**3GPP TSG-RAN4 Meeting #116 *R4-2512544***

**Bengaluru, India, 25th Aug 2025 - 29th Aug 2025**

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.101-5** | **CR** | **0206** | **rev** | **-** | **Current version:** | **19.1.1** |  |
|  | | | | | | | | |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network |  |

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|  | | | | | | | | | | |
| ***Title:*** | Addition of Ku bands to section 4 applicability | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Eutelsat Group | | | | | | | | | |
| ***Source to TSG:*** |  | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_NTN\_Ku\_bands-Core | | | | |  | ***Date:*** | | | 2025-08-15 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-19 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | The applicable sections for the addition of Ku bands using FR1-NTN above 10 GHz need to be specified | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | The applicability of sections is defined based on presence of a temporary antenna connector (implied by frequency) rather than numerology. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Ambiguity of which requirements (radiated or conducted) apply to equipment operating in bands above 10 GHz for which FR1 numerology is specified. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 4 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **N** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  | **N** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **N** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

# 4 General

## 4.1 Relationship between minimum requirements and test requirements

The present document is a Single-RAT specification for satellite NR UE, covering RF characteristics and minimum performance requirements. Conformance to the present specification is demonstrated by fulfilling the test requirements specified in the conformance specification 3GPP TS 38.521-5 [2].

The Minimum Requirements given in this specification make no allowance for measurement uncertainty. The test specification 3GPP TS 38.521-5 [2] defines test tolerances. These test tolerances are individually calculated for each test. The test tolerances are used to relax the minimum requirements in this specification to create test requirements. For some requirements, including regulatory requirements, the test tolerance is set to zero.

The measurement results returned by the test system are compared - without any modification - against the test requirements as defined by the shared risk principle.

The shared risk principle is defined in Recommendation ITU‑R M.1545 [3].

## 4.2 Applicability of minimum requirements

a) In this specification the Minimum Requirements are specified as general requirements and additional requirements. Where the Requirement is specified as a general requirement, the requirement is mandated to be met in all scenarios

b) For specific scenarios for which an additional requirement is specified, in addition to meeting the general requirement, the UE is mandated to meet the additional requirements.

c) The spurious emissions power requirements are for the long-term average of the power. For the purpose of reducing measurement uncertainty, it is acceptable to average the measured power over a period of time sufficient to reduce the uncertainty due to the statistical nature of the signal.

d) In table 4.2-1, the requirement applicability for the NR NTN bands in each NTN frequency range (as specified in Table 5.1-1) is defined. For each requirement, the applicable requirement clause in the specification is identified. Requirements not included in a requirement set is marked not applicable (NA).

Table 4.2-1: *Requirement set* applicability

|  |  |  |
| --- | --- | --- |
| Requirement | *Requirement set* | |
|  | Group C bands | Group R bands |
| Band | N256, n255, n254 | N509, n508, n248, n247 |
| Conducted transmitter characteristics | Clause 6 | NA |
| Conducted receiver characteristics | Clause 7 | NA |
| Conducted performance requirements | Clause 8 | NA |
| Radiated transmitter characteristics | NA | Clause 9 |
| Radiated receiver characteristics | NA | Clause 10 |
| Demodulation performance requirements (Radiated requirements) | NA | Clause 11 |

## 4.3 Specification suffix information

Specification suffix information is not defined for the time being in this release of specification.

## 4.4 Relationship with other core specifications

The present document establishes the minimum RF and performance requirements for NR User Equipment (UE) operating in a Non-Terrestrial Network. The present document for the single-RAT specification of a satellite NR UE side is used together with the technical specification 3GPP TS 38.108 [4] specifying the Satellite Access Node (SAN).