

ETSI TS 125 461 V18.0.0 (2024-04)



**Universal Mobile Telecommunications System (UMTS);
UTRAN Iuant interface: Layer 1
(3GPP TS 25.461 version 18.0.0 Release 18)**



Reference

RTS/TSGR-0325461 vi00

Keywords

UMTS

ETSI

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - APE 7112B
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° w061004871

Important notice

The present document can be downloaded from:

<https://www.etsi.org/standards-search>

The present document may be made available in electronic versions and/or in print. The content of any electronic and/or print versions of the present document shall not be modified without the prior written authorization of ETSI. In case of any existing or perceived difference in contents between such versions and/or in print, the prevailing version of an ETSI deliverable is the one made publicly available in PDF format at www.etsi.org/deliver.

Users of the present document should be aware that the document may be subject to revision or change of status.

Information on the current status of this and other ETSI documents is available at

<https://portal.etsi.org/TB/ETSIDeliverableStatus.aspx>

If you find errors in the present document, please send your comment to one of the following services:

<https://portal.etsi.org/People/CommitteeSupportStaff.aspx>

If you find a security vulnerability in the present document, please report it through our
Coordinated Vulnerability Disclosure Program:

<https://www.etsi.org/standards/coordinated-vulnerability-disclosure>

Notice of disclaimer & limitation of liability

The information provided in the present deliverable is directed solely to professionals who have the appropriate degree of experience to understand and interpret its content in accordance with generally accepted engineering or other professional standard and applicable regulations.

No recommendation as to products and services or vendors is made or should be implied.

No representation or warranty is made that this deliverable is technically accurate or sufficient or conforms to any law and/or governmental rule and/or regulation and further, no representation or warranty is made of merchantability or fitness for any particular purpose or against infringement of intellectual property rights.

In no event shall ETSI be held liable for loss of profits or any other incidental or consequential damages.

Any software contained in this deliverable is provided "AS IS" with no warranties, express or implied, including but not limited to, the warranties of merchantability, fitness for a particular purpose and non-infringement of intellectual property rights and ETSI shall not be held liable in any event for any damages whatsoever (including, without limitation, damages for loss of profits, business interruption, loss of information, or any other pecuniary loss) arising out of or related to the use of or inability to use the software.

Copyright Notification

No part may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm except as authorized by written permission of ETSI.

The content of the PDF version shall not be modified without the written authorization of ETSI.

The copyright and the foregoing restriction extend to reproduction in all media.

© ETSI 2024.
All rights reserved.

Intellectual Property Rights

Essential patents

IPRs essential or potentially essential to normative deliverables may have been declared to ETSI. The declarations pertaining to these essential IPRs, if any, are publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: "*Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards*", which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (<https://ipr.etsi.org/>).

Pursuant to the ETSI Directives including the ETSI IPR Policy, no investigation regarding the essentiality of IPRs, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

Trademarks

The present document may include trademarks and/or tradenames which are asserted and/or registered by their owners. ETSI claims no ownership of these except for any which are indicated as being the property of ETSI, and conveys no right to use or reproduce any trademark and/or tradename. Mention of those trademarks in the present document does not constitute an endorsement by ETSI of products, services or organizations associated with those trademarks.

DECT™, **PLUGTESTS™**, **UMTS™** and the ETSI logo are trademarks of ETSI registered for the benefit of its Members. **3GPP™** and **LTE™** are trademarks of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners. **oneM2M™** logo is a trademark of ETSI registered for the benefit of its Members and of the oneM2M Partners. **GSM®** and the GSM logo are trademarks registered and owned by the GSM Association.

Legal Notice

This Technical Specification (TS) has been produced by ETSI 3rd Generation Partnership Project (3GPP).

The present document may refer to technical specifications or reports using their 3GPP identities. These shall be interpreted as being references to the corresponding ETSI deliverables.

The cross reference between 3GPP and ETSI identities can be found under <https://webapp.etsi.org/key/queryform.asp>.

Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the [ETSI Drafting Rules](#) (Verbal forms for the expression of provisions).

"**must**" and "**must not**" are **NOT** allowed in ETSI deliverables except when used in direct citation.

Contents

Intellectual Property Rights	2
Legal Notice	2
Modal verbs terminology.....	2
Foreword.....	4
1 Scope	5
2 References	5
3 to 4 Void.....	5
5 Iuant interface: Layer 1	5
Annex A: Void	6
Annex B (informative): Change history	7
History	10

Foreword

This Technical Specification has been produced by the 3rd Generation Partnership Project (3GPP).

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

- x the first digit:
 - 1 presented to TSG for information;
 - 2 presented to TSG for approval;
 - 3 or greater indicates TSG approved document under change control.
- Y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

1 Scope

See TS 37.461 [7].

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1]-[6] Void.

[7] 3GPP TS 37.461: "Iuant interface: Layer 1".

3 to 4 Void

5 Iuant interface: Layer 1

See TS 37.461 [7].

Annex A:
Void

Annex B (informative): Change history

TSG #	TSG Doc.	CR	Rev	Subject/Comment	New
TSG-RAN#25	RP-040344	-	-	presentation to TSG-RAN for information	1.0.0
TSG-RAN#25	RP-040344	-	-	approved at TSG-RAN#25 and placed under change control	6.0.0
26	RP-040444	1		DC power supply distribution	6.1.0
26	RP-040444	2	1	Improved demodulator characteristics specification	6.1.0
26	RP-040444	3	-	Requirements missing for when the RS485 bus shall not be driven by the secondary device	6.1.0
26	RP-040444	4	1	RET DC power consumption modes	6.1.0
26	RP-040444	5	-	Minor Corrections and editorial changes to 25.461	6.1.0
27	RP-050061	7	1	Minor Corrections and editorial changes to 25.461	6.2.0
27	RP-050061	8	1	Power consumption clarification of RET	6.2.0
27	RP-050061	9		Modem Operating Bands	6.2.0
27	RP-050061	10		Modem Return loss	6.2.0
27	RP-050061	11		Modem Time Delay and Accuracy	6.2.0
27	RP-050061	12		Modem Insertion Loss	6.2.0
28	RP-050237	13	1	DC power on sequence	6.3.0
28	RP-050237	15	-	BS Modem and RET Modem Filtering	6.3.0
28	RP-050237	16	-	BS Modem and RET modem spectrum emission mode	6.3.0
28	RP-050237	17	-	BS modem and RET modem return loss at modem frequency	6.3.0
28	RP-050237	18	-	Time delay clarification	6.3.0
28	RP-050226	19	-	Introduction of UMTS2600 requirements	7.0.0
29	RP-050438	21	1	Power-Up period clarifications	7.1.0
29	RP-050438	23		Insertion loss for RET	7.1.0
29	RP-050438	25		Testing for RET	7.1.0
29	RP-050438	27		Time delay for RET	7.1.0
29	RP-050438	29		Intermodulation attenuation for RET	7.1.0
29	RP-050438	31		BS and RET modem isolation	7.1.0
30	RP-050704	32	1	Introduction of UMTS 1700 requirements	7.2.0
30	RP-050703	33		Introduction of UMTS 900	7.2.0
30	RP-050689	35		Test Procedures	7.2.0
30	RP-050689	37		Correction to modem isolation and emission	7.2.0
30	RP-050689	39		correction of referencing	7.2.0
30	RP-050689	41	1	RET Control Unit spurious emission simplified version	7.2.0
34	RP-060704	42		Introduction of Band X (Extended UMTS 1.7/2.1 GHz)	7.3.0
35	RP-070058	44	1	Update of DC Power Supply Requirements	7.4.0
35	RP-070058	45		Tower Mounted Amplifier amendment	7.4.0
36	RP-070323	47		Word alignment of station-device	7.5.0
37	RP-070576	48		Introduction of UMTS1500 requirement	8.0.0
39	RP-080082	49	1	Introduction of UMTS 700 MHz (Bands XII XIV)	8.1.0
45	RP-090822	51		Introduction of E-UTRA operating bands	
	RP-090826	53	1	Introduction of the extended UMTS/LTE 800 MHz bands	9.0.0
46	RP-091185	54	1	Introduction of Extended UMTS/LTE1500 requirements for TS25.461	9.1.0
47	RP-100223	58		Introduction of UMTS/LTE in 800 MHz for Europe requirements in TS 25.461	9.2.0
49	RP-100912	59	-	Spectrum band definition additions for TDD 2600 MHz	10.0.0
50	RP-101361	59a	1	Introduction of L-band in TS 25.461	10.1.0
50	RP-101278	61	2	CR UMTS/LTE-3500 spectrum band definition additions for TDD luant interface to TS 25.461	10.1.0
50	RP-101334	66		Band XII channel arrangement correction on 25.461	10.1.0
SP-49	SP-100629			Clarification on the use of References (TS 21.801 CR#0030)	10.1.1
52	RP-110699	70		Add 2 GHz band LTE for ATC of MSS in North America to TS25.461 (Rel-10)	10.2.0
52	RP-110696	71		Add Expanded 1900 MHz Band for UTRA and LTE to TS25.461 (Rel-10)	10.2.0
52	RP-110685	73		Removal of unused references	10.2.0
54	RP-111733	76		Removal of references to operating bands i) and h)	10.3.0
03.2012				Creation of Rel-11 version based on v. 10.3.0	11.0.0
55	RP-120235	78		Addition of new Band 26 for E850	11.0.0
56	RP-120749	79	1	Introduction of E850_LB (Band 27) to TS 25.461	11.1.0
56	RP-120750	80	-	Introduction of Band 28	11.1.0
56	RP-120750	81	-	Introduction of Band 44	11.1.0
58	RP-121736	82	-	Introduction of band 22 in TS 25.461	11.2.0
58	RP-121735	83	1	Introduction of Band 29 into TS 25.461	11.2.0
62	RP-131903	84	1	Introduction of LTE 450 MHZ	12.0.0
62	RP-131904	85	1	Introduction of Band 30	12.0.0
64	RP-140900	87	-	Introduction of Band 32, XXXII	12.1.0
70	RP-152105	91	-	Introduction of band 65	13.0.0
70	RP-152106	92	-	Introduction of band 66	13.0.0
70	RP-152104	93	-	Introduction of band 67	13.0.0

TSG #	TSG Doc.	CR	Rev	Subject/Comment	New
70	RP-152107	94	1	Introduction of band 45 in 25.461	13.0.0
71	RP-160446	95	-	Introduction of Band 68 into 25.461	13.1.0
71	RP-160450	96	1	Introduction of Band 46 in TS 25.461	13.1.0
06/2016				Creation of Rel-14 version based on v. 13.1.0	14.0.0
72	RP-161040	97	1	Introduction of band 70	14.0.0
72	RP-161041	98	-	Introduction of 2.6GHz SDL band	14.0.0
74	RP-162335	100	-	Introduction of band 48	14.1.0

Change history							
Date	Meeting	Tdoc	CR	Rev	Cat	Subject/Comment	New version
09/2017	RP-77	RP-171976	0102	1	B	Introduction of Band 72	15.0.0
09/2017	RP-77	RP-171977	0104	-	B	Introduction of the FDD L-band (Band 74) into TS 25.461	15.0.0
09/2017	RP-77	RP-171978	0105	1	B	Introduction of the TDD L-band(Band 50 and Band 51)	15.0.0
09/2017	RP-77	RP-171980	0106	-	B	CR to 25.461: Introduction of Band 71 (600MHz FDD band for US)	15.0.0
09/2017	RP-77	RP-171979	0107	-	B	CR to 25.461: Introduction of B75 and B76	15.0.0
12/2017	RP-78	RP-172675	0101	3	B	CR to 25.461: Introduction of Band 49 (3.5 GHz LAA in US)	15.1.0
12/2017	RP-78	RP-172711	0108	-	B	Introduction of Band 73	15.1.0
03/2018	RP-79	RP-180471	0109	-	B	Introduction of band 85	15.2.0
03/2018	RP-79	RP-180470	0110	-	B	Introduction of the TDD 3.3-3.4GHz band (Band 52)	15.2.0
12/2018	RP-82	RP-182450	0112	1	F	Replace Band table with reference to RAN4 specifications	15.3.0
2019-04	RAN#83	RP-190557	0120	-	F	Transfer of luant interface specification from 25-series to 37-series	15.4.0
2020-07	SA#88-e	-	-	-	-	Update to Rel-16 version (MCC)	16.0.0
2022-03	SA#95-e					Promotion to Release 17 without technical change	17.0.0
2024-03	SA#103-	-	-	-	-	Update to Rel-18 version (MCC)	18.0.0

History

Document history		
V18.0.0	April 2024	Publication