ROHDE&SCHWARZ

Release Note 3.2.80 for LTE Measurement

New Features compared to version 3.2.70:

- PUCCH / PUSCH / SRS time mask and SRS blanking time mask also for TDD
- Peak values of the EVM vs subcarrier trace are available via remote commands
- Spectrum emission mask: maximum number of areas per mask enhanced from 10 to 12

Bug Fixes compared to version 3.2.70:

None

Known Issues:

None

Release Note 3.2.70 for LTE Measurement

New Features compared to version 3.2.60:

- Enhanced measurements for uplink carrier aggregation (CA)
  - Requires KM502 for FDD or KM552 for TDD
  - For inband emissions, RB allocation table and power monitor both carriers are measured in parallel and the results are available per carrier
  - For spectrum emission mask and spectrum ACLR the measurements are done for the aggregated bandwidth of both carriers
  - Added network signaled values for CA
  - Added spectrum limits for CA
- Additional power dynamics time masks
- Added network signaled values NS11 to NS18 and NS20
- New modulation results: gain imbalance and quadrature error
- List mode enhancements:
  - Added IF power as retrigger source
  - Maximum number of measured subframes increased to 4000 (CMW-B100D or -U100D required)

Bug Fixes compared to version 3.2.60:

None

Known Issues:

None

Release Note 3.2.60 for LTE Measurement

New Features compared to version 3.2.50:

Maximum number of instances increased from two to four in all remote commands.

Bug Fixes compared to version 3.2.50:

Fixed the problem that after a sub-instrument split the names of selectable trigger sources did not always include the right instance numbers.

Known Issues:

None

Release Note 3.2.50 for LTE Measurement

New Features compared to version 3.2.20:

Support for autoscale of y-axis in power monitor view.

Bug Fixes compared to version 3.2.20:

None

Known Issues:

None

Release Note 3.2.20 for LTE Measurement

New Features compared to version 3.2.10:

None

Bug Fixes compared to version 3.2.10:

List mode ACLR measurement results corrected.

Known Issues:

None

Release Note 3.2.10 for LTE Measurement

New Features compared to version 3.0.50:

- Support of frequency offset.
- For NS_11 additional limits are used for spectrum emission mask.

Bug Fixes compared to version 3.0.50:

None

Known Issues:

List mode commands for retrieving ACLR results do not always return the correct values.

Release Note 3.0.50 for LTE Measurement

New Features compared to version 3.0.30:

- Requires R&S CMW base software version 3.0.15 or later.
- Maximum number of measured list mode segments increased to 1000.

Bug Fixes compared to version 3.0.30:

None

Known Issues:

None

Release Note 3.0.30 for LTE Measurement

New Features compared to version 3.0.20:

- Support of operating bands 27, 28 and 44
- While the combined signal path scenario is active, group hopping is controlled by the signaling application

Bug Fixes compared to version 3.0.20:

None

Known Issues:

None

Release Note 3.0.20 for LTE Measurement

New Features compared to version 3.0.10:

- Command for query of "View Filter Throughput"
  FETCh: LTE: MEAS<i>:MEValuation: VFTHroughput?

Bug Fixes compared to version 3.0.10:

- List mode: commands for retrieving ACLR results return result in dB with correct sign for EUTRA1, UTRA1 and UTRA2 now
  (FETCh:LTE:MEAS<i>:MEValuation:LIST:ACLR:NEGative|POSitive:CURRent?)
- Measurement views “Error Vector Magnitude”, “Phase Error” and “Magnitude Error” the X-achsis shows the correct number of symbols again.

Known Issues:

None

Release Note 3.0.10 for LTE Measurement

New Features compared to version 2.1.30:

- The BLER measurement has been enhanced:
  - Missing answers (no ACK/NACK) are counted as DTX
  - PUSCH is counted as NACK
  - BLER result is calculated from ACK, NACK and DTX
  - The number of scheduled subframes per radio frame must be specified. The number of already processed scheduled subframes is indicated as result.
- Modulation analysis for signals containing SRS symbols added
- List mode enhancements:
  - New commands for retrieval of single list mode results for all measured segments
  - Retrieval of segment reliability: FETCh:LTE:MEAS<i>:MEValuation:LIST:SRELiability?
  - Definition of RB allocation per segment:
    CONFigure:LTE:MEAS<i>:MEValuation:LIST:SEGMent<no>:RBALlocation
- The LTE multi evaluation measurement, the LTE PRACH measurement and the LTE SRS measurement have been grouped in the GUI. The "TX Measurement" entry in the

"Measurement Controller" dialog refers to all three measurements. The TX measurement view contains all measurements on separate tabs.

Bug Fixes compared to version 2.1.30:

None

Known Issues:

- In measurement views “Error Vector Magnitude”, “Phase Error” and “Magnitude Error” the X-achsis shows one symbol too much which does not have measurement results.

- List mode: new commands for retrieving ACLR results return in most cases values in dBm with positive sign instead of dB for EUTRA1, UTRA1 and UTRA2 (FETCh:LTE:MEAS<i>:MEValuation:LIST:ACLR:NEGative|POSitive:CURRent?)

Release Note 2.1.30 for LTE Measurement

New Features compared to version 2.1.25:

- List mode: maximum number of measured segments increased to 512
  Version 2.1.27 or later of the R&S CMW base software is required. Older base software versions support only 250 segments
- List mode: new commands for retrieval of single results for all measured segments
- The TPC mode can also be used with the standalone scenario. A list of expected nominal power values to be applied can be defined.
- Operating band changes:
  - Added FDD operating bands 15 and 16
  - Added FDD operating band 22 (option R&S CMW-KB036 required)
  - Added TDD operating bands 42 and 43 (option R&S CMW-KB036 required)
- Performance of MELM configuration improved

Bug Fixes compared to version 2.1.25:

None

Known Issues:

None

Release Note 2.1.25 for LTE Measurement

New Features compared to version 2.1.20:

- High dynamic mode for power dynamics measurements
- New trigger parameter selecting slot or subframe synchronization (Acquisition Mode)
- Additional equalizer spectrum flatness results available via remote control commands: minimum and maximum values within range 1 and range 2
- List mode: maximum number of measured segments increased to 250

Bug Fixes compared to version 2.1.20:

- List Mode ACLR measurement results corrected
- SRS measurement TDD mode: OnPower (SRS2) was not taken into account for Out of Tolerance counter. This is fixed now.
- PRACH measurement TDD mode: Out of Tolerance counter was always 100% even no limit was exceeded. This is fixed now.
- When performing PRACH or SRS measurements the power level dropped -30dB after 30..60 seconds. This is fixed now.

Known Issues:

None

Release Note 2.1.20 for LTE Measurement

New Features compared to version 2.1.10:

- New measurement mode for TPC measurements
- Improvement of view "Equalizer Spectrum Flatness": visualization of range 1 and range 2
- New operating bands 24, 25 and 41
- Unit of trigger delay time changed from slots to µs at the GUI and to seconds in TRIGger:LTE:MEAS<i>:MEValuation:DELay
- List mode changes:

  In the GUI the list mode can now be disabled via the new parameter "Measurement Mode".

  The old parameter "List Mode > Enable" has been removed

  Segments without any enabled measurement now "cost" only one subframe of the

maximum possible 2000 measured subframes, independent of how many subframes are assigned to the segment

- PRACH measurement: Measurement of up to 16 preambles per measurement interval. Presentation of EVM and power results per preamble in new views

Bug Fixes compared to version 2.1.10:

none

Known Issues:

None

Release Note 2.1.10 for LTE Measurement

New Features compared to version 2.0.20:

- New measurement SRS to measure sounding reference signals
- List mode enhancement: inactive segments are not measured which may increase the total number of segments
- Maximum number of subframes that can be measured per measurement cycle increased to 320
- CONFigure:LTE:MEAS<i>:PRACh:FSTRucture renamed to CONFigure:LTE:MEAS<i>:FSTRucture
- *RST values modified for CONFigure:LTE:MEAS<i>:PRACh:MODulation:EWLength (see user manual)

Bug Fixes compared to version 2.0.20:

none

Known Issues:

None