



**Universal Mobile Telecommunications System (UMTS);  
LTE;  
Universal Terrestrial Radio Access (UTRA)  
and Evolved UTRA (E-UTRA) and Evolved Packet Core (EPC);  
User Equipment (UE) conformance specification  
for UE positioning;  
Part 2: Protocol conformance  
(3GPP TS 37.571-2 version 15.6.0 Release 15)**



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Reference

RTS/TSGR-0537571-2vf60

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Keywords

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# Foreword

This Technical Specification has been produced by the 3<sup>rd</sup> 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.

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# Introduction

The present document is part 2 of a multi-part TS:

3GPP TS 37.571-1: Universal Terrestrial Radio Access (UTRA) and Evolved UTRA (E-UTRA) and Evolved Packet Core (EPC); User Equipment (UE) conformance specification for UE positioning; Part 1: Conformance test specification.

**3GPP TS 37.571-2: Universal Terrestrial Radio Access (UTRA) and Evolved UTRA (E-UTRA) and Evolved Packet Core (EPC); User Equipment (UE) conformance specification for UE positioning; Part 2: Protocol conformance.**

3GPP TS 37.571-3: Universal Terrestrial Radio Access (UTRA) and Evolved UTRA (E-UTRA) and Evolved Packet Core (EPC); User Equipment (UE) conformance specification for UE positioning; Part 3: Implementation Conformance Statement (ICS).

3GPP TS 37.571-4: Universal Terrestrial Radio Access (UTRA) and Evolved UTRA (E-UTRA) and Evolved Packet Core (EPC); User Equipment (UE) conformance specification for UE positioning; Part 4: Test suites.

3GPP TS 37.571-5: Universal Terrestrial Radio Access (UTRA) and Evolved UTRA (E-UTRA) and Evolved Packet Core (EPC); User Equipment (UE) conformance specification for UE positioning; Part 5: Test scenarios and assistance data.

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# 1 Scope

The present document specifies the protocol conformance testing for UTRAN, E-UTRAN and NR User Equipment (UE) supporting UE positioning.

This is the second part of a multi-part test specification. The following information can be found in this part:

- the overall protocol conformance test structure;
- the protocol conformance test configurations;
- the conformance requirement and reference to the core specifications;
- the test purposes; and
- a brief description of the test procedure, the specific test requirements and short message exchange table.

The Implementation Conformance Statement (ICS) pro-forma could be found in the 3<sup>rd</sup> part of the present document.

The present document is valid for UE supporting UE positioning implemented according to 3GPP releases starting from Release 99 up to the Release indicated on the cover page of the present document.

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# 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 unless the context in which the reference is made suggests a different Release is relevant (information on the applicable release in a particular context can be found in e.g. test case title, description or applicability, message description or content).

[1] to [30] (void)

[31] 3GPP TS 37.571-2 Release 16: "Universal Terrestrial Radio Access (UTRA) and Evolved UTRA (E-UTRA) and Evolved Packet Core (EPC); User Equipment (UE) conformance specification for UE positioning; Part 2: Protocol conformance"

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# 3 Definitions and abbreviations

Void

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# 4 Default Conditions for UTRAN

The requirements of the present document are provided in 3GPP TS 37.571-2 Release 16 [31].

5 to 9 Void

## Annex A (informative): Change history



Change history							
Date	TSG #	TSG Doc.	CR	Rev	Subject/Comment	Old	New
36.571-2							
2010-08	R5#48	R5-104119			Initial skeleton proposal		0.0.0
	R5#48	R5-104741			Merge of documents R5-104119, R5-104120, R5-104121, R5-104122, together with small editorial modifications	0.0.0	0.0.1
2011-02	R5#50	R5-110250			Various corrections based on LPP v9.3.0 (R5-106431)	0.0.1	
					New test cases: LPP Reliable Transport (R5-106433)		
					New test cases: CS fallback (R5-106698)		0.1.0
2011-05	R5#51	R5-112388			Various corrections (R5-110251)	0.1.0	
					OTDOA default conditions (R5-110252)		0.2.0
2011-08	R5#52	R5-113770			Small corrections to 36.571-2 baseline text	0.2.0	
		R5-113771			Addition of LPP abort test case		
		R5-113147			Addition of Position Capability Transfer test case		
		R5-113140			Addition of Notification test cases		
		R5-113769			Addition of UE Network Capability test case		
		R5-113847			Addition of LPP Error handling test cases		1.0.0
37.571-2							
2011-11	R5#53	R5-115249			Creation of 37.571-2 based on 36.571-2 v1.0.0 and 34.123-1 v9.6.0		1.0.0
		R5-115250			Default conditions for ECID signalling test cases in 37.571-2 baseline text		
		R5-115251			Various corrections to the 37.571-2 baseline text		
		R5-115252			Default system information for UTRAN A-GNSS tests in 37.571-2 baseline text		2.0.0
2011-12	RAN#54	-	-	-	Moved to Rel-9 with editorial changes only.	2.0.0	9.0.0
2012-03	RAN#55	R5-120358	0001	-	Addition of missing test case 7.3.4.1	9.0.0	9.1.0
2012-03	RAN#55	R5-120359	0002	-	Addition of missing test case 7.3.4.2	9.0.0	9.1.0
2012-03	RAN#55	R5-120360	0003	-	Addition of missing test case 7.3.4.3	9.0.0	9.1.0
2012-03	RAN#55	R5-120361	0004	-	Addition of missing test case 7.3.4.4	9.0.0	9.1.0
2012-03	RAN#55	R5-120362	0005	-	Editorial corrections to 37.571-2	9.0.0	9.1.0
2012-03	RAN#55	R5-120363	0006	-	Completion of Test Case 7.3.1.1	9.0.0	9.1.0
2012-03	RAN#55	R5-120364	0007	-	Removal of FFS for Sub-test -7	9.0.0	9.1.0
2012-03	RAN#55	R5-120395	0008	-	Addition of RESET command to EPC MO-LR tests	9.0.0	9.1.0
2012-03	RAN#55	R5-120725	0009	-	Correction of MO-LR CS fallback test cases 7.4.1	9.0.0	9.1.0
2012-06	RAN#56	R5-121134	0010	-	Clarification to cell synchronization for OTDOA	9.1.0	9.2.0
2012-06	RAN#56	R5-121148	0011	-	Completion of Test Case 7.3.1.1	9.1.0	9.2.0
2012-06	RAN#56	-	-	-	Upgrade to v10.0.0 with no change.	9.2.0	10.0.0
2012-09	RAN#57	R5-123067	0012	-	Removal of FFS for Sub-test-7	10.0.0	10.1.0
2012-09	RAN#57	R5-123068	0013	-	Correction of references to clauses in 37.571-5	10.0.0	10.1.0
2012-09	RAN#57	R5-123070	0014	-	Editorial Corrections	10.0.0	10.1.0
2012-09	RAN#57	R5-123071	0015	-	Correction of MO-LR CS fallback test cases 7.4.1	10.0.0	10.1.0
2012-09	RAN#57	R5-123072	0016	-	Correction to UE Network Capability Test Procedure	10.0.0	10.1.0
2012-09	RAN#57	R5-123073	0017	-	Correction to Register and Facility message type content	10.0.0	10.1.0
2012-09	RAN#57	R5-123074	0018	-	Addition of RESET command to EPC MO-LR tests	10.0.0	10.1.0
2012-09	RAN#57	R5-123698	0019	-	Small corrections to default E-UTRAN message contents	10.0.0	10.1.0
2013-03	RAN#59	R5-130112	0021	-	Correction to LPP Request Location Information Message Content for TC 7.3.4.4	10.1.0	10.2.0
2013-03	RAN#59	R5-130593	0022	-	Correction of applicability for TC 7.3.2.3	10.1.0	10.2.0
2013-06	RAN#60	R5-131099	0023	-	Clarification of IE values	10.2.0	10.3.0
2013-06	RAN#60	R5-131100	0024	-	Correction of behaviour in 7.3.2.3	10.2.0	10.3.0
2013-06	RAN#60	R5-131101	0025	-	Simplification of test set-up for OTDOA and ECID tests	10.2.0	10.3.0
2013-06	RAN#60	R5-131306	0026	-	Correction to LTE UE Positioning test cases	10.2.0	10.3.0
2013-06	RAN#60	R5-131326	0027	-	Correction to available GNSS assistance data elements	10.2.0	10.3.0
2013-06	RAN#60	R5-131877	0028	-	Clarification of Sub-Test Case Numbers Tables	10.2.0	10.3.0
2013-06	RAN#60	R5-131878	0029	-	New test case for inter-frequency RSTD measurement indication procedure	10.2.0	10.3.0
2013-09	RAN#61	R5-133175	0030	-	Clarifications to 7.3.3.1	10.3.0	10.4.0
2013-12	RAN#62	R5-134907	0031	-	Addition of missing IEs from otdoa-ProvideCapabilities in 7.3.1.1	10.4.0	10.5.0
2013-12	RAN#62	R5-134908	0032	-	Change Applicability of test 7.3.5.1	10.4.0	10.5.0
2013-12	RAN#62	R5-134909	0033	-	Addition of Capability exchange in various clause 7 tests	10.4.0	10.5.0
2013-12	RAN#62	R5-134910	0034	-	Clarification of Provide Capabilities content for test 7.2.2.2	10.4.0	10.5.0
2014-03	RAN#63	R5-140133	0035	-	Add Assistance Data delivery to test 7.3.5.1	10.5.0	10.6.0
2014-03	RAN#63	R5-140606	0036	-	Correction to LTE UE Positioning test case 7.2.1.2	10.5.0	10.6.0
2014-03	RAN#63	R5-140608	0037	-	Correction to LTE UE Positioning test case 7.2.1.3	10.5.0	10.6.0
2014-03	RAN#63	R5-140793	0038	-	Correction to message content for inter-frequency RSTD measurement indication test case	10.5.0	10.6.0
2014-06	RAN#64	R5-142251	0039	-	Clarification of use of satellite simulator	10.6.0	10.7.0
2014-06	RAN#64	R5-142886	0040	-	Correction to EUTRA UE Positioning test cases 7.3.4.x	10.6.0	10.7.0
2014-09	RAN#65	R5-144194	0041	-	Clarification for configuration of cell 1 in OTDOA tests	10.7.0	10.8.0
2014-09	RAN#65	R5-144195	0042	-	RESET Positioning Information in LPP Abort Procedures	10.7.0	10.8.0
2014-09	RAN#65	R5-144237	0043	-	Adding extra neighbour cells to 7.3.5.1	10.7.0	10.8.0

Change history							
Date	TSG #	TSG Doc.	CR	Rev	Subject/Comment	Old	New
2014-09	RAN#65	R5-144626	0044	-	Correct OTDOA and ECID Elements in 7.3.4.2 and 7.3.4.4	10.7.0	10.8.0
2014-09	RAN#65	R5-144702	0045	-	Correction to test case 7.5.1, Table 7.5.1.3.2-1: Main behaviour	10.7.0	10.8.0
2014-09	RAN#65	R5-144703	0046	-	Updates OTDOA Neighbour Cell Info List	10.7.0	10.8.0
2014-12	RAN#66	R5-145137	0047	-	Clarification to OTDOA Assistance Data	10.8.0	10.9.0
2014-12	RAN#66	R5-145347	0048	-	Addition of Galileo in test 7.3.3	10.8.0	10.9.0
2014-12	RAN#66	R5-145736	0049	-	Correction to OTDOA related default message contents in LPP common procedure for Position Capability Transfer	10.8.0	10.9.0
2014-12	RAN#66	-	-	-	Raised to v 11.0.0 with no change	10.9.0	11.0.0
2014-12	RAN#66	R5-145737	0050	-	Addition of Beidou	11.0.0	12.0.0
2015-03	RAN#67	R5-150741	0051	-	Abbreviation Corrections for BDS in 37.571-2	12.0.0	12.1.0
2015-06	RAN#68	R5-151109	0054	-	IMS settings for LTE Positioning test cases	12.1.0	12.2.0
2015-06	RAN#68	R5-151981	0053	1	Correction of prs-ConfigurationIndex for TDD	12.1.0	12.2.0
2015-06	RAN#68	R5-151982	0055	1	LPP updates and corrections	12.1.0	12.2.0
2015-06	RAN#68	R5-151983	0056	1	Update of default GNSS Assistance Data Elements	12.1.0	12.2.0
2015-06	RAN#68	R5-151984	0057	1	Correction to EUTRA UE Positioning test case 7.3.3.1	12.1.0	12.2.0
2015-06	RAN#68	R5-152147	0058	1	Correction to EUTRA UE Positioning test cases covering the UE-assisted case	12.1.0	12.2.0
2015-06	RAN#68	R5-152149	0052	2	Addition of "early fix" to A-GNSS tests	12.1.0	12.2.0
2015-09	RAN#69	R5-153110	0059	-	Correction to GANSS Multi-frequency Measurement Requested IE	12.2.0	12.3.0
2015-09	RAN#69	R5-153111	0060	-	Corrections to MEASUREMENT CONTROL messages	12.2.0	12.3.0
2015-09	RAN#69	R5-153153	0061	-	Missing "earlyFixReport-r12" in Table 7.2.2.2.3.3-13	12.2.0	12.3.0
2015-09	RAN#69	-	-	-	update of the "non-specific references" in section 2 according to the approved R5-153582 and an action point on ETSI MCC	12.2.0	12.3.0
2015-12	RAN#70	R5-155101	0064	-	Correction to use of Modernized GPS with BDS	12.3.0	12.4.0
2016-03	RAN#71	R5-160354	0067	-	Addition of extra call flow to test case 7.3.4.4	12.4.0	12.5.0
2016-09	RAN#73	R5-165993	0069	1	Add missing references to GPS and Galileo and A-GPS and A-Galileo	12.5.0	12.6.0
2016-09	RAN#73	R5-165996	0070	1	Addition of Indoor Positioning Protocol Conformance Testing (MBS)	12.6.0	13.0.0
2016-12	RAN#74	R5-168065	0071	-	Change of applicability of ECID tests for TDD	13.0.0	13.1.0
2016-12	RAN#74	R5-168461	0073	-	Missing Satellite signal sub-test case reference	13.0.0	13.1.0
2016-12	RAN#74	R5-168463	0075	-	Incorrect Procedure Step referenced for Main behaviour Table	13.0.0	13.1.0
2016-12	RAN#74	R5-169094	0074	1	Correction in Table 7.3.4.4.3.3-11 for sub test 6	13.0.0	13.1.0
2016-12	RAN#74	R5-169100	0072	1	Addition of TC 7.3.3.1A	13.0.0	13.1.0
2016-12	RAN#74	R5-169101	0076	1	Add WLAN signalling sub-test and references for Indoor Positioning	13.0.0	13.1.0
2016-12	RAN#74	R5-169102	0077	1	Add BT signalling sub-test and references for Indoor Positioning	13.0.0	13.1.0
2016-12	RAN#74	R5-169103	0078	1	Add Sensor signalling sub-test and references for Indoor Positioning	13.0.0	13.1.0
2017-03	RAN#75	R5-170736	0079	-	Remove Bluetooth Abbreviations and Add Missing References for WLAN	13.1.0	13.2.0
2017-03	RAN#75	-	-	-	Administrative release upgrade to match the release of 3GPP TS 37.571-1 which was upgraded at RAN#74 to Rel-14 due to Rel-14 relevant CR(s)	13.2.0	14.0.0
2017-06	RAN#76	R5-172963	0082	1	Merge GNSS sub-tests into one sub-test	14.0.0	14.1.0
2017-06	RAN#76	R5-172964	0084	1	Correction to tbs-ProvideCapabilities in several tables	14.0.0	14.1.0
2017-06	RAN#76	R5-172967	0083	1	Introduction of MBS Assistance Data Signalling Sub-test 16	14.0.0	14.1.0
2017-09	RAN#77	R5-173685	0086	-	Editorial changes for Release 14 alignment with core specification	14.1.0	14.2.0
2017-09	RAN#77	R5-173922	0089	-	Clarifications to test 7.2.2.1 for UEs that support more than one positioning technology	14.1.0	14.2.0
2017-09	RAN#77	R5-174060	0091	-	Editorial change to remove referenced text for 'signals switched off or not present' in Section 7	14.1.0	14.2.0
2017-09	RAN#77	R5-174582	0087	1	Correction to Inter-frequency RSTD measurement indication test cases 7.5.1 to support Band > 64	14.1.0	14.2.0
2017-09	RAN#77	R5-174583	0090	1	Editorial change to correct typos and missing Information Elements in tables	14.1.0	14.2.0
2017-09	RAN#77	R5-174585	0088	1	Editorial change to correct IEs	14.1.0	14.2.0
2017-12	RAN#78	R5-176088	0092	-	Correction to LPP ProvideAssistanceData for UE Based MBS	14.2.0	14.3.0
2017-12	RAN#78	R5-176569	0093	-	Addition of Rel-14 WLAN Positioning Protocol Tests and Sub-Tests	14.2.0	14.3.0

Change history							
Date	TSG #	TSG Doc.	CR	Rev	Subject/Comment	Old	New
2017-12	RAN#78	R5-176570	0094	-	Addition of Rel-14 Sensor Positioning Protocol Tests and Sub-Tests	14.2.0	14.3.0
2017-12	RAN#78	R5-176574	0095	-	Correction for UE Assisted TBS Request Location Information Table	14.2.0	14.3.0
2017-12	RAN#78	R5-176576	0096	-	Deletion of Duplicated IEs in Table 5.4.1.3-2	14.2.0	14.3.0
2017-12	RAN#78	R5-177039	0097	1	Editorial change to correct typos, grammar, descriptive text in table content, missing references and formatting issues	14.2.0	14.3.0
2017-12	RAN#78	-	-	-	Administrative release upgrade to match the release of 3GPP TS 37.571-1 which was upgraded at RAN#78 to Rel-15 due to Rel-15 relevant CR(s)	14.3.0	15.0.0
2018-03	RAN#79	R5-181111	0102	-	Update Main Behaviour positioning method	15.0.0	15.1.0
2018-03	RAN#79	R5-181112	0103	-	Missing Release 14 Information Element for otdoa	15.0.0	15.1.0
2018-03	RAN#79	R5-181113	0104	-	Update Simulated Environment conditions for MBS, WLAN, and Bluetooth	15.0.0	15.1.0
2018-06	RAN#80	R5-182957	0106	-	Correction to UE Positioning TCs 7.2.2.1 + 7.2.2.2	15.1.0	15.2.0
2018-06	RAN#80	R5-183169	0105	1	Addition of Rel-14 LPP message segmentation IEs into Capabilities messages	15.1.0	15.2.0
2018-09	RAN#81	R5-184037	0108	-	Addition of PICS for support of LPP message segmentation in test 7.3.1.1	15.2.0	15.3.0
2018-12	RAN#82	R5-186618	0109	-	Addition of NR background information	15.3.0	15.4.0
2018-12	RAN#82	R5-186695	0110	-	Addition of Rel-12 missing IEs to LPP message contents	15.3.0	15.4.0
2018-12	RAN#82	R5-186696	0111	-	Addition of Rel-15 missing IEs to LPP message contents	15.3.0	15.4.0
2018-12	RAN#82	R5-187726	0112	1	Positioning NSA Protocol tests - LPP Procedures	15.3.0	15.4.0
2019-03	RAN#83	R5-192382	0113	1	Addition NR SA positioning tests and removal of NSA	15.4.0	15.5.0
2020-03	RAN#87	R5-200075	0130	-	Removal of technical content in 37.571-2 v15.5.0 and substitution with pointer to the next Release	15.5.0	15.6.0

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## History

<b>Document history</b>		
V15.2.0	July 2018	Publication
V15.3.0	October 2018	Publication
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