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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Features** | **Index** | **Feature group** | **Components** | **Prerequisite feature groups** | **Need for the gNB to know if the feature is supported** | **Applicable to the capability signalling exchange between UEs (V2X WI only)”.** | **Consequence if the feature is not supported by the UE** | **Type**  **(the ‘type’ definition from UE features should be based on the granularity of 1) Per UE or 2) Per Band or 3) Per BC or 4) Per FS or 5) Per FSPC)** | **Need of FDD/TDD differentiation** | **Need of FR1/FR2 differentiation** | **Capability interpretation for mixture of FDD/TDD and/or FR1/FR2** | **Note** | **Mandatory/Optional** |
| 52. NR\_Mob\_Ph4 | 52-1 | Number of CSI-RS resources for L1-RSRP measurement within a slot | * The max number of CSI-RS resources for L1-RSRP measurement that UE can measure within a slot across candidate cells for L1-RSRP measurement | 63-1 | Yes | No | There is no limitation on the number of CSI-RS resources for L1 measurement within a slot. | Per BC | No | No | N/A | Candidate value: {1,2,3,4,5,6,7,8,16,32, 48,64}   * Note: It is also counted in FG 2-24 | Optional with capability signaling |
| 52-2 | Number of total CSI-RS resources to be measured | * The max number of total CSI-RS resources of serving cells and candidate cells across all CCs for L1 measurement. Both LTM candidate cell(s) and serving cells for CSI-RS based L1-RSRP measurement are counted, regardless of whether CSI-RS based L1-RSRP measurement on serving cell is configured in LTM-CSI-ResourceConfig-r18 or not. | 63-1 | Yes | No | There is no limitation on the total number of CSI-RS resources of serving cells and neighbouring cells across all CCs for L1 measurement. | Per BC | No | No | N/A | Candidate values:  {2,4,8,12,16,32,64}   * Note: the value should be not smaller than UE capability of beamManagementSSB-CSI-RS (Component 2 of 2-24) | Optional with capability signaling |
| 52-3 | Skip SSB based L1-RSRP measurement for candidate cell CSI-RS-based L1-RSRP measurement | * Indicates support for skipping SSB-based L1-RSRP during neighboring cell CSI-RS-based L1-RSRP measurement. * Indicates support for skipping SSB-based L1-RSRP during both neighboring cell and serving cell CSI-RS-based L1-RSRP measurement. | 63-1 | Yes | N/A | SSB based L1-RSRP cannot skipped while performing CSI-RS based L1-RSRP | Per UE | no | FR2-1 only | N/A |  | Optional with capability signalling |

# Topic #3: CSI-RS based L1 measurement

#### Issue 3-1: whether skipping step 2 for a serving cell when included in LTM candidate cell

* Proposals
  + Proposal 1: For CSI-RS based L1-RSRP measurement in FR2-1, step 2 can not be skipped when the candidate cell is a serving cell, e.g., PSCell or SCell. (MediaTek, CATT, China Telecom, Apple, Xiaomi, CMCC, vivo, Huawei, Ericsson)
    - Proposal 1a: Clarify in the measurement requirement applicability that the requirement is not applicable when a FR2 serving cell is included in the candidate cell for LTM. [Apple, OPPO]
  + Proposal 2: Prefer to keep step2 about SSB-based L1 measurements and reports on serving cell when it is in the candidate cell for LTM. (ZTE)
  + Proposal 3: When CSI-RS resources are configured for an FR2 serving cell measurements, the applicability of requirements is determined as follows: (Qualcomm)
    - If the CSI-RS resources are configured in an LTM candidate configuration (LTM-Candidate), the same requirements as those defined for CSI-RS-based FR2 LTM candidate cell measurements apply.
    - Otherwise, the requirements defined for the FR2 serving cell apply.
  + Proposal 4: Nokia
    - If serving cell is also current LTM candidate cell, the UE shall perform CSI-RS beam management measurements according to the beam management configuration and requirements
    - At least step 2 can be skipped if the serving cell is current candidate cell.
    - Step 3 can be skipped if the candidate cell is current serving cell as UE can use or report CSI-RS beam management measurements.
* Recommended WF
  + Discuss if proposal 1 can be agreed.

1st round online outcome:

**Option 1 direction**: (Apple, MTK, HW, ZTE, vivo, CATT, E///)

For CSI-RS based L1-RSRP measurement in FR2-1, the new requirement skipping step 2 does not apply for serving cell.

Concern: QC

**Option 2**: (MTK, HW, Apple, QC)

remove the enhanced UE capability on step 2 skipping.

Concern: E///