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Technical Specification

Broadband Radio Access Networks (BRAN);
HiperMAN;
Conformance Testing for WiMAX/HiperMAN 1.3.1;
Part 1: Protocol Implementation Conformance Statement (PICS) proforma

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Foreword

This Technical Specification (TS) has been produced by ETSI Technical Committee Broadband Radio Access Networks (BRAN).

The present document specifies the Protocol Implementation Conformance Statement (PICS) for High PERformance Radio Metropolitan Area Network (HiperMAN) and WiMAX, which operates on frequencies between 2 GHz and 11 GHz.

The present document has been developed on the basis of preceding versions of HiperMAN and WiMAX PICS and makes the previous versions obsolete.

The present document is part 1 of a multi-part deliverable covering Broadband Radio Access Networks (BRAN); HiperMAN; Conformance testing for WiMAX/HiperMAN 1.3.1, as identified below:

Part 1: "Protocol Implementation Conformance Statement (PICS) proforma";

Part 2: "Test Suite Structure and Test Purposes (TSS&TP) ";

Part 3: "Abstract Test Suite (ATS)".

1 Scope

The present document specifies the Protocol Implementation Conformance Statement (PICS) for HiperMAN/WiMAX per ISO/IEC 9646-7 [10], ITU-T Recommendation X.296 [11] and EG 201 058 [12] for conformance of HiperMAN1.3.1/WiMAX compliant systems.

2 References

References are either specific (identified by date of publication and/or edition number or version number) or non-specific.

- For a specific reference, subsequent revisions do not apply.
- Non-specific reference may be made only to a complete document or a part thereof and only in the following cases:
  - if it is accepted that it will be possible to use all future changes of the referenced document for the purposes of the referring document;
  - for informative references.

Referenced documents which are not found to be publicly available in the expected location might be found at http://docbox.etsi.org/Reference.

For online referenced documents, information sufficient to identify and locate the source shall be provided. Preferably, the primary source of the referenced document should be cited, in order to ensure traceability. Furthermore, the reference should, as far as possible, remain valid for the expected life of the document. The reference shall include the method of access to the referenced document and the full network address, with the same punctuation and use of upper case and lower case letters.

NOTE: While any hyperlinks included in this clause were valid at the time of publication ETSI cannot guarantee their long term validity.

2.1 Normative references

The following referenced documents are indispensable for the application of the present document. For dated references, only the edition cited applies. For non-specific references, the latest edition of the referenced document (including any amendments) applies.

[1] ETSI TS 102 177: "Broadband Radio Access Networks (BRAN); HiperMAN; Physical (PHY) layer".

[2] ETSI TS 102 178: "Broadband Radio Access Networks (BRAN); HiperMAN; Data Link Control (DLC) layer".

[3] ETSI TS 102 210: "Broadband Radio Access Networks (BRAN); HiperMAN; System profiles".

[4] IEEE 802.16-2004: "IEEE Standard for Local and Metropolitan Area Networks - Part 16: Air Interface for Fixed Broadband Wireless Access Systems".

[5] IEEE 802.16e-2005 and IEEE 802.16-2004/Cor 1-2005: "Standard for Local and metropolitan area networks - Part 16: Air Interface for Fixed and Mobile Broadband Wireless Access Systems. Amendment 2: Physical and Medium Access Control Layers for Combined Fixed and Mobile Operation in Licensed Bands and Corrigendum1".

[6] ETWG Profile: "Evolutionary WiMAX OFDM System Profile- WiMAX Forum".

[7] WiMAX ForumTM Mobile System Profile v16.1, "WiMAX ForumTM, Technical Working Group, April 2008".

[8] WiMAX ForumTM Mobile Radio Specifications v0.1.0, WiMAX ForumTM, Technical Working Group, April 2008 .

[9] ISO/IEC 9646-1: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 1: General concepts".

[10] ISO/IEC 9646-7: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 7: Implementation Conformance Statements".

[11] ITU-T Recommendation X.296: "OSI conformance testing methodology and framework for protocol Recommendations for ITU-T applications - Implementation conformance statements".

[12] ETSI EG 201 058: "Methods for Testing and Specification (MTS); Implementation Conformance Statement (ICS) proforma style guide".

[13] IEEE 802.3: "IEEE Standard for Information technology - Telecommunications and information exchange between systems - Local and metropolitan area networks - specific requirements - Part 3: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications".

[14] IEEE 802.1Q: "IEEE Standards for Local and metropolitan area networks - Virtual Bridged Local Area Networks".

[15] ITU-T Recommendation X.690: "Information technology - ASN.1 encoding rules: Specification of Basic Encoding Rules (BER), Canonical Encoding Rules (CER) and Distinguished Encoding Rules (DER)".

[16] IETF RFC 2131: "Dynamic Host Configuration Protocol".

[17] IETF RFC 868: "Time Protocol".

[18] IEEE 802.2 (ISO/IEC 8802-2:1998): "EEE Standard for Information technology - Telecommunications and information exchange between systems - Local and metropolitan area networks - Specific Requirements - Part 2: Logical Link Control".

[19] IEEE 802.1D: "IEEE standard for local and metropolitan area networks--Media access control (MAC) Bridges (Incorporates IEEE 802.1t-2001 and IEEE 802.1w)". .

[20] IETF RFC 3344: "IP Mobility Support for IPv4 ".

2.2 Informative references

The following referenced documents are not essential to the use of the present document but they assist the user with regard to a particular subject area**.** For non-specific references, the latest version of the referenced document (including any amendments) applies.

Not applicable.

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in ISO/IEC 9646-1 [9], TS 102 177 [1], TS 102 178 [2], ISO/IEC 9646-7 [10] and IEEE 802.16-2004 [4] with Corrigendum and Amendment as provided by IEEE 802.16e-2005 [5] apply.

3.2 Symbols

For the purposes of the present document, the following symbols apply:

BW	Nominal channel bandwidth (MHz)
m	CID range divider
$P_{TX,max}$	Maximum mean transmit power at the antenna port (dBm)
T_b	Useful OFDM symbol time (s)
T_F	Frame duration (ms)
T_g	OFDM symbol guard time or CP time (s)
T_s	OFDM symbol time (s)

3.3 Abbreviations

For the purposes of the present document, the abbreviations given in TS 102 177 [1], TS 102 178 [2], ISO/IEC 9646-1 [9] and the following apply:

ARQ	Automatic Repeat Request
BS	Base Station
CRC	Cyclic Redundancy Check
HCS	Header Check Sequence
IP	Internet Protocol
IUT	Implementation Under Test
MAC	Medium Access Control
MS	Mobile Station
PHS	Payload Header Suppression
PICS	Protocol Implementation Conformance Statement
PMP	Point-to-MultiPoint
SAP	Service Access Point
SUT	System Under Test
TLV	Type/Length/Value
UL	UpLink

4 Conformance to this PICS Proforma Specification

If it claims to conform to the present document, the actual PICS proforma to be filled in by a supplier shall be technically equivalent to the text of the PICS proforma given in annex A, and shall preserve the numbering, naming, and ordering of the proforma items.

A PICS which conforms to the present document shall be a conforming PICS proforma completed in accordance with the guidance for completion given in clause A.1.

Annex A (normative): Protocol ICS (PICS) for HiperMAN/WiMAX- TWG profile

A.1 Guidance for completing PICS Proforma

A.1.1 Purposes and Structure

The purpose of this PICS proforma is to provide a mechanism whereby a supplier of an implementation of the requirements defined in defined in references [1], [2] (which mandates requirements defined in [4] and [5]) may provide information about the implementation in a standardized manner. The PICS proforma does not cover every possible compliant WiMAX implementation, but only those implementations that are compliant with the system profiles as defined in [7] and [8].

The PICS proforma is subdivided into clauses for the following categories of information:

- guidance for completing the PICS proforma;
- identification and implementation;
- identification of the standard;
- global statement of conformance;
- roles;
- Mobile Station (MS);
- Base Station (BS);
- List of MAC PDUs;
- PDU Fields.

A.1.2 Abbreviations and Conventions

Item column

- The Item column contains a number which identifies the item in the table.

Capability column

- The capability column describes in free text each respective item (e.g. parameters, timers, etc.). It implicitly means "Is <capability> supported by the implementation?".

Reference column

- The reference column indicates the clause of [1], [2], [4], [5] and [7] from which the requirement for the capability is derived.

Status column

- The following notations, defined in [9], are used in the status column:

m	Explicitly shown as mandatory in the standard. It is required to implement.
o	Explicitly mentioned as optional in the standard or is not explicitly mentioned but has capability negotiations. It may or may not be implemented.
oi	Qualified option- for mutually exclusive or selectable options from a set. One or more of the options from the set shall be supported.
IO-NNNN	Inter-operable Options: Item belongs to NNNN group of features for which it is requested to provide testing procedure and distinct labelling of BS equipment. More specifically: ▪ the item is not required to get general "WiMAX certified" label; and ▪ is required to get distinct "WiMAX certified with NNNN capability" label.

The following Inter-operable Options are defined and used in the present document:

1. IO-MIMO: Group of Inter-operable Option features related to Multiple Input Multiple Output (MIMO) operation.
2. IO-BF: Group of Inter-operable Option features related to Beam Forming (BF) operation.
3. IO-MBS: Group of Inter-operable Option features related to Multicast and Broadcast Services (MBS) operation.
4. IO-ETHx (x = 1, 2, 3): Groups of features on three Inter-operable options related to Ethernet CS IO-ETH1, IO-ETH2, IO-ETH3.

Support column

- The support column shall be filled in by the supplier of the implementation. The following common notations, defined in [9] are used for the support column.

Y or y	Supported by implementation.
N or n	Not supported by implementation.
N/A, n/a or -	No answer required (allowed only if the status is n/a either directly or after the evaluation of a conditional status).

Values allowed column

- The values allowed column is only used when necessary in a table. It contains the type, the list, the range, or the length of values allowed. The following notations are used.

Range of values: Example:	<min value>..<max value> 5..20
List of values: Example 1: Example 2: Example 3:	<value1>, <value2>, …, <valueN> 2, 4, 6, 8, 9 1101b, 1011b, 1111b 0x0A, 0x34, 0x2F
List of named values: Example:	<name1>(<val1>), <name2>(<val2>), …, <nameN>(<valN>) reject(1), accept(2)
Length: Example:	Size (<min size>..<max size>) Size (1..8)

Values supported column

- The values supported column is only present when the values allowed column is present. It shall be filled in by the supplier of the implementation. In this column, the value or the ranges of values supported by the implementation shall be indicated.

Reference to items

- For each possible item answer in the support column within the PICS proforma a unique reference exists which may be used, for example, in conditional expressions. It is defined as the table identifier, followed by the "/" character, followed by the item number in the table. If there is more than one support column in a table, the columns are discriminated by letters (a, b, etc.).

Example 1: Table A.5/4 is the reference to the answer of item 4 in table A.5.

Example 2: Table A.6/3b is the reference to the second answer (i.e. in the second support column) of item 3 in table A.6.

Prerequisite Line

- A prerequisite line takes the form: Prerequisite: <predicate>.
- A prerequisite line after a clause or table title indicates that the entire clause or the entire table is not required to be completed if the predicate is FALSE.

Support of specific MAC PDUs or fields does not automatically mean support of the corresponding functionality. It means only that BS(MS) is capable of transmitting or receiving / parsing the message of specific format.

A.1.3 Instructions for completing the PICS Proforma

The supplier of the implementation shall complete the PICS proforma in each of the spaces provided. In particular, an explicit answer shall be entered, in the support or values supported column boxes provided, using the notation described in clause A.1.2.

However, tables related to Mobile Station shall only be completed for Mobile Station (MS) implementations, and tables related to Base Station shall only be filled in for Base Station implementations.

If necessary, the supplier may provide additional comments in space at the bottom of the tables or separately.

A.2 Identification of the implementation

Identification of the Implementation Under Test (IUT) and the system in which it resides (the System Under Test (SUT)) should be filled in so as to provide as much detail as possible regarding version numbers and configuration options.

The product supplier and client information should both be filled in if they are different.

A person who can answer queries regarding information supplied in the PICS should be named as the contact person.

A.2.1 Date of statement

Date of statement (MM/DD/YYYY):	

A.2.2 Implementation Under Test (IUT) identification

IUT name:	
IUT version:	

A.2.3 System Under Test (SUT) identification

SUT name:	
Hardware configuration:	
Operating system:	

A.2.4 Product supplier

Name:	
Address:	
Telephone Number:	
Fax Number:	
E-mail address:	
Additional information:	

A.2.5 Client (if different from product supplier)

Name:	
Address:	
Telephone Number:	
Fax Number:	
E-mail address:	
Additional information:	

A.2.6 PICS contact person

(A person to contact if there are any queries concerning the content of the PICS.)

Name:	
Address:	
Telephone Number:	
Fax Number:	
E-mail address:	
Additional information:	

A.3 Identification of the standard

This PICS proforma applies to the ETSI HiperMAN/WiMAX standard consisting of the following normative references:

- HiperMAN/WiMAX Physical Layer: [1] which normatively references [4] and [5];
- HiperMAN/WiMAX Data Logical Control Layer: [2] which normatively references [4] and [5].

A.4 Global statement of conformance

Are all mandatory capabilities implemented? (Yes/No)	

NOTE: Answering "No" to this question indicates non-conformance to the HiperMAN/WiMAX standard. Non-supported mandatory capabilities are to be identified in the PICS, with an explanation of why the implementation is non-conforming, on pages attached to the PICS proforma.

A.5 System profiles

Table A.1: System profiles

Item	Role	Reference	Status	Support
1	WiMAX Forum™ Mobile System Profile	[7]	m	
Comments:				

Table A.2: Roles

Item	Role	Reference	Status	Support
1	Mobile Station (MS)		oi.3	
2	Base Station (BS)		oi.3	
Comments:				

A.5.1 WirelessMAN-OFDMA 802.16e

Table A.3: Band Class Group

WirelessMAN-OFDMA 802.16e				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Prof1.A_2,3 MHz - 8,75 MHz channel PHY (2,3 GHz to 2,4 GHz)	[7]	oi.4	
2	Prof1.B_2,3 MHz - 5 AND 10 MHz channel PHY (2,3 GHz to 2,4 GHz)	[7]	oi.4	
3	Prof2.A_2,305 MHz to 3,5 MHz channel PHY (2,305 GHz to 2,320 GHz, 2,345 GHz to 2,360 GHz)	[7]	oi.4	
4	Prof2.B_2,305 MHz to 5 MHz channel PHY (2,305 GHz to 2,320 GHz, 2,345 GHz to 2,360 GHz)	[7]	oi.4	
5	Prof2.C_2,305 MHz to10 MHz channel PHY (2,305 GHz to 2,320 GHz, 2,345 GHz to 2,360 GHz)	[7]	oi.4	
6	Prof3.A_2,496 MHz to 5 MHz AND 10 MHz channel PHY (2,496 GHz to 2,69 GHz)	[7]	oi.4	
7	Prof4.A_3,3 MHz to 5 MHz channel PHY (3,3 GHz to 3,4 GHz)	[7]	oi.4	
8	Prof4.B_3,3 MHz to 7 MHz channel PHY (3,3 GHz to 3,4 GHz)	[7]	oi.4	
9	Prof4.C_3,3 MHz to 10 MHz channel PHY (3,3 GHz to 3,4 GHz)	[7]	oi.4	
10	Prof5.A_3,4 MHz to 5 MHz channel PHY (3,4 GHz to 3,8 GHz)	[7]	oi.4	
	Prof5L.A_3,4 MHz to 5 MHz channel PHY (3,4 GHz to 3,6 GHz)		oi.4	
	Prof5H.A_3,4 MHz to 5 MHz channel PHY (3,6 GHz to 3,8 GHz)		oi.4	
11	Prof5.B_3,4 MHz to 7 MHz channel PHY (3,4 GHz to 3,8 GHz)	[7]	oi.4	
	Prof5L.B_3,4 MHz to 7MHz channel PHY (3,4 GHz to 3,6 GHz)		oi.4	
	Prof5H.B_3,4 MHz to 7 MHz channel PHY (3,6 GHz to 3,8 GHz)		oi.4	
12	Prof5.C_3,4 MHz to 10 MHz channel PHY (3,4 GHz to 3,8 GHz)	[7]	oi.4	
	Prof5L.C_3,4 MHz to 10 MHz channel PHY (3,4 GHz to 3,6 GHz)		oi.4	
	Prof5H.C_3,4 MHz to 10 MHz channel PHY (3,6 GHz to 3,8 GHz)		oi.4	
Comments: With regards to Items 2 and 6, the BS shall support 5 MHz or 10 MHz or both bandwidth sizes.				

Table A.4: Power classes

WirelessMAN-OFDMA 802.16e					
Item	**Capability**		**Reference**	**Status**	**Support**
	Transmit Power (dBm) for 16QAM	**Transmit Power (dBm) for QPSK**			
1	18 ≤ PTx,max < 21	20 ≤ PTx,max < 23	[7]	oi.5	
2	21 ≤ PTx,max < 25	23 ≤ PTx,max < 27	[7]	oi.5	
3	25 ≤ PTx,max < 30	27 ≤ PTx,max < 30	[7]	oi.5	
4	30 ≤ PTx,max	30 ≤ PTx,max	[7]	oi.5	
Comments: The Power Classes listed in this table is developed to cover the complete target range of power levels while different interpretation of applicable modulation levels is addressed through a dual range requirement for QPSK and 16QAM per Power Class.					

Table A.5: Duplexing modes

WirelessMAN-OFDMA 802.16e				
Item	**Capability**	**Reference**	**Status**	**Support**
1	TDD Time Division Duplexing	6.3.7.2 [7]	m	
Comments:				

In table A.6, RF channels are calculated using the following formula:

$$RFChannel_n = F_{start} + n \cdot \Delta F_c, \forall n \in N_{range}$$

Where:

F_{start} is the start frequency for the specific band;

ΔF_c is the centre frequency step;

N_{range} is the range value for the n parameter.

Table A.6: RF Profiles

Mobile Station (MS)							
Item	**RF Profile Name**	**Channel BW (MHz)**	**Centre Frequency Step (KHz)**	**Fstart (MHz)**	**Nrange**	**Status**	**Support**
1	Prof1.A_2.3	8,75	250	2 304,5	(0, …, 364)	oi.7	
2	Prof1.B_2.3-5	5	250	2 302,5	(0, …, 380)	oi.7	
	Prof1.B_2.3-10	10		2 305	(0, …, 360)		
3	Prof2.A_2.305	3,5	250	2 306,75 and 2 346,75	(0, …, 46)	oi.7	
4	Prof2.B_2.305	5	250	2 307,5 and 2 347,5	(0, …, 40)	oi.7	
5	Prof2.C_2.305	10	250	2 310 and 2 350	(0, …, 20)	oi.7	
6	Prof3.A_2.496 - 5	5	250	2 498,5	(0, …, 756)	oi.7	
	Prof3.A_2.496 - 10	10		2 501	(0, …, 736)		
7	Prof4.A_3.3	5	250	3 302,5	(0, …, 380)	oi.7	
8	Prof4.B_3.3	7	250	3 303,5	(0, …, 372)	oi.7	
9	Prof4.C_3.3	10	250	3 305	(0, …, 360)	oi.7	
10	Prof5.A_3.4	5	250	3 402,5	(0, …, 1 580)	oi.7	
	Prof5L.A_3.4				(0, …, 780)	oi.7	
	Prof5H.A_3.4				(800, …, 1 580)	oi.7	
11	Prof5.B_3.4	7	250	3 403,5	(0, …, 1 572)	oi.7	
	Prof5L.B_3.4				(0, …, 772)	oi.7	
	Prof5H.B_3.4				(800, …, 1 572)	oi.7	
12	Prof5.C_3.4	10	250	3 405	(0, …, 1 560)	oi.7	
	Prof5L.C_3.4				(0, …, 860)	oi.7	
	Prof5H.C_3.4				(800, …, 1 560)	oi.7	

Comments: Comprehensive RF raster of this table is only for interoperability purposes and not a basis for any performance testing on RF channel scanning and synchronization to network. RF preferred sets are needed to be developed to be considered as basis for scanning time performance requirements.

A.5.1.1 Mobile Station

A.5.1.1.1 PHY functions

A.5.1.1.1.1 m Factor

Table A.7: Sampling Factor for MS

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	8/7	[5] 8.4.2.3	m	
2	28/25	[5] 8.4.2.3	m	
Comments: Item 1 is used for A.3-1, 3, 8 and 11 and Item 2 is used for A.3-2, 4, 5, 6, 7, 9, 10 and 12.				

A.5.1.1.1.2 Cyclic Prefix

Table A.8: Cyclic Prefix for MS

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	1/8	[5] 8.4.2.3, [7]	m	
Comments:				

A.5.1.1.1.3 Frame Duration

Table A.9: Frame duration codes for MS

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	5 msec	[5] 8.4.5.2, [7]	m	
Comments:				

A.5.1.1.1.4 UL and DL Subframe Size

Table A.10: Number of OFDM Symbols in DL and UL

Mobile Station (MS)					
Item	**Capability**	**Value**	**Reference**	**Status**	**Support**
1	Number of OFDM Symbols in DL and UL for 5 MHz BW	(35, 12) (34, 13) (33, 14) (32, 15) (31, 16) (30, 17) (29, 18) (28, 19) (27, 20) (26, 21)	8.4.4.2, [7]	oi.11	
2	Number of OFDM Symbols in DL and UL for 10 MHz BW	(35, 12) (34, 13) (33, 14) (32, 15) (31, 16) (30, 17) (29, 18) (28, 19) (27, 20) (26, 21)	8.4.4.2, [7]	oi.11	
3	Number of OFDM Symbols in DL and UL for 8,75 MHz BW	(30, 12) (29, 13) (28, 14) (27, 15) (26, 16) (25, 17) (24,18)	8.4.4.2, [7]	oi.11	
4	Number of OFDM Symbols in DL and UL for 3,5 MHz BW	(24, 09) (23, 10) (22, 11) (21, 12) (20, 13) (19, 14) (18, 15)	8.4.4.2, [7]	oi.11	
5	Number of OFDM Symbols in DL and UL for 7 MHz BW	(24, 09) (23, 10) (22, 11) (21, 12) (20, 13) (19, 14) (18, 15)	8.4.4.2, [7]	oi.11	
Comments: First value in the pairs is number of symbols in DL subframe and the second value is the number of symbols in UL subframe. If the MS supports one or more oi.11 item, then it shall support all DL/UL number of symbols combinations listed associated with each channel bandwidth.					

A.5.1.1.1.5 Subcarrier Allocation Mode

Table A.11: DL subcarrier allocation for MS

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	PUSC	8.4.6.1.2.1, [6]	m	
2	PUSC with all subchannels	8.4.6.1.2.1, [6]	m	
3	PUSC with dedicated pilots	8.4.6.1.2.1, 8.4.5.3.4, [6]	m	
4	FUSC	8.4.6.1.2.2, [6]	m	
5	AMC 2x3	8.4.6.3, [6]	m	
6	AMC 2x3 with dedicated pilots	8.4.6.3, 8.4.5.3.4, [6]	m	
Comments:				

Table A.12: UL subcarrier allocation for MS

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	PUSC	8.4.6.2.1, [6]	m	
2	PUSC without subchannel rotation	[6]	m	
3	AMC 2x3	8.4.6.3, [6]	m	
Comments:				

A.5.1.1.1.6 UL Channel Sounding

Table A.13: UL Sounding 1 for MS

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Type A with Cyclic shift- support for P values other than 9 and 18	8.4.6.2.7.1, [5]	m	
2	Type A with Cyclic shift- Support P values of 9 and 18	8.4.6.2.7.1, [5]	m	
3	Type A with Decimation	8.4.6.2.7.1, [5]	m	
4	Power Assignment Method: Equal Power (0b00)	8.4.6.2.7.1 8.4.6.2.7.2, [5]	m	
Comments:				

Table A.14: UL Sounding 2 for MS

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Sounding response time capability	8.4.6.2.7.1, 11.8.3.7.14, [6]	m	
2	Max number of simultaneous sounding instructions	8.4.6.2.7.1, 11.8.3.7.14, [6]	m	
Comments:				

A.5.1.1.1.7 Ranging and Band Width Request

Table A.15: Initial ranging for MS

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Initial Ranging in PUSC zone with 2 symbols	8.4.7.1, [5]	m	
Comments:				

Table A.16: HO ranging for MS

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	HO Ranging in PUSC zone with 2 symbols	8.4.7.1, [5]	m	
Comments:				

Table A.17: Periodic Ranging for MS

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Periodic Ranging in PUSC zone with 1 symbols	8.4.7.2, [5]	m	
Comments:				

Table A.18: BW Request for MS

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	BW Request in PUSC zone with 1 symbols	8.4.7.2, [5]	m	
Comments: This table is only related to BW request based on Ranging.				

A.5.1.1.1.8 Fast Feedback

Table A.19: Fast-Feedback/CQI Channel Encoding for MS

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	6 bits	8.4.5.4.10.5, [4]	m	
Comments:				

Table A.20: Fast-Feedback/CQI Channel Allocation Method for MS

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Fast feedback channel allocation using CQICH Allocation IE	8.4.5.4.12, [5]	m	
Comments:				

A.5.1.1.1.9 Channel Coding

Table A.21: Repetition for MS

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Repetition	8.4.9.5, [5]	m	
Comments: Item 1 is only applicable to A.35-1, A.36-1, A.37-1 and A.38-1.				

Table A.22: Randomization for MS

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Randomization	8.4.9.1, [5]	m	
Comments:				

Table A.23: Convolutional Code for MS

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Tail Biting	8.4.9.2.1, [5]	m	
Comments: Convolutional Code shall be only applicable for FCH.				

Table A.24: Convolutional Turbo Code for MS

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	CTC	8.4.9.2.3, excluding 8.4.9.2.3.5, [5]	m	
Comments:				

Table A.25: Interleaving for MS

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Interleaving	8.4.9.3, [5]	m	
Comments:				

A.5.1.1.1.10 HARQ

Table A.26: HARQ Chase Combining for MS

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Chase with CTC	8.4.15.1, [5]	m	
2	H-ARQ Category 1- NO DL aggregation (Wave 1 obly) - Minimum HARQ buffer size or DL = 4 096 (K = 12) - Minimum HARQ buffer size for UL = 16 384 (K = 20) - Aggregation flag for DL = OFF - Aggregation flag for UL = OFF - Number of DL HARQ channels = 4 - Number of UL HARQ channels = 4 - Max Burst in DL Subframe with HARQ = 2 - Max Burst in UL Subframe with HARQ = 2	11.8.3.7.19, 11.8.3.7.19.2, 8.4.4.2, 8.4.15.1.3, 11.8.3.7.12, [5]	oi.27	
3	H-ARQ Category 1- NO DL aggregation - Minimum HARQ buffer size or DL = 16 384 (K=20) - Minimum HARQ buffer size for UL = 16 384 (K=20) - Aggregation flag for DL = OFF - Aggregation flag for UL = OFF - Number of DL HARQ channels = 4 - Number of UL HARQ channels = 4 - Max Burst in DL Subframe with HARQ = 2 - Max Burst in UL Subframe with HARQ = 2	11.8.3.7.19 and 11.8.3.7.19.2, [5]	oi.27	
4	H-ARQ Category 1- DL aggregation ON - Minimum HARQ buffer size or DL = 16 384 (K = 20) - Minimum HARQ buffer size for UL = 16 384 (K = 20) - Aggregation flag for DL = ON - Aggregation flag for UL = OFF - Number of DL HARQ channels = 4 - Number of UL HARQ channels = 4 - Max Burst in DL Subframe with HARQ = 2 - Max Burst in UL Subframe with HARQ = 2	11.8.3.7.19 and 11.8.3.7.19.2, [5]	oi.27	

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
5	H-ARQ Category 2 - Minimum HARQ buffer size or DL = 8 192 (K = 16) - Minimum HARQ buffer size for UL = 16 384 (K = 20) - Aggregation flag for DL = ON - Aggregation flag for UL = ON - Number of DL HARQ channels = 16 - Number of UL HARQ channels = 8 - Max Burst in DL Subframe with HARQ = 5 - Max Burst in UL Subframe with HARQ = 2	11.8.3.7.19 and 11.8.3.7.19.2, [5]	oi.27	
6	H-ARQ Category 3 - Minimum HARQ buffer size or DL = 16 384 (K=20) - Minimum HARQ buffer size for UL = 16 384 (K=20) - Aggregation flag for DL = ON - Aggregation flag for UL = ON - Number of DL HARQ channels = 16 - Number of UL HARQ channels = 8 - Max Burst in DL Subframe with HARQ =5 - Max Burst in UL Subframe with HARQ =2	11.8.3.7.19 and 11.8.3.7.19.2, [5]	oi.27	
7	H-ARQ Category 4 - Minimum HARQ buffer size or DL = 23 170 (K = 22) - Minimum HARQ buffer size for UL = 16 384 (K = 20) - Aggregation flag for DL = ON - Aggregation flag for UL = ON - Number of DL HARQ channels = 16 - Number of UL HARQ channels = 8 - Max Burst in DL Subframe with HARQ = 5 - Max Burst in UL Subframe with HARQ = 2	11.8.3.7.19 and 11.8.3.7.19.2, [5]	oi.27	
8	SN for HARQ reordering	11.13.36, [5]	m	

Comments: Note that the HARQ buffer size shall be interpreted as softbits buffer size, i.e. relating to coded data bits and not un-coded. This means the buffer size refers to both the systematic and parity bits transmitted over the air. It is left to vendor's implementation to determine the amount of memory space for each bit of transmitted information. The buffer size is related to buffer size parameter K according to the following Equation.

$$\text{Buffer size} = \textit{floor}\,[512 \times 2^{(K/4)}]$$

On Items 2 and 3, a waiver is applicable to total DL buffer size of 16 384 for all 4 channels, equivalent to DL buffer size of 4 096 (K=12) per channel, for CAT 1 in Wave 1.

Relative to items 2-6, the term "burst" refers to "sub-burst".

Item 2 is a waiver applicable to Wave 1 only.

BS shall not allocate more than one UL non-HARQ unicast allocation and two UL HARQ unicast allocations for any UL sub-frame for a given MS. If more than one UL non-HARQ bursts (including the non-HARQ unicast allocation and allocation through the CDMA_Allocation_IE) are allocated to an MS in a frame, then the MS may choose to transmit only one of the non-HARQ bursts and ignore the remaining non-HARQ allocation(s).

Table A.27: ACK Channel for MS

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	ACK channel	8.4.5.4.13, [5]	m	
2	HARQ ACK delay for DL burst = 1	11.3.1 [5]	m	
Comments:				

A.5.1.1.1.11 Control Mechanism

Table A.28: MS Synchronization

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	MS UL symbol timing accuracy within ±(Tb/32)/4	8.4.10.1.2, [5]	m	
2	MS to BS frequency synchronization tolerance ≤ 2 % of the subcarrier spacing	8.4.14.1, [5]	m	
Comments:				

A.5.1.1.1.12 Power Control

Table A.29: Closed-loop Power Control for MS

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Closed loop power control	8.4.10.3 and 8.4.10.3.1, [5]	m	
Comments:				

Table A.30: Open-loop Power Control for MS

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Open loop power control	8.4.10.3.2, [5]	m	
Comments:				

Table A.31: MS Maximum Transmission Power Limitation Control

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	MS Maximum Transmission Power Limitation Control	11.3.1, [5]	m	
Comments:				

A.5.1.1.1.13 Channel Quality Measurements

Table A.32: CINR Measurement for MS

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Physical CINR measurement from the preamble for frequency reuse==1 (feedback type=0b00 and report type=0 and CINR preamble report type=0)	6.3.18, 8.4.5.4.12, 8.4.11.3 and 11.8.3.7.9, [5]	m	
2	Physical CINR measurement from the preamble for frequency reuse==3 (feedback type=0b00 and report type=0 and CINR preamble report type=1)	6.3.18, 8.4.5.4.12, 8.4.11.3 and 11.8.3.7.9, [5]	m	
3	Physical CINR measurement for a permutation zone from pilot subcarriers (feedback type=0b00 and report type=1 and CINR zone measurement type=0)	6.3.18, 8.4.5.4.12, 8.4.11.3 and 11.8.3.7.9, [5]	m	
4	Effective CINR measurement for a permutation zone from pilot subcarriers (feedback type=0b01 and report type=1 and CINR zone measurement type=0)	6.3.18, 8.4.5.4.12, 8.4.11.3 and 11.8.3.7.9, [5]	m	
5	Major group indication (applicable to PUSC zone only)	8.4.5.4.12, [5]	m	
6	MIMO permutation feedback cycle (applicable to MIMO only)	8.4.5.4.12, [5]	m	
Comments: For enhanced Fast Feedback channel, the coding is as defined in 8.4.5.4.10.8.				

Table A.33: RSSI Measurement for MS

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	RSSI Measurement	8.4.11.2 and 6.3.2.3.50, [5]	m	
Comments:				

A.5.1.1.1.14 Modulation

Table A.34: PRBS for MS

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	PRBS	8.4.9.4.1, [5]	m	
Comments:				

Table A.35: Downlink MCS for MS, Convolutional Coding

Mobile Station (MS)				
Item		**Reference**	**Status**	**Support**
1	QPSK (CC) 1/2	11.4.2, [5]	m	
Comments:				

Table A.36: Downlink MCS for MS, Convolutional Turbo Code

Mobile Station (MS)				
Item		**Reference**	**Status**	**Support**
1	QPSK (CTC) 1/2	11.4.2, [5]	m	
2	QPSK (CTC) 3/4	11.4.2, [5]	m	
3	16-QAM (CTC) 1/2	11.4.2, [5]	m	
4	16-QAM (CTC) 3/4	11.4.2, [5]	m	
5	64-QAM (CTC) 1/2	11.4.2, [5]	m	
6	64-QAM (CTC) 2/3	11.4.2, [5]	m	
7	64-QAM (CTC) 3/4	11.4.2, [5]	m	
8	64-QAM (CTC) 5/6	11.4.2, [5]	m	
Comments:				

Table A.37: Uplink MCS for MS, Convolutional Turbo Code

Mobile Station (MS)				
Item		**Reference**	**Status**	**Support**
1	QPSK (CTC) 1/2	11.3.1.1, [5]	m	
2	QPSK (CTC) 3/4	11.3.1.1, [5]	m	
3	16-QAM (CTC) 1/2	11.3.1.1, [5]	m	
4	16-QAM (CTC) 3/4	11.3.1.1, [5]	m	
Comments:				

Table A.38: Pilot Modulation for MS

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Modulation of pilots in uplink data burst for PUSC permutations	8.4.9.4.3, [5]	m	
2	Modulation of pilots in uplink data burst for AMC permutation	8.4.9.4.3, [5]	m	
3	Modulation of pilot in uplink Collaborative SM for PUSC permutation		m	
Comments:				

Table A.39: Ranging Modulation for MS

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Modulation of the ranging code	8.4.9.4.3.2, 8.4.7.3, [5]	m	
Comments:				

A.5.1.1.1.15 MAP Support

Table A.40: MAP for MS

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Normal DL-MAP.	6.3.2.3.2, [5]	m	
2	Normal UL-MAP	6.3.2.3.4, [5]	m	
3	Compressed DL-MAP	8.4.5.6.1, [5]	m	
4	Compressed UL-MAP	8.4.5.6.2, [5]	m	
5	Sub-DL-UL-MAP in first zone	6.3.2.3.60, [5]	m	
6	MBS MAP message	6.3.2.3.57, [5]	m	
Comments:				

Table A.41: MAP Features for MS

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	CID in DL-MAP IE in DL-MAP or Compressed DL-MAP	8.4.5.3.7, [5]	m	
2	RCID IE in DL-MAP IE in SUB-DL-UL-MAP	8.4.5.3, [5]	m	
3	UL allocation start IE	8.4.5.4.15, [5]	m	
4	Space-Time Coding (STC)/Zone switch IE	8.4.5.3.4, [5]	m	
5	HARQ and Sub-MAP pointer IE in compressed DL map	8.4.5.3.10, [5]	m	
6	UL Zone Switch IE	8.4.5.4.7, [5]	m	
Comments:				

A.5.1.1.1.16 Multiple Input Multiple Output (MIMO)

Table A.42: Supported Features for DL PUSC MIMO for MS

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	2-antenna, matrix A	8.4.8.1.2.1.1 8.4.8.1.4, [5]	m	
2	2-antenna, matrix B, vertical encoding	8.4.8.1.4, [5]	m	
Comments:				

Table A.43: Supported Features for UL PUSC MIMO for MS

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Collaborative SM for two MS with single transmit antenna	8.4.8.1.5, [5]	m	
2	Capable of generating pilot pattern A or B	8.4.8.1.5, [5]	m	
Comments:				

Table A.44: MIMO Feedback for MS

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Fast DL measurement feedback with more than one Rx antennas	8.4.5.4.10.6 8.4.5.4.10.1 8.4.5.4.10.5, [5]	m	
2	Mode selection feedback with 6 bits	8.4.5.4.10.8, [5]	m	
Comments:				

Table A.45: HARQ DL support for MIMO for MS

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	MIMO DL Chase Combining	8.4.5.3.21, [5]	m	
Comments:				

Table A.46: HARQ UL support for MIMO for MS

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	MIMO UL Chase Combining	8.4.5.4.24, [5]	m	
Comments:				

A.5.1.1.1.17 MS Minimum Performance Requirements

Table A.47: MS Minimum Performance

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	SSTTG ≤ 50 µsec	8.4.4.2, [5]	m	
2	SSRTG ≤ 50 µsec	8.4.4.2, [5]	m	
3	Maximum concurrent bursts in a downlink sub-frame = 10	8.4.4.2, 11.7.8.13, [5]	m	
4	Maximum bursts in a downlink sub-frame = 16	8.4.4.2, [5]	m	
Comments:				

Table A.48: Max Number of Zones in DL and UL Subframes

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Maximum numbers of zones UL = 3		m	
2	Maximum numbers of zones DL = 5	8.4.4.2, [5]	m	
Comments: The numbers are the same as the number of UL/DL Zone Switch IEs plus 1. In the cases that Uplink subframe starts with Zone Switch IE, the number of uplink zones is the same as the number of Zone Switch IEs.				

Table A.49: Measurement Processes and CQI Channels

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Maximum numbers of CQI Channels transmitted by an MS per frame = 2			
2	Maximum number of concurrent CINR measurement processes = 2	8.4.4.2, [5]		
Comments:				

Table A.50: Max MS Sensitivity Level for Convolutional Encoding 3.5 MHz Bandwidth, DL PUSC

BW (MHz)	Sensitivity (dBm)	Reference	Status	Support
QPSK-1/2	-90,8	[5]	m	
NOTE: This table is applicable to A.3-3 only.				
Comments: Equation (149b) of clause 8.4.13.1.1 in [5] and table 84 in [7] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1. Only applicable for FCH. FCH has repetition factor of 4, means sensitivity improves ~6 dB. RCT test is recommended.				

Table A.51: Max MS Sensitivity Level for Convolutional Encoding 5 MHz Bandwidth, DL PUSC

BW (MHz)	Sensitivity (dBm)	Reference	Status	Support
QPSK-1/2	-89,4	[5]	m	
NOTE: This table is applicable to A.3-2, A.4-4, A.4-6, A.4-7 and A.3-10 only.				
Comments: Equation (149b) of clause 8.4.13.1.1 in [5] and table 84 in [7] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1. Only applicable for FCH. FCH has repetition factor of 4, means sensitivity improves ~6 dB. RCT test is recommended.				

Table A.52: Max MS Sensitivity Level for Convolutional Encoding 7 MHz Bandwidth, DL PUSC

BW (MHz)	Sensitivity (dBm)	Reference	Status	Support
QPSK-1/2	-87,8	[5]	m	
NOTE: This table is applicable to A.3-8 and A.3-11 only.				
Comments: Equation (149b) of clause 8.4.13.1.1 in [5] and table 84 in [7] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1. Only applicable for FCH. FCH has repetition factor of 4, means sensitivity improves ~6 dB. RCT test is recommended.				

Table A.53: Max MS Sensitivity Level for Convolutional Encoding 8,75 MHz Bandwidth, DL PUSC

BW (MHz)	Sensitivity (dBm)	Reference	Status	Support
QPSK-1/2	-86,9	[5]	m	
NOTE: This table is applicable to A.3-1 only.				
Comments: Equation (149b) of clause 8.4.13.1.1 in [5] and table 84 in [7] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1. Only applicable for FCH. FCH has repetition factor of 4, means sensitivity improves ~6 dB. RCT test is recommended.				

Table A.54: Max MS Sensitivity Level for Convolutional Encoding 10 MHz Bandwidth, DL PUSC

BW (MHz)	Sensitivity (dBm)	Reference	Status	Support
QPSK-1/2	-86,4	[5]	m	
NOTE: This table is applicable to A.3-2, A.3-5, A.3-6, A.3-9, A.3-12 only.				
Comments: Equation (149b) of clause 8.4.13.1.1 in [5] and table 84 in [7] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1. Only applicable for FCH. FCH has repetition factor of 4, means sensitivity improves ~6 dB. RCT test is recommended.				

Table A.55: Max MS Sensitivity Level for Convolutional Turbo Code 3,5 MHz Bandwidth, DL PUSC

BW (MHz)	Sensitivity (dBm)	Reference	Status	Support
QPSK-1/2	-92,9	[5]	m	
QPSK-3/4	-89,5	[5]	m	
16QAM-1/2	-87,2	[5]	m	
16QAM-3/4	-83,1	[5]	m	
64QAM-1/2	-82,0	[5]	m	
64QAM-2/3	-78,9	[5]	m	
64QAM-3/4	-77,8	[5]	m	
64QAM-5/6	-75,9	[5]	m	
Comments: Equation (149b) of clause 8.4.13.1.1 in [5] and table 84 in [7] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.				

Table A.56: Max MS Sensitivity Level for Convolutional Turbo Code 3,5 MHz Bandwidth, DL FUSC

BW (MHz)	Sensitivity (dBm)	Reference	Status	Support
QPSK-1/2	-92,9	[5]	m	
QPSK-3/4	-89,5	[5]	m	
16QAM-1/2	-87,2	[5]	m	
16QAM-3/4	-83,1	[5]	m	
64QAM-1/2	-82,0	[5]	m	
64QAM-2/3	-78,9	[5]	m	
64QAM-3/4	-77,8	[5]	m	
64QAM-5/6	-75,9	[5]	m	
Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 84 in [7] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.				

Table A.57: Max MS Sensitivity Level for Convolutional Turbo Code 3,5 MHz Bandwidth, DL AMC

BW (MHz)	Sensitivity (dBm)	Reference	Status	Support
QPSK-1/2	-92,8	[5]	m	
QPSK-3/4	-89,4	[5]	m	
16QAM-1/2	-87,1	[5]	m	
16QAM-3/4	-83,0	[5]	m	
64QAM-1/2	-81,9	[5]	m	
64QAM-2/3	-78,8	[5]	m	
64QAM-3/4	-77,7	[5]	m	
64QAM-5/6	-75,8	[5]	m	
Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 84 in [7] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.				

Table A.58: Max MS Sensitivity Level for Convolutional Turbo Code 5 MHz Bandwidth, DL PUSC

BW (MHz)	Sensitivity (dBm)	Reference	Status	Support
QPSK-1/2	-91,5	[5]	m	
QPSK-3/4	-88,1	[5]	m	
16QAM-1/2	-85,8	[5]	m	
16QAM-3/4	-81,7	[5]	m	
64QAM-1/2	-80,6	[5]	m	
64QAM-2/3	-77,5	[5]	m	
64QAM-3/4	-76,4	[5]	m	
64QAM-5/6	-74,5	[5]	m	
Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 84 in [7] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.				

Table A.59: Max MS Sensitivity Level for Convolutional Turbo Code 5 MHz Bandwidth, DL FUSC

BW (MHz)	Sensitivity (dBm)	Reference	Status	Support
QPSK-1/2	-91,4	[5]	m	
QPSK-3/4	-88,0	[5]	m	
16QAM-1/2	-85,7	[5]	m	
16QAM-3/4	-81,6	[5]	m	
64QAM-1/2	-80,5	[5]	m	
64QAM-2/3	-77,4	[5]	m	
64QAM-3/4	-76,3	[5]	m	
64QAM-5/6	-74,4	[5]	m	
Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 84 in [7] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.				

Table A.60: Max MS Sensitivity Level for Convolutional Turbo Code 5 MHz Bandwidth, DL AMC

BW (MHz)	Sensitivity (dBm)	Reference	Status	Support
QPSK-1/2	-91,3	[5]	m	
QPSK-3/4	-87,9	[5]	m	
16QAM-1/2	-85,6	[5]	m	
16QAM-3/4	-81,5	[5]	m	
64QAM-1/2	-80,4	[5]	m	
64QAM-2/3	-77,3	[5]	m	
64QAM-3/4	-76,2	[5]	m	
64QAM-5/6	-74,3	[5]	m	
Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 84 in [7] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.				

Table A.61: Max MS Sensitivity Level for Convolutional Turbo Code 7 MHz Bandwidth, DL PUSC

BW (MHz)	Sensitivity (dBm)	Reference	Status	Support
QPSK-1/2	-89,9	[5]	m	
QPSK-3/4	-86,5	[5]	m	
16QAM-1/2	-84,2	[5]	m	
16QAM-3/4	-80,1	[5]	m	
64QAM-1/2	-79,0	[5]	m	
64QAM-2/3	-75,9	[5]	m	
64QAM-3/4	-74,8	[5]	m	
64QAM-5/6	-72,9	[5]	m	
Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 84 in [7] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.				

Table A.62: Max MS Sensitivity Level for Convolutional Turbo Code 7 MHz Bandwidth, DL FUSC

BW (MHz)	Sensitivity (dBm)	Reference	Status	Support
QPSK-1/2	-89,9	[5]	m	
QPSK-3/4	-86,5	[5]	m	
16QAM-1/2	-84,2	[5]	m	
16QAM-3/4	-80,1	[5]	m	
64QAM-1/2	-79,0	[5]	m	
64QAM-2/3	-75,9	[5]	m	
64QAM-3/4	-74,8	[5]	m	
64QAM-5/6	-72,9	[5]	m	
Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 84 in [7] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.				

Table A.63: Max MS Sensitivity Level for Convolutional Turbo Code 7 MHz Bandwidth, DL AMC

BW (MHz)	Sensitivity (dBm)	Reference	Status	Support
QPSK-1/2	-89,8	[5]	m	
QPSK-3/4	-86,4	[5]	m	
16QAM-1/2	-84,1	[5]	m	
16QAM-3/4	-80,0	[5]	m	
64QAM-1/2	-78,9	[5]	m	
64QAM-2/3	-75,8	[5]	m	
64QAM-3/4	-74,7	[5]	m	
64QAM-5/6	-72,8	[5]	m	
Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 84 in [7] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.				

Table A.64: Max MS Sensitivity Level for Convolutional Turbo Code 8,75 MHz Bandwidth, DL PUSC

BW (MHz)	Sensitivity (dBm)	Reference	Status	Support
QPSK-1/2	-89,0	[5]	m	
QPSK-3/4	-85,6	[5]	m	
16QAM-1/2	-83,3	[5]	m	
16QAM-3/4	-79,2	[5]	m	
64QAM-1/2	-78,1	[5]	m	
64QAM-2/3	-75,0	[5]	m	
64QAM-3/4	-73,9	[5]	m	
64QAM-5/6	-72,0	[5]	m	
Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 84 in [7] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.				

Table A.65: Max MS Sensitivity Level for Convolutional Turbo Code 8,75 MHz Bandwidth, DL FUSC

BW (MHz)	Sensitivity (dBm)	Reference	Status	Support
QPSK-1/2	-88,9	[5]	m	
QPSK-3/4	-85,5	[5]	m	
16QAM-1/2	-83,2	[5]	m	
16QAM-3/4	-79,1	[5]	m	
64QAM-1/2	-78,0	[5]	m	
64QAM-2/3	-74,9	[5]	m	
64QAM-3/4	-73,8	[5]	m	
64QAM-5/6	-71,9	[5]	m	
Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 84 in [7] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.				

Table A.66: Max MS Sensitivity Level for Convolutional Turbo Code 8,75 MHz Bandwidth, DL AMC

BW (MHz)	Sensitivity (dBm)	Reference	Status	Support
QPSK-1/2	-88,8	[5]	m	
QPSK-3/4	-85,4	[5]	m	
16QAM-1/2	-83,1	[5]	m	
16QAM-3/4	-79,0	[5]	m	
64QAM-1/2	-77,9	[5]	m	
64QAM-2/3	-74,8	[5]	m	
64QAM-3/4	-73,7	[5]	m	
64QAM-5/6	-71,8	[5]	m	
Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 84 in [7] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.				

Table A.67: Max MS Sensitivity Level for Convolutional Turbo Code 10 MHz Bandwidth, DL PUSC

BW (MHz)	Sensitivity (dBm)	Reference	Status	Support
QPSK-1/2	-88,5	[5]		
QPSK-3/4	-85,1	[5]	m	
16QAM-1/2	-82,8	[5]	m	
16QAM-3/4	-78,7	[5]	m	
64QAM-1/2	-77,6	[5]	m	
64QAM-2/3	-74,5	[5]	m	
64QAM-3/4	-73,4	[5]	m	
64QAM-5/6	-71,5	[5]	m	
Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 84 in [7] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.				

Table A.68: Max MS Sensitivity Level for Convolutional Turbo Code 10 MHz Bandwidth, DL FUSC

BW (MHz)	Sensitivity (dBm)	Reference	Status	Support
QPSK-1/2	-88,4	[5]	m	
QPSK-3/4	-85,0	[5]	m	
16QAM-1/2	-82,7	[5]	m	
16QAM-3/4	-78,6	[5]	m	
64QAM-1/2	-77,5	[5]	m	
64QAM-2/3	-74,4	[5]	m	
64QAM-3/4	-73,3	[5]	m	
64QAM-5/6	-71,4	[5]	m	
Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 84 in [7] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.				

Table A.69: Max MS Sensitivity Level for Convolutional Turbo Code 10 MHz Bandwidth, DL AMC

BW (MHz)	Sensitivity (dBm)	Reference	Status	Support
QPSK-1/2	-88,3	[5]	m	
QPSK-3/4	-84,9	[5]	m	
16QAM-1/2	-82,6	[5]	m	
16QAM-3/4	-78,5	[5]	m	
64QAM-1/2	-77,4	[5]	m	
64QAM-2/3	-74,3	[5]	m	
64QAM-3/4	-73,2	[5]	m	
64QAM-5/6	-71,3	[5]	m	
Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 84 in [7] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.				

A.5.1.1.1.18 Minimum Transmit Requirements

Table A.70: Transmit requirements for MS

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Tx dynamic Range = 45 dB	8.4.12.1	m	
2	Tx power level min adjustment step = 1 dB	8.4.12.1	m	
3	Tx power level min relative step accuracy according to the following: Single step size m | Required relative accuracy ceil(|m|) = 1dB | +/- 0,5 dB ceil(|m|) = 2dB | +/- 1 dB ceil(|m|) = 3dB | +/- 1,5 dB 4dB < ceil(|m|) ≤ 10dB | +/- 2 dB Two exception points of at least 10 dB apart are allowed over the 45 dB range, where in these two points an accuracy of up to ±2 dB is allowed for any size step	8.4.12.1	m	
4	Spectral flatness according to the following: ≤ ±2 dB for spectral lines from -*Nused*/4 to -1 and +1 to *Nused*/4 Within +2/-4 dB for spectral lines from -*Nused*/2 to-*Nused*/4 and +*Nused*/4 to *Nused*/2	8.4.12.2	m	
5	The power difference between adjacent subcarriers ≤ 0,4 dB	8.4.12.2	m	
6	Tx relative constellation error according to the following: QPSK-1/2 ≤ -15,0 dB QPSK-3/4 ≤ -18,0 dB 16QAM-1/2 ≤ -20,5 dB 16QAM-3/4 ≤ -24,0 dB	8.4.12.3	m	
Comments:				

Table A.71: MS Transmitter Spectral Mask Requirements

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Prof 3.A 2.496 - 10 MHz channel PHY (2,496 GHz to 2,69 GHz)	2.1.5.1.1, [8]	m	
2	Prof 3.A 2.496 - 5 MHz channel PHY (2,496 GHz to 2,69 GHz)	2.1.5.1.1, [8]	m	
Comments:				

A.5.1.1.1.19 Receive Requirements Table

Table A.72: MS Receiver Requirements

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	MS Rx max input level on-channel reception tolerance = -30 dBm	8.4.13.3.1		
2	MS Rx max input level on-channel damage tolerance = 0 dBm	8.4.13.4.1		
3	Min adjacent channel rejection at BER=10^{-6} for 3 dB degradation C/I according to the following: 16QAM-3/4 10 dB 64QAM-3/4 (if 64-QAM supported) 4 dB	8.4.13.2	m	
4	Min alternate channel rejection at BER=10^{-6} for 3 dB degradation C/I according to the following: 16QAM-3/4 29 dB 64QAM-3/4 (if 64-QAM supported) 23 dB	8.4.13.2	m	
Comments:				

A.5.1.1.2 MS MAC functions

Table A.73: Convergence Sub layer protocol support

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Packet convergence sub layer	5.2, [4]	m	
Comments:				

A.5.1.1.2.1 Packet Convergence Sublayer

Table A.74: Packet Convergence Sub layer support

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Internet Protocol (IPv4)	5.2.6, [4]	m	
2	Internet Protocol (IPv6)	5.2.6, [4]	m	
3	IEEE 802.3 [13] (Ethernet)	5.2.4, [4]	o	
4	Packet, IPv4 over 802.3/Ethernet		o	
5	Packet, IPv6 over 802.3/Ethernet		o	
6	IPv4 with Header Compression (ROHC)	5.2.7, [5]	m	
7	IPv6 with Header compression (ROHC)	5.2.7, [5]	m	
Comments: Items 3, 4 and 5 are not required for WiMAX certified label, only optionally certified.				

Table A.75: Major packet classification

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	IP Classification	[4] 11.13.19.3.4	m	
2	Ethernet classification	[4] 11.13.19.3.4	o	
Comments: Item 2 is not required for WiMAX certified label, only optionally certified. It is conditioned by Eth-CS.				

Table A.76: IP packet classification in the UL

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Classification based on DSCP /IP TOS field	[4] 5.2.2 and 11.13.19.3.4.2	m	
2	Classification based on IP Protocol/Next Header field	[4] 5.2.2 and 11.13.19.3.4.3	m	
3	Classification based on IP masked Source Address	[4] 5.2.2 and 11.13.19.3.4.4	m	
4	Classification based on IP Destination Address	[4] 5.2.2 and 11.13.19.3.4.5	m	
5	Classification based on protocol source port range	[4] 5.2.2 and 11.13.19.3.4.6	m	
6	Classification based on protocol destination port range	[4] 5.2.2 and 11.13.19.3.4.7	m	
Comments:				

Table A.77: PHS

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	PHS	5.2.3 5.2.3.1 5.2.3.2	m	
Comments:				

A.5.1.1.2.2 MAC common part sub layer

Table A.78: MAC Common part sublayer functionalities

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Addressing and connections	[4] 6.3.1	m	
2	Construction of PDUs	[4] 6.3.3	m	
3	ARQ	[4] 6.3.4	m	
4	Uplink scheduling service	[4] 6.3.5	m	
5	Bandwidth allocation and request	[4] 6.3.6	m	
6	Contention resolution	[4] 6.3.8	m	
7	Network entry and initialization	[4] 6.3.9	m	
8	Ranging	[4] 6.3.10	m	
9	Update of UL and DL channel descriptors	[4] 6.3.11	m	
10	Quality of service	[4] 6.3.14	m	
Comments:				

Table A.79: Miscellaneous management functions

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	MS reset initiated by BS (RES-CMD)	[4] 6.3.2.3.22	o	
2	MS network clock comparison initiated by BS (CLK-CMP)	[4] 6.3.2.3.25	o	
3	MS notifies BS of de-registration (DREG-REQ)	[4] 6.3.2.3.43	m	
4	Deregistration (DREG-CMD)	[4] 6.3.2.3.26	m	
5	MS receives quick answer from BS to its DSx-REQ (DSX-RVD)	[4] 6.3.2.3.27	m	
6	MS answers to BS channel measurement report request (REP-REQ and REP-RSP)	[4] 6.3.2.3.33	m	
7	MS applies the power change requested by the BS (FPC)	[4] 6.3.2.3.34	m	
Comments:				

A.5.1.1.2.2.1 Addressing and Connections

Table A.80: Addressing and Connections

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Globally Unique MS MAC Address	[4] 6.3.1	m	
2	MAC Management messages only applicable on connection types as specified in [4] table 14	[4]	m	
3	User data only on transport connections	[4]	m	
Comments:				

A.5.1.1.2.2.2 Construction and Transmission of MAC PDUs

Table A.81: Transmission conventions

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Fields of MAC messages are transmitted in the same order as they appear in the corresponding tables in the standard	[4] 6.3.3.1	m	
2	Fields of MAC messages and fields of TLVs, which are specified in the standard as binary numbers (including CRC and HCS) are transmitted as a sequence of their binary digits, starting from MSB. Bit masks (for example, in ARQ) are considered numerical fields. For signed numbers MSB is allocated for the sign. Length field in the "definite form" of ITU-T Recommendation X.690 [15] is also considered a numerical field	[4] 6.3.3.1	m	
3	Fields specified as SDUs or SDU fragments (for example, MAC PDU payloads) are transmitted in the same order of bytes as received from upper layers	[4] 6.3.3.1	m	
4	Fields specified as strings are transmitted in the order of symbols in the string. In cases c and d, bits within a byte are transmitted in the order MSB first	[4] 6.3.3.1	m	
5	TLV value that is defined (in the standard) as a list of numerical values (e.g. section 11.13.19.3.4.2) will be transmitted in the same order as the numerical values appear in the table	[4] 6.3.3.1	m	
Comments:				

Table A.82: Subheader and Extended Subheader support

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Extended subheader support	6.3.2.2.7 and 11.7.25	m	
2	Capability of sending Grant management Subheader	6.3.2.2.2	m	
Comments:				

Table A.83: PDU concatenation

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Concatenate Multiple MAC PDUs into a single burst of the allocated length	[4] 6.3.3.2	m	
2	Receive concatenated MAC PDUs and determine disposition via CID	[4] 6.3.3.2	m	
3	Padding of any unused space with stuff byte value in the UL Burst	[4] 6.3.3.7	m	
Comments:				

Table A.84: SDU Fragmentation

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Fragment a MAC SDU into multiple MAC PDUs applicable to traffic connections and Management messages on Primary management connection	[4] 6.3.3.3	m	
2	Add Fragmentation Sub header to the SDU fragment including setting FC according to the Fragmentation rules table	[4] 6.3.3.3	m	
3	Do not perform fragmentation of PDUs on "Broadcast management" connections	[4] 6.3.2.3	m	
4	Increment the FSN modulo 2048 for non-ARQ connections	[4] and [5] 6.3.3.3	m	
5	Increment the BSN modulo 2048 for ARQ connection	[4] 6.3.3.4.2	m	
6	Do not perform fragmentation of PDUs on Basic and Initial Ranging connections	[4] 6.3.2.3	m	
Comments:				

Table A.85: SDU reassembly

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Receive and reassemble fragmented SDUs	[4] 6.3.3.3	m	
2	Discard SDUs corrupted due to loss of fragment	[4] 6.3.3.3	m	
Comments:				

Table A.86: Packing

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Pack variable length SDUs in a single MAC PDU on non-ARQ connections	[4] 6.3.3.4.1.2	m	
2	Unpack variable length SDUs on non-ARQ connections	[4] 6.3.3.4.1.2	m	
3	Pack variable length SDUs or SDUs fragments in a single MAC PDU on ARQ-enabled connections	[4] 6.3.3.4.2 5.1.2	m	
4	Unpack variable length SDUs or SDUs fragments on ARQ-enabled connections	[4] 6.3.3.4.2 5.1.2	m	
5	Do not perform packing of SDUs on Basic, Broadcast and Initial Ranging connections	[4] 6.3.2.3	m	
6	Perform packing of ARQ Feedback Payload	[4] 6.3.3.4.3	m	
7	Extracting ARQ Feedback IEs from received ARQ Feedback Payload	[4] 6.3.3.4.3	m	
Comments:				

Table A.87: MAC CRC

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Compute and add CRC, and set CI bit based on connection properties	[4] 6.3.3.5	m	
2	Check CRC based on CI bit	[4] 6.3.3.5	m	
Comments: For Basic, Primary, Broadcast, Fragmentable Broadcast connections CRC should be used always. For ARQ connections CRC should be used always. CRC can be enabled/disabled on SFID basis.				

Table A.88: MAC PDU Formats

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
Comments:				

A.5.1.1.2.2.3 ARQ

Table A.89: ARQ

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Pack several ARQ feedback information elements in a single ARQ feedback payload	[4] 6.3.2.3	m	
2	Insert a single ARQ feedback payload as first payload in a MAC PDU	[4] 6.3.2.3	m	
3	ARQ ACK type 1 - Cumulative ACK entry	11.7.24, 6.3.4.2	m	
4	ARQ ACK type 2 - Cumulative with Selective ACK entry	11.7.24, 6.3.4.2	m	
5	ARQ ACK type 3 - Cumulative ACK with Block Sequence ACK	11.7.24, 6.3.4.2	m	
Comments:				

A.5.1.1.2.2.4 Data Delivery Services for Mobile Network

Table A.90: Data Delivery Services for Mobile Network

Prerequisite: Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Unsolicited Grant service (UGS)	[5] 6.3.20.1.1	m	
2	Real-Time Variable Rate (RT-VR) Service	[5] 6.3.20.1.2	m	
3	Non-Real-Time Variable Rate (NRT-VR) Service	[5] 6.3.20.1.3	m	
4	Best Effort (BE) Service	[5] 6.3.20.1.4	m	
5	Extended Real-Time Variable Rate (ERT-VR) Service	[5] 6.3.20.1.5	m	
Comments:				

A.5.1.1.2.2.5 Request-Grant Mechanism

Table A.91: Request-Grant Mechanism

Prerequisite: Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Incremental bandwidth request using BW request header	[4] 6.3.6.1	m	
2	Aggregate bandwidth request using BW request header	[4] 6.3.6.1	m	
3	Bandwidth request using Grant Management Subheader	[4] 6.3.2.2.2	m	
4	Request-Grant mechanism combined with UL Tx power report	[5] 6.3.2.1.2.1.2	m	
5	CQICH allocation request using CQICH allocation request header	[5] 6.3.2.1.2.1.4	m	
6	Contention-based CDMA bandwidth requests	[4] 6.3.6.5	m	
Comments:				

A.5.1.1.2.2.6 Network entry and initialization

Table A.92: Network entry and initialization

Item	**Capability**	**Reference**	**Status**	**Support**
1	MS performs scanning and synchronization to the downlink	[4] 6.3.9.1	m	
2	MS obtains downlink parameters	[4] 6.3.9.2	m	
3	MS obtains uplink parameters	[4] 6.3.9.3, 6.3.9.4	m	
4	MS performs Initial Ranging	[4]	m	
5	MS negotiates basic capabilities	[4] 6.3.9.7	m	
6	MS performs authorization	[4] 6.3.9.8, 7.2	m	
7	MS performs registration	[4] 6.3.9.9	m	
Comments:				

Table A.93: Obtain DL parameters

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	MS receives DLFP correctly	[4] 8.4.4.3	m	
2	MS receives DL-MAP correctly	[4] 6.3.9.2	m	
3	MS receives DCD correctly	[4] 6.3.9.2	m	
Comments:				

Table A.94: Obtain UL parameters

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	MS receives UCD correctly	[4] 6.3.9.3 and 6.3.9.4	m	
2	MS receives UL-MAP correctly		m	
Comments:				

Table A.95: Initial ranging

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	MS receives UL-MAP containing initial ranging opportunity	6.3.10.3.1	m	
2	MS sends initial ranging code	6.3.10.3.1, 8.4.7.1	m	
3	MS sends an initial ranging code again after random backoff, if the BS does not respond	6.3.10.3.1, 8.4.7.1	m	
4	MS receives RNG-RSP	6.3.10.3.1	m	
5	MS performs network entry and initialization on DL Frequency Override channel, if instructed in RNG-RSP	6.3.10.3.1	m	
6	MS continues the ranging process using initial ranging codes in the periodic ranging region, if receiving RNG-RSP with continue status	6.3.10.3.1	m	
7	MS receives CDMA allocation IE after receiving RNG-RSP with success status	6.3.10.3.1	m	
8	SS receives CDMA allocation IE without receiving RNG-RSP with success status	6.3.9.5.1, 6.3.10.3.1	m	
9	MS sends RNG-REQ in UL slots allocated by CDMA allocation IE	6.3.10.3.1, 8.4.5.4.3	m	
10	MS establishes Basic and Primary Management connections	6.3.10.3.1	m	
11	MS performs timing, power and frequency adjustment	6.3.10.3.1	m	
Comments: IEEE 802.16e-2005 [5] needs correction in figures 85-87 to allow for the case MS receives CDMA Allocation_IE without having received RNG-RSP with success status which case is allowed by the text of section 6.3.9.5.1.				

Table A.96: MS basic capability negotiation

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	MS sends SBC-REQ	[4] 6.3.9.7	m	
2	MS receives SBC-RSP	[4] 6.3.9.7	m	
3	MS resends SBC-REQ on timeout	[4] 6.3.9.7	m	
Comments:				

Table A.97: MS registration

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	MS sends REG-REQ to register with a BS.	[4] 6.3.9.9	m	
2	MS receives REG-RSP.	[4] 6.3.9.9	m	
3	MS re-sends REG-REQ upon time out	[4] 6.3.9.9	m	
Comments:				

Table A.98: Periodic ranging

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	MS sends periodic ranging codes after T4 expires.	6.3.10.3.2 and 8.4.7.2	m	
2	MS sends a periodic ranging code again after random backoff, if the BS does not respond	6.3.10.3.2 and 8.4.7.2	m	
3	MS adjusts PHY parameters in response to RNG-RSP including the case of unsolicited RNG-RSP	6.3.10.3.2 and 8.4.7.2	m	
Comments:				

A.5.1.1.2.2.8 Update of channel descriptors

Table A.99: Update of channel descriptors

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	MS stores new uplink burst descriptors upon receiving UCD message with incremented Configuration change count (I+1 mod 256)	6.3.11	m	
2	MS transmits using new generation of burst descriptors defined in UCD after receiving UL-MAP with UCD Count matching the new Configuration Change Count (I+1 mod 256)	6.3.11	m	
3	MS stores new downlink burst descriptors upon receiving DCD message with incremented Configuration Change Count (I+1 mod 256)	6.3.11	m	
4	MS receives using new generation of burst descriptors after receiving DL-MAP with DCD Count matching the new Configuration Change Count (I+1 mod 256)	6.3.11	m	
5	MS Supports two simultaneous sets of burst descriptors	6.3.11	m	
Comments:				

A.5.1.1.2.2.9 QoS

Table A.100: Service flow operations

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Dynamic service flow creation - BS-initiated	6.3.14.7.1.2	m	
2	Dynamic service flow creation -MS-initiated	6.3.14.7.1.1	m	
3	Dynamic service flow change - BS-initiated	6.3.14.9.4.2	m	
4	Dynamic service flow change -MS-initiated	6.3.14.9.4.1	m	
5	Dynamic service flow deletion -BS-initiated	6.3.14.9.5.2	m	
6	Dynamic service flow deletion- MS-initiated	6.3.14.9.5.1	m	
Comments:				

A.5.1.1.2.2.10 Sleep Mode

Table A.101: Sleep Mode

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Sleep Mode Implementation in MS	6.3.21	m	
2	Power Saving Class type 1 support	6.3.21.2	m	
3	Support of Traffic Indication Message for Power Saving Class type 1	6.3.21.2	m	
4	Indicating DL traffic by SLPID bit map in TRF-IND	6.3.21.1 and 6.3.2.3.46	m	
5	Indicating DL traffic by SLPID in TRF-IND	6.3.21.1 and 6.3.2.3.46	m	
6	Support of SLPID_Update TLV in TRF-IND	6.3.2.3.46 and 11.16.1	m	
7	Traffic triggered wakening flag	6.3.2.3.44 and 45, and 6.3.21.2	m	
8	Activation of Power Saving Class by unsolicited SLP-RSP message from BS	6.3.2.3.45 and 6.3.21.1	m	
9	DL sleep control extended subheader	6.3.2.2.7.2 and 11.7.25	m	
10	Bandwidth request and uplink sleep control header	6.3.2.1.2.1.6 and 11.7.25	m	
11	Support of periodic ranging in sleep mode	6.3.21.5 and 11.16.2	m	
12	Sleep mode multicast CID support at MS	6.3.2.3.46 and 10.4	m	
13	MS Support of triggered action indicated by Enabled-Action-Triggered TLV	6.3.2.3.6, 6.3.2.3.44 and 45, 6.3.21.1, and 11.5, 11.6, and 11.7.3	m	
Comments:				

A.5.1.1.2.2.11 Handover

Table A.102: Neighbour Advertisement

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Neighbour Advertisement	6.3.2.3.47	m	
2	Support BS index at the MS (Use BS index instead of BSID) in Scan/HO related messages, as numbered in MOB_NBR-ADV	6.3.2.3.48 to 51, 6.3.2.3.53	m	
Comments:				

Table A.103: Scanning

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Scanning for cell selection (HO)	6.3.2.3.48 and 49	m	
2	MS Requests Scanning Interval Allocations from BS	6.3.2.3.48 and 49 6.3.21.1.2	m	
3	Unsolicited Scanning Interval Allocation by BS	6.3.2.3.48 and 49, 6.3.21.1.2	m	
4	Event Triggered Scanning based on serving BS metrics	6.3.21.1.2	m	
5	MS autonomous neighbour cell scanning	8.4.13.1.3	m	
Comments:				

Table A.104: Scan Reporting Type Support

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Periodic reporting based on Report Period as indicated in MOB_SCN-RSP message	6.3.2.3.49 and 11.4.1	m	
2	Event triggered reporting based on metric conditions (The action includes support for MOB_SCN-REP)	6.3.2.3.49 and 11.4.1	m	
Comments:				

Table A.105: HO/Scan/Report Trigger Metrics

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Mean BS CINR	6.3.2.3.53 and 11.8.7	m	
2	Mean BS RSSI	6.3.2.3.53 and 11.8.7	m	
3	Relative Rx Delay	6.3.2.3.53 and 11.8.7	m	
4	BS Round Trip Delay	6.3.2.3.53 and 11.8.7	m	
Comments:				

Table A.106: MAC Layer HO Procedures

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	General HO Support	6.3.21.2 and 6.3.2.3.55	m	
2	HO initiated by MS support at MS side	6.3.22.2 and 6.3.22.2.2	m	
3	HO initiated by BS support at MS side	6.3.22.2 and 6.3.22.2.2	m	
4	HO Indication	6.3.21.2.5	m	
5	Cancellation of HO	6.3.21.2.3	m	
6	Metric Triggered HO Requests	11.1.7 (table 348g)	m	
7	Resource Retention Support	6.3.2.3.52 and 6.3.2.3.54	m	
8	CDMA HO Ranging	6.3.10.3.3	m	
9	HO_ID support	6.3.2.3.52 and 6.3.2.3.54	m	
10	Support negotiating of "HO authorization policy" during HO (i.e. between BSs)	6.3.2.3.52 and 6.3.2.3.54	m	
Comments:				

Table A.107: HO Optimization

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	HO Optimization Support	6.3.2.3.6, 6.3.21.2.7 and 11.6	m	
2	Support Omission of SBC-REQ management messages	6.3.2.3.6, 6.3.21.2.7 and 11.6	m	
3	Support Omission of PKM Authentication phase except TEK Phase	6.3.2.3.6, 6.3.21.2.7 and 11.6	m	
4	Support Omission of PKM TEK creation phase during re-entry processing	6.3.2.3.6, 6.3.21.2.7 and 11.6	m	
5	Support "Full State Sharing"- No exchange of network re-entry messages after ranging before resuming normal operations	6.3.2.3.6, 6.3.21.2.7 and 11.6	m	
6	Unsolicited SBC-RSP management message with updated capabilities information	6.3.2.3.6, 6.3.21.2.7 and 11.6	m	
7	Support SBC- RSP TLVs as part of RNG-RSP message	11.6	m	
8	Support Omission of REG-REQ during NW re-entry	6.3.2.3.6, 6.3.21.2.7 and 11.6	m	
9	Unsolicited REG-RSP with updated capabilities information	6.3.2.3.6, 6.3.21.2.7 and 11.6	m	
10	Support REG-RSP TLV as part of RNG-RSP message	11.6	m	
11	Support of ARQ continuation using SN report header after NW re-entry	6.3.2.3.6, 6.3.21.2.7 and 11.6	o	
12	Support continuation of non-ARQ connection using SDU SN extended sub-header before handover and using SN report header after NW re-entry	6.3.22.2.8	o	
13	Support sending Bandwidth Request header with zero BR as a notification of MS's successful re-entry registration	6.3.21.2.7 and 11.6	m	
14	Support receiving IP address refresh bit	11.6	m	
15	Capability of sending SN Report header after requested by SN request extended subheader	6.3.2.2.7.7	o	
Comments:				

Table A.108: CID and SAID Update

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	CID update in MS by RNG-RSP	11.7.9	m	
2	CID update in MS by REG-RSP	11.7.9	m	
3	Compressed CID update in MS by RNG-RSP	11.7.9.1	m	
4	Compressed CID update in MS by REG-RSP	11.7.9.1	m	
5	SAID update in MS by RNG-RSP	11.7.17 and 11.6	m	
6	SAID update in MS by SA-TEK_RSP	11.7.20	m	
Comments:				

A.5.1.1.2.2.12 Idle Mode

Table A.109: Idle Mode

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	General Idle Mode functionality	6.3.24	m	
2	Idle mode initiation by DREG-REQ message from MS	6.3.24.1	m	
3	Support for Idle Mode initiation by unsolicited DREG-CMD from BS	6.3.24.1	m	
4	MS retention of service and operational information during Idle Mode initiated by DREG-CMD	6.3. 24.1	m	
5	Request from MS to BS to retain service and operational information by DREG-REQ message	6.3. 24.1	m	
6	MS capability of receiving Broadcast Control Pointer IE	6.3. 24.5	m	
7	MS Capability of using dedicated ranging region and ranging code allocation for location update or network entry of MS in Idle Mode	6.3. 24.7.1	o	
8	Paging Group Update at MS	6.3. 24.8.1.1	m	
9	Timer Location Update at MS	6.3. 24.8.1.2	m	
10	Power Down Location Update at MS	6.3. 24.8.1.3	m	
11	Secure Location Update	6.3. 24.8.2.1	m	
12	Un-secure Location Update	6.3. 24.8.2.2	m	
13	Paging Preference	11.13.30	m	
14	Idle mode multicast CID support at MS	10.4	m	
Comments:				

A.5.1.1.2.2.12a Expedited Re-entry from Idle Mode

Table A.110: -a Expedited Re-entry from Idle Mode

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Expedited network re-entry from Idle Mode support	6.3.23.9	m	
2	Support Omission of SBC-REQ management messages	11.6	m	
3	Support Omission of PKM Authentication phase except TEK phase	11.6	m	
4	Support Omission of PKM TEK creation phase during re-entry processing	11.6	m	
5	Support "Full State Sharing except ARQ state (blocks in ARQ window and associated timers)" - No exchange of network re-entry messages after ranging before resuming normal operations	11.6	m	
6	Unsolicited SBC-RSP management message with updated capabilities information	11.6	m	
7	Support SBC-RSP TLVs as part of RNG-RSP message	11.6	m	
8	Support Omission of REG-REQ during NW re-entry	11.6	m	
9	Unsolicited REG-RSP with updated capabilities information	11.6	m	
10	Support REG-RSP TLV as part of RNG-RSP message	11.6	m	
11	MS send Bandwidth Request header with zero BR as a notification of MS's successful re-entry registration	11.6	m	
12	MS trigger a higher layer protocol required to refresh its traffic IP address (e.g. DHCP Discover - RFC 2131 [16]) or Mobile IPv4 re-registration (RFC 3344 [20])	11.6	m	
Comments:				

A. 5.1.1.2.2.13 Feedback Mechanism

Table A.111: Feedback Mechanism

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Feedback header	6.3.2.1.2.2.1	m	
2	Bandwidth request and UL Tx Power Report	6.3.2.1.2.1.2	m	
3	SN report header	6.3.2.1.2.1.7	o	
Comments:				

A. 5.1.1.2.2.14 Multicast Traffic Connection

Table A.112: Multicast Traffic Connection

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Multicast traffic connection	6.3.13	m	
Comments:				

A. 5.1.1.2.2.15 Security Sublayer

Table A.113: Security functions

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	MS supports two simultaneous active TEKs	6.3.9.8 and 7.2.1	m	
2	MS supports SAID update using RNG-REQ/RNG-RSP	11.6	m	
3	MS supports SAID update using SA-TEK-REQ/SA-TEK-RSP	11.7.20	m	
4	MS sends PKMv2 EAP-Start	7.2.2.2	m	
5	MS exchanges PKMv2 EAP-Transfer	7.2.2.2	m	
6	MS derives AK	7.2.2.2	m	
7	MS derives KEK	7.2.2.2	m	
8	MS derives message authentication keys	7.2.2.2	m	
9	MS receives PKMv2 SA-TEK-Challenge	7.8.1	m	
10	MS checks whether AKID is valid or not	7.8.1	m	
11	MS sends PKMv2 SA-TEK-Request	7.8.1	m	
12	MS receives PKMv2 SA-TEK-Response	7.8.1	m	
13	MS establishes SAs included in PKMv2 SA-TEK-Response	7.8.1	m	
14	MS re-sends PKMv2 SA-TEK-Request when SATEKTimer timeout	7.8.1	m	
15	MS sends PKMv2 Key-Request	7.2.2.5	m	
16	MS receives PKMv2 Key-Reply	7.2.2.5	m	
17	MS re-sends PKMv2 Key-Request when Operational Wait timer timeout	7.2.2.5	m	
18	MS supports Dot16KDF algorithm	7.2.2.2 and 7.5.4.6.1	m	
Comments: In case of initial network entry, MS shall not send PKMv2 EAP-Start message.				

Table A.114: PKM message encodings support

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	(one or more) SA_TEK_Update	11.7.21	m	
2	Security negotiation parameters	11.8.4	m	
3	Display-String	11.9.1	o	
4	TEK	11.9.3	m	
5	Key lifetime	11.9.4	m	
6	Key sequence number	11.9.5	m	
7	SAID	11.9.7	m	
8	TEK-Parameters	11.9.8	m	
9	Error-code	11.9.10	m	
10	Security capabilities	11.9.13	m	
11	Cryptographic suite	11.9.14	m	
12	Cryptographic suite list	11.9.15	m	
13	SA descriptor(s)	11.9.17	m	
14	SA type	11.9.18	m	
15	PKM configuration settings	11.9.19	m	
16	Nonce	11.9.20	m	
17	MS_random	11.9.21	m	
18	BS_random	11.9.22	m	
19	CMAC Digest	11.9.27	m	
20	AKID	11.9.32	m	
21	EAP payload	11.9.33	m	
22	SA service type	11.9.35	m	
23	PKMv2 configuration settings	11.9.36	m	
24	Frame Number	11.9.37	m	
Comments:				

Table A.115: Authorization Policy Support

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	802.16 Authorization policy support (This is about the capability of negotiating authorization policy)	11.7.8.7	m	
Comments:				

Table A.116: PKM Version Support

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	PKMv2 Support	11.8.4.1	m	
Comments:				

Table A.117: PKMv2 Authorization Policy Support-Initial Network Entry

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	No Authorization	11.8.4.2	m	
2	EAP-based authorization	11.8.4.2, 7.1.3.2 and 7.2.2.2.2	m	
Comments:				

Table A.118: PKMv2 Authorization Policy Support-Network Re-entry

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	No Authorization	11.8.4.2	m	
2	EAP-based authorization	11.8.4.2, 7.1.3.2 and 7.2.2.2.2	m	
Comments:				

Table A.119: Supported Cryptographic Suites

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	No data encryption, no data authentication and no key encryption	11.9.14	m	
2	CCM-Mode 128-bit AES, CCM-Mode, AES Key Wrap with 128-bit key	11.9.14	m	
Comments: For Item 1 This cryptographic suite means that no encryption and no TEK exchange.				

Table A.120: Message Authentication Code Mode

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	No message authentication	11.8.4.3	m	
2	CMAC	11.8.4.3	m	
Comments:				

Table A.121: Security Association

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Support of Static SA	7.2.1.1 and 7.3.2	m	
2	Support of Dynamic SA	7.2.1.1	m	
3	Support of Primary SA	7.2.1.1	m	
Comments:				

Table A.122: SA Service Type

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Unicast	11.9.35	m	
Comments:				

Table A.123: EAP Authentication Methods

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Adopt recommendation from NWG	7.1.3.2 and 7.2.2.2.2		
Comments:				

A.5.1.1.2.2.16 MBS

Table A.124: MBS

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Multi-BS-MBS	6.3.13	m	
2	Support for MBS_MAP-IE	6.3.13.2.3	m	
3	MS initiated MBS request using DSA-REQ	11.13.20	m	
4	BS initiated MBS request using DSA-REQ	11.13.20	m	
Comments:				

A.5.1.1.2.2.17 MS's Network Entry issued by BS restart

Table A.125: MS's Network Entry issued by BS restart

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	MS's Network Entry triggered by BS restart counter change	6.3.9.11, 11.4.1	m	
Comments:				

A.5.1.1.2.2.18 MAC support for H-ARQ

Table A.126: MAC support for H-ARQ

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	HARQ Support	6.3.17	m	
2	HARQ Buffer Negotiation Capability	11.8.3.7.19	m	
3	HARQ Channel mapping	6.3.17, 11.13.32	m	
4	Capability of DL HARQ channels Number negotiation	11.8.3.7.2	m	
5	Capability of UL HARQ channels Number negotiation	11.8.3.7.3	m	
6	Capability of HARQ ACK delay negotiation in DL transmission	11.4.1	m	
7	Capability of HARQ ACK delay negotiation in UL transmission	11.3.1	m	
8	PDU SN extended subheader for HARQ reordering	11.13.33	m	
Comments: All items below are conditional dependently on HARQ support. HARQ Channel mapping is determined by BS.				

A.5.1.2 Base Station

A.5.1.2.1 PHY functions

A.5.1.2.1.1 Sampling Factor

Table A.127: Sampling Factor for BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	8/7	[4] 8.4.2.3	m	
2	28/25	[4] 8.4.2.3	m	
Comments: Item 1 is used for A.3-1, 3, 8 and 11 and Item 2 is used for A.3-2, 4, 5, 6, 7, 9, 10 and 12.				

A.5.1.2.1.2 Cyclic Prefix

Table A.128: Cyclic Prefix for BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	1/8	[4] 8.4.2.3, [7]	m	
Comments:				

A.5.1.2.1.3 Frame Duration

Table A.129: Frame duration codes for BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	5 msec	8.4.5.2, [7]	m	
Comments:				

A.5.1.2.1.4 TTG/RTG

Table A.130: TTG performance for BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	188 PS for 3,5 MHz	8.4.4.2	oi.129	
2	148 PS for 5 MHz	8.4.4.2	oi.129	
3	376 PS for 7 MHz	8.4.4.2	oi.129	
4	218 PS for 8,75 MHz	8.4.4.2	oi.129	
5	296 PS for 10 MHz	8.4.4.2	oi.129	
Comments:				

Table A.131: RTG performance for BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	60 PS for 3,5 MHz	8.4.4.2	oi.130	
2	84 PS for 5 MHz	8.4.4.2	oi.130	
3	120 PS for 7 MHz	8.4.4.2	oi.130	
4	186 PS for 8,75 MHz,	8.4.4.2	oi.130	
5	168 PS for 10 MHz	8.4.4.2	oi.130	
Comments:				

A.5.1.2.1.5 UL and DL Subframe Size

Table A.132: Number of OFDM Symbols in DL and UL

Base Station (BS)					
Item	**Capability**	**Value**	**Reference**	**Status**	**Support**
1	Number of OFDM Symbols in DL and UL for 5 MHz BW	(35, 12)	8.4.4.2, [7]	oi.131	
		(34, 13)			
		(33, 14)			
		(32, 15)			
		(31, 16)			
		(30, 17)			
		(29, 18)			
		(28, 19)			
		(27, 20)			
		(26, 21)			
2	Number of OFDM Symbols in DL and UL for 10 MHz BW	(35, 12)	8.4.4.2, [7]	oi.131	
		(34, 13)			
		(33, 14)			
		(32, 15)			
		(31, 16)			
		(30, 17)			
		(29, 18)			
		(28, 19)			
		(27, 20)			
		(26, 21)			
3	Number of OFDM Symbols in DL and UL for 8,75 MHz BW	(30, 12)	8.4.4.2, [7]	oi.131	
		(29, 13)			
		(28, 14)			
		(27, 15)			
		(26, 16)			
		(25, 17)			
		(24, 18)			
4	Number of OFDM Symbols in DL and UL for 3,5 MHz BW	(24, 09)	8.4.4.2, [7]	oi.131	
		(23, 10)			
		(22, 11)			
		(21, 12)			
		(20, 13)			
		(19, 14)			
		(18, 15)			
5	Number of OFDM Symbols in DL and UL for 7 MHz BW	(24, 09)	8.4.4.2, [7]	oi.131	
		(23, 10)			
		(22, 11)			
		(21, 12)			
		(20, 13)			
		(19, 14)			
		(18, 15)			
Comments: First value in the pairs is number of symbols in DL subframe and the second value is the number of symbols in UL subframe.					

A.5.1.2.1.6 Subcarrier Allocation Mode

Table A.133: DL subcarrier allocation for BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	PUSC	8.4.6.1.2.1, [7]	m	
2	PUSC with all subchannels	8.4.6.1.2.1, [7]	m	
3	PUSC with dedicated pilots	8.4.6.1.2.1, 8.4.5.3.4, [7]	IO-BF	
4	FUSC	8.4.6.1.2.2, [6]	m	
5	AMC 2 x 3	8.4.6.3, [7]	m	
6	AMC 2 x 3 with dedicated pilots	8.4.6.3, 8.4.5.3.4, [7]	IO-BF	
Comments:				

Table A.134: UL subcarrier allocation for BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	PUSC	8.4.6.2.1, [7]	m	
2	PUSC without subchannel rotation	11.3.1 [7]	IO-BF	
3	AMC 2 x 3	8.4.6.3, [7]	m	
Comments:				

A.5.1.2.1.7 UL Channel Sounding

Table A.135: UL Sounding 1 for BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Type A with Cyclic shift- support for P values other than 9 and 18	8.4.6.2.7.1	IO-BF	
2	Type A with Cyclic shift- Support P values of 9 and 18	8.4.6.2.7.1	IO-BF	
3	Type A with Decimation	8.4.6.2.7.1	IO-BF	
4	Power Assignment Method: Equal Power (0b00)	8.4.6.2.7.1, 8.4.6.2.7.2	IO-BF	
Comments:				

Table A.136: UL Sounding 2 for BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Sounding response time capability = Next Frame	8.4.6.2.7.1, 11.8.3.7.14, [6]	IO-BF	
2	Maximum number of simultaneous sounding instructions = 2	8.4.6.2.7.1, 11.8.3.7.14, [6]	IO-BF	
Comments:				

A.5.1.2.1.8 Ranging and Band Width Request

Table A.137: Initial ranging for BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Initial Ranging in PUSC zone with 2 symbols	8.4.7.1	m	
Comments:				

Table A.138: HO ranging for BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	HO Ranging in PUSC zone with 2 symbols	8.4.7.1	m	
Comments:				

Table A.139: Periodic Ranging for BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Periodic Ranging in PUSC zone with 1 symbols	8.4.7.2	m	
Comments:				

Table A.140: BW Request for BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	BW Request in PUSC zone with 1 symbols	8.4.7.2	m	
Comments:				

A.5.1.2.1.9 Fast Feedback

Table A.141: Fast-Feedback/CQI Channel Encoding for BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	6 bits	[5] 8.4.5.4.10.5	m	
Comments:				

Table A.142: Fast-Feedback/CQI Channel Allocation Method for BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Fast feedback channel allocation using CQICH Allocation IE	[5] 8.4.5.4.12	m	
Comments:				

A.5.1.2.1.10 Channel Coding

Table A.143: Repetition for BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Repetition	8.4.9.5	m	
Comments: Item 1 is only applicable to A.35-1, A.36-1, A.37-1, **(i.e. QPSK 1/2 for SISO) and A.42-1 (i.e. QPSK 1/2 for Matrix-A MIMO).**				

Table A.144: Randomization for BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Randomization	8.4.9.1	m	
Comments:				

Table A.145: Convolutional Code for BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Tail Biting	8.4.9.2.1	m	
Comments: Convolutional Code shall be only applicable for FCH.				

Table A.146: Convolutional Turbo Code for BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	CTC	8.4.9.2.3 excluding 8.4.9.2.3.5	m	
Comments:				

Table A.147: Interleaving for BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Interleaving	8.4.9.3	m	
Comments:				

A.5.1.2.1.11 HARQ

Table A.148: HARQ Chase Combining for BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Chase with CTC	8.4.15.1	m	
Comments:				

Table A.149: ACK Channel for BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	ACK channel	8.4.5.4.13	m	
Comments:				

A.5.1.2.1.12 Control Mechanism

Table A.150: Synchronization for BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	BS Synchronization in time /slot	8.4.10.1.1, 6.3.2.3.47	m	
2	BS Synchronization in frequency	8.4.10.1.1	m	
3	BS to Neighbour BS Synchronization in frequency	6.3.2.3.47	m	
Comments:				

A.5.1.2.1.13 Power Control

Table A.151: Closed-loop Power Control for BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Closed loop power control	8.4.10.3 and 8.4.10.3.1	m	
Comments:				

Table A.152: Open-loop Power Control for BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Open loop power control	8.4.10.3.2	m	
2	Passive Uplink open loop power control	8.4.10.3.2	m	
3	UL Tx power and Headroom transmission condition using bandwidth request and UL Tx Power Report header	8.4.10.3.2.1 and 6.3.2.1.2.1.2	m	
Comments:				

A.5.1.2.1.14 Channel Quality Measurements

Table A.153: CINR Measurement for BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Physical CINR measurement from the preamble for frequency reuse==1 (feedback type=0b00 and report type=0 and CINR preamble report type=0)	6.3.18, 8.4.5.4.12, 8.4.11.3 and 11.8.3.7.9	m	
2	Physical CINR measurement from the preamble for frequency reuse==3 (feedback type=0b00 and report type=0 and CINR preamble report type=1)	6.3.18, 8.4.5.4.12, 8.4.11.3 and 11.8.3.7.9	m	
3	Physical CINR measurement for a permutation zone from pilot subcarriers (feedback type=0b00 and report type=1 and CINR zone measurement type=0)	6.3.18, 8.4.5.4.12, 8.4.11.3 and 11.8.3.7.9	m	
4	Effective CINR measurement for a permutation zone from pilot subcarriers (feedback type=0b01 and report type=1 and CINR zone measurement type=0)	6.3.18, 8.4.5.4.12, 8.4.11.3 and 11.8.3.7.9	m	
5	Major group indication (applicable to PUSC zone only)	8.4.5.4.12	IO-BF	
6	MIMO permutation feedback cycle (applicable to MIMO only)	8.4.5.4.12	IO-MIMO	
Comments:				

A.5.1.2.1.15 Modulation

Table A.154: PRBS for BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	PRBS	8.4.9.4.1	m	
Comments:				

Table A.155: Downlink MCS for BS, Convolutional Coding

Mobile Station (MS)				
Item		**Reference**	**Status**	**Support**
1	QPSK (CC) 1/2	11.4.2	m	
Comments:				

Table A.156: Downlink MCS for BS, Convolutional Turbo Code

Mobile Station (MS)				
Item		**Reference**	**Status**	**Support**
1	QPSK (CTC) 1/2	11.4.2	**m**	
2	QPSK (CTC) 3/4	11.4.2	m	
3	16-QAM (CTC) 1/2	11.4.2	m	
4	16-QAM (CTC) 3/4	11.4.2	m	
5	64-QAM (CTC) 1/2	11.4.2	m	
6	64-QAM (CTC) 2/3	11.4.2	m	
7	64-QAM (CTC) 3/4	11.4.2	m	
8	64-QAM (CTC) 5/6	11.4.2	m	
Comments:				

Table A.157: Uplink MCS for BS, Convolutional Turbo Code

Mobile Station (MS)				
Item		**Reference**	**Status**	**Support**
1	QPSK (CTC) 1/2	11.3.1.1	**m**	
2	QPSK (CTC) 3/4	11.3.1.1	m	
3	16-QAM (CTC) 1/2	11.3.1.1	m	
4	16-QAM (CTC) 3/4	11.3.1.1	m	
Comments:				

Table A.158: Pilot modulation for BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Modulation of all pilots in downlink for FUSC permutations	8.4.9.4.3	m	
2	Modulation of pilots in downlink belonging to the segment for PUSC permutations	8.4.9.4.3	m	
3	Modulation of pilots in downlink in allocated AMC bins for AMC allocations	8.4.9.4.3	m	
4	Pilot modulation for PUSC with dedicated pilot	8.4.9.4.3	IO-BF	
5	Pilot modulation for MIMO PUSC		IO-MIMO	
6	Pilot modulation for MIMO PUSC with dedicated pilot		IO-BF and IO-MIMO	
7	Pilot modulation for AMC 2x3 with dedicated pilot (BS shall not modulate pilots that belong to bins that are not allocated in the DL-MAP)		IO-BF	
Comments: The BS support for item 6 shall be required when BS applies for IO-BF AND IO-MIMO certifications.				

Table A.159: Preamble modulation for BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Modulation of pilots in downlink preamble	8.4.9.4.3.1	m	
Comments:				

Table A.160: FCH for BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Used sub-channel bitmap	8.4.4.3	m	
2	DL MAP coding indication	8.4.4.3	m	
3	DL MAP repetition coding	8.4.4.3	m	
Comments:				

Table A.161: Coding of the DL-MAP for BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	0b010 - CTC encoding used on DL-MAP	8.4.4.3	m	
Comments:				

A.5.1.2.1.16 MAP Support

Table A.162: Normal MAP for BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Normal DL-MAP.	6.3.2.3.2	m	
2	Normal UL-MAP	6.3.2.3.4	m	
3	Compressed DL-MAP	8.4.5.6.1	m	
4	Compressed UL-MAP	8.4.5.6.2	m	
5	Sub-DL-UL-MAP in first zone	6.3.2.3.60	m	
6	MBS MAP message	6.3.2.3.57	IO-MBS	
Comments:				

Table A.163: MAP Features for BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	CID in DL-MAP IE in DL-MAP or Compressed DL-MAP	8.4.5.3.7	m	
2	RCID IE in DL-MAP IE in SUB-DL-UL-MAP	8.4.5.3	m	
3	UL allocation start IE	8.4.5.4.15	m	
4	Space-Time Coding (STC)/Zone switch IE	8.4.5.3.4,	m	
5	HARQ and Sub-MAP pointer IE in compressed DL map	8.4.5.3.10	m	
6	UL Zone Switch IE	8.4.5.4.7	m	
Comments:				

A.5.1.2.1.17 Multiple Input Multiple Output (MIMO)

Table A.164: Supported Features for DL PUSC MIMO for BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	2-antenna, matrix A	8.4.8.1.2.1.1 8.4.8.1.4	IO-MIMO	
2	2-antenna, matrix B, vertical encoding	8.4.8.1.2.1.3 8.4.8.1.4	IO-MIMO	
Comments:				

Table A.165: Supported Features for UL PUSC MIMO for BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Collaborative SM for two MS with single transmit antenna	8.4.8.1.5	IO-MIMO	
2	Capable of processing pilot pattern A and B	8.4.8.1.5	IO-MIMO	
Comments:				

Table A.166: MIMO Feedback for BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Fast DL measurement feedback with more than one Rx antennas	8.4.5.4.10.6 8.4.5.4.10.1 8.4.5.4.10.5	IO-MIMO	
2	Mode selection feedback with 6 bits	8.4.5.4.10.8	IO-MIMO	
Comments:				

Table A.167: HARQ DL support for MIMO for BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	MIMO DL Chase Combining	8.4.5.3.21	IO-MIMO	
Comments:				

Table A.168: HARQ UL support for MIMO for BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	MIMO UL Chase Combining	8.4.5.4.24	IO-MIMO	
Comments:				

A.5.1.2.1.18 BS Performance Requirements

Table A.169: Max BS Sensitivity Level for Convolutional Turbo Coding for 3,5 MHz Bandwidth, UL PUSC

BW (MHz)	Sensitivity (dBm)	Reference	Status	Support
QPSK-1/2	-93,1		m	
QPSK-3/4	-89,7		m	
16QAM-1/2	-87,4		m	
16QAM-3/4	-83,3		m	
NOTE: This table is applicable to A.3-3 only.				
Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 84 in [6] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.				

Table A.170: Max BS Sensitivity Level for Convolutional Turbo Coding for 3,5 MHz Bandwidth, UL AMC

BW (MHz)	Sensitivity (dBm)	Reference	Status	Support
QPSK-1/2	-92,8		m	
QPSK-3/4	-89,4		m	
16QAM-1/2	-87,1		m	
16QAM-3/4	-83,0		m	
NOTE: This table is applicable to A.3-3 only.				
Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 84 in [6] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.				

Table A.171: Max BS Sensitivity Level for Convolutional Turbo Code for 5 MHz Bandwidth, UL PUSC

BW (MHz)	Sensitivity (dBm)	Reference	Status	Support
QPSK-1/2	-91,6		m	
QPSK-3/4	-88,2		m	
16QAM-1/2	-85,9		m	
16QAM-3/4	-81,8		m	
NOTE: This table is applicable to A.3-2, A.3-4, A.3-6, A.3-7 and A.3-10 only.				
Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 84 in [6] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.				

Table A.172: Max BS Sensitivity Level for Convolutional Turbo Code for 5 MHz Bandwidth, UL AMC

BW (MHz)	Sensitivity (dBm)	Reference	Status	Support
QPSK-1/2	-91,3		m	
QPSK-3/4	-87,9		m	
16QAM-1/2	-85,6		m	
16QAM-3/4	-81,5		m	
NOTE: This table is applicable to A.3-2, A.3-4, A.3-6, A.3-7 and A.3-10 only.				
Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 84 in [6] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.				

Table A.173: Max BS Sensitivity Level for Convolutional Turbo Code for 7 MHz Bandwidth, UL PUSC

BW (MHz)	Sensitivity (dBm)	Reference	Status	Support
QPSK-1/2	-89,9		m	
QPSK-3/4	-86,5		m	
16QAM-1/2	-84,2		m	
16QAM-3/4	-80,1		m	
NOTE: This table is applicable to A.3-8 and A.4-11 only.				
Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 84 in [6] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.				

Table A.174: Max BS Sensitivity Level for Convolutional Turbo Code for 7 MHz Bandwidth, UL AMC

BW (MHz)	Sensitivity (dBm)	Reference	Status	Support
QPSK-1/2	-89,8		m	
QPSK-3/4	-86,4		m	
16QAM-1/2	-84,1		m	
16QAM-3/4	-80,0		m	
NOTE: This table is applicable to A.3-8 and A.3-11 only.				
Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 84 in [6] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.				

Table A.175: Max BS Sensitivity Level for Convolutional Turbo Code for 8,75 MHz Bandwidth, UL PUSC

BW (MHz)	Sensitivity (dBm)	Reference	Status	Support
QPSK-1/2	-89,0		m	
QPSK-3/4	-85,6		m	
16QAM-1/2	-83,3		m	
16QAM-3/4	-79,2		m	
NOTE: This table is applicable to A.3-1 only.				
Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 84 in [6] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.				

Table A.176: Max BS Sensitivity Level for Convolutional Turbo Code for 8,75 MHz Bandwidth, UL AMC

BW (MHz)	Sensitivity (dBm)	Reference	Status	Support
QPSK-1/2	-88,8		m	
QPSK-3/4	-85,4		m	
16QAM-1/2	-83,1		m	
16QAM-3/4	-79,0		m	
NOTE: This table is applicable to A.3-1 only.				
Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 84 in [6] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.				

Table A.177: Max BS Sensitivity Level for Convolutional Turbo Code for 10 MHz Bandwidth, UL PUSC

BW (MHz)	Sensitivity (dBm)	Reference	Status	Support
QPSK-1/2	-88,5		m	
QPSK-3/4	-85,1		m	
16QAM-1/2	-82,8		m	
16QAM-3/4	-78,7		m	
NOTE: This table is applicable to A.3-2, A.3-5, A.3-6, A.3-9, A.3-12 only.				
Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 84 in [6] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.				

Table A.178: Max BS Sensitivity Level for Convolutional Turbo Code for 10 MHz Bandwidth, UL AMC

BW (MHz)	Sensitivity (dBm)	Reference	Status	Support
QPSK-1/2	-88,3		m	
QPSK-3/4	-84,9		m	
16QAM-1/2	-82,6		m	
16QAM-3/4	-78,5		m	
NOTE: This table is applicable to A.3-2, A.3-5, A.3-6, A.3-9, A.3-12 only.				
Comments: Equation (149b) of section 8.4.13.1.1 in [5] and table 84 in [6] are used for calculation of the numbers. Sensitivity numbers are calculated based on assumption of repetition factor R = 1.				

A.5.1.2.1.19 Minimum Transmit Requirements

Table A.179: Transmit requirements for BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Tx dynamic Range = 10 dB	8.4.12.1	m	
2	Spectral flatness according to the following: ≤ ±2 dB for spectral lines from - *Nused*/4 to 1 and +1 to *Nused*/4 Within +2/-4 dB for spectral lines from - *Nused*/2 to *Nused*/4 and +*Nused*/4 to *Nused*/2	8.4.12.2	m	
3	Per sub-carrier flatness ≤ 0,4 dB	8.4.12.2	m	
4	Power difference between adjacent subcarriers according to the following: Tx downlink radio frame shall be time-aligned with the 1pps timing pulse within 1 µsec	8.4.12.3	m	
5	Tx relative constellation error according to the following: QPSK-1/2 ≤ -15,0 dB QPSK-3/4 ≤ -18,0 dB 16QAM-1/2 ≤ -20,5 dB 16QAM-3/4 ≤ -24,0 dB 64QAM-1/2 (if 64-QAM supported) ≤ -26,0 dB 64QAM-2/3 (if 64-QAM supported) ≤ -28,0 dB 64QAM-3/4 (if 64-QAM supported) ≤ -30,0 dB 64QAM-5/6 (if 64-QAM supported) ≤ -30,0 dB	8.4.12.3	m	
Comments:				

A.5.1.2.1.20 Receive Requirements

Table A.180: BS Receiver Requirements

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	BS Rx Max input level on-channel reception tolerance = -45 dBm	8.4.13.3.2		
2	BS Rx Max input level on-channel damage tolerance = -10 dBm	8.4.13.4.2		
3	Min adjacent channel rejection at BER=10^{-6} for 3 dB degradation C/I according to the following: 16QAM-3/4 10 dB	8.4.13.2		
4	Min alternate channel rejection at BER=10^{-6} for 3 dB degradation C/I according to the following: 16QAM-3/4 29 dB	8.4.13.2		
Comments:				

A.5.1.2.1.21 BS Synchronization

Table A.181: BS Synchronization

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	BS reference frequency accuracy within $\pm 2 \times 10^{-6}$	8.4.14.1	m	
2	BS to BS frequency synchronization accuracy for Hand Over ≤ 1 % of the subcarrier spacing	6.3.2.3.47	m	
Comments:				

A.5.1.2.2 BS MAC functions

Table A.182: Convergence Sub layer protocol support

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Packet convergence sub layer	[4] 5.2	m	
Comments:				

A.5.1.2.2.1 Packet Convergence Sublayer

Table A.183: Packet Convergence Sub layer support

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Internet Protocol (IPv4)	[4] 5.2.6	m	
2	Internet Protocol (IPv6)	[4] 5.2.6	m	
3	IEEE 802.3 [13] (Ethernet)	[4] 5.2.4	IO-ETH1	
4	IPv4 over 802.3 [13] Ethernet	[4] 5.2.4	IO-ETH2	
5	IPv6 over 802.3 [13] Ethernet	[4] 5.2.4	IO-ETH3	
6	IPv4 with Header Compression (ROHC)	[5] 5.2.7	m	
7	IPv6 with Header compression (ROHC)	[5] 5.2.7	m	
Comments: Item 3, 4, and 5 are not required for WiMAX certified label, only optionally certified.				

Table A.184: Major packet classification

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	IP Classification	[4] 11.13.19.3.4	m	
2	Ethernet classification	[4] 11.13.19.3.4	IO-ETH1 OR IO-ETH2 OR IO-ETH3	
Comments:				

Table A.185: IP packet classification in the UL

Item	**Capability**	**Reference**	**Status**	**Support**
1	Classification based on DSCP /IP TOS field	[4] 5.2.2, 11.13.19.3.4.2	m	
2	Classification based on IP Protocol/Next Header field	[4] 5.2.2, 11.13.19.3.4.3	m	
3	Classification based on IP masked Source Address	[4] 5.2.2, 11.13.19.3.4.4	m	
4	Classification based on IP Destination Address	[4] 5.2.2, 11.13.19.3.4.5	m	
5	Classification based on protocol source port range	[4] 5.2.2, 11.13.19.3.4.6	m	
6	Classification based on protocol destination port range	[4] 5.2.2, 11.13.19.3.4.7	m	
Comments:				

Table A.186: PHS

Item	**Capability**	**Reference**	**Status**	**Support**
1	PHS	5.2.3 5.2.3.1 5.2.3.2	m	
Comments:				

A.5.1.2.2.2 MAC common part sub layer

Table A.187: MAC Common part sublayer functionalities

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Addressing and connections	[4] 6.3.1	m	
2	Construction of PDUs	[4] 6.3.3	m	
3	ARQ	[4] 6.3.4	m	
4	Uplink scheduling service	[4] 6.3.5	m	
5	Bandwidth allocation and request	[4] 6.3.6	m	
6	Contention resolution	[4] 6.3.8	m	
7	Network entry and initialization	[4] 6.3.9	m	
8	Ranging	[4] 6.3.10	m	
9	Update of UL and DL channel descriptors	[4] 6.3.11	m	
10	Quality of service	[4] 6.3.14	m	
Comments:				

Table A.188: Miscellaneous management functions

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	MS reset initiated by BS (RES-CMD)	[4] 6.3.2.3.22	o	
2	MS network clock comparison initiated by BS (CLK-CMP)	[4] 6.3.2.3.25	o	
3	MS notifies BS of de-registration (DREG-REQ)	[4] 6.3.2.3.43	m	
4	MS forced by BS to change its channel access (DREG-CMD)	[4] 6.3.2.3.26	m	
5	BS transmits DSX-RVD	[4] 6.3.2.3.27	m	
6	BS transmits REP-REQ message and receives REP-RSP	[4] 6.3.2.3.33	m	
7	BS transmits FPC	[4] 6.3.2.3.34	o	
Comments:				

A.5.1.2.2.2.1 Addressing and Connections

Table A.189: Addressing and Connections

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Globally Unique 48 bits MAC Address, making up three 16 bits CID	[4] 6.3.1	m	
2	Time urgent MAC Management messages on basic connection	[4] 6.3.1	m	
3	Delay tolerant MAC Management messages on primary management connection	[4] 6.3.1	m	
Comments:				

A.5.1.2.2.2.2 Construction and Transmission of MAC PDUs

Table A.190: Transmission conventions

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Fields of MAC messages are transmitted in the same order as they appear in the corresponding tables in the standard.	[4] 6.3.3.1	m	
2	Fields of MAC messages and fields of TLVs, which are specified in the standard as binary numbers (including CRC and HCS) are transmitted as a sequence of their binary digits, starting from MSB. Bit masks (for example, in ARQ) are considered numerical fields. For signed numbers MSB is allocated for the sign. Length field in the "definite form" of ITU-T Recommendation X.690 [15] is also considered a numerical field.	[4] 6.3.3.1	m	
3	Fields specified as SDUs or SDU fragments (for example, MAC PDU payloads) are transmitted in the same order of bytes as received from upper layers.	[4] 6.3.3.1	m	
4	Fields specified as strings are transmitted in the order of symbols in the string. In cases c and d, bits within a byte are transmitted in the order MSB first.	[4] 6.3.3.1	m	
Comments:				

Table A.191: Subheader and Extended Subheader support

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Extended subheader support	6.3.2.2.7	m	
2	Capability of receiving Grant management Subheader	6.3.2.2.2	m	
Comments:				

Table A.192: PDU concatenation

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Concatenate Multiple MAC PDUs into a single burst of the allocated length	[4] 6.3.3.2	m	
2	Receive concatenated MAC PDUs and determine disposition via CID	[4] 6.3.3.2	m	
3	Padding of any unused space with stuff byte value in the DL Burst	[4] 6.3.3.7	m	
Comments:				

Table A.193: SDU Fragmentation

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Fragment a MAC SDU into multiple MAC PDUs applicable to traffic connections and Management messages on Primary management connection	[4] 6.3.3.3	m	
2	Add Fragmentation Sub header to the SDU fragment including setting FC according to the Fragmentation rules table	[4] 6.3.3.3	m	
3	Do not perform fragmentation of PDUs on "Broadcast management" connections	[4] 6.3.2.3	m	
4	Perform fragmentation of PDUs on 'Fragmentable Broadcast management connection	[4]	m	
5	Increment the FSN modulo 2048 for non-ARQ connections	[4] and [5] 6.3.3.3	m	
6	Increment the BSN modulo 2048 for ARQ connection	[4] 6.3.3.4.2	m	
7	Do not perform fragmentation of PDUs on Basic and Initial Ranging connections	[4] 6.3.2.3	m	
Comments: DCD and UCD message shall be transmitted using "Fragmentable Broadcast management connection".				

Table A.194: SDU reassembly

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Receive and reassemble fragmented SDUs	[4] 6.3.3.3	m	
2	In case of no-ARQ connection, discard SDUs corrupted due to loss of fragment	[4] 6.3.3.3.1	m	
Comments:				

Table A.195: Packing

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Pack variable length SDUs in a single MAC PDU on non-ARQ connections	[4] 6.3.3.4.1.2	m	
2	Unpack variable length SDUs on non-ARQ connections	[4] 6.3.3.4.1.2	m	
3	Pack variable length SDUs or SDUs fragments in a single MAC PDU on ARQ-enabled connections	[4] 6.3.3.4.2 5.1.2	m	
4	Unpack variable length SDUs or SDUs fragments on ARQ-enabled connections	[4] 6.3.3.4.2 5.1.2	m	
5	Do not perform packing of SDUs on Basic, Broadcast and Initial Ranging connections	[4] 6.3.2.3	m	
6	Perform packing of ARQ Feedback Payload	[4] 6.3.3.4.3	m	
7	Extracting ARQ Feedback IEs from received ARQ Feedback Payload	[4] 6.3.3.4.3	m	
Comments:				

Table A.196: CRC

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Compute and add CRC, and set CI bit based on connection properties	[4] 6.3.3.5	m	
2	Check CRC based on CI bit	[4] 6.3.3.5	m	
Comments:				

A.5.1.2.2.2.3 ARQ

Table A.197: ARQ

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Pack several ARQ feedback information elements in a single ARQ feedback payload	[4] 6.3.4 and 5.1.3	m	
2	Insert a single ARQ feedback payload as first payload in a MAC PDU	[4] 6.3.4 and 5.1.3	m	
Comments:				

A.5.1.2.2.2.4 Data Delivery Services for Base Network

Table A.198: Data Delivery Services for Base Network

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Unsolicited Grant service (UGS)	6.3.20.1.1	m	
2	Real-Time Variable Rate (RT-VR) Service	6.3.20.1.2	m	
3	Non-Real-Time Variable Rate (NRT-VR) Service	6.3.20.1.3	m	
4	Best Effort (BE) Service	6.3.20.1.4	m	
5	Extended Real-Time Variable Rate (ERT-VR) service	6.3.20.1.5	m	
Comments:				

A.5.1.2.2.2.5 Request-Grant Mechanism

Table A.199: Request-Grant mechanism

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Incremental bandwidth request using BW request header	6.3.6.1	m	
2	Aggregate bandwidth request using BW request header	6.3.6.1	m	
3	Bandwidth request using Grant Management Subheader	6.3.2.2.2	m	
4	Request-Grant mechanism combined with UL Tx power report	6.3.2.1.2.1.2	m	
5	CQICH allocation request using CQICH allocation request header	6.3.2.1.2.1.4	m	
6	Contention-based CDMA bandwidth requests	6.3.6.5	m	
Comments:				

A.5.1.2.2.2.6 Network entry and initialization

Table A.200: Network entry and initialization

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	BS sends downlink parameters using periodic broadcast of the DCD message	6.3.9.2	m	
2	BS sends uplink parameters using periodic broadcast of the UCD message	6.3.9.3, 6.3.9.4	m	
3	BS allocates an initial ranging opportunity	6.3.9.5, 6.3.9.6	m	
4	BS commands MS to adjusts power, timing and frequency during initial ranging	6.3.9.6	m	
5	BS negotiates basic capabilities	6.3.9.7	m	
6	BS performs authorization and key exchange	6.3.9.8, 7.2	m	
7	BS accepts registration request from MS to allow SS in network	6.3.9.9	m	
Comments:				

Table A.201: DL parameter transmission

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	BS sends DLFP correctly	[4] 8.4.4.3	m	
2	BS sends DL-MAP correctly	[4] 6.3.9.2	m	
3	BS sends DCD correctly	[4] 6.3.9.2	m	
Comments:				

Table A.202: UL parameter transmission

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	BS sends UCD correctly	[4] 6.3.9.3, 6.3.9.4	m	
2	BS sends UL-MAP correctly		m	
Comments:				

Table A.203: Initial ranging

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	BS sends UL-MAP containing initial ranging opportunity	6.3.10.3.1	m	
2	BS receives initial ranging code from MS	6.3.10.3.1, 8.4.7.1	m	
3	BS sends RNG-RSP with time and power corrections in response to initial ranging code from MS, including an accepted CDMA code and related information that help the MS identify destination of RNG-RSP	6.3.10.3.1	m	
4	BS receives initial ranging code transmitted in periodic ranging region after responding with RNG-RSP including status continue	6.3.10.3.1, 8.4.7.1	m	
5	BS sends CDMA allocation IE after sending RNG-RSP including status success so the MS can transmit RNG-REQ	6.3.10.3.1, 8.4.5.4.3	m	
6	BS receives RNG-REQ transmitted in UL slots allocated by CDMA allocation IE	6.3.10.3.1, 8.4.5.4.3	m	
7	BS assigns Basic and Primary Management CIDs in response to the first RNG-REQ message transmitted in UL slots allocated by CDMA allocation IE	6.3.10.3.1	m	
Comments: BS shall include an accepted CDMA code and related information for identifying SS that will use UL slots allocated by CDMA allocation IE.				

Table A.204: BS basic capability negotiation

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	BS receives SBC-REQ	[4] 6.3.9.7	m	
2	BS sends SBC-RSP	[4] 6.3.9.7	m	
Comments:				

Table A.205: Registration

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	BS receives REG-REQ	[4] 6.3.9.9	m	
2	BS sends REG-RSP.	[4] 6.3.9.9	m	
Comments:				

Table A.206: Periodic ranging

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	BS receives periodic ranging code	6.3.10.3.2	m	
2	BS sends RNG-RSP unsolicited or in response to a periodic ranging code with time and/or power and/or frequency corrections or none of above, including an accepted CDMA code and related information that help the MS identify the destination of RNG-RSP	6.3.10.3.2	m	
Comments:				

A.5.1.2.2.2.7 Update of channel descriptors

Table A.207: Update of channel descriptors by BS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Simultaneous support of two channel descriptors	6.3.11	m	
2	BS sends UL channel descriptors at regular intervals using UCD message with identical Configuration change count	6.3.11	m	
3	BS sends new UL channel descriptors using UCD message with incremented Configuration change count (I+1 mod 256)	6.3.11	m	
4	BS sends DL channel descriptors at regular intervals using DCD message with identical Configuration change count	6.3.11	m	
5	BS sends new DL channel descriptors using DCD message with incremented Configuration change count (I+1 mod 256)	6.3.11	m	
6	Receive with the new uplink parameters starting from the first PS that is covered by the UL-MAP with UCD Count matching the new Configuration Change Count	6.3.11	m	
7	Transmit with the new downlink parameters starting from the frame with the first DL-MAP with a DCD Count matching the new Configuration Change Count	6.3.11	m	
Comments: For item 1, two channel descriptors are the current active set and the new pending set, during the transition period between a DCD or UCD configuration change and when the new configuration becomes active.				

A.5.1.2.2.2.8 QoS

Table A.208: Service flow operations

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Dynamic service flow creation - BS-initiated	6.3.14.7.1.2	m	
2	Dynamic service flow creation - MS-initiated	6.3.14.7.1.1	m	
3	Dynamic service flow change - BS-initiated	6.3.14.9.4.2	m	
4	Dynamic service flow change - MS-initiated	6.3.14.9.4.1	m	
5	Dynamic service flow deletion - BS-initiated	6.3.14.9.5.2	m	
6	Dynamic service flow deletion - MS-initiated	6.3.14.9.5.1	m	
Comments:				

A.5.1.2.2.2.9 Sleep Mode

Table A.209: Sleep Mode

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Sleep Mode Implementation in BS	6.3.21	m	
2	Power Saving Class type 1 support	6.3.21.2	m	
3	Support of Traffic Indication Message for Power Saving Class type 1	6.3.21.2	m	
4	Indicating DL traffic by SLPID bit map in TRF-IND	6.3.21.1 6.3.2.3.46	m	
5	Indicating DL traffic by SLPID in TRF-IND	6.3.21.1 6.3.2.3.46	m	
6	Support of SLPID_Update TLV in TRF-IND	6.3.2.3.46 11.1.8.2	m	
7	Traffic triggered wakening flag	6.3.2.3.44-45, 6.3.21.2	m	
8	Activation of Power Saving Class by unsolicited SLP-RSP message from BS	6.3.2.3.45 6.3.21.1	m	
9	DL sleep control extended subheader	6.3.2.2.7.2 11.7.25	m	
10	Bandwidth request and uplink sleep control header	6.3.2.1.2.1.6 11.7.25	m	
11	Support of periodic ranging in sleep mode	6.3.21.5 11.16.2	m	
12	Sleep mode multicast CID support at BS	10.4 6.3.2.3.46	m	
13	BS Support of triggered action indicated by Enabled-Action-Triggered TLV	6.3.2.3.6, 6.3.2.3.44-45, 6.3.21.1, 11.5, 11.6, 11.7.3, 11.5, 11.6, 11.7.3	m	
Comments:				

A.5.1.2.2.2.10 Handover

Table A.210: Neighbour Advertisement

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Neighbour Advertisement	6.3.2.3.47	m	
2	Support BS index at the BS (Use BS index instead of BSID) in Scan/HO related messages, as numbered in MOB_NBR-ADV	6.3.2.3.48 to 51, 6.3.2.3.53	m	
Comments:				

Table A.211: Scanning

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Scanning for cell selection (HO)	6.3.2.3.48 and 49	m	
2	BS allocates Scanning Interval in response to MS request	6.3.2.3.48 and 49 6.3.21.1.2	m	
3	Unsolicited Scanning Interval Allocation by BS	6.3.2.3.48 and 49, 6.3.21.1.2	m	
4	BS commands MS to perform scanning triggered by serving BS metrics	6.3.21.1.2	m	
Comments:				

Table A.212: Scan Reporting Type Support

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Periodic reporting based on Report Period as indicated in MOB_SCN-RSP message	6.3.2.3.49, 11.4.1	m	
2	BS commands MS to perform reporting triggered by metric conditions	6.3.2.3.49, 11.4.1	m	
Comments:				

Table A.213: HO/Scan/Report Trigger Metrics

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Mean BS CINR	6.3.2.3.53, 11.8.7	m	
2	Mean BS RSSI	6.3.2.3.53, 11.8.7	m	
3	BS Round Trip Delay	6.3.2.3.53, 11.8.7	m	
Comments:				

Table A.214: MAC Layer HO Procedures

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	General HO Support	6.3.21.2, 6.3.2.3.55	m	
2	HO initiated by BS support at BS side	6.3.22.2	m	
3	HO initiated by MS support at BS side	6.3.22.2	m	
4	HO Indication	6.3.21.2.5	m	
5	Cancellation of HO	6.3.21.2.3	m	
6	Metric Triggered HO Requests	11.1.7 (table 348g)	m	
7	Resource Retention Support	6.3.2.3.52, 6.3.2.3.54	m	
8	CDMA HO Ranging	6.3.10.3.3	m	
9	HO_ID support	6.3.2.3.52, 6.3.2.3.54	m	
10	Support negotiating of "HO authorization policy" during HO (i.e. between BSs)	6.3.2.3.52, 6.3.2.3.54	m	
Comments:				

Table A.215: HO Optimization

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	HO Optimization Support	6.3.2.3.6, 6.3.21.2.7, 11.6	m	
2	Support Omission of SBC-REQ management messages	6.3.2.3.6, 6.3.21.2.7, 11.6	m	
3	Support Omission of PKM Authentication phase except TEK Phase	6.3.2.3.6, 6.3.21.2.7, 11.6	m	
4	Support Omission of PKM TEK creation phase during re-entry processing	6.3.2.3.6, 6.3.21.2.7, 11.6	m	
5	Support "Full State Sharing"- No exchange of network re-entry messages after ranging before resuming normal operations	6.3.2.3.6, 6.3.21.2.7, 11.6	m	
6	Unsolicited SBC-RSP management message with updated capabilities information	6.3.2.3.6, 6.3.21.2.7, 11.6	m	
7	Support SBC- RSP TLVs as part of RNG-RSP message	11.6	m	
8	Support Omission of REG-REQ during NW re-entry	6.3.2.3.6, 6.3.21.2.7, 11.6	m	
9	Unsolicited REG-RSP with updated capabilities information	6.3.2.3.6, 6.3.21.2.7, 11.6	m	
10	Support REG-RSP TLV as part of RNG-RSP message	11.6	m	
11	Support of ARQ continuation using SN report header after NW re-entry	6.3.2.3.6, 6.3.21.2.7, 11.6	m	
12	Support continuation of non-ARQ connection using SDU SN extended sub-header before handover and using SN report header after NW re-entry	6.3.2.2.7.8, 6.3.2.1.2.1.7	o	
13	Support receiving Bandwidth Request header with zero BR as a notification of MS's successful re-entry registration	6.3.21.2.7, 11.6	m	
14	Support sending traffic IP address refresh bit	11.6	m	
15	Sending SN request extended subheader to request additional SN Report Header after network re-entry	6.3.2.2.7.7	o	
Comments:				

Table A.216: CID and SAID Update

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	CID update from BS by RNG-RSP	11.7.9, 11.6	m	
2	CID update from BS by REG-RSP	11.7.9	m	
3	Compressed CID update from BS by RNG-RSP	11.7.9.1	m	
4	Compressed CID update from BS by REG-RSP	11.7.9.1	m	
5	SAID update from BS by RNG-RSP	11.7.17, 11.6	m	
6	SAID update from BS by SA-TEK-RSP	11.7.20	m	
Comments:				

A.5.1.2.2.2.11 Idle Mode

Table A.217: Idle Mode

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	General Idle Mode functionality	6.3.24	m	
2	Idle mode initiation by DREG-REQ message from BS	6.3.24.1	m	
3	Idle Mode initiation by unsolicited DREG-CMD from BS	6.3.24.1	m	
4	Maintain connection information at BS side during Idle Mode initiation process	6.3.24.1	m	
5	Request from BS, MS to retain service and operational information by DREG-CMD message	6.3.24.1	m	
6	BS retention of service and operational information by DREG-REQ message	6.3.24.1	m	
7	BS capability of transmitting Broadcast Control Pointer IE	6.3.24.5	m	
8	Paging Group Update MS	6.3.4.8.1.1	m	
9	Timer Location Update MS	6.3.24.8.1.2	m	
10	Power Down Location Update MS	6.3.24.8.1.3	m	
11	Secure Location Update	6.3.24.8.2.1	m	
12	Un-secure Location Update	6.3.24.8.2.2	m	
13	Paging Preference	11.13.30	m	
14	Idle mode multicast CID support at BS	10.4	m	
Comments:				

A.5.1.2.2.2.11-a Expedited Re-entry from Idle Mode

Table A.218: Expedited Re-entry from Idle Mode

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Expedited network re-entry from Idle Mode support	6.3.23.9	m	
2	Support Omission of SBC-REQ management messages	11.6	m	
3	Support Omission of PKM Authentication phase except TEK phase	11.6	m	
4	Support Omission of PKM TEK creation phase during re-entry processing	11.6	m	
5	Support "Full State Sharing except ARQ state (blocks in ARQ window and associated timers"" - No exchange of network re-entry messages after ranging before resuming normal operations	11.6	m	
6	Unsolicited SBC-RSP management message with updated capabilities information	11.6	m	
7	Support SBC-RSP TLVs as part of RNG-RSP message	11.6	m	
8	Support Omission of REG-REQ during NW re-entry	11.6	m	
9	Unsolicited REG-RSP with updated capabilities information	11.6	m	
10	Support REG-RSP TLV as part of RNG-RSP message	11.6	m	
11	MS send Bandwidth Request header with zero BR as a notification of MS's successful re-entry registration.	11.6	m	
12	Support of transmission of IP refresh bit	11.6	m	
Comments:				

A.5.1.2.2.2.12 Feedback Mechanism

Table A.219: Feedback Mechanism

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Feedback Header	6.3.2.1.2.2.1	m	
2	Bandwidth request and UL Tx Power Report	6.3.2.1.2.1.2	m	
3	SN report header	6.3.2.1.2.1.7	m	
4	SN request extended subheader	6.3.2.2.7.7	o	
Comments:				

A.5.1.2.2.2.13 Multicast Traffic Connection

Table A.220: Multicast Traffic Connection

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Multicast traffic connection	6.3.13	m	
Comments:				

A.5.1.2.2.2.14 Security Sublayer

Table A.221: Security functions

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	BS supports two simultaneous active TEKs	6.3.9.8, 7.2.1	m	
2	BS supports SAID update using RNG-REQ/RNG-RSP	11.6	m	
3	BS supports SAID update using SA-TEK-REQ/SA-TEK-RSP	11.7.20	m	
4	BS receives PKMv2 EAP-Start	6.3.2.3.9.15	m	
5	BS exchanges PKMv2 EAP-Transfer	7.2.2.2	m	
6	BS derives AK	7.2.2.2	m	
7	BS derives KEK	7.2.2.2	m	
8	BS derives message authentication keys	7.2.2.2	m	
9	BS sends PKMv2 SA-TEK-Challenge	7.2.2.2	m	
10	BS re-sends PKMv2 SA-TEK-challenge when SAChallengeTimer timeout	7.8.1	m	
11	BS checks whether AKID is valid or not	7.8.1	m	
12	BS receives PKMv2 SA-TEK-Request	7.8.1	m	
13	BS sends PKMv2 SA-TEK-Response	7.8.1	m	
14	BS manages SAs it included in PKMv2 SA-TEK-Response	7.2.2.5	m	
15	BS receives PKMv2 Key-Request	7.8.1	m	
16	BS sends PKMv2 Key-Reply	7.8.1	m	
17	BS supports Dot16KDF algorithm	7.2.2.2, 7.5.4.6.1	m	
Comments: In case of initial network entry, BS shall not receive PKMv2 EAP-Start message.				

Table A.222: PKM message encodings support

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	(one or more) SA_TEK_Update	11.1.10	m	
2	Security negotiation parameters	11.8.4	m	
3	Display-String	11.9.1	o	
4	TEK	11.9.3	m	
5	Key lifetime	11.9.4	m	
6	Key sequence number	11.9.5	m	
7	SAID	11.9.7	m	
8	TEK-Parameters	11.9.8	m	
9	Error-code	11.9.10	m	
10	Security capabilities	11.9.13	m	
11	Cryptographic suite	11.9.14	m	
12	Cryptographic suite list	11.9.15	m	
13	SA descriptor(s)	11.9.17	m	
14	SA type	11.9.18	m	
15	PKM configuration settings	11.9.19	m	
16	Nonce	11.9.20	m	
17	MS_random	11.9.21	m	
18	BS_random	11.9.22	m	
19	CMAC Digest	11.9.27	m	
20	AKID	11.9.32	m	
21	EAP payload	11.9.33	m	
22	SA service type	11.9.35	m	
23	PKMv2 configuration settings	11.9.36	m	
24	Frame Number	11.9.37	m	
Comments:				

Table A.223: Authorization Policy Support

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	802.16 Authorization policy support (this is about the capability of negotiating authorization policy)	11.7.8.7	m	
Comments:				

Table A.224: PKM Version Support

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	PKMv2 Support	11.8.4.1	m	
Comments:				

Table A.225: PKMv2 Authorization Policy Support-Initial Network Entry

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	No Authorization	11.8.4.2	m	
2	EAP-based authorization	11.8.4.2, 7.1.3.2 and 7.2.2.2.2	m	
Comments:				

Table A.226: PKMv2 Authorization Policy Support-Network Re-entry

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	No Authorization	11.8.4.2	m	
2	EAP-based authorization	11.8.4.2, 7.1.3.2 and 7.2.2.2.2	m	
Comments:				

Table A.227: Supported Cryptographic Suites

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	No data encryption, no data authentication and no key encryption	11.9.14	m	
2	CCM-Mode 128-bit AES, CCM-Mode, AES Key Wrap with 128-bit key	11.9.14	m	
Comments: For Item 1: This cryptographic suite means that no encryption and no TEK exchange.				

Table A.228: Message Authentication Code Mode

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	No message authentication	11.8.4.3	m	
2	CMAC	11.8.4.3	m	
Comments:				

Table A.229: Security Association

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Support of Static SA	7.2.1.1 and 7.3.2	m	
2	Support of Dynamic SA	7.2.1.1	m	
3	Support of Primary SA	7.2.1.1	m	
Comments:				

Table A.230: SA Service Type

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Unicast	11.9.35	m	
Comments:				

A.5.1.2.2.2.15 MBS

Table A.231: MBS

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Multi-BS-MBS	6.3.13	IO-MBS	
2	Support for MBS_MAP-IE	6.3.13.2.3	IO-MBS	
3	BS initiated MBS request using DSA-REQ	11.13.20	IO-MBS	
4	BS initiated MBS request using DSA-REQ	11.13.20	IO-MBS	
Comments:				

A.5.1.2.2.2.16 MS's Network Entry issued by BS restart

Table A.232: MS's Network Entry issued by BS restart

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	BS transmits BS restart counter TLV when applicable	6.3.9.11, 11.4.1	m	
Comments:				

A.5.1.2.2.2.17 MAC support for H-ARQ

Table A.233: MAC support for H-ARQ

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	HARQ Support	6.3.17	m	
2	HARQ Buffer Negotiation Capability	11.8.3.7.19	m	
3	HARQ Channel mapping	6.3.17, 11.13.32	m	
4	Capability of DL HARQ channels Number negotiation	11.8.3.7.2	m	
5	Capability of UL HARQ channels Number negotiation	11.8.3.7.3	m	
6	Capability of HARQ ACK delay negotiation in DL transmission	11.4.1	m	
7	Capability of HARQ ACK delay negotiation in UL transmission	11.3.1	m	
8	PDU SN extended subheader for HARQ reordering	11.13.33	m	
Comments: All items above are conditional dependently on HARQ support. HARQ Channel mapping is determined by BS.				

A.6 List of PDUs, MAP IEs, sub-headers, and extended sub-headers

A.6.1 PDUs for MAC layer

A.6.1.1 PDUs for network entry and initialization

Table A.234: BS sending MAC PDUs for network entry and initialization

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	DL-MAP	[4] 6.3.9.2, 6.3.2.3.2	m	
2	DCD	[4] 6.3.9.2, 6.3.2.3.1	m	
3	UL-MAP	[4] 6.3.9.3, 6.3.2.3.4	m	
4	UCD	[4] 6.3.9.3, 6.3.2.3.3	m	
5	RNG-RSP	[4] 6.3.9.5, 6.3.2.3.6	m	
6	SBC-RSP	[4] 6.3.9.7, 6.3.2.3.24	m	
7	PKM-RSP	[4] 6.3.9.8, 6.3.2.3.9	m	
8	REG-RSP	[4] 6.3.9.9	m	
9	Compressed DL-MAP	[4] 8.4.5.6	m	
10	Compressed UL-MAP	[4] 8.4.5.6	m	
Comments:				

Table A.235: BS receiving MAC PDUs for network entry and initialization

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	RNG-REQ	[4] 6.3.9.5, 6.3.2.3.5	m	
2	SBC-REQ	[4] 6.3.9.7, 6.3.2.3.23	m	
3	PKM-REQ	[4] 6.3.9.8, 6.3.2.3.9	m	
4	REG-REQ	[4] 6.3.9.9, 6.3.2.3.7	m	
Comments:				

Table A.236: MS sending MAC PDUs for network entry and initialization

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	RNG-REQ	[4] 6.3.9.5, 6.3.2.3.5	m	
2	SBC-REQ	[4] 6.3.9.7, 6.3.2.3.23	m	
3	PKM-REQ	[4] 6.3.9.8, 6.3.2.3.9	m	
4	REG-REQ	[4] 6.3.9.9, 6.3.2.3.7	m	
Comments:				

Table A.237: MS receiving MAC PDUs for network entry and initialization

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	DL-MAP	[4] 6.3.9.2, 6.3.2.3.2	m	
2	DCD	[4] 6.3.9.2, 6.3.2.3.1	m	
3	UL-MAP	[4] 6.3.9.3, 6.3.2.3.4	m	
4	UCD	[4] 6.3.9.3, 6.3.2.3.3	m	
5	RNG-RSP	[4] 6.3.9.5, 6.3.2.3.6	m	
6	SBC-RSP	[4] 6.3.9.7, 6.3.2.3.24	m	
7	PKM-RSP	[4] 6.3.9.8, 6.3.2.3.9	m	
8	REG-RSP	[4] 6.3.9.9	m	
9	Compressed DL-MAP	[4] 8.4.5.6	m	
10	Compressed UL-MAP	[4] 8.4.5.6	m	
Comments:				

A.6.1.2 PDUs for service flows

Table A.238: BS sending PDUs for service flows

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	DSA-REQ (create)	6.3.2.3.10	m	
2	DSA-RSP	6.3.2.3.11	m	
3	DSA-ACK	6.3.2.3.12	m	
4	DSC-REQ (change)	6.3.2.3.13	m	
5	DSC-RSP	6.3.2.3.14	m	
6	DSC-ACK	6.3.2.3.15	m	
7	DSD-REQ (delete)	6.3.2.3.16	m	
8	DSD-RSP	6.3.2.3.17	m	
9	DSX-RVD (creation or change)	6.3.2.3.27	m	
Comments:				

Table A.239: BS receiving PDUs for service flows

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	DSA-REQ (create)	6.3.2.3.10	m	
2	DSA-RSP	6.3.2.3.11	m	
3	DSA-ACK	6.3.2.3.12	m	
4	DSC-REQ (change)	6.3.2.3.13	m	
5	DSC-RSP	6.3.2.3.14	m	
6	DSC-ACK	6.3.2.3.15	m	
7	DSD-REQ (delete)	6.3.2.3.16	m	
8	DSD-RSP	6.3.2.3.17	m	
Comments:				

Table A.240: MS sending PDUs for service flows

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	DSA-REQ (create)	6.3.2.3.10	m	
2	DSA-RSP	6.3.2.3.11	m	
3	DSA-ACK	6.3.2.3.12	m	
4	DSC-REQ (change)	6.3.2.3.13	m	
5	DSC-RSP	6.3.2.3.14	m	
6	DSC-ACK	6.3.2.3.15	m	
7	DSD-REQ (delete)	6.3.2.3.16	m	
8	DSD-RSP	6.3.2.3.17	m	
Comments:				

Table A.241: MS receiving PDUs for service flows

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	DSA-REQ (create)	6.3.2.3.10	m	
2	DSA-RSP	6.3.2.3.11	m	
3	DSA-ACK	6.3.2.3.12	m	
4	DSC-REQ (change)	6.3.2.3.13	m	
5	DSC-RSP	6.3.2.3.14	m	
6	DSC-ACK	6.3.2.3.15	m	
7	DSD-REQ (delete)	6.3.2.3.16	m	
8	DSD-RSP	6.3.2.3.17	m	
9	DSX-RVD (creation or change)	6.3.2.3.27	m	
Comments:				

A.6.1.3 PDUs for ARQ

Table A.242: BS sending PDUs for ARQ

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	ARQ-feedback	[4] 6.3.4	m	
2	ARQ-discard	[4] 6.3.4	m	
3	ARQ-reset	[4] 6.3.4	m	
Comments:				

Table A.243: BS receiving PDUs for ARQ

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	ARQ-feedback	[4] 6.3.4	m	
2	ARQ-discard	[4] 6.3.4	m	
3	ARQ-reset	[4] 6.3.4	m	
Comments:				

Table A.244: MS sending PDUs for ARQ

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	ARQ-feedback	[4] 6.3.4	m	
2	ARQ-discard	[4] 6.3.4	m	
3	ARQ-reset	[4] 6.3.4	m	
Comments:				

Table A.245: MS receiving PDUs for ARQ

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	ARQ-feedback	[4] 6.3.4	M	
2	ARQ-discard	[4] 6.3.4	M	
3	ARQ-reset	[4] 6.3.4	M	
Comments:				

A.6.1.4 PDUs for miscellaneous capabilities

Table A.246: BS sending MAC PDUs for miscellaneous capabilities

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	RES-CMD	[4] 6.3.2.3.22	o	
2	CLK-CMP	[4] 6.3.2.3.25	o	
3	DREG-CMD	[4] 6.3.2.3.26	m	
4	DSX-RVD	[4] 6.3.2.3.27	m	
5	REP-REQ	[4] 6.3.2.3.33	m	
6	FPC	[4] 6.3.2.3.34	o	
Comments:				

Table A.247: BS receiving MAC PDUs for miscellaneous capabilities

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	DREG-REQ	[4] 6.3.2.3.43	m	
2	REP-RSP	[4] 6.3.2.3.33	m	
Comments:				

Table A.248: MS sending MAC PDUs for miscellaneous capabilities

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	DREG-REQ	[4] 6.3.2.3.43	m	
2	REP-RSP	[4] 6.3.2.3.33	m	
Comments:				

Table A.249: MS receiving MAC PDUs for miscellaneous capabilities

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	RES-CMD	[1] 6.3.2.3.22	o	
2	CLK-CMP	[1] 6.3.2.3.25	o	
3	DREG-CMD	[1] 6.3.2.3.26	m	
4	DSX-RVD	[1] 6.3.2.3.27	m	
5	REP-REQ	[1] 6.3.2.3.33	m	
6	FPC	[1] 6.3.2.3.34	m	
Comments:				

A.6.1.5 PDUs for security

Table A.250: BS sending MAC security messages

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	PKM-RSP PKMv2-EAP-Transfer	6.3.2.3.9	m	
2	PKM-RSP PKMv2-SA-TEK-Challenge	6.3.2.3.9	m	
3	PKM-RSP PKMv2-SA-TEK-Response	6.3.2.3.9	m	
4	PKM-RSP PKMv2-Key-Response	6.3.2.3.9	m	
5	PKM-RSP PKMv2-Key-Reject	6.3.2.3.9	m	
6	PKM-RSP PKMv2-SA-Addition	6.3.2.3.9	m	
7	PKM-RSP PKMv2-TEK-Invalid	6.3.2.3.9	m	
Comments:				

Table A.251: BS receiving MAC security messages (Including some PKMv1 which is needed also for PKMv2)

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	PKM-REQ PKMv2-EAP-Start	6.3.2.3.9	m	
2	PKM-REQ PKMv2-EAP-Transfer	6.3.2.3.9	m	
3	PKM-REQ PKMv2-SA-TEK-Request	6.3.2.3.9	m	
4	PKM-REQ PKMv2-Key-Request	6.3.2.3.9	m	
Comments:				

Table A.252: MS sending MAC security messages (Including some PKMv1 which is needed also for PKMv2)

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	PKM-REQ PKMv2-EAP-Start	6.3.2.3.9	m	
2	PKM-REQ/RSP PKMv2-EAP-Transfer	6.3.2.3.9	m	
3	PKM-REQ PKMv2-SA-TEK-Request	6.3.2.3.9	m	
4	PKM-REQ PKMv2-Key-Request	6.3.2.3.9	m	
Comments:				

Table A.253: MS receiving MAC security messages

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	PKM-REQ/RSP PKMv2-EAP-Transfer	6.3.2.3.9	m	
2	PKM-RSP PKMv2-SA-TEK-Challenge	6.3.2.3.9	m	
3	PKM-RSP PKMv2-SA-TEK-Response	6.3.2.3.9	m	
4	PKM-RSP PKMv2-Key-Response	6.3.2.3.9	m	
5	PKM-RSP PKMv2-Key-Reject	6.3.2.3.9	m	
6	PKM-RSP PKMv2-SA-Addition	6.3.2.3.9	m	
7	PKM-RSP PKMv2-TEK-Invalid	6.3.2.3.9	m	
Comments:				

A.6.1.6 PDUs for Sleep Mode

Table A.254: BS sending MAC PDUs for Sleep Mode

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	MOB_SLP-RSP message	6.3.2.3.45	m	
2	MOB_TRF-IND message	6.3.2.3.46	m	
3	DL Sleep control extended subheader	6.3.21.2 6.3.21.3 6.3.21.4 6.3.2.2.7.2	m	
Comments:				

Table A.255: BS receiving MAC PDUs for Sleep mode

Item	**Capability**	**Reference**	**Status**	**Support**
1	MOB_SLP-REQ message	6.3.2.3.44	m	
2	Bandwidth request and uplink sleep control header	6.3.2.1.1, 6.3.2.1.2.1.6	m	
Comments:				

Table A.256: MS receiving MAC PDUs for Sleep Mode

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	MOB_SLP-RSP message	6.3.2.3.45	m	
2	MOB_TRF-IND message	6.3.2.3.46	m	
3	DL Sleep control extended subheader	6.3.21.2 6.3.21.3 6.3.21.4 6.3.2.2.7.2	m	
Comments:				

Table A.257: MS sending MAC PDUs for Sleep Mode

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	MOB_SLP-REQ message	6.3.2.3.44	m	
2	Bandwidth request and uplink sleep control header	6.3.2.1.2.1.6	m	
Comments:				

A.6.1.7 PDUs for Handover

Table A.258: BS sending MAC PDUs for Handover

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	MOB_SCN-RSP	6.3.2.3.49	m	
2	MOB_NBR-ADV	6.3.2.3.47	m	
3	MOB_BSHO-REQ (Mode = 0x0b000)	6.3.2.3.52	m	
4	MOB_BSHO-REQ (Mode = 0x0b001 to 0xb110)	6.3.2.3.52	o	
5	MOB_BSHO-RSP (Mode = 0x0b000)	6.3.2.3.54	m	
6	MOB_BSHO-RSP (Mode = 0x0b001 to 0xb110)	6.3.2.3.54	o	
7	MOB_BSHO-RSP (Mode = 0b111)	6.3.2.3.54	o	
Comments:				

Table A.259: BS receiving MAC PDUs for Handover

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	MOB_SCN-REQ	6.3.2.3.48	m	
2	MOB_SCN-REP	6.3.2.3.50	m	
3	MOB_MSHO-REQ (Arrival Time Difference Indication = 0)	6.3.2.3.53	m	
4	MOB_MSHO-REQ (Arrival Time Difference Indication = 1)	6.3.2.3.53	o	
5	MOB_HO-IND(Mode = 0b00)	6.3.2.3.55	m	
6	MOB_HO-IND(Mode = 0b01 or 0b10)	6.3.2.3.55	o	
Comments:				

Table A.260: MS sending MAC PDUs for Handover

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	MOB_SCN-REQ	6.3.2.3.48	m	
2	MOB_SCN-REP	6.3.2.3.50	m	
3	MOB_MSHO-REQ (Arrival Time Difference Indication = 0)	6.3.2.3.53	m	
4	MOB_MSHO-REQ (Arrival Time Difference Indication = 1)	6.3.2.3.53	o	
5	MOB_HO-IND (Mode = 0b00)	6.3.2.3.55	m	
6	MOB_HO-IND (Mode = 0b01 or 0b10)	6.3.2.3.55	o	
Comments:				

Table A.261: MS receiving MAC PDUs for Handover

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	MOB_SCN-RSP	6.3.2.3.49	M	
2	MOB_NBR-ADV	6.3.2.3.47	M	
3	MOB_BSHO-REQ (Mode = 0x0b000)	6.3.2.3.52	M	
4	MOB_BSHO-REQ (Mode = 0x0b001 to 0xb110)	6.3.2.3.52	O	
5	MOB_BSHO-RSP (Mode = 0x0b000)	6.3.2.3.54	M	
6	MOB_BSHO-RSP (Mode = 0x0b001 to 0xb110)	6.3.2.3.54	O	
7	MOB_BSHO-RSP (Mode = 0xb111)	6.3.2.3.54	O	
Comments:				

A.6.1.8 PDUs for Idle mode

Table A.262: MS sending MAC PDUs for Idle Mode

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	DREG-REQ	6.3.2.3.42	m	
Comments:				

Table A.263: MS receiving MAC PDUs for Idle Mode

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	DREG-CMD	6.3.2.3.26	m	
2	MOB_PAG-ADV	6.3.2.3.56	m	
Comments:				

Table A.264: BS sending MAC PDUs for Idle Mode

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	DREG-CMD	6.3.2.3.26	m	
2	MOB_PAG-ADV	6.3.2.3.26	m	
Comments:				

Table A.265: BS receiving MAC PDUs for Idle Mode

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	DREG-REQ	6.3.2.3.42	m	
Comments:				

A.6.1.9 PDUs for Feedback

Table A.266: MS sending MAC PDUs for Feedback

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Feedback header	6.3.2.1.2.2.1	m	
2	Bandwidth request and UL Tx Power Report	6.3.2.1.2.1.2	m	
3	SN report header	6.3.2.1.2.1.7	m	
Comments:				

Table A.267: BS receiving MAC PDUs for Feedback

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Feedback header	6.3.2.1.2.2.1	m	
2	Bandwidth request and UL Tx Power Report	6.3.2.1.2.1.2	m	
3	SN report header	6.3.2.1.2.1.7	m	
Comments:				

Table A.268: BS sending MAC PDUs for Feedback

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	SN request extended subheader	6.3.2.2.7.7	o	
Comments:				

Table A.269: MS receiving MAC PDUs for Feedback

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	SN request extended subheader	6.3.2.2.7.7	o	
Comments:				

A.6.1.10 PDUs and MAP IEs for Power Control

Table A.270: BS sending MAC PDUs and MAP IEs for Power Control

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	RNG_RSP message	8.4.10.3.1 and 11.6	m	
2	PMC_RSP message	8.4.10.3.2 and 6.3.2.3.59	m	
3	REP_REQ message	8.4.10.3 and 6.3.2.3.33	o	
4	Fast power control message	8.4.10.3 and 6.3.2.3.34	o	
5	power control IE	8.4.10.3 and 8.4.5.4.5	m	
6	UL interference and noise level IE	8.4.10.3 and 8.4.5.3.19	m	
7	Tx power report TLV in UCD	11.3.1	m	
8	Normalized C/N override 2 TLV in UCD	11.3.1	m	
9	Normalized C/N for Channel Sounding TLV in UCD	11.3.1	IO-BF	
10	OFDMA uplink power control support TLVs in SBC-RSP	11.8.3.7.11	m	
11	BS_EIRP TLV in DCD	6.3.9.5.1 and 11.4.1	m	
12	EIRxPIR,max TLV in DCD	6.3.9.5.1 and 11.4.1	m	
NOTE: PDU of Item 3 is only applicable to closed loop power control.				
Comments:				

Table A.271: BS receiving MAC PDUs and MAP IEs for Power Control

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	PMC_REQ message	8.4.10.3.2 and 6.3.2.3.58	m	
2	REP_RSP message	8.4.10.3 and 6.3.2.3.33	o	
3	Maximum transmit power TLV in SBC-REQ	11.8.3.2	m	
4	OFDMA uplink power control support TLVs in SBC-REQ	11.8.3.7.11	m	
5	Bandwidth request and UL Tx power report header	6.3.2.1.2.1.2	m	
NOTE: PDU of Item 2 is only applicable to closed loop power control.				
Comments:				

Table A.272: MS sending MAC PDUs and MAP IEs for Power Control

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	PMC_REQ message	8.4.10.3.2 and 6.3.2.3.58	m	
2	REP_RSP message	8.4.10.3 and 6.3.2.3.33	m	
3	Maximum transmit power TLV in SBC-REQ	11.8.3.2	m	
4	OFDMA uplink power control support TLVs in SBC-REQ	11.8.3.7.11	m	
5	Bandwidth request and UL Tx power report header	6.3.2.1.2.1.2	m	
NOTE: PDU of Item 2 is only applicable to closed loop power control.				
Comments: Message of Item 2 is mandatory as a response to REP-REQ.				

Table A.273: MS receiving MAC PDUs and MAP IEs for Power Control

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	RNG_RSP message	8.4.10.3.1 and 11.6	m	
2	PMC_RSP message	8.4.10.3.2 and 6.3.2.3.59	m	
3	REP_REQ message	8.4.10.3 and 6.3.2.3.33	m	
4	Fast power control message	8.4.10.3 and 6.3.2.3.34	m	
5	power control IE	8.4.10.3 and 8.4.5.4.5	m	
6	UL interference and noise level IE	8.4.10.3 and 8.4.5.3.19	m	
7	Tx power report TLV in UCD	11.3.1	m	
8	Normalized C/N override 2 TLV in UCD	11.3.1	m	
9	Normalized C/N for Channel Sounding TLV in UCD	11.3.1	m	
10	OFDMA uplink power control support TLVs in SBC-RSP	11.8.3.7.11	m	
11	BS_EIRP TLV in DCD	6.3.9.5.1 and 11.4.1	m	
12	EIRxPIR,max TLV in DCD	6.3.9.5.1 and 11.4.1	m	
NOTE: PDU of Item 3 is only applicable to closed loop power control.				
Comments:				

A.6.1.11 PDUs for band AMC

Table A.274: BS sending MAC PDUs for band AMC

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	REP_REQ message (Channel Type Request : Type=1.3, Value = 0b01)	6.3.2.3.33, 6.3.19, 8.4.6.3.2 and 11.11	m	
Comments:				

Table A.275: BS receiving MAC PDUs for band AMC

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	REP_RSP message (Enhanced Band-AMC report: Type=2.4)	6.3.2.3.33, 6.3.19, 8.4.6.3.2 and 11.12	m	
Comments: The CINR shall be measured from the preamble.				

Table A.276: MS sending MAC PDUs for band AMC

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	REP_RSP message (Enhanced Band-AMC report: Type=2.4)	6.3.2.3.33, 6.3.19, 8.4.6.3.2 and 11.12	m	
Comments:				

Table A.277: MS receiving MAC PDUs for band AMC

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	REP_REQ message (Channel Type Request : Type=1.3, Value = 0b01)	6.3.2.3.33, 6.3.19, 8.4.6.3.2 and 11.11	m	
Comments: The CINR shall be measured from the preamble.				

A.6.2 MAP IEs

Table A.278: BS sending MAP IEs for DL

Base Station (BS)				
Item	**Capabilities**	**Reference**	**Status**	**Support**
1	DL-MAP IE (DIUC 0 ~ 12)	8.4.5.3	m	
2	DL-MAP IE (DIUC 15: Extended DIUC- General)	8.4.5.3	m	
3	DL-MAP IE (DIUC 14: Extended2 DIUC- General)	8.4.5.3	m	
4	Space-Time Coding (STC)/Zone switch IE	8.4.5.3.4	m	
5	CID Switch IE	8.4.5.3.7	m	
6	MIMO DL Basic IE	8.4.5.3.8	IO-MIMO	
7	HARQ and Sub-MAP pointer IE	8.4.5.3.10	m	
8	MBS MAP IE	8.4.5.3.12	IO-MBS	
9	MBS Data IE	6.3.2.3.57	IO-MBS	
10	UL Interference and Noise Level IE	8.4.5.3.19	m	
11	RCID IE	8.4.5.3.20.1	m	
12	HARQ DL-MAP IE	8.4.5.3.21	m	
13	DL HARQ Chase sub-burst IE	8.4.5.3.21	m	
14	MIMO DL Chase HARQ sub-burst IE	8.4.5.3.21	IO-MIMO	
15	Dedicated MIMO DL Control IE	8.4.5.3.21.1	IO-MIMO	
16	Broadcast Control Pointer IE	8.4.5.3.25	m	
NOTE 1: There can be two PUSC MIMO zones 1st with broadcasted pilots and 2nd with dedicated pilots. NOTE 2: Beamforming to multiple users with different pilot patterns is not supported.				
Comments: With respect to item 16: • Limit "Control header" = "0b001 or 0b011" for MIMO information and possible CQI information (no closed loop MIMO). • Limit "N_Layers" = 0b00 for single layer. • If dedicated pilots are used for decoding [i.e. "Dedicated pilots" = 1] limit Num_beamformed_streams = 1, combination of MIMO and BF.				

Table A.279: BS sending MAP IEs for UL

Base Station (BS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	UL-MAP IE (UIUC 1 ~ 10)	8.4.5.4	m	
2	UL-MAP IE (UIUC 0: Fast Feedback Channel == FAST-FEEDBACK allocation IE)	8.4.5.4, 8.4.5.4.1 8.4.5.4.9	m	
3	UL-MAP IE (UIUC 12: CDMA Bandwidth Request/CDMA Ranging)	8.4.5.4, 8.4.5.4.1	m	
4	UL-MAP IE (UIUC 13: PAPR reduction and safety zone allocation)	8.4.5.4, 8.4.5.4.2	IO-BF	
5	UL-MAP IE (UIUC 14: CDMA allocation IE)	8.4.5.4, 8.4.5.4.3	m	
6	UL-MAP IE (UIUC 15: Extended UIUC- General)	8.4.5.4, 8.4.5.4.3	m	
7	UL-MAP IE (UIUC 11: Extended UIUC2- General)	8.4.5.4, 8.4.5.4.3	m	
8	Power Control IE	8.4.5.4.5	m	
9	UL Zone switch IE	8.4.5.4.7	m	
10	MIMO UL Basic IE	8.4.5.4.11	IO-MIMO	
11	CQICH Allocation IE	8.4.5.4.12	m	
12	UL allocation start IE	8.4.5.4.15	m	
13	Fast Ranging IE	8.4.5.4.21	m	
14	HARQ UL-MAP IE	8.4.5.4.24	m	
15	UL HARQ Chase sub-burst IE	8.4.5.4.24	m	
16	MIMO UL Chase HARQ sub-burst IE	8.4.5.4.24	IO-MIMO	
17	Dedicated UL control IE	8.4.5.4.24.1	o	
18	HARQ ACKCH region allocation IE	8.4.5.4.25 and 8.4.5.4.13	m	
19	UL Sounding Command IE	8.4.5.4.26	IO-BF	
20	Feedback polling IE	8.4.5.4.28	m	
Comments: Applicable to item 17: • Limited to "Num SDMA layers" = 0b01 to represent 2 layer Collaborative SM, and "Pilot pattern" =0b00 or 0b01, for pattern A or B.				

Table A.280: MS receiving MAP IEs for DL

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	DL-MAP IE (DIUC 0 ~ 12)	8.4.5.3	m	
2	DL-MAP IE (DIUC 15: Extended DIUC- General)	8.4.5.3	m	
3	DL-MAP IE (DIUC 14: Extended2 DIUC- General)	8.4.5.3	m	
4	Space-Time Coding (STC)/Zone switch IE	8.4.5.3.4	m	
5	CID Switch IE	8.4.5.3.7	m	
6	MIMO DL Basic IE	8.4.5.3.8	m	
7	HARQ and Sub-MAP pointer IE	8.4.5.3.10	m	
8	MBS MAP IE	8.4.5.3.12	m	
9	MBS Data IE	6.3.2.3.57	m	
10	UL Interference and Noise Level IE	8.4.5.3.19	m	
11	RCID IE	8.4.5.3.20.1	m	
12	HARQ DL-MAP IE	8.4.5.3.21	m	
13	DL HARQ Chase sub-burst IE	8.4.5.3.21	m	
14	MIMO DL Chase HARQ sub-burst IE	8.4.5.3.21	m	
15	Dedicated MIMO DL Control IE	8.4.5.3.21.1	m	
16	Broadcast Control Pointer IE	8.4.5.3.25	m	
NOTE 1: There can be two PUSC MIMO zones, 1st with broadcasted pilots and 2nd with dedicated pilots. NOTE 2: Beamforming to multiple users with different pilot patterns is not supported.				
Comments: With respect to item 15: • Limit "Control header" = "0b001 or 0b011" for MIMO information and possible CQI information (no closed loop MIMO). • Limit "N_Layers" = 0b00 for single layer. • If dedicated pilots are used for decoding [i.e. "Dedicated pilots" = 1] limit Num_beamformed_streams = 1, combination of MIMO and BF.				

Table A.281: MS receiving MAP IEs for UL

Mobile Station (MS)				
Item	**Capability**	**Reference**	**Status**	**Support**
1	UL-MAP IE (UIUC 1 ~ 10)	8.4.5.4	m	
2	UL-MAP IE (UIUC 0: Fast Feedback Channel == FAST-FEEDBACK allocation IE)	8.4.5.4, 8.4.5.4.1 8.4.5.4.9	m	
3	UL-MAP IE (UIUC 12: CDMA Bandwidth Request/CDMA Ranging)	8.4.5.4, 8.4.5.4.1	m	
4	UL-MAP IE (UIUC 13: PAPR reduction and safety zone allocation)	8.4.5.4, 8.4.5.4.2	m	
5	UL-MAP IE (UIUC 14: CDMA allocation IE)	8.4.5.4, 8.4.5.4.3	m	
6	UL-MAP IE (UIUC 15: Extended UIUC- General)	8.4.5.4, 8.4.5.4.3	m	
7	UL-MAP IE (UIUC 11: Extended UIUC2- General)	8.4.5.4, 8.4.5.4.3	m	
8	Power Control IE	8.4.5.4.5	m	
9	UL Zone switch IE	8.4.5.4.7	m	
10	MIMO UL Basic IE	8.4.5.4.11	m	
11	CQICH Allocation IE	8.4.5.4.12	m	
12	UL allocation start IE	8.4.5.4.15	m	
13	Fast Ranging IE	8.4.5.4.21	m	
14	HARQ UL-MAP IE	8.4.5.4.24	m	
15	UL HARQ Chase sub-burst IE	8.4.5.4.24	m	
16	MIMO UL Chase HARQ sub-burst IE	8.4.5.4.24	m	
17	Dedicated UL control IE	8.4.5.4.24.1	m	
18	HARQ ACKCH region allocation IE	8.4.5.4.25	m	
19	UL Sounding Command IE	8.4.5.4.26	m	
20	Feedback polling IE	8.4.5.4.28	m	
Comments: Item 17 is limited to "Num SDMA layers" = 0b01 to represent 2 layer Collaborative SM, and "Pilot pattern" =0b00 or 0b01, for pattern A or B.				

A.7 PDU fields

A.7.1 Fields of PDUs for MAC layer

A.7.1.1 DL-MAP

Table A.282: PDU: DL-MAP

Item	Capability	Reference	Status	Support
1	Management Message type=2	[4] 6.3.2.3.2	m	
2	DCD count	[4] 6.3.2.3.2	m	
3	Base station ID	[4] 6.3.2.3.2	m	
4	PHY Synchronization Field		m	
Comments:				

Table A.283: PDU: Sub downlink/uplink map

Item	Capability	Reference	Status	Support
1	Compressed Map Indicator	[5] 6.3.2.3.60	m	
2	Map message length	[5] 6.3.2.3.60	m	
3	RCID_type	[5] 6.3.2.3.60	m	
4	HARQ ACK offset indicator	[5] 6.3.2.3.60	m	
5	DL HARQ AK offset	[5] 6.3.2.3.60	m	
6	UL HARQ ACK offset	[5] 6.3.2.3.60	m	
7	DL IE Count	[5] 6.3.2.3.60	m	
8	DL_MAP information elements	[5] 6.3.2.3.60	m	
9	OFDMA Symbol Offset	[5] 6.3.2.3.60	m	
10	Subchannel offset	[5] 6.3.2.3.60	m	
11	UL_MAP information elements	[5] 6.3.2.3.60	m	
Comments:				

Table A.284: PDU: Common Part of DL-MAP Information Elements

Item	Capability	Reference	Status	Support
1	CID only if INC_CID = 1	[4] 8.4.5.3	m	
2	DIUC	[4] 8.4.5.3	m	
3	N_CID only if INC_CID = 1	[4] 8.4.5.3	m	
4	RCID_IE if included in SUB-DL-UL-MAP	[4] 8.4.5.3	m	
Comments:				

Table A.285: PDU: Common Part of Extended DIUC

Item	Capability	Reference	Status	Support
1	Extended DIUC	[4] 8.4.5.3.1	m	
2	Length	[4] 8.4.5.3.1	m	
3	Unspecified data	[4] 8.4.5.3.1	m	
Comments:				

Table A.286: PDU: Common Part of Extended-2 DIUC

Item	Capability	Reference	Status	Support
1	Extended-2 DIUC	[4] 8.4.5.3.2	m	
2	Length	[4] 8.4.5.3.2	m	
3	Unspecified data	[4] 8.4.5.3.2	m	
Comments:				

A.7.1.2 DCD

Table A.287: PDU : DCD

Item	Capability	Reference	Status	Support
1	Management Message type=1	[4] and [5] 6.3.2.3.1	m	
2	Reserved (see note)	[4] and [5] 6.3.2.3.1	m	
3	Configuration Change count	[4] and [5] 6.3.2.3.1	m	
NOTE: Reserved bit shall be set to zero.				

Table A.288: DCD TLV

Item	Capability	Reference	Status	Support
1	Frequency	[4] 4.3.2 and [5] 11.4.1	m	
2	BS Id	[4] 4.3.2 and [5] 11.4.1	m	
3	MAC version	[4] 4.3.2 and [5] 11.4.1	m	
4	BS EIRP	[4] 4.3.2 and [5] 11.4.1	m	
5	TTG	[4] 4.3.2 and [5] 11.4.1	m	
6	RTG	[4] 4.3.2 and [5] 11.4.1	m	
7	$EIRxP_{IR,max}$	[4] 4.3.2 and [5] 11.4.1	m	
8	HO Type Support	[4] 4.3.2 and [5] 11.4.1	m	
9	Paging Group ID	[4] 4.3.2 and [5] 11.4.1	m	
10	Trigger, Compound TLV see next Trigger TLV	[4] 4.3.2 and [5] 11.4.1	m	
11	BS Restart Count	[4] 4.3.2 and [5] 11.4.1	m	
12	Default RSSI and CINR averaging parameter	[4] 4.3.2 and [5] 11.4.1	m	
13	DL AMC Allocated Physical Bands Bitmap	[4] 4.3.2 and [5] 11.4.1	m	
14	OFDMA Downlink_Burst_Profile	[4] 8.4.5.5	m	
15	Hysteresis margin	[5] 11.4.1	m	
16	Time to trigger duration	[5] 11.4.1	m	
17	MBS zone identifier list	[5] 11.4.1	IO-MBS	
Comments:				

Table A.289: OFDMA Downlink_ Burst_Profile

Item	Capability	Reference	Status	Support
1	Type = 1	[4] 8.4.5.5, 11.4.2	m	
2	Length	[4] 8.4.5.5, 11.4.2	m	
3	Reserved (see note)	[4] 8.4.5.5, 11.4.2	m	
4	DIUC	[4] 8.4.5.5, 11.4.2	m	
5	FEC Code Type	[4] 11.4.2	m	
NOTE: Reserved bit shall be set to zero.				

Table A.290: Trigger TLV

Item	Capability	Reference	Status	Support
1	Type/Function/Action	4.3.2 [4] 11.4.1	m	
2	Trigger Value	4.3.2 [4] 11.4.1	m	
3	Trigger Averaging Duration	4.3.2 [4] 11.4.1	m	
Comments:				

Table A.291: Type/Function/Action Description

Item	Capability	Reference	Status	Support
1	Type	[4] 11.4.1	m	
2	Function	[4] 11.4.1	m	
3	Action	[4] 11.4.1	m	
Comments:				

A.7.1.3 UCD

Table A.292: PDU: UCD

Item	Capability	Reference	Status	Support
1	Management Message type=0	[4] 6.3.2.3.3		
2	Configuration Change count	[4] 6.3.2.3.3		
3	Ranging backoff start	[4] 6.3.2.3.3		
4	Ranging backoff End	[4] 6.3.2.3.3		
5	Request backoff start	[4] 6.3.2.3.3		
6	Request backoff End	[4] 6.3.2.3.3		
Comments:				

Table A.293: UCD TLV

Item	Capability	Reference	Status	Support
1	Frequency	4.3.2 [4] and [5] 11.3.1	m	
2	Contention-based Reservation Timeout	4.3.2 [4] and [5] 11.3.1	m	
3	Start of Ranging Codes Group	4.3.2 [4] and [5] 11.3.1	m	
4	Band AMC Allocation Threshold	4.3.2 [4] and [5] 11.3.1	m	
5	Band AMC Release Threshold	4.3.2 [4] and [5] 11.3.1	m	
6	Band AMC Allocation Timer	4.3.2 [4] and [5] 11.3.1	m	
7	Band AMC Release Timer	4.3.2 [4] and [5] 11.3.1	m	
8	Band Status Reporting Max Period	4.3.2 [4] and [5] 11.3.1	m	
9	Band AMC Retry Timer	4.3.2 [4] and [5] 11.3.1	m	
10	Normalized C/N Override-2	4.3.2 [4] and [5] 11.3.1	m	
11	Handover Ranging Codes	4.3.2 [4] and [5] 11.3.1	m	
12	Initial Ranging Codes	4.3.2 [4] and [5] 11.3.1	m	
13	Initial Ranging interval	4.3.2 [4] and [5] 11.3.1	m	
14	Tx Power Report	4.3.2 [4] and [5] 11.3.1	m	
15	Normalized C/N for Channel Sounding	4.3.2 [4] and [5] 11.3.1	IO-BF	
16	Initial Ranging backoff start	4.3.2 [4] and [5] 11.3.1	m	
17	Initial Ranging backoff end	4.3.2 [4] and [5] 11.3.1	m	
18	Bandwidth request backoff start	4.3.2 [4] and [5] 11.3.1	m	
19	Bandwidth request backoff end	4.3.2 [4] and [5] 11.3.1	m	
20	Permutation Base	4.3.2 [4] and [5] 11.3.1	m	
21	UL allocated subchannels bitmap	4.3.2 [4] and [5] 11.3.1	m	
22	HARQ Ack Delay for DL burst	4.3.2 [4] and 11.3.1	m	
23	UL AMC allocated physical bands bitmap	4.3.2 [4] and [5] 11.3.1	m	
24	Size of CQICH-ID field	4.3.2 [4] and [5]	m	
25	Band-AMC entry average CINR	4.3.2 [4] and [5] 11.3.1	m	
26	HO_ranging_start	[5] 11.3.1	m	
27	HO_ranging_end	[5] 11.3.1	m	
28	Periodic Ranging Codes	[1] 11.3.1	m	
29	Bandwidth Request Codes	[1] 11.3.1	m	
30	Periodic Ranging Backoff Start	[1] 11.3.1	m	
31	Periodic Ranging Backoff End	[1] 11.3.1	m	
32	CQICH Band AMC Transition Delay	[1] 11.3.1	m	
33	OFDMA Uplink_ Burst_Profile	[4], [5] 8.4.5.5	m	
34	Ranging Region	[5] 11.3.1	m	
35	FastFeedback Region	[5] 11.3.1	m	
36	HARQ Ack Region	[5] 11.3.1	m	
37	Sounding Region	[5] 11.3.1	IO-BF	
38	UL PUSC Subchannel Rotation	[5] 11.3.1	IO-BF	
39	MS Maximum Transmission Power Limitation Control	[5] 11.3.1	o	
Comments:				

Table A.294: OFDMA Uplink_ Burst_Profile

Item	Capability	Reference	Status	Support
1	Type = 1	[4] 8.4.5.5	m	
2	Length	[4] 8.4.5.5	m	
3	Reserved (See note)	[4] 8.4.5.5	m	
4	UIUC	[4] 8.4.5.5	m	
5	FEC Code Type and Modulation Type	4.3.2 [4] 11.3.1.1	m	
NOTE: Reserved bit shall be set to zero.				

A.7.1.4 UL-MAP

Table A.295: PDU: UL-MAP

Item	Capability	Reference	Status	Support
1	Management Message type=3	[4] and [5] 6.3.2.3.4	m	
2	Reserved (See note)	[4] and [5] 6.3.2.3.4	m	
3	UCD count	[4] and [5] 6.3.2.3.4	m	
4	Allocation start time	[4] and [5] 6.3.2.3.4	m	
NOTE: Reserved bit shall be set to zero.				

Table A.296: UL-MAP Information Element(s)

Item	Capability	Reference	Status	Support
1	CID	[4] 8.4.5.4	m	
2	UIUC	[4] 8.4.5.4	m	
3	Duration	[4] 8.4.5.4	m	
4	OFDMA Symbol Offset if UIUC = 12	[4] 8.4.5.4	m	
5	Subchannel offset if UIUC = 12	[4] 8.4.5.4	m	
6	No. of OFDMA symbols if UIUC = 12	[4] 8.4.5.4	m	
7	No. subchannels if UIUC = 12	[4] 8.4.5.4	m	
8	Ranging method if UIUC = 12	[4] 8.4.5.4	m	
9	BS Sending of UL-MAP IE (UIUC = 12) with dedicated ranging indicator	[4] 8.4.5.4	o	
10	MS Receiving of UL-MAP IE (UIUC = 12) with dedicated ranging indicator	[4] 8.4.5.4	o	
11	Repetition coding indication	[4] 8.4.5.4	m	
12	Slot Offset if AAS or AMC UL Zone	[4] 8.4.5.4	m	
13	Padding nibble, if needed	[4] 8.4.5.4	m	
Comments:				

Table A.297: Extended UIUC dependent IE

Item	Capability	Reference	Status	Support
1	Extended UIUC	[4] 8.4.5.4.4.1	m	
2	Length	[4] 8.4.5.4.4.1	m	
3	Unspecified data	[4] 8.4.5.4.4.1	m	
Comments:				

Table A.298: Extended-2 UIUC dependent IE

Item	Capability	Reference	Status	Support
1	Extended-2 UIUC	[4] 8.4.5.4.4.2	m	
2	Length	[4] 8.4.5.4.4.2	m	
3	Unspecified data	[4] 8.4.5.4.4.2	m	
Comments:				

Table A.299: PAPR reduction, safety zone and sounding zone IE

Item	Capability	Reference	Status	Support
1	OFDMA symbol offset	[4] 8.4.5.4.2	IO-BF M for MS	
2	Subchannel offset	[4] 8.4.5.4.2	IO-BF M for MS	
3	No. OFDMA symbols	[4] 8.4.5.4.2	IO-BF M for MS	
4	No. subchannels	[4] 8.4.5.4.2	IO-BF M for MS	
5	PAPR Reduction/Safety zone	[4] 8.4.5.4.2	IO-BF M for MS	
6	Reserved	[4] 8.4.5.4.2	IO-BF M for MS	
7	Sounding Zone	[4] 8.4.5.4.2	IO-BF M for MS	
Comments:				

Table A.300: CDMA Allocation IE

Item	Capability	Reference	Status	Support
1	Duration	[4] 8.4.5.4.3	m	
2	UIUC	[4] 8.4.5.4.3	m	
3	Repetition Coding Indication	[4] 8.4.5.4.3	m	
4	Frame Number Index	[4] 8.4.5.4.3	m	
5	Ranging Code	[4] 8.4.5.4.3	m	
6	Ranging Symbol	[4] 8.4.5.4.3	m	
7	Ranging subchannel	[4] 8.4.5.4.3	m	
8	BW request mandatory	[4] 8.4.5.4.3	m	
Comments:				

Table A.301: Fast Feedback alloc IE

Item	Capability	Reference	Status	Support
1	OFDMA symbol offset	[4] 8.4.5.4.9	m	
2	Subchannel offset	[4] 8.4.5.4.9	m	
3	No. OFDMA symbols	[4] 8.4.5.4.9	m	
4	No subchannels	[4] 8.4.5.4.9	m	
5	Reserved	[4] 8.4.5.4.9	m	
Comments:				

A.7.1.5 RNG-REQ and RNG-RSP

Table A.302: PDU: RNG-REQ

Item	Capability	Reference	Status	Support
1	Management Message type=4	[4] and [5] 6.3.2.3.5	m	
2	Reserved (See note)	[4] and [5] 6.3.2.3.5	m	
NOTE: Reserved bit shall be set to zero.				

Table A.303: RNG-REQ TLV

Item	Capability	Reference	Status	Support
1	Requested Downlink Burst profile	[4] 6.3.2.3.5, 11.5	m	
2	SS MAC address	[4] 6.3.2.3.5, 11.5	m	
3	MAC version	[4] 6.3.2.3.5, 11.5	m	
4	Serving BS ID	[5] 11.5	m	
5	HO ID	[5] 11.5	m	
6	Paging Controller ID	[5] 11.1.9.2	m	
7	Power_Down_Indicator	[5] 11.5	m	
8	Enabled_Action-Triggered	[5] 11.1.8.1	o	
9	Requested downlink repetition coding level	[5] 11.5	m	
10	Ranging Purpose Indication	[5] 11.5	m	
11	CMAC Tuple	[5] 11.1.2.2	m	
Comments:				

Table A.304: PDU : RNG-RSP

Item	Capability	Reference	Status	Support
1	Management Message type=5	[4] and [5] 6.3.2.3.6	m	
2	Reserved (See note)	[4] and [5] 6.3.2.3.6	m	
NOTE: Reserved bit shall be set to zero.				

Table A.305: RNG-RSP TLV

Item	Capability	Reference	Status	Support
1	Timing Adjust Information	[4] 6.3.2.3.6, 11.6	m	
2	Power Adjust Information	[4] 6.3.2.3.6, 11.6	m	
3	Ranging Status	[4] 6.3.2.3.6, 11.6	m	
4	DL Frequency Override	[4] 6.3.2.3.6, 11.6	m	
5	Basic CID	[4] 6.3.2.3.6, 11.6	m	
6	Primary Management CID	[4] 6.3.2.3.6, 11.6	m	
7	SS MAC Address	[4] 6.3.2.3.6, 11.6	m	
8	Ranging code attributes		m	
9	CID_update	[5] 11.6	m	
10	Offset Frequency_Adjust	[5] 11.6	m	
11	Global_Service_Name	[5] 11.6	o	
12	QoS_Parameters	[5] 11.6	o	
13	SFID	[5] 11.6	o	
14	Resource_Retain_Flag	[5] 11.6	o	
15	HO_Process_Optimization	[5] 11.6	m	
16	HO_ID	[5] 11.6	m	
17	SBC-RSP_encoding	[5] 11.6	m	
18	REG-RSP encoding	[5] 11.6	m	
19	Location Update_Reponse	[5] 11.6	m	
20	Paging Information	[5] 11.1.9.3	m	
21	Paging_Contrller_ID	[5] 11.1.9.26	m	
22	Next_Periodic_Ranging	[5] 11.1.8.3	m	
23	Enabled-Action_Triggered	[5] 11.1.8.1	o	
24	CMAC Tuple	[5] 11.1.2.2	m	
Comments: In case of initial network entry, CMAC-Tuple TLV shall not be included.				

A.7.1.6 SBC-REQ and SBC-RSP

Table A.306: PDU: SBC-REQ

Item	Capability	Reference	Status	Support
1	Management Message type=26	6.3.2.3.23	m	
Comments:				

Table A.307: SBC-REQ TLV

Item	Capability	Reference	Status	Support
1	Physical Parameters supported (see table A.308)	11.8.1	m	
2	Capabilities for Construction and Transmission of MAC PDUs	11.8.2	m	
3	Security negotiation parameters	11.8.4	m	
4	Extension capability	11.8.6	m	
5	HO trigger metric support	11.8.7	m	
6	CMAC Tuple	11.1.2	m	
Comments: In case of initial network entry, CMAC-Tuple TLV shall not be included.				

Table A.308: Physical Parameters Supported fields for SBC-REQ

Item	Capability	Reference	Status	Support
1	Subscriber transition gap	11.8.3.1	m	
2	Maximum transmit power	11.8.3.2	m	
3	Current transmit power	11.1.1, 11.8.3.3	m	
4	OFDMA MS FFT sizes	11.8.3.7.1	m	
5	OFDMA SS demodulator	11.8.3.7.2	m	
6	OFDMA SS modulator	11.8.3.7.3	m	
7	The number of UL HARQ channel	11.8.3.7.3	m	
8	OFDMA SS permutation support	11.8.3.7.4	m	
9	OFDMA SS CINR measurement capability	11.8.3.7.9	m	
10	The number of DL HARQ channel	11.8.3.7.2	m	
11	HARQ Chase combining and CC-IR buffer capability	11.8.3.7.19.2	m	
12	OFDMA SS uplink power control support	11.8.3.7.11	m	
13	OFDMA MAP capability	11.8.3.7.12	m	
14	Uplink control channel support	11.8.3.7.13	m	
15	OFDMA MS CSIT capability	11.8.3.7.14	m	
16	Maximum number of burst per frame capability in HARQ	11.8.3.7.15	m	
17	OFDMA SS demodulator for MIMO support	11.8.3.7.5	m	
18	OFDMA SS modulator for MIMO support	11.8.3.7.16	m	
19	OFDMA parameter sets	11.8.3.7.20	m	
Comments: With regards to item 3, MS may ignore power updates between RNG-RSP and this message.				

Table A.309: PDU: SBC-RSP

Item	Capability	Reference	Status	Support
1	Management Message type=27	6.3.2.3.24	m	
Comments:				

Table A.310: SBC-RSP TLV

Item	Capability	Reference	Status	Support
1	Physical Parameters supported (see table A.311)	11.8.2	m	
2	Capabilities for Construction and Transmission of MAC PDUs	11.8.2	m	
3	Security negotiation parameters	11.8.4	m	
4	Extension capability	11.8.6	m	
5	HO trigger metric support	11.8.7	m	
6	CMAC Tuple	11.1.2	m	
Comments: Item 2 Bandwidth allocation support: this does not apply to TDD systems.				

Table A.311: Physical Parameters Supported fields for SBC-RSP

Item	Capability	Reference	Status	Support
1	Subscriber transition gap	11.8.3	m	
2	OFDMA MS FFT sizes	11.8.3.7.1	m	
3	OFDMA SS demodulator	11.8.3.7.2	m	
4	OFDMA SS modulator	11.8.3.7.3	m	
5	The number of UL HARQ channel	11.8.3.7.3	m	
6	OFDMA SS permutation support	11.8.3.7.4	m	
7	OFDMA SS CINR measurement capability	11.8.3.7.9	m	
8	The number of DL HARQ channel	11.8.3.7.2	m	
9	HARQ Chase combining and CC-IR buffer capability	11.8.3.7.19.2	m	
10	OFDMA SS uplink power control support	11.8.3.7.11	m	
11	OFDMA MAP capability	11.8.3.7.12	m	
12	Uplink control channel support	11.8.3.7.13	m	
13	OFDMA MS CSIT capability	11.8.3.7.14	IO-BF	
14	Maximum number of burst per frame capability in HARQ	11.8.3.7.15	m	
15	OFDMA SS demodulator for MIMO support	11.8.3.7.5	IO-MIMO	
16	OFDMA SS modulator for MIMO support	11.8.3.7.16	IO-MIMO	
17	OFDMA parameter sets	11.8.3.7.20	IO-MIMO	
Comments:				

A.7.1.7 ARQ messages

Table A.312: PDU: ARQ feedback message

Item	Capability	Reference	Status	Support
1	Management Message type=33	[4] 6.3.2.3.30	m	
Comments:				

Table A.313: ARQ Feedback Information Elements

Item	Capability	Reference	Status	Support
1	CID	[4] 6.3.4.2	m	
2	last	[4] 6.3.4.2	m	
3	ACK type	[4] 6.3.4.2	m	
4	BSN	[4] 6.3.4.2	m	
5	Number of ACK maps	[4] 6.3.4.2	m	
6	ACK MAP(s)	[4] 6.3.4.2	m	
Comments:				

Table A.314: PDU: ARQ Discard message

Item	Capability	Reference	Status	Support
1	Management Message type=34	[4] 6.3.2.3.31	m	
2	Connection ID	[4] 6.3.2.3.31	m	
3	Fragmentation Sequence Number	[4] 6.3.2.3.31	m	
Comments:				

Table A.315: PDU: ARQ Reset message

Item	Capability	Reference	Status	Support
1	Management Message type=35	[4] 6.3.2.3.32	m	
2	Connection ID	[4] 6.3.2.3.32	m	
3	Type	[4] 6.3.2.3.32	m	
4	Direction	[1] 6.3.2.3.32	m	
5	Reserved	[1] 6.3.2.3.32	m	
Comments:				

A.7.1.8 RES-CMD

Table A.316: PDU: RES-CMD

Item	Capability	Reference	Status	Support
1	Management Message type=25	[4] 6.3.2.3.22	o	
Comments:				

Table A.317: RES-CMD TLV

Item	Capability	Reference	Status	Support
1	CMAC Tuple	[4] 11.1.2.2	o	
Comments:				

A.7.1.9 CLK-CMP

Table A.318: PDU: CLK-CMP

Item	Capability	Reference	Status	Support
1	Management Message type=28	[4] 6.3.2.3.25	o	
2	Clock count	[4] 6.3.2.3.25	o	
3	Clock Id	[4] 6.3.2.3.25	o	
4	Sequence number	[4] 6.3.2.3.25	o	
5	Clock comparison value	[4] 6.3.2.3.25	o	
Comments:				

A.7.1.10 DREG-REQ and DREG-CMD

Table A.319: PDU: DREG-REQ

Item	Capability	Reference	Status	Support
1	Management Message type=49	[4] 6.3.2.3.42	m	
2	De-registration request code	[4] 6.3.2.3.42	m	
Comments:				

Table A.320: DREG-REQ TLV

Item	Capability	Reference	Status	Support
1	CMAC Tuple	[4] 6.3.2.3.42	m	
2	Paging Cycle Request	[4] 6.3.2.3.42	m	
3	Idle Mode Retain Information	[4] 6.3.2.3.42	m	
Comments:				

Table A.321: PDU: DREG-CMD

Item	Capability	Reference	Status	Support
1	Management Message type=29	[4] 6.3.2.3.26	m	
2	action code	[4] 6.3.2.3.26	m	
Comments:				

Table A.322: DREG-CMD TLV

Item	Capability	Reference	Status	Support
1	CMAC Tuple	[5] 11.1.2.2	m	
2	Paging Information	[5] 11.14	m	
3	Paging Controller ID	[5] 11.14	m	
4	Idle Mode Retain Information	[5] 11.14	m	
5	REQ-Duration	[5] 11.14	m	
Comments:				

A.7.1.11 DSX-RVD

Table A.323: PDU: DSX-RVD

Item	Capability	Reference	Status	Support
1	Management Message type=30	[4] 6.3.2.3.27	m	
2	Transaction ID	[4] 6.3.2.3.27	m	
3	Confirmation Code	[4] 6.3.2.3.27	m	
Comments:				

A.7.1.12 REP-REQ and REP-RSP

Table A.324: PDU: REP-REQ

Item	Capability	Reference	Status	Support
1	Management Message type=36	[4] 6.3.2.3.33	m	
Comments:				

Table A.325: REP-REQ TLV for report request

Item	Capability	Reference	Status	Support
1	Report type	[4] 11.11	m	
2	Channel Type request	[4] 11.11	m	
3	Zone-specific physical CINR request	[4] 11.11	m	
4	Preamble physical CINR request	[4] 11.11	m	
5	Zone-specific effective CINR request	[4] 11.11	m	
Comments:				

Table A.326: PDU: REP-RSP

Item	Capability	Reference	Status	Support
1	Management Message type=37	[4] 6.3.2.3.33	m	
Comments:				

Table A.327: REP-RSP TLV for report

Item	Capability	Reference	Status	Support
1	CINR report	[4] 11.12	m	
2	RSSI report	[4] 11.12	m	
3	Normal sub-channel Report (CQI value)	[4] 11.12	m	
4	Enhanced Band AMC Report	[4] 11.12	m	
5	physical CINR measured on PUSC zone with 'use all SC=0'	[4] 11.12	m	
6	physical CINR measured on PUSC zone with 'use all SC=1'	[4] 11.12	m	
7	physical CINR measured on FUSC zone	[4] 11.12	m	
8	physical CINR measured on AMC zone	[4] 11.12	m	
9	The estimation of physical CINR measured from preamble for frequency reuse configuration=1	[4] 11.12	m	
10	The estimation of physical CINR measured from preamble for frequency reuse configuration=3	[4] 11.12	m	
11	effective CINR measured on PUSC zone with 'use all SC=0'	[4] 11.12	m	
12	effective CINR measured on PUSC zone with 'use all SC=1' / PUSC AAS zone	[4] 11.12	m	
13	effective CINR measured on FUSC zone	[4] 11.12	m	
14	effective CINR measured on AMC AAS zone	[4] 11.12	m	
Comments:				

A.7.1.13 FPC

Table A.328: PDU: FPC

Item	**Capability**	**Reference**	**Status**	**Support**
1	Management Message type=38	[4] 6.3.2.3.34	BS:o MS:m	
2	Number of stations	[4] 6.3.2.3.34	BS:o MS:m	
3	Basic CID	[4] 6.3.2.3.34	BS:o MS:m	
4	Power adjust	[4] 6.3.2.3.34	BS:o MS:m	
Comments: Set of Basic CID and Power adjust values for each station defined.				

A.7.1.14 REG-REQ and REG-RSP

Table A.329: PDU: Registration Request (REG-REQ)

Item	Capability	Reference	Status	Support
1	Management Message type=6	6.3.2.3.7	m	
Comments:				

Table A.330: PDU: REG-REQ TLV

Item	Capability	Reference	Status	Support
1	SS management support	[4] 11.1.5	o	
2	IP management mode	[4] 11.1.5	o	
3	Vendor ID Encoding	[4] 11.1.5	o	
4	Vendor specific information	[4] 11.1.6	o	
5	Number of UL transport CIDs supported	[5] 11.7.6.1	m	
6	Number of DL transport CIDs supported	[5] 11.7.6.2	m	
7	CMAC Tuple	11.1.2.2	m	
8	Classification, PHS options, SDU encapsulation support	11.7.7.1	m	
9	Maximum number of classifiers	11.7.7.2	m	
10	PHS support	11.7.7.3	m	
11	ARQ support	11.7.8.1	m	
12	DSx flow control	11.7.8.2	m	
13	Maximum MAC data per frame support	11.7.8.10	m	
14	Packing support	11.7.8.11	m	
15	MAC extended rtPS support	11.7.8.12	m	
16	Maximum number of bursts transmitted concurrently to the MS	11.7.8.13	m	
17	Handover supported	11.7.13.5	m	
18	HO process optimization MS timer	11.7.13.2	m	
19	Handover Indication Readiness Timer	11.7.13.4	m	
20	BS Switching Timer	11.7.13.5	m	
21	Mobility feature supported	11.7.14.1	m	
22	Power saving class capability	11.7.14.2	m	
23	Sleep-mode recovery time	11.7.15	m	
24	Idle mode timeout	11.7.20.1	m	
25	ARQ-ACK type	11.7.23	m	
26	MS HO connections parameters processing time	11.7.13.4	m	
27	MS HO TEK processing time	11.7.24	m	
28	MAC header and subheader support	11.7.25	m	
29	MS periodic ranging timer information	11.7.27	o	
Comments: Item 8 Classification, PHS options, SDU encapsulation support: Length field has the value of 2.				

Table A.331: PDU: Registration Response (REG-RSP)

Item	Capability	Reference	Status	Support
1	Management Message type=7	6.3.2.3.8	m	
2	Response	6.3.2.3.8	m	
Comments:				

Table A.332: PDU: REG-RSP TLV

Item	Capability	Reference	Status	Support
1	SS management support	6.3.2.3.8, 11.7.2	o	
2	IP management mode	6.3.2.3.8, 11.7.3	o	
3	IP version	11.7.4	o	
4	Vendor ID Encoding	11.1.5	o	
5	Vendor-specific information	11.1.6	o	
6	SS management support	6.3.2.3.8, 11.7.2	m	
7	Uplink transport CIDs supported	11.7.6.1	m	
8	Downlink transport CIDs supported	11.7.6.2	m	
9	CMAC Tuple	11.1.2	m	
10	Classification, PHS options, SDU encapsulation support	11.7.7.1	m	
11	Maximum number of classifiers	11.7.7.2	m	
12	PHS support	11.7.7.3	m	
13	ARQ support	11.7.8.1	m	
14	DSx flow control	11.7.8.2	m	
15	Maximum MAC data per frame support	11.7.8.10	m	
16	Packing support	11.7.8.11	m	
17	MAC extended rtPS support	11.7.8.12	m	
18	Maximum number of bursts transmitted concurrently to the MS	11.7.8.13	m	
19	Handover supported	11.7.13.5	m	
20	HO process optimization MS timer	11.7.13.2	m	
21	Mobility feature supported	11.7.14.1	m	
22	Idle mode timeout	11.7.20.1	m	
23	ARQ-ACK type	11.7.23	m	
24	MS HO connections parameters processing time	11.7.24	m	
25	MS HO TEK processing time	11.7.24	m	
26	MAC header and subheader support	11.7.25	m	
27	CID update encodings	11.7.10	m	
28	Compressed CID update encodings	11.7.10.1	m	
29	System resource retain timer	11.7.13.1	m	
30	HO process optimization MS timer	11.7.13.2	m	
31	MS handover retransmission timer	11.7.13.3	m	
32	Handover Indication Readiness Timer	11.7.13.4	m	
33	Mobility feature supported	11.7.14.1	m	
34	Power saving class capability	11.7.14.2	m	
35	SAID update encodings	11.7.18	m	
36	Total number of provisional service flow	11.7.19	m	
37	Idle mode Timeout	11.7.20.1	m	
38	SA TEK update	11.7.21	m	
39	ARQ-ACK type	11.7.23	m	
40	MS HO connections parameters processing time	11.7.24	m	
41	MS HO TEK processing time	11.7.24	m	
42	MAC header and subheader support	11.7.25	m	
Comments: Item 9 Classification, PHS options, SDU encapsulation support: Length field has the value of 2.				

A.7.1.15 PKM-REQ and PKM-RSP Messages

Table A.333: PDU: PKM Request (PKM-REQ)

Item	Capability	Reference	Status	Support
1	Management Message type=9	[4] 6.3.2.3.9	m	
2	Code	[4] 6.3.2.3.9	m	
3	PKM Identifier	[4] 6.3.2.3.9	m	
Comments:				

Table A.334: PDU: PKM Reply (PKM-RSP)

Item	Capability	Reference	Status	Support
1	Management Message type=10	[4] 6.3.2.3.9	m	
2	Code	[4] 6.3.2.3.9	m	
3	PKM Identifier	[4] 6.3.2.3.9	m	
Comments:				

Table A.335: PKMv2 SA_TEK_Challenge TLV support

Item	Capability	Reference	Status	Support
1	BS_random	11.9.22	m	
2	Key sequence number	11.9.5	m	
3	AKID	11.9.32	m	
4	Key lifetime	11.9.4	m	
5	CMAC Digest	11.9.27	m	
Comments:				

Table A.336: PKMv2 SA_TEK_Request TLV support

Item	Capability	Reference	Status	Support
1	MS_random	11.9.21	m	
2	BS_random	11.9.22	m	
3	Key sequence number	11.9.5	m	
4	AKID	11.9.32	m	
5	Security capabilities	11.9.13	m	
6	Security negotiation parameters	11.8.4	m	
7	CMAC Digest	11.9.27	m	
Comments:				

Table A.337: PKMv2 SA_TEK_Response TLV support

Item	Capability	Reference	Status	Support
1	MS_random	11.9.21	o	
2	BS_random	11.9.22	o	
3	Key sequence number	11.9.5	m	
4	AKID	11.9.32	m	
5	(one or more) SA_TEK_Update	11.7.21	m	
6	Frame Number	11.9.37	m	
7	(one or more) SA descriptor(s)	11.9.17	m	
8	Security negotiation parameters	11.8.4	m	
9	PKMv2 configuration settings	11.9.36	m	
10	CMAC Digest	11.9.27	m	
Comments: In case of initial network entry, SA_TEK_Update TLV shall not be included.				

Table A.338: PKMv2 EAP_Start TLV support

Item	Capability	Reference	Status	Support
1	Key sequence number	11.9.5	m	
2	CMAC Digest	11.9.27	m	
Comments:				

Table A.339: PKMv2 EAP_Transfer TLV support

Item	Capability	Reference	Status	Support
1	EAP payload	11.9.33	m	
2	Key sequence number	11.9.5	m	
3	CMAC Digest	11.9.27	m	
Comments:				

Table A.340: PKMv2 Key-Request TLV

Item	Capability	Reference	Status	Support
1	Key Sequence Number	11.9.5	m	
2	SAID	11.9.7	m	
3	Nonce	11.9.20	o	
4	CMAC Digest	11.9.27	m	
Comments:				

Table A.341: PKMv2 Key-Reply

Item	Capability	Reference	Status	Support
1	Key Sequence Number	11.9.5	m	
2	SAID	11.9.7	m	
3	TEK-Parameters (older)	11.9.8	m	
4	TEK-Parameters (newer)	11.9.8	m	
5	GKEK-Parameters (older)	11.9.28	o	
6	GKEK-Parameters (newer)	11.9.28	o	
7	Nonce	11.9.20	o	
8	CMAC Digest	11.9.27	m	
Comments:				

Table A.342: PKMv2 Key-Reject TLV

Item	Capability	Reference	Status	Support
1	Key Sequence Number	11.9.5	m	
2	SAID	11.9.7	m	
3	Error-code	11.9.10	m	
4	Display-String	11.9.1	o	
5	Nonce	11.9.20	o	
6	CMAC Digest	11.9.27	m	
Comments:				

Table A.343: PKMv2 SA-Addition

Item	Capability	Reference	Status	Support
1	Key Sequence Number	11.9.5	m	
2	SA-Descriptor	11.9.17	m	
3	CMAC Digest	11.9.27	m	
Comments:				

Table A.344: PKMv2 TEK-Invalid

Item	Capability	Reference	Status	Support
1	Key Sequence Number	11.9.5	m	
2	SAID	11.9.7	m	
3	Error-code	11.9.10	m	
4	Display-String	11.9.1	o	
5	CMAC Digest	11.9.27	m	
Comments:				

A.7.1.16 DSA-REQ, DSA-RSP and DSA-ACK messages

Table A.345: PDU: DSA-REQ

Item	Capability	Reference	Status	Support
1	Management Message type=11	[4] 6.3.2.3.10	m	
2	Transaction ID	[4] 6.3.2.3.10	m	
Comments:				

Table A.346: DSA-REQ parameters

Item	Capability	Reference	Status	Support
1	Service flow identifier - SFID transmitted from BS side, received at MS side	[4] 11.13.1	m	
2	CID transmitted from BS side, received at MS side	[4] 11.13.2	m	
3	Service class name	[4] 11.13.3	o	
4	QOS parameter set type	[4] 11.13.4	m	
5	Traffic priority	[4] 11.13.5	m	
6	Maximum sustained traffic rate	[4] 11.13.6	m	
7	Minimum reserved traffic rate	[4] 11.13.8	m	
8	Vendor specific QOS parameters	[4] 11.13.10	o	
9	Service flow scheduling type	[4] 11.13.11	m	
10	Request/transmission policy	[4] 11.13.12	m	
11	Tolerated jitter	[4] 11.13.13	m	
12	Maximum latency	[4] 11.13.14	m	
13	Fixed length versus variable length SDU indicator	[4] 11.13.15	m	
14	SDU size	[4] 11.13.16	o	
15	Target SAID	[4] 11.13.17	o	
16	ARQ enable	[4] 11.13.18.1	m	
17	ARQ_WINDOW_SIZE	[4] 11.13.18.2	m	
18	ARQ RETRY TIMEOUT- Transmitter Delay	[4] 11.13.18.3	m	
19	ARQ RETRY TIMEOUT- Receiver Delay	[4] 11.13.18.3	m	
20	ARQ_BLOCK_LIFETIME	[4] 11.13.18.4	m	
21	ARQ_SYNC_LOSS_TIMEOUT	[4] 11.13.18.5	m	
22	ARQ_DELIVER_IN_ORDER	[4] 11.13.18.6	m	
23	ARQ_RX_PURGE_TIMEOUT	[4] 11.13.18.7	m	
24	ARQ_BLOCK_SIZE	[4] 11.13.18.8	m	
25	RECEIVER_ARQ_ACK_PROCESSING_TIME	11.13.18.9	o	
26	Unsolicited Grant Interval	[4] 11.13.20	m	
27	Unsolicited Polling Interval	[4] 11.13.21	m	
28	FSN size	11.13.22	o	
29	MBS Service	11.13.23	m	
30	Global Service Class Name	11.13.24	m	
31	Type of Data Delivery Services	11.13.25	m	
32	Time Base	11.13.27	m	
33	MBS zone identifier assignment	11.13.29	IO-MBS	
34	Paging preference	11.13.30	m	
35	SN Feedback Enabled	11.13.31	m	
36	HARQ Service Flows	11.13.32	m	
37	Authorization Token	11.13.34	o	
38	HARQ Channel mapping	11.13.35	m	
39	PDU SN extended subheader for HARQ reordering (TLV)	11.13.36	m	
40	CS specification	[4] 11.13.19.1	m	
41	Packet Classification Rule	[4] 11.13.19.3.4	m	
42	Classifier Rule Priority	[4] 11.13.19.3.4.1	m	
43	IP Type of Service/DSCP	[4] 11.13.19.3.4.2	m	
44	Protocol	[4] 11.13.19.3.4.3	m	
45	IP Masked Source Address	[4] 11.13.19.3.4.4	m	
46	IP Masked Destination Address	[4] 11.13.19.3.4.5	m	
47	Protocol Source Port Range	[4] 11.13.19.3.4.6	m	
48	Protocol destination Port Range	[4] 11.13.19.3.4.7	m	
49	Ethernet Destination MAC Address	[4] 11.13.19.3.4.8	IO-ETH1 or IO-ETH2 or IO-ETH3	

Item	Capability	Reference	Status	Support
50	Ethernet Source MAC Address	[4] 11.13.19.3.4.9	IO-ETH1 or IO-ETH2 or IO-ETH3	
51	Ethertype/IEEE 802.2 [18] SAP	[4] 11.13.19.3.4.10	IO-ETH1 or IO-ETH2 or IO-ETH3	
52	Associated Payload Header Suppression Index	[4] 11.13.19.3.4.13	m	
53	Vendor Specific Classifier Parameters	[4] 11.13.19.3.4.15	o	
54	Payload Header Suppression Rule	[4] 11.13.19.3.7	m	
55	Payload Header Suppression Index	[4] 11.13.19.3.7.1	m	
56	Payload Header Suppression Field	[4] 11.13.19.3.7.2	m	
57	Payload Header Suppression Mask	[4] 11.13.19.3.7.3	m	
58	Payload Header Suppression Size	[4] 11.13.19.3.7.4	m	
59	Payload Header Suppression Verification	[4] 11.13.19.3.7.5	m	
60	Vendor Specific PHS Parameters	[4] 11.13.19.3.7.6	o	
61	Packet classification rule index	[4] 11.13.19.3.4.14	m	
62	CMAC Tuple	[5] 6.3.2.3.10	m	
63	Classifier Action Rule	11.13.19.3.4.17	m	
64	ROHC Parameter Payload	11.13.38	m	
Comments:				

Table A.347: PDU: DSA-RSP

Item	Capability	Reference	Status	Support
1	Management Message type=12	[4] 6.3.2.3.11	m	
2	Transaction ID	[4] 6.3.2.3.11	m	
3	Confirmation code	[4] 6.3.2.3.11	m	
4	ARQ enable	[4] 11.13.18.1	m	
Comments:				

Table A.348: DSA-RSP TLV for Service flow parameters

Item	Capability	Reference	Status	Support
1	Service flow identifier - SFID transmitted from BS side, received at MS side	[4] 11.13.1	m	
2	CID transmitted from BS side, received at MS side	[4] 11.13.2	m	
3	Target SAID	[4] 11.13.17	m	
4	MBS Service	[4] 11.13.23	m	
5	ARQ TLVs for ARQ-enabled connections	[4] 11.13.18	m	
6	MBS zone identifier assignment	[4] 11.13.29	IO-MBS	
7	ROHC Parameter Payload	[4] 11.13.38	m	
8	CMAC Tuple	[5] 11.1.2.2	m	
Comments:				

Table A.349: PDU: DSA-ACK

Item	Capability	Reference	Status	Support
1	Management Message type=13	[4] 6.3.2.3.12	m	
2	Transaction ID	[4] 6.3.2.3.12	m	
3	Confirmation code	[4] 6.3.2.3.12	m	
Comments:				

Table A.350: DSA-ACK TLV

Item	Capability	Reference	Status	Support
1	CMAC Tuple	[5] 11.1.2.2	m	
Comments:				

A.7.1.17 DSC-REQ, DSC-RSP and DSC-ACK messages

Table A.351: PDU: DSC-REQ

Item	Capability	Reference	Status	Support
1	Management Message type=14	[4] 6.3.2.3.13	m	
2	Transaction ID	[4] 6.3.2.3.13	m	
Comments:				

Table A.352: DSC-REQ parameters

Item	Capability	Reference	Status	Support
1	Classifier DSC action	[4] 11.13.19.3.2	m	
2	CMAC Tuple	[5] 11.1.2.2	m	
3	Service flow identifier- SFID	[4] 11.13.1	m	
4	CID	[4] 11.13.2	m	
5	Service class name	[4] 11.13.3	o	
6	QOS parameter set type	[4] 11.13.4	m	
7	Traffic priority	[4] 11.13.5	m	
8	Maximum sustained traffic rate	[4] 11.13.6	m	
9	Minimum reserved traffic rate	[4] 11.13.8	m	
10	Vendor specific QOS parameters	[4] 11.13.10	o	
11	Tolerated jitter	[4] 11.13.13	m	
12	Maximum latency	[4] 11.13.14	m	
13	Unsolicited Grant Interval	[4] 11.13.20	m	
14	Unsolicited Polling Interval	[4] 11.13.21	m	
15	Global Service Class Name	11.13.24	o	
16	Time Base	11.13.27	m	
17	Paging preference	11.13.30	m	
18	SN Feedback Enabled	11.13.31	m	
19	Authorization Token	11.13.34	o	
20	ROHC Parameter Payload	[5] 11.13.38	m	
Comments:				

Table A.353: PDU : DSC-RSP

Item	Capability	Reference	Status	Support
1	Management Message type=15	[4] 6.3.2.3.14	m	
2	Transaction ID	[4] 6.3.2.3.14	m	
3	Confirmation code	[4] 6.3.2.3.14	m	
Comments:				

Table A.354: DSC-RSP TLV

Item	Capability	Reference	Status	Support
1	ROHC Parameter Payload	11.13.38	m	
2	CMAC Tuple	[5] 11.1.2.2	m	
Comments:				

Table A.355: PDU: DSC-ACK

Item	Capability	Reference	Status	Support
1	Management Message type=16	[4] 6.3.2.3.15	m	
2	Transaction ID	[4] 6.3.2.3.15	m	
3	Confirmation code	[4] 6.3.2.3.15	m	
Comments:				

Table A.356: DSC-ACK TLV

Item	Capability	Reference	Status	Support
1	CMAC Tuple	[5] 11.1.2.2	m	
Comments:				

A.7.1.18 DSD-REQ and DSD-RSP messages

Table A.357: PDU: DSD-REQ

Item	Capability	Reference	Status	Support
1	Management Message type=17	[4] 6.3.2.3.16	m	
2	Transaction ID	[4] 6.3.2.3.16	m	
3	Service flow ID	[4] 6.3.2.3.16	m	
Comments:				

Table A.358: DSD-REQ TLV

Item	Capability	Reference	Status	Support
1	CMAC Tuple	[5] 11.1.2.2	m	
Comments:				

Table A.359: PDU: DSD-RSP

Item	Capability	Reference	Status	Support
1	Management Message type=18	[4] 6.3.2.3.17	m	
2	Transaction ID	[4] 6.3.2.3.17	m	
3	Confirmation code	[4] 6.3.2.3.17	m	
4	Service flow ID	[4] 6.3.2.3.17	m	
Comments:				

Table A.360: DSD-RSP TLV

Item	Capability	Reference	Status	Support
1	CMAC Tuple	[5] 11.1.2.2	m	
Comments:				

A.7.1.19 TLVs for Handover, Sleep and Idle Mode

Table A.361: MOB_SLP-REQ TLV

Item	Capability	Reference	Status	Support
1	Enabled-Action-Triggered	[5] 6.3.2.3.44, 6.3.21.1, and 11.17.3	m	
2	CMAC Tuple	[5] 6.3.2.3.44, 11.1.2.1 and 11.1.2.2	m	
Comments:				

Table A.362: MOB_SLP-RSP TLV

Item	Capability	Reference	Status	Support
1	Enabled-Action-Triggered	[5] 6.3.2.3.45, 6.3.21.1, and 11.17.3	m	
2	CMAC Tuple	[5] 6.3.2.3.45, 11.1.2.1 and 11.1.2.2	m	
Comments:				

Table A.363: MOB_TRF-IND TLV

Item	Capability	Reference	Status	Support
1	SLPID_Update	[5] 6.3.2.3.46, 6.3.21.1, 6.3.21.5, and 1116.1	m	
Comments:				

Table A.364: PDU: MOB_SLP-REQ

Item	Capability	Reference	Status	Support
1	Management Message type=50	[5] 6.3.2.3.44	m	
2	Number of Classes	[5] 6.3.2.3.44	m	
3	Definition	[5] 6.3.2.3.44	m	
4	Operation	[5] 6.3.2.3.44	m	
5	Power_Saving_Class_ID	[5] 6.3.2.3.44	m	
6	Start_frame_number	[5] 6.3.2.3.44	m	
7	Reserved	[5] 6.3.2.3.44	m	
8	Power_Saving_Class_Type = 1	[5] 6.3.2.3.44	m	
9	Direction	[5] 6.3.2.3.44	m	
10	TRF-IND Required	[5] 6.3.2.3.44	m	
11	Traffic_triggered_wakening_flag	[5] 6.3.2.3.44	m	
12	Reserved	[5] 6.3.2.3.44	m	
13	Initial-sleep window	[5] 6.3.2.3.44	m	
14	Listening-window	[5] 6.3.2.3.44	m	
15	Final-sleep window base	[5] 6.3.2.3.44	m	
16	Final-sleep window exponent	[5] 6.3.2.3.44	m	
17	Number_of_Sleep_CIDs	[5] 6.3.2.3.44	m	
18	CID	[5] 6.3.2.3.44	m	
Comments:				

Table A.365: PDU: MOB_SLP-RSP

Item	Capability	Reference	Status	Support
1	Management Message type=51	[5] 6.3.2.3.45	m	
2	Number of Classes	[5] 6.3.2.3.45	m	
3	Length of Data	[5] 6.3.2.3.45	m	
4	Sleep Approved	[5] 6.3.2.3.45	m	
5	Definition	[5] 6.3.2.3.45	m	
6	Operation	[5] 6.3.2.3.45	m	
7	Power_Saving_Class_ID	[5] 6.3.2.3.45	m	
8	Start_frame_number	[5] 6.3.2.3.45	m	
9	Stop_CQI_Allocation_Flag	[5] 6.3.2.3.45	m	
10	Reserved	[5] 6.3.2.3.45	m	
11	Power_Saving_Class_Type	[5] 6.3.2.3.45	m	
12	Direction	[5] 6.3.2.3.45	m	
13	Initial-sleep window	[5] 6.3.2.3.45	m	
14	Listening-window	[5] 6.3.2.3.45	m	
15	Final-sleep window base	[5] 6.3.2.3.45	m	
16	Final-sleep window exponent	[5] 6.3.2.3.45	m	
17	TRF-IND required	[5] 6.3.2.3.45	m	
18	Traffic_triggered_wakenging_flag	[5] 6.3.2.3.45	m	
19	Reserved	[5] 6.3.2.3.45	m	
20	SLPID	[5] 6.3.2.3.45	m	
21	Reserved	[5] 6.3.2.3.45	m	
22	Number_of_CIDs	[5] 6.3.2.3.45	m	
23	CID	[5] 6.3.2.3.45	m	
24	Padding	[5] 6.3.2.3.45	m	
25	REQ-duration	[5] 6.3.2.3.45	m	
Comments:				

Table A.366: PDU: MOB_TRF-IND

Item	Capability	Reference	Status	Support
1	Management Message type=52	[5] 6.3.2.3.46	m	
2	FMT	[5] 6.3.2.3.46	m	
3	SLPID Group Indication bit-map	[5] 6.3.2.3.46	m	
4	Traffic Indication Bitmap	[5] 6.3.2.3.46	m	
5	Num_Pos	[5] 6.3.2.3.46	m	
6	SLPID	[5] 6.3.2.3.46	m	
7	Padding	[5] 6.3.2.3.46	m	
Comments:				

Table A.367: DL Sleep control extended subheader

Item	Capability	Reference	Status	Support
1	Power_Saving_Class_ID	[5] 6.3.2.7.2	m	
2	Operation	[5] 6.3.2.7.2	m	
3	Final_Sleep_Window_Exponent	[5] 6.3.2.7.2	m	
4	Final_Sleep_Window_Base	[5] 6.3.2.7.2	m	
5	Stop_CQI_Allocation_Flag	[5] 6.3.2.7.2	m	
6	Start frame	[5] 6.3.2.7.2	m	
Comments:				

Table A.368: Bandwidth request and uplink sleep control header

Item	Capability	Reference	Status	Support
1	Type	6.3.2.1.2.1.6	m	
2	BR	6.3.2.1.2.1.6	m	
3	Power_Saving_Class_ID	6.3.2.1.2.1.6	m	
4	Operation	6.3.2.1.2.1.6	m	
5	Reserved	6.3.2.1.2.1.6	m	
6	CID	6.3.2.1.2.1.6	m	
7	HCS	6.3.2.1.2.1.6	m	
Comments:				

A.7.1.20 MOB_NBR-ADV

Table A.369: PDU: MOB_NBR-ADV

Item	Capability	Reference	Status	Support
1	Management Message type=53	[5] 6.3.2.3.47	m	
2	Skip-optional-fields bitmap	[5] 6.3.2.3.47	m	
3	DCD Configuration Change Count	[5] 6.3.2.3.47	m	
4	UCD Configuration Change Count	[5] 6.3.2.3.47	m	
Comments:				

Table A.370: MOB_NBR-ADV TLV

Item	Capability	Reference	Status	Support
1	Mobility Feature Supported	[5] 6.3.2.3.47, 11.7.14.1	m	
2	Paging Group ID	[5] 6.3.2.3.47	m	
3	DCD_settings	[5] 6.3.2.3.47, 11.1.7	m	
4	UCD_settings	[5] 6.3.2.3.47, 11.1.7	m	
5	PHY Mode ID	[5] 6.3.2.3.47, 11.18.1	m	
6	Neighbour BS Trigger	[5] 6.3.2.3.47, 11.1.7	m	
Comments:				

A.7.1.21 MOB_SCN-REQ

Table A.371: PDU: MOB_SCN-REQ

Item	Capability	Reference	Status	Support
1	Management Message type=54	[5] 6.3.2.3.48	m	
2	Scan duration	[5] 6.3.2.3.48	m	
3	Interleaving interval	[5] 6.3.2.3.48	m	
4	Scan Iteration	[5] 6.3.2.3.48	m	
5	N_Recommended_BS_Index	[5] 6.3.2.3.48	m	
6	Configuration Change Count for MOB_NBR-ADV	[5] 6.3.2.3.48	m	
7	Neighbor_BS_Index	[5] 6.3.2.3.48	m	
8	Scanning type	[5] 6.3.2.3.48	m	
9	Recommended BS ID	[5] 6.3.2.3.48	m	
10	N_Recommended_BS_Full	[5] 6.3.2.3.48	m	
Comments:				

Table A.372: MOB_SCN-REQ TLV

Item	Capability	Reference	Status	Support
1	CMAC Tuple	[5] 11.1.2.2	m	
Comments:				

A.7.1.22 MOB_SCN-RSP

Table A.373: PDU: MOB_SCN-RSP

Item	Capability	Reference	Status	Support
1	Management Message type=55	[5] 6.3.2.3.49	m	
2	Scan duration	[5] 6.3.2.3.49	m	
3	Report mode	[5] 6.3.2.3.49	m	
4	Report period	[5] 6.3.2.3.49	m	
5	Report metric	[5] 6.3.2.3.49	m	
6	Start Frame	[5] 6.3.2.3.49	m	
7	Interleaving interval	[5] 6.3.2.3.49	m	
8	Scan iteration	[5] 6.3.2.3.49	m	
9	Configuration Change Count for MOB_NBR-ADV	[5] 6.3.2.3.49	m	
10	N_Recommended_BS_Index	[5] 6.3.2.3.49	m	
11	Neighbor_BS_Index	[5] 6.3.2.3.49	m	
12	Scanning type	[5] 6.3.2.3.49	m	
13	N_Recommended_BS_Full	[5] 6.3.2.3.49	m	
14	Recommended BS ID	[5] 6.3.2.3.49	m	
15	Rendezvous time	[5] 6.3.2.3.49	o	
16	CDMA code	[5] 6.3.2.3.49	o	
17	Transmission opportunity offset	[5] 6.3.2.3.49	o	
Comments:				

Table A.374: MOB_SCN-RSP TLV

Item	Capability	Reference	Status	Support
1	CMAC Tuple	[5] 11.1.2.2	m	
Comments:				

A.7.1.23 MOB_SCN-REP

Table A.375: PDU: MOB_SCN-REP

Item	Capability	Reference	Status	Support
1	Management Message type=60	[5] 6.3.2.3.50	m	
2	Report mode	[5] 6.3.2.3.50	m	
3	N_current_BSs	[5] 6.3.2.3.50	m	
4	Report metric	[5] 6.3.2.3.50	m	
5	BS CINR mean	[5] 6.3.2.3.50	m	
6	BS RSSI mean	[5] 6.3.2.3.50	m	
7	BS RTD	[5] 6.3.2.3.50	m	
8	N_Neighbor_BS_Index	[5] 6.3.2.3.50	m	
9	N_Neighbor_BS_Full	[5] 6.3.2.3.50	m	
10	Configuration Change Count for MOB_NBR-ADV	[5] 6.3.2.3.50	m	
11	Neighbor_BS_Index	[5] 6.3.2.3.50	m	
12	Neighbour BSID	[5] 6.3.2.3.50	m	
Comments:				

Table A.376: MOB_SCN-REP TLV

Item	Capability	Reference	Status	Support
1	CMAC Tuple	[5] 11.1.2.2	m	
Comments:				

A.7.1.24 MOB_BSHO-REQ

Table A.377: PDU: MOB_BSHO-REQ

Item	Parameter	Reference	Status	Support
1	Management Message type=56	[5] 6.3.2.3.52	m	
2	Mode	[5] 6.3.2.3.52	m	
3	HO operation mode	[5] 6.3.2.3.52	m	
4	N_Recommended	[5] 6.3.2.3.52	m	
5	Resource Retain Flag	[5] 6.3.2.3.52	m	
6	Unsolicited UL grant for HO-IND flag	[5] 6.3.2.3.52	m	
7	Neighbour BSID	[5] 6.3.2.3.52	m	
8	Service Level Prediction	[5] 6.3.2.3.52	m	
9	Preamble Index/Subchannel Index	[5] 6.3.2.3.52	m	
10	HO process optimization	[5] 6.3.2.3.52	m	
11	Network Assisted HO supported per neighbour BS	[5] 6.3.2.3.52	m	
12	HO_ID_included_indication	[5] 6.3.2.3.52	m	
13	HO_authorization policy indicator	[5] 6.3.2.3.52	m	
14	HO_ID	[5] 6.3.2.3.52	m	
15	HO_authorization_policy_support	[5] 6.3.2.3.52	o	
16	Action Time	[5] 6.3.2.3.52	m	
Comments: In Item 9, only Preamble Index is applicable for OFDMA.				

Table A.378: MOB_BSHO-REQ TLV

Item	Capability	Reference	Status	Support
1	CMAC Tuple	[5] 11.1.2.2	m	
2	Resource Retain Time	[5] 6.3.2.3.52	m	
Comments:				

A.7.1.25 MOB_BSHO-RSP

Table A.379: PDU: MOB_BSHO-RSP

Item	Capability	Reference	Status	Support
1	Management Message type=58	[5] 6.3.2.3.54	m	
2	Mode	[5] 6.3.2.3.54	m	
3	Action Time	[5] 6.3.2.3.54	m	
4	Resource Retain Flag	[5] 6.3.2.3.54	m	
5	Unsolicited UL grant for HO-IND flag	[5] 6.3.2.3.54	m	
Comments:				

Table A.380: MOB_BSHO-RSP TLV

Item	Capability	Reference	Status	Support
1	CMAC Tuple	[5] 11.1.2	m	
2	Resource Retain Time	[5] 6.3.2.3.54	m	
Comments:				

A.7.1.26 MOB_MSHO-REQ

Table A.381: PDU: MOB_MSHO-REQ

Item	Capability	Reference	Status	Support
1	Management Message type=57	[5] 6.3.2.3.53	m	
2	Report metric	[5] 6.3.2.3.53	m	
3	N_New_BS_Index	[5] 6.3.2.3.53	m	
4	N_New_BS_Full	[5] 6.3.2.3.53	m	
5	Configuration Change Count for MOB_NBR-ADV	[5] 6.3.2.3.53	m	
6	Neighbor_BS_Index	[5] 6.3.2.3.53	m	
7	Neighbour BSID	[5] 6.3.2.3.53	m	
8	Preamble index/ Subchannel Index	[5] 6.3.2.3.53	m	
Comments:				

Table A.382: MOB_MSHO-REQ TLV

Item	Capability	Reference	Status	Support
1	CMAC Tuple	[5] 11.1.2.2	m	
Comments:				

A.7.1.27 MOB_HO-IND

Table A.383: PDU: MOB_HO-IND

Item	Parameter	Reference	Status	Support
1	Management Message type=59	[5] 6.3.2.3.55	m	
2	Mode	[5] 6.3.2.3.55	m	
3	HO_IND_TYPE	[5] 6.3.2.3.55	m	
4	Ranging Params valid indication	[5] 6.3.2.3.55	m	
5	Target_BS_ID	[5] 6.3.2.3.55	m	
6	Preamble Index/ Subchannel Index	[5] 6.3.2.3.55	m	
Comments:				

Table A.384: MOB_HO-IND TLV

Item	Capability	Reference	Status	Support
1	CMAC Tuple	[5] 11.1.2.2	m	
Comments:				

A.7.1.28 PDUs fields for Idle Mode

Table A.385: PDU: MOB_PAG-ADV

Item	Capability	Reference	Status	Support
1	MS MAC Address Hash	6.3.24.1	m	
2	Paging Group ID	6.3.24.8.1.1	m	
3	Action Code	6.3.2.3.56	m	
Comments:				

Table A.386: PHY Synchronization Field

Item	Capability	Reference	Status	Support
1	Frame size and frame number	6.3.24.3	m	
Comments:				

A.7.1.29 Feedback

Table A.387: PDU: Feedback Header

Item	Capability	Reference	Status	Support
1	CII	[5] 6.3.2.1.2.2.1 table 7h	m	
2	Feedback Type	[5] table 7i	m	
3	Feedback Content	[5] table 7i	m	
4	HCS	[5] table 7h	m	
Comments:				

Table A.388: PDU: Feedback Header types

Item	Capability	Reference	Status	Support
1	MIMO feedback type + feedback payload (Type 0000)	[5] table 7i	m	
Comments: Feedback Type (from table 302b) 0b000 - 0b010 (Fast DL measurement/Default Feedback) are valid Only CQICH Types = 000 is valid for WiMAX 0b000 = Fast DL measurement/Default Feedback with antenna grouping 0b001 = Fast DL measurement/Default Feedback with antenna selection 0b010 = Fast DL measurement/Default Feedback with reduced codebook Feedback Payload (from table 298f) The possible payloads are identical to those available for the regular CQICH. 1. Define that the measurement configuration is the same as the last REP-REQ or CQICH. 2. Define that FH will not be used for reporting CQI if CQICH was allocated to the user, however, it can be used for MIMO mode feedback in the case we want to use CQICH channel to report CQI every frame. The feedback polling IE allocate will be restricted to the end of the frame when Dedicated UL Allocation Included.			

A.7.1.30 NSP Selection

Table A.389: PDU: Service Identity Information (SII-ADV) message

Item	Capability	Reference	Status	Support
1	Management Message Type=68	802.16Rev2/D2:6.3.2.3.63	m	
Comments:				

Table A.390: TLVs for NSP Selection

Item	Capability	Reference	Status	Support
1	NSP List TLV	802.16Rev2/D2: 11.1.11.1, 6.3.2.3.63	m	
2	Service Information Query (SIQ) TLV	802.16Rev2/D2: 11.8.9	m	
3	NSP Change Count TLV	802.16Rev2/D2: 11.4.1, 6.3.2.3.63	m	
4	Verbose NSP Name List TLV	802.16Rev2/D2: 11.1.11.2	m	
5	Visited NSP ID TLV	802.16Rev2/D2: 11.8.11	m	
6	Visited NSP Realm TLV	802.16Rev2/D2: 11.8.13	m	
7	SII-ADV Message Pointer TLV	802.16Rev2/D2: 11.8.14	m	
Comments: For Item 1, scope of the TLV is SBC_RSP or SII-ADV. For Item 2, scope of the TLV is SBC_REQ. For Item 3, scope of the TLV is DCD. For Item 4, scope of the TLV is SBC-RSP or SII-ADV. For Item 5, scope of the TLV is SBC-REQ. For Item 6, scope of the TLV is SBC-RSP. For Item 7, scope of the TLV is SBC-RSP.				

Annex B (normative): Protocol ICS (PICS) for HiperMAN/WiMAX- ETWG profile

B.1 Guidance for completing PICS Proforma

B.1.1 Purposes and Structure

The purpose of this PICS proforma is to provide a mechanism whereby a supplier of an implementation of the requirements defined in [1] and [2] (which mandates requirements defined in [4]) may provide information about the implementation in a standardized manner. The PICS proforma does not cover every possible compliant HiperMAN/WiMAX implementation, but only those implementations that are compliant with the system profiles as defined in [3].

The PICS proforma is subdivided into clauses for the following categories of information:

- guidance for completing the PICS proforma;
- identification and implementation;
- identification of the standard;
- global statement of conformance;
- roles;
- Mobile Station (MS);
- Base Station (BS).

B.1.2 Abbreviations and Conventions

Item column

- The Item column contains a number which identifies the item in the table.

Capability column

- The capability column describes in free text each respective item (e.g. parameters, timers, etc.). It implicitly means "Is <capability> supported by the implementation?".

Reference column

- The reference column indicates the clause of [1], [2], and [4] from which the requirement for the capability is derived. A reference to [4] is to be understood as a reference to IEEE 802.16-2004 [4] as corrected and amended by IEEE 802.16e-2005 [5].

Status column

- The following notations, defined in [9], are used in the status column.

m	Mandatory - the capability is required to be supported
o	Optional - the capability may be supported or not
n/a	Not applicable - in the given context, it is impossible to use the capability
x	Prohibited (excluded) - there is a requirement not to use this capability in the given context
o.i	Qualified option - for mutually exclusive or selectable options from a set. "i" is an integer which identifies a group of related optional items and the logic of their selection which is defined immediately following the table
ci	Conditional - the requirement on the capability ("m", "o", "x", or "n/a") depends on the support of other optional or conditional items. "i" is an integer identifying a conditional status expression which is defined immediately following the table
i	Irrelevant (out of scope) - capability outside the scope of the reference specification. No answer is requested from the supplier

Support column

- The support column shall be filled in by the supplier of the implementation. The following common notations, defined in [9] are used for the support column.

Y or y	Supported by implementation.
N or n	Not supported by implementation.
N/A, n/a or -	No answer required (allowed only if the status is n/a either directly or after the evaluation of a conditional status).

If this PICS proforma is completed in order to describe a multiple profile implementation, it may be necessary to answer that a capability is supported for one profile and not supported for another. In that case, the supplier shall enter a unique reference to a conditional expression, preceded by "?" (e.g. ?3). This expression shall be given in the space provided for comments at the bottom of the table. It uses the predicates defined in [9], each of which refers to a single profile or a family of profiles and which takes the value TRUE if and only if that profile is to be used.

EXAMPLE: ?3: If profM1 then Y else N.

NOTE: As stated in [9], support for a received PDU requires the ability to parse all valid parameters of that PDU. Supporting a PDU while having no ability to parse a valid parameter is non-conformant. Support for a parameter on a PDU means that the semantics of that parameter are supported.

Values allowed column

- The values allowed column is only used when necessary in a table. It contains the type, the list, the range, or the length of values allowed. The following notations are used.

Range of values: Example:	<min value>..<max value> 5..20
List of values: Example 1: Example 2: Example 3:	<value1>, <value2>, …, <valueN> 2, 4, 6, 8, 9 1101b, 1011b, 1111b 0x0A, 0x34, 0x2F
List of named values: Example:	<name1>(<val1>), <name2>(<val2>), …, <nameN>(<valN>) reject(1), accept(2)
Length: Example:	Size (<min size>..<max size>) Size (1..8)

Values supported column

- The values supported column is only present when the values allowed column is present. It shall be filled in by the supplier of the implementation. In this column, the value or the ranges of values supported by the implementation shall be indicated.

Reference to items

- For each possible item answer in the support column within the PICS proforma a unique reference exists which may be used, for example, in conditional expressions. It is defined as the table identifier, followed by the "/" character, followed by the item number in the table. If there is more than one support column in a table, the columns are discriminated by letters (a, b, etc.).

Example 1: Table B.5/4 is the reference to the answer of item 4 in table B.5.

Example 2: Table B.6/3b is the reference to the second answer (i.e. in the second support column) of item 3 in table B.6.

Prerequisite Line

- A prerequisite line takes the form: Prerequisite: <predicate>.
- A prerequisite line after a clause or table title indicates that the entire clause or the entire table is not required to be completed if the predicate is FALSE.

B.1.3 Instructions for completing the PICS Proforma

The supplier of the implementation shall complete the PICS proforma in each of the spaces provided. In particular, an explicit answer shall be entered, in the support or values supported column boxes provided, using the notation described in clause B.1.2.

However, tables related to Mobile Station shall only be completed for Mobile Station (MS) implementations, and tables related to Base Station shall only be filled in for Base Station implementations.

If necessary, the supplier may provide additional comments in space at the bottom of the tables or separately.

B.2 Identification of the implementation

Identification of the Implementation Under Test (IUT) and the system in which it resides (the System Under Test (SUT)) should be filled in so as to provide as much detail as possible regarding version numbers and configuration options.

The product supplier and client information should both be filled in if they are different.

A person who can answer queries regarding information supplied in the PICS should be named as the contact person.

B.2.1 Date of statement

Date of statement (MM/DD/YYYY):	

B.2.2 Implementation Under Test (IUT) identification

IUT name:	
IUT version:	

B.2.3 System Under Test (SUT) identification

SUT name:	
Hardware configuration:	
Operating system:	

B.2.4 Product supplier

Name:	
Address:	
Telephone Number:	
Fax Number:	
E-mail address:	
Additional information:	

B.2.5 Client (if different from product supplier)

Name:	
Address:	
Telephone Number:	
Fax Number:	
E-mail address:	
Additional information:	

B.2.6 PICS contact person

(A person to contact if there are any queries concerning the content of the PICS).

Name:	
Address:	
Telephone Number:	
Fax Number:	
E-mail address:	
Additional information:	

B.3 Identification of the standard

This PICS proforma applies to the ETSI HiperMAN/WiMAX standard consisting of the following normative references:

- HiperMAN/WiMAX Physical Layer: [1].
- HiperMAN/WiMAX Data Logical Control Layer: [2] which normatively references [4].

B.4 Global statement of conformance

Are all mandatory capabilities implemented? (Yes/No)	

NOTE: Answering "No" to this question indicates non-conformance to the HiperMAN/WiMAX standard. Non-supported mandatory capabilities are to be identified in the PICS, with an explanation of why the implementation is non-conforming, on pages attached to the PICS proforma.

B.5 System profiles

Table B.1: System profiles

Item	Role	Reference	IEEE	HM	WIMAX /ETG	Support
1	WirelessMAN-SC	[4] 12.1	Ob.1.1	X	X	
2	WirelessMAN-SCa	[4] 12.2	Ob.1.1	X	X	
3	WirelessMAN-OFDM and WirelessHUMAN-OFDM	[4] 12.3	Ob.1.1	m	m	
4	WirelessMAN-OFDMA and WirelessHUMAN-OFDMA	[4] 12.4	Ob.1.1	X	X	
Ob.1.1: It is mandatory to support at least one of these items.						
Comments:						

Table B.2: Roles

Prerequisite: B.1/3 WirelessMAN-OFDM and WirelessHUMAN-OFDM.				
Item	**Role**	**Reference**	**Status**	**Support**
1	Mobile Station (MS)	[4]	Ob.2.1	
2	Base Station (BS)	[4]	Ob.2.1	
Ob.2.1: It is mandatory to support exactly one of these items.				
NOTE: These Items do not reflect the capability to support the given role as part of the current implementation, but indicates the role of the implementation which is relevant to fill all the items of this PICS proforma.				
Comments:				

Table B.3: Usage Scenarios

Prerequisite: B.2/1 Mobile Station.				
Item	**Usage scenario**	**Reference**	**Status**	**Support**
1	Fixed	[6] 3.2	Ob.3.1	
2	Nomadic	[6] 3.2	Ob.3.1	
3	Portable	[6] 3.2	Ob.3.1	
Ob.3.1: It is mandatory to support at least one of these items.				
Comments:				

B.5.1 WirelessMAN-SC

Void.

B.5.2 WirelessMAN-SCa

Void.

B.5.3 WirelessMAN-OFDM and WirelessHUMAN-OFDM

Table B.4: Network topology

Prerequisite: B.1/3 WirelessMAN-OFDM and WirelessHUMAN-OFDM.						
Item	**Role**	**Reference**	**IEEE**	**HM**	**WIMAX**	**Support**
1	profM3_PMP - Basic packet PMP	[4] 6.1	Ob.4	m	m	
2	profM3_Mesh - Basic packet Mesh	[4] 6.2	Ob.4	X	X	
Ob.4: It is mandatory to support at least one of these items.						
Comments:						

Table B.5: Channelization

Prerequisite: B.1/3 WirelessMAN-OFDM and WirelessHUMAN-OFDM.				
Item	**Name**	**Reference**	**Status**	**Support**
1	profP3_1,75 - 1,75 MHz channel PHY	[4] 12.3.2.1	Ob.5	
2	profP3_3,5 - 3,5 MHz channel PHY	[4] 12.3.2.2	Ob.5	
3	profP3_7 - 7,0 MHz channel PHY	[4] 12.3.2.3	Ob.5	
4	profP3_3 - 3 MHz channel PHY	[4] 12.3.2.4	Ob.5	
5	profP3_5,5 - 5,5 MHz channel PHY	[4] 12.3.2.5	Ob.5	
6	profP3_10 - 10 MHz channel PHY	[4] 12.3.2.6	Ob.5	
7	profP3_2,5- 2,5 MHz channel PHY	[6] 5	Ob.5	
8	profP3_5 - 5 MHz channel PHY	[6] 5	Ob.5	
Ob.5: It is mandatory to support at least one of these items.				
Comments:				

Table B.6: Power classes

Prerequisite: B.1/3 WirelessMAN-OFDM and WirelessHUMAN-OFDM.				
Item	**Name**	**Reference**	**Status**	**Support**
1	profC3_0 - $P_{TX,max}$ < 14 dBm	[4] 12.3	Ob.6	
2	profC3_14 - 14 dBm < $P_{TX,max}$ < 17 dBm	[4] 12.3	Ob.6	
3	profC3_17 - 17 dBm < $P_{TX,max}$ < 20 dBm	[4] 12.3	Ob.6	
4	profC3_20 - 20 dBm < $P_{TX,max}$ < 23 dBm	[4] 12.3	Ob.6	
5	profC3_23 - $P_{TX,max}$ > 23 dBm	[4] 12.3	Ob.6	
Ob.6: It is mandatory to support at least one of these items.				
Comments:				

Table B.7: Duplexing modes

Prerequisite: B.1/3 WirelessMAN-OFDM and WirelessHUMAN-OFDM.				
Item	**Name**	**Reference**	**Status**	**Support**
1	prof_TDD - TDD Time Division Duplexing	[4] 6.3.7.2	Ob.7	
2	prof_FDD - FDD Frequency Division Duplexing	[4] 6.3.7.1	Ob.7	
Ob.7: It is mandatory to support at least one of these items.				
Comments:				

Table B.8: FDD Duplexing modes

Prerequisite: B.7/2 prof_FDD - FDD Frequency Division Duplexing.				
Item	**Name**	**Reference**	**Status**	**Support**
1	Supports FDD Frequency Division Duplexing Full Duplex	[4] 6.3.7.1	Cb.8.1	
2	Supports FDD Frequency Division Duplexing Half Duplex (see note)	[4] 6.3.7.1	Cb.8.1	
Ob.8: It is mandatory to support at least one of these items. Cb.8.1: IF B.2/1 THEN Ob.8 ELSE m.				
NOTE: For the Base Station, supporting FDD Half Duplex means "respects Halp Duplex Nature of half-duplex FDD MS".				
Comments:				

Table B.9: RF Profiles

Prerequisite: B.1/3 WirelessMAN-OFDM and WirelessHUMAN-OFDM.				
Item	**Name**	**Reference**	**Status**	**Support**
1	profR10_1 - RF Profile for 10 MHz Channelization 5000 + n x 5 MHz, *n* {55, 57, 59, 61, 63, 65, 67}	[4] 12.3.3.1.1	Ob.9	
2	profR10_2 - RF Profile for 10 MHz Channelization 5000 + n x 5 MHz, *n* {148, 150, 152, 154, 156, 158, 160, 162, 164, 166}	[4] 12.3.3.1.1	Ob.9	
3	profR10_3 - RF Profile for 10 MHz Channelization 5000 + n x 5 MHz, *n* {147 149 151 153 155 157 159 161 163 165 167}	[4] 12.3.3.1.1	Ob.9	
4	profR3_1 - RF Profile for licensed bands with steps of 250 kHz	[4] 8.3.10.2	Cb.9.1	
Ob.9: IF B.5/6 THEN It is mandatory to support at least one of these items ELSE x. Cb.9.1: IF (B.5/1 OR B.5/2 OR B.5/3 OR B.5/4 OR B.5/5 OR B.5/7 OR B.5/8) THEN m ELSE x.				
Comments:				

B.5.3.1 MS in PMP topology

B.5.3.1.1 PHY functions

Table B.10: Frame duration codes for MS

Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP.				
Item	**Frame Duration in ms**	**Reference**	**Status**	**Support**
1	2,5	[4] 8.3.5.4	m	
2	4	[4] 8.3.5.4	m	
3	5	[4] 8.3.5.4	m	
4	8	[4] 8.3.5.4	m	
5	10	[4] 8.3.5.4	m	
6	12,5	[4] 8.3.5.4	m	
7	20	[4] 8.3.5.4	m	
Comments:				

Table B.11: Cyclic Prefix for MS

Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP.				
Item	**Cyclic Prefix**	**Reference**	**Status**	**Support**
1	1/4	[4] 8.3.2.4	m	
2	1/8	[4] 8.3.2.4	m	
3	1/16	[4] 8.3.2.4	m	
4	1/32	[4] 8.3.2.4	m	
Comments:				

Table B.12: Modulation for MS

Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP.				
Item	**Modulation**	**Reference**	**Status**	**Support**
1	BPSK	[4] 8.3.3.4.1	m	
2	QPSK	[4] 8.3.3.4.1	m	
3	16-QAM	[4] 8.3.3.4.1	m	
4	64-QAM	[4] 8.3.3.4.1	Cb.12.1	
Cb.12.1: IF HUMAN THEN o ELSE m.				
Comments:				

Table B.13: Major PHY functions for MS

Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP.				
Item	**Name**	**Reference**	**Status**	**Support**
1	AAS (Adaptive Antenna) supported	[4] 6.3.7.6	o	
2	DL Subchannelization	[4] 8.3.5.1.1	o	
3	UL Subchannelization	[4] 8.3.2.4	Cb.13.5	
4	Dynamic Frequency Support DFS	[4] 6.3.15	Cb.13.1	
5	Concatenated Reed-Solomon-convolutional code (RS-CC)	[4] 8.3.3.2	m	
6	Block Turbo Coding (BTC)	[4] 8.3.3.2	o	
7	Convolutional Turbo Codes (CTC)	[4] 8.3.3.2	o	
8	Randomization	[4] 8.3.3.1	m	
9	Block Interleaving	[4] 8.3.3.3	m	
10	Gray-coded constellation mapping	[4] 8.3.3.4.1	m	
11	Long preamble	[4] 8.3.3.6	m	
12	Short preamble	[4] 8.3.3.6	m	
13	Pilot modulation mapping	[4] 8.3.3.4.2	m	
14	Rate ID decoding	[4] 8.3.3.4.3	m	
15	Subchannelization preamble	[4] 8.3.3.6	Cb.13.2	
16	UL Midambles	[4] 8.3.3.6, 8.3.6.3	m	
17	Compressed Private MAP	[4] 8.3.6.6	o	
18	Reduced Private MAP	[4] 8.3.6.7	o	
19	STC	[4] 8.3.8	o	
20	AAS preamble	[4] 8.3.3.6	Cb.13.3	
21	Full contention BW requesting	[4] 8.3.7.3.2	m	
22	Focused Contention BW requesting	[4] 8.3.7.3.3	o	
23	RSSI mean and std measurement	[4] 8.3.9.2	m	
24	CINR mean and std measurement	[4] 8.3.9.3	m	
25	Closed loop power control mode	[4] 8.3.7.4.1	m	
26	Open loop power control mode	[4] 8.3.7.4.2	o	
27	Can detect used cyclic prefix	[4] 8.3.1.1.1	m	
28	TC sublayer support	[4] 8.3.4	o	
29	Preamble cyclic time shift	[4] 8.3.3.6, 8.3.6.2.7, 8.3.6.3.7	Cb.13.4	
30	Handover	[4] 8.3	Cb.13.6	
Cb.13.1: IF license exempt band THEN m ELSE n/a. Cb.13.2: IF (B.13/31 OR B.13/3) THEN m ELSE i. Cb.13.3: IF B.13/1 THEN m ELSE i. Cb.13.4: IF B.13/1 THEN m ELSE n/a. Cb.13.5: IF (B3/2 or B3/3) THEN m ELSE o. Cb.13.6: IF (B3/3) THEN m ELSE o.				
Comments:				

Table B.14: MS Multiplexing and multiple access

Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP.				
Item	**Name**	**Reference**	**Status**	**Support**
1	Synchronize to long preamble	[4] 8.3.5.1	m	
2	Demodulate bursts	[4] 8.3.5.1	m	
3	Support contention slot for initial ranging	[4] 8.3.5.1	m	
4	Support contention slot for bandwidth request	[4] 8.3.5.1	m	
5	Support for Initial Ranging with a subchannelized ranging burst	[4] 8.3.7.2	m	
Comments:				

Table B.15: MS Radio subsystem control

Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP.						
Item	**Capability**	**Reference**	**Status**	**Support**	**Values allowed**	**Values supported**
1	MS adjusts TX frequency based on frequency offset data from BS.	[4] 8.3.12	m		Ca.15.1	
2	MS adjusts TX power based on power level data from BS.	[4] 8.3.10.1	m		±1,5 dB for step sizes ≤ 15 dB, ±3 dB for 15 dB < step sizes ≤ 30 dB, ±5 dB for step sizes > 30 dB	
3	MS TX power control algorithm dynamic range.	[4] 8.3.10.1	m		Cb.15.2	
4	MS TX power control algorithm slew rate.	[4] 8.3.7.4	m		≥ 30 dB/s	
5	MS computes full initial ranging TX power based on data from BS and RSSI measurements.	[4] 6.3.9.5	m		n/a	
6	MS TX power control algorithm accounts for effects of different burst profiles on RF power amp.	[4] 8.3.7.4	m		n/a	
7	MS adjusts Symbol clock based on frequency offset data from BS.	[4] 8.3.12	m		5 ppm	
8	The power control algorithm shall support power fading depths.	[4] 8.3.7.4	m		≥10 dB	
Ca.15.1: IF (B.13/2OR B.13/3) THEN ≥ ±1 % ELSE ≥ ±2 % of subcarrier spacing, minimum accuracy. Cb.15.2: IF (B.13/2OR B.13/3) THEN ≥ 50 dB ELSE ≥ 30 dB.						
Comments:						

Table B.16: MS Minimum performance

Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP.						
Item	**Capability**	**Reference**	**Status**	**Support**	**Values allowed**	**Values supported**
1	Max DL Concurrent bursts	[4] 8.3.5.1.1	m		1	
2	Max concurrent bursts in UL subframe	[4] 8.3.5.1	m		1	
3	Tx Power Level minimum adjustment step	[4] 8.3.10.1	m		≤ 1 dB	
4	Tx Power Level minimum relative step accuracy	[4] 8.3.10.1	m		±1,5 dB for step sizes ≤ 15 dB, ±3 dB for 15 dB < step sizes ≤ 30 dB, ±5 dB for step sizes > 30 dB	
5	Tx Spectral flatness Absolute difference between adj. carriers	[4] 8.3.10.1.1	m		≤ 0,1 dB	
6	Tx Spectral flatness Deviation of average energy in each carrier from the measured energy averaged over all 200 active tones Carrier -50..-1, 1..50	[4] 8.3.10.1.1	m		≤ ±2 dB	
7	Tx Spectral flatness Deviation of average energy in each carrier from the measured energy averaged over all 200 active tones Carrier -100..-50, 50..100	[4] 8.3.10.1.1	m		≤ +2/-4 dB	
8	Tx relative constellation error: BPSK-1/2 QPSK-1/2 QPSK-3/4 16QAM-1/2 16QAM-3/4	[4] 8.3.10.1.2	m		 ≤ -13 dB ≤ -16 dB ≤ -18,5 dB ≤ -21,5 dB ≤ -25 dB	
9	Tx relative constellation error: 64QAM-2/3 64QAM-3/4	[4] 8.3.10.1.2	Cb.16.1		 ≤ -29 dB ≤ -30 dB	
10	TX power at spectral line 0	[4] 8.3.10.4	m		≥ -15 dBm relative to total transmitted power	
11	Min SNR requirements for BER=10^{-6} in AWGN channel: BPSK-1/2 QPSK-1/2 QPSK-3/4 16QAM-1/2 16QAM-3/4 64QAM-2/3 64QAM-3/4	[4] 8.3.11.1	m		 3 dB 6 dB 8,5 dB 11,5 dB 15 dB 19 dB 21 dB	
12	Adjacent channel rejection at BER=10^{-6} for 3 dB degradation C/I 16QAM-3/4	[4] 8.3.11.2	m		- 11 dB	
13	Adjacent channel rejection at BER=10^{-6} for 3 dB degradation C/I 64QAM-3/4	[4] 8.3.11.2	Cb.16.1		- 4 dB	

Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP.						
Item	**Capability**	**Reference**	**Status**	**Support**	**Values allowed**	**Values supported**
14	Non-adjacent channel rejection at BER=10^{-6} for 3 dB degradation C/I 16QAM-3/4	[4] 8.3.11.2	m		- 30 dB	
15	Non-adjacent channel rejection at BER=10^{-6} for 3 dB degradation C/I 64QAM-3/4	[4] 8.3.11.2	Cb.16.1		- 23 dB	
16	Rx max. input level on-channel reception tolerance	[4] 8.3.11.3	m		≥ -30 dBm	
17	Rx max. input level on-channel damage tolerance	[4] 8.3.11.3	m		≥ 0 dBm	
18	Reference time tolerance	[4] 12.3.2	m		±(Tb/32)/2	
Cb.16.1: IF B.12/4 THEN m ELSE i.						
Comments:						

Table B.17: MS ProfP3_1.75 specific minimum performance

Prerequisite: B.5/1 profP3_1,75 - 1,75 MHz channel PHY.						
Item	**Capability**	**Reference**	**Status**	**Support**	**Values allowed**	**Values supported**
1	T_b	[4] 12.3.2.1	m		128 µs	
2	BER performance threshold, BER=10^{-6} BPSK-1/2 QPSK-1/2 QPSK-3/4 16QAM-1/2 16QAM-3/4	[4] 12.3.2.1	m		 ≤ -96 dBm ≤ -93 dBm ≤ -91 dBm ≤ -88 dBm ≤ -84 dBm	
3	BER performance threshold, BER=10^{-6} 64QAM-2/3 64QAM-3/4	[4] 12.3.2.1	Cb.17.1		 ≤ -80 dBm ≤ -78 dBm	
4	Reference frequency tolerance MS to BS synchronization tolerance	[4] 12.3.2.1	m		Cb.17.2	
Cb.17.1: IF B.12/4 THEN m ELSE i. Cb.17.2: IF (B.13/2OR B.13/3) THEN ≤ 78,13 Hz ELSE ≤ 156,25 Hz						
Comments:						

Table B.18: MS ProfP3_3.5 specific minimum performance

Prerequisite: B.5/2 profP3_3,5 - 3,5 MHz channel PHY.						
Item	**Capability**	**Reference**	**Status**	**Support**	**Values allowed**	**Values supported**
1	T_b	[4] 12.3.2.2	m		64 µs	
2	BER performance threshold, BER=10^{-6} BPSK-1/2 QPSK-1/2 QPSK-3/4 16QAM-1/2 16QAM-3/4	[4] 12.3.2.2	m		 ≤ -93 dBm ≤ -90 dBm ≤ -88 dBm ≤ -85 dBm ≤ -81 dBm	
3	BER performance threshold, BER=10^{-6} 64QAM-2/3 64QAM-3/4	[4] 12.3.2.2	Cb.18.1		 ≤ -77 dBm ≤ -75 dBm	
4	Reference frequency tolerance MS to BS synchronization tolerance	[4] 12.3.2.2	m		Cb.18.2	
Cb.18.1: IF B.12/4 THEN m ELSE i. Cb.18.2: IF (B.13/2OR B.13/3) THEN ≤ 156,25 Hz ELSE ≤ 312,5 Hz.						
Comments:						

Table B.19: MS ProfP3_7.0 specific minimum performance

Prerequisite: B.5/3 profP3_7 - 7,0 MHz channel PHY.						
Item	**Capability**	**Reference**	**Status**	**Support**	**Values allowed**	**Values supported**
1	T_b	[4] 12.3.2.3	m		32 µs	
2	BER performance threshold, BER=10^{-6} BPSK-1/2 QPSK-1/2 QPSK-3/4 16QAM-1/2 16QAM-3/4	[4] 12.3.2.3	m		 ≤ -90 dBm ≤ -87 dBm ≤ -85 dBm ≤ -82 dBm ≤ -78 dBm	
3	BER performance threshold, BER=10^{-6} 64QAM-2/3 64QAM-3/4	[4] 12.3.2.3	Cb.19		 ≤ -74 dBm ≤ -72 dBm	
4	Reference frequency tolerance MS to BS synchronization tolerance	[4] 12.3.2.3	m		Cb.19.2	
Cb.19.1: IF B.12/4 THEN m ELSE i. Cb.19.2: IF (B.13/2OR B.13/3) THEN ≤ 312,5 Hz ELSE ≤ 625 Hz.						
Comments:						

Table B.20: MS ProfP3_3 specific minimum performance

Prerequisite: B.5/4 profP3_3 - 3 MHz channel PHY.						
Item	**Capability**	**Reference**	**Status**	**Support**	**Values allowed**	**Values supported**
1	T_b	[4] 12.3.2.4	m		74 18/43 µs	
2	BER performance threshold, BER=10^{-6} BPSK-1/2 QPSK-1/2 QPSK-3/4 16QAM-1/2 16QAM-3/4	[4] 12.3.2.4	m		 ≤ -94 dBm ≤ -91 dBm ≤ -88 dBm ≤ -85 dBm ≤ -82 dBm	
3	BER performance threshold, BER=10^{-6} 64QAM-2/3 64QAM-3/4	[4] 12.3.2.4	Cb.20.1		 ≤ -78 dBm ≤ -76 dBm	
4	Reference frequency tolerance MS to BS synchronization tolerance	[4] 12.3.2.4	m		Cb.20.2	
Cb.20.1: IF B.12/4 THEN m ELSE i. Cb.20.2: IF (B.13/2 OR B.13/3) THEN ≤ 134,38 Hz ELSE ≤ 273,13 Hz.						
Comments:						

Table B.21: MS ProfP3_5.5 specific minimum performance

Prerequisite: B.5/5 profP3_5.5 - 5,5 MHz channel PHY.						
Item	**Capability**	**Reference**	**Status**	**Support**	**Values allowed**	**Values supported**
1	T_b	[4] 12.3.2.5	m		40 40/79 µs	
2	BER performance threshold, BER=10^{-6} BPSK-1/2 QPSK-1/2 QPSK-3/4 16QAM-1/2 16QAM-3/4	[4] 12.3.2.5	m		 ≤ -89 dBm ≤ -86 dBm ≤ -84 dBm ≤ -79 dBm ≤ -77 dBm	
3	BER performance threshold, BER=10^{-6} 64QAM-2/3 64QAM-3/4	[4] 12.3.2.5	Cb.21.1		 ≤ -72 dBm ≤ -71 dBm	
4	Reference frequency tolerance MS to BS synchronization tolerance	[4] 12.3.2.5	m		Cb.21.2	
Cb.21.1: IF B.12/4 THEN m ELSE i. Cb.21.2: IF (B.13/2OR B.13/3) THEN ≤ 246,88 Hz ELSE ≤ 493,75 Hz.						
Comments:						

Table B.22: MS ProfP3_10 specific minimum performance

Prerequisite: B.5/6_profP3_10 - 10 MHz channel PHY.						
Item	**Capability**	**Reference**	**Status**	**Support**	**Values allowed**	**Values supported**
1	T_b	[4] 12.3.2.6	m		22 2/9 µs	
2	BER performance threshold, BER=10^{-6} BPSK-1/2 QPSK-1/2 QPSK-3/4 16QAM-1/2 16QAM-3/4	[4] 12.3.2.6	m		 ≤ -86 dBm ≤ -83 dBm ≤ -81 dBm ≤ -76 dBm ≤ -74 dBm	
3	BER performance threshold, BER=10^{-6} 64QAM-2/3 64QAM-3/4	[4] 12.3.2.6	Cb.22.1		 ≤ -72 dBm ≤ -71 dBm	
4	Reference frequency tolerance MS to BS synchronization tolerance	[4] 12.3.2.6	m		Cb.22.2	
Cb.22.1: IF B.12/4 THEN m ELSE i. Cb.22.2: IF (B.13/2 OR B.13/3) THEN ≤ 450 Hz ELSE ≤ 900 Hz.						
Comments:						

Table B.23: MS ProfP3_2.5 specific minimum performance

Prerequisite: B.5/7_profP3_2,5- 2,5 MHz channel PHY.						
Item	**Capability**	**Reference**	**Status**	**Support**	**Values allowed**	**Values supported**
1	T_b	[6] 5.3.7	m		88 8/9 µs	
2	BER performance threshold, BER=10^{-6} BPSK-1/2 QPSK-1/2 QPSK-3/4 16QAM-1/2 16QAM-3/4	[6] 5.3.7	m		 ≤ -93 dBm ≤ -90 dBm ≤ -88 dBm ≤ -85 dBm ≤ -81 dBm	
3	BER performance threshold, BER=10^{-6} 64QAM-2/3 64QAM-3/4	[6] 5.3.7	Cb.23.1		 ≤ -77 dBm ≤ -75 dBm	
4	Reference frequency tolerance MS to BS synchronization tolerance	[6] 5.3.7	m		Cb.23.2	
Cb.23.1: IF B.12/4 THEN m ELSE i. Cb.23.2: IF (B.13/2OR B.13/3) THEN ≤ 112,5 Hz ELSE ≤ 225 Hz.						
Comments:						

Table B.24: MS ProfP3_5 specific minimum performance

Prerequisite: B.5/8 profP3_5- 5 MHz channel PHY.						
Item	**Capability**	**Reference**	**Status**	**Support**	**Values allowed**	**Values supported**
1	T_b	[6] 5.3.8	m		44 4/9 µs	
2	BER performance threshold, BER=10^{-6} BPSK-1/2 QPSK-1/2 QPSK-3/4 16QAM-1/2 16QAM-3/4	[6] 5.3.8	m		 ≤ -90 dBm ≤ -87 dBm ≤ -85 dBm ≤ -82 dBm ≤ -78 dBm	
3	BER performance threshold, BER=10^{-6} 64QAM-2/3 64QAM-3/4	[6] 5.3.8	Cb.24.1		 ≤ -74 dBm ≤ -72 dBm	
4	Reference frequency tolerance MS to BS synchronization tolerance	[6] 5.3.8	m		Cb.24.2	
Cb.24.1: IF B.12/4 THEN m ELSE i. Cb.24.2: IF (B.13/2OR B.13/3) THEN ≤ 225 Hz ELSE ≤ 450 Hz.						
Comments:						

B.5.3.1.2 Convergence sub layer

Table B.25: MS Convergence Sub layer protocol support

Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP.				
Item	**Name**	**Reference**	**Status**	**Support**
1	Packet convergence sub layer	[4] 5.2	m	
Comments:				

Table B.26: MS Packet Convergence Sub layer protocol support

Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP.				
Item	**Name**	**Reference**	**Status**	**Support**
1	Internet Protocol (IPv4)	[4] 5.2.6	o	
2	Internet Protocol (IPv6)	[4] 5.2.6	o	
3	IEEE 802.3 (Ethernet) [13]	[4] 5.2.4	m	
4	IEEE 802.1Q VLAN [14]	[4] 5.2.5	o	
5	IPv4 over 802.3 Ethernet [13]	[4] 5.2.4	m	
6	IPv6 over 802.3 Ethernet [13]	[4] 5.2.4	o	
7	IPv4 over 802.1Q VLAN [14]	[4] 5.2.5	Cb.26.1	
8	IPv6 over 802.1Q VLAN [14]	[4] 5.2.5	Cb.26.1	
9	Payload Header Suppression (PHS)	[4] 5.2.3	o	
Cb.26.1: IF (A 26/4) THEN o ELSE i.				
Comments:				

Table B.27: MS Major packet classification

Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP.				
Item	**Name**	**Reference**	**Status**	**Support**
1	IP Classification	[4] 11.13.19.3.4	Cb.27.1	
2	Ethernet classification	[4] 11.13.19.3.4	Cb.27.2	
3	IEEE 802.1Q VLAN classification [14]	[4] 11.13.19.3.4	Cb.27.3	
Cb.27.1: IF (A 26/1 or A 26/2 or A 26/5 or A 26/6 or A 26/7 or A 26/8) THEN m ELSE n/a. Cb.27.2: IF (A 26/3 or A 26/5 or A 26/6 or) THEN m ELSE n/a. Cb.27.3: IF (A 26/4 or A 26/7 or A 26/8) THEN m ELSE n/a.				
Comments:				

Table B.28: IP packet classification in the UL

Prerequisite: (B.2/1 and B.4/1 and B.27/1) Mobile Station (MS) and Basic packet PMP and IP support.						
Item	**Name**	**Reference**	**IEEE**	**HM**	**WiMAX**	**Support**
1	Classification based on DSCP/IP TOS field	[4] 5.2.2, 11.13.19.3.4.2	Ob.28	m	m	
2	Classification based on IP Protocol/Next Header field	[4] 5.2.2, 11.13.19.3.4.3	Ob.28	m	m	
3	Classification based on IP masked Source Address	[4] 5.2.2, 11.13.19.3.4.4	Ob.28	m	m	
4	Classification based on IP Destination Address	[4] 5.2.2, 11.13.19.3.4.5	Ob.28	m	m	
5	Classification based on protocol source port range	[4] 5.2.2, 11.13.19.3.4.6	Ob.28	m	m	
6	Classification based on protocol destination port range	[4] 5.2.2, 11.13.19.3.4.7	Ob.28	m	m	
Ob.28: It is mandatory to support at least one of these items.						
NOTE: The status was made mandatory for HM and WiMAX, because for interoperability issue, the MS should support all the classifiers.						
Comments:						

Table B.29: Ethernet packet classification in the UL

Prerequisite: (B.2/1 and B.4/1 and B.27/2) Mobile Station (MS) and Basic packet PMP and Ethernet support.						
Item	**Name**	**Reference**	**IEEE**	**HM**	**WiMAX**	**Support**
1	Classification based on Destination MAC Address	[4] 5.2.2, 11.13.19.3.4.8	Ob.29	m	m	
2	Classification based on Source MAC Address	[4] 5.2.2, 11.13.19.3.4.9	Ob.29	m	m	
3	Classification based on Ethertype/SAP	[4] 5.2.2, 11.13.19.3.4.10	Ob.29	m	m	
Ob.29: It is mandatory to support at least one of these items.						
NOTE: The status was made mandatory for HM and WiMAX, because for interoperability issue, the MS should support all the classifiers.						
Comments:						

Table B.30: 802.1Q packet classification in the UL

Prerequisite: (B.2/1 and B.4/1 and B.27/3) Mobile Station (MS) and Basic packet PMP and 802.1Q support.						
Item	**Name**	**Reference**	**IEEE**	**HM**	**WiMAX**	**Support**
1	Classification based on 802.1D user priority	[4] 5.2.2, 11.13.19.3.4.11	Ob.30	m	m	
2	Classification based on 802.1Q VLAN ID	[4] 5.2.2, 11.13.19.3.4.12	Ob.30	m	m	
Ob.30: It is mandatory to support at least one of these items.						
NOTE: The status was made mandatory for HM and WiMAX, because for interoperability issue, the MS should support all the classifiers.						
Comments:						

B.5.3.1.3 MAC common part sub layer

Table B.31: Major MAC Common part functionalities for MS

Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP.				
Item	**Name**	**Reference**	**Status**	**Support**
1	Addressing and connections	[4] 6.3.1	m	
2	Construction of PDUs	[4] 6.3.3	m	
3	ARQ	[4] 6.3.4	o	
4	Uplink scheduling service	[4] 6.3.5	m	
5	Bandwidth allocation and request	[4] 6.3.6	m	
6	Contention resolution	[4] 6.3.8	m	
7	Network entry and initialization	[4] 6.3.9	m	
8	Ranging	[4] 6.3.10	m	
9	Update of UL and DL channel descriptors	[4] 6.3.11	m	
10	Quality of service	[4] 6.3.14	o	
Comments:				

Table B.32: Miscellaneous management functions for MS in PMP

Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP.				
Item	**Name**	**Reference**	**Status**	**Support**
1	Participation in multicast polling groups	[4] 6.3.12, 12.3.1.1	m	
2	Downlink Burst profile management initiated by MS (DBPC messages)	[4] 6.3.2.3.20 [4] 6.3.2.3.21	m	
3	MS reset initiated by BS (RES-CMD)	[4] 6.3.2.3.22	m	
4	MS network clock comparison initiated by BS (CLK-CMP)	[4] 6.3.2.3.25	Cb.32.1	
5	MS notifies BS of de-registration (DREG-REQ)	[4] 6.3.2.3.43	o	
6	MS forced by BS to change its channel access (DREG-CMD)	[4] 6.3.2.3.26	m	
7	MS receives quick answer from BS to its DSx-REQ (DSX-RVD)	[4] 6.3.2.3.27	Cb.32.2	
8	MS informs BS of reception of Config file (TFTP messages)	[4] 6.3.2.3.28 [4] 6.3.2.3.29	m	
9	MS answers to BS channel management report request (REP-REQ and REP-RSP)	[4] 6.3.2.3.33	m	
10	MS applies the power change requested by the BS (FPC)	[4] 6.3.2.3.34	m	
11	MS answers the AAS feedback message request from the BS (AAS-FBCK messages)	[4] 6.3.2.3.40	Cb.32.3	
12	MS inform the BS of preferred beam direction (AAS-BEAM select message)	[4] 6.3.2.3.41	Cb.32.3	
13	MS answers the AAS beam message request from the BS (AAS-Beam messages)	[4] 6.3.2.3.42	Cb.32.3	
Cb.32.1: IF B.41/1 THEN m ELSE o. Cb.32.2: IF (B.57/2 or B.57/5 or B.57/8) THEN m ELSE n/a. Cb.32.3: IF B.13/1 THEN m ELSE n/a.				
Comments:				

Table B.33: MS Management capability

Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	MS Management Support	[4] 6.3.9, 11.7.2	o	
2	MS IP Management	[4] 6.3.9, 11.7.3	o	
Comments:				

Table B.34: MS Addressing and Connections - PMP

Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Globally Unique MS MAC Address	[4] 6.3.1	m	
2	MAC Management messages only applicable on connection types as specified in [4] table 14	[4] 6.3.2.3	m	
3	User data only on transport connections	[4] 6.3.1	m	
4	Data transferred over the secondary management shall be encapsulated in 802.3 Ethernet packets	[4] 6.3.1	Cb.34.2	
5	DHCP for MS IP address establishment and maintenance on the secondary management connection	[4] 6.3.9.10	Cb.34.1	
6	Time protocol on the secondary management connection	[4] 6.3.9.11	Cb.34.1	
7	TFTP during initialization on the secondary management connection	[4] 6.3.9.12	Cb.34.1	
8	SNMP packets used for MS management on the secondary management connection	[4] 6.3.1	Cb.34.1	
Cb.34.1: IF B.33/2 THEN m ELSE n/a. Cb.34.2: IF B.33/1 THEN m ELSE n/a.				
Comments:				

B.5.3.1.4 Construction and Transmission of MAC PDUs

Table B.35: MS Transmission conventions

Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Fields of MAC messages are transmitted in the same order as they appear in the corresponding tables in the standard	[4] 6.3.3.1	m	
2	Fields of MAC messages and fields of TLVs, which are specified in the standard as binary numbers (including CRC and HCS) are transmitted as a sequence of their binary digits, starting from MSB. Bit masks (for example, in ARQ) are considered numerical fields. For signed numbers MSB is allocated for the sign. Length field in the "definite form" of ITU-T Recommendation X.690 [15] is also considered a numerical field	[4] 6.3.3.1	m	
3	Fields specified as SDUs or SDU fragments (for example, MAC PDU payloads) are transmitted in the same order of bytes as received from upper layers	[4] 6.3.3.1	m	
4	Fields specified as strings are transmitted in the order of symbols in the string. In cases c and d, bits within a byte are transmitted in the order MSB first	[4] 6.3.3.1	m	
Comments:				

Table B.36: MS PDU concatenation

Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Concatenate Multiple MAC PDUs into a single burst of the allocated length	[4] 6.3.3.2	m	
2	Receive concatenated MAC PDUs and determine disposition via CID	[4] 6.3.3.2	m	
3	Padding of any unused space in the UL Burst to a known state	[4] 6.3.3.7	m	
Comments:				

Table B.37: MS SDU Fragmentation

Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Fragment a MAC SDU into multiple MAC PDUs applicable to Management messages on Primary management connection	[4] 6.3.3.3	m	
2	Add Fragmentation Sub header to the SDU fragment including setting FC according to the Fragmentation rules table	[4] 6.3.3.3	m	
3	Increment the FSN modulo 8 for non-ARQ connections	[4] 6.3.3.3	o	
4	Increment the FSN modulo 2048 for non-ARQ connections	[4] 6.3.3.3	m	
5	Increment the BSN modulo 2048 for ARQ connection	[4] 6.3.3.4.2	Cb.37.1	
6	Do not perform fragmentation of PDUs on Basic and Initial Ranging connections	[4] 6.3.2.3	m	
Cb.37.1: IF A31/3 THEN m ELSE i.				
Comments:				

Table B.38: MS SDU reassembly

Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Receive and reassemble fragmented SDUs	[4] 6.3.3.3	m	
2	Discard SDUs corrupted due to loss of fragment	[4] 6.3.3.3	m	
Comments:				

Table B.39: MS Packing

Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Supports Fixed length non-ARQ SDUs in a MAC PDU	[4] 6.3.3.4.1.1	o	
2	Pack Fixed length non-ARQ SDUs in a MAC PDU	[4] 6.3.3.4.1.1	o	
3	Unpack Fixed length non-ARQ SDUs in a MAC PDU	[4] 6.3.3.4.1.1	Cb.39.1	
4	Supports variable length non-ARQ SDUs in a MAC PDU	[4] 6.3.3.4.1.2	m	
5	Pack variable length non-ARQ SDUs in a MAC PDU	[4] 6.3.3.4.1.2	o	
6	Unpack variable length non-ARQ SDUs in a MAC PDU	[4] 6.3.3.4.1.2	m	
7	Pack variable length ARQ-enabled SDUs or SDUs fragments in a MAC PDU	[4] 6.3.3.4.2 [2] 5.1.2	Cb.39.2	
8	Unpack variable length ARQ-enabled SDUs or SDUs fragments in a MAC PDU	[4] 6.3.3.4.2 [2] 5.1.2	Cb.39.2	
9	Do not perform packing of SDUs on Basic, Broadcast and Initial Ranging connections	[4] 6.3.2.3	m	
10	Perform packing of ARQ Feedback Payload	[4] 6.3.3.4.3	Cb.39.3	
11	Extracting ARQ Feedback IEs from received ARQ Feedback Payload	[4] 6.3.3.4.3	Cb.39.3	
12	Pack several ARQ feedback information elements in a single ARQ feedback payload	[4] 6.3.4 [2] 5.1.3	Cb.39.4	
13	Insert a single ARQ feedback payload as first packet in a MAC PDU	[4] 6.3.4 [2] 5.1.3	Cb.39.4	
Cb.39.1: IF A39/1 THEN m ELSE o. Cb.39.2: IF A31/3 THEN m ELSE i. Cb.39.3: IF (B.31/3 And B.39/7) THEN m ELSE i. Cb.39.4: IF B.31/3 THEN m ELSE n/a.				
Comments:				

Table B.40: MS CRC

Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Compute and add CRC	[4] 6.3.3.5	m	
2	Check CRC	[4] 6.3.3.5	m	
Comments:				

Table B.41: MS Uplink scheduling services

Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP.				
Item	**Name**	**Reference**	**Status**	**Support**
1	Unsolicited grant service (UGS)	[4] 6.3.5.2.1,[6] 6 .1.1	m	
2	Real time polling service (rtPS)	[4] 6.3.5.2.2	o	
3	Non-Real time polling service (nrtPS)	[4] 6.3.5.2.3	m	
4	Best effort service (BE)	[4] 6.3.5.2.4	m	
5	Extended Real time polling service (ertPS)	[4] 6.3.5.2.2	o	
6	Refrain from issuing requests on UGS connections other than Poll-me bits and Slip indicator	[4] 6.3.5	Cb.41.1	
Cb.41.1: IF A41/1 THEN m ELSE n/a.				
Comments:				

Table B.42: Bandwidth allocation and request for MS

Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP.				
Item	**Name**	**Reference**	**Status**	**Support**
1	MS requests aggregate bandwidth via Bandwidth Request Header	[4] 6.3.6.1	m	
2	MS requests incremental bandwidth via Bandwidth Request Header	[4] 6.3.6.1	o	
3	MS requests incremental bandwidth via piggyback request	[4] 6.3.6.1	Cb.42.1	
4	MS transmits Bandwidth request during REQ Region Full.	[4] 6.3.6.4	m	
5	MS transmits Bandwidth request during Focused Contention IE.	[4] 6.3.6.1	o	
6	MS transmits Bandwidth request during Subchannelized Region	[4] 6.3.6.1	Cb.42.2	
7	MS transmits Bandwidth request during any IE having UIUCs in the range of 5 - 12	[4] 6.3.6.1	m	
8	MS responds to Unicast, or Broadcast polls	[4] 6.3.6.3.2 [4] 6.3.6.3.1	m	
9	MS responds to Multicast polls	[4] 6.3.6.3.2	Cb.42.3	
10	MS uses Poll-me (PM) bit	[4] 6.3.6.3.3	Cb.42.4	
11	MS uses SI	[4] 6.3.5.2.1	Cb.42.4	
12	Receive AAS IE	[4] 6.3.6.1	Cb.42.5	
Cb.42.1: IF B.42/2 THEN m ELSE o. Cb.42.2: IF (B.13/2 OR B.13/3) THEN m, ELSE n/a. Cb.42.3: IF B.32/1 THEN m ELSE n/a. Cb.42.4: IF B.41/1 THEN m ELSE n/a. Cb.42.5: IF B.13/1 THEN m ELSE n/a.				
Comments				

Table B.43: MS MAP Relevance

Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP.						
Item	**Capability**	**Reference**	**Status**	**Support**	**Value allowed**	**Value supported**
1	Minimum UL MAP Relevance	[4] 6.3.7.5.3	m		Cb.43.1	
2	Maximum UL-MAP Relevance	[4] 6.3.7.5.3	m		End of following frame	
Cb.43.1: IF B.7/2: THEN round trip delay + Tproc ELSE ATDD split.						
Comments						

Table B.44: Contention resolution for MS

Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP.				
Item	**Name**	**Reference**	**Status**	**Support**
1	The MS supports truncated exponential backoff for initial ranging	[4] 6.3.8	m	
2	The MS supports truncated exponential backoff for bandwidth request contention	[4] 6.3.8	m	
Comments:				

Table B.45: Network entry and initialization for MS in PMP

Item	Capability	Reference	IEEE	HM	ETG	Support
1	Scanning and synchronization to the downlink	[4] 6.3.9.1	m	m	m	
2	Obtain Downlink Parameters	[4] 6.3.9.2	m	m	m	
3	Obtain Uplink Parameters	[4] 6.3.9.3, 6.3.9.4	m	m	m	
4	Perform Initial Ranging	[4] 6.3.9.5, 6.3.9.6	m	m	m	
5	Inform BS of Basic Capabilities	[4] 6.3.9.7	m	m	m	
6	Perform MS Authorization	[4] 6.3.9.8, 7.2	o	m	m	
7	Perform registration	[4] 6.3.9.9	m	m	m	
8	Request for IP connectivity	[4] 6.3.9.10	Cb.45.1	Cb.45.1	Cb.45.1	
9	Establish Time of day	[4] 6.3.9.11	Cb.45.1	Cb.45.1	Cb.45.1	
10	Transfer operational parameters	[4] 6.3.9.12	Cb.45.1	Cb.45.1	Cb.45.1	
11	Supports Network Entry triggered by BS restart count TLV change	[4] 6.3.9.15	m	m	o	
12	Initial ranging with subchannelization	[4] 8.3.7.2	Cb.45.2	Cb.45.2	Cb.45.2	
Cb.45.1: IF B.33/1 THEN m ELSE n/a. Cb.45.2: IF (B.13/2 OR B.13/3) THEN m, ELSE n/a.						
Comments:						

Table B.46: MS Obtain DL Parameters

Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	MS receives DLFP correctly	[4] 8.3.5.1	m	
2	MS receives DL-MAP correctly	[4] 6.3.9.2	m	
3	MS receives DCD correctly	[4] 6.3.9.2	m	
Comments:				

Table B.47: MS Obtain UL Parameters

Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	MS receives UCD correctly	[4] 6.3.9.3, 6.3.9.4	m	
2	MS receives UL-MAP correctly	[4] 6.3.9.3, 6.3.9.4	m	
Comments:				

Table B.48: MS Initial ranging

Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	MS receives UL-MAP containing Initial Ranging IE	[4] 6.3.9.5	m	
2	MS sends RNG-REQ in random transmission opportunity (TO) within backoff window, using the correct burst profile	[4] 6.3.9.5	m	
3	MS receives RNG-RSP	[4] 6.3.9.5	m	
4	MS establishes Basic and Primary Management connections	[4] 6.3.9.5	m	
5	MS performs timing and power adjustment, and frequency adjustment	[4] 6.3.9.6	m	
6	Use the RNG-REQ message to request a DL burst profile change	[4] 6.3.10.1	o	
7	MS performs network entry and initialization on DL Frequency Override channel, if instructed	[4] 6.3.9.5	m	
Comments:				

Table B.49: MS Negotiate basic capabilities

Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	MS sends SBC-REQ	[4] 6.3.9.7	m	
2	MS receives SBC-RSP	[4] 6.3.9.7	m	
3	MS resends SBC-REQ on timeout	[4] 6.3.9.7	m	
Comments:				

Table B.50: MS Registration

Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	MS sends REG-REQ to register with a BS	[4] 6.3.9.9	m	
2	MS receives REG-RSP	[4] 6.3.9.9	m	
3	MS re-sends REG-REQ upon time out, until REG-RSP is received or until T6 expires	[4] 6.3.9.9	m	
4	MS establishes Secondary Management Connection	[4] 6.3.9.9	Cb.50.1	
Cb.50.1: IF B.33/1 THEN m ELSE n/a.				
Comments:				

Table B.51: MS Establish IP connectivity

Prerequisite: (B.2/1 and B.4/1 and B.33/2) Mobile Station (MS) and Basic packet PMP and MS IP Management.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	DHCP mechanisms following the RFC 2131 [16] rules	[4] 6.3.9.10	m	
2	MS sends DHCP discover on Secondary Management Connection	[4] 6.3.9.10	m	
3	MS receives DHCP offer on Secondary Management Connection	[4] 6.3.9.10	m	
4	MS sends DHCP request on Secondary Management Connection	[4] 6.3.9.10	m	
5	MS receives DHCP response on Secondary Management Connection	[4] 6.3.9.10	m	
6	MS sets up IP parameters from DHCP response	[4] 6.3.9.10	m	
Comments: As per item B.21/5 all the DHCP packets mentioned here are intended for MS management.				

Table B.52: MS Establish time of day

Prerequisite: (B.2/1 and B.4/1 and B.33/2) Mobile Station (MS) and Basic packet PMP and MS IP Management.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	MS sends Time of Day request	[4] 6.3.9.11	m	
2	MS receives Time of Day response	[4] 6.3.9.11	m	
3	MS establishes Time of Day	[4] 6.3.9.11	m	
Comments:				

Table B.53: MS Transfer operational parameters

Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP and MS IP Management.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	MS sends TFTP-CPLT on Secondary management connection, after successful configuration using DHCP protocol	[4] 6.3.9.12	Cb.53.1	
2	MS sends TFTP-CPLT on Primary management connection, for notification	[4] 6.3.9.12	m	
3	MS receives TFTP-RSP as response to TFTP-CPLT	[4] 6.3.9.12	m	
4	MS keeps sending TFTP-CPLT on timeout while waiting for TFTP-RSP	[4] 6.3.9.12	m	
5	Transfer Config File	[4] 6.3.9.12	o	
6	Support Configuration File format	[4] 9.2.1	Cb.53.2	
7	MS MIC Configuration setting	[4] 9.2.3	Cb.53.2	
8	End Configuration Setting	[4] 9.2.3	Cb.53.2	
9	Software Upgrade Filename	[4] 9.2.2	Cb.53.2	
10	Software Server Ip Address	[4] 9.2.2	Cb.53.2	
11	Pad Configuration setting	[4] 9.2.1	Cb.53.2	
12	Vendor specific configuration settings	[4] 9.2.2	o	
Cb.53.1: IF B.45/10 THEN m ELSE x. Cb.53.2: IF B.53/5 THEN m ELSE n/a.				
Comments:				

Table B.54:MS Periodic ranging

Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Reinitialize after T4 with no periodic ranging opportunity	[4] 6.3.10	m	
2	Adjust PHY parameters in response to RNG-RSP after initial ranging	[4] 6.3.10	m	
3	Use the RNG-REQ message to request a DL burst profile change	[4] 6.3.10	m	
4	Use the DBPC-REQ message to request a DL burst profile change in data grant interval	[4] 6.3.10	m	
5	Change DL burst profile based upon RNG-RSP	[4] 6.3.10	m	
6	Change DL burst profile based upon DBPC-RSP	[4] 6.3.10	m	
Comments:				

Table B.55: Update of channel descriptors by MS

Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	MS stores new uplink burst descriptors upon receiving UCD message with incremented Configuration change count (I+1 mod 256)	[4] 6.3.11	m	
2	MS transmits using new generation of burst descriptors defined in UCD after receiving UL-MAP with UCD Count matching the new Configuration Change Count (I+1 mod 256)	[4] 6.3.11	m	
3	MS stores new downlink burst descriptors upon receiving DCD message with incremented Configuration Change Count (I+1 mod 256)	[4] 6.3.11	m	
4	MS receives using new generation of burst descriptors after receiving DL-MAP with DCD Count matching the new Configuration Change Count (I+1 mod 256)	[4] 6.3.11	m	
5	MS Supports two simultaneous sets of burst descriptors	[4] 6.3.11	m	
Comments:				

Table B.56: Assignment of SSs to multicast groups

Prerequisite: (B.2/1 and B.4/1 and B.32/1) Mobile Station (MS) and Basic packet PMP and MCA_REQ from BS allowed.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	MS receives a request for joining or leaving a multicast polling group, using MCA-REQ	[4] 6.3.12	m	
2	MS supports participation in multicast polling group and adds multicast CID to transmission opportunities to join the group	[4] 6.3.12	o	
3	MS supports participation in multicast polling group and delete multicast CID to transmission opportunities to leave the group	[4] 6.3.12	o	
4	MS transmits MCA-RSP to acknowledge the action and indicate status (ok, reject, etc.)	[4] 6.3.12	m	
Comments:				

Table B.57: MS Service flow operations

Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	MS receives DSA-REQ on pre provisioned service flows, to get encodings	[4] 6.3.14.7.1	m	
2	MS initiates (DSA-REQ) the creation of a Dynamic service flow	[4] 6.3.14.7.2	o	
3	MS answers (DSA-RSP) to the creation of a Dynamic service flow initiated by BS	[4] 6.3.14.7.2	m	
4	MS receives DSC-REQ for modification of existing service flows	[4] 6.3.14.9.4	m	
5	MS initiates (DSC-REQ) the modification of a Dynamic service flow	[4] 6.3.14.9.4	o	
6	MS answers (DSC-RSP) to the modification of a Dynamic service flow initiated by BS	[4] 6.3.14.9.4	m	
7	MS receives DSD-REQ for deletion of existing service flows	[4] 6.3.14.9.5	m	
8	MS initiates (DSD-REQ) the release of a Dynamic service flow	[4] 6.3.14.9.5	o	
9	MS answers (DSD-RSP) to the release of a Dynamic service flow initiated by BS	[4] 6.3.14.9.5	m	
Comments:				

B.5.3.1.5 MAC procedures for Mobility Management

B.5.3.1.5.1 Data delivery services

Table B.58: MS Data delivery services for mobile network

Prerequisite: (B.2/1 and B.4/1) Mobile Station (MS) and Basic packet PMP.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Unsolicited Grant Service (UGS)	[4] 6.3.20.1.1	m	
2	Real-Time Variable Rate (RT-VR)	[4] 6.3.20.1.2	o	
3	Non-Real-Time Variable Rate (NRT-VR)	[4] 6.3.20.1.3	m	
4	Best Effort (BE)	[4] 6.3.20.1.4	m	
5	Extended Real-Time Variable Rate Service (ERT-VR)	[4] 6.3.20.1.5	o	
Comments:				

B.5.3.1.5.2 Sleep Mode

Table B.59: MS- Sleep Mode

Prerequisite: (B.2/1 and B.4/1 and B.13/30) Mobile Station (MS) and Basic packet PMP and Handover supported at PHY level.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Sleep Mode implementation	[4] 6.3.21	o	
2	Supports Power saving Class type 1	[4] 6.3.21.2	Cb.59.4	
3	Supports use of MOB_TRF-IND to indicate appearance of DL traffic	[4] 6.3.21.2	Cb.59.1	
4	Supports traffic triggered wakening flag	[4] 6.3.22.2	Cb.59.1	
5	Supports Power saving Class type 2	[4] 6.3.21.3	Cb.59.4	
6	Supports Power saving Class type 3	[4] 6.3.21.4	Cb.59.4	
7	Supports activation of Power Saving by unsolicited MOB_SLP-RSP	[4] 6.3.22.2.2	Cb.59.2	
8	Supports activation of Power Saving by RNG-REQ	[4] 6.3.21.3	Cb.59.3	
9	Supports activation of Power Saving by RNG-RSP	[4] 6.3.21.3 and 4	Cb.59.2	
10	Supports activation of Power Saving with BR and Uplink sleep control header	[4] 6.3.21.3 and 4	Cb.59.2	
11	Supports activation of Power Saving with DL sleep control extended subheader	[4] 6.3.21.3 and 4	Cb.59.2	
12	Supports periodic ranging in sleep mode	[4] 6.3.21.5	Cb.59.5	
13	Supports DL Traffic indication by RNG-RSP message	[4] 6.3.21.5	Cb.59.5	
Cb.59.1: IF B.59/2 THEN o ELSE n/a. Cb.59.2: IF (B.59/5 or B.59/6)THEN o ELSE n/a. Cb.59.3: IF B.59/5THEN o ELSE n/a. Cb.59.4: IF B.59/1THEN It is mandatory to support at least one of these items ELSE n/a. Cb.59.5: IF B.59/1THEN o ELSE n/a.				
Comments:				

B.5.3.1.5.3 Neighbour advertisement

Table B.60: MS network topology acquisition procedures

Prerequisite: (B.2/1 and B.4/1 and B.13/30) Mobile Station (MS) and Basic packet PMP and Handover supported at PHY level.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Network topology advertisement	[4] 6.3.22.1.1	Cb.60.1	
2	Scanning for cell selection	[4] 6.3.22.1.2	Cb.60.1	
3	Unsolicited scanning interval allocation by BS	[4] 6.3.22.1.2	Cb.60.1	
4	MS requests scanning interval allocations from BS	[4] 6.3.22.1.2	Cb.60.1	
5	Event triggered scanning based on serving BS metrics	[4] 6.3.22.1.2	o	
6	Periodic scan reporting (MOB_SCN-REP message)	[4] 6.3.22.1.2, 11.4.1	Cb.60.1	
7	Event triggered scan reporting (metric conditions)	[4] 6.3.22.1.2, 11.4.1	o	
8	Association procedure	[4] 6.3.22.1.3	o	
9	Support "Ranging Parameter Validity Time" (MOB_SCN-REP)	[4] 6.3.22.1.2, 11.19	o	
10	Supports Mean BS CINR	[4] 6.3.2.3.53, 11.8.7	Cb.60.1	
11	Supports Mean BS RSSI	[4] 6.3.2.3.53, 11.8.7	Cb.60.1	
12	Supports relative RX Delay	[4] 6.3.2.3.53, 11.8.7	o	
13	Supports BS Round Trip Delay	[4] 6.3.2.3.53, 11.8.7	o	
Cb.60.1: IF (B3/3) THEN m ELSE o.				
Comments:				

B.5.3.1.5.4 Handover

Table B.61: MS- HO Process

Prerequisite: (B.2/1 and B.4/1 and B.13/30) Mobile Station (MS) and Basic packet PMP and Handover supported at PHY level.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	General HO support	[4] 6.3.22.2	Cb.60.1	
2	Cell Reselection	[4] 6.3.22.2.1	Cb.60.1	
3	Metric Triggered HO requests	[4] 6.3.22.2.1, 11.1.7	o	
4	HO decision and initiation initiated by MS	[4] 6.3.22.2.2	o	
5	HO decision and initiation initiated by BS	[4] 6.3.22.2.2	Cb.60.1	
6	HO Cancellation	[4] 6.3.22.2.3	Cb.60.1	
7	Use of scanning and association results	[4] 6.3.22.2.4	Cb.60.1	
8	Termination with the Serving BS	[4] 6.3.22.2.5	Cb.60.1	
9	Supports resource retention (MOB_BSHO-REQ/RSP)	[4] 6.3.22.2.5	Cb.60.1	
10	Drops during HO	[4] 6.3.22.2.6	Cb.60.1	
11	Network entry/re-entry	[4] 6.3.22.2.7	Cb.60.1	
12	Supports HO_ID (MOB_BSHO-REQ/RSP)	[4] 6.3.22.2.7	Cb.60.1	
13	MS-Assisted coordination of DL transmission at Target BS for HO	[4] 6.3.22.2.8	Cb.60.1	
14	HO process	[4] 6.3.22.2.9	Cb.60.1	
Cb.61.1: IF (B3/3) THEN m ELSE o.				
Comments:				

Table B.62: MS- HO Optimization

Prerequisite: (B.2/1 and B.4/1 and B.13/30) Mobile Station (MS) and Basic packet PMP and Handover supported at PHY level.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Supports HO optimization	[4] 6.3.22.2.7, 11.6	o	
2	Supports omission of SBC-REQ management messages (Bit #0)	[4] 6.3.22.2.7, 11.6	o	
3	Supports omission of PKM authentication phase, except TEK (Bit #1)	[4] 6.3.22.2.7, 11.6	o	
4	Supports omission of PKM TEK creation phase (Bit #2)	[4] 6.3.22.2.7, 11.6	o	
5	Supports omission of Network Address Acquisition (Bit #3)	[4] 6.3.22.2.7, 11.6	o	
6	Supports omission of Time of the Day Acquisition (Bit #4)	[4] 6.3.22.2.7, 11.6	o	
7	Supports omission of TFTP Phase (Bit #5)	[4] 6.3.22.2.7, 11.6	o	
8	Supports Full service and operational state transfer (Bit #6)	[4] 6.3.22.2.7, 11.6	o	
9	Supports notifying MS of DL data Pending (Bit #7)	[4] 6.3.22.2.7, 11.6	o	
10	Supports receiving of unsolicited SBC-RSP management messages with updated capabilities information (Bit #8)	[4] 6.3.22.2.7, 11.6	o	
11	Supports receiving of unsolicited SBC-RSP message in the same frame as RNG-RSP	[4] 6.3.22.2.7, 11.6	o	
12	Supports receiving of SBC-RSP TLV in RNG-RSP	[4] 6.3.22.2.7, 11.6	o	
13	Supports omission of REG-REQ during NW re-entry (Bit #9)	[4] 6.3.22.2.7, 11.6	o	
14	Supports receiving of unsolicited REG-RSP management messages with updated capabilities information (Bit #10)	[4] 6.3.22.2.7, 11.6	o	
15	Supports receiving of unsolicited REG-RSP message in the same frame as RNG-RSP	[4] 6.3.22.2.7, 11.6	o	
16	Supports receiving of REG-RSP TLV in RNG-RSP	[4] 6.3.22.2.7, 11.6	o	
17	Supports ARQ continuation using SN report header after NW re-entry	[4] 6.3.22.2.8	o	
18	Supports continuation of non-ARQ connection using SDU SN extended subheader before handover and using report header after NW re-entry	[4] 6.3.22.2.8	o	
19	Supports sending Bandwith Request header with zero BR as a notification of successful re-entry registration (Bit #12)	[4] 6.3.22.2.7, 11.6	o	
20	Supports triggering a higher layer protocol required to refresh its traffic IP address (Bit #13)	[4] 11.6	o	
21	Supports SN request extended subheader (Bit #11)	[4] 11.6	o	
Comments:				

B.5.3.1.5.5 Idle Mode

Table B.63: MS- Idle Mode

Prerequisite: (B.2/1 and B.4/1 and B.13/30) Mobile Station (MS) and Basic packet PMP and Handover supported at PHY level.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Supports Idle mode functionality	[4] 6.3.24	o	
2	Supports Idle mode initiation by DREG-REQ message	[4] 6.3.24.1	Cb.63.1	
3	Supports Idle mode initiation by unsolicited DREG-CMD message	[4] 6.3.24.1	Cb.63.1	
4	Supports maintaining connection information at BS during Idle Mode initiation process	[4] 6.3.24.1	Cb.63.2	
5	Supports retaining service and operational information by DREG-CMD	[4] 6.3.24.1	Cb.63.2	
6	Supports retaining service and operational information by DREG-REQ	[4] 6.3.24.1	Cb.63.2	
7	Support of inclusion of MS MAC address hash ion paging message	[4] 6.3.24.1	Cb.63.2	
8	Supports handling of Broadcast Control Pointer IE	[4] 6.3.24.5	Cb.63.2	
9	Supports handling of dedicated ranging region and code allocation for location update and network entry of MS in idle mode	[4] 6.3.24.7.1	Cb.63.2	
10	Supports Paging Group Update	[4] 6.3.24.8.1.1	Cb.63.2	
11	Supports Timer Location Update	[4] 6.3.24.8.1.2	Cb.63.2	
12	Supports Power Down Location Update	[4] 6.3.24.8.1.3	Cb.63.2	
13	Supports MAC Hash Skip Threshold Location Update	[4] 6.3.24.8.1.4	Cb.63.2	
14	Supports Secure Location Update	[4] 6.3.24.8.2.1	Cb.63.2	
15	Supports Unsecure Location Update	[4] 6.3.24.8.2.1	Cb.63.2	
Cb.63.1: IF B.63/1 THEN It is mandatory to support at least one of these items ELSE n/a. Cb.63.2: IF B.63/1 THEN o ELSE N/A.				
Comments:				

Table B.64: MS- network re-entry from Idle Mode

Prerequisite: (B.2/1 and B.4/1 and B.13/30) Mobile Station (MS) and Basic packet PMP and Handover supported at PHY level.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Expedited network re-entry from Idle Mode	[4] 6.3.24.9	o	
2	Supports omission of SBC-REQ management messages (Bit #0)	[4] 6.3.24.9, 11.6	o	
3	Supports omission of PKM authentication phase, except TEK (Bit #1)	[4] 6.3.24.9, 11.6	o	
4	Supports omission of PKM TEK creation phase (Bit #2)	[4] 6.3.24.9, 11.6	o	
5	Supports omission of Network Address Acquisition (Bit #3)	[4] 6.3.24.9, 11.6	o	
6	Supports omission of Time of the Day Acquisition (Bit #4)	[4] 6.3.24.9, 11.6	o	
7	Supports omission of TFTP Phase (Bit #5)	[4] 6.3.24.9, 11.6	o	
8	Supports Full service and operational state transfer (Bit #6)	[4] 6.3.24.9, 11.6	o	
9	Supports notifying MS of DL data Pending (Bit #7)	[4] 6.3.24.9, 11.6	o	
10	Supports receiving of unsolicited SBC-RSP management messages with updated capabilities information (Bit #8)	[4] 6.3.24.9, 11.6	o	
11	Supports receiving of unsolicited SBC-RSP message in the same frame as RNG-RSP	[4] 6.3.24.9, 11.6	o	
12	Supports receiving of SBC-RSP TLV in RNG-RSP	[4] 6.3.24.9, 11.6	o	
13	Supports omission of REG-REQ during NW re-entry (Bit #9)	[4] 6.3.24.9, 11.6	o	
14	Supports receiving of unsolicited REG-RSP management messages with updated capabilities information (Bit #10)	[4] 6.3.24.9, 11.6	o	
15	Supports receiving of unsolicited REG-RSP message in the same frame as RNG-RSP	[4] 6.3.24.9, 11.6	o	
16	Supports receiving of REG-RSP TLV in RNG-RSP	[4] 6.3.24.9, 11.6	o	
17	Supports sending Bandwith Request header with zero BR as a notification of successful re-entry registration (Bit #12)	[4] 6.3.24.9, 11.6	o	
18	Supports triggering a higher layer protocol required to refresh its traffic IP address (Bit #13)	[4] 11.6	o	
Comments:				

B.5.3.1.6 Security

Table B.65: MS - PKM version

Prerequisite: (B.2/1 and B.4/1 and B.45/6) Mobile Station (MS) and Basic packet PMP and Perform MS Authorization.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Supports PKM version 1	[4] 7.2.1	m	
2	Supports PKM version 2	[4] 7.2.2, 7.8	m	
Comments:				

Table B.66: PKM v1 Major Privacy functions for MS in PMP

Prerequisite: (B.2/1 and B.4/1 and B.45/6) Mobile Station (MS) and Basic packet PMP and Perform MS Authorization.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	MS send Auth Request (PKM-REQ with *Code=4)*	[4] 7.2	m	
2	AK decryption using RSA with 1024 bit key	[4] 11.1.2	m	
3	MS supports PKM message authentication using HMAC with SHA-1.	[4] 7.5.3	m	
4	MS supports MAC management message authentication using HMAC with SHA-1.	[4] 7.5.3	m	
5	TEK decryption using 3-DES	[4] 7.5.2.1	m	
6	TEK decryption using RSA with 1024 bit key	[4] 7.5.2.2	o	
7	TEK-128 decryption using AES	[4] 7.5.2.3	Cb.66.2	
8	DES data encryption/decryption on a per SA basis.	[4] 7.5.1.1	m	
9	AES data encryption/decryption on a per SA basis.	[4] 7.5.1.2	o	
10	Support of no encryption/decryption on a per- SA basis.	[4] 7.1.5, 11.9.14	m	
Cb.66.1: IF B.66/ THEN m ELSE n/a. Cb.66.2: IF B.66/9 THEN m ELSE n/a.				
Comments:				

Table B.67: MS- PKM v2 Authorization Policy support - initial network entry

Prerequisite: (B.2/1 and B.4/1 and B.45/6) Mobile Station (MS) and Basic packet PMP and Perform MS Authorization.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	No Authorization	[4] 11.8.4.2	m	
2	EAP-based authorization	[4] 11.8.4.2	m	
3	EAP-based authorization and Authenticated (EIK) EAP-based authorization	[4] 11.8.4.2	o	
4	RSA-based authorization	[4] 11.8.4.2	o	
5	RSA-based authorization and Authenticated (EIK) EAP-based authorization	[4] 11.8.4.2	o	
6	RSA-based authorization and EAP-based authorization	[4] 11.8.4.2	o	
Comments:				

Table B.68: MS- PKM v2 Authorization Policy support - network re-entry

Prerequisite: (B.2/1 and B.4/1 and B.45/6) Mobile Station (MS) and Basic packet PMP and Perform MS Authorization.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	No Authorization	[4] 11.8.4.2	m	
2	EAP-based authorization	[4] 11.8.4.2	m	
3	EAP-based authorization and Authenticated (EIK) EAP-based authorization	[4] 11.8.4.2	n/a	
4	RSA-based authorization	[4] 11.8.4.2	n/a	
5	RSA-based authorization and Authenticated (EIK) EAP-based authorization	[4] 11.8.4.2	n/a	
6	RSA-based authorization and EAP-based authorization	[4] 11.8.4.2	n/a	
Comments:				

Table B.69: MS Cryptographic suites

Prerequisite: (B.2/1 and B.4/1 and B.45/6) Mobile Station (MS) and Basic packet PMP and Perform MS Authorization.						
Item	**Capability**	**Reference**	**Status**	**Support**	**Value allowed**	**Value supported**
1	No data encrypt, no data authent and 3-DES 128	[4] 11.9.14	m		0x000001	
2	CBC-mode 56bit DES, no data authent and 3-DES 128	[4] 11.9.14	m		0x010001	
3	No data encrypt, no data authent and RSA, 1024	[4] 11.9.14	o		0x000002	
4	CBC-mode 56bit DES, no data authent and RSA, 1024	[4] 11.9.14	o		0x010002	
5	CCM-Mode 128-bit AES, CCM-Mode, 128-bit, ECB mode AES with 128-bit key	[4] 11.9.14	o		0x020103	
6	CCM-Mode 128bits AES, CCM-Mode, AES Key Wrap with 128-bit key	[4] 11.9.14	m		0x020104	
7	CBC-Mode 128-bit AES, no data authentication, ECB mode AES with 128-bit key	[4] 11.9.14	o		0x030003	
8	MBS CTR Mode 128 bits AES, no data authentication, AES ECB mode with 128-bit key	[4] 11.9.14	o		0x800003	
9	MBS CTR mode 128 bits AES, no data authentication, AES Key Wrap with 128-bit key	[4] 11.9.14	o		0x800004	
Comments:						

Table B.70: CID and SAID update for MS in PMP

Prerequisite: (B.2/1 and B.4/1 and B.45/6) Mobile Station (MS) and Basic packet PMP and Perform MS Authorization.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Support CID update by RNG-RSP	[4] 6.3.2.3.6, 11.7.10	m	
2	Support CID update by REG-RSP	[4] 6.3.2.3.8, 11.7.10	m	
3	Support compressed CID update by RNG-RSP	[4] 6.3.2.3.6, 11.7.10	m	
4	Support compressed CID update by REG-RSP	[4] 6.3.2.3.8, 11.7.10	m	
5	Support SAID update by RNG-RSP	[4] 6.3.2.3.6, 11.7.18	m	
6	Support SAID update by REG-RSP	[4] 6.3.2.3.8, 11.7.18	m	
7	Support SAID update by SA-TEK-RSP	[4] 7.8.1, 11.7.21	m	
Comments:				

Table B.71: MS- PKM v2 Message Authentication Code (MAC) mode

Prerequisite: (B.2/1 and B.4/1 and B.45/6) Mobile Station (MS) and Basic packet PMP and Perform MS Authorization.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	No message authentication	[4] 11.8.4.3	m	
2	HMAC	[4] 11.8.4.3	m	
3	CMAC	[4] 11.8.4.3	m	
4	64-bit short-HMAC	[4] 11.8.4.3	o	
5	80-bit short-HMAC	[4] 11.8.4.3	o	
6	96-bit short-HMAC	[4] 11.8.4.3	o	
Comments:				

Table B.72: Security association for MS in PMP

Prerequisite: (B.2/1 and B.4/1 and B.45/6) Mobile Station (MS) and Basic packet PMP and Perform MS Authorization.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Support of Primary SA	[4] 7.2.1.1, 7.2.2.3	m	
2	Support of Static SA	[4] 7.2.1.1, 7.2.2.3	m	
3	Support of Dynamic SA	[4] 7.2.1.1, 7.2.2.3	m	
Comments:				

Table B.73: Security association service types for MS in PMP

Prerequisite: (B.2/1 and B.4/1 and B.45/6) Mobile Station (MS) and Basic packet PMP and Perform MS Authorization.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Support of Unicast service	[4] 7.2	m	
2	Support of Group multicast service	[4] 7.2.2.3.2	m	
3	Support of MBS services	[4] 7.2.2.3.3	m	
Comments:				

Table B.74: Certificate for MS in PMP

Prerequisite: (B.2/1 and B.4/1 and B.45/6) Mobile Station (MS) and Basic packet PMP and Perform MS Authorization.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Support of X.509 MS certificate for device authorization	[4] 7.2.1, 7.8	m	
2	Support of X.209 manufacturer certificate	[4] 7.2.1, 7.8	m	
3	Support of X.209 certificate profile	[4] 7.2.1, 7.8	m	
Comments:				

B.5.3.2 MS in MESH topology

Void.

B.5.3.3 BS in PMP topology

B.5.3.3.1 PHY functions

Table B.75: Frame duration codes for BS

Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP.				
Item	**Frame Duration in ms**	**Reference**	**Status**	**Support**
1	2.5	[4] 8.3.5.4	Ob.75	
2	4	[4] 8.3.5.4	Ob.75	
3	5	[4] 8.3.5.4	Ob.75	
4	8	[4] 8.3.5.4	Ob.75	
5	10	[4] 8.3.5.4	Ob.75	
6	12,5	[4] 8.3.5.4	Ob.75	
7	20	[4] 8.3.5.4	Ob.75	
Ob.75: It is mandatory to support at least one of these items.				
Comments:				

Table B.76: Cyclic Prefix for BS

Prerequisite: (B2/2 and B4/1) Base Station (BS) and Basic packet PMP.				
Item	**Cyclic Prefix**	**Reference**	**Status**	**Support**
1	1/4	[4] 8.3.2.4	Ob.76	
2	1/8	[4] 8.3.2.4	Ob.76	
3	1/16	[4] 8.3.2.4	Ob.76	
4	1/32	[4] 8.3.2.4	Ob.76	
Ob.76: It is mandatory to support at least one of these items.				
Comments:				

Table B.77: Modulation for BS

Prerequisite: (B2/2 and B4/1) Base Station (BS) and Basic packet PMP.				
Item	**Modulation**	**Reference**	**Status**	**Support**
1	BPSK	[4] 8.3.3.4.1	m	
2	QPSK	[4] 8.3.3.4.1	m	
3	16-QAM	[4] 8.3.3.4.1	m	
4	64-QAM	[4] 8.3.3.4.1	Cb.77.1	
Cb.77.1: IF HUMAN THEN o ELSE m.				
Comments:				

Table B.78: Major PHY functions for BS

Prerequisite: (B2/2 and B4/1) Base Station (BS) and Basic packet PMP.				
Item	**Name**	**Reference**	**Status**	**Support**
1	AAS (Adaptive Antenna) supported	[4] 6.3.7.6	o	
2	DL Subchannelization	[4] 8.3.5.1.1	o	
3	UL Subchannelization	[4] 8.3.2.4	m	
4	Dynamic Frequency Support DFS	[4] 6.3.15	Cb.78.1	
5	Concatenated Reed-Solomon-convolutional code (RS-CC)	[4] 8.3.3.2	m	
6	Block Turbo Coding (BTC)	[4] 8.3.3.2	o	
7	Convolutional Turbo Codes	[4] 8.3.3.2	o	
8	Randomization	[4] 8.3.3.1	m	
9	Block Interleaving	[4] 8.3.3.3	m	
10	Gray-coded constellation mapping	[4] 8.3.3.4.1	m	
11	Long preamble	[4] 8.3.3.6	m	
12	DL Short preamble	[4] 8.3.3.6	o	
13	Subchannelization preamble - Rx	[4] 8.3.3.6	Cb. 78.2	
14	UL Midambles - Rx	[4] 8.3.3.6, 8.3.6.3	o	
15	Compressed Private MAP	[4] 8.3.6.6	o	
16	Reduced Private MAP	[4] 8.3.6.7	o	
17	STC	[4] 8.3.8	o	
18	AAS preamble - Rx	[4] 8.3.3.6	Cb. 78.3	
19	Full contention BW requesting	[4] 8.3.7.3.2	m	
20	Focused Contention BW requesting	[4] 8.3.7.3.3	o	
21	Closed loop power control mode	[4] 8.3.7.4.1	m	
22	Open loop power control mode	[4] 8.3.7.4.2	o	
23	DLFP encoding	[4] 8.3.5.1	m	
24	Network Synchronization to external 1 pps	[4] 8.3.7.1.1	o	
25	Preamble cyclic time shift	[4] 8.3.3.6, 8.3.6.2.7, 8.3.6.3.7	Cb. 78.4	
26	Handover	[4] 8.3	m	
Cb.78.1: IF license exempt band THEN m ELSE n/a. Cb.78.2: IF (B.78/2 or B.78/3) THEN m ELSE x. Cb.78.3: IF B.78/1 THEN m ELSE x. Cb.78.4: IF B.78/1 THEN m ELSE n/a.				
Comments:				

Table B.79: BS Multiplexing and multiple access

Prerequisite: (B2/2 and B4/1) Base Station (BS) and Basic packet PMP.				
Item	**Name**	**Reference**	**Status**	**Support**
1	Synchronize to short UL preamble	[4] 8.3.5.1	m	
2	Synchronize to long UL preamble	[4] 8.3.5.1	m	
3	Demodulate bursts	[4] 8.3.5.1	m	
4	Support contention slot for initial ranging	[4] 8.3.5.1	m	
5	Support contention slot for bandwidth request	[4] 8.3.5.1	m	
6	TC sublayer support	[4] 8.3.4	o	
Comments:				

Table B.80: BS Radio Subsystem Control

Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	BS measures uplink burst timing and commands MS TX adjustments as needed	[4] 6.3.10.2	m	
2	The BS measures receiver power sufficiently often to handle the fading rate requirement of 10 dB/s	[4] 8.3.7.4	m	
Comments:				

Table B.81: BS Minimum performance

Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP.						
Item	**Capability**	**Reference**	**Status**	**Support**	**Values allowed**	**Values supported**
1	Tx Dynamic range BS	[4] 12.3.2	m		≥ 10 dB	
2	Tx Spectral flatness Absolute difference between adj. carriers	[4] 12.3.2	m		≤ 0,1 dB	
3	Tx Spectral flatness Deviation of average energy in each carrier from the measured energy averaged over all 200 active tones. Carrier -50..-1, 1..50	[4] 12.3.2	m		≤ ±2 dB	
4	Tx Spectral flatness Deviation of average energy in each carrier from the measured energy averaged over all 200 active tones. Carrier -100..-50, 50..100	[4] 12.3.2	m		≤ +2/-4 dB	
5	Tx relative constellation error: BPSK-1/2 QPSK-1/2 QPSK-3/4 16QAM-1/2 16QAM-3/4	[4] 12.3.2	m		 ≤ -13 dB ≤ -16 dB ≤ -18,5 dB ≤ -21,5 dB ≤ -25 dB	
6	Tx relative constellation error: 64QAM-2/3 64QAM-3/4	[4] 12.3.2	Cb.81.1		 ≤ -29 dB ≤ -31 dB	
7	TX power at spectral line 0.	[4] 8.3.10.4	m		≥ -15 dBm relative to total transmitted power	
8	Min SNR requirements for BER=10^{-6} in AWGN channel: BPSK-1/2 QPSK-1/2 QPSK-3/4 16QAM-1/2 16QAM-3/4 64QAM-2/3 64QAM-3/4	[4] 8.3.11.1	m		 3 dB 6 dB 8,5 dB 11,5 dB 15 dB 19 dB 21 dB	
9	Rx max. input level on-channel reception tolerance	[4] 12.3.2	m		≥ -30 dBm	
10	Rx max. input level on-channel damage tolerance	[4] 12.3.2	m		≥ 0 dBm	
11	Adjacent channel rejection at BER=10^{-6} for 3 dB degradation C/I 16QAM-3/4	[4] 12.3.2	m		- 11 dB	
12	Adjacent channel rejection at BER=10^{-6} for 3 dB degradation C/I 64QAM-3/4	[4] 12.3.2	Cb.81.1		- 4 dB	
13	Non-adjacent channel rejection at BER=10^{-6} for 3 dB degradation C/I 16QAM-3/4	[4] 12.3.2	m		- 30 dB	

Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP.						
Item	**Capability**	**Reference**	**Status**	**Support**	**Values allowed**	**Values supported**
14	Non-adjacent channel rejection at BER=10^{-6} for 3 dB degradation C/I 64QAM-3/4	[4] 12.3.2	Cb.81.1		- 23 dB	
15	Reference frequency tolerance	[4] 12.3.2	m		≤ ±8 ppm up to 10 years after the date of equipment manufacture	
16	Network Synchronization to external 1pps	[4] 8.3.7.1.1	Cb.81.2		Start of Frame < ±2 µs from 1 pps	
Cb.81.1: IF B.77/4 THEN m ELSE i. Cb.81.2: IF B.78/24 THEN m ELSE n/a.						
Comments:						

Table B.82: BS ProfP3_1.75 specific minimum performance

Prerequisite: B.5/1 profP3_1,75 - 1,75 MHz channel PHY.						
Item	**Capability**	**Reference**	**Status**	**Support**	**Values allowed**	**Values supported**
1	T_b	[4] 12.3.2.1	m		128 µs	
2	BER performance threshold, BER=10^{-6} BPSK-1/2 QPSK-1/2 QPSK-3/4 16QAM-1/2 16QAM-3/4	[4] 12.3.2.1	m		 ≤ -94 dBm ≤ -91 dBm ≤ -89 dBm ≤ -84 dBm ≤ -82 dBm	
3	BER performance threshold, BER=10^{-6} 64QAM-2/3 64QAM-3/4	[4] 12.3.2.1	Cb.82.1		 ≤ -77 dBm ≤ -76 dBm	
Cb.82.1: IF B.77/4 THEN m ELSE i.						
Comments:						

Table B.83: BS ProfP3_3.5 specific minimum performance

Prerequisite: B.5/2 profP3_3,5 - 3,5 MHz channel PHY.						
Item	**Capability**	**Reference**	**Status**	**Support**	**Values allowed**	**Values supported**
1	T_b	[4] 12.3.2.2	m		64 µs	
2	BER performance threshold, BER=10^{-6} BPSK-1/2 QPSK-1/2 QPSK-3/4 16QAM-1/2 16QAM-3/4	[4] 12.3.2.2	m		 ≤ -91 dBm ≤ -88 dBm ≤ -86 dBm ≤ -81 dBm ≤ -79 dBm	
3	BER performance threshold, BER=10^{-6} 64QAM-2/3 64QAM-3/4	[4] 12.3.2.2	Cb.83.1		 ≤ -74 dBm ≤ -73 dBm	
Cb.83.1: IF B.77/4 THEN m ELSE i.						
Comments:						

Table B.84: BS ProfP3_7.0 specific minimum performance

Prerequisite: B.5/3 profP3_7 - 7,0 MHz channel PHY.						
Item	**Capability**	**Reference**	**Status**	**Support**	**Values allowed**	**Values supported**
1	T_b	[4] 12.3.2.3	m		32 µs	
2	BER performance threshold, BER=10^{-6} BPSK-1/2 QPSK-1/2 QPSK-3/4 16QAM-1/2 16QAM-3/4	[4] 12.3.2.3	m		 ≤ -88 dBm ≤ -85 dBm ≤ -83 dBm ≤ -78 dBm ≤ -76 dBm	
3	BER performance threshold, BER=10^{-6} 64QAM-2/3 64QAM-3/4	[4] 12.3.2.3	Cb.84.1		 ≤ -71 dBm ≤ -70 dBm	
Cb.84.1: IF B.77/4 THEN m ELSE i.						
Comments:						

Table B.85: BS ProfP3_3 specific minimum performance

Prerequisite: B.5/4 profP3_3 - 3 MHz channel PHY.						
Item	**Capability**	**Reference**	**Status**	**Support**	**Values allowed**	**Values supported**
1	T_b	[4] 12.3.2.4	m		74 18/43 µs	
2	BER performance threshold, BER=10^{-6} BPSK-1/2 QPSK-1/2 QPSK-3/4 16QAM-1/2 16QAM-3/4	[4] 12.3.2.4	m		 ≤ -91 dBm ≤ -88 dBm ≤ -87 dBm ≤ -81 dBm ≤ -80 dBm	
3	BER performance threshold, BER=10^{-6} 64QAM-2/3 64QAM-3/4	[4] 12.3.2.4	Cb.85.1		 ≤ -75 dBm ≤ -73 dBm	
Cb.85.1: IF B.77/4 THEN m ELSE i.						
Comments:						

Table B.86: BS ProfP3_5.5 specific minimum performance

Prerequisite: B.5/5 profP3_5,5 - 5,5 MHz channel PHY.						
Item	**Capability**	**Reference**	**Status**	**Support**	**Values allowed**	**Values supported**
1	T_b	[4] 12.3.2.5	m		40 40/79 µs	
2	BER performance threshold, BER=10^{-6} BPSK-1/2 QPSK-1/2 QPSK-3/4 16QAM-1/2 16QAM-3/4	[4] 12.3.2.5	m		 ≤ -89 dBm ≤ -86 dBm ≤ -84 dBm ≤ -79 dBm ≤ -77 dBm	
3	BER performance threshold, BER=10^{-6} 64QAM-2/3 64QAM-3/4	[4] 12.3.2.5	Cb.86.1		 ≤ -72 dBm ≤ -71 dBm	
Cb.86.1: IF B.77/4 THEN m ELSE i.						
Comments:						

Table B.87: BS ProfP3_10 specific minimum performance

Prerequisite: B.5/6 profP3_10 - 10 MHz channel PHY.						
Item	**Capability**	**Reference**	**Status**	**Support**	**Values allowed**	**Values supported**
1	T_b	[4] 12.3.2.6	m		22 2/9 µs	
2	BER performance threshold, BER=10^{-6} BPSK-1/2 QPSK-1/2 QPSK-3/4 16QAM-1/2 16QAM-3/4	[4] 12.3.2.6	m		 ≤ -86 dBm ≤ -83 dBm ≤ -81 dBm ≤ -76 dBm ≤ -74 dBm	
3	BER performance threshold, BER=10^{-6} 64QAM-2/3 64QAM-3/4	[4] 12.3.2.6	Cb.87.1		 ≤ -72 dBm ≤ -71 dBm	
Cb.87.1: IF B.77/4 THEN m ELSE i.						
Comments:						

Table B.88: BS ProfP3_2.5 specific minimum performance

Prerequisite: B.5/7 profP3_2.5- 2.5 MHz channel PHY.						
Item	**Capability**	**Reference**	**Status**	**Support**	**Values allowed**	**Values supported**
1	T_b	[5] 12.3.2.6	m		88 8/9 µs	
2	BER performance threshold, BER=10^{-6} BPSK-1/2 QPSK-1/2 QPSK-3/4 16QAM-1/2 16QAM-3/4	[5] 12.3.2.6	m		 ≤ -93 dBm ≤ -90 dBm ≤ -88 dBm ≤ -85 dBm ≤ -81 dBm	
3	BER performance threshold, BER=110^{-6} 64QAM-2/3 64QAM-3/4	[5] 12.3.2.6	Cb.88.1		 ≤ -77 dBm ≤ -75 dBm	
Cb.88.1: IF B.77/4 THEN m ELSE i.						
Comments:						

Table B.89: BS ProfP3_5 specific minimum performance

Prerequisite: B.5/8 profP3_5 - 5 MHz channel PHY.						
Item	**Capability**	**Reference**	**Status**	**Support**	**Values allowed**	**Values supported**
1	T_b	[5] 12.3.2.6	m		44 4/9 µs	
2	BER performance threshold, BER=10^{-6} BPSK-1/2 QPSK-1/2 QPSK-3/4 16QAM-1/2 16QAM-3/4	[5] 12.3.2.6	m		 ≤ -90 dBm ≤ -87 dBm ≤ -85 dBm ≤ -82 dBm ≤ -78 dBm	
3	BER performance threshold, BER=10^{-6} 64QAM-2/3 64QAM-3/4	[5] 12.3.2.6	Cb.89.1		 ≤ -74 dBm ≤ -72 dBm	
Cb.89.1: IF B.77/4 THEN m ELSE i.						
Comments:						

B.5.3.3.2 Convergence sub layer

Table B.90: BS Convergence Sub layer protocol support

Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP.				
Item	**Name**	**Reference**	**Status**	**Support**
1	Packet convergence sub layer	[4] 5.2	m	
Comments:				

Table B.91: BS Packet Convergence Sub layer protocol support

Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP.				
Item	**Name**	**Reference**	**Status**	**Support**
1	Internet Protocol (IPv4)	[4] 5.2.6	o	
2	Internet Protocol (IPv6)	[4] 5.2.6	o	
3	IEEE 802.3 (Ethernet) [13]	[4] 5.2.4	m	
4	IEEE 802.1Q VLAN [14]	[4] 5.2.5	o	
5	IPv4 over 802.3 Ethernet [13]	[4] 5.2.4	m	
6	IPv6 over 802.3 Ethernet [13]	[4] 5.2.4	o	
7	IPv4 over 802.1Q VLAN [14]	[4] 5.2.5	Cb.91.1	
8	IPv6 over 802.1Q VLAN [14]	[4] 5.2.5	Cb.91.1	
9	Payload Header Suppression (PHS)	[4] 5.2.3	o	
Cb.91.1: IF (A 91/4) THEN o ELSE i.				
Comments:				

Table B.92: BS Major packet classification

Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP.				
Item	**Name**	**Reference**	**Status**	**Support**
1	IP Classification	[4] 11.13.19.3.4	Cb.92.1	
2	Ethernet classification	[4] 11.13.19.3.4	Cb.92.2	
3	IEEE 802.1Q VLAN classification [14]	[4] 11.13.19.3.4	Cb.92.3	
Cb.92.1: IF (A 91/1 or A 91/2 or A 91/5 or A 91/6 or A 91/7 or A 91/8) THEN m ELSE n/a. Cb.92.2: IF (A 91/3 or A 91/5 or A 91/6 or) THEN m ELSE n/a. Cb.92.3: IF (A 91/4 or A 91/7 or A 91/8) THEN m ELSE n/a.				
Comments:				

Table B.93: IP packet classification in the DL

Prerequisite: (B.2/2 and B.4/1 and B.92/1) Base Station (BS) and Basic packet PMP and IP support.				
Item	**Name**	**Reference**	**Status**	**Support**
1	Classification based on DSCP/IP TOS field	[4] 11.13.19.3.4.2	Ob.93	
2	Classification based on IP Protocol/Next Header field	[4] 11.13.19.3.4.3	Ob.93	
3	Classification based on IP masked Source Address	[4] 11.13.19.3.4.4	Ob.93	
4	Classification based on IP Destination Address	[4] 11.13.19.3.4.5	Ob.93	
5	Classification based on protocol source port range	[4] 11.13.19.3.4.6	Ob.93	
6	Classification based on protocol destination port range	[4] 11.13.19.3.4.7	Ob.93	
Ob.93: It is mandatory to support at least one of these items.				
Comments:				

Table B.94: Ethernet packet classification in the DL

Prerequisite: (B.2/2 and B.4/1 and B. 92/2) Base Station (BS) and Basic packet PMP and Ethernet support.				
Item	**Name**	**Reference**	**Status**	**Support**
1	Classification based on Destination MAC Address	[4] 11.13.19.3.4.8	Ob.94	
2	Classification based on Source MAC Address	[4] 11.13.19.3.4.9	Ob.94	
3	Classification based on Ethertype/SAP	[4] 11.13.19.3.4.10	Ob.94	
Ob.94: It is mandatory to support at least one of these items.				
Comments:				

Table B.95: 802.1Q packet classification in the DL

Prerequisite: (B.2/2 and B.4/1 and B. 92/3) Base Station (BS) and Basic packet PMP and 802.1Q support.				
Item	**Name**	**Reference**	**Status**	**Support**
1	Classification based on 802.1D user priority	[4] 11.13.19.3.4.11	Ob.95	
2	Classification based on 802.1Q VLAN ID	[4] 11.13.19.3.4.12	Ob.95	
Ob.95: It is mandatory to support at least one of these items.				
Comments:				

B.5.3.3.3 MAC common part sub layer

Table B.96: Major MAC Common part functionalities for BS

Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP.				
Item	**Name**	**Reference**	**Status**	**Support**
1	Addressing and connections	[4] 6.3.1	m	
2	Construction of PDUs	[4] 6.3.3	m	
3	ARQ	[4] 6.3.4	o	
4	Uplink scheduling service	[4] 6.3.5	m	
5	Bandwidth allocation and request	[4] 6.3.6	m	
6	Contention resolution	[4] 6.3.8	m	
7	Network entry and initialization	[4] 6.3.9	m	
8	Ranging	[4] 6.3.10	m	
9	Update of UL and DL channel descriptors	[4] 6.3.11	m	
10	Quality of service	[4] 6.3.14	o	
Comments:				

Table B.97: Miscellaneous management functions for BS in PMP

Prerequisite: (B. 2/2) Base Station (BS).				
Item	**Name**	**Reference**	**Status**	**Support**
1	Assignment of SSs to multicast polling groups	[4] 6.3.12, 12.3.1.1	m	
2	Change of Downlink Burst profile management (DBPC messages initiated by MS)	[4] 6.3.2.3.20 [4] 6.3.2.3.21	m	
3	BS initiates MS reset (RES-CMD)	[4] 6.3.2.3.22	m	
4	BS initiates MS network clock comparison (CLK-CMP)	[4] 6.3.2.3.25	m	
5	BS notified by MS of MS de-registration (DREG-REQ)	[4] 6.3.2.3.43	m	
6	BS forces MS to change its channel access (DREG-CMD)	[4] 6.3.2.3.26	m	
7	BS sends quick answer to DSx-REQ sent by MS (DSX-RVD) (see Note)	[4] 6.3.2.3.27	o	
8	BS receives confirmation of reception of Config file (TFTP messages)	[4] 6.3.2.3.28 [4] 6.3.2.3.29	m	
9	BS sends channel management report request (REP-REQ)	[4] 6.3.2.3.33	Cb.97.1	
10	BS requests the power change (FPC)	[4] 6.3.2.3.34	o	
11	BS sends AAS feedback message request (AAS-FBCK messages)	[4] 6.3.2.3.40	Cb.97.2	
12	BS is informed of preferred beam direction (AAS-BEAM select message)	[4] 6.3.2.3.41	Cb.97.2	
13	BS sends AAS beam message request (AAS-Beam messages)	[4] 6.3.2.3.42	Cb.97.2	
Cb.97.1: IF band below 11 GHz THEN m ELSE n/a. Cb.97.2: IF A78./1 THEN m ELSE n/a.				
NOTE: This item represents the capability of the BS to use sometime, but not every time, DSX-RVD instead of DSX-RSP to inform the MS in a more timely manner.				
Comments:				

Table B.98: BS Addressing and Connections - PMP

Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Globally Unique 48 bits MAC Address, making up three 16 bits CID	[4] 6.3.1	m	
2	Time urgent MAC Management messages on basic connection	[4] 6.3.1	m	
3	Delay tolerant MAC Management messages on primary management connection	[4] 6.3.1	m	
4	SNMP packets used for MS management on the secondary management connection	[4] 6.3.1	m	
Comments:				

B.5.3.3.4 Construction and Transmission of MAC PDUs

Table B.99: BS Transmission conventions

Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Transmit messages most significant byte first	[4] 6.3.3.1	m	
2	Transmit bytes most significant bit first	[4] 6.3.3.1	m	
Comments:				

Table B.100: BS PDU concatenation

Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Concatenate Multiple MAC PDUs into a single burst	[4] 6.3.3.2	m	
2	Receive concatenated MAC PDUs and determine disposition via CID	[4] 6.3.3.2	m	
3	Padding of any unused space in the DL Burst to a known state	[4] 6.3.3.7	m	
Comments:				

Table B.101: BS SDU Fragmentation

Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Fragment a MAC SDU into multiple MAC PDUs applicable to Management messages on Primary management connection	[4] 6.3.3.3	m	
2	Correctly set the Fragmentation Control (FC) bits	[4] 6.3.3.3	m	
3	Increment the FSN modulo 8 for non-ARQ connections	[4] 6.3.3.3	o	
4	Increment the FSN modulo 2048 for non-ARQ connections	[4] 6.3.3.3	m	
5	Increment the BSN modulo 2048 for ARQ connection	[4] 6.3.3.4.2	Cb.101.1	
6	Do not perform fragmentation of PDUs on Basic, Broadcast and Initial Ranging connections	[4] 6.3.2.3	m	
Cb.101.1: IF A96/3 THEN m ELSE i.				
Comments:				

Table B.102: BS SDU reassembly

Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Receive and reassemble fragmented SDUs.	[4] 6.3.3.3	m	
2	Discard SDUs corrupted due to loss of fragment	[4] 6.3.3.3	m	
Comments:				

Table B.103: BS Packing

Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Supports Fixed length non-ARQ SDUs in a MAC PDU	[4] 6.3.3.4.1.1	o	
2	Pack Fixed length non-ARQ SDUs in a MAC PDU	[4] 6.3.3.4.1.1	o	
3	Unpack Fixed length non-ARQ SDUs in a MAC PDU	[4] 6.3.3.4.1.1	Cb.103.1	
4	Supports variable length non-ARQ SDUs in a MAC PDU	[4] 6.3.3.4.1.2	m	
5	Pack variable length non-ARQ SDUs in a MAC PDU	[4] 6.3.3.4.1.2	o	
6	Unpack variable length non-ARQ SDUs in a MAC PDU	[4] 6.3.3.4.1.2	m	
7	Pack variable length ARQ-enabled SDUs or SDUs fragments in a MAC PDU	[4] 6.3.3.4.2 [2] 5.1.2	Cb.103.2	
8	Unpack variable length ARQ-enabled SDUs or SDUs fragments in a MAC PDU	[4] 6.3.3.4.2 [2] 5.1.2	m	
9	Do not perform packing of SDUs on Basic, Broadcast and Initial Ranging connections	[4] 6.3.2.3	m	
10	Perform packing of ARQ Feedback Payload	[4] 6.3.3.4.3	Cb.103.3	
11	Extracting ARQ Feedback IEs from received ARQ Feedback Payload	[4] 6.3.3.4.3	Cb.103.3	
Cb.103.1: IF B.103/1 THEN m ELSE 0. Cb.103.2: IF A96/3 THEN m ELSE i. Cb.103.3: IF (A96/3 And B.103/7) THEN m ELSE i.				
Comments:				

Table B.104: BS CRC

Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Compute and add CRC	[4] 6.3.3.5	m	
2	Check CRC	[4] 6.3.3.5	m	
Comments:				

Table B.105: BS ARQ

Prerequisite: (B.2/2 and B.4/1 and B.96/3) Base Station (BS) and Basic packet PMP.and ARQ				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Pack several ARQ feedback information elements in a single ARQ feedback payload	[4] 6.3.4 [2] 5.1.3	m	
2	Insert a single ARQ feedback payload as first packet in a MAC PDU	[4] 6.3.4 [2] 5.1.3	m	
Comments:				

Table B.106: BS Uplink scheduling services

Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Unsolicited grant service (UGS)	[4] 6.3.5.2.1, 12.1.2	o	
2	Real time polling service (rtPS)	[4] 6.3.5.2.2, 12.1.2	o	
3	Non-Real time polling service (nrtPS)	[4] 6.3.5.2.3	m	
4	Best effort service (BE)	[4] 6.3.5.2.4	m	
5	Extended Real time polling service (ertPS)	[4] 6.3.5.2.2	o	
Comments:				

Table B.107: Bandwidth allocation and request

Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP.				
Item	**Name**	**Reference**	**Status**	**Support**
1	BS receives request for aggregate bandwidth via Bandwidth Request Header	[4] 6.3.6.1	m	
2	BS receives request for incremental bandwidth via Bandwidth Request Header	[4] 6.3.6.1	m	
3	BS receives request for incremental bandwidth via piggyback request	[4] 6.3.6.1	m	
4	BS receives Bandwidth request during REQ Region Full	[4] 6.3.6.4	m	
5	BS receives Bandwidth request during Focused Contention IE	[4] 6.3.6.1	o	
6	BS receives Bandwidth request during Subchannelized Region	[4] 6.3.6.1	Cb.107.1	
7	BS receives Bandwidth request during any IE having UIUCs in the range of 5 - 12	[4] 6.3.6.1	m	
8	BS sends Unicast, or Broadcast polls	[4] 6.3.6.3.2 [4] 6.3.6.3.1	m	
9	BS sends Multicast polls	[4] 6.3.6.3.2	Cb. 107.2	
10	BS accepts Poll-me (PM) bit	[4] 6.3.6.3.3	Cb. 107.3	
11	BS accepts SI	[4] 6.3.5.2.1	Cb. 107.3	
12	BS accepts AAS IE	[4] 6.3.6.1	Cb. 107.4	
Cb.107.1: IF (B.78/2 or B.78/3) THEN m, ELSE o. Cb. 107.2: IF B.97/1 THEN m ELSE n/a. Cb. 107.3: IF B.106/1 THEN m ELSE n/a. Cb. 107.4: IF B.78/1 THEN m ELSE n/a.				
Comments:				

Table B.108: BS MAP Relevance

Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP.						
Item	**Capability**	**Reference**	**Status**	**Support**	**Value allowed**	**Value supported**
1	Minimum UL MAP Relevance	[4] 6.3.7.5.3	m		Cb.108.1	
2	Maximum UL-MAP Relevance	[4] 6.3.7.5.3	m		End of following frame	
Cb.108.1: IF B.7/2: THEN round trip delay + Tproc ELSE ATDD split.						
Comments:						

Table B.109: Contention resolution

Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP.				
Item	**Name**	**Reference**	**Status**	**Support**
1	BS sets truncated exponential backoff for initial ranging	[4] 6.3.8	m	
2	BS sets truncated exponential backoff for bandwidth request contention	[4] 6.3.8	m	
Comments:				

Table B.110: Network entry and initialization for BS in PMP

Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP.						
Item	**Name**	**Reference**	**IEEE**	**HM**	**WiMAX**	**Support**
1	Send Downlink Parameters via DCD periodic PDUs	[4] 6.3.9.2	m	m	m	
2	Send Uplink Parameters via UCD periodic PDUs	[4] 6.3.9.3, 6.3.9.4	m	m	m	
3	Allocate an Initial Ranging interval	[4] 6.3.9.5, 6.3.9.6	m	m	m	
4	Allocate an Initial Ranging interval with Subchannelization	[4] 6.3.9.5, 6.3.9.6	Cb.110.1	Cb.110.1	Cb.110.1	
5	Negotiate Basic Capabilities (SBC-RSP)	[4] 6.3.9.7	m	m	m	
6	Perform authorization and key exchange	[4] 6.3.9.8, 7.2	o	m	m	
7	Accept registration to allow MS in network	[4] 6.3.9.9	m	m	m	
8	Establish IP connectivity and forward IP address	[4] 6.3.9.10	m	m	m	
9	Establish Time of day	[4] 6.3.9.11	m	m	m	
10	Receives operational parameters from MS	[4] 6.3.9.12	m	m	m	
Cb.110.1: IF (B.78/2 or B.78/3) THEN m, ELSE n/a.						
Comments:						

Table B.111: Sending DL Parameters

Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	BS sends DL-MAP correctly	[4] 6.3.9.2	m	
2	BS sends DCD correctly	[4] 6.3.9.2	m	
	BS sends DLFP correctly	[4] 8.3.5.1	m	
Comments:				

Table B.112: Sending UL Parameters

Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	BS sends UCD correctly	[4] 6.3.9.3, 6.3.9.4	m	
2	BS sends UL-MAP correctly	[4] 6.3.9.3, 6.3.9.4	m	
Comments:				

Table B.113: BS Initial ranging

Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	BS allocates Initial Ranging IE	[4] 6.3.9.5	m	
2	BS assigns Basic and Primary Management CIDs	[4] 6.3.9.5	m	
3	BS sends RNG-RSP, declared successful when it includes its MAC address	[4] 6.3.9.5	m	
4	BS performs final tuning using RNG-REQ and RNG-RSP	[4] 6.3.9.5	m	
Comments:				

Table B.114: BS Negotiate basic capabilities

Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	BS receives SBC-REQ	[4] 6.3.9.7	m	
2	BS sends SBC-RSP	[4] 6.3.9.7	m	
Comments:				

Table B.115: BS Registration

Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	BS sends REG-RSP and waits for TFTP-CPLT	[4] 6.3.9.9	m	
2	BS assigns Secondary Management Connection	[4] 6.3.9.9	m	
Comments:				

Table B.116: BS Establish IP connectivity

Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	DHCP mechanisms following the RFC 2131 [16] rules	[4] 6.3.9.10	m	
2	BS receives DHCP discover on Secondary Management Connection	[4] 6.3.9.10	m	
3	BS sends DHCP offer on Secondary Management Connection	[4] 6.3.9.10	m	
4	BS receives DHCP request on Secondary Management Connection	[4] 6.3.9.10	m	
5	BS sends DHCP response on Secondary Management Connection	[4] 6.3.9.10	m	
Comments: All the DHCP packets mentioned here are intended for MS management.				

Table B.117: BS Establish time of day

Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	BS receives Time of Day request	[4] 6.3.9.11	m	
2	BS processes the request and sends Time of Day response	[4] 6.3.9.11	m	
Comments:				

Table B.118: BS Transfer operational parameters

Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	BS is informed of completion of successful configuration using DHCP protocol, when receiving TFTP-CPLT on Primary management connection, for notification	[4] 6.3.9.12	m	
2	BS sends TFTP-RSP as response to TFTP-CPLT	[4] 6.3.9.12	m	
Comments:				

Table B.119: BS Periodic ranging

Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Provide periodic ranging opportunities sufficiently often	[4] 6.3.10	m	
2	Command MS to adjust timing, power, and frequency parameters	[4] 6.3.10	m	
3	Use the RNG-RSP message to command an unsolicited DL burst profile change	[4] 6.3.10	Cb.B.119.1	
4	Use the DBPC-RSP message to command an unsolicited DL burst profile change	[4] 6.3.10	Cb.B.119.1	
5	Use the RNG-RSP message to command a DL burst profile change in response to a RNG-REQ message	[4] 6.3.10	m	
6	Use the DBPC-RSP message to command a DL burst profile change in response to a DBPC-REQ message	[4] 6.3.10	m	
Cb.B.119.1: It is mandatory to support at least one of these Items.				
Comments:				

Table B.120: Update of channel descriptors by BS

Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Support of two simultaneous sets of burst descriptors	[4] 6.3.11	m	
2	BS sends UL channel descriptors at regular intervals using UCD message with identical Configuration change count	[4] 6.3.11	m	
3	BS sends new UL burst descriptors using UCD message with incremented Configuration change count (I+1 mod 256)	[4] 6.3.11	m	
4	BS sends DL channel descriptors at regular intervals using DCD message with identical Configuration change count	[4] 6.3.11	m	
5	BS sends new DL burst descriptors using DCD message with incremented Configuration change count (I+1 mod 256)	[4] 6.3.11	m	
6	Receive with the new uplink parameters starting from the first PS that the UL-MAP with UCD Count matching the new Configuration Change Count covers	[4] 6.3.11	m	
7	Transmit with the new downlink parameters starting from the frame with the first DL-MAP with a DCD Count matching the new Configuration Change Count	[4] 6.3.11	m	
Comments:				

Table B.121: BS Assignment of SSs to multicast groups

Prerequisite: (B.2/2 and B.4/1 and B.97/1) Base Station (BS) and Basic packet PMP and MCA_REQ from BS allowed.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	BS supports multicast polling groups	[4] 6.3.12	m	
2	BS adds or removes an MS to a multicast polling group, using MCA-REQ	[4] 6.3.12	m	
3	BS waits for MCA-RSP that acknowledges the action and indicate status (ok, reject, etc.)	[4] 6.3.12	m	
Comments:				

Table B.122: BS Service flow operations

Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	BS issues DSA-REQ on preprovisioned service flows, to pass encodings	[4] 6.3.14.7.1	m	
2	BS initiates (DSA-REQ) the creation of a Dynamic service flow	[4] 6.3.14.7.2	m	
3	BS answers (DSA-RSP) to the creation of a Dynamic service flow initiated by MS	[4] 6.3.14.7.1	m	
4	BS initiates (DSC-REQ) the modification of a Dynamic service flow	[4] 6.3.14.9.4	m	
5	BS answers (DSC-RSP) to the modification of a Dynamic service flow initiated by MS	[4] 6.3.14.9.4	m	
6	BS initiates (DSD-REQ) the release of a Dynamic service flow	[4] 6.3.14.9.5	m	
7	BS answers (DSD-RSP) to the release of a Dynamic service flow initiated by MS	[4] 6.3.14.9.5	m	
Comments:				

B.5.3.3.5 MAC procedures for Mobility Management

B.5.3.3.5.1 Data delivery services

Table B.123: BS Data delivery services for mobile network

Prerequisite: (B.2/2 and B.4/1) Base Station (BS) and Basic packet PMP.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Unsolicited Grant Service (UGS)	[4] 6.3.20.1.1	m	
2	Real-Time Variable Rate (RT-VR)	[4] 6.3.20.1.2	o	
3	Non-Real-Time Variable Rate (NRT-VR)	[4] 6.3.20.1.3	m	
4	Best Effort (BE)	[4] 6.3.20.1.4	m	
5	Extended Real-Time Variable Rate Service (ERT-VR)	[4] 6.3.20.1.5	o	
Comments:				

B.5.3.3.5.2 Sleep Mode

Table B.124: BS- Sleep Mode

Prerequisite: (B.2/1 and B.4/1 and B.13/30) Mobile Station (MS) and Basic packet PMP and Handover supported at PHY level.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Sleep Mode implementation	[4] 6.3.21	m	
2	Supports Power saving Class type 1	[4] 6.3.21.2	m	
3	Supports use of MOB_TRF-IND to indicate appearance of DL traffic	[4] 6.3.21.2	Cb.59.1	
4	Supports traffic triggered wakening flag	[4] 6.3.22.2	Cb.59.1	
5	Supports Power saving Class type 2	[4] 6.3.21.3	o	
6	Supports Power saving Class type 3	[4] 6.3.21.4	o	
7	Supports activation of Power Saving by unsolicited MOB_SLP-RSP	[4] 6.3.22.2.2	Cb.59.2	
8	Supports activation of Power Saving by RNG-REQ	[4] 6.3.21.3	Cb.59.3	
9	Supports activation of Power Saving by RNG-RSP	[4] 6.3.21.3 and 4	Cb.59.2	
10	Supports activation of Power Saving with BR and Uplink sleep control header	[4] 6.3.21.3 and 4	Cb.59.2	
11	Supports activation of Power Saving with DL sleep control extended subheader	[4] 6.3.21.3 and 4	Cb.59.2	
12	Supports periodic ranging in sleep mode	[4] 6.3.21.5	m	
13	Supports DL Traffic indication by RNG-RSP message	[4] 6.3.21.5	o	
Cb.124.1 IF B.124/2 THEN o ELSE n/a. Cb.124.2 IF (B.124/5 or B.124/6)THEN o ELSE n/a. Cb.124.3 IF B.124/5 THEN o ELSE n/a.				
Comments:				

B.5.3.3.5.3 Network advertisement

Table B.125: BS network topology acquisition procedures

Prerequisite: (B.2/2 and B.4/1 and B.78/26) Base Station (BS) and Basic packet PMP and Handover supported at PHY level.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Network topology advertisement	[4] 6.3.22.1.1	m	
2	Scanning for cell selection	[4] 6.3.22.1.2	m	
3	Unsolicited scanning interval allocation by BS	[4] 6.3.22.1.2	m	
4	MS requests scanning interval allocations from BS	[4] 6.3.22.1.2	m	
5	Event triggered scanning based on serving BS metrics	[4] 6.3.22.1.2	o	
6	Periodic scan reporting (MOB_SCN-RSP message)	[4] 6.3.22.1.2, 11.4.1	m	
7	Event triggered scan reporting (metric conditions)	[4] 6.3.22.1.2, 11.4.1	o	
8	Association procedure	[4] 6.3.22.1.3	o	
9	Support "Ranging Parameter Validity Time" (MOB_SCN-REP)	[4] 6.3.22.1.2, 11.19	o	
10	Supports Mean BS CINR	[4] 6.3.2.3.53, 11.8.7	m	
11	Supports Mean BS RSSI	[4] 6.3.2.3.53, 11.8.7	m	
12	Supports relative RX Delay	[4] 6.3.2.3.53, 11.8.7	o	
13	Supports BS Round Trip Delay	[4] 6.3.2.3.53, 11.8.7	o	
Comments:				

B.5.3.3.5.4 Handover

Table B.126: BS- HO Process

Prerequisite: (B.2/2 and B.4/1 and B.78/26) Base Station (BS) and Basic packet PMP and Handover supported at PHY level.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	General HO support	[4] 6.3.22.2	m	
2	Cell Reselection	[4] 6.3.22.2.1	m	
3	Metric Triggered HO requests	[4] 6.3.22.2.1, 11.1.7	o	
4	HO decision and initiation initiated by MS	[4] 6.3.22.2.2	m	
5	HO decision and initiation initiated by BS	[4] 6.3.22.2.2	m	
6	HO Cancellation	[4] 6.3.22.2.3	m	
7	Use of scanning and association results	[4] 6.3.22.2.4	m	
8	Termination with the Serving BS	[4] 6.3.22.2.5	m	
9	Supports resource retention (MOB_BSHO-REQ/RSP)	[4] 6.3.22.2.5	m	
10	Supports negotiating of "HO authorization policy" during HO (between BSs)	[4] 6.3.22.2.5	o	
11	Drops during HO	[4] 6.3.22.2.6	m	
12	Network entry/re-entry	[4] 6.3.22.2.7	m	
13	Supports HO_ID (MOB_BSHO-REQ/RSP)	[4] 6.3.22.2.7	m	
14	MS-Assisted coordination of DL transmission at Target BS for HO	[4] 6.3.22.2.8	m	
15	HO process	[4] 6.3.22.2.9	m	
Comments:				

Table B.127: BS- HO Optimization

Prerequisite: (B.2/2 and B.4/1 and B.78/26) Base Station (BS) and Basic packet PMP and Handover supported at PHY level.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Supports HO optimization	[4] 6.3.2.6, 6.3.22.2.7, 11.6	o	
2	Supports omission of SBC-REQ management messages (Bit #0)	[4] 6.3.2.6, 6.3.22.2.7, 11.6	o	
3	Supports omission of PKM authentication phase, except TEK (Bit #1)	[4] 6.3.2.6, 6.3.22.2.7, 11.6	o	
4	Supports omission of PKM TEK creation phase (Bit #2)	[4] 6.3.2.6, 6.3.22.2.7, 11.6	o	
5	Supports omission of Network Address Acquisition (Bit #3)	[4] 6.3.2.6, 6.3.22.2.7, 11.6	o	
6	Supports omission of Time of the Day Acquisition (Bit #4)	[4] 6.3.2.6, 6.3.22.2.7, 11.6	o	
7	Supports omission of TFTP Phase (Bit #5)	[4] 6.3.2.6, 6.3.22.2.7, 11.6	o	
8	Supports Full service and operational state transfer (Bit #6)	[4] 6.3.2.6, 6.3.22.2.7, 11.6	o	
9	Supports notifying MS of DL data Pending (Bit #7)	[4] 6.3.2.6, 6.3.22.2.7, 11.6	o	
10	Supports sending of unsolicited SBC-RSP management messages with updated capabilities information (Bit #8)	[4] 6.3.2.6, 6.3.22.2.7, 11.6	o	
11	Supports sending of unsolicited SBC-RSP message in the same frame as RNG-RSP	[4] 6.3.2.6, 6.3.22.2.7, 11.6	o	
12	Supports sending of SBC-RSP TLV in RNG-RSP	[4] 6.3.2.6, 6.3.22.2.7, 11.6	o	
13	Supports omission of REG-REQ during NW re-entry (Bit #9)	[4] 6.3.2.6, 6.3.22.2.7, 11.6	o	
14	Supports sending of unsolicited REG-RSP management messages with updated capabilities information (Bit #10)	[4] 6.3.2.6, 6.3.22.2.7, 11.6	o	
15	Supports sending of unsolicited REG-RSP message in the same frame as RNG-RSP	[4] 6.3.2.6, 6.3.22.2.7, 11.6	o	
16	Supports sending of REG-RSP TLV in RNG-RSP	[4] 6.3.2.6, 6.3.22.2.7, 11.6	o	
17	Supports ARQ continuation using SN report header after NW re-entry	[4] 6.3.2.6, 6.3.22.2.8	o	
18	Supports continuation of non-ARQ connection using SDU SN extended subheader before handover and using report header after NW re-entry	[4] 6.3.2.6, 6.3.22.2.8	o	
19	Supports receiving Bandwith Request header with zero BR as a notification of successful re-entry registration (Bit #12)	[4] 6.3.2.6, 6.3.22.2.7, 11.6	o	
20	Supports SN request extended subheader (Bit #11)	[4] 6.3.2.6, 11.6	o	
Comments:				

B.5.3.3.5.5 Idle Mode

Table B.128: BS- Idle Mode

Prerequisite: (B.2/2 and B.4/1 and B.78/26) Base Station (BS) and Basic packet PMP and Handover supported at PHY level.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Supports Idle mode functionality	[4] 6.3.24	o	
2	Supports Idle mode initiation by DREG-REQ message.	[4] 6.3.24.1	Cb.128.1	
3	Supports Idle mode initiation by unsolicited DREG-CMD message.	[4] 6.3.24.1	Cb.128.1	
4	Supports maintaining connection information at BS during Idle Mode initiation process.	[4] 6.3.24.1	Cb.128.2	
5	Supports retaining service and operational information by DREG-CMD	[4] 6.3.24.1	Cb.128.2	
6	Supports retaining service and operational information by DREG-REQ	[4] 6.3.24.1	Cb.128.2	
7	Support of inclusion of MS MAC address hash ion paging message.	[4] 6.3.24.1	Cb.128.2	
8	Supports handling of Broadcast Control Pointer IE	[4] 6.3.24.5	Cb.128.2	
9	Supports handling of dedicated ranging region and code allocation for location update and network entry of MS in idle mode	[4] 6.3.24.7.1	Cb.128.2	
10	Supports Paging Group Update	[4] 6.3.24.8.1.1	Cb.128.2	
11	Supports Timer Location Update	[4] 6.3.24.8.1.2	Cb.128.2	
12	Supports Power Down Location Update	[4] 6.3.24.8.1.3	Cb.128.2	
13	Supports MAC Hash Skip Threshold Location Update	[4] 6.3.24.8.1.4	Cb.128.2	
14	Supports Secure Location Update	[4] 6.3.24.8.2.1	Cb.128.2	
15	Supports Unsecure Location Update	[4] 6.3.24.8.2.1	Cb.128.2	
Cb.128.1: IF B.128/1 THEN m ELSE n/a. Cb.128.2: IF B.128/1 THEN o ELSE N/A.				
Comments:				

Table B.129: BS - network re-entry from Idle Mode

Prerequisite: (B.2/2 and B.4/1 and B.78/26) Base Station (BS) and Basic packet PMP and Handover supported at PHY level.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Expedited network re-entry from Idle Mode	[4] 6.3.24.9	o	
2	Supports omission of SBC-REQ management messages (Bit #0)	[4] 6.3.24.9, 11.6	o	
3	Supports omission of PKM authentication phase, except TEK (Bit #1)	[4] 6.3.24.9, 11.6	o	
4	Supports omission of PKM TEK creation phase (Bit #2)	[4] 6.3.24.9, 11.6	o	
5	Supports omission of Network Address Acquisition (Bit #3)	[4] 6.3.24.9, 11.6	o	
6	Supports omission of Time of the Day Acquisition (Bit #4)	[4] 6.3.24.9, 11.6	o	
7	Supports omission of TFTP Phase (Bit #5)	[4] 6.3.24.9, 11.6	o	
8	Supports Full service and operational state transfer (Bit #6)	[4] 6.3.24.9, 11.6	o	
9	Supports notifying MS of DL data Pending (Bit #7)	[4] 6.3.24.9, 11.6	o	
10	Supports receiving of unsolicited SBC-RSP management messages with updated capabilities information (Bit #8)	[4] 6.3.24.9, 11.6	o	
11	Supports receiving of unsolicited SBC-RSP message in the same frame as RNG-RSP	[4] 6.3.24.9, 11.6	o	
12	Supports receiving of SBC-RSP TLV in RNG-RSP	[4] 6.3.24.9, 11.6	o	
13	Supports omission of REG-REQ during NW re-entry (Bit #9)	[4] 6.3.24.9, 11.6	o	
14	Supports receiving of unsolicited REG-RSP management messages with updated capabilities information (Bit #10)	[4] 6.3.24.9, 11.6	o	
15	Supports receiving of unsolicited REG-RSP message in the same frame as RNG-RSP	[4] 6.3.24.9, 11.6	o	
16	Supports receiving of REG-RSP TLV in RNG-RSP	[4] 6.3.24.9, 11.6	o	
17	Supports sending Bandwith Request header with zero BR as a notification of successful re-entry registration (Bit #12)	[4] 6.3.24.9, 11.6	o	
18	Supports triggering a higher layer protocol required to refresh its traffic IP address (Bit #13)	[4] 11.6	o	
Comments:				

B.5.3.3.6 Security

Table B.130: BS- PKM version

Prerequisite: (B.2/2 and B.4/1 and B.110/6) Base Station (BS) and Basic packet PMP and Perform BS Authorization.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Supports PKM version 1	[4] 7.2.1	m	
2	Supports PKM version 2	[4] 7.2.2, 7.8	m	
Comments:				

Table B.131: PKM v1 Major Privacy functions for BS in PMP

Prerequisite: (B.2/2 and B.4/1 and B.110/6) Base Station (BS) and Basic packet PMP and Perform BS Authorization.				
Item	**Name**	**Reference**	**Status**	**Support**
1	Does the BS support Authorization Information messages?	[4] 7.2	o	
2	Does the BS support receipt of Auth Request (PKM-REQ with *Code=4)*	[4] 7.2	m	
3	Does the BS verify that the MS provides its Basic CID as part of the Authorization Request?	[4] 7.2	m	
4	Does the BS support generation of Auth Reply (PKM-RSP with *Code=5)*?	[4] 7.2	m	
5	Does the BS support two simultaneously active AKs?	[4] 7.2	m	
6	BS supports AK generation	[4] 7.5.4	m	
7	AK encryption using RSA with 1 024 bit key	[4] 7.5.5, 7.5.6	m	
8	BS supports PKM message authentication using HMAC with SHA-1	[4] 11.1.2	m	
9	BS supports MAC management message authentication using HMAC with SHA-1	[4] 7.5.3	m	
10	TEK encryption using 3-DES	[4] 7.5.2.1	m	
11	TEK encryption using RSA with 1 024 bit key	[4] 7.5.2.2	o	
12	TEK-128 encryption using AES	[4] 7.5.2.3	Cb.131.3	
13	DES data encryption/decryption on a per SA basis	[4] 7.5.1.1	m	
14	AES data encryption/decryption on a per SA basis	[4] 7.5.1.1	o	
15	Support of no encryption/decryption on a per- SA basis	[4] 6.3.2.1	m	
Cb.131.1: IF table B.131/ THEN m, ELSE n/a. Cb.131.2: IF table B.131/14 THEN m, ELSE n/a.				
Comments:				

Table B.132: BS- PKM v2 Authorization Policy support - initial network entry

Prerequisite: (B.2/2 and B.4/1 and B.110/6) Base Station (BS) and Basic packet PMP and Perform BS Authorization.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	No Authorization	[4] 11.8.4.2	m	
2	EAP-based authorization	[4] 11.8.4.2	m	
3	EAP-based authorization and Authenticated (EIK) EAP-based authorization	[4] 11.8.4.2	o	
4	RSA-based authorization	[4] 11.8.4.2	o	
5	RSA-based authorization and Authenticated (EIK) EAP-based authorization	[4] 11.8.4.2	o	
6	RSA-based authorization and EAP-based authorization	[4] 11.8.4.2	o	
Comments:				

Table B.133: BS- PKM v2 Authorization Policy support - network re-entry

Prerequisite: (B.2/2 and B.4/1 and B.110/6) Base Station (BS) and Basic packet PMP and Perform BS Authorization.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	No Authorization	[4] 11.8.4.2	m	
2	EAP-based authorization	[4] 11.8.4.2	m	
3	EAP-based authorization and Authenticated (EIK) EAP-based authorization	[4] 11.8.4.2	n/a	
4	RSA-based authorization	[4] 11.8.4.2	n/a	
5	RSA-based authorization and Authenticated (EIK) EAP-based authorization	[4] 11.8.4.2	n/a	
6	RSA-based authorization and EAP-based authorization	[4] 11.8.4.2	n/a	
Comments:				

Table B.134: BS Cryptographic suites

Prerequisite: (B.2/2 and B.4/1 and B. 110/6) Base Station (BS) and Basic packet PMP and Perform BS Authorization.						
Item	**Capability**	**Reference**	**Status**	**Support**	**Value allowed**	**Value supported**
1	No data encrypt, no data authent and 3-DES 128	[4] 11.9.14, 12.3.1.1	o		0x000001	
2	CBC-mode 56bit DES, no data authent and 3-DES 128	[4] 11.9.14, 12.3.1.1	m		0x010001	
3	No data encrypt, no data authent and RSA, 1024	[4] 11.9.14, 12.3.1.1	o		0x000002	
4	CBC-mode 56bit DES, no data authent and RSA, 1024	[4] 11.9.14, 12.3.1.1	o		0x010002	
5	CCM-Mode 128-bit AES, CCM-Mode, 128-bit, ECB mode AES with 128-bit key	[4] 11.9.14	o		0x020103	
6	CCM-Mode 128bits AES, CCM-Mode, AES Key Wrap with 128-bit key	[4] 11.9.14	m		0x020104	
7	CBC-Mode 128-bit AES, no data authentication, ECB mode AES with 128-bit key	[4] 11.9.14	o		0x030003	
8	MBS CTR Mode 128 bits AES, no data authentication, AES ECB mode with 128-bit key	[4] 11.9.14	o		0x800003	
9	MBS CTR mode 128 bits AES, no data authentication, AES Key Wrap with 128-bit key	[4] 11.9.14	o		0x800004	
Comments:						

Table B.135: CID and SAID update for BS in PMP

Prerequisite: (B.2/2 and B.4/1 and B.110/6) Base Station (BS) and Basic packet PMP and Perform BS Authorization.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Support CID update by RNG-RSP	[4] 6.3.2.3.6, 11.7.10	m	
2	Support CID update by REG-RSP	[4] 6.3.2.3.8, 11.7.10	m	
3	Support compressed CID update by RNG-RSP	[4] 6.3.2.3.6, 11.7.10	m	
4	Support compressed CID update by REG-RSP	[4] 6.3.2.3.8, 11.7.10	m	
5	Support SAID update by RNG-RSP	[4] 6.3.2.3.6, 11.7.18	m	
6	Support SAID update by REG-RSP	[4] 6.3.2.3.8, 11.7.18	m	
7	Support SAID update by SA-TEK-RSP	[4] 7.8.1, 11.7.21	m	
Comments:				

Table B.136: BS- PKM v2 Message Authentication Code (MAC) mode

Prerequisite: (B.2/2 and B.4/1 and B.110/6) Base Station (BS) and Basic packet PMP and Perform BS Authorization.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	No message authentication	[4] 11.8.4.3	m	
2	HMAC	[4] 11.8.4.3	m	
3	CMAC	[4] 11.8.4.3	m	
4	64-bit short-HMAC	[4] 11.8.4.3	o	
5	80-bit short-HMAC	[4] 11.8.4.3	o	
6	96-bit short-HMAC	[4] 11.8.4.3	o	
Comments:				

Table B.137: Security association for BS in PMP

Prerequisite: (B.2/2 and B.4/1 and B.110/6) Base Station (BS) and Basic packet PMP and Perform BS Authorization.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Support of Primary SA	[4] 7.2.1.1, 7.2.2.3	m	
2	Support of Static SA	[4] 7.2.1.1, 7.2.2.3	m	
3	Support of Dynamic SA	[4] 7.2.1.1, 7.2.2.3	m	
Comments:				

Table B.138: Security association service types for BS in PMP

Prerequisite: (B.2/2 and B.4/1 and B.110/6) Base Station (BS) and Basic packet PMP and Perform BS Authorization.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Support of Unicast service	[4] 7.2	m	
2	Support of Group multicast service	[4] 7.2.2.3.2	m	
3	Support of MBS services	[4] 7.2.2.3.3	m	
Comments:				

Table B.139: Certificate for BS in PMP

Prerequisite: (B.2/2 and B.4/1 and B.110/6) Base Station (BS) and Basic packet PMP and Perform BS Authorization.				
Item	**Capability**	**Reference**	**Status**	**Support**
1	Support of X.509 MS certificate for device authorization	[4] 7.2.1, 7.8	m	
2	Support of X.209 manufacturer certificate	[4] 7.2.1, 7.8	m	
3	Support of X.209 certificate profile	[4] 7.2.1, 7.8	m	
Comments:				

B.5.3.4 BS in MESH topology

Void.

B.5.4 WirelessMAN-OFDMA and WirelessHUMAN-OFDMA

Void.

B.6 List of PDUs and their directions

In the following PDU tables, statuses with values are the only valid cases, according to the direction of the PDU. When not applicable to a given direction, status **not applicable** (**n/a**) is defined.

B.6.1 Void

B.6.2 PDUs for MAC layer

B.6.2.1 PDUs for MAC layer in PMP topology

B.6.2.1.1 PDUs for network entry and initialization in PMP

Table B.140: BS sending MAC PDUs for network entry and initialization in PMP

Prerequisite: B.4/1 Basic packet PMP.				
Item	**PDU**	**Reference**	**Status**	**Support**
1	DL-MAP	[4] 6.3.9.2	m	
2	DCD	[4] 6.3.9.2	m	
3	UL-MAP	[4] 6.3.9.3	m	
4	UCD	[4] 6.3.9.3	m	
5	RNG-REQ	-	n/a	
6	RNG-RSP	[4] 6.3.9.5	m	
7	SBC-REQ	-	n/a	
8	SBC-RSP	[4] 6.3.9.7	m	
9	PKM-REQ	-	n/a	
10	PKM-RSP	[4] 6.3.9.8	m	
11	REG-REQ	-	n/a	
12	REG-RSP	[4] 6.3.9.9	m	
13	DHCP discover	-	n/a	
14	DHCP offer	[4] 6.3.9.10	m	
15	DHCP request	-	n/a	
16	DHCP response	[4] 6.3.9.10	m	
17	Time of day request	-	n/a	
18	Time of day response	[4] 6.3.9.11	m	
Comments:				

Table B.141: MS sending MAC PDUs for network entry and initialization in PMP

Prerequisite: B.4/1 Basic packet PMP.				
Item	**PDU**	**Reference**	**Status**	**Support**
1	DL-MAP	-	n/a	
2	DCD	-	n/a	
3	UL-MAP	-	n/a	
4	UCD	-	n/a	
5	RNG-REQ	[4] 6.3.9.5	m	
6	RNG-RSP	-	n/a	
7	SBC-REQ	[4] 6.3.9.7	m	
8	SBC-RSP	-	n/a	
9	PKM-REQ	[4] 6.3.9.8	m	
10	PKM-RSP	-	n/a	
11	REG-REQ	[4] 6.3.9.9	m	
12	REG-RSP	-	n/a	
13	DHCP discover	[4] 6.3.9.10	Cb.141.1	
14	DHCP offer	-	n/a	
15	DHCP request	[4] 6.3.9.10	Cb.141.1	
16	DHCP response	-	n/a	
17	Time of day request	[4] 6.3.9.11	Cb.141.1	
18	Time of day response	-	n/a	
Cb.141.1: IF B.33/1 THEN m ELSE n/a.				
Comments:				

B.6.2.1.2 PDUs for service flows in PMP

Table B.142: BS sending PDUs for service flows in PMP

Prerequisite: B.4/1 Basic packet PMP.				
Item	**PDU**	**Reference**	**Status**	**Support**
1	DSA-REQ (create)	[4] 6.3.2.3.10	m	
2	DSA-RSP	[4] 6.3.2.3.11	m	
3	DSA-ACK	[4] 6.3.2.3.12	m	
4	DSC-REQ (change)	[4] 6.3.2.3.13	m	
5	DSC-RSP	[4] 6.3.2.3.14	m	
6	DSC-ACK	[4] 6.3.2.3.15	m	
7	DSD-REQ (delete)	[4] 6.3.2.3.16	m	
8	DSD-RSP	[4] 6.3.2.3.17	m	
Comments:				

Table B.143: MS sending PDUs for service flows in PMP

Prerequisite: B.4/1 Basic packet PMP.				
Item	**PDU**	**Reference**	**Status**	**Support**
1	DSA-REQ (create)	[4] 6.3.2.3.10	Cb.143.1	
2	DSA-RSP	[4] 6.3.2.3.11	m	
3	DSA-ACK	[4] 6.3.2.3.12	Cb.143.1	
4	DSC-REQ (change)	[4] 6.3.2.3.13	Cb.143.2	
5	DSC-RSP	[4] 6.3.2.3.14	m	
6	DSC-ACK	[4] 6.3.2.3.15	Cb.143.2	
7	DSD-REQ (delete)	[4] 6.3.2.3.16	Cb.143.3	
8	DSD-RSP	[4] 6.3.2.3.17	m	
Cb.143.1: IF A 57/2 THEN m ELSE n/a. Cb.143.2: IF B.57/5 THEN m ELSE n/a. Cb.143.3: IF A 57/8 THEN m ELSE n/a.				
Comments:				

B.6.2.1.3 PDUs for ARQ in PMP

Table B.144: BS sending PDUs for ARQ in PMP

Prerequisite: (B.4/1 and B. 96/3) Basic packet PMP and MS supports ARQ procedure.				
Item	**PDU**	**Reference**	**Status**	**Support**
1	ARQ-feedback	[4] 6.3.4	Cb.144.1	
2	ARQ-discard	[4] 6.3.4	Cb.144.1	
3	ARQ-reset	[4] 6.3.4	Cb.144.1	
Cb.144.1: IF B.96/3 THEN m ELSE n/a.				
Comments:				

Table B.145: MS sending PDUs for ARQ in PMP

Prerequisite: (B.4/1 and B.31/3) Basic packet PMP and MS supports ARQ procedure.				
Item	**PDU**	**Reference**	**Status**	**Support**
1	ARQ-feedback	[4] 6.3.4	Cb.145.1	
2	ARQ-discard	[4] 6.3.4	Cb.145.1	
3	ARQ-reset	[4] 6.3.4	Cb.145.1	
Cb.145.1: IF B.31/3 THEN m ELSE n/a.				
Comments:				

B.6.2.1.4 PDUs for miscellaneous capabilities in PMP

Table B.146: BS sending MAC PDUs for miscellaneous capabilities in PMP

Prerequisite: B.4/1 Basic packet PMP.				
Item	**PDU**	**Reference**	**Status**	**Support**
1	MCA-REQ	[4] 6.3.2.3.18	m	
2	MCA-RSP	[4] 6.3.2.3.19	n/a	
3	DBPC-REQ	[4] 6.3.2.3.20	n/a	
4	DBPC-RSP	[4] 6.3.2.3.21	m	
5	RES-CMD	[4] 6.3.2.3.22	m	
6	CLK-CMP	[4] 6.3.2.3.25	Cb.146.2	
7	DREG-CMD	[4] 6.3.2.3.26	m	
8	DSX-RVD	[4] 6.3.2.3.27	Cb.146.3	
9	TFTP-CPLT	[4] 6.3.2.3.28	n/a	
10	TFTP-RSP	[4] 6.3.2.3.29	m	
11	REP-REQ	[4] 6.3.2.3.33	m	
12	REP-RSP	[4] 6.3.2.3.33	n/a	
13	FPC	[4] 6.3.2.3.34	Cb.146.1	
14	AAS-FBCK-REQ	[4] 6.3.2.3.40	Cb.146.2	
15	AAS-FBCK-RSP	[4] 6.3.2.3.40	Cb.146.3	
16	AAS-BEAM-select	[4] 6.3.2.3.41	n/a	
17	AAS-BEAM-REQ	[4] 8.3.6.5	Cb.146.4	
18	AAS-BEAM-RSP	[4] 8.3.6.5	Cb.146.5	
Cb.146.1: IF B.97/10 THEN m ELSE n/a. Cb.146.2: IF B.78/1 THEN m ELSE n/a. Cb.146.3: IF B.106/1 THEN m ELSE n/a. Cb.146.4: IF B.97/7 THEN m ELSE n/a.				
Comments:				

Table B.147: MS sending MAC PDUs for miscellaneous capabilities in PMP

Prerequisite: B.4/1 Basic packet PMP.				
Item	**PDU**	**Reference**	**Status**	**Support**
1	MCA-REQ	-	n/a	
2	MCA-RSP	[4] 6.3.12, 12.3.1.1	m	
3	DBPC-REQ	[4] 6.3.2.3.20	m	
4	DBPC-RSP	-	n/a	
5	RES-CMD	-	n/a	
6	CLK-CMP	-	n/a	
7	DREG-REQ	[4] 6.3.2.3.43	o	
8	DREG-CMD	-	n/a	
9	DSX-RVD	-	n/a	
10	TFTP-CPLT	[4] 6.3.2.3.28	m	
11	TFTP-RSP	-	n/a	
12	REP-REQ	-	n/a	
13	REP-RSP	[4] 6.3.2.3.33	m	
14	FPC	-	n/a	
15	AAS-FBCK-REQ	-	n/a	
16	AAS-FBCK-RSP	-	n/a	
17	AAS-BEAM-select	[4] 6.3.2.3.41	Cb.147.1	
18	AAS-BEAM-REQ	-	n/a	
19	AAS-BEAM-RSP	-	n/a	
Cb.147.1: IF B.13/1 THEN (IF B.7/2or B.8/2 THEN m ELSE o) ELSE n/a.				
Comments:				

B.6.2.1.5 PDUs for privacy in PMP

Table B.148: BS sending MAC Privacy PDUs in PMP

Prerequisite: B.4/1 Basic packet PMP.				
Item	**PDU**	**Reference**	**Status**	**Support**
1	PKM-RSP SA Add (Code 3)	[4] 6.3.2.3.9	Cb.148.1	
2	PKM-REQ Auth Request (Code 4)		n/a	
3	PKM-RSP Auth Reply (Code 5)	[4] 6.3.2.3.9	m	
4	PKM-RSP Auth Reject (Code 6)	[4] 6.3.2.3.9	m	
5	PKM-REQ Key Request (Code 7)		n/a	
6	PKM-RSP Key Reply (Code 8)	[4] 6.3.2.3.9	m	
7	PKM-RSP Key Reject (Code 9)	[4] 6.3.2.3.9	m	
8	PKM-RSP Auth Invalid (Code 10)	[4] 6.3.2.3.9	m	
9	PKM-RSP TEK Invalid (Code 11)	[4] 6.3.2.3.9	m	
10	PKM-REQ Authent Info (Code 12)		n/a	
Cb.148.1: IF table B.131/ THEN m, ELSE n/a.				
Comments:				

Table B.149: MS sending MAC Privacy PDUs in PMP

Prerequisite: B.4/1 Basic packet PMP.				
Item	**PDU**	**Reference**	**Status**	**Support**
1	PKM-RSP SA Add (Code 3)	-	n/a	
2	PKM-REQ Auth Request (Code 4)	[4] 6.3.2.3.9	m	
3	PKM-RSP Auth Reply (Code 5)	-	n/a	
4	PKM-RSP Auth Reject (Code 6)	-	n/a	
5	PKM-REQ Key Request (Code 7)	[4] 6.3.2.3.9	m	
6	PKM-RSP Key Reply (Code 8)	-	n/a	
7	PKM-RSP Key Reject (Code 9)	-	n/a	
8	PKM-RSP Auth Invalid (Code 10)	-	n/a	
9	PKM-RSP TEK Invalid (Code 11)	-	n/a	
10	PKM-REQ Authent Info (Code 12)	[4] 6.3.2.3.9	m	
Comments:				

B.6.2.1.6 PDUs for Mobility in PMP

Table B.150: BS sending MAC PDUs for Mobility in PMP

Prerequisite: B.4/1 Basic packet PMP.				
Item	**PDU**	**Reference**	**Status**	**Support**
1	MOB_SLP-REQ	[4] 6.3.2.3.44	n/a	
2	MOB_SLP-RSP	[4] 6.3.2.3.45		
3	MOB_TRF-IND	[4] 6.3.2.3.46		
4	MOB_NBR-ADV	[4] 6.3.2.3.47	m	
5	MOB_SCN-REQ	[4] 6.3.2.3.48	n/a	
6	MOB_SCN-RSP	[4] 6.3.2.3.49		
7	MOB_SCN-REP	[4] 6.3.2.3.50	n/a	
8	MOB_ASC-REP	[4] 6.3.2.3.51		
9	MOB_BSHO-REQ	[4] 6.3.2.3.52		
10	MOB_MSHO-REQ	[4] 6.3.2.3.53	n/a	
11	MOB_BSHO-RSP	[4] 6.3.2.3.54		
12	MOB_HO-IND	[4] 6.3.2.3.55	n/a	
13	MOB_PAG-ADV	[4] 6.3.2.3.56		
14	MBS_MAP	[4] 6.3.2.3.57		
15	PMC_REQ	[4] 6.3.2.3.58	n/a	
16	PMC_RSP	[4] 6.3.2.3.59		
17	SUB-DL-UL-MAP	[4] 6.3.2.3.60		
18	PRC-LT_CTRL	[4] 6.3.2.3.61		
Cb.150.1: IF (B3/3) THEN m ELSE o.				
Comments:				

Table B.151: MS sending MAC PDUs for Mobility in PMP

Prerequisite: B.4/1 Basic packet PMP.				
Item	**PDU**	**Reference**	**Status**	**Support**
1	MOB_SLP-REQ	[4] 6.3.2.3.44		
2	MOB_SLP-RSP	[4] 6.3.2.3.45	n/a	
3	MOB_TRF-IND	[4] 6.3.2.3.46	n/a	
4	MOB_NBR-ADV	[4] 6.3.2.3.47	n/a	
5	MOB_SCN-REQ	[4] 6.3.2.3.48	Cb.151.1	
6	MOB_SCN-RSP	[4] 6.3.2.3.49	n/a	
7	MOB_SCN-REP	[4] 6.3.2.3.50		
8	MOB_ASC-REP	[4] 6.3.2.3.51	n/a	
9	MOB_BSHO-REQ	[4] 6.3.2.3.52	n/a	
10	MOB_MSHO-REQ	[4] 6.3.2.3.53		
11	MOB_BSHO-RSP	[4] 6.3.2.3.54	n/a	
12	MOB_HO-IND	[4] 6.3.2.3.55		
13	MOB_PAG-ADV	[4] 6.3.2.3.56	n/a	
14	MBS_MAP	[4] 6.3.2.3.57	n/a	
15	PMC_REQ	[4] 6.3.2.3.58		
16	PMC_RSP	[4] 6.3.2.3.59	n/a	
17	SUB-DL-UL-MAP	[4] 6.3.2.3.60	n/a	
18	PRC-LT_CTRL	[4] 6.3.2.3.61	n/a	
Cb.151.1: IF (B3/3) THEN m ELSE o.				
Comments:				

B.6.2.2 PDUs for MAC layer in MESH topology

Void.

B.7 PDU fields

All items in this clause concern only the status of the fields of PDU transmitted by the IUT. For PDU received by the IUT all the fields are supposed to have been received. So for the received PDU, all fields, which are sent by the sender side are mandatory.

To know which fields of a PDU received by the IUT are mandatory, please refer to the status of the transmitted PDU fields for the opposite side. Fields that are either mandatory or optional for the transmitter, become mandatory for the receiver.

B.7.1 Fields of PDUs for MAC layer

B.7.1.1 PDUs fields for MAC in PMP topology

B.7.1.1.1 DL-MAP

Table B.152: PDU: DL-MAP

Item	Parameter	Reference	Status	Support
1	Management Message type=2	[4] 6.3.2.3.2	m	
2	DCD count	[4] 6.3.2.3.2	m	
3	Base station ID	[4] 6.3.2.3.2	m	
4	DL_MAP Information Element(s) See next DL-MAP Information Element	[4] 6.3.2.3.2	m	
Comments:				

Table B.153: PDU: DL-MAP Information Element

Item	Parameter	Reference	Status	Support
1	CID	[4] 8.3.6.2	m	
2	DIUC	[4] 8.3.6.2	m	
3	Preamble Present	[4] 8.3.6.2	m	
4	Start Time	[4] 8.3.6.2	m	
5	Extended DIUC dependent IE Only if DIUC=15	[4] 8.3.6.2	o	
Comments:				

Table B.154: PDU: Extended DIUC dependent IE

Item	Parameter	Reference	Status	Support
1	Extended DIUC	[4] 8.3.6.2.2	m	
2	Length	[4] 8.3.6.2.2	m	
3	Unspecified data	[4] 8.3.6.2.2	m	
Comments:				

B.7.1.1.2 DCD

Table B.155: PDU: DCD

Item	Parameter	Reference	Status	Support
1	Management Message type=1	[4] 6.3.2.3.1	m	
2	Reserved (see note)	[4] 6.3.2.3.1	m	
3	Configuration Change count	[4] 6.3.2.3.1	m	
4	TLV Encoded information see next DCD TLV table	[4] 6.3.2.3.1	m	
5	Downlink burst profile(s) see next DCD DL burst profile table	[4] 6.3.2.3.1, 8.1.4.1.2.5	m	
NOTE: Shall be set to zero.				
Comments:				

Table B.156: DCD TLV

Item	Parameter	Reference	Status	Support
1	Channel Number	[4]]11.4.1	Cb.156.1	
2	Channel Switch Frame Number	[4] 11.4.1	Cb.156.1	
3	Frequency	[4] 11.4.1	m	
4	BS Id	[4] 11.4.1	m	
5	Frame Duration Code	[4] 11.4.1	m	
6	Frame Number	[4] 11.4.1	m	
7	MAC version	[4] 11.4.1	m	
8	BS EIRP	[2] 4.3.2,[4] 11.4.1	m	
9	TTG	[2] 4.3.2,[4] 11.4.1	n/a	
10	RTG	[2] 4.3.2,[4] 11.4.1	n/a	
11	$EIRxP_{IR,max}$	[2] 4.3.2,[4] 11.4.1	m	
Cb.156.1: IF B. license exempt band THEN m ELSE n/a.				
Comments:				

Table B.157: DCD DL Burst Profile

Item	Capability	Reference	Status	Support
1	Type=1	[2] 4.3.2,[4] 8.1.4.1.2.5, 11.4.2	m	
2	Length	[2] 4.3.2,[4] 8.1.4.1.2.5, 11.4.2	m	
3	Reserved (see note)	[2] 4.3.2,[4] 8.1.4.1.2.5, 11.4.2	m	
4	DIUC	[2] 4.3.2,[4] 8.1.4.1.2.5, 11.4.2	m	
5	FEC Code Type	[2] 4.3.2,[4] 8.1.4.1.2.5, 11.4.2	m	
6	TCS_Enable	[2] 4.3.2,[4] 8.1.4.1.2.5, 11.4.2	o	
NOTE: Shall be set to zero.				
Comments:				

B.7.1.1.3 UCD

Table B.158: PDU: UCD

Item	Parameter	Reference	Status	Support
1	Management Message type=0	[4] 6.3.2.3.3	m	
2	Configuration Change count	[4] 6.3.2.3.3	m	
3	Ranging backoff start	[4] 6.3.2.3.3	m	
4	Ranging backoff End	[4] 6.3.2.3.3	m	
5	Request backoff start	[4] 6.3.2.3.3	m	
6	Request backoff End	[4] 6.3.2.3.3	m	
7	TLV Encoded information see next UCD TLV table	[4] 6.3.2.3.3	m	
8	Uplink burst profile(s) see next UCD UL burst profile table for encodings	[4] 8.3.5.5	m	
Comments:				

Table B.159: UCD TLV

Item	Parameter	Reference	Status	Support
1	Frequency	[2] 4.3.2, [4] 11.3.1	m	
2	Contention-based Reservation Timeout	[2] 4.3.2, [4] 11.3.1	m	
3	Contention ranging request opportunity size	[4] 11.3.1	m	
4	Contention ranging request burst size	[4] 11.3.1	m	
5	Subchannelization REQ Region-Full Parameters	[2] 4.3.2, [4] 11.3.1	Cb.159.1	
6	Subchannelization focused contention codes	[2] 4.3.2, [4] 11.3.1	Cb.159.1	
7	Subchannelized Initial Ranging capable BS	[2] 4.3.2, [4] 11.3.1	m	
Cb.159.1: IF B.13/ THEN m ELSE n/a.				
Comments:				

Table B.160: UCD UL Burst Profile

Item	Capability	Reference	Status	Support
1	Type=1	[4] 8.3.5.5	m	
2	Length	[4] 8.3.5.5	m	
3	UIUC	[4] 8.3.5.5	m	
4	Reserved (see note)	[4] 8.3.5.5	m	
5	FEC Code Type	[2] 4.3.2, [4] 11.3.1.1	m	
6	Focused contention power boost	[2] 4.3.2, [4] 11.3.1.1	Cb.B.160.1	
7	TCS enable	[4] 11.3.1.1	o	
Cb.B.160.1: IF Focused Contention BW requesting THEN m ELSE o.				
NOTE: This field shall be set to zero.				
Comments:				

B.7.1.1.4 UL-MAP

Table B.161: PDU: UL-MAP

Item	Parameter	Reference	Status	Support
1	Management Message type=3	[4] 6.3.2.3.4	m	
2	Reserved (see note)	[4] 6.3.2.3.4	m	
3	UCD count	[4] 6.3.2.3.4	m	
4	Allocation start time	[4] 6.3.2.3.4	m	
5	UL_MAP Information Element(s), see table B.162	[4] 6.3.2.3.4	m	
NOTE: Shall be set to zero.				
Comments:				

Table B.162: UL-MAP Information Element(s)

Item	Parameter	Reference	Status	Support
1	CID	[4] 8.3.6.3	m	
2	Start Time	[4] 8.3.6.3	m	
3	Subchannel index	[4] 8.3.6.3	m	
4	UUIC	[4] 8.3.6.3	m	
5	Duration	[4] 8.3.6.3	m	
6	Midamble repetition interval	[4] 8.3.6.3	m	
7	Focused_Contention_IE()	[4] 8.3.6.3	C.162.1	
8	Subchannelized_Network_Entry_IE()	[4] 8.3.6.3	m	
9	Extended UUIC dependent IE (See table B.163)	[4] 8.3.6.3	o	
10	Padding nibble, if needed	[4] 8.3.6.3	o	
C.162.1: IF B78/20 THEN m ELSE n/a.				
Comments:				

Table B.163: Extended UIUC dependent IE

Item	Parameter	Reference	Status	Support
1	Extended UIUC	[4] 8.3.6.3.4	m	
2	Length	[4] 8.3.6.3.4	m	
3	Unspecified data	[4] 8.3.6.3.4	m	
Comments:				

B.7.1.1.5 RNG-REQ and RNG-RSP

Table B.164: PDU: RNG-REQ

Item	Parameter	Reference	Status	Support
1	Management Message type=4	[4] 6.3.2.3.5	m	
2	Reserved (see note)	[4] 6.3.2.3.5	m	
3	TLV Encoded information see next RNG-REQ TLV table	[4] 6.3.2.3.5	m	
NOTE: Shall be set to zero.				
Comments:				

Table B.165: RNG-REQ TLV

Item	Parameter	Reference	Status	Support
1	Requested Downlink Burst profile	[4] 6.3.2.3.5	m	
2	MS MAC address	[4] 6.3.2.3.5	m	
3	Ranging anomalies	[4] 6.3.2.3.5	o	
4	MAC version	[4] 6.3.2.3.5	m	
5	AAS broadcast capability	[4] 6.3.2.3.5	Cb.165.1	
Cb.165.1: IF A13/1 THEN o ELSE n/a.				
Comments:				

Table B.166: PDU: RNG-RSP

Item	Parameter	Reference	Status	Support
1	Management Message type=5	[4] 6.3.2.3.6	m	
2	Reserved (see note)	[4] 6.3.2.3.6	m	
3	TLV Encoded information see next RNG-RSP TLV table	[4] 6.3.2.3.6	m	
NOTE: Shall be set to zero.				
Comments:				

Table B.167: RNG-RSP TLV

Item	Parameter	Reference	Status	Support
1	Timing Adjust Information	[4] 6.3.2.3.6	o	
2	Power Adjust Information	[4] 6.3.2.3.6	o	
3	Ranging Status	[4] 6.3.2.3.6	m	
4	DL Frequency Override	[4] 6.3.2.3.6	o	
5	UL Channel ID Override	[4] 6.3.2.3.6	o	
6	DL Operational Burst Profile	[4] 6.3.2.3.6	o	
7	Basic CID	[4] 6.3.2.3.6	Cb.167.3	
8	Primary Management CID	[4] 6.3.2.3.6	Cb.167.3	
9	MS MAC Address	[4] 6.3.2.3.6	Cb.167.3	
10	Frequency Adjust Information	[4] 6.3.2.3.6	o	
11	AAS broadcast permission	[4] 6.3.2.3.6	Cb.167.1	
12	Frame Number	[4] 6.3.2.3.6	o	
13	Initial ranging opportunity Number	[4] 6.3.2.3.6	o	
14	ranging sub channel	[4] 6.3.2.3.6	Cb.167.2	
Cb.167.1: IF B.13/1 THEN o ELSE n/a. Cb.167.2: IF B.13/ THEN o ELSE n/a. Cb.167.3: IF on initial ranging CID THEN m ELSE o.				
Comments:				

B.7.1.1.6 SBC-REQ and SBC-RSP

Table B.168: PDU: SBC-REQ

Item	Parameter	Reference	Status	Support
1	Management Message type=26	[4] 6.3.2.3.23	m	
2	TLV Encoded information see next SBC-REQ TLV table	[4] 6.3.2.3.23	m	
Comments:				

Table B.169: SBC-REQ TLV

Item	Parameter	Reference	Status	Support
1	Physical Parameters supported (see table B.170)	[4] 6.3.2.3.23	m	
2	Bandwidth Allocation Support	[4] 6.3.2.3.23	m	
3	Capabilities for construction and transmission of MAC PDUs	[4] 6.3.2.3.23	o	
4	PKM Flow control	[4] 6.3.2.3.23	o	
5	Authorization policy support	[4] 6.3.2.3.23	o	
6	Maximum number of supported security association	[4] 6.3.2.3.23	o	
Comments:				

Table B.170: Physical Parameters Supported fields for SBC-REQ

Item	Parameter	Reference	Status	Support
1	Subscriber transition gap	[4] 11.8.3	m	
2	Maximum transmit power	[4] 11.8.3	m	
3	Current transmit power	[4] 11.8.3	m	
4	MS FFT sizes	[4] 11.8.3	m	
5	MS demodulator	[4] 11.8.3	m	
6	MS modulator	[4] 11.8.3	m	
7	MS TC sublayer support	[4] 11.8.3	o	
Comments:				

Table B.171: PDU: SBC-RSP

Item	Parameter	Reference	Status	Support
1	Management Message type=27	[4] 6.3.2.3.24	m	
2	TLV Encoded information see next SBC-RSP TLV table	[4] 6.3.2.3.24	m	
Comments:				

Table B.172: SBC-RSP TLV

Item	Parameter	Reference	Status	Support
1	Physical Parameters supported (see table B.173)	[4] 6.3.2.3.24	Cb.172.1	
2	Bandwidth Allocation Support	[4] 6.3.2.3.24	Cb.172.1	
3	Capabilities for Construction and Transmission of MAC PDUs	[4] 6.3.2.3.23	Cb.172.1	
4	PKM Flow control	[4] 6.3.2.3.23	Cb.172.1	
5	Authorization Policy Support	[4] 6.3.2.3.23	Cb.172.1	
6	Maximum number of supported security association	[4] 6.3.2.3.23	Cb.172.1	
Cb.172.1: IF (parameter included in the SBC-REQ message) THEN m ELSE o.				
Comments:				

Table B.173: Physical Parameters Supported fields for SBC-RSP

Item	Parameter	Reference	Status	Support
1	Subscriber transition gap	[4] 11.8.3	m	
2	MS FFT sizes	[4] 11.8.3	m	
3	MS demodulator	[4] 11.8.3	m	
4	MS modulator	[4] 11.8.3	m	
5	MS TC sublayer support	[4] 11.8.3	o	
Comments:				

B.7.1.1.7 DHCP messages

Comments on Establish IP connectivity PDUs: **DHCP discover, DHCP offer, DHCP request** and **DHCP response** are defined by RFC 2131 [16].

B.7.1.1.8 Time of day messages

Comments on Establish Time of day PDUs: **Time of day request** and **Time of day response** are defined by RFC 868 [17].

B.7.1.1.9 ARQ messages

Table B.174: PDU: ARQ feedback message

Item	Parameter	Reference	Status	Support
1	Management Message type=33	[4] 6.3.2.3.30	m	
2	ARQ feedback payload: one or several ARQ feedback IE(s) see next ARQ feedback IE table	[4] 6.3.2.3.30	m	
Comments:				

Table B.175: ARQ Feedback Information Elements

Item	Parameter	Reference	Status	Support
1	CID	[4] 6.3.4.2	m	
2	last	[4] 6.3.4.2	m	
3	ACK type	[4] 6.3.4.2	m	
4	BSN	[4] 6.3.4.2	m	
5	Number of ACK maps	[4] 6.3.4.2	m	
6	ACK MAP(s)	[4] 6.3.4.2	m	
Comments:				

Table B.176: PDU: ARQ Discard message

Item	Parameter	Reference	Status	Support
1	Management Message type=34	[4] 6.3.2.3.31	m	
2	Connection ID	[4] 6.3.2.3.31	m	
3	Fragmentation Sequence Number	[4] 6.3.2.3.31	m	
Comments:				

Table B.177: PDU: ARQ Reset message

Item	Parameter	Reference	Status	Support
1	Management Message type=35	[4] 6.3.2.3.32	m	
2	Connection ID	[4] 6.3.2.3.32	m	
3	Type	[4] 6.3.2.3.32	m	
Comments:				

B.7.1.1.10 MCA-REQ and MCA-RSP

Table B.178: PDU: MCA-REQ

Item	Parameter	Reference	Status	Support
1	Management Message type=21	[4] 6.3.2.3.18	m	
2	Transaction ID	[4] 6.3.2.3.18	m	
3	TLV encoded information	[4] 6.3.2.3.18	m	
Comments:				

Table B.179: MCA-REQ TLV

Item	Parameter	Reference	Status	Support
1	Transaction ID	[4] 6.3.2.3.18	m	
2	Multicast CID	[4] 6.3.2.3.18	m	
3	Assignment	[4] 6.3.2.3.18	m	
4	Multicast Group Type	[4] 11.10	o	
5	Periodic Allocations	[4] 11.10	m	
Comments:				

Table B.180: PDU: MCA-RSP

Item	Parameter	Reference	Status	Support
1	Management Message type=22	[4] 6.3.2.3.19	m	
2	Transaction ID	[4] 6.3.2.3.19	m	
3	Confirmation Code	[4] 6.3.2.3.19	m	
Comments:				

B.7.1.1.11 DBPC-REQ and DBPC-RSP

Table B.181: PDU: DBPC-REQ

Item	Parameter	Reference	Status	Support
1	Management Message type=23	[4] 6.3.2.3.20	m	
2	Reserved (see note)	[4] 6.3.2.3.20	m	
3	DIUC	[4] 6.3.2.3.20	m	
4	DL configuration change count	[4] 6.3.2.3.20	m	
NOTE: Shall be set to zero.				
Comments:				

Table B.182: PDU: DBPC-RSP

Item	Parameter	Reference	Status	Support
1	Management Message type=24	[4] 6.3.2.3.21	m	
2	Reserved (see note)	[4] 6.3.2.3.21	m	
3	DIUC	[4] 6.3.2.3.21	m	
4	DL configuration change count	[4] 6.3.2.3.21	m	
NOTE: Shall be set to zero.				
Comments:				

B.7.1.1.12 RES-CMD

Table B.183: PDU: RES-CMD

Item	Parameter	Reference	Status	Support
1	Management Message type=25	[4] 6.3.2.3.22	m	
2	TLV encoded information	[4] 6.3.2.3.22	m	
Comments:				

Table B.184: RES-CMD TLV

Item	Parameter	Reference	Status	Support
1	HMAC tuple	[4] 6.3.2.3.22	m	
Comments:				

B.7.1.1.13 CLK-CMP

Table B.185: PDU: CLK-CMP

Item	Parameter	Reference	Status	Support
1	Management Message type=28	[4] 6.3.2.3.25	m	
2	Clock count	[4] 6.3.2.3.25	m	
3	Clock Id	[4] 6.3.2.3.25	m	
4	Sequence number	[4] 6.3.2.3.25	m	
5	Clock comparison value	[4] 6.3.2.3.25	m	
Comments:				

B.7.1.1.14 DREG-REQ and DREG-CMD

Table B.186: PDU: DREG-REQ

Item	Parameter	Reference	Status	Support
1	Management Message type=49	[4] 6.3.2.3.42	m	
2	De-registration request code	[4] 6.3.2.3.42	m	
3	TLV encoded information	[4] 6.3.2.3.42	m	
Comments:				

Table B.187: DREG-REQ TLV

Item	Parameter	Reference	Status	Support
1	HMAC tuple	[4] 6.3.2.3.42	m	
Comments:				

Table B.188: PDU: DREG-CMD

Item	Parameter	Reference	Status	Support
1	Management Message type=29	[4] 6.3.2.3.26	m	
2	action code	[4] 6.3.2.3.26	m	
3	TLV encoded information	[4] 6.3.2.3.26	m	
Comments:				

Table B.189: DREG-CMD TLV

Item	Parameter	Reference	Status	Support
1	HMAC tuple	[4] 6.3.2.3.26	m	
Comments:				

B.7.1.1.15 DSX-RVD

Table B.190: PDU: DSX-RVD

Item	Parameter	Reference	Status	Support
1	Management Message type=30	[4] 6.3.2.3.27	m	
2	Transaction ID	[4] 6.3.2.3.27	m	
3	Confirmation Code	[4] 6.3.2.3.27	m	
Comments:				

B.7.1.1.16 TFTP-CPLT and TFTP-RSP

Table B.191: PDU: TFTP-CPLT

Item	Parameter	Reference	Status	Support
1	Management Message type=31	[4] 6.3.2.3.28	m	
2	TLV encoded information	[4] 6.3.2.3.28	m	
Comments:				

Table B.192: TFTP-CPLT TLV

Item	Parameter	Reference	Status	Support
1	HMAC tuple	[4] 6.3.2.3.28	m	
Comments:				

Table B.193: PDU: TFTP-RSP

Item	Parameter	Reference	Status	Support
1	Management Message type=32	[4] 6.3.2.3.29	m	
2	Response	[4] 6.3.2.3.29	m	
Comments:				

B.7.1.1.17 REP-REQ and REP-RSP

Table B.194: PDU: REP-REQ

Item	Parameter	Reference	Status	Support
1	Management Message type=36	[4] 6.3.2.3.33	m	
2	Report request TLVs	[4] 6.3.2.3.33	m	
Comments:				

Table B.195: REP-REQ TLV for report request

Item	Parameter	Reference	Status	Support
1	Report type	[4] 11.11	m	
2	Channel number	[4] 11.11	o	
Comments:				

Table B.196: PDU: REP-RSP

Item	Parameter	Reference	Status	Support
1	Management Message type=37	[4] 6.3.2.3.33	m	
2	Report response TLVs	[4] 6.3.2.3.33	m	
Comments:				

Table B.197: REP-RSP TLV for report

Item	Parameter	Reference	Status	Support
1	Channel number	[4] 11.12	o	
2	Start frame	[4] 11.12	o	
3	duration	[4] 11.12	o	
4	Basic report	[4] 11.12	o	
5	CINR report	[4] 11.12	o	
6	RSSI report	[4] 11.12	o	
7	Current Transmit Power	[4] 11.12	m	
Comments:				

B.7.1.1.18 AAS-FBCK-REQ and AAS-FBCK-RSP

Table B.198: PDU: AAS-FBCK-REQ

Item	Parameter	Reference	Status	Support
1	Management Message type=44	[4] 6.3.2.3.40	m	
2	Frame number	[4] 6.3.2.3.40	m	
3	Number of frames	[4] 6.3.2.3.40	m	
4	Measurement data type	[4] 6.3.2.3.40	m	
5	Feedback request counter	[4] 6.3.2.3.40	m	
6	Frequency measurement resolution	[4] 6.3.2.3.40	m	
Comments:				

Table B.199: PDU: AAS-FBCK-RSP

Item	Parameter	Reference	Status	Support
1	Management Message type=45	[4] 6.3.2.3.40	m	
2	Feedback request number	[4] 6.3.2.3.40	m	
3	Real (Frequency value)	[4] 6.3.2.3.40	m	
4	Imaginary (Frequency value)	[4] 6.3.2.3.40	m	
Comments: Set of Real and Imaginary Frequency values for each frequency defined.				

B.7.1.1.19 AAS-BEAM messages

Table B.200: PDU: AAS-Beam-Select

Item	Parameter	Reference	Status	Support
1	Management Message type=46	[4] 6.3.2.3.41	m	
2	AAS beam direction index	[4] 6.3.2.3.41	m	
Comments:				

Table B.201: PDU: AAS-BEAM-REQ

Item	Parameter	Reference	Status	Support
1	Management Message type=47	[4] 8.3.6.5	m	
2	Frame number	[4] 8.3.6.5	m	
3	Feedback request number	[4] 8.3.6.5	m	
4	Measurement report type	[4] 8.3.6.5	m	
5	Resolution parameter	[4] 8.3.6.5	m	
6	Beam bit mask	[4] 8.3.6.5	m	
Comments:				

Table B.202: PDU: AAS-BEAM-RSP

Item	Parameter	Reference	Status	Support
1	Management Message type=48	[4] 8.3.6.5	m	
2	Frame number	[4] 8.3.6.5	m	
3	Feedback request number	[4] 8.3.6.5	m	
4	Measurement report type	[4] 8.3.6.5	m	
5	Resolution parameter	[4] 8.3.6.5	m	
6	Beam bit mask	[4] 8.3.6.5	m	
7	AAS_BEAM_REP_IE	[4] 8.3.6.5	m	
8	RSSI mean value	[4] 8.3.6.5	m	
9	CINR mean value	[4] 8.3.6.5	m	
Comments:				

B.7.1.1.20 FPC

Table B.203: PDU: FPC

Item	Parameter	Reference	Status	Support
1	Management Message type=38	[4] 6.3.2.3.34	m	
2	Number of stations	[4] 6.3.2.3.34	m	
3	Basic CID	[4] 6.3.2.3.34	m	
4	Power adjust	[4] 6.3.2.3.34	m	
Comments: Set of Basic CID and Power adjust values for each station defined.				

B.7.1.1.21 REG-REQ and REG-RSP

Table B.204: PDU: Registration Request (REG-REQ)

Item	Parameter	Reference	Status	Support
1	Management Message type=6	[4] 6.3.2.3.7	m	
2	TLV Encoded Information (See next table REG-REQ TLV)	[4] 6.3.2.3.7	m	
Comments:				

Table B.205: PDU: REG-REQ TLV (PMP)

Item	Parameter	Reference	Status	Support
1	IP version	[4] 11.7.4	o	
2	Vendor ID Encoding	[4] 11.1.5	o	
3	Vendor specific information	[4] 11.1.6	o	
4	MS Capabilities Encodings	[4] 11.7.8	o	
5	Convergence Sub layer Capabilities	[4] 11.7.7	o	
6	ARQ parameters	[4] 11.7.1	o	
7	Number of UL transport CIDs supported	[4] 11.7.6.1	m	
8	Number of DL transport CIDs supported	[4] 11.7.6.2	m	
9	MS management Support	[4] 11.7.2	m	
10	IP management mode	[4] 11.7.3	m	
11	HMAC Tuple	[4] 6.3.2.3.7	m	
Comments:				

Table B.206: MS Capabilities encoding and values

Item	MS Capability	Reference	Status	Support	Value	
					allowed range	Supported
1	ARQ support	[4] 11.7.8.1	o		0 - 1	
2	DSx flow control	[4] 11.7.8.2	o		0 - 255	
3	MCA flow control	[4] 11.7.8.4	o		0 - 255	
4	Multicast polling group	[4] 11.7.8.5	o		0 - 255	
Comments:						

Table B.207: Convergence Sub layer Capabilities

Item	Convergence Sub layer Capabilities	Reference	Status	Support
1	Convergence sub layer support Tx	[4] 11.7.7.1	o	
2	Max. number of classifiers Tx	[4] 11.7.7.2	o	
3	Payload header suppression support Tx	[4] 11.7.7.3	o	
Comments:				

Table B.208: PDU: Registration Response (REG-RSP)

Item	Parameter	Reference	Status	Support
1	Management Message type=7	[4] 6.3.2.3.8	m	
2	Response	[4] 6.3.2.3.8	m	
3	TLV Encoded Information see next table REG-RSP TLV	[4] 6.3.2.3.8	m	
Comments:				

Table B.209: PDU: REG-RSP TLV (PMP)

Item	Parameter	Reference	Status	Support
1	Secondary Management CID	[4] 11.7.5	Cb.209.1	
2	MS Capabilities Encodings See table B.206	[4] 11.7.8	Cb.209.2	
3	IP version	[4] 11.7.4	o	
4	Vendor ID Encoding	[4] 11.1.5	o	
5	Vendor-specific information	[4] 11.1.6	o	
6	ARQ parameters	[4] 11.7.1	Cb.209.3	
7	IP management mode	[4] 11.7.3	m	
8	MS management support	[4] 6.3.2.3.8	Cb.209.3	
9	Traffic priority	[4] 11.13.5	Cb.209.4	
10	Maximum sustained traffic rate	[4] 11.13.6	Cb.209.4	
11	Minimum reserved traffic rate	[4] 11.13.8	Cb.209.4	
12	Maximum latency	[4] 11.13.14	Cb.209.4	
13	Uplink transport CIDs supported	[4] 11.7.6.1	m	
14	Downlink transport CIDs supported	[4] 11.7.6.2	m	
15	Convergence Sublayer Capabilities	[4] 11.7.7	Cb.209.2	
16	HMAC Tuple	[4] 11.1.2	m	
Cb.209.1: IF B.33/1 THEN m ELSE n/a. Cb.209.2: IF found in the REG-REQ or IF the BS requires the use of a non-default value. Cb.209.3: IF found in the REG-REQ. Cb.209.4: IF A209./1 THEN o ELSE n/a.				
Comments:				

B.7.1.1.22 PKM-REQ and PKM-RSP Messages

Table B.210: PDU: PKM Request (PKM-REQ)

Item	Parameter	Reference	Status	Support
1	Management Message type=9	[4] 6.3.2.3.9	m	
2	Code	[4] 6.3.2.3.9	m	
3	PKM Identifier	[4] 6.3.2.3.9	m	
4	TLV Encoded Attributes	[4] 6.3.2.3.9	m	
Comments:				

Table B.211: PDU: PKM Reply (PKM-RSP)

Item	Parameter	Reference	Status	Support
1	Management Message type=10	[4] 6.3.2.3.9	m	
2	Code	[4] 6.3.2.3.9	m	
3	PKM Identifier	[4] 6.3.2.3.9	m	
4	TLV Encoded Attributes	[4] 6.3.2.3.9	m	
Comments:				

Table B.212: PDU: TLV Attributes (SA Add)

Item	Parameter	Reference	Status	Support
1	Key Sequence Number	[4] 6.3.2.3.9.1	m	
2	SA Descriptors	[4] 6.3.2.3.9.1	m	
3	HMAC digest	[4] 6.3.2.3.9.1	m	
Comments:				

Table B.213: PDU: TLV Attributes (Auth Request)

Item	Parameter	Reference	Status	Support
1	MS-Certificate	[4] 6.3.2.3.9.2	m	
2	Security Capabilities	[4] 6.3.2.3.9.2	m	
3	SAID	[4] 6.3.2.3.9.2	m	
Comments:				

Table B.214: PDU: TLV Attributes (Auth Reply)

Item	Parameter	Reference	Status	Support
1	AUTH-Key	[4] 6.3.2.3.9.3	m	
2	Key-Lifetime	[4] 6.3.2.3.9.3	m	
3	Key-Sequence-Number	[4] 6.3.2.3.9.3	m	
4	SA Descriptor	[4] 6.3.2.3.9.3	m	
5	PKM configuration	[4] 6.3.2.3.9.3	o	
Comments:				

Table B.215: PDU: TLV Attributes (Auth Reject)

Item	Parameter	Reference	Status	Support
1	Error code	[4] 6.3.2.3.9.4	m	
2	Display-String	[4] 6.3.2.3.9.4	o	
Comments:				

Table B.216: PDU: TLV Attributes (Key Request)

Item	Parameter	Reference	Status	Support
1	Key-Sequence-Number	[4] 6.3.2.3.9.5	m	
2	HMAC-Digest	[4] 6.3.2.3.9.5	m	
3	SAID	[4] 6.3.2.3.9.5	m	
Comments:				

Table B.217: PDU: TLV Attributes (Key Reply)

Item	Parameter	Reference	Status	Support
1	Key-Sequence-number	[4] 6.3.2.3.9.6	m	
2	HMAC-Digest	[4] 6.3.2.3.9.6	m	
3	SAID	[4] 6.3.2.3.9.6	m	
4	TEK-Parameters	[4] 6.3.2.3.9.6	m	
Comments:				

Table B.218: PDU: TLV Attributes (Key Reject)

Item	Parameter	Reference	Status	Support
1	Key-Sequence-number	[4] 6.3.2.3.9.7	m	
2	HMAC-Digest	[4] 6.3.2.3.9.7	m	
3	SAID	[4] 6.3.2.3.9.7	m	
4	Error-code	[4] 6.3.2.3.9.7	m	
5	Display-String - Tx	[4] 6.3.2.3.9.7	m	
Comments:				

Table B.219: PDU: TLV Attributes (Auth Invalid)

Item	Parameter	Reference	Status	Support
1	Error-code	[4] 6.3.2.3.9.8	m	
2	Display-String	[4] 6.3.2.3.9.8	m	
Comments:				

Table B.220: PDU: TLV Attributes (TEK Invalid)

Item	Parameter	Reference	Status	Support
1	Key-Sequence-number	[4] 6.3.2.3.9.9	m	
2	HMAC-Digest	[4] 6.3.2.3.9.9	m	
3	SAID	[4] 6.3.2.3.9.9	m	
4	Error-code	[4] 6.3.2.3.9.9	m	
5	Display-String	[4] 6.3.2.3.9.9	m	
Comments:				

Table B.221: PDU: TLV Attributes (Authentication Information)

Item	Parameter	Reference	Status	Support
1	CA-Certificate	[4] 6.3.2.3.9.10	m	
Comments:				

B.7.1.1.23 DSA-REQ, DSA-RSP and DSA-ACK messages

Table B.222: PDU: DSA-REQ

Item	Parameter	Reference	Status	Support
1	Management Message type=11	[4] 6.3.2.3.10	m	
2	Transaction ID	[4] 6.3.2.3.10	m	
3	TLV Encoded Information see next table: DSA-REQ TLV	[4] 6.3.2.3.10	m	
Comments:				

Table B.223: DSA-REQ parameter families

Item	Parameter	Reference	Status	Support
1	Service flow parameters See table B.224	[4] 6.3.2.3.10, 11.13	m	
2	Convergence sublayer parameter encodings see table B.225	[4] 6.3.2.3.10, 11.13.19	m	
3	HMAC tuple	[4] 6.3.2.3.10	m	
Comments:				

Table B.224: DSA-REQ TLV for Service flow parameters

Item	Parameter	Reference	Status	Support
1	Service flow identifier - SFID	[4] 11.13.1	Cb.224.1	
2	CID	[4] 11.13.2	Cb.224.1	
3	Service class name	[4] 11.13.3	o	
4	QOS parameter set type	[4] 11.13.4	m	
5	Traffic priority	[4] 11.13.5	Cb.224.2	
6	Maximum sustained traffic rate	[4] 11.13.6	m	
7	Maximum traffic burst	[4] 11.13.7	o	
8	Minimum reserved traffic rate	[4] 11.13.8	Cb.224.3	
9	Minimum tolerable traffic rate	[4] 11.13.9	o	
10	Vendor specific QOS parameters	[4] 11.13.10	o	
11	Uplink Grant scheduling type	[4] 11.13.11	Cb.224.4	
12	Request/transmission policy	[4] 11.13.12	m	
13	Tolerated jitter	[4] 11.13.13	Cb.224.5	
14	Maximum latency	[4] 11.13.14	Cb.224.6	
15	Fixed length versus variable length SDU indicator	[4] 11.13.15	m	
16	SDU size	[4] 11.13.16	Cb.224.7	
17	Target SAID	[4] 11.13.17	m	
18	ARQ enable	[4] 11.13.18.1	m	
19	ARQ_WINDOW_SIZE	[4] 11.13.18.2	Cb.224.8	
20	ARQ_TX_delay	[4] 11.13.18.3	Cb.224.8	
21	ARQ_RX_delay	[4] 11.13.18.3	Cb.224.8	
22	ARQ_BLOCK_LIFETIME	[4] 11.13.18.4	Cb.224.8	
23	ARQ_SYNC_LOSS_TIMEOUT	[4] 11.13.18.5	Cb.224.8	
24	ARQ_DELIVER_IN_ORDER	[4] 11.13.18.6	Cb.224.8	
25	ARQ_RX_PURGE_TIMEOUT	[4] 11.13.18.7	Cb.224.8	
26	ARQ_BLOCK_SIZE	[4] 11.13.18.8	Cb.224.8	
27	Unsolicited Grant Interval	[4] 11.13.20	Cb.224.9	
28	Unsolicited Polling Interval	[4] 11.13.21	Cb.224.10	
29	FSN size	[4] 11.13.22	o	
30	CS specification	[4] 11.13.19.1	m	
Cb.224.1: IF B.2/2 THEN m ELSE x Cb.224.2: IF (B.41/3 or B.41/4) THEN m ELSE n/a. Cb.224.3: IF (B.41/2 OR B.41/3) THEN m ELSE o. Cb.224.4: IF ("UL service request") THEN m else n/a. Cb.224.5: IF B.41/1 THEN m ELSE n/a. Cb.224.6: IF (B.41/1 or B.41/2) THEN m ELSE n/a. Cb.224.7: IF (B.224/15=1) THEN o. Cb.224.8: IF B.31/3 THEN m ELSE n/a. Cb.224.9: IF (B.41/1 AND "UL service request") THEN m else n/a (UGS supported). Cb.224.10: IF (B.41/2 AND "UL service request") THEN m else n/a (rtPS supported).				
Comments: n/a status means here: not used.				

Table B.225: DSA-REQ and DSA-RSP TLV for Packet Convergence sublayer: packet classification rule parameter

Item	Parameter	Reference	Status	Support
1	Packet Classification Rule	[4] 11.13.19.3.4	Cb.225,6	
2	Classifier Rule Priority	[4] 11.13.19.3.4.1	Cb.225,6	
3	IP Type of Service/DSCP	[4] 11.13.19.3.4.2	Cb.225,1,	
4	Protocol	[4] 11.13.19.3.4.3	Cb.225,1	
5	IP Masked Source Address	[4] 11.13.19.3.4.4	Cb.225,1	
6	IP Masked Destination Address	[4] 11.13.19.3.4.5	Cb.225,1	
7	Protocol Source Port Range	[4] 11.13.19.3.4.6	Cb.225,1	
8	Protocol destination Port Range	[4] 11.13.19.3.4.7	Cb.225,1	
9	Ethernet Destination MAC Address	[4] 11.13.19.3.4.8	Cb.225,2	
10	Ethernet Source MAC Address	[4] 11.13.19.3.4.9	Cb.225,2	
11	Ethertype/IEEE 802.2 SAP [18]	[4] 11.13.19.3.4.10	Cb.225,2	
12	IEEE 802.1D [19] User_Priority	[4] 11.13.19.3.4.11	Cb.225,3	
13	IEEE 802.1Q VLAN_ID [14]	[4] 11.13.19.3.4.12	Cb.225,3	
14	Associated Payload Header Suppression Index	[4] 11.13.19.3.4.13	Cb.225,5	
15	Vendor Specific Classifier Parameters	[4] 11.13.19.3.4.15	o	
16	Payload Header Suppression Rule	[4] 11.13.19.3.7	Cb.225,4	
17	Payload Header Suppression Index	[4] 11.13.19.3.7.1	Cb.225,4	
18	Payload Header Suppression Field	[4] 11.13.19.3.7.2	Cb.225,4	
19	Payload Header Suppression Mask	[4] 11.13.19.3.7.3	Cb.225,4	
20	Payload Header Suppression Size	[4] 11.13.19.3.7.4	Cb.225,4	
21	Payload Header Suppression Verification	[4] 11.13.19.3.7.5	Cb.225,4	
22	Vendor Specific PHS Parameters	[4] 11.13.19.3.7.6	Cb.225,5	
23	Packet classification rule index	[4] 11.13.19.3.4.14	Cb.225,6	
24	HMAC tuple	[4] 6.3.2.3.10	m	
Cb.225.1: IF B.26/1 or B.26/2 or B.26/5 or B.26/6 or B.26/7 or B.26/8 THEN o ELSE n/a. Cb.225.2: IF B.26/3 THEN o ELSE n/a. Cb.225.3: IF B.26/4 THEN o ELSE n/a. Cb.225.4: IF B.207/3 THEN o ELSE n/a. Cb.225.5: IF B. 207/3 THEN o ELSE n/a. Cb.225.6: IF uplink service flow THEN m ELSE o.				
Comments:				

Table B.226: PDU: DSA-RSP

Item	Parameter	Reference	Status	Support
1	Management Message type=12	[4] 6.3.2.3.11	m	
2	Transaction ID	[4] 6.3.2.3.11	m	
3	Confirmation code	[4] 6.3.2.3.11	m	
4	ARQ enable	[4] 11.13.18.1	Cb.226.1	
5	TLV Encoded Information see next table: DSA-RSP TLV	[4] 6.3.2.3.11	o	
Cb.226.1 IF (B.31/3 or B.96/3)THEN m ELSE n/a.				
Comments:				

Table B.227: DSA-RSP parameter families

Item	Parameter	Reference	Status	Support
1	Service flow parameters See table B.228	[4] 6.3.2.3.11 [4] 11.13	m	
2	Convergence sub layer parameter encodings See table B.225	[4] 6.3.2.3.11 [4] 11.13.21	m	
Comments:				

Table B.228: DSA-RSP TLV for Service flow parameters

Item	Parameter	Reference	Status	Support
1	Service flow identifier - SFID	[4] 11.13.1	m	
2	CID	[4] 11.13.2	m	
3	Service class name	[4] 11.13.3	o	
4	QOS parameter set type	[4] 11.13.4	m	
5	Traffic priority	[4] 11.13.5	Cb.228.1	
6	Maximum sustained traffic rate	[4] 11.13.6	m	
7	Maximum traffic burst	[4] 11.13.7	o	
8	Minimum reserved traffic rate	[4] 11.13.8	Cb.228.2	
9	Minimum tolerable traffic rate	[4] 11.13.9	o	
10	Vendor specific QOS parameters	[4] 11.13.10	o	
11	Uplink Grant scheduling type	[4] 11.13.11	Cb.228.3	
12	Request/transmission policy	[4] 11.13.12	m	
13	Tolerated jitter	[4] 11.13.13	Cb.228.4	
14	Maximum latency	[4] 11.13.14	Cb.228.5	
15	Fixed length versus variable length SDU indicator	[4] 11.13.15	m	
16	SDU size	[4] 11.13.16	Cb.228.6	
17	Target SAID	[4] 11.13.17	m	
18	ARQ enable	[4] 11.13.18.1	m	
19	ARQ_WINDOW_SIZE	[4] 11.13.18.2	Cb.228.7	
20	ARQ_TX_delay	[4] 11.13.18.3	Cb.228.7	
21	ARQ_RX_delay	[4] 11.13.18.3	Cb.228.7	
22	ARQ_BLOCK_LIFETIME	[4] 11.13.18.4	Cb.228.7	
23	ARQ_SYNC_LOSS_TIMEOUT	[4] 11.13.18.5	Cb.228.7	
24	ARQ_DELIVER_IN_ORDER	[4] 11.13.18.6	Cb.228.7	
25	ARQ_RX_PURGE_TIMEOUT	[4] 11.13.18.7	Cb.228.7	
26	ARQ_BLOCK_SIZE	[4] 11.13.18.8	Cb.228.7	
27	Unsolicited Grant Interval	[4] 11.13.20	Cb.228.8	
28	Unsolicited Polling Interval	[4] 11.13.21	Cb.228.9	
29	FSN size	[4] 11.13.22	o	
30	CS specification	[4] 11.13.19.1	m	
Cb.228.1: IF (B.41/3 or B.41/4) THEN m ELSE n/a. Cb.228.2: IF (B.41/2 OR B.41/3) THEN m ELSE o. Cb.228.3: IF ("UL service request") THEN m else n/a. Cb.228.4: IF B.41/1 THEN m ELSE n/a. Cb.228.5: IF (B.41/1 or B.41/2) THEN m ELSE n/a. Cb.228.6: IF (B.224/15=1) THEN o. Cb.228.7: IF B.31/3 THEN m ELSE n/a. Cb.228.8: IF (B.41/1 AND "UL service request") THEN m else n/a (UGS supported). Cb.228.9: IF (B.41/2 AND "UL service request") THEN m else n/a (rtPS supported).				
Comments: n/a status means here: not used.				

Table B.229: DSA-RSP TLV for Service flow parameters

Item	Parameter	Reference	Status	Support
1	HMAC tuple	[4] 6.3.2.3.11	m	
Comments:				

Table B.230: PDU: DSA-ACK

Item	Parameter	Reference	Status	Support
1	Management Message type=13	[4] 6.3.2.3.12	m	
2	Transaction ID	[4] 6.3.2.3.12	m	
3	Confirmation code	[4] 6.3.2.3.12	m	
4	TLV Encoded Information see next table: DSA-ACK TLV	[4] 6.3.2.3.12	m	
Comments:				

Table B.231: DSA-ACK TLV

Item	Parameter	Reference	Status	Support
1	HMAC tuple	[4] 6.3.2.3.12	m	
Comments:				

B.7.1.1.24 DSC-REQ, DSC-RSP and DSC-ACK messages

Table B.232: PDU: DSC-REQ

Item	Parameter	Reference	Status	Support
1	Management Message type=14	[4] 6.3.2.3.13	m	
2	Transaction ID	[4] 6.3.2.3.13	m	
3	TLV Encoded Information see next table: DSC-REQ TLV	[4] 6.3.2.3.13	m	
Comments:				

Table B.233: DSC-REQ parameter families

Item	Parameter	Reference	Status	Support
1	Service flow parameters See table B.234	[4] 6.3.2.3.13 [4] 11.13	m	
2	Classifier DSC action	[4] 11.13.19.3.2		
3	Convergence sublayer parameter encodings See table B.225	[4] 11.13.19		
4	HMAC tuple	[4] 6.3.2.3.13	m	
Comments:				

Table B.234: DSC-REQ TLV for Service flow parameters

Item	Parameter	Reference	Status	Support
1	Service flow identifier - SFID	[4] 11.13.1	m	
2	CID	[4] 11.13.2	Cb.234.1	
3	Service class name	[4] 11.13.3	o	
4	QOS parameter set type	[4] 11.13.4	m	
5	Traffic priority	[4] 11.13.5	Cb.234.2	
6	Maximum sustained traffic rate	[4] 11.13.6	m	
7	Maximum traffic burst	[4] 11.13.7	o	
8	Minimum reserved traffic rate	[4] 11.13.8	Cb.234.3	
9	Minimum tolerable traffic rate	[4] 11.13.9	o	
10	Vendor specific QOS parameters	[4] 11.13.10	o	
11	Uplink Grant scheduling type	[4] 11.13.11	X	
12	Request/transmission policy	[4] 11.13.12	X	
13	Tolerated jitter	[4] 11.13.13	Cb.234.4	
14	Maximum latency	[4] 11.13.14	Cb.234.5	
15	Fixed length versus variable length SDU indicator	[4] 11.13.15	X	
16	SDU size	[4] 11.13.16	X	
17	Target SAID	[4] 11.13.17	m	
18	ARQ enable	[4] 11.13.18.1	X	
19	ARQ_WINDOW_SIZE	[4] 11.13.18.2	Cb.234.6	
20	ARQ_TX_delay	[4] 11.13.18.3	X	
21	ARQ_RX_delay	[4] 11.13.18.3	X	
22	ARQ_BLOCK_LIFETIME	[4] 11.13.18.4	X	
23	ARQ_SYNC_LOSS_TIMEOUT	[4] 11.13.18.5	X	
24	ARQ_DELIVER_IN_ORDER	[4] 11.13.18.6	X	
25	ARQ_PURGE_TIMEOUT	[4] 11.13.18.7	X	
26	ARQ_BLOCK_SIZE	[4] 11.13.18.8	X	
27	Unsolicited Grant Interval	[4] 11.13.20	Cb.234.7	
28	Unsolicited Polling Interval	[4] 11.13.21	Cb.234.8	
29	CS specification	[4] 11.13.19.1	x	
Cb.234.1: IF B.2/2 THEN m ELSE x Cb.234.2: IF (B.41/3 OR B.41/4) THEN m ELSE n/a. Cb.234.3: IF (B.41/2 OR B.41/3) THEN o ELSE m. Cb.234.4 IF B.41/1 THEN m ELSE n/a. Cb.234.5: IF (B.41/1 or B.41/2) THEN m ELSE n/a. Cb.234.6: IF B.31/3 THEN m ELSE n/a. Cb.234.7: IF (B.41/1 AND "UL service request") THEN m else n/a (UGS supported). Cb.234.8: IF (B.41/2 AND "UL service request") THEN m else n/a (rtPS supported).				
Comments:				

Table B.235: PDU: DSC-RSP

Item	Parameter	Reference	Status	Support
1	Management Message type=15	[4] 6.3.2.3.14	m	
2	Transaction ID	[4] 6.3.2.3.14	m	
3	Confirmation code	[4] 6.3.2.3.14	m	
4	TLV Encoded Information see next table: DSC-RSP TLV	[4] 6.3.2.3.14	m	
Comments:				

Table B.236: DSC-RSP parameter families

Item	Parameter	Reference	Status	Support
1	Service flow parameters. See table B.237	[4] 6.3.2.3.14, 11.13	o	
2	Convergence sublayer parameter encodings	[4] 6.3.2.3.14, 11.13.21	o	
Comments:				

Table B.237: DSC-RSP TLV for Service flow parameters

Item	Parameter	Reference	Status	Support
1	Service flow identifier - SFID	[4] 11.13.1	m	
2	CID	[4] 11.13.2	m	
3	Service class name	[4] 11.13.3	o	
4	QOS parameter set type	[4] 11.13.4	m	
5	Traffic priority	[4] 11.13.5	Cb.234.1	
6	Maximum sustained traffic rate	[4] 11.13.6	m	
7	Maximum traffic burst	[4] 11.13.7	o	
8	Minimum reserved traffic rate	[4] 11.13.8	Cb.234.2	
9	Minimum tolerable traffic rate	[4] 11.13.9	o	
10	Vendor specific QOS parameters	[4] 11.13.10	o	
11	Uplink Grant scheduling type	[4] 11.13.11	X	
12	Request/transmission policy	[4] 11.13.12	X	
13	Tolerated jitter	[4] 11.13.13	Cb.234.3	
14	Maximum latency	[4] 11.13.14	Cb.234.4	
15	Fixed length versus variable length SDU indicator	[4] 11.13.15	X	
16	SDU size	[4] 11.13.16	X	
17	Target SAID	[4] 11.13.17	m	
18	ARQ enable	[4] 11.13.18.1	X	
19	ARQ_WINDOW_SIZE	[4] 11.13.18.2	Cb.234.5	
20	ARQ_TX_delay	[4] 11.13.18.3	X	
21	ARQ_RX_delay	[4] 11.13.18.3	X	
22	ARQ_BLOCK_LIFETIME	[4] 11.13.18.4	X	
23	ARQ_SYNC_LOSS_TIMEOUT	[4] 11.13.18.5	X	
24	ARQ_DELIVER_IN_ORDER	[4] 11.13.18.6	X	
25	ARQ_PURGE_TIMEOUT	[4] 11.13.18.7	X	
26	ARQ_BLOCK_SIZE	[4] 11.13.18.8	X	
27	Unsolicited Grant Interval	[4] 11.13.20	Cb.234.6	
28	Unsolicited Polling Interval	[4] 11.13.21	Cb.234.7	
29	CS specification	[4] 11.13.19.1	x	
Cb.234.1: IF (B.41/3 OR B.41/4) THEN m ELSE n/a. Cb.234.2: IF (57/2 AND (B.41/2 OR B.41/3)) THEN o ELSE m. Cb.234.3: IF B.41/1 THEN m ELSE n/a. Cb.234.4: IF (B.41/1 or B.41/2) THEN m ELSE n/a. Cb.234.5: IF B.31/3 THEN m ELSE n/a. Cb.234.6: IF (B.41/1 AND "UL service request") THEN m else n/a (UGS supported). Cb.234.7: IF (B.41/2 AND "UL service request") THEN m else n/a (rtPS supported).				
Comments:				

Table B.238: DSC-RSP TLV

Item	Parameter	Reference	Status	Support
1	HMAC tuple	[4] 6.3.2.3.14	m	
Comments:				

Table B.239: PDU: DSC-ACK

Item	Parameter	Reference	Status	Support
1	Management Message type=16	[4] 6.3.2.3.15	m	
2	Transaction ID	[4] 6.3.2.3.15	m	
3	Confirmation code	[4] 6.3.2.3.15	m	
4	TLV Encoded Information see next table: DSC-ACK TLV	[4] 6.3.2.3.15	m	
Comments:				

Table B.240: DSC-ACK TLV

Item	Parameter	Reference	Status	Support
1	HMAC tuple	[4] 6.3.2.3.15	m	
Comments:				

B.7.1.1.25 DSD-REQ and DSD-RSP messages

Table B.241: PDU: DSD-REQ

Item	Parameter	Reference	Status	Support
1	Management Message type=17	[4] 6.3.2.3.16	m	
2	Transaction ID	[4] 6.3.2.3.16	m	
3	Service flow ID	[4] 6.3.2.3.16	m	
4	TLV Encoded Information see next table: DSD-REQ TLV	[4] 6.3.2.3.16	m	
Comments:				

Table B.242: DSD-REQ TLV

Item	Parameter	Reference	Status	Support
1	HMAC tuple	[4] 6.3.2.3.16	m	
Comments:				

Table B.243: PDU: DSD-RSP

Item	Parameter	Reference	Status	Support
1	Management Message type=18	[4] 6.3.2.3.17	m	
2	Transaction ID	[4] 6.3.2.3.17	m	
3	Confirmation code	[4] 6.3.2.3.17	m	
4	Service flow ID	[4] 6.3.2.3.17	m	
5	TLV Encoded Information see next table: DSD-RSP TLV	[4] 6.3.2.3.17	m	
Comments:				

Table B.244: DSD-RSP TLV

Item	Parameter	Reference	Status	Support
1	HMAC tuple	[4] 6.3.2.3.17	m	
Comments:				

B.7.1.2 Additional fields of MAC PDUs in MESH topology

Void.

B.8 Parameters and timers

Table B.245: MS Timers MAC layer - PMP

Item	Timer name	Reference	Status	Support	Value	
	MAC layer				Allowed range	Supported
1	T1	[4] 10.1	m		< 5 DCD interval	
2	T2	[4] 10.1	m		< 5 ranging interval	
3	T3	[4] 10.1	m		< 200 ms	
4	T4	[4] 10.1	m		< 35 s	
5	T6	[4] 10.1	m		< 3 s	
6	T7	[4] 10.1	m		< 1 s	
7	T8	[4] 10.1	m		< 300 ms	
8	T10	[4] 10.1	m		< 3 s	
9	T12	[4] 10.1	m		< 5 UCD interval	
10	T14	[4] 10.1	m		< 200 ms	
11	T18	[4] 10.1	m		< 300 ms or T9	
12	T20	[4] 10.1	m		> 2 ms	
13	T21	[4] 10.1	m		< 11 s	
14	T22	[4] 10.1	Cb.245.1		< 500 ms	
15	T26	[4] 10.1	m		10 ms to 200 ms	
16	T28	[4] 10.1	m		200 ms to 1 min	
17	T29	[4] 10.1	m		200 ms to 30 s	
18	T30	[4] 10.1	m		200 ms to 200 ms	
Cb.245.1: IF B.31/3 THEN m ELSE n/a.						
Comments:						

Table B.246: Privacy (PKM) Related Timers

Item	Timer name	Reference	Status	Support	Value	
					Allowed range	Supported
1	AK Lifetime (PKM)	[4] 10.2, [4] 10.2	m		Cb.246.1	
2	TEK Lifetime (PKM)	[4] 10.2, [4] 10.2	m		Cb.246.2	
3	Authorize Wait Timeout (PKM)	[4] 10.2	m		2 s to 30 s	
4	Reauthorize Wait Timeout (PKM)	[4] 10.2	m		2 s to 30 s	
5	Authorization Grace Time (PKM)	[4] 10.2	m		Cb.246.3	
6	Operational Wait Timeout (PKM)	[4] 10.2	m		1 s to 10 s	
7	Rekey Wait Timeout (PKM)	[4] 10.2	m		1 s to 10 s	
8	TEK Grace Time (PKM)	[4] 10.2	m		Cb.246.4	
9	Authorize Reject Wait Timeout (PKM)	[4] 10.2	m		10 s to 600 s	
Cb.246.1: IF (test mode) THEN 5 mn ELSE 1 day..70 days. Cb.246.2: IF (test mode) THEN 3 mn ELSE 30 mn..7 days. Cb.246.3: IF (test mode) THEN 60 s ELSE 5 mn..35 days. Cb.246.4: IF (test mode) THEN 60 s ELSE 5 mn..3,5 days.						
Comments: The TEK Grace Time shall be less than half the TEK Lifetime.						

Table B.247:Counters

Item	Timer name	Reference	Status	Support	Value			
					Min.	Default	Max.	Supported
1	Contention Ranging Retries	[4] 10.1	Cb.247.1		16	-	-	
2	Invited Ranging Retries	[4] 10.1	m		16	-	-	
3	Request Retries	[4] 10.1	Cb.247.1		16	-	-	
4	Registration Request Retries	[4] 10.1	Cb.247.1		3	-	-	
5	DSx Request Retries	[4] 10.1	m		-	3	-	
6	DSx Response Retries	[4] 10.1	m		-	3	-	
7	TFTP Request Retries	[4] 10.1	Cb.247.1		3	-	-	
8	TFTP Download Retries	[4] 10.1	Cb.247.1		3	-	-	
9	Time of Day Retries	[4] 10.1	Cb.247.1		3	-	-	
10	Ranging Correction Retries	[4] 10.1	m		-	16	-	
11	SBC Request Retries	[4] 10.1	Cb.247.1		3	3	16	
12	TFTP-CLPT Retries	[4] 10.1	Cb.247.1		3	3	16	
Cb.247.1: IF B.2/1 THEN m ELSE n/a.								
Comments:								

History

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