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| 3GPP TS 38.521-4 V16.14.0 (2022-12) | |
| Technical Specification | |
| 3rd Generation Partnership Project;  Technical Specification Group Radio Access Network;  NR;  User Equipment (UE) conformance specification;  Radio transmission and reception;  Part 4: Performance requirements  (Release 16) | |
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# 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.

The present document is part 4 of a multi-part Technical Specification (TS) covering the New Radio (NR) User Equipment (UE) conformance specification, which is divided in the following parts:

FFS.

# 1 Scope

The present document specifies the measurement procedures for the conformance test of the user equipment (UE) that contain performance requirements as part of 5G-NR.

The requirements are listed in different clauses only if the corresponding parameters deviate. More generally, tests are only applicable to those mobiles that are intended to support the appropriate functionality. To indicate the circumstances in which tests apply, this is noted in the "*definition and applicability*" part of the test.

For example only Release 15 and later UE declared to support 5G-NR shall be tested for this functionality. In the event that for some tests different conditions apply for different releases, this is indicated within the text of the test itself.

# 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] to [25] (void)

[26] 3GPP TS 38.521-4 Release 17: "NR; User Equipment (UE) conformance specification; Radio transmission and reception; Part 4: Performance requirements"

# 3 Definition of terms, symbols and abbreviations

Void

# 4 General

The requirements of the present document are provided in 3GPP TS 38.521-4 Release 17 [26].

# 5 to 11 Void

Annex A to H: Void

Annex I (informative):  
Change history

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Change history** | | | | | | | | |
| **Date** | **Meeting** | **Tdoc** | **CR** | **Rev** | | **Cat** | **Subject/Comment** | **New version** |
| 2018-01 |  | R5-180064 |  |  | |  | Skeleton for NR Demod spec | 0.0.1 |
| 2018-04-13 |  | R5-182036 |  |  | |  | Added the test procedure for FR2 Demod testing in Annex | 0.1.0 |
| 2018-10-12 |  | R5-185903 |  |  | |  | Added the demod spec test case section titles to be in line with RAN4 approved skeleton for 38.101-4 | 0.1.1 |
| 2018-11-20 | RAN5 #81 | R5-188006 |  |  | |  | new TC for PDSCH FR1 demod | 0.2.0 |
| 2018-11-20 | RAN5 #81 | R5-188008 |  |  | |  | new TC for PDSCH FR2 demod | 0.2.0 |
| 2018-11-20 | RAN5 #81 | R5-187573 |  |  | |  | section 3 of 38.521-4 spec | 0.2.0 |
| 2018-11-20 | RAN5 #81 | R5-187845 |  |  | |  | section 4 of 38.521-4 spec | 0.2.0 |
| 2018-11-20 | RAN5 #81 | R5-188009 |  |  | |  | pCR for new TC addition for FR1 FDD PDSCH Demod | 0.2.0 |
| 2018-11-20 | RAN5 #81 | R5-188010 |  |  | |  | pCR for new TC addition for FR1 FDD PDCCH Demod | 0.2.0 |
| 2019-01-25 | RAN5 5G-NR AH#4 | R5-190054 |  |  | |  | update to 2Rx TDD FR1 PDSCH mapping Type A performance test case | 0.3.0 |
| 2019-01-25 | RAN5 5G-NR AH#4 | R5-190926 |  |  | |  | pCR for new TC addition for FR1 4Rx FDD PDSCH Demodulation performance (2x4) | 0.3.0 |
| 2019-01-25 | RAN5 5G-NR AH#4 | R5-190927 |  |  | |  | pCR for new TC addition for FR1 4Rx FDD PDSCH Demodulation performance (4x4) | 0.3.0 |
| 2019-01-25 | RAN5 5G-NR AH#4 | R5-190928 |  |  | |  | pCR for new TC addition for FR1 4Rx FDD PDSCH Demodulation performance with enhanced receiver type X (4x4) | 0.3.0 |
| 2019-01-25 | RAN5 5G-NR AH#4 | R5-190291 |  |  | |  | Updated to Annex A Measurement Channels for Performance tests | 0.3.0 |
| 2019-01-25 | RAN5 5G-NR AH#4 | R5-190292 |  |  | |  | Updated to Annex B Propagation conditions for Performance tests | 0.3.0 |
| 2019-01-25 | RAN5 5G-NR AH#4 | R5-190458 |  |  | |  | update to 2Rx TDD FR2 PDSCH mapping Type A performance test case | 0.3.0 |
| 2019-01-25 | RAN5 5G-NR AH#4 | R5-190461 |  |  | |  | 2Rx TDD FR2 PDCCH performance test case | 0.3.0 |
| 2019-01-25 | RAN5 5G-NR AH#4 | R5-190929 |  |  | |  | LTE link setup details for demod test cases | 0.3.0 |
| 2019-01-25 | RAN5 5G-NR AH#4 | R5-190930 |  |  | |  | Annex for statistical tput calculation for demod test cases | 0.3.0 |
| 2019-01-25 | RAN5 5G-NR AH#4 | R5-190931 |  |  | |  | pCR for TC addition of FR1 TDD 4Rx PDSCH | 0.3.0 |
| 2019-01-25 | RAN5 5G-NR AH#4 | R5-190932 |  |  | |  | pCR for modification of FDD 2Rx FR1 PDSCH Demod | 0.3.0 |
| 2019-01-25 | RAN5 5G-NR AH#4 | R5-190933 |  |  | |  | Annex for DL and UL Signal Setup | 0.3.0 |
| 2019-01-25 | RAN5 5G-NR AH#4 | R5-190934 |  |  | |  | pCR for modification of FDD FR1 PDCCH Demod | 0.3.0 |
| 2019-01-25 | RAN5 5G-NR AH#4 | R5-190935 |  |  | |  | PDSCH and PDCCH Config before measurement | 0.3.0 |
| 2019-01-25 | RAN5 5G-NR AH#4 | R5-190986 |  |  | |  | 38.521-4 Common Section updates to clarify leverage across architecture options | 0.3.0 |
| 2019-01-25 | RAN5 5G-NR AH#4 | R5-190552 |  |  | |  | Addition of 2Rx TDD FR1 Single PMI tests for both SA and NSA | 0.3.0 |
| 2019-01-25 | RAN5 5G-NR AH#4 | R5-190553 |  |  | |  | Addition of 2Rx TDD FR1 RI reporting for both SA and NSA | 0.3.0 |
| 2019-03-01 | RAN5 #82 | R5-191183 |  |  | |  | Adding relevant references to 38.521-4 | 0.4.0 |
| 2019-03-01 | RAN5 #82 | R5-192461 |  |  | |  | Adding of test case 6.2.2.1.2.1.2, Rx FDD FR1 periodic wideband CQI reporting under fading conditions for both SA and NSA | 0.4.0 |
| 2019-03-01 | RAN5 #82 | R5-192672 |  |  | |  | Introduction of New test case 5.3.2.2.1 2Rx TDD FR1 PDCCH 1 Tx antenna performance for both SA and NSA | 0.4.0 |
| 2019-03-01 | RAN5 #82 | R5-192463 |  |  | |  | Introduction of New test case 5.3.2.2.2 2Rx TDD FR1 PDCCH 2 Tx antenna performance for both SA and NSA | 0.4.0 |
| 2019-03-01 | RAN5 #82 | R5-192462 |  |  | |  | Introduction of New test case 5.3.3.1.1 4Rx FDD FR1 PDCCH 1 Tx antenna performance for both SA and NSA | 0.4.0 |
| 2019-03-01 | RAN5 #82 | R5-192464 |  |  | |  | Introduction of New test case 5.3.3.1.2 4Rx FDD FR1 PDCCH 2 Tx antenna performance for both SA and NSA | 0.4.0 |
| 2019-03-01 | RAN5 #82 | R5-192465 |  |  | |  | Introduction of New test case 5.3.3.2.1 4Rx TDD FR1 PDCCH 1 Tx antenna performance for both SA and NSA | 0.4.0 |
| 2019-03-01 | RAN5 #82 | R5-192465 |  |  | |  | Introduction of New test case 5.3.3.2.2 4Rx TDD FR1 PDCCH 2 Tx antenna performance for both SA and NSA | 0.4.0 |
| 2019-03-01 | RAN5 #82 | R5-192474 |  |  | |  | Introduction of TS 38.521-4 test case 6.3.2.1.1 | 0.4.0 |
| 2019-03-01 | RAN5 #82 | R5-192475 |  |  | |  | Introduction of TS 38.521-4 test case 6.3.2.1.2 | 0.4.0 |
| 2019-03-01 | RAN5 #82 | R5-192467 |  |  | |  | Introduction of test case 5.2.2.1.2\_1, 2Rx FDD FR1 PDSCH mapping Type A and CSI-RS overlapped with PDSCH performance - 2x2 MIMO with baseline receiver for both SA and NSA | 0.4.0 |
| 2019-03-01 | RAN5 #82 | R5-192840 |  |  | |  | Demod spec section 4 update | 0.4.0 |
| 2019-03-01 | RAN5 #82 | R5-192673 |  |  | |  | Update to TDD FR1 2Rx PDSCH Type A test case | 0.4.0 |
| 2019-03-01 | RAN5 #82 | R5-192103 |  |  | |  | addition of 2Rx TDD FR1 periodic CQI reporting test case | 0.4.0 |
| 2019-03-01 | RAN5 #82 | R5-192468 |  |  | |  | pCR for addition of 2Rx TDD FR1 TypeA and CSI-RS overlapped TC | 0.4.0 |
| 2019-03-01 | RAN5 #82 | R5-192866 |  |  | |  | pCR for modification of PDSCH and PDCCH Config before measurement | 0.4.0 |
| 2019-03-01 | RAN5 #82 | R5-192470 |  |  | |  | pCR for modification of FDD FR1 PDCCH Demod | 0.4.0 |
| 2019-03-01 | RAN5 #82 | R5-192471 |  |  | |  | pCR for modification of FDD 2Rx FR1 PDSCH Demod | 0.4.0 |
| 2019-03-01 | RAN5 #82 | R5-192472 |  |  | |  | Update to 2Rx TDD FR1 RI reporting for both SA and NSA | 0.4.0 |
| 2019-03-01 | RAN5 #82 | R5-192460 |  |  | |  | Minimum test time update for FR1 Demod test case | 0.4.0 |
| 2019-03-01 | RAN5 #82 | R5-192473 |  |  | |  | Addition of Annex F for Demod spec | 0.4.0 |
| 2019-03 | RAN#83 | RP-190222 | - | - | | - | Presented to the RAN#83 plenary for 1-step approval | 1.0.0 |
| 2019-03 | RAN#83 | - | - | - | | - | raised to v15.0.0 with editorial changes only | 15.0.0 |
| 2019-06 | RAN5#83 | R5-193544 | 0030 | - | | F | Updates to test case 6.2.2.1.2.1, 2Rx FDD FR1 periodic wideband CQI reporting under fading conditions for both SA and NSA | 15.1.0 |
| 2019-06 | RAN5#83 | R5-193943 | 0035 | - | | F | Adding test case 6.2.2.2.2.2, 2Rx TDD FR1 periodic subband CQI reporting under fading conditions for both SA and NSA | 15.1.0 |
| 2019-06 | RAN5#83 | R5-194159 | 0048 | - | | F | Alignment of Annex C with core specification | 15.1.0 |
| 2019-06 | RAN5#83 | R5-194466 | 0056 | - | | F | Introduction of FR1 CQI test case 6.2.2.2.2.1 | 15.1.0 |
| 2019-06 | RAN5#83 | R5-194622 | 0057 | - | | F | Corrections TDD UL-DL configurations | 15.1.0 |
| 2019-06 | RAN5#83 | R5-194680 | 0066 | - | | F | Demod section 5 general update | 15.1.0 |
| 2019-06 | RAN5#83 | R5-194689 | 0073 | - | | F | Addition of text for FR1 PBCH demodulation test case | 15.1.0 |
| 2019-06 | RAN5#83 | R5-194690 | 0074 | - | | F | Update to 2Rx TDD FR2 PDSCH Type A test case | 15.1.0 |
| 2019-06 | RAN5#83 | R5-194691 | 0075 | - | | F | Update to FR2 PDCCH config param | 15.1.0 |
| 2019-06 | RAN5#83 | R5-194692 | 0076 | - | | F | Addition of text for FR2 PBCH demodulation test case | 15.1.0 |
| 2019-06 | RAN5#83 | R5-194693 | 0077 | - | | F | Update to section 8 CSI reporting | 15.1.0 |
| 2019-06 | RAN5#83 | R5-194979 | 0063 | 1 | | F | Further updates to 2Rx TDD FR1 PDSCH mapping Type A test case | 15.1.0 |
| 2019-06 | RAN5#83 | R5-194980 | 0032 | 1 | | F | Introduction of TC 6.4.3.2\_1 4Rx TDD FR1 RI reporting for both SA and NSA | 15.1.0 |
| 2019-06 | RAN5#83 | R5-194981 | 0034 | 1 | | F | Adding test case 6.2.2.1.2.2, 2Rx FDD FR1 periodic subband CQI reporting under fading conditions for both SA and NSA | 15.1.0 |
| 2019-06 | RAN5#83 | R5-194982 | 0053 | 1 | | F | Update to 4Rx FDD FR1 PDSCH mapping Type A performance 4x4 MIMO with baseline Rx | 15.1.0 |
| 2019-06 | RAN5#83 | R5-194983 | 0054 | 1 | | F | Update to 4Rx FDD FR1 PDSCH mapping Type A performance 4x4 MIMO with enhanced Rx | 15.1.0 |
| 2019-06 | RAN5#83 | R5-194984 | 0037 | 1 | | F | Editorial changes to TS 38.521-4 test case 6.3.2.1.2 | 15.1.0 |
| 2019-06 | RAN5#83 | R5-194985 | 0038 | 1 | | F | Introduction to TS 38.521-4 test case 6.3.3.1.1 | 15.1.0 |
| 2019-06 | RAN5#83 | R5-194986 | 0039 | 1 | | F | Introduction to TS 38.521-4 test case 6.3.3.1.2 | 15.1.0 |
| 2019-06 | RAN5#83 | R5-194987 | 0040 | 1 | | F | Introduction to TS 38.521-4 test case 6.3.3.2.1 | 15.1.0 |
| 2019-06 | RAN5#83 | R5-194988 | 0041 | 1 | | F | Introduction to TS 38.521-4 test case 6.3.3.2.2 | 15.1.0 |
| 2019-06 | RAN5#83 | R5-194989 | 0059 | 1 | | F | Modification of 2Rx FDD FR1 PDSCH mapping Type A performance - enhanced Rx | 15.1.0 |
| 2019-06 | RAN5#83 | R5-194990 | 0060 | 1 | | F | Modification of 2Rx TDD FR1 PDSCH mapping Type A and CSI-RS overlapped with PDSCH performance - baseline Rx | 15.1.0 |
| 2019-06 | RAN5#83 | R5-194991 | 0061 | 1 | | F | Modification of 2Rx FDD FR1 PDCCH 1 Tx | 15.1.0 |
| 2019-06 | RAN5#83 | R5-194992 | 0062 | 1 | | F | Modification of 2Rx FDD FR1 PDCCH 2 Tx | 15.1.0 |
| 2019-06 | RAN5#83 | R5-194993 | 0042 | 1 | | F | Update to test case 5.3.2.2.1 2Rx TDD FR1 PDCCH 1 Tx antenna performance for both SA and NSA | 15.1.0 |
| 2019-06 | RAN5#83 | R5-194994 | 0043 | 1 | | F | Update to test case 5.3.2.2.2 2Rx TDD FR1 PDCCH 2 Tx antenna performance for both SA and NSA | 15.1.0 |
| 2019-06 | RAN5#83 | R5-194995 | 0044 | 1 | | F | Update to test case 5.3.3.1.1 4Rx FDD FR1 PDCCH 1 Tx antenna performance for both SA and NSA | 15.1.0 |
| 2019-06 | RAN5#83 | R5-194996 | 0045 | 1 | | F | Update to test case 5.3.3.1.2 4Rx FDD FR1 PDCCH 2 Tx antenna performance for both SA and NSA | 15.1.0 |
| 2019-06 | RAN5#83 | R5-194997 | 0046 | 1 | | F | Update to test case 5.3.3.2.1 4Rx TDD FR1 PDCCH 1 Tx antenna performance for both SA and NSA | 15.1.0 |
| 2019-06 | RAN5#83 | R5-194998 | 0047 | 1 | | F | Update to test case 5.3.3.2.2 4Rx TDD FR1 PDCCH 2 Tx antenna performance for both SA and NSA | 15.1.0 |
| 2019-06 | RAN5#83 | R5-194999 | 0055 | 1 | | F | Update to FR1 demod test case 5.2.2.1.2\_1 | 15.1.0 |
| 2019-06 | RAN5#83 | R5-195000 | 0078 | 1 | | F | Update to RI Reporting Accuracy test | 15.1.0 |
| 2019-06 | RAN5#83 | R5-195001 | 0049 | 1 | | F | Updated to Annexes for performance tests | 15.1.0 |
| 2019-06 | RAN5#83 | R5-195002 | 0068 | 1 | | F | Demod section 2-4 update | 15.1.0 |
| 2019-06 | RAN5#83 | R5-195003 | 0058 | 1 | | F | Modification of 2Rx FDD FR1 PDSCH mapping Type A performance - baseline Rx | 15.1.0 |
| 2019-06 | RAN5#83 | R5-195088 | 0029 | 1 | | F | Editorial Aligning CSI common test parameters with core specification | 15.1.0 |
| 2019-06 | RAN5#83 | R5-195089 | 0031 | 1 | | F | Updating of E-UTRA test frequency for DEMOD test cases | 15.1.0 |
| 2019-06 | RAN5#83 | R5-195098 | 0079 | - | | F | Performance implementation of FR2 UL demod OTA tests using single pol Rx TE | 15.1.0 |
| 2019-06 | RAN5#83 | R5-195170 | 0052 | 1 | | F | Update to 4Rx FDD FR1 PDSCH mapping Type A performance 2x4 MIMO with baseline Rx | 15.1.0 |
| 2019-06 | RAN5#83 | R5-195171 | 0033 | 1 | | F | Introducing MU and TT clauses in annex F for Channel State Information reporting test cases | 15.1.0 |
| 2019-06 | RAN5#83 | R5-195172 | 0069 | 1 | | F | Annex update for PDSCH PDCCH minimum test time | 15.1.0 |
| 2019-06 | RAN5#83 | R5-195413 | 0067 | 1 | | F | Update to section 9 and 10 of Demod spec | 15.1.0 |
| 2019-06 | RAN5#83 | R5-195438 | 0050 | 2 | | F | Introducing 5.2.2.1.4\_1 2Rx FDD FR1 PDSCH Mapping Type A and LTE-NR coexistence performance | 15.1.0 |
| 2019-06 | RAN5#83 | R5-195439 | 0051 | 2 | | F | Introducing 5.2.3.1.4\_1 4Rx FDD FR1 PDSCH Mapping Type A and LTE-NR coexistence performance | 15.1.0 |
| 2019-06 | RAN5#83 | R5-195440 | 0064 | 1 | | F | Addition of new test case for 2Rx FDD FR1 periodic CQI reporting under AWGN | 15.1.0 |
| 2019-06 | RAN5#83 | R5-195441 | 0065 | 1 | | F | Update to 2Rx TDD FR1 periodic CQI reporting under AWGN | 15.1.0 |
| 2019-06 | RAN5#83 | R5-195442 | 0070 | 1 | | F | Addition of SDR test case for single carrier in SA mode | 15.1.0 |
| 2019-06 | RAN5#83 | R5-195443 | 0072 | 1 | | F | Addition of FR1 SDR test case for CA in NSA mode | 15.1.0 |
| 2019-06 | RAN#84 | - | - | - | | - | Administrative release upgrade to match the release of 3GPP TS 38.508-1 and TS 38.521-1 which were upgraded at RAN#84 to Rel-16 due to Rel-16 relevant CR(s) | 16.0.0 |
| 2019-09 | RAN#85 | R5-195558 | 0080 | - | | F | Correction to 5.2.2.1.4\_1 2Rx FR1 PDSCH LTE-NR coexistence performance | 16.1.0 |
| 2019-09 | RAN#85 | R5-196245 | 0090 | - | | F | Correction to 2Rx TDD FR1 periodic CQI reporting under AWGN conditions for both SA and NSA | 16.1.0 |
| 2019-09 | RAN#85 | R5-196247 | 0092 | - | | F | Correction to 5.3.2.2.1 and 5.3.3.2.1 TDD FR1 PDCCH 1Tx performance | 16.1.0 |
| 2019-09 | RAN#85 | R5-196495 | 0097 | - | | F | Updated to Annex A for performance tests | 16.1.0 |
| 2019-09 | RAN#85 | R5-196496 | 0098 | - | | F | Updated to Annex B for performance tests | 16.1.0 |
| 2019-09 | RAN#85 | R5-196498 | 0100 | - | | F | Updated to General clauses for Demod and CSI requirements | 16.1.0 |
| 2019-09 | RAN#85 | R5-196857 | 0119 | - | | F | Corrections to PDSCH demod TCs | 16.1.0 |
| 2019-09 | RAN#85 | R5-197370 | 0086 | 1 | | F | Updates to 6.2.2.1.2.1, 2Rx FDD FR1 periodic wideband CQI reporting under fading conditions for both SA and NSA | 16.1.0 |
| 2019-09 | RAN#85 | R5-197371 | 0087 | 1 | | F | Updates to 6.2.2.2.2.1, 2Rx TDD FR1 periodic wideband CQI reporting under fading conditions for both SA and NSA | 16.1.0 |
| 2019-09 | RAN#85 | R5-197372 | 0125 | 1 | | F | Modification of 4Rx FDD FR1 PDSCH mapping Type A performance - 2x4 MIMO with baseline receiver for both SA and NSA | 16.1.0 |
| 2019-09 | RAN#85 | R5-197373 | 0084 | 1 | | F | Clean up test cases 5.3.3.1.1, 5.3.3.1.2, 5.3.3.2.1 and 5.3.3.2.2 for 4Rx PDCCH | 16.1.0 |
| 2019-09 | RAN#85 | R5-197374 | 0099 | 1 | | F | Updated to General clauses for performance tests | 16.1.0 |
| 2019-09 | RAN#85 | R5-197375 | 0123 | 1 | | F | Modification of FDD FR1 2Rx TypeA baseline and TypeX Rxvr | 16.1.0 |
| 2019-09 | RAN#85 | R5-197376 | 0083 | 1 | | F | Clean up test cases 5.3.2.2.1 and 5.3.2.2.2 for 2Rx PDCCH | 16.1.0 |
| 2019-09 | RAN#85 | R5-197377 | 0093 | 1 | | F | Correction to FR1 FDD PDSCH mapping Type A performance test cases | 16.1.0 |
| 2019-09 | RAN#85 | R5-197378 | 0095 | 1 | | F | Correction to MU and TT for FR1 demodulation test cases | 16.1.0 |
| 2019-09 | RAN#85 | R5-197379 | 0096 | 1 | | F | Update to 4Rx FDD FR1 PDSCH mapping Type A performance | 16.1.0 |
| 2019-09 | RAN#85 | R5-197380 | 0117 | 1 | | F | Update of Annex F to add new CSI test cases | 16.1.0 |
| 2019-09 | RAN#85 | R5-197512 | 0101 | 1 | | F | Update to SA SDR test case | 16.1.0 |
| 2019-09 | RAN#85 | R5-197513 | 0102 | 1 | | F | Update to NSA SDR test case | 16.1.0 |
| 2019-09 | RAN#85 | R5-197566 | 0127 | 1 | | F | Modification on 2Rx TDD FR1 Single PMI with 4Tx Type1 - SinglePanel codebook for both SA and NSA | 16.1.0 |
| 2019-09 | RAN#85 | R5-197567 | 0128 | 1 | | F | Introduce 2Rx TDD FR1 Single PMI with 8Tx Type1 - SinglePanel codebook for both SA and NSA | 16.1.0 |
| 2019-09 | RAN#85 | R5-197572 | 0126 | 1 | | F | Modification of 4Rx FDD FR1 PDSCH mapping Type A performance - 4x4 MIMO with baseline receiver for both SA and NSA | 16.1.0 |
| 2019-09 | RAN#85 | R5-197573 | 0091 | 1 | | F | Correction to 2Rx TDD FR1 PDSCH mapping Type A performance | 16.1.0 |
| 2019-09 | RAN#85 | R5-197574 | 0105 | 1 | | F | Update to TDD FR1 2Rx TypeA Baseline and Type X receiver Demod test cases | 16.1.0 |
| 2019-09 | RAN#85 | R5-197575 | 0107 | 1 | | F | Editorial and updates to TS 38.521-4 test case 6.3.2.1.1 | 16.1.0 |
| 2019-09 | RAN#85 | R5-197576 | 0108 | 1 | | F | Updates to TS 38.521-4 test case 6.3.2.1.2 | 16.1.0 |
| 2019-09 | RAN#85 | R5-197577 | 0109 | 1 | | F | Updates to TS 38.521-4 test case 6.3.3.1.1 | 16.1.0 |
| 2019-09 | RAN#85 | R5-197578 | 0110 | 1 | | F | Update to TS 38.521-4 test case 6.3.3.1.2 | 16.1.0 |
| 2019-09 | RAN#85 | R5-197579 | 0111 | 1 | | F | Editorial and update to TS 38.521-4 test case 6.3.3.2.1 | 16.1.0 |
| 2019-09 | RAN#85 | R5-197580 | 0112 | 1 | | F | Editorial and update to TS 38.521-4 test case 6.3.3.2.2 | 16.1.0 |
| 2019-09 | RAN#85 | R5-197581 | 0120 | 1 | | F | Correction of PRACH-ConfigurationIndex for TC 5.2.2.2.1\_1 | 16.1.0 |
| 2019-09 | RAN#85 | R5-197582 | 0122 | 1 | | F | Update to RI Reporting Accuracy test | 16.1.0 |
| 2019-09 | RAN#85 | R5-197615 | 0088 | 1 | | F | Updates to 6.2.2.1.2.2, 2Rx FDD FR1 periodic subband CQI reporting under fading conditions for both SA and NSA | 16.1.0 |
| 2019-09 | RAN#85 | R5-197616 | 0089 | 1 | | F | Updates to 6.2.2.2.2.2, 2Rx TDD FR1 periodic subband CQI reporting under fading conditions for both SA and NSA | 16.1.0 |
| 2019-09 | RAN#85 | R5-197648 | 0115 | 2 | | F | Update to Annex G to restructure minimum test time tables for Demodulation test cases | 16.1.0 |
| 2019-09 | RAN#85 | R5-197649 | 0116 | 2 | | F | Update to Annex G to add minimum test time for CSI test cases | 16.1.0 |
| 2019-12 | RAN#86 | R5-198248 | 0141 | - | | F | Updates to Annex F | 16.2.0 |
| 2019-12 | RAN#86 | R5-198281 | 0142 | - | | F | Update to FR1 4Rx FDD PDSCH Type A Demodulation performance | 16.2.0 |
| 2019-12 | RAN#86 | R5-198395 | 0151 | - | | F | Corrections to E-UTRA configurations for EN-DC test cases | 16.2.0 |
| 2019-12 | RAN#86 | R5-198407 | 0152 | - | | F | Correction to 2Rx FDD FR1 periodic CQI reporting under AWGN conditions for both SA and NSA | 16.2.0 |
| 2019-12 | RAN#86 | R5-198408 | 0153 | - | | F | Correction to 2Rx and 4Rx TDD FR1 Single PMI with 4Tx Type1 - SinglePanel codebook for both SA and NSA | 16.2.0 |
| 2019-12 | RAN#86 | R5-198409 | 0154 | - | | F | Correction to Sections 5.2 and 5.3 | 16.2.0 |
| 2019-12 | RAN#86 | R5-198560 | 0157 | - | | F | Updated to Annex A and B for performance tests | 16.2.0 |
| 2019-12 | RAN#86 | R5-198679 | 0161 | - | | F | Correction of SchedulingRequestResourceConfig periodicityAndOffset for TC 7.2.2.2.1\_1 | 16.2.0 |
| 2019-12 | RAN#86 | R5-198680 | 0162 | - | | F | Include PDSCH RMC for PDCCH demod FR1 test cases | 16.2.0 |
| 2019-12 | RAN#86 | R5-199079 | 0137 | 2 | | F | Adding new test case 6.2.3.1.2.1, 4Rx FDD FR1 periodic wideband CQI reporting under fading conditions for both SA and NSA | 16.2.0 |
| 2019-12 | RAN#86 | R5-199382 | 0129 | 1 | | F | Addition of 5.2.2.1.3\_1 2Rx FDD PDSCH mapping Type B | 16.2.0 |
| 2019-12 | RAN#86 | R5-199383 | 0130 | 1 | | F | Addition of NR test case 5.2.3.1.2\_1-FDD type A CSI-RS overlap 4x4 MIMO | 16.2.0 |
| 2019-12 | RAN#86 | R5-199384 | 0134 | 1 | | F | Addition of NR test case 6.2.3.1.1.1-FDD periodical CQI | 16.2.0 |
| 2019-12 | RAN#86 | R5-199385 | 0136 | 1 | | F | Addition of NR test case 6.4.2.1\_1-FDD RI reporting | 16.2.0 |
| 2019-12 | RAN#86 | R5-199387 | 0149 | 1 | | F | Update to starting MCS index for CQI reporting test cases | 16.2.0 |
| 2019-12 | RAN#86 | R5-199388 | 0145 | 1 | | F | Update to Annex G for minimum test time for FR2 Demod test cases | 16.2.0 |
| 2019-12 | RAN#86 | R5-199414 | 0131 | 1 | | F | Addition of NR test case 5.2.3.1.3\_1-FDD type B 2x4 MIMO | 16.2.0 |
| 2019-12 | RAN#86 | R5-199415 | 0132 | 1 | | F | Addition of NR test case 5.2.3.2.2\_1-TDD type A CSI-RS overlap 2x4 MIMO | 16.2.0 |
| 2019-12 | RAN#86 | R5-199416 | 0133 | 1 | | F | Addition of NR test case 5.2.3.2.3\_1-TDD type B 2x4 MIMO | 16.2.0 |
| 2019-12 | RAN#86 | R5-199417 | 0135 | 1 | | F | Addition of NR test case 6.2.3.2.1.1-TDD periodical CQI | 16.2.0 |
| 2019-12 | RAN#86 | R5-199418 | 0138 | 1 | | F | Adding new test case 6.2.3.1.2.2, 4Rx FDD FR1 aperiodic subband CQI reporting under fading conditions for both SA and NSA | 16.2.0 |
| 2019-12 | RAN#86 | R5-199419 | 0139 | 1 | | F | Adding new test case 6.2.3.2.2.1, 4Rx TDD FR1 periodic wideband CQI reporting under fading conditions for both SA and NSA | 16.2.0 |
| 2019-12 | RAN#86 | R5-199420 | 0140 | 1 | | F | Adding new test case 6.2.3.2.2.2, 4Rx TDD FR1 aperiodic subband CQI reporting under fading conditions for both SA and NSA | 16.2.0 |
| 2019-12 | RAN#86 | R5-199421 | 0155 | 1 | | F | Correction to chapter 5 and 6 to be aligned with core spec | 16.2.0 |
| 2019-12 | RAN#86 | R5-199422 | 0156 | 1 | | F | Editorial correction to CSI reporting tests | 16.2.0 |
| 2019-12 | RAN#86 | R5-199425 | 0146 | 1 | | F | Update to FR2 2Rx PDSCH Type A enhanced type X receiver test case | 16.2.0 |
| 2019-12 | RAN#86 | R5-199516 | 0160 | 1 | | F | Update PrachConfigIndex in 5.2.3.2.1\_1 test case | 16.2.0 |
| 2019-12 | RAN#86 | R5-199525 | 0148 | 1 | | F | Clarification on PDCP SDU size for SDR SA Demod test case | 16.2.0 |
| 2019-12 | RAN#86 | R5-199526 | 0147 | 1 | | F | Clarification on PDCP SDU size for SDR NSA Demod test case | 16.2.0 |
| 2019-12 | RAN#86 | R5-199527 | 0143 | 1 | | F | Update to FR2 2Rx PDSCH Type A baseline receiver test case | 16.2.0 |
| 2019-12 | RAN#86 | R5-199531 | 0144 | 1 | | F | Annex update for UE positioning procedure for Demod test cases | 16.2.0 |
| 2019-12 | RAN#86 | R5-199532 | 0150 | 1 | | F | Update to FR2 PDCCH Demod test case | 16.2.0 |
| 2019-12 | RAN#86 | R5-199570 | 0158 | 1 | | F | Introduction of FR2 CQI test cases | 16.2.0 |
| 2020-03 | RAN#87 | R5-200271 | 0165 | - | | F | Update to Demod TC 5.2.3.2.1\_1 | 16.3.0 |
| 2020-03 | RAN#87 | R5-200322 | 0166 | - | | F | CR to 38.521-4 to introduce isolation procedure | 16.3.0 |
| 2020-03 | RAN#87 | R5-200450 | 0168 | - | | F | Addition of message exceptions for Type2 QCL information | 16.3.0 |
| 2020-03 | RAN#87 | R5-201245 | 0170 | 1 | | F | Core alignment to 4Rx PDCCH Demod Test Cases | 16.3.0 |
| 2020-03 | RAN#87 | R5-200453 | 0171 | - | | F | Correction to FR1 2Rx PDSCH demodulation test cases | 16.3.0 |
| 2020-03 | RAN#87 | R5-200454 | 0172 | - | | F | Correction to FR1 4Rx PDSCH demodulation test cases | 16.3.0 |
| 2020-03 | RAN#87 | R5-200455 | 0173 | - | | F | Correction to measurement uncertainty and test tolerance for CQI test cases | 16.3.0 |
| 2020-03 | RAN#87 | R5-200456 | 0174 | - | | F | Correction to PDCCH demod TCs | 16.3.0 |
| 2020-03 | RAN#87 | R5-200660 | 0175 | - | | F | Correcting CQI value in test procedure | 16.3.0 |
| 2020-03 | RAN#87 | R5-200672 | 0178 | - | | F | Updated to Annex A and B for performance tests | 16.3.0 |
| 2020-03 | RAN#87 | R5-200682 | 0179 | - | | F | Correction to Applicability rules for Performance tests | 16.3.0 |
| 2020-03 | RAN#87 | R5-200710 | 0180 | - | | F | Update of TC 5.2.2.1.3\_1 2Rx FDD PDSCH mapping Type B | 16.3.0 |
| 2020-03 | RAN#87 | R5-200711 | 0181 | - | | F | Update of TC 5.2.3.1.2\_1 4Rx FDD PDSCH mapping Type A and CSI-RS overlapped | 16.3.0 |
| 2020-03 | RAN#87 | R5-200712 | 0182 | - | | F | Update of TC 5.2.3.1.3\_1 4Rx FDD PDSCH mapping Type B | 16.3.0 |
| 2020-03 | RAN#87 | R5-200713 | 0183 | - | | F | Update of TC 5.2.3.2.2\_1 4Rx TDD PDSCH mapping Type A and CSI-RS overlapped | 16.3.0 |
| 2020-03 | RAN#87 | R5-200714 | 0184 | - | | F | Update of TC 5.2.3.2.3\_1 4Rx TDD PDSCH mapping Type B | 16.3.0 |
| 2020-03 | RAN#87 | R5-200718 | 0188 | - | | F | Update of Test Tolerance in Annex F | 16.3.0 |
| 2020-03 | RAN#87 | R5-200729 | 0189 | - | | F | Core spec alignment for FR1 4Rx FDD PDSCH Type A Demodulation performance | 16.3.0 |
| 2020-03 | RAN#87 | R5-200914 | 0176 | 1 | | F | Correction to test case 8.2.2.2.1.1 2 Rx, TDD FR2 periodic CQI reporting under AWGN performance for both SA and NSA | 16.3.0 |
| 2020-03 | RAN#87 | R5-200915 | 0164 | 1 | | F | Update of Clause 4 in TS 38.521-4 | 16.3.0 |
| 2020-03 | RAN#87 | R5-200985 | 0169 | 1 | | F | Core alignment for FR2 demod test case | 16.3.0 |
| 2020-03 | RAN#87 | R5-201068 | 0187 | 1 | | F | Update of TC 6.4.2.1\_1 2Rx FDD RI reporting | 16.3.0 |
| 2020-03 | RAN#87 | R5-201090 | 0177 | 1 | | F | Replacing derivation paths to 38.331 | 16.3.0 |
| 2020-03 | RAN#87 | R5-201180 | 0167 | 1 | | F | Addition of FR2 Demod sustained data rate test case | 16.3.0 |
| 2020-06 | RAN#88 | R5-201816 | 0190 | - | | F | Correction to TC 5.2.3.1.1\_4 4Rx FDD FR1 PDSCH mapping Type A performance | 16.4.0 |
| 2020-06 | RAN#88 | R5-201945 | 0191 | - | | F | Updated to Annex A and B for performance tests | 16.4.0 |
| 2020-06 | RAN#88 | R5-202242 | 0195 | - | | F | Clarification of propagation condition for Demod test cases during call setup | 16.4.0 |
| 2020-06 | RAN#88 | R5-202297 | 0198 | - | | F | Correction to 4Rx FDD FR1 periodic CQI reporting under AWGN conditions for both SA and NSA | 16.4.0 |
| 2020-06 | RAN#88 | R5-202980 | 0201 | 1 | | F | Correction to CSI reporting test cases missing MIMO correlation matrixes | 16.4.0 |
| 2020-06 | RAN#88 | R5-202304 | 0205 | - | | F | Correction to FR2 PDCCH demodulation tests | 16.4.0 |
| 2020-06 | RAN#88 | R5-202307 | 0208 | - | | F | Editorial correction on the table numbers for Minimum Test Time | 16.4.0 |
| 2020-06 | RAN#88 | R5-202308 | 0209 | - | | F | Editorial correction to 4x4 MIMO PDSCH demodulation tests | 16.4.0 |
| 2020-06 | RAN#88 | R5-202736 | 0197 | 1 | | F | Message exception correction for Demod test cases | 16.4.0 |
| 2020-06 | RAN#88 | R5-202737 | 0202 | 1 | | F | Correction to FR1 aperiodic subband CQI reporting under fading conditions | 16.4.0 |
| 2020-06 | RAN#88 | R5-202738 | 0203 | 1 | | F | Correction to FR1 Single PMI with 8Tx TypeI - SinglePanel codebook for both SA and NSA | 16.4.0 |
| 2020-06 | RAN#88 | R5-202739 | 0207 | 1 | | F | Correction to message exception and test description in RI tests | 16.4.0 |
| 2020-06 | RAN#88 | R5-202740 | 0196 | 1 | | F | Update to FR2 PDSCH Demod test case | 16.4.0 |
| 2020-06 | RAN#88 | R5-202741 | 0211 | 1 | | F | Introduction of 8.4.2.2.1 2Rx TDD FR2 RI reporting for both SA and NSA | 16.4.0 |
| 2020-06 | RAN#88 | R5-202742 | 0210 | 1 | | F | Editorial correction to Annex C.2 | 16.4.0 |
| 2020-06 | RAN#88 | R5-202743 | 0213 | 1 | | F | Update Wireless isolation procedure | 16.4.0 |
| 2020-06 | RAN#88 | R5-202766 | 0212 | 1 | | F | Updates of FR2 MU and TT in TS 38.521-4 | 16.4.0 |
| 2020-06 | RAN#88 | R5-202832 | 0214 | 1 | | F | Addition of message exceptions for PDSCH test cases | 16.4.0 |
| 2020-06 | RAN#88 | R5-202908 | 0193 | 1 | | F | Clarification of disabling Tx diversity for FR2 UE for FR2 Demod testing | 16.4.0 |
| 2020-06 | RAN#88 | R5-202979 | 0199 | 2 | | F | Correction to 4Rx TDD FR1 RI reporting | 16.4.0 |
| 2020-06 | RAN#88 | R5-202981 | 0204 | 1 | | F | Correction to FR2 CQI reporting tests | 16.4.0 |
| 2020-06 | RAN#88 | R5-202989 | 0192 | 1 | | F | Updates to 8.2.2.2.2.1, 2Rx TDD FR2 aperiodic CQI reporting under fading performance for both SA and NSA | 16.4.0 |
| 2020-09 | RAN#89 | R5-203298 | 0215 | - | | F | Activate Test Mode in NSA Demod Test Cases | 16.5.0 |
| 2020-09 | RAN#89 | R5-203670 | 0217 | - | | F | message contents correction for TC 5.2.3.1.2\_1 | 16.5.0 |
| 2020-09 | RAN#89 | R5-203717 | 0219 | - | | F | Correction to TC 5.2.3.1.1\_1 4Rx FDD FR1 PDSCH mapping Type A performance | 16.5.0 |
| 2020-09 | RAN#89 | R5-203756 | 0220 | - | | F | Removing unnecessary IE rbg-Size from message exceptions | 16.5.0 |
| 2020-09 | RAN#89 | R5-203902 | 0221 | - | | F | Correction to Annex G minimum test time table | 16.5.0 |
| 2020-09 | RAN#89 | R5-204062 | 0226 | - | | F | Correction to PDSCH reference channel | 16.5.0 |
| 2020-09 | RAN#89 | R5-204063 | 0227 | - | | F | Correction to 2Rx FDD FR1 periodic wideband CQI reporting under fading conditions | 16.5.0 |
| 2020-09 | RAN#89 | R5-204064 | 0228 | - | | F | Correction to LTE-NR coexistence performance | 16.5.0 |
| 2020-09 | RAN#89 | R5-204100 | 0232 | - | | F | Update to common test parameters and channel mappings | 16.5.0 |
| 2020-09 | RAN#89 | R5-204101 | 0233 | - | | F | Update E-UTRA cell configuration for NSA | 16.5.0 |
| 2020-09 | RAN#89 | R5-204261 | 0235 | - | | F | Editorial correction of message exceptions | 16.5.0 |
| 2020-09 | RAN#89 | R5-204774 | 0223 | 1 | | F | Test applicability update for all PDSCH mapping type B test cases | 16.5.0 |
| 2020-09 | RAN#89 | R5-204870 | 0222 | 1 | | F | Addition of FR1 2Rx TDD PDSCH mapping type B test case | 16.5.0 |
| 2020-09 | RAN#89 | R5-204871 | 0224 | 1 | | F | Addition of 4Rx FDD FR1 RI reporting test case | 16.5.0 |
| 2020-09 | RAN#89 | R5-204933 | 0229 | 1 | | F | CR to update MU and TT in 38.521-4 | 16.5.0 |
| 2020-09 | RAN#89 | R5-204934 | 0225 | 1 | | F | Correction to frequencyDomainAllocation | 16.5.0 |
| 2020-09 | RAN#89 | R5-204935 | 0230 | 1 | | F | Correction to MU and TT for FR1 PMI and RI tests | 16.5.0 |
| 2020-09 | RAN#89 | R5-204936 | 0218 | 1 | | F | Update to FR2 PDSCH test case | 16.5.0 |
| 2020-09 | RAN#89 | R5-204937 | 0216 | 1 | | F | Annex F Update of MU and TT for FR2 PDSCH and PDCCH Demodulation scenario | 16.5.0 |
| 2020-09 | RAN#89 | R5-204938 | 0236 | 1 | | F | Update of AWGN flatness in TS 38.521-4 | 16.5.0 |
| 2020-12 | RAN#90 | R5-205920 | 0243 | - | | F | Introduction of new test case for FR2 CA PDSCH Demodulation | 16.6.0 |
| 2020-12 | RAN#90 | R5-205925 | 0247 | - | | F | Update to FDD LTE-NR coexistence test case | 16.6.0 |
| 2020-12 | RAN#90 | R5-206090 | 0248 | - | | F | Correction to 5.2.2.1.4\_1 LTE NR coexistence performance | 16.6.0 |
| 2020-12 | RAN#90 | R5-206091 | 0249 | - | | F | Correction to 9.4B.1.1 Sustained downlink data rate performance for EN-DC within FR1 | 16.6.0 |
| 2020-12 | RAN#90 | R5-206092 | 0250 | - | | F | Core alignment to FR1 and FR2 CSI test cases | 16.6.0 |
| 2020-12 | RAN#90 | R5-206093 | 0251 | - | | F | Clean up on FR2 CQI and RI test cases | 16.6.0 |
| 2020-12 | RAN#90 | R5-206094 | 0252 | - | | F | Clean up on FR1 RI test cases | 16.6.0 |
| 2020-12 | RAN#90 | R5-206097 | 0255 | - | | F | Correction to incorrect parameter settings for subband CQI tests | 16.6.0 |
| 2020-12 | RAN#90 | R5-206098 | 0256 | - | | F | Correction to Message contents for Sustained downlink data rate tests | 16.6.0 |
| 2020-12 | RAN#90 | R5-206163 | 0259 | - | | F | Correction in message content of 5.2.2.2.1\_1, 5.2.3.2.1\_1 test cases | 16.6.0 |
| 2020-12 | RAN#90 | R5-206165 | 0260 | - | | F | Update on TB success rate definition in Sustain data rate test cases | 16.6.0 |
| 2020-12 | RAN#90 | R5-206208 | 0262 | - | | F | Editorial update of uplink signals | 16.6.0 |
| 2020-12 | RAN#90 | R5-206666 | 0237 | 1 | | F | Update of LTE-NR coexistence performance test case 5.2.2.1.4 | 16.6.0 |
| 2020-12 | RAN#90 | R5-206667 | 0238 | 1 | | F | Update of LTE-NR coexistence performance test case 5.2.3.1.4 | 16.6.0 |
| 2020-12 | RAN#90 | R5-206668 | 0253 | 1 | | F | Correction to number of CQI and HARQ in CQI TCs under fading | 16.6.0 |
| 2020-12 | RAN#90 | R5-206669 | 0254 | 1 | | F | Correction to FR1 periodic wideband CQI reporting under fading conditions | 16.6.0 |
| 2020-12 | RAN#90 | R5-206670 | 0258 | 1 | | F | Correction of CSI-IM periodicity and offset in 4RX FDD wideband CQI under fading condition | 16.6.0 |
| 2020-12 | RAN#90 | R5-206671 | 0240 | 1 | | F | Update to OCNG definition in DEMOD spec | 16.6.0 |
| 2020-12 | RAN#90 | R5-206775 | 0239 | 1 | | F | Addition of test case 5.2.2.2.4\_1 2Rx TDD FR1 PDSCH Mapping Type A and LTE-NR coexistence performance - 4x2 MIMO with baseline receiver for both SA and NSA | 16.6.0 |
| 2020-12 | RAN#90 | R5-206776 | 0241 | 1 | | F | Applicability rules for section 5 CA Demodulation requirements | 16.6.0 |
| 2020-12 | RAN#90 | R5-206777 | 0242 | 1 | | F | Applicability rules for section 7 CA Demodulation requirements | 16.6.0 |
| 2020-12 | RAN#90 | R5-206829 | 0263 | 1 | | F | Update of Annex F | 16.6.0 |
| 2020-12 | RAN#90 | R5-206830 | 0244 | 1 | | F | Update to FR2 PDSCH Demodulation test case | 16.6.0 |
| 2020-12 | RAN#90 | R5-206831 | 0245 | 1 | | F | Update to FR2 PDCCH Demodulation test case | 16.6.0 |
| 2020-12 | RAN#90 | R5-206832 | 0246 | 1 | | F | Update to FR2 CQI reporting under AWGN test case | 16.6.0 |
| 2020-12 | RAN#90 | R5-206833 | 0261 | 1 | | F | CR on MU and testability limit for FR2 demod test case | 16.6.0 |
| 2021-03 | RAN#91 | R5-210520 | 0275 | - | | F | Correction to SR config for TDD PDSCH Type A performance test cases | 16.7.0 |
| 2021-03 | RAN#91 | R5-210521 | 0276 | - | | F | Correction to test applicability for LTE-NR coexistence performance test cases | 16.7.0 |
| 2021-03 | RAN#91 | R5-210522 | 0277 | - | | F | Correction to wideband CQI reporting under fading test cases | 16.7.0 |
| 2021-03 | RAN#91 | R5-210523 | 0278 | - | | F | Addition of 8.3.2.2.1 2Rx TDD FR2 Single PMI with 2TX TypeI-SinglePanel Codebook | 16.7.0 |
| 2021-03 | RAN#91 | R5-210770 | 0282 | - | | F | Update message content in test case 7.3.2.2.2 | 16.7.0 |
| 2021-03 | RAN#91 | R5-210773 | 0283 | - | | F | Correction in 6.4.2.1\_1 test requirements | 16.7.0 |
| 2021-03 | RAN#91 | R5-210868 | 0284 | - | | F | Correction to Table F.1.1.2-2 for FR1 test cases | 16.7.0 |
| 2021-03 | RAN#91 | R5-210869 | 0285 | - | | F | Correction to Test Purpose of PDCCH test cases | 16.7.0 |
| 2021-03 | RAN#91 | R5-210993 | 0288 | - | | F | Editorial, cleanup of some references in 38.521-4 | 16.7.0 |
| 2021-03 | RAN#91 | R5-211050 | 0289 | - | | F | Updating applicability in test case 5.2.2.2.4\_1 | 16.7.0 |
| 2021-03 | RAN#91 | R5-211081 | 0293 | - | | F | Update to downlink physical channel EPRE level for LTE-NR coex scenario | 16.7.0 |
| 2021-03 | RAN#91 | R5-211086 | 0296 | - | | F | Adding new CSI test cases to annex F | 16.7.0 |
| 2021-03 | RAN#91 | R5-211658 | 0297 | 1 | | F | Addition of new test case 6.3.2.1.3 2Rx FDD FR1 Multiple PMI with 16Tx Type1 - SinglePanel codebook for both SA and NSA | 16.7.0 |
| 2021-03 | RAN#91 | R5-211659 | 0298 | 1 | | F | Addition of new test case 6.3.3.1.3 4Rx FDD FR1 Multiple PMI with 16Tx Type1 - SinglePanel codebook for both SA and NSA | 16.7.0 |
| 2021-03 | RAN#91 | R5-211716 | 0280 | 1 | | F | Correction to DCI bit size for PDSCH Type B performance and LTE coexistence tests | 16.7.0 |
| 2021-03 | RAN#91 | R5-211717 | 0281 | 1 | | F | Correction to LB setup DRB in CLOSE UE TEST LOOP message | 16.7.0 |
| 2021-03 | RAN#91 | R5-211718 | 0286 | 1 | | F | Correction to NR test case 6.2.2.1.2.1 | 16.7.0 |
| 2021-03 | RAN#91 | R5-211719 | 0273 | 1 | | F | Correction to E-UTRA link setup for NSA testing | 16.7.0 |
| 2021-03 | RAN#91 | R5-211813 | 0290 | 1 | | F | Adding new test case 6.3.2.2.3, 2Rx TDD FR1 Single PMI with 16Tx Type1 - SinglePanel codebook for both SA and NSA | 16.7.0 |
| 2021-03 | RAN#91 | R5-211814 | 0292 | 1 | | F | Adding new test case 6.3.3.2.3, 4Rx TDD FR1 Single PMI with 16Tx Type1 - SinglePanel codebook for both SA and NSA | 16.7.0 |
| 2021-03 | RAN#91 | R5-211816 | 0274 | 1 | | F | Update of minimum conformance requirements for 4Rx FDD FR1 PDSCH in TC 5.2.3.1.1\_1 | 16.7.0 |
| 2021-03 | RAN#91 | R5-211817 | 0265 | 1 | | F | Addition of Applicability of different requirements for R16 NR HST in 5.1.1.7 | 16.7.0 |
| 2021-03 | RAN#91 | R5-211818 | 0268 | 1 | | F | Update of Applicability of requirements for mandatory UE features with capability signalling for R16 NR HST in 5.1.1.4 | 16.7.0 |
| 2021-03 | RAN#91 | R5-211819 | 0269 | 1 | | F | Update of Applicability of requirements for optional UE features for R16 NR HST in 5.1.1.3 | 16.7.0 |
| 2021-03 | RAN#91 | R5-211820 | 0264 | 1 | | F | Addition of Abbreviations and References for R16 NR HST in 3.3 and References | 16.7.0 |
| 2021-03 | RAN#91 | R5-211821 | 0266 | 1 | | F | Addition of HST-DPS Channel Profile in B.3.3 | 16.7.0 |
| 2021-03 | RAN#91 | R5-211822 | 0267 | 1 | | F | Addition of HST-SFN Channel Profile in B.3.2 | 16.7.0 |
| 2021-03 | RAN#91 | R5-211823 | 0270 | 1 | | F | Update of Combinations of channel model parameters for R16 NR HST in B.2.2 | 16.7.0 |
| 2021-03 | RAN#91 | R5-211824 | 0271 | 1 | | F | Update of Reference measurement channels for PDSCH performance requirements for R16 NR HST in A.3.2 | 16.7.0 |
| 2021-03 | RAN#91 | R5-211825 | 0272 | 1 | | F | Update of Single Tap Channel Profile for R16 NR HST in B.3.1 | 16.7.0 |
| 2021-03 | RAN#91 | R5-211916 | 0291 | 1 | | F | Adding new test case 6.3.2.2.4, 2Rx TDD FR1 Single PMI with 32Tx Type1 - SinglePanel codebook for both SA and NSA | 16.7.0 |
| 2021-03 | RAN#91 | R5-211929 | 0299 | 1 | | F | Update of FR2 demod test cases | 16.7.0 |
| 2021-06 | RAN#92 | R5-212063 | 0301 | - | | F | Addition of test applicability rules for UE supporting FR2 DL 256QAM | 16.8.0 |
| 2021-06 | RAN#92 | R5-212064 | 0302 | - | | F | Updating on annexes for FR2 DL 256QAM test cases | 16.8.0 |
| 2021-06 | RAN#92 | R5-212067 | 0303 | - | | F | Addition of new test case 6.3.2.1.4 2Rx FDD FR1 Single PMI with 32Tx Type1 - SinglePanel codebook for both SA and NSA | 16.8.0 |
| 2021-06 | RAN#92 | R5-212068 | 0304 | - | | F | Addition of new test case 6.3.3.1.4 4Rx FDD FR1 Single PMI with 32Tx Type1 - SinglePanel codebook for both SA and NSA | 16.8.0 |
| 2021-06 | RAN#92 | R5-212254 | 0308 | - | | F | Update MU and TT for 8.4.2.2.1 | 16.8.0 |
| 2021-06 | RAN#92 | R5-212632 | 0311 | - | | F | Correction of E-UTRA link settings | 16.8.0 |
| 2021-06 | RAN#92 | R5-212635 | 0312 | - | | F | Correction of DL RMC for TC 5.2.3.1.4\_1 | 16.8.0 |
| 2021-06 | RAN#92 | R5-212743 | 0314 | - | | F | Update to Demod test cases title | 16.8.0 |
| 2021-06 | RAN#92 | R5-212933 | 0315 | - | | F | Addition of eMIMO demod test case 5.2.2.1.11 | 16.8.0 |
| 2021-06 | RAN#92 | R5-212934 | 0316 | - | | F | Addition of eMIMO demod test case 5.2.2.2.11 | 16.8.0 |
| 2021-06 | RAN#92 | R5-212935 | 0317 | - | | F | Addition of eMIMO demod test case 5.2.3.1.11 | 16.8.0 |
| 2021-06 | RAN#92 | R5-212936 | 0318 | - | | F | Addition of eMIMO demod test case 5.2.3.2.11 | 16.8.0 |
| 2021-06 | RAN#92 | R5-212937 | 0319 | - | | F | Adding FRC for eMIMO demod test cases | 16.8.0 |
| 2021-06 | RAN#92 | R5-212977 | 0327 | - | | F | Updating G.1.2 for performance testing | 16.8.0 |
| 2021-06 | RAN#92 | R5-213306 | 0328 | - | | F | Introduction of additional PDSCH RMC for FDD | 16.8.0 |
| 2021-06 | RAN#92 | R5-213308 | 0329 | - | | F | Update of message exceptions in FR2 demod test cases | 16.8.0 |
| 2021-06 | RAN#92 | R5-213341 | 0330 | - | | F | Message content update in 5.2.2.2.1\_1 and 5.2.3.2.1\_1 test 1-9 | 16.8.0 |
| 2021-06 | RAN#92 | R5-213342 | 0331 | - | | F | Message content update in SA LTE-NR coexistence test cases | 16.8.0 |
| 2021-06 | RAN#92 | R5-213358 | 0334 | - | | F | Addition of FR1 PDSCH Demodulation CA with power imbalance test case | 16.8.0 |
| 2021-06 | RAN#92 | R5-213919 | 0313 | 1 | | F | Correction of derivation paths to 38.508-1 | 16.8.0 |
| 2021-06 | RAN#92 | R5-213920 | 0332 | 1 | | F | TT update to FR2 CQI reporting under fading test case | 16.8.0 |
| 2021-06 | RAN#92 | R5-214012 | 0326 | 1 | | F | Adding 256QAM into CQI reporting test case | 16.8.0 |
| 2021-06 | RAN#92 | R5-214016 | 0325 | 1 | | F | Adding FRC for URLLC demod test cases | 16.8.0 |
| 2021-06 | RAN#92 | R5-214058 | 0300 | 1 | | F | Update of FR2 demod test cases | 16.8.0 |
| 2021-06 | RAN#92 | R5-214059 | 0310 | 1 | | F | Correction to TC 9.4B.1.1-SDR performance | 16.8.0 |
| 2021-06 | RAN#92 | R5-214088 | 0307 | 1 | | F | Update to minimum test time | 16.8.0 |
| 2021-06 | RAN#92 | R5-214098 | 0333 | 1 | | F | Addition of FR1 normal PDSCH demodulation CA test case for 2CC | 16.8.0 |
| 2021-06 | RAN#92 | R5-214099 | 0320 | 1 | | F | Addition of URLLC demod test case 5.2.2.1.5 | 16.8.0 |
| 2021-06 | RAN#92 | R5-214100 | 0321 | 1 | | F | Addition of URLLC demod test case 5.2.2.2.5 | 16.8.0 |
| 2021-06 | RAN#92 | R5-214101 | 0322 | 1 | | F | Addition of URLLC demod test case 5.2.3.1.5 | 16.8.0 |
| 2021-06 | RAN#92 | R5-214102 | 0323 | 1 | | F | Addition of URLLC demod test case 5.2.3.2.5 | 16.8.0 |
| 2021-06 | RAN#92 | R5-214103 | 0324 | 1 | | F | Adding MU and TT for URLLC demod test cases | 16.8.0 |
| 2021-06 | RAN#92 | R5-214112 | 0306 | 1 | | F | Core alignment of common test parameters for PDCCH demodulation tests | 16.8.0 |
| 2021-09 | RAN#93 | R5-214533 | 0338 | - | | F | Updates on FRC for FR2 DL 256QAM | 16.9.0 |
| 2021-09 | RAN#93 | R5-215065 | 0353 | - | | F | Core spec alignment of RMC | 16.9.0 |
| 2021-09 | RAN#93 | R5-215084 | 0357 | - | | F | Addition of eMIMO demod test case 5.2.2.2.12 | 16.9.0 |
| 2021-09 | RAN#93 | R5-215085 | 0358 | - | | F | Addition of eMIMO demod test case 5.2.2.2.13 | 16.9.0 |
| 2021-09 | RAN#93 | R5-215090 | 0363 | - | | F | Addition of eMIMO demod test case 5.2.3.2.12 | 16.9.0 |
| 2021-09 | RAN#93 | R5-215091 | 0364 | - | | F | Addition of eMIMO demod test case 5.2.3.2.13 | 16.9.0 |
| 2021-09 | RAN#93 | R5-215092 | 0365 | - | | F | Addition of eMIMO demod test case 5.2.3.2.14 | 16.9.0 |
| 2021-09 | RAN#93 | R5-215093 | 0366 | - | | F | Adding FRC for eMIMO demod test cases | 16.9.0 |
| 2021-09 | RAN#93 | R5-215094 | 0367 | - | | F | Adding MU and TT for eMIMO demod test cases | 16.9.0 |
| 2021-09 | RAN#93 | R5-215103 | 0372 | - | | F | Addition of URLLC demod test case 5.2.3.2.7 | 16.9.0 |
| 2021-09 | RAN#93 | R5-215342 | 0380 | - | | F | Correction to reporting granularity for single PMI TCs | 16.9.0 |
| 2021-09 | RAN#93 | R5-215343 | 0381 | - | | F | Correction to test time for measuring CQI in Sub-band CQI TCs | 16.9.0 |
| 2021-09 | RAN#93 | R5-215345 | 0383 | - | | F | Correction to DCI bitlength for test 1-5 and 1-6 in TC 5.2.2.2.1\_1 and 5.2.3.2.1\_1 | 16.9.0 |
| 2021-09 | RAN#93 | R5-215470 | 0387 | - | | F | Correction of message exceptions in PDCCH test cases | 16.9.0 |
| 2021-09 | RAN#93 | R5-215609 | 0390 | - | | F | MTSU and TT mapping related to Max Device Size in TS 38.521-4 | 16.9.0 |
| 2021-09 | RAN#93 | R5-215610 | 0391 | - | | F | Update 9.4B.1.1 message content | 16.9.0 |
| 2021-09 | RAN#93 | R5-215663 | 0394 | - | | F | Updates to FR1 2DLCA PDSCH demodulation with power imbalance test case | 16.9.0 |
| 2021-09 | RAN#93 | R5-215665 | 0396 | - | | F | Editorial correction to the section 6.2.2.2.2 title | 16.9.0 |
| 2021-09 | RAN#93 | R5-215666 | 0397 | - | | F | Update to test coverage across 5G NR architecture options for Demod scenarios | 16.9.0 |
| 2021-09 | RAN#93 | R5-215901 | 0346 | 1 | | F | Update FR2 RI test configuration update for TS 38.521-4 | 16.9.0 |
| 2021-09 | RAN#93 | R5-215902 | 0382 | 1 | | F | Editorial error correction in Section 7 and 8 | 16.9.0 |
| 2021-09 | RAN#93 | R5-215934 | 0360 | 1 | | F | Addition of eMIMO demod test case 5.2.3.1.12 | 16.9.0 |
| 2021-09 | RAN#93 | R5-215937 | 0343 | 1 | | F | Update of Annex F for test cases of demodulation for power saving | 16.9.0 |
| 2021-09 | RAN#93 | R5-215942 | 0339 | 1 | | F | Updates to PDSCH Demodulation Performance for 2DL CA | 16.9.0 |
| 2021-09 | RAN#93 | R5-215944 | 0345 | 1 | | F | Update Applicability of requirement for HST-DPS and multi-TRxP test cases | 16.9.0 |
| 2021-09 | RAN#93 | R5-215946 | 0350 | 1 | | F | Addition of NR HST Demod TC 5.2.2.1.9 - HST SFN | 16.9.0 |
| 2021-09 | RAN#93 | R5-215947 | 0351 | 1 | | F | Addition of NR HST Demod TC 5.2.2.1.10 - HST DPS | 16.9.0 |
| 2021-09 | RAN#93 | R5-215950 | 0368 | 1 | | F | Completing CQI reporting test case with 256QAM | 16.9.0 |
| 2021-09 | RAN#93 | R5-215952 | 0369 | 1 | | F | Addition of URLLC demod test case 5.2.2.1.7 | 16.9.0 |
| 2021-09 | RAN#93 | R5-215953 | 0370 | 1 | | F | Addition of URLLC demod test case 5.2.2.2.7 | 16.9.0 |
| 2021-09 | RAN#93 | R5-215954 | 0374 | 1 | | F | Addition of 5.2.2.1.6 2Rx FDD FR1 PDSCH repetitions over multiple slots performance | 16.9.0 |
| 2021-09 | RAN#93 | R5-215955 | 0375 | 1 | | F | Addition of 5.2.2.1.8 2Rx FDD FR1 PDSCH pre-emption performance | 16.9.0 |
| 2021-09 | RAN#93 | R5-215956 | 0376 | 1 | | F | Addition of 5.2.2.2.6 2Rx TDD FR1 PDSCH repetitions over multiple slots performance | 16.9.0 |
| 2021-09 | RAN#93 | R5-215957 | 0377 | 1 | | F | Addition of 5.2.2.2.8 2Rx TDD FR1 PDSCH pre-emption performance | 16.9.0 |
| 2021-09 | RAN#93 | R5-215958 | 0378 | 1 | | F | Addition of 5.2.3.1.6 4Rx FDD FR1 PDSCH repetitions over multiple slots performance | 16.9.0 |
| 2021-09 | RAN#93 | R5-215959 | 0379 | 1 | | F | Addition of 5.2.3.2.6 4Rx TDD FR1 PDSCH repetitions over multiple slots performance | 16.9.0 |
| 2021-09 | RAN#93 | R5-216021 | 0385 | 1 | | F | Clean-up of parameter settings and message contents in 8.4.2.2.1 | 16.9.0 |
| 2021-09 | RAN#93 | R5-216040 | 0384 | 1 | | F | Correction to dedicated CORESET ID setting in PDCCH-Config for Standalone | 16.9.0 |
| 2021-09 | RAN#93 | R5-216041 | 0388 | 1 | | F | Update of message exceptions | 16.9.0 |
| 2021-09 | RAN#93 | R5-216071 | 0359 | 1 | | F | Addition of eMIMO demod test case 5.2.2.2.14 | 16.9.0 |
| 2021-09 | RAN#93 | R5-216072 | 0340 | 1 | | F | Addition of 2Rx TDD FR1 PDCCH 1 Tx antenna performance for power saving test case | 16.9.0 |
| 2021-09 | RAN#93 | R5-216073 | 0341 | 1 | | F | Addition of 4Rx TDD FR1 PDCCH 1 Tx antenna performance for power saving test case | 16.9.0 |
| 2021-09 | RAN#93 | R5-216074 | 0342 | 1 | | F | Addition of 2Rx TDD FR2 PDCCH 1 Tx antenna performance for power saving test case | 16.9.0 |
| 2021-09 | RAN#93 | R5-216075 | 0395 | 1 | | F | Updates to FR2 2DLCA PDSCH demodulation test case | 16.9.0 |
| 2021-09 | RAN#93 | R5-216076 | 0337 | 1 | | F | Addition of FR2 DL 256QAM demodulation test case | 16.9.0 |
| 2021-09 | RAN#93 | R5-216078 | 0371 | 1 | | F | Addition of URLLC demod test case 5.2.3.1.7 | 16.9.0 |
| 2021-09 | RAN#93 | R5-216096 | 0336 | 1 | | F | Update of FR2 demod test cases | 16.9.0 |
| 2021-09 | RAN#93 | R5-216112 | 0347 | 1 | | F | Addition of NR PS Demod TC 5.3.2.1.3-FR1 FDD 2Rx | 16.9.0 |
| 2021-09 | RAN#93 | R5-216113 | 0348 | 1 | | F | Addition of NR PS Demod TC 5.3.3.1.3-FR1 FDD 4Rx | 16.9.0 |
| 2021-09 | RAN#93 | R5-216118 | 0392 | 1 | | F | Update to FR2 NSA SDR TC 9.4B.1.2 | 16.9.0 |
| 2021-09 | RAN#93 | R5-216126 | 0354 | 1 | | F | Addition of eMIMO demod test case 5.2.2.1.12 | 16.9.0 |
| 2021-09 | RAN#93 | R5-216127 | 0355 | 1 | | F | Addition of eMIMO demod test case 5.2.2.1.13 | 16.9.0 |
| 2021-09 | RAN#93 | R5-216128 | 0356 | 1 | | F | Addition of eMIMO demod test case 5.2.2.1.14 | 16.9.0 |
| 2021-09 | RAN#93 | R5-216129 | 0361 | 1 | | F | Addition of eMIMO demod test case 5.2.3.1.13 | 16.9.0 |
| 2021-09 | RAN#93 | R5-216130 | 0362 | 1 | | F | Addition of eMIMO demod test case 5.2.3.1.14 | 16.9.0 |
| 2021-12 | RAN#94 | R5-216786 | 0403 | - | | F | Addition of applicability of different requirements with Multi-TRxP | 16.10.0 |
| 2021-12 | RAN#94 | R5-216787 | 0404 | - | | F | Update Applicability of requirements for optional UE features | 16.10.0 |
| 2021-12 | RAN#94 | R5-216908 | 0407 | - | | F | Addition of NR HST Demod TC 5.2.2.1.1\_1 - 2Rx FDD type A | 16.10.0 |
| 2021-12 | RAN#94 | R5-216909 | 0408 | - | | F | Addition of NR HST Demod TC 5.2.2.2.1\_1 - 2Rx TDD type A | 16.10.0 |
| 2021-12 | RAN#94 | R5-216910 | 0409 | - | | F | Correction to NR HST Demod TC 5.2.2.1.9\_1 - HST-SFN | 16.10.0 |
| 2021-12 | RAN#94 | R5-217059 | 0412 | - | | F | Correction to NR TC 5.3.2.1.1-2Rx FDD FR1 PDCCH 1 Tx antenna performance | 16.10.0 |
| 2021-12 | RAN#94 | R5-217060 | 0413 | - | | F | Correction to NR TC 5.3.3.2.1-PDCCH 1 Tx antenna performance | 16.10.0 |
| 2021-12 | RAN#94 | R5-217363 | 0430 | - | | F | Addition of RMC in Annex A for eMIMO enhanced typeII CSI reporting | 16.10.0 |
| 2021-12 | RAN#94 | R5-217364 | 0431 | - | | F | Addition of B.2.3.2.3A Beam steering approach with dual cluster beams | 16.10.0 |
| 2021-12 | RAN#94 | R5-217370 | 0434 | - | | F | Updating 5.2.x.y.7 PDSCH with UE processing capability 2 | 16.10.0 |
| 2021-12 | RAN#94 | R5-217375 | 0439 | - | | F | Update to Annex F for URLLC test cases | 16.10.0 |
| 2021-12 | RAN#94 | R5-217377 | 0441 | - | | F | Update to applicability of optional features for URLLC test cases | 16.10.0 |
| 2021-12 | RAN#94 | R5-217378 | 0442 | - | | F | Update to URLLC RMC for demodulation testing in Annex A | 16.10.0 |
| 2021-12 | RAN#94 | R5-217437 | 0443 | - | | F | Correction to frequencyDomainResources in PDCCHConfigCommon message exception | 16.10.0 |
| 2021-12 | RAN#94 | R5-217522 | 0446 | - | | F | Addition of DL and UL RMC for FR2 SDR test case | 16.10.0 |
| 2021-12 | RAN#94 | R5-217525 | 0449 | - | | F | Updates to FR1 normal PDSCH CA test cases | 16.10.0 |
| 2021-12 | RAN#94 | R5-217526 | 0450 | - | | F | Updates to FR2 normal PDSCH CA test cases | 16.10.0 |
| 2021-12 | RAN#94 | R5-218248 | 0424 | 1 | | F | Updating minimum test time in Annex G | 16.10.0 |
| 2021-12 | RAN#94 | R5-218308 | 0425 | 1 | | F | Addition of 6.3.2.1.6 2Rx FDD FR1 Multiple PMI with 16Tx Enhanced Type II codebook | 16.10.0 |
| 2021-12 | RAN#94 | R5-218309 | 0426 | 1 | | F | Addition of 6.3.2.2.6 2Rx TDD FR1 Multiple PMI with 16Tx Enhanced Type II codebook | 16.10.0 |
| 2021-12 | RAN#94 | R5-218310 | 0427 | 1 | | F | Addition of 6.3.3.1.6 4Rx FDD FR1 Multiple PMI with 16Tx Enhanced Type II codebook | 16.10.0 |
| 2021-12 | RAN#94 | R5-218311 | 0428 | 1 | | F | Addition of 6.3.3.2.6 4Rx TDD FR1 Multiple PMI with 16Tx Enhanced Type II codebook | 16.10.0 |
| 2021-12 | RAN#94 | R5-218312 | 0429 | 1 | | F | Addition of applicability of optional features in 6.1.1.3 | 16.10.0 |
| 2021-12 | RAN#94 | R5-218328 | 0405 | 1 | | F | Correction to PS Demod TC 5.3.2.1.3 - 2Rx | 16.10.0 |
| 2021-12 | RAN#94 | R5-218329 | 0406 | 1 | | F | Correction to PS Demod TC 5.3.3.1.3 - 4Rx | 16.10.0 |
| 2021-12 | RAN#94 | R5-218339 | 0420 | 1 | | F | Addition of new test case 6.3.2.1.5 2Rx FDD FR1 Multiple PMI with 16Tx TypeII codebook for both SA and NSA | 16.10.0 |
| 2021-12 | RAN#94 | R5-218340 | 0421 | 1 | | F | Addition of new test case 6.3.2.2.5 2Rx TDD FR1 Multiple PMI with 16Tx TypeII codebook for both SA and NSA | 16.10.0 |
| 2021-12 | RAN#94 | R5-218341 | 0422 | 1 | | F | Addition of new test case 6.3.3.1.5 4Rx FDD FR1 Multiple PMI with 16Tx TypeII codebook for both SA and NSA | 16.10.0 |
| 2021-12 | RAN#94 | R5-218342 | 0423 | 1 | | F | Addition of new test case 6.3.3.2.5 4Rx TDD FR1 Multiple PMI with 16Tx TypeII codebook for both SA and NSA | 16.10.0 |
| 2021-12 | RAN#94 | R5-218343 | 0444 | 1 | | F | Correction to TC 5.2.2.2.4\_1 and editorial corrections | 16.10.0 |
| 2021-12 | RAN#94 | R5-218344 | 0447 | 1 | | F | Addition of NE-DC SDR test case | 16.10.0 |
| 2021-12 | RAN#94 | R5-218345 | 0399 | 1 | | F | Addition of new test case 5.2.3.1.9\_1 for NR HST | 16.10.0 |
| 2021-12 | RAN#94 | R5-218346 | 0400 | 1 | | F | Addition of new test case 5.2.3.1.10\_1 for NR HST | 16.10.0 |
| 2021-12 | RAN#94 | R5-218347 | 0414 | 1 | | F | Addition of test case 5.2.2.2.9\_1, 2Rx TDD FR1 HST-SFN performance - 2x2 MIMO with baseline receiver for both SA and NSA | 16.10.0 |
| 2021-12 | RAN#94 | R5-218348 | 0415 | 1 | | F | Addition of test case 5.2.2.2.10\_1, 2Rx TDD FR1 HST-DPS performance - 2x2 MIMO with baseline receiver for both SA and NSA | 16.10.0 |
| 2021-12 | RAN#94 | R5-218349 | 0416 | 1 | | F | Addition of test case 5.2.3.2.9\_1, 4Rx TDD FR1 HST-SFN performance - 2x4 MIMO with baseline receiver for both SA and NSA | 16.10.0 |
| 2021-12 | RAN#94 | R5-218350 | 0418 | 1 | | F | Addition of test cases 5.2.2.2.9\_1, 5.2.2.2.10\_1, 5.2.3.2.9\_1 to annex F | 16.10.0 |
| 2021-12 | RAN#94 | R5-218357 | 0419 | 1 | | F | Update of URLLC demodulation Test Cases | 16.10.0 |
| 2021-12 | RAN#94 | R5-218358 | 0433 | 1 | | F | Updating 5.2.x.y.5 PDSCH with 1e-5 BLER | 16.10.0 |
| 2021-12 | RAN#94 | R5-218359 | 0435 | 1 | | F | Addition of 6.2.2.1.1.2 URLLC 2RX FDD CQI reporting test case | 16.10.0 |
| 2021-12 | RAN#94 | R5-218360 | 0440 | 1 | | F | Addition of statistical testing limit for URLLC test cases in Annex G | 16.10.0 |
| 2021-12 | RAN#94 | R5-218436 | 0453 | 1 | | F | Update to LTE-NR coex test case message exception | 16.10.0 |
| 2021-12 | RAN#94 | R5-218462 | 0432 | 1 | | F | Addition of MU and TT in Annex F for enhanced typeII CSI reporting | 16.10.0 |
| 2021-12 | RAN#94 | R5-218465 | 0401 | 1 | | F | Addition of PDCCH Search Space Ext configuration for power saving test case | 16.10.0 |
| 2021-12 | RAN#94 | R5-218466 | 0417 | 1 | | F | Update of test case 5.2.3.2.1\_1, 4Rx TDD FR1 PDSCH mapping Type A performance - 2x4 MIMO with baseline receiver for both SA and NSA | 16.10.0 |
| 2021-12 | RAN#94 | R5-218467 | 0436 | 1 | | F | Addition of 6.2.2.2.1.2 URLLC 2RX TDD CQI reporting test case | 16.10.0 |
| 2021-12 | RAN#94 | R5-218468 | 0437 | 1 | | F | Addition of 6.2.3.1.1.2 URLLC 4RX FDD CQI reporting test case | 16.10.0 |
| 2021-12 | RAN#94 | R5-218469 | 0438 | 1 | | F | Addition of 6.2.3.2.1.2 URLLC 4RX TDD CQI reporting test case | 16.10.0 |
| 2021-12 | RAN#94 | R5-218486 | 0445 | 1 | | F | Clarification on cl 4.6 test coverage across 5G NR architecture options for Demod | 16.10.0 |
| 2022-03 | RAN#95 | R5-220276 | 0454 | - | | F | Clarifications on 5G NR connectivity options for Demod | 16.11.0 |
| 2022-03 | RAN#95 | R5-220629 | 0460 | - | | F | Correction to demod TC 5.2.2.1.4\_1 | 16.11.0 |
| 2022-03 | RAN#95 | R5-220630 | 0461 | - | | F | Correction to demod TC 5.2.3.2.1\_1 | 16.11.0 |
| 2022-03 | RAN#95 | R5-220634 | 0463 | - | | F | Updates to HST test case 5.2.3.1.9\_1 | 16.11.0 |
| 2022-03 | RAN#95 | R5-220635 | 0464 | - | | F | Updates to HST test case 5.2.3.1.10\_1 | 16.11.0 |
| 2022-03 | RAN#95 | R5-220638 | 0467 | - | | F | Addition of fading profile power uncertainty for 4Tx, FR1 | 16.11.0 |
| 2022-03 | RAN#95 | R5-220651 | 0468 | - | | F | Editorial correction for test case title in Annex F | 16.11.0 |
| 2022-03 | RAN#95 | R5-220664 | 0469 | - | | F | Editorial change for the position of clause 5.2.3.1.9 and 5.2.3.1.10 | 16.11.0 |
| 2022-03 | RAN#95 | R5-220678 | 0471 | - | | F | Correcting applicability part of HST test cases in 38.521-4 | 16.11.0 |
| 2022-03 | RAN#95 | R5-220684 | 0473 | - | | F | Addition of new RMCs to Annex | 16.11.0 |
| 2022-03 | RAN#95 | R5-220686 | 0475 | - | | F | Correcting test applicability for EN-DC, rel-16 to rel-15 | 16.11.0 |
| 2022-03 | RAN#95 | R5-220751 | 0476 | - | | F | Correction to PS Demod TC 5.3.2.1.3 | 16.11.0 |
| 2022-03 | RAN#95 | R5-220764 | 0477 | - | | F | Updating test case 6.3.2.2.3, 2Rx TDD FR1 Single PMI with 16Tx Type1 - SinglePanel codebook for both SA and NSA | 16.11.0 |
| 2022-03 | RAN#95 | R5-220796 | 0478 | - | | F | Update to eMIMO demod test cases | 16.11.0 |
| 2022-03 | RAN#95 | R5-220820 | 0487 | - | | F | Adding testability description of 7.2.2.2.2 and 7.2.2.2.3 | 16.11.0 |
| 2022-03 | RAN#95 | R5-220936 | 0493 | - | | F | Editorial correction to 5.3.3.1.3 and 5.3.3.2.3 | 16.11.0 |
| 2022-03 | RAN#95 | R5-221153 | 0494 | - | | F | Update to FR1 CA normal PDSCH test cases | 16.11.0 |
| 2022-03 | RAN#95 | R5-221154 | 0495 | - | | F | Update to FR1 CA power imbalance test cases | 16.11.0 |
| 2022-03 | RAN#95 | R5-221155 | 0496 | - | | F | Update to FR2 CA normal PDSCH test cases | 16.11.0 |
| 2022-03 | RAN#95 | R5-221707 | 0499 | 1 | | F | Editorial update to PBCH demod requirements section | 16.11.0 |
| 2022-03 | RAN#95 | R5-221708 | 0500 | 1 | | F | Update to testability of test requirements due to achievable SNR improvements | 16.11.0 |
| 2022-03 | RAN#95 | R5-221709 | 0501 | 1 | | F | FR1 NSA SDR message contents update | 16.11.0 |
| 2022-03 | RAN#95 | R5-221710 | 0491 | 1 | | F | Correction to Annex H.1.2 | 16.11.0 |
| 2022-03 | RAN#95 | R5-221842 | 0455 | 1 | | F | Correction on Type I PMI test cases | 16.11.0 |
| 2022-03 | RAN#95 | R5-221843 | 0456 | 1 | | F | Addition of FR1 CA CQI test cases | 16.11.0 |
| 2022-03 | RAN#95 | R5-221844 | 0457 | 1 | | F | Addition of applicability for FR1 CA CQI test requirements | 16.11.0 |
| 2022-03 | RAN#95 | R5-221845 | 0474 | 1 | | F | Addition of test case 5.2.3.2.4\_1, 4Rx TDD FR1 PDSCH Mapping Type A and LTE-NR coexistence performance - 4x4 MIMO with baseline receiver for both SA and NSA | 16.11.0 |
| 2022-03 | RAN#95 | R5-221846 | 0497 | 1 | | F | Introduction of FR1 CA SDR test case | 16.11.0 |
| 2022-03 | RAN#95 | R5-221847 | 0458 | 1 | | F | Addition of FR2 CA CQI test cases | 16.11.0 |
| 2022-03 | RAN#95 | R5-221848 | 0459 | 1 | | F | Addition of applicability for FR2 CA CQI test requirements | 16.11.0 |
| 2022-03 | RAN#95 | R5-221854 | 0470 | 1 | | F | Addition of test case 5.2.3.2.10\_1, 4Rx TDD FR1 HST DPS performance - 2x4 MIMO with baseline receiver for both SA and NSA | 16.11.0 |
| 2022-03 | RAN#95 | R5-221855 | 0502 | 1 | | F | Update to HST Demod test cases | 16.11.0 |
| 2022-03 | RAN#95 | R5-221856 | 0465 | 1 | | F | Addition of HST test case 5.2.3.1.9\_1 to annex F | 16.11.0 |
| 2022-03 | RAN#95 | R5-221857 | 0466 | 1 | | F | Addition of HST test case 5.2.3.1.10\_1 to annex F | 16.11.0 |
| 2022-03 | RAN#95 | R5-221860 | 0480 | 1 | | F | Update to 5.2.x.y.5 PDSCH with 1e-5 BLER | 16.11.0 |
| 2022-03 | RAN#95 | R5-221861 | 0481 | 1 | | F | Update to 5.2.x.y.6 PDSCH with repetitions over multiple slots | 16.11.0 |
| 2022-03 | RAN#95 | R5-221862 | 0483 | 1 | | F | Update to 5.2.2.y.8 PDSCH pre-emption | 16.11.0 |
| 2022-03 | RAN#95 | R5-221863 | 0484 | 1 | | F | Addition of 5.2.3.1.8 PDSCH pre-emption 4Rx FDD | 16.11.0 |
| 2022-03 | RAN#95 | R5-221864 | 0485 | 1 | | F | Addition of 5.2.3.2.8 PDSCH pre-emption 4Rx TDD | 16.11.0 |
| 2022-03 | RAN#95 | R5-221865 | 0488 | 1 | | F | Addition of 7.2.2.2.2 FR2 PDSCH repetition | 16.11.0 |
| 2022-03 | RAN#95 | R5-221866 | 0489 | 1 | | F | Addition of 7.2.2.2.3 FR2 PDSCH mapping Type B | 16.11.0 |
| 2022-03 | RAN#95 | R5-221867 | 0479 | 1 | | F | Addition of minimum test time for 1% residual BLER | 16.11.0 |
| 2022-03 | RAN#95 | R5-221868 | 0486 | 1 | | F | Update to Annex F for URLLC test cases | 16.11.0 |
| 2022-06 | RAN#96 | R5-222231 | 0503 | - | | F | Update of Demod TC 5.2.2.1.9\_1 2Rx FDD FR1 HST-SFN performance | 16.12.0 |
| 2022-06 | RAN#96 | R5-222232 | 0504 | - | | F | Update of Demod TC 5.2.3.1.1\_1 4Rx FDD FR1 PDSCH mapping Type A perf for NR HST | 16.12.0 |
| 2022-06 | RAN#96 | R5-222233 | 0505 | - | | F | Update of Demod TC 5.2.3.1.9\_1 4Rx FDD FR1 HST-SFN performance | 16.12.0 |
| 2022-06 | RAN#96 | R5-222234 | 0506 | - | | F | Update of Demod TC 5.2.3.1.10\_1 4Rx FDD FR1 HST-DPS performance | 16.12.0 |
| 2022-06 | RAN#96 | R5-222498 | 0509 | - | | F | Correction to k0 value description | 16.12.0 |
| 2022-06 | RAN#96 | R5-222499 | 0510 | - | | F | Correction to coreset RB in 5.3.2.1.3 and 5.3.3.1.3 | 16.12.0 |
| 2022-06 | RAN#96 | R5-222585 | 0519 | - | | F | Update to FR1 CA SDR test case | 16.12.0 |
| 2022-06 | RAN#96 | R5-222595 | 0524 | - | | F | Correction to demod test case procedure | 16.12.0 |
| 2022-06 | RAN#96 | R5-222619 | 0525 | - | | F | Addition of NR SL Demod TC 11.1.2 - PSSCH | 16.12.0 |
| 2022-06 | RAN#96 | R5-222620 | 0526 | - | | F | Addition of NR SL Demod TC 11.1.3 - PSCCH | 16.12.0 |
| 2022-06 | RAN#96 | R5-222621 | 0527 | - | | F | Addition of NR SL Demod TC 11.1.4 - PSBCH | 16.12.0 |
| 2022-06 | RAN#96 | R5-222622 | 0528 | - | | F | Addition of NR SL Demod TC 11.1.5 - PSFCH | 16.12.0 |
| 2022-06 | RAN#96 | R5-222623 | 0529 | - | | F | Addition of NR SL Demod TC 11.1.6 - imbalance | 16.12.0 |
| 2022-06 | RAN#96 | R5-222624 | 0530 | - | | F | Addition of NR SL Demod TC 11.1.7 - soft buffer | 16.12.0 |
| 2022-06 | RAN#96 | R5-222625 | 0531 | - | | F | Addition of NR SL Demod TC 11.1.8 - PSCCH capability | 16.12.0 |
| 2022-06 | RAN#96 | R5-222627 | 0533 | - | | F | Correction to references for NR SL Demod | 16.12.0 |
| 2022-06 | RAN#96 | R5-222628 | 0534 | - | | F | Addition of NR SL Demod RMCs in Annex A | 16.12.0 |
| 2022-06 | RAN#96 | R5-222629 | 0535 | - | | F | Addition of test tolerance for NR SL Demod in Annex F | 16.12.0 |
| 2022-06 | RAN#96 | R5-222630 | 0536 | - | | F | Addition of test method for NR SL Demod in Annex G | 16.12.0 |
| 2022-06 | RAN#96 | R5-222895 | 0540 | - | | F | Update to URLLC test cases 5.2.x.y.7 | 16.12.0 |
| 2022-06 | RAN#96 | R5-222898 | 0543 | - | | F | Update to URLLC test case 7.2.2.2.3 | 16.12.0 |
| 2022-06 | RAN#96 | R5-223024 | 0547 | - | | F | Update of FR1 RI reporting test cases | 16.12.0 |
| 2022-06 | RAN#96 | R5-223048 | 0548 | - | | F | Removal of duplicate clauses from the Demod spec | 16.12.0 |
| 2022-06 | RAN#96 | R5-223049 | 0549 | - | | F | Addition of test case 6.3.3.2.4, 4Rx TDD FR1 Single PMI with 32Tx Type1 - SinglePanel codebook for both SA and NSA | 16.12.0 |
| 2022-06 | RAN#96 | R5-223107 | 0551 | - | | F | Correction in performance enhancement test cases 6.3.2.2.3, 6.3.2.2.4 and 6.3.3.2.3 | 16.12.0 |
| 2022-06 | RAN#96 | R5-223119 | 0552 | - | | F | Solving editor notes for Type I PMI test cases | 16.12.0 |
| 2022-06 | RAN#96 | R5-223120 | 0553 | - | | F | Solving editor notes for Type II PMI test cases | 16.12.0 |
| 2022-06 | RAN#96 | R5-223153 | 0554 | - | | F | Solve duplicated information in Annex | 16.12.0 |
| 2022-06 | RAN#96 | R5-223275 | 0555 | - | | F | Update of FR2 CQI CA test cases | 16.12.0 |
| 2022-06 | RAN#96 | R5-223704 | 0532 | 1 | | F | Addition of NR SL Demod TC 11.1.9 - PSFCH capability | 16.12.0 |
| 2022-06 | RAN#96 | R5-223714 | 0508 | 1 | | F | Correction to PDCCH parameters in 5.2.2.1.4 and 5.2.2.2.4 | 16.12.0 |
| 2022-06 | RAN#96 | R5-223715 | 0516 | 1 | | F | Update to FR1 CA normal PDSCH test cases | 16.12.0 |
| 2022-06 | RAN#96 | R5-223716 | 0517 | 1 | | F | Update to FR1 CA power imbalance test cases | 16.12.0 |
| 2022-06 | RAN#96 | R5-223717 | 0520 | 1 | | F | Update to FR1 CA CQI reporting test case | 16.12.0 |
| 2022-06 | RAN#96 | R5-223718 | 0518 | 1 | | F | Update to FR2 CA normal PDSCH test cases | 16.12.0 |
| 2022-06 | RAN#96 | R5-223719 | 0521 | 1 | | F | Introduction of FR2 CA SDR test case | 16.12.0 |
| 2022-06 | RAN#96 | R5-223722 | 0544 | 1 | | F | Editorial, removal of editors note in test case 5.2.2.2.10\_1 | 16.12.0 |
| 2022-06 | RAN#96 | R5-223723 | 0545 | 1 | | F | Adding TT and removal of editors note in test case 5.2.3.2.9\_1 | 16.12.0 |
| 2022-06 | RAN#96 | R5-223724 | 0546 | 1 | | F | Adding TT and removal of editors note in test case 5.2.3.2.10\_1 | 16.12.0 |
| 2022-06 | RAN#96 | R5-223726 | 0539 | 1 | | F | Update to URLLC test cases 5.2.x.y.6 | 16.12.0 |
| 2022-06 | RAN#96 | R5-223727 | 0537 | 1 | | F | Update to Annex G for minimum test time | 16.12.0 |
| 2022-06 | RAN#96 | R5-223728 | 0538 | 1 | | F | Update to Annex F for URLLC test cases | 16.12.0 |
| 2022-06 | RAN#96 | R5-223837 | 0512 | 1 | | F | Correction to the reference of test frequency | 16.12.0 |
| 2022-06 | RAN#96 | R5-223838 | 0513 | 1 | | F | Clarification of UL RMC in FR1 PMI test cases | 16.12.0 |
| 2022-06 | RAN#96 | R5-223839 | 0515 | 1 | | F | Update of LTE-NR coexistence test cases | 16.12.0 |
| 2022-06 | RAN#96 | R5-223840 | 0514 | 1 | | F | Update of FR2 test cases | 16.12.0 |
| 2022-06 | RAN#96 | R5-223841 | 0522 | 1 | | F | Introduction of FR2 SDR test case | 16.12.0 |
| 2022-06 | RAN#96 | R5-223871 | 0511 | 1 | | F | Correction to CSI-Report periodicity and offset in 6.2A.3.1 | 16.12.0 |
| 2022-09 | RAN#97 | R5-224502 | 0556 | - | | F | Re-orginzation of NR SL Demod test cases | 16.13.0 |
| 2022-09 | RAN#97 | R5-224503 | 0557 | - | | F | Correction to Annex F for NR SL Demod TCs | 16.13.0 |
| 2022-09 | RAN#97 | R5-224633 | 0559 | - | | F | Core alignment and editorial corrections for FR1 Demodulation CA test cases | 16.13.0 |
| 2022-09 | RAN#97 | R5-224642 | 0560 | - | | F | Correction to CQI-RI-PMI delay in 6.2A.3.1 | 16.13.0 |
| 2022-09 | RAN#97 | R5-224643 | 0561 | - | | F | Correction to DCI bit size in 5.2.2.2.4\_1 | 16.13.0 |
| 2022-09 | RAN#97 | R5-224644 | 0562 | - | | F | Correction to message exception in 5.2.3.2.10\_1 | 16.13.0 |
| 2022-09 | RAN#97 | R5-224655 | 0563 | - | | F | Addition of missing message exceptions for CQI tests | 16.13.0 |
| 2022-09 | RAN#97 | R5-224657 | 0565 | - | | F | Update of FR2 PDCCH TCs | 16.13.0 |
| 2022-09 | RAN#97 | R5-225004 | 0569 | - | | F | Editorial correction to sub-clause ID for test requirement to TC5.2.3.2.1\_x | 16.13.0 |
| 2022-09 | RAN#97 | R5-225110 | 0573 | - | | F | Correction of aperiodicTriggeringOffset | 16.13.0 |
| 2022-09 | RAN#97 | R5-225118 | 0575 | - | | F | Correction of CQI reporting test cases | 16.13.0 |
| 2022-09 | RAN#97 | R5-225121 | 0577 | - | | F | Update of minimum test time | 16.13.0 |
| 2022-09 | RAN#97 | R5-225208 | 0578 | - | | F | Update CQI report periodicity for TDD FR1 periodic wideband CQI reporting under fading conditions | 16.13.0 |
| 2022-09 | RAN#97 | R5-225670 | 0566 | 1 | | F | FR2 demod testability update | 16.13.0 |
| 2022-09 | RAN#97 | R5-225726 | 0579 | 1 | | F | Corrections for FDD Power Saving test cases | 16.13.0 |
| 2022-09 | RAN#97 | R5-225727 | 0580 | 1 | | F | Corrections for TDD Power Saving test cases | 16.13.0 |
| 2022-09 | RAN#97 | R5-225809 | 0558 | 1 | | F | Core alignment and editorial corrections for FR1 CSI CA test cases | 16.13.0 |
| 2022-09 | RAN#97 | R5-225810 | 0572 | 1 | | F | Removal of brackets for DCI format in clause 5 | 16.13.0 |
| 2022-09 | RAN#97 | R5-225811 | 0574 | 1 | | F | Correction of NR-LTE coexistence test cases | 16.13.0 |
| 2022-09 | RAN#97 | R5-225812 | 0576 | 1 | | F | Clarification of UL RMC in FR1 aperiodic CQI reporting tests | 16.13.0 |
| 2022-09 | RAN#97 | R5-225813 | 0564 | 1 | | F | Addition of missing RMC for PDCCH tests | 16.13.0 |
| 2022-12 | RAN#98 | R5-225992 | 0581 | | - | F | Removal of technical content in 38.521-4 v16.13.0 and substitution with pointer to the next Release | 16.14.0 |