**3GPP TSG RAN5 Meeting #108 *R5-254912***

**Bengaluru, India, August 25-29, 2025**

**3GPP TSG RAN Meeting #109 *RP-25xxxx***

**Beijing, China, September 15-18, 2025**

**Source: ZTE Corporation, Huawei, China Telecom**

**Title: New WID on UE Conformance – Additional NR bands for NR features in Rel-19**

**Document for: Endorsement**

**Agenda Item: 4.1**

3GPP™ Work Item Description

Information on Work Items can be found at <http://www.3gpp.org/Work-Items>   
See also the [3GPP Working Procedures](http://www.3gpp.org/specifications-groups/working-procedures), article 39 and the TSG Working Methods in [3GPP TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm)

# Title: UE Conformance – Additional NR bands for NR features in Rel-19

## Acronym: NR\_bands\_xFeature\_R19-UEConTest

## Unique identifier: xxxxxxx

|  |  |  |
| --- | --- | --- |
| **This WID includes a Testing part** | | **X** |
| **and it addresses the following 3GPP work area:** | **Radio Access** | **X** |
| **Core Network** |  |
| **Services** |  |

Potential target Release: Rel-19

## 1 Impacts

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Affects:** | UICC apps | ME | AN | CN | Others (specify) |
| **Yes** |  |  |  |  |  |
| **No** | X | X | X | X | X |
| **Don't know** |  |  |  |  |  |

## 2 Classification of the Work Item and linked work items

### 2.1 Primary classification

This description is a

|  |  |
| --- | --- |
| Normative Work Item:  *tick applicable boxes below* | |
|  | Stage 1 |
|  | Stage 2 |
|  | Stage 3 |
| X | Other (e.g. testing) |

### 2.2 Parent Work Item

For a brand-new topic, use “N/A” in the table below. Otherwise indicate the parent Work Item.

|  |  |  |  |
| --- | --- | --- | --- |
| Parent Work / Study Items | | | |
| Acronym | Working Group | Unique ID | Title (as in 3GPP Work Plan) |
| NR\_bands\_xFeature\_R19 | R4 | 1040121 | Additional NR bands for NR features in Rel-19 |
| NR\_bands\_xFeature\_R19-Core | R4 | 1041121 | Core part: Additional NR bands for NR features in Rel-19 |

### 2.3 Other related Work Items and dependencies

|  |  |  |  |
| --- | --- | --- | --- |
| Other related Work/Study Items (if any) | | | |
| **Acronym** | Unique ID | Title | Nature of relationship |
| NR\_ENDC\_RF\_FR1\_enh2-UEConTest | 1030066 | UE Conformance - Further RF requirements enhancement for NR and EN-DC in frequency range 1 | There is dependency on completion of the existing WI NR\_ENDC\_RF\_FR1\_enh2-UEConTest. |

## 3 Justification

3GPP TSG RAN WG4 has created the Rel-19 WID for additional NR bands for NR features. The WID is to support a number of NR features for the band specific requirements. Following requirements are introduced into the tables of core specifications where the band specific requirements are specified:

* **NR feature: UL-MIMO for a single band**
  + The introduction of NR bands with UL-MIMO happened in Rel-16 WI NR\_RF\_FR1 and in Rel-17 WI NR\_bands\_UL\_MIMO\_PC3\_R17 for PC1.5/2/3. The work continued in Rel-18 WI NR\_bands\_UL\_MIMO\_R18 for PC1.5/2/3/5.
  + The Rel-19 basket WI is setup to introduce further NR bands with UL-MIMO for PC5, PC3, PC2 and PC1.5 UE power class.
  + Note: PC1.5/2/3/5 means the power class 1.5/2/3/5, where the corresponding maximum output power are defined in Table 6.2.1-1 and Table 6.2F.1-1 in TS 38.101-1, respectively.
* **NR features: 4Rx and 8Rx**
  + To provide higher throughput and better coverage, the 4Rx UE requirements had been introduced based on the operator and market’s demand in the previous releases from Rel-15 to Rel-18.
  + Similar to 4Rx, the bands supporting 8Rx are added to RAN4 specification based on operators’ demands. In Rel-18, CPE/FWA/vehicle/industrial devices are applied to 8Rx in terms of the WID NR\_ENDC\_RF\_FR1\_enh2.
  + The Rel-19 basket WI is created to include the corresponding 4Rx and 8Rx requirements for NR FR1 bands (<2.6GHz) in the RAN4 specifications.

The RAN4 WID had a 75% completion level as of RAN#108. It’s time for 3GPP TSG RAN5 to start working on the corresponding conformance testing part to meet the industry interest.

## 4 Objective

### 4.1 Objective of SI or Core part WI or Testing part WI

The objective of this work item is to develop RF test cases for Rel-19 additional NR bands for NR features covered by the RAN4 work items.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Band** | **Objectives name** | **Power class** | **Additional information** | **status** |
| n2 | Obj#1: UL-MIMO for a single band | PC2 | UL MIMO applies to all UE form factor | Completed |
| n85 | Obj#1: UL-MIMO for a single band | PC2 | Note: if this requested band with UL MIMO applies to all UE form factor | Completed |
| n100 | Obj#1: UL-MIMO for a single band | PC3 | Applies to all UE form factors | Completed |
| n101 | Obj#1: UL-MIMO for a single band | PC3 | Applies to all UE form factors | Completed |
| n13 | Obj#2: 4Rx | N/A | 4Rx operation is primarily for FWA form factor, and can be supported by handheld UE | Completed for FWA Completed for handheld UE |
| n85 | Obj#2: 4Rx | N/A | 4Rx operation is primarily for FWA form factor, and can be supported by handheld UE. | Completed for FWA Ongoing for handheld UE |
| n1 | Obj#3: 8Rx | N/A | 8 Rx operation is targeted for FWA/CPE/Vehicle/Industrial devices form factor. | Completed |
| n3 | Obj#3: 8Rx | N/A | 8 Rx operation is targeted for FWA/CPE/Vehicle/Industrial devices form factor. | Completed |
| n25 | Obj#3: 8Rx | N/A | 8 Rx operation is targeted for FWA/CPE/Vehicle/Industrial devices form factor. | Completed |
| n34 | Obj#3: 8Rx | N/A | 8 Rx operation is targeted for FWA/CPE/Vehicle/Industrial devices form factor. | Completed |
| n39 | Obj#3: 8Rx | N/A | 8 Rx operation is targeted for FWA/CPE/Vehicle/Industrial devices form factor. | Completed |
| n66 | Obj#3: 8Rx | N/A | 8 Rx operation is targeted for FWA/CPE/Vehicle/Industrial devices form factor. | Ongoing |

Note 1: RAN5 work on this WI for 8Rx shall be started only after the completion of the dependent RAN5 WI listed in clause 2.3.

In the conformance test WI, example bands would be selected from the above list based on the industry interest to complete the new RF test cases.

## 5 Expected Output and Time scale

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **New specifications** | | | | | |
| Type | TS/TR number | Title | For info  at TSG# | For approval at TSG# | Remarks |
|  |  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Impacted existing TS/TR** | | | |
| TS/TR No. | Description of change | Target completion plenary# | Remarks |
| 38.508-1 | Definition of common test environment for additional NR bands for NR features in Rel-19 | TSG RAN#114 (Dec-26) |  |
| 38.508-2 | Introduction of common implementation conformance statement (ICS) for additional NR bands for NR features in Rel-19 | TSG RAN#114 (Dec-26) |  |
| 38.521-1 | Introduction of test aspect of RF requirements for additional NR bands for NR features in Rel-19 | TSG RAN#114 (Dec-26) |  |
| 38.522 | Applicability statements of additional NR bands for NR features in Rel-19 | TSG RAN#114 (Dec-26) |  |
| 38.905 | Documentation of test points for additional NR bands for NR features in Rel-19 | TSG RAN#114 (Dec-26) |  |

## 6 Work item Rapporteur(s)

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## 7 Work item leadership

RAN5

## 8 Aspects that involve other WGs

None

## 9 Supporting Individual Members

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| --- |
| Supporting IM name |
| ZTE Corporation |
| Huawei |
| China Telecom |
| Sanechips |
| HiSilicon |
| CATT |
| China Unicom |
| NTT Docomo |
| vivo |
| CMCC |
| Xiaomi |
| Samsung |
| Tejet |
| SRTC |
| MediaTek |
| Verizon |
| AT&T |
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