

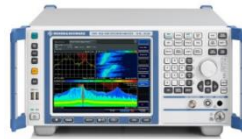
# LabVIEW driver history for the R&S® Spectrum Analyzers Driver Documentation

## Products:

| R&S®FSW



| R&S®FSVR



| R&S®FPS



| R&S®FSV / FSVA



| R&S®FSWP



| R&S®FSV3000 / FSVA3000



| R&S®FSMR3000



| R&S®FSPN



Driver history for LabVIEW

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# 1 Supported Instruments

In the following table, the supported R&S instruments and firmware versions are listed:

<b>Which instruments are supported?</b>		
<b>Current revision of instrument driver supports these instruments and firmware versions:</b>		
<b>Instrument</b>	<b>Supported Firmware</b>	<b>Remarks</b>
FSW	5.20	
FSV	3.40	
FSVR	1.63	
FPS	1.60	
FSWP	3.00	
FSVA	3.70	
FSV3000	1.80	
FSVA3000	1.80	
FSMR3000	1.01	
FSPN	3.00	

## 2 Installation of the LabVIEW driver

Before you start the installer, please close your LabVIEW application.

### 2.1 Installation on a Windows machine

The driver is distributed as a WinZip self-extracting executable file. Installer supported operation systems: Win7, Win8, Win10.

Preconditions:

- LabVIEW 2015 or newer installed
- Any VISA installed – R&S VISA 5.12.3 or newer / NI VISA 18.0 or newer

When you start the driver WinZip installer, the following steps are being performed:

1. Unpacking of the driver's **instr.lib** and **user.lib** directories content as well as the **Installer.vi** into a temporary folder: **C:\temp\rsspecan-lv-5.20.0**  
The driver is compiled in LabVIEW 2015 64-bit. From there you can copy to another location or run the **Installer.vi** manually later. The content of the temporary folder is not deleted after the installation is finished. Starting the same installation again will overwrite all the data in this temporary folder.
2. After unpacking, the **Installer.vi** is automatically started in the last opened version of LabVIEW.  
In case you have more than one version of LabVIEW installed on your machine, make sure that the last opened LabVIEW version is the one in which you want to use the driver. If that is not the case, cancel the installation at this point, open and close your desired LabVIEW version and run the installer again. You can have the driver installed parallel for more LabVIEW versions by repeating the installation process for each desired version.
3. On the installer options page you have a choice to uncheck the **Mass-compiling** option (**not recommended, because of the driver's performance penalty as well as VIs opening times**) and you can change the location of the **instr.lib** part of the driver. **user.lib** part must be placed in the default location, otherwise the Express VI configuration will not function.  
On this page you also see the actual LabVIEW version.  
Hitting **Next** button will first delete the old driver (if it existed), copy the new driver and mass-compile it.
4. The next window allows for selection of options to be installed. Select the options you plan to use, or use the choice '**Install All Options**'.
5. The LabVIEW is closed and after starting it again the driver is ready for use.

## 2.2 Installation on a non-Windows machine

In case you would like to install the driver on a non-Windows machine, use a Windows machine to start the driver's WinZip self-extracting executable file. **This machine does not need to have LabVIEW installed.**

After the **Step 1** from the previous chapter is finished, copy the content of the temporary folder to your target machine and start the **Installer.vi** manually. From that point onwards, the installation process is the same as described in the previous chapter Steps 2, 3, and 4.

## 3 LabVIEW driver History

### 3.1 Version 5.20.0 / 04 – 2023

- \* Added support for FSW 5.20
- \* Added support for FSWP/FSPN 3.0
- \* Added support for FSW K96 (OFDM Vector Signal Analyzer)
- \* New Core 7.5.0
  
- \* New:
  - Configure Frequency Annotation Mode.vi
  - Configure Analyzer Attenuation.vi
  - Configure Signal Path Enabled.vi
  - Linking To Delta Marker.vi
  - Linking Delta Marker To Another Delta Marker.vi
  - Configure Calibration Schedule Settings.vi
  - Configure Calibration Schedule.vi
  - Configure Calibration Schedule Time.vi
  - Configure System Floating Option Enabled.vi
  - Query System Floating License.vi
  - Configure System SCPI Recorder Auto Recording Enabled.vi
  - Configure System SCPI Recorder Add Sync Commands.vi
  - Query System SCPI Recorder List Recording.vi
  - Export System SCPI Recorder.vi
  - System SCPI Recorder Clear All.vi
  - Execute Application.vi
  - Calculate Sequencer Time Trigger.vi
  - Configure Spurious Matching Condition.vi
  - Configure External Frontend Enabled.vi
  - Configure External Frontend Connection Settings.vi
  - Configure External Frontend Connection Firmware State.vi
  - Query External Frontend Connection Physical State.vi
  - Configure External Frontend Network Settings.vi
  - Query External Frontend Identification.vi
  - Query External Frontend Frequency Band Range List.vi
  - Configure External Frontend Frequency Band Range.vi
  - Configure External Frontend Frequency Band Auto Enabled.vi
  - Query External Frontend Frequency Band Count.vi
  - Query External Frontend Frequency Band Range.vi
  - Query External Frontend Intermediate Frequency Sideband.vi
  - Query External Frontend Intermediate Frequency.vi
  - Query External Frontend Reference Frequency List.vi
  - Configure External Frontend Reference Frequency.vi
  - External Frontend Update Firmware.vi
  - Configure External Frontend Alignment Correction.vi
  - Perform External Frontend Diagnostics Selftest.vi
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  - Query External Frontend Device Name List.vi
  - Query External Frontend Device Type.vi

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- Configure BTO Synchronization Search Enabled.vi
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- Configure BTO Limit Checks F1 Max In Range.vi
- Configure BTO Limit Checks F1 Max Lower.vi
- Configure BTO Limit Checks F2 Avg F1 Avg Ratio Lower.vi
- Configure BTO Limit Checks F2 Max In Range.vi
- Configure BTO Limit Checks F2 Max Lower.vi
- Configure BTO Limit Checks Power Average.vi
- Configure BTO Limit Checks Power Relative Peak Upper.vi
- Configure BTO Limit Checks Power Peak Upper.vi
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- Configure BTO Limit Checks Block Frequency.vi
- Configure BTO Limit Checks Initial Frequency.vi
- Configure BTO Limit Checks Total Frequency Offset.vi
- Configure BTO Limit Checks Peak DQPSK Upper.vi
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- Query HRP UWB Result Pulse Rise Time.vi
- Query HRP UWB Result Pulse Rise Time Sel Packet.vi
- Query HRP UWB Result Pulse Rise Time Passed.vi
- Query HRP UWB Result Pulse Rise Time Passed Sel Packet.vi
- Query HRP UWB Result Pulse Location SFD.vi
- Query HRP UWB Result Pulse Location SFD Sel Packet.vi
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- Configure Signal Statistic Normal Distribution Enabled.vi
- Configure Transient Analysis Settling Time Phase Limits.vi

\* Updated:

- Add Measurement Channel.vi - Channel types added
- Replace Measurement Channel.vi - Channel types added
- Query All Measurement Channels.vi - Channel type help fixed and updated
- Configure Marker Demodulation.vi - Demod types added
- Configure Generator Coupling Center Frequency.vi - Help updated
- Query System Info Switching Cycles Count.vi - Relay control values added
- Configure Display Time Format.vi - ISO format added, ISO made default
- Add Window.vi - Window types added, removed values 91 (use value 2) and 122 (use value 82)
- Replace Window.vi - Window types added, removed values 91 (use value 2) and 122 (use value 82)
- Configure Test Reports General Settings.vi - Help updated
- Get Analog Demod Result Values.vi - ACV added
- Configure BTO Measurement.vi - LE types added
- Amplifier Direct DPD Action.vi - Continue action added
- Configure Transient Analysis Chirp Result Table Frequency.vi - New value Parameter
- Configure Transient Analysis Chirp Result Table Timing.vi - New value in Parameter
- Configure Transient Analysis Chirp Result Table Phase.vi - New value in Parameter
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- Query Transient Analysis Chirp Result Timing.vi - New value in Parameter
- Query Transient Analysis Chirp Result Phase.vi - New value in Parameter
- Configure WLAN Signal.vi - Standard updated
- Configure WLAN MIMO Reference Level Offset.vi - Coupling updated
- Query 5G NR DL Analysis All Carriers.vi - Type updated, Result help updated
- Query 5G NR DL Analysis EVM PDSCH Statistics.vi - Modulation and helps updated
- Configure 5G NR UL Advanced Settings Ref Point A.vi - K0 select and helps updated
- Query 5G NR UL Analysis All Carriers.vi - Type and helps updated
- Query HRP UWB Packet SYNC.vi - Selected sync and helps updated
- Query HRP UWB Packet SYNC All.vi - Selected sync and helps updated
- Query HRP UWB Packet Data All.vi - Select packets data and helps updated

## 3.2 Version 4.95.0 / 06 – 2022

\* Update for FSWP/FSPN K6 Pulse Measurement

\* New:

- Pulse Measurement > Configuration > Output (Class)
- Pulse Measurement > Measurement > Result Configuration > Parameter Stability Waterfall (Class)
- Configure Pulse Measurement Acquisition Digitizer.vi
- Configure Pulse Measurement Trace Results.vi
- Configure Pulse Measurement Trace Stability Evaluation.vi

- Configure Pulse Stability Burst Statistics.vi
- Configure Pulse Stability Burst Analysis.vi
- Configure Pulse Result Parameter Trend Stability.vi
- Configure Pulse Result Parameter Distribution Stability.vi
- Configure Pulse Parameter Spectrum Stability.vi
- Configure Pulse Result Table Stability.vi
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- Configure Pulse Result Table Stability Limit.vi
- Query Pulse Result Stability.vi
- Pulse Query Result Limit Stability.vi

\* Updated:

- Pulse Measurement Add Window.vi - Window Type values updated
- Pulse Measurement Replace Window.vi - Window Type values updated

### 3.3 Version 4.90.0 / 03 – 2022

\* New Core 7.3.0

- \* Added support for FSW 4.90
- \* Added support for FSMR3000 FW 1.01
- \* Added support for FSPN FW 2.00
- \* Update for FSWP 2.00

\* New:

- Generator Coupling (Class)
- Application Starter (Class)
- HUMS (Class)
- Test Reports (Class)
- Amplifier Statistics Table (Class)
- 5G NR > Downlink > Positioning RS (Class)
- 5G NR > Downlink > Generator (Class)
- 5G NR > Downlink > Combined Measurement (Class)
- 5G NR > Uplink > Combined Measurement (Class)
- 5G NR > Uplink > Generator (Class)
- 5G NR > Uplink > Results (Class)
- HRP UWB Measurement (Class)
- Configure Limit Line Check Trace.vi
- Configure Missing External Reference Behavior.vi
- Configure Noise Measurement Points.vi
- Configure Noise Display Uncertainty.vi
- Configure Phase Ultra Small RBWs.vi
- Configure Phase Spurious Color.vi
- Export Phase Spurs.vi
- Get Phase Number Of Trace Data Points.vi
- Query Sweep Auto Type.vi
- Configure Trace Export Column Separator.vi
- Configure Trace Export X Value Distribution.vi
- Query User Correction Frequency Response Span Cover.vi
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- Query HUMS Tag Catalog.vi
- Add HUMS Tag.vi
- Delete HUMS Tag.vi
- Delete All HUMS Tags.vi
- Query HUMS Tag By ID.vi
- Configure HUMS SNMP Version.vi
- Query HUMS REST State.vi
- Configure HUMS SNMP Admin Information.vi
- Configure HUMS SNMP Community.vi
- Add HUMS SNMP v3 User.vi
- Delete HUMS SNMP User.vi
- Delete All HUMS SNMP Users.vi
- Query HUMS SNMP v3 User List.vi
- Configure Power Unit.vi
- Configure Spurious Carrier Harmonics.vi
- Configure Spurious Frequency Plan Tolerance.vi
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- Configure 5G NR DL Advanced Settings Frequency Error Limit Check.vi
- Configure 5G NR DL Advanced Settings Shared Spectrum Channel Access.vi
- Configure 5G NR DL Advanced Settings LTE-CRS Coexistence MBSFN Subframes.vi
- Configure 5G NR DL Power On Off Number Of Frames To Analyze.vi

- Configure 5G NR DL Analysis 3D View.vi
- Configure 5G NR DL Analysis ACLR Limit Pass Mode.vi
- Configure 5G NR DL Analysis Evaluation Range Selected Meas ID.vi
- Query 5G NR DL Analysis All Carriers.vi
- Query 5G NR DL Analysis EVM Frequency Error Limit Check Result.vi
- Query 5G NR DL Analysis ACLR Limit Check.vi
- Query 5G NR DL Analysis Overload.vi
- Query 5G NR DL Analysis SEM Pass Fail.vi
- Query 5G NR DL Analysis Sync State.vi
- Query 5G NR DL Analysis Time Stamp Delta.vi
- Query 5G NR DL Analysis Time Stamp.vi
- Configure 5G NR DL Analysis Sweep Total Limit Pass Mode.vi
- Query 5G NR DL ACLR Limit Check Results.vi
- Query 5G NR DL ACLR Power Limit Check Results.vi
- Query 5G NR DL CACLR Limit Check Results.vi
- Fetch 5G NR DL Analysis CORESET.vi
- Fetch 5G NR DL Analysis Combined Measurement.vi
- Configure 5G NR UL Demodulation Extended Frequency Lock Range.vi
- Configure 5G NR UL Channel Raster.vi
- Configure 5G NR UL MC Setup.vi
- Configure 5G NR UL Global MC Frequency Offset.vi
- 5G NR UL Sync MC Frequency To Center.vi
- Configure 5G NR UL CC Physical Settings Automatic Demodulation.vi
- Configure 5G NR UL CC Physical Settings Detection.vi
- Configure 5G NR UL Slot Paste Settings.vi
- 5G NR UL Slot Paste To.vi
- Configure 5G NR UL Enhanced PUSCH PTRS N\_ID.vi
- Configure 5G NR UL Enhanced PUSCH DM-RS N\_ID RS.vi
- Configure 5G NR UL Enhanced PUSCH DM-RS Uplink.vi
- Configure 5G NR UL PUSCH Copy Settings.vi
- 5G NR UL PUSCH Copy.vi
- Configure 5G NR UL PUCCH Copy Settings.vi
- 5G NR UL PUCCH Copy.vi
- Configure 5G NR UL Advanced Settings PUSCH Frequency Hopping.vi
- Configure 5G NR UL Analysis 3D View.vi
- Configure 5G NR UL Analysis ACLR Limit Pass Mode.vi
- Configure 5G NR UL Automatic EVM Slots.vi
- Configure 5G NR UL Analysis Evaluation Range Selected Meas ID.vi
- Query 5G NR UL Analysis All Carriers.vi
- Query 5G NR UL Analysis ACLR Limit Check.vi
- Query 5G NR UL Analysis Overload.vi
- Query 5G NR UL Analysis SEM Pass Fail.vi
- Query 5G NR UL Analysis Sync State.vi
- Query 5G NR UL Analysis Time Stamp Delta.vi
- Query 5G NR UL Analysis Time Stamp.vi
- Query 5G NR UL EVM Limits Frequency Error.vi
- Configure 5G NR UL Analysis Frequency Sweep SEM IFF.vi
- Configure 5G NR UL Analysis Frequency Sweep ACLR IFF.vi
- Configure 5G NR UL Analysis Total Limit Pass Mode.vi
- Query 5G NR UL ACLR Limit Check Results.vi
- Query 5G NR UL ACLR Power Limit Check Results.vi
- Query 5G NR UL CACLR Limit Check Results.vi
- Fetch 5G NR UL Analysis Combined Measurement.vi
- Instrument Options.vi
- Configure ID Query Format.vi
- Set Instrument Date Time.vi
- Get Instrument Date Time.vi

\* Updated:

- 5G NR > Downlink > CSI RS (Class) - CSI repcap added

- Configure Phase Signal Capture Range.vi - Range updated
- Configure Limit Line.vi - Units values added
- Configure Averaging Type.vi - Value added
- Data Set File Select Items.vi - Calibration added
- Data Set File Select Items From Channel.vi - Calibration added
- Configure Amplifier Input Source Analog Baseband Capture.vi - Rep cap added
- Configure Amplifier Power Servoing.vi - Typo fixed in control name
- Configure Noise ENR Noise Source.vi - Range table updated
- Configure Noise ENR Calibration Noise Source.vi - Range table updated
- Configure Noise Result Summary Display.vi - Updated item
- Configure Noise Limit Line Type.vi - Updated result type
- Noise Add Window.vi - Updated window type
- Noise Replace Window.vi - Updated window type
- Configure Phase Display Y Axis Unit.vi - Range table updated
- Query Noise Measurement Results.vi - Updated result type
- Configure WLAN Demodulation 802-11ax HE PPDU Config RU Size.vi - Range table update
- Configure WLAN Result Summary Display.vi - Updated item ring
- Configure 5G NR.vi - Added values to Mode
- Configure 5G NR DL Demodulation EVM Calculation Method.vi - Range updated
- Configure 5G NR DL Physical Settings.vi - Operating Band updated
- 5G NR DL Add Window.vi - Window Type range updated
- 5G NR DL Replace Window.vi - Window Type range updated
- Configure 5G NR DL Analysis Show Result Summary Items.vi - Item range updated
- Configure 5G NR UL Demodulation EVM Calculation Method.vi - Range updated
- Configure 5G NR UL Physical Settings.vi - Range updated
- Configure 5G NR UL Bandwidth Part Subcarrier Spacing.vi - Range updated
- Add 5G NR UL Window.vi - Window Type range updated
- Replace 5G NR UL Window.vi - Window Type range updated
- Configure 5G NR UL Analysis Show Result Summary Items.vi - Item range updated
- Query 5G NR UL EVM Limits PUSCH Resource.vi - SCPI command fixed in help

### 3.4 Version 4.65.1 / 06 – 2020

\* Updated:

- Fetch 5G NR DL Analysis Bitstream.vi - API changed - added Format parameter
- Fetch 5G NR UL Analysis Bitstream.vi - API changed - added Format parameter
- RSSPECAN\_ATTR\_5G\_NR\_DIRECTION - added Wait For OPC

### 3.5 Version 4.65.0 / 05 – 2020

\* New Core 6.60.0

\* Added support for FSW 4.60

\* New:

- NB IoT > Analysis > Trace Data (Class)
- 5G NR > Downlink > Configuration > Advanced Settings (Class)
- Configure DOCSIS Power Interval Search Enabled.vi
- Configure Auto Adjust Search Mode.vi
- Configure User Correction File Adjust Reference Level.vi
- Configure User Correction Adjust Reference Level.vi
- Configure User Correction BB FRES Adjust Reference Level.vi
- Configure User Correction RF Input Adjust Reference Level.vi
- Configure System Trial Options Enabled.vi

- Configure System Trial Options.vi
- Configure MSR Gap Limit Channels Enabled.vi
- Query MSR Gap Limit Channels Enabled.vi
- Query TOI Results.vi
- File Export Microservice.vi
- Configure PWM Sensor Offset.vi
- Configure Multi Carrier Group Delay Mode Estimation.vi
- Configure Multi Carrier Group Delay Max Clock Offset.vi
- Configure Multi Carrier Group Delay Large Offset Compensation Enabled.vi
- Configure Multi Carrier Group Delay Carrier Decimation Factor.vi
- Query Multi Carrier Group Delay Clock Offset.vi
- Configure Amplifier Force ARB Mode.vi
- Configure Amplifier Crest Factor Reduction.vi
- Configure Amplifier Crest Factor Reduction Simple Mode.vi
- Apply Amplifier Crest Factor Reduction.vi
- Configure Amplifier Crest Factor Reduction EVM Ref Signal.vi
- Get Amplifier Crest Factor Reduction Enabled State.vi
- Get Amplifier Crest Factor Reduction Current Value.vi
- Get Amplifier Crest Factor Reduction Delta State.vi
- Get Amplifier Crest Factor Reduction Iterations State.vi
- Get Amplifier Crest Factor Reduction Signal Bandwidth State.vi
- Get Amplifier Crest Factor Reduction Channel Spacing State.vi
- Get Amplifier Crest Factor Reduction Apply State.vi
- Get Amplifier Phase Error Results.vi
- Store LTE Downlink Demodulation Settings.vi
- Configure LTE Downlink Custom Sync Weight Enabled.vi
- Configure LTE Downlink Custom Sync Weight First Half.vi
- Configure LTE Downlink Custom Sync Weight Second Half.vi
- Store LTE Uplink Demodulation Settings.vi
- Configure NB IoT Downlink Analysis Location Select.vi
- Configure NB IoT Downlink Analysis Subframe Select All.vi
- Configure NB IoT Downlink Analysis Subframe Select.vi
- Configure 5G NR DL Data Capture Signal Repeats Max No of Slots to Analyze.vi
- Configure 5G NR DL Tracking Time Level.vi
- Configure 5G NR DL Demodulation EVM Calculation Method.vi
- Configure 5G NR DL Enhanced PDSCH VRB-to-PRB Interleave.vi
- Configure 5G NR DL CORESET PDCCH Config.vi
- Configure 5G NR DL CSI RS RB.vi
- Configure 5G NR DL Advanced Settings Handling Of Carrier Leakage.vi
- Configure 5G NR DL Advanced Settings RF Upconversion.vi
- Configure 5G NR DL Advanced Settings Exclude User IDs.vi
- Configure 5G NR DL Advanced Settings Ref Point A.vi
- Query 5G NR DL Advanced Settings Ref Point A Frequency.vi
- Configure 5G NR DL Advanced Settings LTE-CRS Coexistence.vi
- Configure 5G NR DL Power On Off Base Station Output Power.vi
- Configure 5G NR DL Analysis EVM Max Hold.vi
- Query 5G NR DL Analysis EVM Peak.vi
- Configure 5G NR DL Analysis Sweep BS Category B Option.vi
- Configure 5G NR UL Demodulation EVM Calculation Method.vi
- Configure 5G NR UL Tracking Level.vi
- Configure 5G NR UL Tracking Time.vi
- Configure 5G NR UL CC Physical Settings Power Class.vi
- Configure 5G NR UL CC Physical PRACH Settings.vi
- Configure 5G NR UL Repeated Slot Analysis.vi
- Configure 5G NR UL Advanced Settings Extreme Conditions.vi
- Configure 5G NR UL Analysis EVM Max Hold.vi
- Configure 5G NR UL Analysis Evaluation Range Preamble.vi
- Query 5G NR UL Analysis Summary EVM Peak.vi
- Query 5G NR UL Analysis Summary EVM PRACH.vi
- Query 5G NR UL ACP Channel Limit Check Results.vi



\* Updated:

- Frequency Sweep Measurement (Class) - renamed
- Fetch X Trace.vi - parameter formatting fixed
- Configure Sequencer Mode.vi - value in the ring removed (Channel Defined)
- Configure Spurious LISN.vi - Range table updated at LISN
- Fetch Trace IQ Data.vi - control help
- Configure EMI LISN V-network Type.vi - Range table updated at LISN
- Read WLAN Memory IQ Data.vi - control help
- Configure LTE Uplink Frequency Sweep Measurements.vi - Updated range table for SEM

Requirement

- Configure 5G NR.vi - Added PRACH measurement
- Configure 5G NR DL Enhanced PDSCH DM-RS.vi - New range table used for Method
- Configure 5G NR DL CORESET DM-RS.vi - SID param depends on Sequence Generation
- 5G NR DL Add Window.vi - Channel Flatness added to Window Type
- 5G NR DL Replace Window.vi - Channel Flatness added to Window Type
- Configure 5G NR DL Analysis Show Result Summary Items.vi - added EVM PDSCH 1024QAM, EVM PDSCH 4096QAM, EVM PRACH, Frame/Preamble Start Offset Start Offset, EVM Peak, RSSI, EVM DMRS PUSCH 1024QAM, EVM DMRS PUSCH 4096QAM, EVM PUSCH 1024QAM, EVM PUSCH 4096QAM to Item
- Query 5G NR DL ACP Channel Limit Check Results.vi - Fixed bug
- Add 5G NR UL Window.vi - added Spectrum Flatness to Window Type
- Replace 5G NR UL Window.vi - added Spectrum Flatness to Window Type
- Configure 5G NR UL Analysis Show Result Summary Items.vi - added EVM PDSCH 1024QAM, EVM PDSCH 4096QAM, EVM PRACH, Frame/Preamble Start Offset Start Offset, EVM Peak, RSSI, EVM DMRS PUSCH 1024QAM, EVM DMRS PUSCH 4096QAM, EVM PUSCH 1024QAM, EVM PUSCH 4096QAM to Item
- Fetch 5G NR UL Analysis Allocation Summary.vi - Help and control help fixed
- Configure OneWeb UL Evaluation Range Constellation Diag.vi - Range table fix
- OneWeb UL Fetch Channel And Spectrum Flatness.vi - Range table fix
- OneWeb UL Fetch Channel And Spectrum Flatness Difference.vi - Range table fix
- OneWeb UL Fetch Channel Flatness SRS.vi - Range table fix
- OneWeb UL Fetch Group Delay.vi - Range table fix
- OneWeb UL Fetch EVM vs Carrier.vi - Range table fix

\* Deleted:

- Configure 5G NR DL CORESET PDCCH.vi
- Configure MSR Gap Limit Channels.vi
- Query MSR Gap Limit Channels.vi

## 3.6 Version 4.60.0 / 01 – 2020

\* Added support for FSWP 1.90

\* New:

- Configure Phase Spurious List.vi
- Configure Phase Spurious Filter.vi
- Configure Phase Spurious Filter Offset.vi
- Query Phase Spurious Filter Name.vi
- Clear Phase Spurious Filter.vi
- Save Phase Spurious Filter.vi
- Load Phase Spurious Filter.vi
- Configure Transient Analysis Settling Time.vi
- Query Transient Analysis Settling Time Result.vi

- Configure Transient Analysis Frequency Deviation.vi
- Query Transient Analysis Frequency Deviation Regression Line Data.vi
- Query Transient Analysis Frequency Deviation Regression Line Points.vi
- Query Transient Analysis Frequency Deviation Regression Line Slope.vi
- Fetch Phase Spurious List Count.vi

\* Updated:

- Add Phase Window.vi - added Power vs Frequency to Window Type
- Replace Phase Window.vi - added Power vs Frequency to Window Type

### 3.7 Version 4.50.0 / 03 – 2019

- \* Added support for FSW 4.50
- \* Added support for 5G NR Uplink (K145)
- \* Added support for Verizon 5GTF (K118/K119)
- \* Added support for OneWeb Reverse Link (K201)

\* New:

- Configure External Generator TCP IP.vi - bug fixed - sending IP address in single quotes
- Measurement -> Spectrum Analyzer Measurement -> Noise Power Ratio -> Generator (Class)

- Multi-Carrier Group Delay -> Configuration -> Generator Control (Class)

- VSA -> Configuration -> Digital Standard -> Digital IQ 40G (Class)

- Configure RF Input Type.vi

- Configure Subwindow Horizontal Scale.vi

- Configure Subwindow Vertical Scale.vi

- Configure Window Sweep Points.vi

- Query Sweep Subspans.vi

- Configure Display Window Reference Value.vi

- Configure Display Window Marker Info.vi

- Configure Display Subwindow Multiple Zoom.vi

- Configure Trace Subwindow State.vi

- Configure Trace Subwindow Smoothing.vi

- Configure Trace Subwindow Reset Behavior.vi

- Configure Trace Subwindow Preset.vi

- Calibration Preselection.vi

- Insert Correction BB FRES.vi

- Insert Correction Input FRES.vi

- Insert Correction User FRES.vi

- Insert Touchstone BB FRES.vi

- Insert Touchstone Input FRES.vi

- Insert Touchstone User FRES.vi

- Move Touchstone BB FRES.vi

- Move Touchstone Input FRES.vi

- Move Touchstone User FRES.vi

- Configure System Changing Hardware Enabled.vi

- Configure System Changing Hardware.vi

- Configure Display Subwindow Zoom State.vi

- Configure Display Subwindow Zoom.vi

- Configure Display Subwindow Amplitude Grid Mode.vi

- Query MSR Gap Name.vi

- Configure MSR Gap Channel Spacing.vi

- Query MSR Gap Channel Spacing.vi

- Configure MSR Gap Channel Bandwidths.vi

- Query MSR Gap Channel Bandwidths.vi

- Configure MSR Gap Weighting Filter State.vi

- Query MSR Gap Weighting Filter State.vi
- Configure MSR Gap Channel Roll Off Factor.vi
- Query MSR Gap Channel Roll Off Factor.vi
- Configure MSR Gap Limit Relative State.vi
- Query MSR Gap Limit Relative State.vi
- Configure MSR Gap Limit Relative.vi
- Query MSR Gap Limit Relative.vi
- Configure MSR Gap Limit Absolute State.vi
- Query MSR Gap Limit Absolute State.vi
- Configure MSR Gap Limit Absolute.vi
- Query MSR Gap Limit Absolute.vi
- Configure MSR Gap Limit Channels.vi
- Query MSR Gap Limit Channels.vi
- Configure MSR Gap Mode.vi
- Configure MSR Gap Limit ACLR Relative.vi
- Configure MSR Gap Limit ACLR Relatives.vi
- Query MSR Gap Limit ACLR Relatives.vi
- Configure MSR Gap Limit ACLR Relative State.vi
- Configure MSR Gap Limit ACLR Relative States.vi
- Query MSR Gap Limit ACLR Relative States.vi
- Configure MSR Gap Limit CACLR Relative.vi
- Configure MSR Gap Limit CACLR Relative State.vi
- Query MSR Gap Limit ACLR Result.vi
- Configure SEM Symmetrical Setup.vi
- Configure Spurious Frequency Plan Settings.vi
- Configure Spurious Frequency Plan Identifier.vi
- Configure Spurious Frequency Plan Component Type.vi
- Configure Spurious Frequency Plan Component Delete.vi
- Transfer Spurious Frequency Spurs To Table.vi
- Configure Spurious Frequency Plan Input Frequency Settings.vi
- Configure IQ Oscilloscope Coupling.vi
- Configure Pulse Measurement Detection Settings.vi
- Configure Pulse Top Level Fixed.vi
- Configure Pulse Pulse Settings.vi
- Configure Pulse Pulse Window Type.vi
- Query Pulse Pulse Resolution Bandwidth.vi
- Query Pulse Count All.vi
- Query Pulse Count Current Buffer.vi
- Query Pulse Count Power.vi
- Query Pulse Count Timing.vi
- Query Pulse Count Frequency.vi
- Query Pulse Count Phase.vi
- Query Pulse Count Time Sidelobe.vi
- Query Pulse Count Envelope Model.vi
- Configure Amplifier Generator Maximum Power.vi
- Query Amplifier Generator Maximum Power LED State.vi
- Configure Amplifier Generator Control Enabled.vi
- Configure Amplifier Direct DPD Gain Expansion.vi
- Query Amplifier Direct DPD Operation Status.vi
- Query Amplifier Direct DPD Polynomial.vi
- Configure Amplifier Window Result Summary Display All.vi
- Configure Amplifier Window Result Parameter Sweep Table All.vi
- Get Amplifier Baseband Power Results.vi
- Get Amplifier Parameter Table Power Output Results.vi
- Get Amplifier Compression Point Sweep Table Results.vi
- Configure EMI Final Measurement Marker Dwell Timer.vi
- Configure EMI Final Measurement Delta Marker Dwell Time.vi
- Configure Transient Analysis Hop Result Table FM Settling.vi
- Configure Transient Analysis Hop Result Table PM Settling.vi
- Configure Transient Analysis Chirp Result Table FM Settling.vi

- Configure Transient Analysis Chirp Result Table PM Settling.vi
- Configure Transient Analysis Chirp Result Table Frequency INL.vi
- Configure VSA Frame APSK N State.vi
- Configure VSA Frame ASK N State.vi
- Configure VSA Demodulation Symbol Record Length.vi
- Configure VSA Equalizer File Format.vi
- Query VSA BER Symbol Error.vi
- Query VSA Burst Information.vi
- Query VSA Pattern Information.vi
- Configure VSA Evaluation Range.vi - changed data types of Start and Stop parameters from ViInt32 to ViReal64
- Configure WLAN Interpolation Type.vi
- Fetch WLAN Spectrum Flatness Summary.vi
- Configure WiGig Data Acquisition Rates.vi
- Fetch WiGig Signal To Ratio Statistics.vi
- Query LTE Downlink Physical Layer Cell Identity.vi
- Query LTE Downlink Measurement Cyclic Prefix.vi
- Query LTE Uplink Physical Layer Cell Identity.vi
- LTE Uplink Select Tab.vi
- Query LTE Uplink Measurement Cyclic Prefix.vi
- Configure NB IoT Downlink Measurement Mode.vi
- Configure NB IoT Downlink Guardband.vi
- Configure NB IoT Downlink Guardband User.vi
- Configure NB IoT Downlink Analysis Y Axis Scaling.vi
- NBIoTDownlinkSEM
- NB IoT Downlink Add Window.vi
- NB IoT Downlink Replace Window.vi
- NB IoT Downlink Select Tab.vi
- Configure 5G NR DL Complete Signal Demodulation.vi
- Configure 5G NR DL Long Capture.vi
- Configure 5G NR DL Data Capture According To Standard.vi
- Configure 5G NR DL Data Capture Maximum Slots Per Frame To Analyze.vi
- Configure 5G NR DL Segmented Capture.vi
- 5G NR DL Auto EVM.vi
- 5G NR DL Auto Level All.vi
- Configure 5G NR DL Tracking.vi
- Configure 5G NR DL Demodulation.vi
- Configure 5G NR DL CC Physical Settings Load Test Model.vi
- Configure 5G NR DL Bandwidth Part Demodulation.vi
- Configure 5G NR DL PDSCH Codeword Modulation.vi
- Configure 5G NR DL Enhanced PDSCH Settings.vi
- Configure 5G NR DL Enhanced PDSCH Channel Coding.vi
- Configure 5G NR DL Enhanced PDSCH Scrambling.vi
- Configure 5G NR DL CORESET Precoder Granularity.vi
- Configure 5G NR DL CORESET DM-RS Reference Point.vi
- Configure 5G NR DL CORESET Interleaving.vi
- Configure 5G NR DL CORESET PDCCH.vi
- Configure 5G NR DL Synchronization Signal Offset Relative To.vi
- Configure 5G NR DL Synchronization Signal L Selection.vi
- Configure 5G NR DL Analysis Show Result Summary Items.vi
- Configure 5G NR DL Analysis CC Result.vi
- Configure 5G NR DL Analysis Carrier Axes.vi
- Configure 5G NR DL Analysis Evaluation Range Segment.vi
- Configure 5G NR DL Analysis Evaluation Range Beamforming Reference AP.vi
- Configure 5G NR DL Analysis Evaluation Range Beamforming Antenna Port.vi
- Query 5G NR DL Analysis EVM All Statistics.vi
- Query 5G NR DL Analysis EVM PDSCH Statistics.vi
- Query 5G NR DL Analysis EVM PDSCH Limit Check Result.vi
- Query 5G NR DL Analysis EVM Physical Statistics.vi
- Query 5G NR DL Analysis EVM Signal Power Statistics.vi

- Query 5G NR DL Analysis EVM Frequency Error Statistics.vi
- Query 5G NR DL Analysis EVM Sampling Error Statistics.vi
- Query 5G NR DL Analysis IQ Gain Imbalance.vi
- Query 5G NR DL Analysis IQ Offset.vi
- Query 5G NR DL Analysis IQ Quadrature Error.vi
- Query 5G NR DL Analysis OSTP.vi
- Query 5G NR DL Analysis CSI-RSRP.vi
- Query 5G NR DL Analysis SS-RSRP.vi
- Query 5G NR DL Analysis RSTP.vi
- Query 5G NR DL Analysis Crest Factor.vi
- Configure 5G NR DL Analysis Sweep Base Station Type.vi
- Configure 5G NR DL Analysis Sweep SEM Position.vi
- Query 5G NR DL ACP Channel Limit Check Results.vi
- Configure 5G NR UL Enhanced PUSCH Settings.vi
- Configure 5G NR UL PUSCH Allocations.vi
- Configure 5G NR DL PUSCH Allocation Type.vi
- Configure 5G NR UL Analysis Show Result Summary Items.vi
- 5G NR -> Downlink -> Configuration -> Frame -> CSI RS (Class)
- 5G NR -> Downlink -> Configuration -> Antenna Port Mapping (Class)
- 5G NR -> Downlink -> Configuration -> Power On Off Measurements (Class)
- 5G NR -> Downlink -> Configuration -> Layout (Class)
- 5G NR -> Downlink -> Analysis -> Power On Off Measurements (Class)
- 5G NR -> Downlink -> Analysis -> Time Alignment Measurement (Class)
- 5G NR -> Downlink -> Analysis -> Trace Data (Class)

\* Updated:

- Add Measurement Channel.vi - channel type
- Configure RF Input State.vi
- Configure Sync Parameter Coupling Enabled.vi
- Configure Display Focused Area.vi - subwindow
- Configure List Power Sequence.vi
- Configure MSR Number Of Subblocks.vi - range
- Configure MSR Tx Channel Definition.vi - subblock range
- Query MSR Tx Channel Name.vi - subblock range
- Configure MSR Gap Size.vi - help
- Configure MSR Gap Channel.vi - help
- Configure MSR Gap Limit Checking.vi - help
- File Manager Operations.vi - help
- Configure Pulse Top Level.vi
- Configure PWM Absolute.vi - unit
- Configure Phase RF Input.vi - Source params
- Query EMI Final Measurement Delta Marker Limit Line.vi - help
- Configure Transient Analysis Chirp Result Table.vi - Range table updated
- Configure Transient Analysis Parameter Distribution Chirp Frequency.vi - Range table updated
- Configure Transient Analysis Parameter Trend Hop Frequency.vi
- Configure Transient Analysis Parameter Trend Hop Frequency Axis.vi
- Configure Transient Analysis Parameter Trend Hop Power.vi - Range table updated
- Configure Transient Analysis Parameter Trend Hop State.vi - Range table updated
- Configure Transient Analysis Parameter Trend Hop Timing.vi - Range table updated
- Configure Transient Analysis Parameter Trend Hop Phase.vi - Range table updated
- Configure Transient Analysis Parameter Trend Chirp Frequency.vi
- Configure Transient Analysis Parameter Trend Chirp Frequency Axis.vi
- Configure Transient Analysis Parameter Trend Chirp Power.vi - Range table updated
- Configure Transient Analysis Parameter Trend Chirp State.vi - Range table updated
- Configure Transient Analysis Parameter Trend Chirp Timing.vi
- Configure Transient Analysis Parameter Trend Chirp Phase.vi - Range table updated
- Query Transient Analysis Hop Result Frequency.vi - added command help + edit code
- Query Transient Analysis Chirp Result Frequency.vi - added command help + edit code
- Configure NB IoT Downlink Deployment.vi

- Configure 5G NR.vi
- Configure 5G NR DL Data Capture.vi
- Configure 5G NR DL Physical Settings.vi
- Configure 5G NR DL PDSCH Modulation.vi
- Configure 5G NR DL Analysis Evaluation Range Bandwidth Part.vi - new command
- Configure TDS UE Sync To Slot Mode.vi - using different attribute
- Query Pulse Result Limit Timing.vi

\* Updated repeated capabilities:

- LTETAERAntenna - changed from Ant2...Ant4 to TAERAnt2...TAERAnt4
- GSMCarrier - changed from Carr1...Carr16 to GSMCarr1...GSMCarr16
- Line - changed from L1...L2 to Line1...Line2
- PnoRange - changed from R1...R20 to PNR1...PNR20
- WLAN\_MIMOAntenna - changed from TX1...TX4 to WLANTX1...WLANTX4

\* Deleted deprecated attributes and their repeated capabilities that are non numeric - all for C only, all of them have alternative attributes

List of removed repeated capabilities:

- ModifMinMaxAver
- ModifAboveBelow
- ProbeNumber
- MinMax
- StatisticMeasType
- PulsePowerTable
- VSAResultType
- VSALimitType
- VSABerRate
- VSABerErrors
- VSABerBits
- StatisticsCounter
- WcdmaChannel
- PulsePhaseTable
- LeftRight
- PulseThreshold
- GSMMeasType
- GSMMeasModif
- GSMBurstType
- GSMspectrumType
- GSMPerc
- GSMBurstSel
- GSMBurstModif
- NoiseMarkerRes
- ResultDetector
- AnalogModulation
- LowHighPass
- FMOffsetResult
- FMSChannel
- FMSMeasType
- ModifStopStart
- ModifLowUpp
- BtoRtpPacketSection

\* Deleted deprecated attributes (their existing alternatives):

- RSSPECAN\_ATTR\_3GBS\_CPICH\_CODE - RSSPECAN\_ATTR\_3GPP\_CPICH\_CODE
- RSSPECAN\_ATTR\_3GBS\_CPICH\_MODE - RSSPECAN\_ATTR\_3GPP\_CPICH\_MODE
- RSSPECAN\_ATTR\_3GBS\_CPICH\_PATTERN -  
RSSPECAN\_ATTR\_3GPP\_CPICH\_PATTERN
- RSSPECAN\_ATTR\_3GUE\_CDP\_CHAN\_CODE -  
RSSPECAN\_ATTR\_3GBS\_RESULTS\_SELECT\_CHAN

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- RSSPECAN\_ATTR\_3GUE\_CDP\_HSDPAUPA\_STATE -  
RSSPECAN\_ATTR\_3GBS\_WCDP\_HSDPAUPA\_STATE  
- RSSPECAN\_ATTR\_3GUE\_CDP\_INACT\_CHAN\_THR -  
RSSPECAN\_ATTR\_3GBS\_WCDP\_INACT\_CHAN\_THR  
- RSSPECAN\_ATTR\_3GUE\_CDP\_INVERT\_Q -  
RSSPECAN\_ATTR\_3GBS\_WCDP\_INVERT\_Q  
- RSSPECAN\_ATTR\_3GUE\_CDP\_MULTIFRAME\_CAPTURE\_LENGTH -  
RSSPECAN\_ATTR\_3GBS\_WCDP\_MULTIFRAME\_CAPTURE\_LENGTH  
- RSSPECAN\_ATTR\_3GUE\_CDP\_MULTIFRAME\_FRAME\_ANALYZE -  
RSSPECAN\_ATTR\_3GBS\_WCDP\_MULTIFRAME\_FRAME\_ANALYZE  
- RSSPECAN\_ATTR\_3GUE\_CDP\_NORM - RSSPECAN\_ATTR\_3GBS\_WCDP\_NORMALIZE  
- RSSPECAN\_ATTR\_3GUE\_CDP\_SCR\_CODE - RSSPECAN\_ATTR\_3GBS\_SCODE  
- RSSPECAN\_ATTR\_3GUE\_CDP\_SFAC - RSSPECAN\_ATTR\_3GBS\_RESULTS\_SFAC  
- RSSPECAN\_ATTR\_3GUE\_CDP\_SIDEBAND -  
RSSPECAN\_ATTR\_3GBS\_WCDP\_SIDE\_BAND  
- RSSPECAN\_ATTR\_3GUE\_CDP\_SLOT -  
RSSPECAN\_ATTR\_3GBS\_RESULTS\_SELECT\_CPICH\_SLOT  
- RSSPECAN\_ATTR\_AMPLIFIER\_DPD\_MODELING\_ORDER -  
RSSPECAN\_ATTR\_AMPLIFIER\_DPD\_SEQUENCE  
- RSSPECAN\_ATTR\_DIGITAL\_BASEBAND\_INPUT\_TRIGGER\_HOLDOFF -  
RSSPECAN\_ATTR\_TRIGGER\_IFP\_OFFSET  
- RSSPECAN\_ATTR\_DIGITAL\_BASEBAND\_INPUT\_TRIGGER\_SOURCE -  
RSSPECAN\_ATTR\_TRIGGER\_SOURCE  
- RSSPECAN\_ATTR\_IQ\_DATA\_WBAND\_STATE -  
RSSPECAN\_ATTR\_IQ\_MAX\_BANDWIDTH\_EXTENSION  
- RSSPECAN\_ATTR\_LTE\_DOWNLINK\_IQ\_SWAP - RSSPECAN\_ATTR\_BB\_SWAP\_IQ  
- RSSPECAN\_ATTR\_LTE\_UPLINK\_IDENTITY\_VALUE -  
RSSPECAN\_ATTR\_LTE\_UPLINK\_CELL\_IDENTITY  
- RSSPECAN\_ATTR\_LTE\_UPLINK\_INPUT - RSSPECAN\_ATTR\_BB\_INPUT\_SELECTION  
- RSSPECAN\_ATTR\_LTE\_UPLINK\_IQ\_SWAP - RSSPECAN\_ATTR\_BB\_SWAP\_IQ  
- RSSPECAN\_ATTR\_LTE\_UPLINK\_RF\_ATTENUATION -  
RSSPECAN\_ATTR\_ATTENUATION  
- RSSPECAN\_ATTR\_MARKER\_PEAK\_LIST\_PEAK\_LABELS -  
RSSPECAN\_ATTR\_MARKER\_PEAK\_LIST\_ANNOTATION\_LABEL  
- RSSPECAN\_ATTR\_MEAS\_POW\_CHANNEL\_BANDWIDTH -  
RSSPECAN\_ATTR\_POW\_CHANNEL\_BANDWIDTH  
- RSSPECAN\_ATTR\_SEM\_WEIGHT\_FILTER\_ALT\_ALPHA -  
RSSPECAN\_ATTR\_POWER\_ALT\_CHANNEL\_WEIGHTING\_FILTER\_ALPHA\_VALUE  
- RSSPECAN\_ATTR\_SEM\_WEIGHT\_FILTER\_ALT\_STATE -  
RSSPECAN\_ATTR\_POWER\_ALT\_CHANNEL\_WEIGHTING\_FILTER\_STATE  
- RSSPECAN\_ATTR\_SEM\_WEIGHT\_FILTER\_TX\_CHANNEL\_ALPHA -  
RSSPECAN\_ATTR\_POWER\_CHANNEL\_WEIGHTING\_FILTER\_ALPHA  
- RSSPECAN\_ATTR\_SEM\_WEIGHT\_FILTER\_TX\_CHANNEL\_STATE -  
RSSPECAN\_ATTR\_POWER\_CHANNEL\_WEIGHTING\_FILTER  
- RSSPECAN\_ATTR\_SERVICE\_NOISE\_SOURCE -  
RSSPECAN\_ATTR\_NOISE\_SOURCE\_STATE  
- RSSPECAN\_ATTR\_TDUE\_STS\_MODE - RSSPECAN\_ATTR\_TDBS\_STS\_MODE  
- RSSPECAN\_ATTR\_TRIGGER\_RFP\_HOLDOFF -  
RSSPECAN\_ATTR\_TRIGGER\_IFP\_OFFSET  
- RSSPECAN\_ATTR\_VSA\_EVAL\_LINE - RSSPECAN\_ATTR\_VSA\_EVAL\_LINE\_START or  
RSSPECAN\_ATTR\_VSA\_EVAL\_LINE\_STOP  
- RSSPECAN\_ATTR\_WLAN\_FETC\_PAYL -  
RSSPECAN\_ATTR\_WLAN\_FETC\_PAYL\_AVERAGE  
- RSSPECAN\_ATTR\_WLAN\_FETC\_PEAK -  
RSSPECAN\_ATTR\_WLAN\_FETC\_PEAK\_AVERAGE  
- RSSPECAN\_ATTR\_WLAN\_FETC\_PRE -  
RSSPECAN\_ATTR\_WLAN\_FETC\_PRE\_AVERAGE  
- RSSPECAN\_ATTR\_WLAN\_INIT - RSSPECAN\_ATTR\_INIT  
- RSSPECAN\_ATTR\_WLAN\_INIT\_CONT -  
RSSPECAN\_ATTR\_SWEEP\_MODE\_CONTINUOUS

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- RSSPECAN\_ATTR\_WLAN\_PVR\_MODE -  
RSSPECAN\_ATTR\_WLAN\_PEAK\_ERROR\_VECTOR\_MEAS\_RANGE

## 3.8 Version 4.20.0 / 11 – 2018

- \* Added support for FSV 3.40
- \* Added support for FSWP 1.70
- \* Added support for NB IoT Downlink (K106)
- \* Added support for FPS and FSWP to Power Meter (K9)
- \* Removed support for WiMAX

\* New:

- Configure AUX Port Control Lines State.vi
- Configure Frequency Level.vi
- Configure Frequency Trigger.vi
- Configure Spurious Tracking.vi
- Configure Advanced Reference Frequency Input.vi
- Configure Advanced External Reference Coupling.vi
- Hardcopy Page Include All Windows.vi
- Hardcopy Page Include Selected Window.vi
- Configure Analog Baseband Input Attenuation IQ Interface.vi
- Configure Analog Baseband YIG Filter Enabled.vi
- Configure Pulse Marker Labels For Peaks.vi
- Query Noise Measurement Memory Results.vi
- Query Noise Measurement Array Scalar Results.vi
- Configure Phase Smoothing Settings.vi
- Configure Phase Signal Level.vi
- Configure Phase Pulse Gate Source.vi
- Configure Phase Pulse External Gate Level.vi
- Configure Phase Frequency Stability.vi
- Transient Analysis Y Axis Grid Mode.vi
- Get Phase Noise Limit Line Compatible.vi
- Get Allan Variance And Deviation.vi
- Read Phase Trace Data Linear Interpolation.vi
- Read Phase Trace Number Of Measurement Points.vi
- Fetch Phase Residual DUT Gain.vi

\* Updated:

- Query Transient Analysis Hop Numbers.vi - fixed Option to check from K6 to K60
- Configure Trigger Source.vi
- Move Window.vi
- Add Phase Window.vi
- Replace Phase Window.vi
- Get Phase Integrated Measurement Result.vi

## 3.9 Version 3.20.0 / 09 – 2018

- \* Added support for FSW 3.20
- \* Added support for 5G NR Downlink (K144)

\* New in Base System:

- User Correction
- Parameter Coupling



- Noise Power Ratio
- Configure Sweep Zero Span.vi
- Configure Input Connector.vi
- Configure Probe Mode.vi
- Configure Auto Scaling Enabled.vi
- Configure Continuous Gate.vi
- Configure Gate Source Mode.vi
- Configure External Gate RF Level.vi
- Configure External Gate Port.vi
- Configure Display Y Axis Scale Range.vi
- Configure Display Y Axis Range.vi
- Configure Display Window Y Axis Grid Spacing.vi
- Configure Reference Level Position.vi
- Configure Display Window Reference Level.vi
- Configure Display Window Reference Level Range.vi
- Configure Display Window Unit Phase.vi
- Configure Display Window Unit Frequency.vi
- Configure Trace Smoothing.vi
- Configure Trace Symbol Enabled.vi
- Marker Noise Measurement All Off.vi
- Phase Noise All Off.vi
- Marker Band Power All Off.vi
- Configure Marker Selective Demodulation.vi
- Configure External Reference Frequency.vi
- Configure Reference Oscillator Outputs.vi
- Query System Info Device Footprint.vi
- Query System Info Switching Cycles Count.vi
- Query System Info BIOS Version.vi
- Query System Info Frequency Bands.vi
- Configure System Display Lock.vi
- Configure Display MultiView Tab Enabled.vi
- Configure Display Time Format.vi
- Move Window.vi
- Adjust Spurious Emissions X Axis To Range Definitions.vi
- System Reboot.vi
- Configure Spurious Carrier Frequency Reference.vi
- Configure Spurious Carrier Frequency.vi
- Configure Spurious Carrier Guard Interval.vi
- Configure Spurious Detection Table Content.vi
- Configure Spurious LISN.vi
- Configure Carrier Search Range Type.vi
- Configure Carrier Search Range Center Span.vi
- Configure Carrier Search Range Start Stop.vi
- Query Spurious Range Number Of Ranges.vi

\* Updated in Base System:

- Configure Reference Oscillator.vi - frequency is set on all instrument models
- Calibration.vi - increased max time to 14400000ms
- Configure Hardcopy Color.vi - Color Map control updated
- Pulse Power Filter Type.vi
- Configure RF Input State.vi - updated Source parameter
- Configure Trace Reset Behavior.vi - using new attribute that uses Window repeated capability
- Get Transducer Factor Catalog.vi - help updated
- Configure Sync Parameter Coupling Enabled.vi - fixed constants in Parameter control
- Configure Display Focused Area.vi - reusing Window parameter
- Configure Delta Marker.vi - reusing Window parameter to configure the State
- Move Delta Marker.vi - reusing Window parameter to configure the Position
- Query Delta Marker.vi - reusing Window parameter

\* New in IQ Analyzer:

- Configure IQ Data Format.vi
- Configure Oscilloscope Self-Alignment Enabled.vi

\* Updated in IQ Analyzer:

- Configure IQ Data Acquisition.vi - Filter Bandwidth and Swap IQ is send to instrument only if it's FSW family
- Read Memory IQ Large Data Block.vi - deleted

\* New in External Generator:

- Configure External Gain PA Correction Enabled.vi

\* Updated in Phase Noise:

- Configure Phase Display Settings.vi - range of X Start changed to 0.0 to 300.0E+6

\* New in Baseband Power:

- Configure Analog Baseband Input Impedance.vi

\* Updated in Baseband Power:

- Configure Analog Baseband Probe Common Mode Offset.vi

\* New in Power Meter:

- Configure PWM Continuous Update.vi

\* New in DOCSIS:

- Delete DOCSIS CPAESA Table Rows.vi
- Delete DOCSIS Modulation Subcarrier Table Set.vi
- Delete DOCSIS Next Codeword Pointer Profile Row.vi
- Delete DOCSIS Codeword Frame Table Row.vi
- Delete DOCSIS Upstream ESA Table Row.vi
- Delete DOCSIS Upstream Profile Table Row.vi
- Configure DOCSIS Filter Out Adjacent Channels.vi
- Configure DOCSIS Evaluation Range Fast Mode.vi
- Configure DOCSIS Result Summary Display Settings.vi
- Query DOCSIS Window Type.vi
- DOCSIS Auto Set From PLC And Run.vi
- DOCSIS Auto Detection And Run.vi
- Fetch DOCSIS Cyclic Prefix CP.vi
- Query DOCSIS Marker Z Axis.vi

\* Updated in DOCSIS:

- Configure DOCSIS OFDM Channel Description.vi - Cyclic Prefix CP and Roll Off parameters updated
- Configure DOCSIS Result Summary Display.vi - Item parameter updated
- Fetch DOCSIS All Results.vi - Result parameter help updated
- Fetch DOCSIS Signal Content Detailed Formatted.vi - Object Information Type parameter help updated, parsing of command reply fixed
- Fetch DOCSIS Bitstream Results.vi - parsing of command reply fixed
- Fetch DOCSIS Results.vi - added 'Analyzed Minislots' and 'Trigger To Frame' to Specified Parameter

\* New in Transient Analysis:

- Configure Transient Analysis Hop Chirp Frequency Deviation.vi
- Configure Transient Analysis Hop Chirp Phase Deviation.vi
- Configure Transient Analysis Hop Chirp Settling Tolerance.vi
- Query Transient Analysis Parameter Distribution Axis.vi
- Query Transient Analysis Parameter Trend Axis.vi
- RSSPECAN\_ATTR\_TRANSIENT\_WINDOW\_STATISTIC\_TYPE - with Window repeated capability
- Query Transient Analysis Hop Total In Capture Buffer.vi

- Query Transient Analysis Chirp Total In Capture Buffer.vi

\* Updated in Transient Analysis:

- Configure Transient Analysis Relative Scaling.vi - using new attributes that use Window repeated capability
- Configure Transient Analysis Hop Chirp Frequency.vi - Reference parameter updated
- Configure Transient Analysis Hop Chirp Power.vi - Reference parameter updated
- Configure Transient Analysis Hop Result Table.vi - Header parameter updated
- Configure Transient Analysis Chirp Result Table.vi - Header parameter updated
- Configure Transient Analysis Chirp Result Table State.vi - Parameter updated
- Configure Transient Analysis Parameter Distribution Hop Frequency.vi - X Axis parameter updated
- Configure Transient Analysis Parameter Distribution Chirp Frequency.vi - X Axis parameter updated
- Configure Transient Analysis Parameter Trend Hop Frequency.vi - Y Axis parameter updated
- Configure Transient Analysis Parameter Trend Hop Frequency Axis.vi - Display Parameter parameter updated
- Configure Transient Analysis Parameter Trend Chirp Frequency.vi - Y Axis parameter updated
- Configure Transient Analysis Parameter Trend Chirp Frequency Axis.vi - Display Parameter parameter updated
- Query Transient Analysis Hop Result Frequency.vi - Parameter updated
- Query Transient Analysis Hop Result Table.vi - Results parameter help updated
- Query Transient Analysis Chirp Result Frequency.vi - Parameter updated
- Query Transient Analysis Chirp Result Table.vi - Results parameter help updated
- Configure Transient Analysis Link To Full.vi - ranges of Percent parameters updated

\* New in WCDMA:

- Select WCDMA IQ File.vi
- Create WCDMA BS Channel Table According To Measurement.vi
- Create WCDMA UE Channel Table According To Measurement.vi
- Export WCDMA Marker Peak List To File.vi

\* New in WLAN:

- Configure WLAN Standard Version Error Vector Magnitude.vi
- Configure WLAN Channel Bandwidth Auto.vi
- Configure WLAN Compensate Crosstalk.vi
- Configure WLAN Demodulation 802-11n Guard Interval.vi
- Configure WLAN Demodulation 802-11ac Guard Interval.vi
- Query WLAN Demodulation 802-11ax HE PPDU Config RU Index Count.vi
- Query WLAN Demodulation 802-11ax HE PPDU Config RU Index Highest.vi
- Configure WLAN MIMO Antenna Signal Capture OSP.vi
- Configure WLAN MIMO Antenna Signal Capture Path.vi
- Configure WLAN MIMO Antenna Signal Capture Time Sync.vi
- Query WLAN MIMO LAN Status.vi
- Select WLAN IQ File.vi
- Query WLAN IQ File Channel List.vi
- Configure WLAN IQ File Channel.vi
- Configure WLAN IQ File Repetition Count.vi
- Configure WLAN Polynomial Degree.vi
- Configure WLAN AM AM Autoscale.vi
- Configure WLAN AM AM Fixed.vi
- Configure WLAN AM AM Auto Hysteresis.vi
- Configure WLAN AM AM Number Of Divisions.vi
- Configure WLAN AM AM Scaling Per Division.vi
- Configure WLAN SEM Channel Bandwidth.vi
- Configure WLAN PPDU Selected Enabled.vi
- Query WLAN Burst PPDU Status.vi
- Fetch WLAN PPDU EVM.vi

- Fetch WLAN Signal Content Detailed EVM.vi
- Fetch WLAN Signal Content Detailed PPDU.vi
- Fetch WLAN AM AM Polynomial Coefficients.vi
- Fetch WLAN Detailed Signal Content IEEE 802.11ax.vi
- Fetch WLAN Signal Field.vi
- Fetch WLAN Unused Tone Error Summary.vi

\* Updated in WLAN:

- Configure WLAN Demodulation 802-11n MCS Index.vi - help updated
- Configure WLAN Demodulation 802-11n Guard Interval Length.vi - Guard Interval Length parameter updated
- Configure WLAN Demodulation 802-11ac Guard Interval Length.vi - Guard Interval Length parameter updated
- Configure WLAN Demodulation 802-11ax.vi - PPDU Format To Measure parameter updated
- Fetch WLAN Burst All.vi - SCPI command updated, helps updated
- Fetch WLAN Burst Power.vi - function API changed
- Fetch WLAN Burst Error.vi - function API changed
- Fetch WLAN IQ Impairments.vi - function API changed
- Fetch WLAN EVM.vi - function API changed
- Fetch WLAN Burst Time.vi - function API changed
- Fetch WLAN Burst Error Rate For Pilots.vi - function API changed
- Query WLAN Demodulation 802-11ax HE PPDU Config Highest RU Index.vi - SCPI command updated

\* Deleted in WLAN:

- Query WLAN Demodulation 802-11ax HE PPDU Config Highest RU Index Subchannel.vi

\* New in WiGig:

- Select WiGig IQ File.vi
- Load WiGig SEM File.vi
- WiGig Recalculate IQ Measurement Results.vi
- Configure WiGig Exporting Trace Results To ASCII File Enabled.vi

\* New in LTE:

- Configure LTE Downlink Exclude Inband NB-IoT.vi
- Configure LTE Downlink SEM Operating Band.vi
- LTE Downlink Select Tab.vi
- Configure LTE Uplink PUSCH Cell ID.vi
- Configure LTE Uplink PUSCH Cell ID Value.vi
- Configure LTE Uplink Local Oscillator Frequency.vi

\* Updated in LTE:

- Component Carrier range updated to 1-5
- Configure LTE Downlink PDSCH Configurable Subframes.vi - range updated
- Configure LTE Downlink PDSCH Used Allocation.vi - Power range updated
- Query LTE Downlink Measurement Synchronization State.vi - breaking change - API changed (added Component Carrier)
- Configure LTE Downlink Reference Signal.vi - range updated
- Configure LTE Downlink PBCH.vi - PBCH Relative Power range updated
- Configure LTE Downlink PCFICH.vi - PCFICH Relative Power range updated
- Configure LTE Downlink PHICH.vi - PHICH Relative Power range updated
- Configure LTE Downlink PDCCH.vi - PDCCH Relative Power range updated
- Configure LTE Downlink EPDCCH.vi - Relative Power range updated
- Configure LTE Downlink MBSFN.vi - Relative Power range updated
- Configure LTE Downlink Parameter Estimation.vi - Channel Estimation range updated
- Configure LTE Downlink Measurement Constellation Modulation.vi - Modulation range updated
- Configure LTE Downlink Carrier Aggregation.vi - Number of Carriers range updated
- Configure LTE Uplink Subframe Table.vi - Modulation range updated

- 
- Configure LTE Uplink Reference Signal.vi - Relative Power PUSCH, Relative Power PUCCH ranges updated
  - Configure LTE Uplink Sounding Reference Signal.vi - Relative Power range updated
  - Configure LTE Uplink PUCCH Structure.vi - N2\_RB range updated
  - Configure LTE Uplink Carrier Agregation Bandwidth.vi - range updated
  - Configure LTE Uplink Measurement Constellation Modulation - range updated
  - Query LTE Uplink Measurement Synchronization State.vi - breaking change - API changed (added Component Carrier)
  - Configure LTE Uplink Number Of Carriers.vi - range updated
  - Configure LTE Uplink Carrier Aggregation.vi - Number of Carriers range updated

\* New in VSA:

- VSA Digital Standard Preset.vi
- Configure VSA Digital IQ 40G Enabled.vi
- Query VSA Digital IQ 40G Sample Rate.vi
- Query VSA Digital IQ 40G Connected Device.vi
- Configure VSA Frame Pattern.vi
- Get VSA Frame Mapping Catalog.vi
- VSA Load Frame Config.vi
- Configure VSA Frame Mapping Select.vi
- VSA Load Frame Structure.vi
- VSA Save Frame Structure.vi
- VSA Frame Structure Edit.vi
- Configure VSA Frame Mode.vi
- Configure VSA Frame User File.vi
- Configure VSA Frame PSK.vi
- Configure VSA Frame QAM.vi
- Configure VSA Frame QPSK.vi
- Configure VSA Frame Boosting.vi
- Configure VSA Frame Modulation.vi
- Configure VSA Frame Description.vi
- Query VSA Frame Start Sample.vi
- Configure VSA Known Data Source.vi
- Configure VSA Known Data PRBS Type.vi
- Configure VSA Known Data Negate Feedback.vi
- Configure VSA Known Data Polynomial.vi
- Configure VSA Known Data PRBS Pattern.vi
- Configure VSA Deltamarker Peak Search.vi
- Configure VSA IQ Load Stream.vi
- Query VSA IQ Stream List.vi
- Query VSA Deltamarker Absolute X.vi

\* Updated in VSA:

- Configure VSA Compensation.vi
- Configure VSA Equalizer.vi - Length parameter updated
- Get VSA Result.vi - added IQ Skew
- Query VSA Modulation Accuracy Statistic Results.vi - added IQ Skew

\* New in Pulse:

- Configure Pulse Marker Link.vi
- Configure Pulse Deltamarker Link To Marker.vi
- Configure Pulse Marker Link To Marker.vi
- Configure Pulse Measurement Trace IQ Detector.vi
- Configure Pulse Measurement Trace Statistic Type.vi
- Query Pulse Result Range IQ Stored In Memory.vi

\* Updated in Pulse:

- Configure Pulse Reference For Pulse Pulse Measurement.vi - Pulse default value updated
- Configure Pulse Reference Level.vi - Unit help updated

### 3.10 Version 3.10.0 / 08 – 2018

- \* Added
  - Configure Sweep Zero Span.vi
- \* Updated
  - Configure Phase Display Settings.vi - range of X Start changed to 0.0 to 300.0E+6
  - Configure Reference Oscillator.vi - frequency is set on all instrument models
  - Configure Auto Adjust.vi - fixed for FSV family
  - Configure IQ Data Acquisition.vi - Filter Bandwidth and Swap IQ is send to instrument only if it's FSW family

### 3.11 Version 3.9.1 / 08 – 2017

- \* New
  - Configure Noise Frequency Settings Digital Mode.vi
- \* Updated
  - Initialize.vi, Initialize with Options.vi, Close.vi and Utility VIs have new VI icons
  - Read Phase Trace Data.vi: added new input parameters: Window, Perform Sweep, Timeout
  - Configure Noise Frequency Settings.vi: code improvements, added Digital Down converter Mode
  - Noise Loss Input Table Operations.vi: control Operation - renamed parameter
  - Get Phase Spot Noise Y Position.vi: Spot Noise - changed range to 1..8
  - Changes in all Add Window VIs: Changed parameter 'Window Name' to 'Reference Window Name'
  - Extended Rep Cap 'Snoise' to SN1 .. SN8
  - Configure Phase Signal Searching.vi, Configure Phase Signal Settings.vi - help improvements

### 3.12 Version 3.9.0 / 05 – 2017

- \* Added support for FSW 2.61, FSWP 1.50
- \* New in Base System:
  - Configure Preselector Adjustment.vi
  - Configure External Mixer XCORR.vi
- \* Updated in Base
  - Configure SEM Range Filter Type.vi - added 5-Pole filters to 'Filter Type'
  -
- \* New in I/Q Analyzer:
  - Configure IQ Maximum Bandwidth.vi
  - Configure Oscilloscope Sample Rate.vi
  - Configure Oscilloscope Power Splitter Mode.vi

\* Updated in I/Q Analyzer:

- Fetch Trace IQ Data.vi - to fetch all data, submit minus one (-1) to either 'Offset Samples' or 'No of Sample' controls

\* New in Pulse Measurement:

- Configure Pulse Measurement Trace Evaluation.vi
- Configure Pulse Result Parameter Trend Display Style.vi
- Configure Pulse Result Parameter Trend Envelope Model.vi
- Configure Pulse Result Parameter Distribution Envelope Model.vi
- Configure Pulse Result Parameter Spectrum Envelope Model.vi
- Configure Pulse Result Table Envelope Model.vi
- Configure Pulse Result Table Envelope Model Limit Check All.vi
- Configure Pulse Result Table Envelope Model Limit.vi
- Query Pulse Result Envelope Model.vi
- Query Pulse Result Limit Envelope Model.vi

\* Updated in Pulse Measurement:

- Configure Pulse Result Parameter Trend Power.v - added I, Q to 'X Axis'
- Configure Pulse Result Parameter Distribution Power.vi - added I, Q to 'X Axis'
- Configure Pulse Result Parameter Spectrum Power.vi - added I, Q to 'X Axis'
- Configure Pulse Result Table Power Limit.vi - added In-Phase Amplitude, Quadrature Amplitude to 'Parameter'

\* New in Amplifier:

- Get Amplifier Reference Signal Waveform File.vi
- Configure Amplifier Averaging IQ Data.vi
- Query Amplifier Averaging IQ Data Count.vi
- Configure Amplifier Equalizer Filter Length For Training.vi
- Amplifier Train Equalizer Filter.vi
- Amplifier Save Equalizer Filter.vi
- Amplifier Load Equalizer Filter.vi
- Configure Amplifier Equalizer State.vi
- Generate DPD Waveform File All.vi
- Get Amplifier DPD LED State.vi
- Configure Amplifier Direct DPD State.vi
- Amplifier Direct DPD Action.vi
- Configure Amplifier Direct DPD Iterations.vi
- Query Amplifier Direct DPD Current Iteration.vi
- Configure Amplifier Direct DPD Power Linearity Tradeoff.vi
- Configure Amplifier Direct DPD Name On Generator.vi
- Store Amplifier Direct DPD Waveform File.vi
- Apply Amplifier Direct DPD.vi

\* Updated in Amplifier:

- Query Amplifier IQ Synchronization Data.vi - breaking change - API changed

\* New in Noise Figure and Gain Measurement

- Query Noise ENR Table List.vi

\* Updated in Noise Figure and Gain Measurement:

- Configure Noise ENR Noise Source.vi ... VI help updated
- Configure Noise ENR Resistor Temperatures.vi... VI help updated
- Noise ENR Table Operations.vi... VI help updated
- Query Noise ENR Temperature Table List.vi... VI help updated

\* New in Phase Noise:

- Configure Phase Local Oscillator.vi
- Configure Phase Cross Correlation Optimize Threshold.vi
- Configure Phase Cross Correlation Finish Segment.vi
- Configure Phase Signal Searching Count.vi

- Signal Source Signal Frequency Stepsize.vi
- Transient Analysis State.vi
- Transient Analysis Measurement Mode.vi
- Transient Analysis Reference Level.vi
- Transient Analysis Y Axis Scale AF Coupling.vi
- Transient Analysis Y Axis Unit.vi
- Transient Analysis Trace Persistence.vi

\* Updated in Phase Noise:

- Add Phase Window.vi - added Phase
- Replace Phase Window.vi - added Phase

\* New in Transient Analysis:

- Configure Transient Analysis Compensate Hop Frequency Deviation.vi
- Configure Transient Analysis Compensate Chirp Rate Deviation.vi

\* New in IEEE 802-11:

- Configure WLAN Preamble Channel Estimation.vi
- Configure WLAN Evaluation Range Time Domain Analysis Interval.vi
- Configure WLAN Demodulation 802-11ax.vi
- Configure WLAN Demodulation 802-11ax HE PPDU Config.vi
- Query WLAN Demodulation 802-11ax HE PPDU Config Highest RU Index.vi
- Query WLAN Demodulation 802-11ax HE PPDU Config Highest RU Index Subchannel.vi
- Query WLAN Demodulation 802-11ax HE PPDU Config User Index.vi
- Configure WLAN Demodulation 802-11ax HE PPDU Config RU Index.vi
- Configure WLAN Demodulation 802-11ax HE PPDU Config RU Size.vi
- Configure WLAN Demodulation 802-11ax HE PPDU Config MCS Index.vi
- Configure WLAN Demodulation 802-11ax HE PPDU Config Nsts Per User.vi
- Configure WLAN Demodulation 802-11ax HE PPDU Config TX Beamforming.vi
- Configure WLAN Demodulation 802-11ax HE PPDU Config DCM.vi
- Configure WLAN Demodulation 802-11ax HE PPDU Config Coding.vi
- Configure WLAN Demodulation 802-11ax HE PPDU Config Insert.vi
- Configure WLAN Demodulation 802-11ax HE PPDU Config Delete.vi
- Configure WLAN MIMO Reference Level Offset.vi
- Configure WLAN MIMO Amplitude Settings Coupling.vi

\* Updated in IEEE 802-11:

- Configure WLAN Signal.vi - added IEEE 802.11ax to 'Standart'
- Get WLAN Lower Limit Line.vi - added missing ? to SCPI command
- Get WLAN All Limits.vi - SCPI command fixed
- Configure WLAN STC MIMO.vi - Number of MIMO Antennas raised from 4 to 8

\* New in LTE Downlink:

- Configure LTE Downlink Measurement Antenna Port Cell Reference Signal.vi
- Configure LTE Downlink Measurement Antenna Port CSI Reference Signal.vi

\* Updated in LTE Downlink:

- Configure LTE Downlink PDSCH Used Allocation.vi - added 1024QAM Modulation
- LTE Downlink Add Window.vi - added values 107 to 119 to 'Window Type'
- LTE Downlink Replace Window.vi - added values 107 to 119 to 'Window Type'
- Query LTE Downlink Measurement Result Summary.vi - added QAM1024
- Query LTE Downlink Measurement Limit Check Result.vi - added QAM1024
- Configure LTE Downlink Measurement Antenna Port.vi - added Ports 11, 12, 13, 14, All
- Configure LTE Downlink MBSFN Subframe.vi - added 1024QAM Modulation

\* Updated in LTE Uplink:

- LTE Uplink Add Window.vi - added Diagram, Peak List to 'Window Type'
- LTE Uplink Replace Window.vi - added Diagram, Peak List to 'Window Type'
- Query LTE Uplink Measurement Result Summary.vi - added QAM256
- Query LTE Uplink Measurement Limit Check Result.vi - added QAM256



\* New in DOCSIS 3.1

- Configure DOCSIS Upstream Auto Detection.vi
- Configure DOCSIS Power Unit.vi
- Configure DOCSIS Auto Configuration Per Continuous Minislot Block.vi
- Configure DOCSIS Band Auto Config.vi
- Configure DOCSIS Band Configuration Table Subcarriers.vi
- Configure DOCSIS Band Configuration Table Frequency.vi
- Configure DOCSIS Auto Bands Applied To.vi
- Configure DOCSIS User Config.vi
- Query DOCSIS Synchronous Power Band Result.vi

\* Updated in DOCSIS:

- Configure DOCSIS Upstream Profile.vi - added QAM32, Unused at 'Modulation'
- Add DOCSIS Window.vi - added Synchronous Band Power at 'Window Type'
- Replace DOCSIS Window.vi - added Synchronous Band Power at 'Window Type'

\* Updated in VSA:

- Configure VSA Trace Eval.vi - Use attribute

RSSPECAN\_ATTR\_ACTIVE\_WINDOW to configure the window on instrument before calling this function

- Configure VSA Limits Default.vi - breaking change - removed unused control

### 3.13 Version 3.8.0 / 01 – 2016

\* Added support for FSW 2.50, FSWP 1.30

\* New Subsystems:

- Spurious Measurement Application - K50

\* New in Base System:

- Configure RF Input With User Impedance.vi
- Configure Trace File Type.vi
- Configure Trace Import.vi
- Import Single Trace From File.vi
- Import Limit.vi
- Export Limit.vi
- Import Transducer Factor.vi
- Export Transducer Factor.vi
- Query IQ Data Format.vi
- Write Command with OPC sync.vi
- Query with OPC sync.vi

\* Updated in Base System:

- Query Spectrum Analyzer Measurement Results.vi
- Configure Spurious Emissions Sweep List Start Stop.vi
- Configure Spurious Emissions Sweep List Reference Level.vi
- Configure Spurious Emissions Sweep List Preamplifier.vi
- Configure Spurious Emissions Sweep List Preamplifier Level.vi
- Spurious Emissions Delete Range.vi
- Configure Reference Oscillator.vi ... Oscillator frequencz is set for FSV,FSVR or FSVA

only

\* New in K14

- Dwell Time.vi

\* New in DOCSIS:

- Fetch DOCSIS PLC NCP Information.vi
  - Fetch DOCSIS PLC NCP Subcarriers.vi
  - Fetch DOCSIS PLC OFDM Excluded Subcarriers.vi
  - Fetch DOCSIS PLC OFDM Channel Information.vi
  - Fetch DOCSIS PLC OFDM Pilots Subcarriers.vi
  - Fetch DOCSIS PLC Profile Information.vi
  - Fetch DOCSIS PLC Profile Subcarriers.vi
  - Fetch DOCSIS PLC Timestamp.vi,
- \* Updated in DOCSIS
- Add DOCSIS Window.vi
  - Replace DOCSIS Window.vi
  - Configure DOCSIS Modulation.vi
  - Configure DOCSIS OFDM Channel Description.vi
- \* New in Amplifier (K18)
- Configure Amplifier Generator Digital Attenuation.vi
  - Configure Amplifier Generator RF Output.vi
  - Update Amplifier Settings From Generator.vi
  - Configure Amplifier DPD Method.vi
  - Generate DPD Waveform File.vi
  - Export DPD Waveform To File.vi
  - Configure Amplifier Result Summary Display All.vi
  - Configure Amplifier Phase Display Settings.vi
  - Configure Amplifier Power Reference Display Settings.vi
  - Configure Amplifier Result Parameter Sweep Table All.vi
- \* Updated in Amplifier (K18)
- Get Amplifier Generator Setup Led State.vi
  - Amplifier Add Window.vi
  - Amplifier Replace Window.vi
- \* New in LTE Downlink:
- Configure LTE Downlink Reference Signal Carrier.vi
- \* Updated in LTE Uplink:
- Query LTE Uplink Measurement Frame Start Offset.vi
- \* New in Pulse (K6):
- Query Pulse Result Limit Power.vi
  - Query Pulse Result Limit Timing.vi
  - Query Pulse Result Limit Frequency.vi
  - Query Pulse Result Limit Phase.vi
- \* Update in Pulse (K6)
- Configure Pulse Result Table Power.vi
  - Pulse Measurement Add Window.vi
  - Pulse Measurement Replace Window.vi
  - Query Pulse Result Power.vi
- \* New in VSA (K70:)
- Read VSA Trace Symbol Errors.vi
- \* Updated in VSA (K70):
- Configure VSA Modulation Settings.vi
  - Get VSA Result.vi ... modifier range checking changed
- \* New in Phase Noise (FSWP)
- VCO State.vi
  - VCO DC Source.vi
  - VCO Sweep.vi

- Spot Noise Vs Tune State.vi
- Spot Noise Vs Tune Source.vi
- Spot Noise Vs Tune Sweep.vi
- Configure Phase Baseband Input.vi

\* Update in Phase Noise (FSWP)

- AddPhaseWindow
- ReplacePhaseWindow

\* Updated in Transient Analysis (K60)

- Transient Analysis Add Window.vi....bug fixed
- Transient Analysis Replace Window.vi....bug fixed

\* New attributes:

- Transducer Factor Import (RSSPECAN\_ATTR\_TRANSDUCER\_FACTOR\_IMPORT)
- Trace File Type (RSSPECAN\_ATTR\_TRACE\_FILE\_TYPE)
- Trace Import All (RSSPECAN\_ATTR\_TRACE\_IMPORT\_ALL)
- Input Impedance User (RSSPECAN\_ATTR\_INPUT\_IMPEDANCE\_USER)
- Input Impedance Pad Type (RSSPECAN\_ATTR\_INPUT\_IMPEDANCE\_PAD\_TYPE)
- Limit Import (RSSPECAN\_LIMIT\_IMPORT)
- Spurious Application Mode (RSSPECAN\_ATTR\_SPURIOUS\_APPLICATION\_MODE)
- SE Carrier Reference Power Reference  
(RSSPECAN\_ATTR\_SE\_CARRIER\_REFERENCE\_POWER\_REFERENCE)
- SE Carrier Reference Carrier Level  
(RSSPECAN\_ATTR\_SE\_CARRIER\_REFERENCE\_CARRIER\_LEVEL)
- SE Carrier Adjust Auto (RSSPECAN\_ATTR\_SE\_CARRIER\_ADJUST\_AUTO)
- SE Type Of Search (RSSPECAN\_ATTR\_SE\_TYPE\_OF\_SEARCH)
- SE Performed Steps (RSSPECAN\_ATTR\_SE\_PERFORMED\_STEPS)
- SE Mark Residuals (RSSPECAN\_ATTR\_SE\_MARK\_RESIDUALS)
- SE Remove Residuals (RSSPECAN\_ATTR\_SE\_REMOVE\_RESIDUALS)
- SE Transfer Search Settings To Wide  
(RSSPECAN\_ATTR\_SE\_TRANSFER\_SEARCH\_SETTINGS\_TO\_WIDE)
- SE Directed Search Limit Offset  
(RSSPECAN\_ATTR\_SE\_DIRECTED\_SEARCH\_LIMIT\_OFFSET)
- SE Directed Maximum Final RBW  
(RSSPECAN\_ATTR\_SE\_DIRECTED\_MAXIMUM\_FINAL\_RBW)
- SE Directed Number FFT Averages  
(RSSPECAN\_ATTR\_SE\_DIRECTED\_NUMBER\_FFT\_AVERAGES)
- SE Directed Peak Excursion (RSSPECAN\_ATTR\_SE\_DIRECTED\_PEAK\_EXCURSION)
- SE Directed Reference Level  
(RSSPECAN\_ATTR\_SE\_DIRECTED\_REFERENCE\_LEVEL)
- SE Directed Detector (RSSPECAN\_ATTR\_SE\_DIRECTED\_DETECTOR)
- SE Directed RF Attenuation (RSSPECAN\_ATTR\_SE\_DIRECTED\_RF\_ATTENUATION)
- SE Directed Preamplifier State  
(RSSPECAN\_ATTR\_SE\_DIRECTED\_PREAMPLIFIER\_STATE)
- SE Directed Preamplifier (RSSPECAN\_ATTR\_SE\_DIRECTED\_PREAMPLIFIER)
- SE Directed Save Table (RSSPECAN\_ATTR\_SE\_DIRECTED\_SAVE\_TABLE)
- SE Directed Load Table (RSSPECAN\_ATTR\_SE\_DIRECTED\_LOAD\_TABLE)
- SE Wide Clear Ranges (RSSPECAN\_ATTR\_SE\_WIDE\_CLEAR\_RANGES)
- SE Wide Load Ranges (RSSPECAN\_ATTR\_SE\_WIDE\_LOAD\_RANGES)
- SE Wide Save Ranges (RSSPECAN\_ATTR\_SE\_WIDE\_SAVE\_RANGES)
- SE List Range Resolution Bandwidth Auto  
(RSSPECAN\_ATTR\_SE\_LIST\_RANG\_BAND\_AUTO)
- SE List Range Limit Offset (RSSPECAN\_ATTR\_SE\_LIST\_RANGE\_LIMIT\_OFFSET)
- SE List Range Maximum Final RBW  
(RSSPECAN\_ATTR\_SE\_LIST\_RANGE\_MAXIMUM\_FINAL\_RBW)
- SE List Range Number FFT Averages  
(RSSPECAN\_ATTR\_SE\_LIST\_RANGE\_NUMBER\_FFT\_AVERAGES)
- SE List Range Peak Excursion  
(RSSPECAN\_ATTR\_SE\_LIST\_RANGE\_PEAK\_EXCURSION)

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- SE List Range Signal Noise Ratio  
(RSSPECAN\_ATTR\_SE\_LIST\_RANGE\_SIGNAL\_NOISE\_RATIO)
- SE List Range Threshold Start  
(RSSPECAN\_ATTR\_SE\_LIST\_RANGE\_THRESHOLD\_START)
- SE List Range Threshold Stop  
(RSSPECAN\_ATTR\_SE\_LIST\_RANGE\_THRESHOLD\_STOP)
- Dwell Time Auto (RSSPECAN\_ATTR\_DWELL\_TIME\_AUTO)
- Dwell Time (RSSPECAN\_ATTR\_DWELL\_TIME)
- Amplifier Setup From Generator  
(RSSPECAN\_ATTR\_AMPLIFIER\_SETUP\_FROM\_GENERATOR)
- Amplifier Generator Digital Attenuation  
(RSSPECAN\_ATTR\_AMPLIFIER\_GENERATOR\_DIGITAL\_ATTENUATION)
- Amplifier Generator Digital Attenuation State  
(RSSPECAN\_ATTR\_AMPLIFIER\_GENERATOR\_DIGITAL\_ATTENUATION\_STATE)
- Amplifier Generator RF Output  
(RSSPECAN\_ATTR\_AMPLIFIER\_GENERATOR\_RF\_OUTPUT)
- Amplifier Generator RF Output State  
(RSSPECAN\_ATTR\_AMPLIFIER\_GENERATOR\_RF\_OUTPUT\_STATE)
- Amplifier DPD Method (RSSPECAN\_ATTR\_AMPLIFIER\_DPD\_METHOD)
- Amplifier DPD Generate Waveform File  
(RSSPECAN\_ATTR\_AMPLIFIER\_DPD\_GENERATE\_WAVEFORM\_FILE)
- Amplifier DPD Export Waveform File  
(RSSPECAN\_ATTR\_AMPLIFIER\_DPD\_EXPORT\_WAVEFORM\_FILE)
- Amplifier Display Window Table Item MACC All  
(RSSPECAN\_ATTR\_AMPLIFIER\_DISPLAY\_WINDOW\_TABLE\_ITEM\_MACC\_ALL)
- Amplifier Display Window Table Item Power All  
(RSSPECAN\_ATTR\_AMPLIFIER\_DISPLAY\_WINDOW\_TABLE\_ITEM\_POWER\_ALL)
- Amplifier Display Window Table Item Volt/Curr All  
(RSSPECAN\_ATTR\_AMPLIFIER\_DISPLAY\_WINDOW\_TABLE\_ITEM\_VC\_ALL)
- Amplifier AM PM Definition (RSSPECAN\_ATTR\_AMPLIFIER\_AM\_PM\_DEFINITION)
- Amplifier Power Reference (RSSPECAN\_ATTR\_AMPLIFIER\_POWER\_REFERENCE)
- Amplifier Parameters Sweep Table Item All  
(RSSPECAN\_ATTR\_AMPLIFIER\_PARAMETERS\_SWEEP\_TABLE\_ITEM\_ALL)
- Pulse Result Table Power Amplitude I  
(RSSPECAN\_ATTR\_PULSE\_RESULT\_TABLE\_POWER\_AMPLITUDE\_I)
- Pulse Result Table Power Amplitude Q  
(RSSPECAN\_ATTR\_PULSE\_RESULT\_TABLE\_POWER\_AMPLITUDE\_Q)
- LTE Downlink Reference Power Carrier  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_REFERENCE\_POWER\_CARR)
- LTE Uplink Trigger To Frame Result Carrier  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_TRIGGER\_TO\_FRAME\_RESULT\_CARR)
- Phase Noise Baseband Input Connector  
(RSSPECAN\_ATTR\_PNOISE\_BASEBAND\_INPUT\_CONNECTOR)
- VCO Measurement State (RSSPECAN\_ATTR\_VCO\_MEASUREMENT\_STATE)
- VCO Sweep Fix Source (RSSPECAN\_ATTR\_VCO\_SWEEP\_FIX\_SOURCE)
- VCO Sweep Initial Settling Time  
(RSSPECAN\_ATTR\_VCO\_SWEEP\_INITIAL\_SETTLING\_TIME)
- VCO Sweep Settling Time (RSSPECAN\_ATTR\_VCO\_SWEEP\_SETTLING\_TIME)
- VCO Sweep Frequency Resolution  
(RSSPECAN\_ATTR\_VCO\_SWEEP\_FREQUENCY\_RESOLUTION)
- VCO Sweep Points (RSSPECAN\_ATTR\_VCO\_SWEEP\_POINTS)
- VCO Sweep Source (RSSPECAN\_ATTR\_VCO\_SWEEP\_SOURCE)
- VCO Sweep Start (RSSPECAN\_ATTR\_VCO\_SWEEP\_START)
- VCO Sweep Stop (RSSPECAN\_ATTR\_VCO\_SWEEP\_STOP)
- Spot Noise vs Tune Measurement State  
(RSSPECAN\_ATTR\_SPOT\_NOISE\_VS\_TUNE\_MEASUREMENT\_STATE)
- Spot Noise vs Tune Sweep Initial Settling Time  
(RSSPECAN\_ATTR\_SPOT\_NOISE\_VS\_TUNE\_SWEEP\_INITIAL\_SETTLING\_TIME)
- Spot Noise vs Tune Sweep Settling Time  
(RSSPECAN\_ATTR\_SPOT\_NOISE\_VS\_TUNE\_SWEEP\_SETTLING\_TIME)

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- Spot Noise vs Tune Sweep Points  
(RSSPECAN\_ATTR\_SPOT\_NOISE\_VS\_TUNE\_SWEEP\_POINTS)
- Spot Noise vs Tune Sweep Source  
(RSSPECAN\_ATTR\_SPOT\_NOISE\_VS\_TUNE\_SWEEP\_SOURCE)
- Spot Noise vs Tune Sweep Start  
(RSSPECAN\_ATTR\_SPOT\_NOISE\_VS\_TUNE\_SWEEP\_START)
- Spot Noise vs Tune Sweep Stop  
(RSSPECAN\_ATTR\_SPOT\_NOISE\_VS\_TUNE\_SWEEP\_STOP)
- DOCSIS NCP Modulation (RSSPECAN\_ATTR\_DOCSIS\_NCP\_MODULATION)
- DOCSIS Fetch PLC Timestamp  
(RSSPECAN\_ATTR\_DOCSIS\_FETCH\_PLC\_TIMESTAMP)
- DOCSIS Fetch PLC NCP Change Count  
(RSSPECAN\_ATTR\_DOCSIS\_FETCH\_PLC\_NCP\_CHANGE\_COUNT)
- DOCSIS Fetch PLC NCP Channel ID  
(RSSPECAN\_ATTR\_DOCSIS\_FETCH\_PLC\_NCP\_CHANNEL\_ID)
- DOCSIS Fetch PLC NCP Modulation  
(RSSPECAN\_ATTR\_DOCSIS\_FETCH\_PLC\_NCP\_MODULATION)
- DOCSIS Fetch PLC OFDM Change Count  
(RSSPECAN\_ATTR\_DOCSIS\_FETCH\_PLC\_OFDM\_CHANGE\_COUNT)
- DOCSIS Fetch PLC OFDM Cyclic Prefix Length  
(RSSPECAN\_ATTR\_DOCSIS\_FETCH\_PLC\_OFDM\_CYCLIC\_PREFIX\_LENGTH)
- DOCSIS Fetch PLC OFDM Channel ID  
(RSSPECAN\_ATTR\_DOCSIS\_FETCH\_PLC\_OFDM\_CHANNEL\_ID)
- DOCSIS Fetch PLC OFDM FFT Length  
(RSSPECAN\_ATTR\_DOCSIS\_FETCH\_PLC\_OFDM\_FFT\_LENGTH)
- DOCSIS Fetch PLC OFDM Start Index L  
(RSSPECAN\_ATTR\_DOCSIS\_FETCH\_PLC\_OFDM\_START\_INDEX\_L)
- DOCSIS Fetch PLC OFDM Roll Off  
(RSSPECAN\_ATTR\_DOCSIS\_FETCH\_PLC\_OFDM\_ROLL\_OFF)
- DOCSIS Fetch PLC OFDM Spectrum Location  
(RSSPECAN\_ATTR\_DOCSIS\_FETCH\_PLC\_OFDM\_SPECTRUM\_LOCATION)
- DOCSIS Fetch PLC OFDM Time Interleaving Depth  
(RSSPECAN\_ATTR\_DOCSIS\_FETCH\_PLC\_OFDM\_TIME\_INTERLEAVING\_DEPTH)
- DOCSIS Fetch PLC Profile Change Count  
(RSSPECAN\_ATTR\_DOCSIS\_FETCH\_PLC\_PROFILE\_CHANGE\_COUNT)
- DOCSIS Fetch PLC Profile Channel ID  
(RSSPECAN\_ATTR\_DOCSIS\_FETCH\_PLC\_PROFILE\_CHANNEL\_ID)

\* Modified attributes:

- Amplifier Generator Segment  
(RSSPECAN\_ATTR\_AMPLIFIER\_GENERATOR\_SEGMENT) - SCPI command fixed
- Transient Evaluation Basis (RSSPECAN\_ATTR\_TRANSIENT\_EVALUATION\_BASIS) -  
Repeated Capability Window added
- DOCSIS NPC Modulation Deprecated  
(RSSPECAN\_ATTR\_DOCSIS\_NPC\_MODULATION) - This attribute is deperecated. Use  
RSSPECAN\_ATTR\_DOCSIS\_NCP\_MODULATION instead it.

\* Modified Repeated Capabilities:

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- Range - Identifiers

("R1,R2,R3,R4,R5,R6,R7,R8,R9,R10,R11,R12,R13,R14,R15,R16,R17,R18,R19,R20,R21,R22,R23,R24,R25,R26,R27,R28,R29,R30,R31,R32,R33,R34,R35,R36,R37,R38,R39,R40,R41,R42,R43,R44,R45,R46,R47,R48,R49,R50,R51,R52,R53,R54,R55,R56,R57,R58,R59,R60,R61,R62,R63,R64,R65,R66,R67,R68,R69,R70,R71,R72,R73,R74,R75,R76,R77,R78,R79,R80,R81,R82,R83,R84,R85,R86,R87,R88,R89,R90,R91,R92,R93,R94,R95,R96,R97,R98,R99,R100,R101,R102,R103,R104,R105,R106,R107,R108,R109,R110,R111,R112,R113,R114,R115,R116,R117,R118,R119,R120,R121,R122,R123,R124,R125,R126,R127,R128,R129,R130,R131,R132,R133,R134,R135,R136,R137,R138,R139,R140,R141,R142,R143,R144,R145,R146,R147,R148,R149,R150,R151,R152,R153,R154,R155,R156,R157,R158,R159,R160,R161,R162,R163,R164,R165,R166,R167,R168,R169,R170,R171,R172,R173,R174,R175,R176,R177,R178,R179,R180,R181,R182,R183,R184,R185,R186,R187,R188,R189,R190,R191,R192,R193,R194,R195,R196,R197,R198,R199,R200,R201,R202,R203,R204,R205,R206,R207,R208,R209,R210,R211,R212,R213,R214,R215,R216,R217,R218,R219,R220,R221,R222,R223,R224,R225,R226,R227,R228,R229,R230,R231,R232,R233,R234,R235,R236,R237,R238,R239,R240,R241,R242,R243,R244,R245,R246,R247,R248,R249,R250,R251,R252,R253,R254,R255,R256,R257,R258,R259,R260,R261,R262,R263,R264,R265,R266,R267,R268,R269,R270,R271,R272,R273,R274,R275,R276,R277,R278,R279,R280,R281,R282,R283,R284,R285,R286,R287,R288,R289,R290,R291,R292,R293,R294,R295,R296,R297,R298,R299,R300,R301,R302,R303,R304,R305,R306,R307,R308,R309,R310,R311,R312,R313,R314,R315,R316,R317,R318,R319,R320,R321,R322,R323,R324,R325,R326,R327,R328,R329,R330,R331,R332,R333,R334,R335,R336,R337,R338,R339,R340,R341,R342,R343,R344,R345,R346,R347,R348,R349,R350,R351,R352,R353,R354,R355,R356,R357,R358,R359,R360,R361,R362,R363,R364,R365,R366,R367,R368,R369,R370,R371,R372,R373,R374,R375,R376,R377,R378,R379,R380,R381,R382,R383,R384,R385,R386,R387,R388,R389,R390,R391,R392,R393,R394,R395,R396,R397,R398,R399,R400,R401,R402,R403,R404,R405,R406,R407,R408,R409,R410,R411,R412,R413,R414,R415,R416,R417,R418,R419,R420,R421,R422,R423,R424,R425,R426,R427,R428,R429,R430,R431,R432,R433,R434,R435,R436,R437,R438,R439,R440,R441,R442,R443,R444,R445,R446,R447,R448,R449,R450,R451,R452,R453,R454,R455,R456,R457,R458,R459,R460,R461,R462,R463,R464,R465,R466,R467,R468,R469,R470,R471,R472,R473,R474,R475,R476,R477,R478,R479,R480,R481,R482,R483,R484,R485,R486,R487,R488,R489,R490,R491,R492,R493,R494,R495,R496,R497,R498,R499,R500,R501,R502,R503,R504,R505,R506,R507,R508,R509,R510,R511,R512,R513,R514,R515,R516,R517,R518,R519,R520,R521,R522,R523,R524,R525,R526,R527,R528,R529,R530,R531,R532,R533,R534,R535,R536,R537,R538,R539,R540,R541,R542,R543,R544,R545,R546,R547,R548,R549,R550,R551,R552,R553,R554,R555,R556,R557,R558,R559,R560,R561,R562,R563,R564,R565,R566,R567,R568,R569,R570,R571,R572,R573,R574,R575,R576,R577,R578,R579,R580,R581,R582,R583,R584,R585,R586,R587,R588,R589,R590,R591,R592,R593,R594,R595,R596,R597,R598,R599,R600,R601,R602,R603,R604,R605,R606,R607,R608,R609,R610,R611,R612,R613,R614,R615,R616,R617,R618,R619,R620,R621,R622,R623,R624,R625,R626,R627,R628,R629,R630,R631,R632,R633,R634,R635,R636,R637,R638,R639,R640,R641,R642,R643,R644,R645,R646,R647,R648,R649,R650,R651,R652,R653,R654,R655,R656,R657,R658,R659,R660,R661,R662,R663,R664,R665,R666,R667,R668,R669,R670,R671,R672,R673,R674,R675,R676,R677,R678,R679,R680,R681,R682,R683,R684,R685,R686,R687,R688,R689,R690,R691,R692,R693,R694,R695,R696,R697,R698,R699,R700,R701,R702,R703,R704,R705,R706,R707,R708,R709,R710,R711,R712,R713,R714,R715,R716,R717,R718,R719,R720,R721,R722,R723,R724,R725,R726,R727,R728,R729,R730,R731,R732,R733,R734,R735,R736,R737,R738,R739,R740,R741,R742,R743,R744,R745,R746,R747,R748,R749,R750,R751,R752,R753,R754,R755,R756,R757,R758,R759,R760,R761,R762,R763,R764,R765,R766,R767,R768,R769,R770,R771,R772,R773,R774,R775,R776,R777,R778,R779,R780,R781,R782,R783,R784,R785,R786,R787,R788,R789,R790,R791,R792,R793,R794,R795,R796,R797,R798,R799,R800,R801,R802,R803,R804,R805,R806,R807,R808,R809,R810,R811,R812,R813,R814,R815,R816,R817,R818,R819,R820,R821,R822,R823,R824,R825,R826,R827,R828,R829,R830,R831,R832,R833,R834,R835,R836,R837,R838,R839,R840,R841,R842,R843,R844,R845,R846,R847,R848,R849,R850,R851,R852,R853,R854,R855,R856,R857,R858,R859,R860,R861,R862,R863,R864,R865,R866,R867,R868,R869,R870,R871,R872,R873,R874,R875,R876,R877,R878,R879,R880,R881,R882,R883,R884,R885,R886,R887,R888,R889,R890,R891,R892,R893,R894,R895,R896,R897,R898,R899,R900,R901,R902,R903,R904,R905,R906,R907,R908,R909,R910,R911,R912,R913,R914,R915,R916,R917,R918,R919,R920,R921,R922,R923,R924,R925,R926,R927,R928,R929,R930,R931,R932,R933,R934,R935,R936,R937,R938,R939,R940,R941,R942,R943,R944,R945,R946,R947,R948,R949,R950,R951,R952,R953,R954,R955,R956,R957,R958,R959,R960,R961,R962,R963,R964,R965,R966,R967,R968,R969,R970,R971,R972,R973,R974,R975,R976,R977,R978,R979,R980,R981,R982,R983,R984,R985,R986,R987,R988,R989,R990,R991,R992,R993,R994,R995,R996,R997,R998,R999,R1000)

7,R968,R969,R970,R971,R972,R973,R974,R975,R976,R977,R978,R979,R980,R981,R982,R983,R984,R985,R986,R987,R988,R989,R990,R991,R992,R993,R994,R995,R996,R997,R998,R999,R1000",  
"R1,R2,R3,R4,R5,R6,R7,R8,R9,R10,R11,R12,R13,R14,R15,R16,R17,R18,R19,R20,R21,R22,R23,R24,R25,R26,R27,R28,R29,R30")

- Range - Command Values

("1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96,97,98,99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135,136,137,138,139,140,141,142,143,144,145,146,147,148,149,150,151,152,153,154,155,156,157,158,159,160,161,162,163,164,165,166,167,168,169,170,171,172,173,174,175,176,177,178,179,180,181,182,183,184,185,186,187,188,189,190,191,192,193,194,195,196,197,198,199,200,201,202,203,204,205,206,207,208,209,210,211,212,213,214,215,216,217,218,219,220,221,222,223,224,225,226,227,228,229,230,231,232,233,234,235,236,237,238,239,240,241,242,243,244,245,246,247,248,249,250,251,252,253,254,255,256,257,258,259,260,261,262,263,264,265,266,267,268,269,270,271,272,273,274,275,276,277,278,279,280,281,282,283,284,285,286,287,288,289,290,291,292,293,294,295,296,297,298,299,300,301,302,303,304,305,306,307,308,309,310,311,312,313,314,315,316,317,318,319,320,321,322,323,324,325,326,327,328,329,330,331,332,333,334,335,336,337,338,339,340,341,342,343,344,345,346,347,348,349,350,351,352,353,354,355,356,357,358,359,360,361,362,363,364,365,366,367,368,369,370,371,372,373,374,375,376,377,378,379,380,381,382,383,384,385,386,387,388,389,390,391,392,393,394,395,396,397,398,399,400,401,402,403,404,405,406,407,408,409,410,411,412,413,414,415,416,417,418,419,420,421,422,423,424,425,426,427,428,429,430,431,432,433,434,435,436,437,438,439,440,441,442,443,444,445,446,447,448,449,450,451,452,453,454,455,456,457,458,459,460,461,462,463,464,465,466,467,468,469,470,471,472,473,474,475,476,477,478,479,480,481,482,483,484,485,486,487,488,489,490,491,492,493,494,495,496,497,498,499,500,501,502,503,504,505,506,507,508,509,510,511,512,513,514,515,516,517,518,519,520,521,522,523,524,525,526,527,528,529,530,531,532,533,534,535,536,537,538,539,540,541,542,543,544,545,546,547,548,549,550,551,552,553,554,555,556,557,558,559,560,561,562,563,564,565,566,567,568,569,570,571,572,573,574,575,576,577,578,579,580,581,582,583,584,585,586,587,588,589,590,591,592,593,594,595,596,597,598,599,600,601,602,603,604,605,606,607,608,609,610,611,612,613,614,615,616,617,618,619,620,621,622,623,624,625,626,627,628,629,630,631,632,633,634,635,636,637,638,639,640,641,642,643,644,645,646,647,648,649,650,651,652,653,654,655,656,657,658,659,660,661,662,663,664,665,666,667,668,669,670,671,672,673,674,675,676,677,678,679,680,681,682,683,684,685,686,687,688,689,690,691,692,693,694,695,696,697,698,699,700,701,702,703,704,705,706,707,708,709,710,711,712,713,714,715,716,717,718,719,720,721,722,723,724,725,726,727,728,729,730,731,732,733,734,735,736,737,738,739,740,741,742,743,744,745,746,747,748,749,750,751,752,753,754,755,756,757,758,759,760,761,762,763,764,765,766,767,768,769,770,771,772,773,774,775,776,777,778,779,780,781,782,783,784,785,786,787,788,789,790,791,792,793,794,795,796,797,798,799,800,801,802,803,804,805,806,807,808,809,810,811,812,813,814,815,816,817,818,819,820,821,822,823,824,825,826,827,828,829,830,831,832,833,834,835,836,837,838,839,840,841,842,843,844,845,846,847,848,849,850,851,852,853,854,855,856,857,858,859,860,861,862,863,864,865,866,867,868,869,870,871,872,873,874,875,876,877,878,879,880,881,882,883,884,885,886,887,888,889,890,891,892,893,894,895,896,897,898,899,900,901,902,903,904,905,906,907,908,909,910,911,912,913,914,915,916,917,918,919,920,921,922,923,924,925,926,927,928,929,930,931,932,933,934,935,936,937,938,939,940,941,942,943,944,945,946,947,948,949,950,951,952,953,954,955,956,957,958,959,960,961,962,963,964,965,966,967,968,969,970,971,972,973,974,975,976,977,978,979,980,981,982,983,984,985,986,987,988,989,990,991,992,993,994,995,996,997,998,999,1000", "1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30")

\* Modified Range Tables:

- rssidpecan\_rngListRangInpAtt - RSSIDPECAN\_ATTR\_SE\_LIST\_RANG\_INP\_ATT  
Range changed to <0.0;79.0>
- rssidpecan\_rngRBW - RSSIDPECAN\_ATTR\_SE\_LIST\_RANG\_BAND  
Range changed to <1.0;50000000>
- rssidpecan\_rngAmplAttenMode - RSSIDPECAN\_ATTR\_ATTENUATION\_MODE  
New items: RSSIDPECAN\_VAL\_ATT\_MODE\_LNO
- rssidpecan\_rngLayoutQueryWindowType -

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New items: RSSPECAN\_VAL\_LAYOUT\_TYPE\_PLCM,  
RSSPECAN\_VAL\_LAYOUT\_TYPE\_PIAQ, RSSPECAN\_VAL\_LAYOUT\_TYPE\_HARM,  
RSSPECAN\_VAL\_LAYOUT\_TYPE\_INO, RSSPECAN\_VAL\_LAYOUT\_TYPE\_POW,  
RSSPECAN\_VAL\_LAYOUT\_TYPE\_SENS, RSSPECAN\_VAL\_LAYOUT\_TYPE\_SNT,  
RSSPECAN\_VAL\_LAYOUT\_TYPE\_SUPP  
- rsspecan\_rngPulseParameterPowerTrend -  
RSSPECAN\_ATTR\_PULSE\_RESULT\_PARAMETER\_TREND\_POWER\_Y\_AXIS,  
RSSPECAN\_ATTR\_PULSE\_RESULT\_PARAMETER\_TREND\_POWER\_X\_AXIS,  
RSSPECAN\_ATTR\_PULSE\_PARAMETER\_SPECTRUM\_POWER  
New items: RSSPECAN\_VAL\_PULSE\_RESULT\_POWER\_AMPL\_I,  
RSSPECAN\_VAL\_PULSE\_RESULT\_POWER\_AMPL\_Q  
- rsspecan\_rngVSAModulPSKFormat -  
RSSPECAN\_ATTR\_VSA\_MODULATION\_PSK\_FORMAT  
New items: RSSPECAN\_VAL\_MOD\_PSK\_MNPI2  
- rsspecan\_rngAmplifierLayoutQueryWindowType -  
New items: RSSPECAN\_VAL\_LAYOUT\_TYPE\_AM\_EVM  
- RsSpecAn\_rngDOCSISModulation - RSSPECAN\_ATTR\_DOCSIS\_MODULATION  
New items: RSSPECAN\_VAL\_DOCSIS\_MODULATION\_ZEROBIT  
- rsspecan\_rngPulseLayoutType -  
New items: RSSPECAN\_VAL\_LAYOUT\_TYPE\_PIAQ  
- rsspecan\_rngDOCSISLayoutType -  
New items: RSSPECAN\_VAL\_LAYOUT\_TYPE\_PLCM  
- rsspecan\_rngPhaseNoiseLayoutType -  
New items: RSSPECAN\_VAL\_LAYOUT\_TYPE\_HARM,  
RSSPECAN\_VAL\_LAYOUT\_TYPE\_INO, RSSPECAN\_VAL\_LAYOUT\_TYPE\_POW,  
RSSPECAN\_VAL\_LAYOUT\_TYPE\_SENS, RSSPECAN\_VAL\_LAYOUT\_TYPE\_SNT,  
RSSPECAN\_VAL\_LAYOUT\_TYPE\_SUPP, RSSPECAN\_VAL\_LAYOUT\_TYPE\_FREQ

### 3.14 Version 3.7.0 / 08 – 2016

\* Added support for FSW 2.40, FSWP 1.20, FSV 3.10, FPS 1.40, FSVA 3.101

\* New Subsystems

- Avionics

\* New in Base System:

- Configure Internal Wideband Calibration Frequency.vi

- System Tree Walking.vi

- Configure Hardcopy Print Margins Settings.vi

- Configure Hardcopy Windows Settings.vi

- Hardcopy Content.vi

- Configure Sweep Points.vi

\* Updated in Base System:

- Configure External Gate.vi

- Configure Calibration Signal.vi

- Configure Preset Filter.vi

- Add Window.vi

- Replace Window.vi

- Query Power Results.vi

- Configure Hardcopy Device.vi

- Get Status Register Query.vi

\* New in IQ Analyzer:

- Configure IQ Bandwidth Extention.vi



\* Updated in VSA:

- Configure VSA Modulation Settings.vi

\* New in Phase Noise:

- Configure Phase Display Y Axis Unit.vi
- Configure Phase Pulse External Gate Type.vi
- Configure Phase Signal Capture Range.vi
- Signal Source DUT Bypass.vi
- Signal Source Pulse Modulation.vi
- Signal Source Pulse Settings.vi

\* Updated in Phase Noise:

- Read Phase Trace Data.vi

\* New in DOCSIS:

- Configure DOCSIS OFDM Spectrum Location.vi
- Query DOCSIS Next Codeword Pointer Number Of Entries.vi
- Configure DOCSIS Next Codeword Pointer Modulation.vi
- Configure DOCSIS Next Codeword Pointer Start Stop.vi
- Configure DOCSIS Next Codeword Pointer Set.vi
- Configure DOCSIS Limit Check State.vi
- Configure DOCSIS Evaluation Range Symbol Size.vi
- Configure DOCSIS Result Summary Unit.vi
- Fetch DOCSIS Continuous Pilots Results.vi
- Fetch DOCSIS Data Results.vi
- Fetch DOCSIS Power Pilots Results.vi
- Fetch DOCSIS Scattered Pilots Results.vi
- Fetch DOCSIS Physical Link Channel Results.vi

\* Updated in DOCSIS:

- Configure DOCSIS Channel Estimation.vi
- Add DOCSIS Window.vi
- Replace DOCSIS Window.vi

\* New in Noise Figure and Gain Measurement:

- Configure Noise Local Oscillator Settings.vi
- Configure Noise Frequency Entries Table.vi
- Configure Noise Result Summary Display.vi

\* New in Amplifier:

- Query Amplifier IQ Synchronization Data.vi
- Configure Amplifier Power Servoing.vi
- Configure Amplifier Power Servoing Target Settings.vi
- Configure Amplifier Power Servoing Data Acquisition.vi
- Configure Amplifier Power Servoing Start.vi
- Configure Amplifier Power Servoing Stop.vi
- Get Amplifier Power All Result.vi

\* Updated in Amplifier:

- Amplifier Add Window.vi
- Amplifier Replace Window.vi

\* New in Multi-Carrier Group Delay:

- Configure Multi Carrier Group Delay Reference.vi
- Configure Multi Carrier Group Delay Reference Frequency.vi
- Replace Multi Carrier Group Delay Window.vi
- Add Multi Carrier Group Delay Window.vi

\* Updated in WCDMA:

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- WCDMA TAE Load Default Carrier Table.vi - FSV support instrument added
  - WCDMA TAE Carrier Table Operations.vi - FSV support instrument added
  - Get WCDMA TAE Carrier Table Catalog.vi - FSV support instrument added
  - Get WCDMA TAE Number Of Carriers.vi - FSV support instrument added
  - WCDMA TAE Carrier Operations.vi - FSV support instrument added
  - Configure WCDMA TAE Carrier Table.vi - FSV support instrument added

\* New in Transient Analysis:

- Configure Transient Analysis Evaluation.vi

\* Updated Transient Analysis:

- Transient Analysis Replace Window.vi

\* New in IEEE 802-11:

- Configure WLAN Spectrum Flatness Unit.vi
- Fetch WLAN Effective Channel Gain.vi
- Fetch WLAN Physical Channel Gain.vi
- Get WLAN Upper Limit Line.vi
- Get WLAN Upper Limit Line.vi

\* New in LTE Downlink:

- Configure LTE Downlink Frequency Sweep Measurements Auto.vi
- Query LTE Downlink CCDF Results.vi
- Query LTE Downlink CCDF Statistical Results.vi
- Query LTE Downlink CCDF Statistical All Results.vi
- Query LTE Downlink Measurement Limit Check Result.vi
- Query LTE Downlink Measurement EVM Physical Channel Limit Check.vi
- Query LTE Downlink Measurement EVM Physical Signal Limit Check.vi
- Query LTE Downlink Measurement Frequency Error Limit Check.vi
- Query LTE Downlink Measurement Sampling Error Limit Check.vi
- Query LTE Downlink Measurement IQ Offset Limit Check.vi
- Query LTE Downlink Measurement IQ Gain Imbalance Limit Check.vi
- Query LTE Downlink Measurement IQ Quadrature Error Limit Check.vi
- Configure LTE Downlink Measurement Signal Detection.vi
- Configure LTE Downlink Measurement Subframe.vi
- Configure LTE Downlink Measurement Subframe All.vi
- Configure LTE Downlink Measurement Constellation Modulation.vi
- Configure LTE Downlink Measurement Constellation Modulation All.vi
- Configure LTE Downlink Measurement Constellation Allocation.vi
- Configure LTE Downlink Measurement Constellation Allocation All.vi
- Configure LTE Downlink Measurement Constellation OFDM Symbol.vi
- Configure LTE Downlink Measurement Constellation OFDM Symbol All.vi
- Configure LTE Downlink Measurement Constellation Carrier.vi
- Configure LTE Downlink Measurement Constellation Carrier All.vi
- Configure LTE Downlink Measurement Constellation Location.vi
- Configure LTE Downlink Measurement Antenna Port.vi
- Query LTE Downlink Marker Z Axis.vi
- Query LTE Downlink Marker Z Axis All.vi

\* Updated in LTE Downlink:

- Configure LTE Downlink PDSCH Configurable Subframes.vi
- Configure LTE Downlink PDSCH Used Allocations.vi
- Configure LTE Downlink PDSCH Used Allocation.vi
- Configure LTE Downlink PDSCH Used Allocation Enhanced Settings.vi
- Configure LTE Downlink Positioning Reference Signal.vi
- Configure LTE Downlink CSI Reference Signal.vi
- Configure LTE Downlink PRB Symbol Offset.vi
- Configure LTE Downlink PBCH.vi
- Configure LTE Downlink PCFICH.vi
- Configure LTE Downlink PHICH.vi

- Configure LTE Downlink PHICH Ng Parameter.vi
- Configure LTE Downlink PHICH Enhanced Test Models.vi
- Configure LTE Downlink PDCCH.vi
- Configure LTE Downlink PDSCH Power Ratio.vi
- Configure LTE Downlink EPDCCH.vi
- Configure LTE Downlink MBSFN.vi
- Configure LTE Downlink MBSFN Subframe.vi
- Query LTE Downlink Measurement Result Summary.vi
- Query LTE Downlink Measurement Power Result.vi

\* New in LTE Uplink:

- Configure LTE Uplink DRS Cell ID.vi
- Configure LTE Uplink DRS Cell ID Value.vi
- Configure LTE Uplink Sounding Reference Signal State.vi
- Configure LTE Uplink PUCCH Cell ID.vi
- Configure LTE Uplink PUCCH Cell ID Value.vi
- Configure LTE Uplink Local Oscillator Location.vi
- Query LTE Uplink CCDF Results.vi
- Query LTE Uplink CCDF Statistical Results.vi
- Query LTE Uplink CCDF Statistical All Results.vi
- Query LTE Uplink Measurement Limit Check Result.vi
- Query LTE Uplink Measurement Limit Check EVM All.vi
- Query LTE Uplink Measurement EVM Physical Channel Limit Check.vi
- Query LTE Uplink Measurement EVM Physical Signal Limit Check.vi
- Query LTE Uplink Measurement Frequency Error Limit Check.vi
- Query LTE Uplink Measurement Sampling Error Limit Check.vi
- Query LTE Uplink Measurement IQ Offset Limit Check.vi
- Query LTE Uplink Measurement IQ Gain Imbalance Limit Check.vi
- Query LTE Uplink Measurement IQ Quadrature Error Limit Check.vi
- Configure LTE Uplink Measurement Signal Detection.vi
- Configure LTE Uplink Measurement Subframe.vi
- Configure LTE Uplink Measurement Subframe All.vi
- Configure LTE Uplink Measurement Slot.vi
- Configure LTE Uplink Measurement Constellation Modulation.vi
- Configure LTE Uplink Measurement Constellation Modulation All.vi
- Configure LTE Uplink Measurement Constellation Allocation.vi
- Configure LTE Uplink Measurement Constellation Allocation All.vi
- Configure LTE Uplink Measurement Constellation OFDM Symbol.vi
- Configure LTE Uplink Measurement Constellation OFDM Symbol All.vi
- Configure LTE Uplink Measurement Constellation Carrier.vi
- Configure LTE Uplink Measurement Constellation Carrier All.vi
- Query LTE Uplink Marker Z Axis.vi
- Query LTE Uplink Marker Z Axis All.vi

\* Updated in LTE Uplink:

- Configure LTE Uplink Signal Characteristics.vi
- Configure LTE Uplink Spectrum Flatness.vi
- Configure LTE Uplink Global Settings.vi
- Configure LTE Uplink Sounding Reference Signal.vi
- Configure LTE Uplink PUCCH Structure.vi
- Configure LTE Uplink PRACH Structure.vi
- Configure LTE Uplink PRACH Preamble Mapping.vi
- Configure LTE Uplink PUCCH Resource Blocks Auto.vi
- Query LTE Uplink Measurement Result Summary.vi
- Query LTE Uplink Measurement Power Result.vi

\* New in WiGIG:

- Configure WiGIG Result Summary Display.vi

\* New attributes:

- System Tree Walking (RSSPECAN\_ATTR\_SYSTEM\_TREE\_WALKING)
- Hcopy Content (RSSPECAN\_ATTR\_HCOPY\_CONTENT)
- Hcopy Page Printing State (RSSPECAN\_ATTR\_HCOPY\_PAGE\_PRINTING\_STATE)
- Hcopy Page Margin Top (RSSPECAN\_ATTR\_HCOPY\_PAGE\_MARGIN\_TOP)
- Hcopy Page Margin Left (RSSPECAN\_ATTR\_HCOPY\_PAGE\_MARGIN\_LEFT)
- Hcopy Page Margin Bottom (RSSPECAN\_ATTR\_HCOPY\_PAGE\_MARGIN\_BOTTOM)
- Hcopy Page Margin Right (RSSPECAN\_ATTR\_HCOPY\_PAGE\_MARGIN\_RIGHT)
- Hcopy Page Margin Unit (RSSPECAN\_ATTR\_HCOPY\_PAGE\_MARGIN\_UNIT)
- Hcopy Windows Count (RSSPECAN\_ATTR\_HCOPY\_WINDOWS\_COUNT)
- Hcopy Windows Scale (RSSPECAN\_ATTR\_HCOPY\_WINDOWS\_SCALE)
- Service Internal Wideband Calibration Frequency  
(RSSPECAN\_ATTR\_SERVICE\_INTERNAL\_WIDEBAND\_CALIBRATION\_FREQUENCY)
- Force IQ Bandwidth Extension  
(RSSPECAN\_ATTR\_FORCE\_IQ\_BANDWIDTH\_EXTENSION)
- MCGD Carrier Reference Type  
(RSSPECAN\_ATTR\_MCGD\_CARRIER\_REFERENCE\_TYPE)
- MCGD Carrier Reference Frequency  
(RSSPECAN\_ATTR\_MCGD\_CARRIER\_REFERENCE\_FREQUENCY)
- Amplifier Synchronization IQ Data  
(RSSPECAN\_ATTR\_AMPLIFIER\_SYNCHRONIZATION\_IQ\_DATA)
- Amplifier Power Servoing Maximum Input  
(RSSPECAN\_ATTR\_AMPLIFIER\_POWER\_SERVOING\_MAXIMUM\_INPUT)
- Amplifier Power Servoing Expected Gain  
(RSSPECAN\_ATTR\_AMPLIFIER\_POWER\_SERVOING\_EXPECTED\_GAIN)
- Amplifier Power Servoing Target Output Power  
(RSSPECAN\_ATTR\_AMPLIFIER\_POWER\_SERVOING\_TARGET\_OUTPUT\_POWER)
- Amplifier Power Servoing Maximum Output Deviation  
(RSSPECAN\_ATTR\_AMPLIFIER\_POWER\_SERVOING\_MAXIMUM\_OUTPUT\_DEVIATION)
- Amplifier Power Servoing Measurement Auto  
(RSSPECAN\_ATTR\_AMPLIFIER\_POWER\_SERVOING\_MEASUREMENT\_AUTO)
- Amplifier Power Servoing Measurement Time  
(RSSPECAN\_ATTR\_AMPLIFIER\_POWER\_SERVOING\_MEASUREMENT\_TIME)
- Amplifier Power Servoing Capture Length  
(RSSPECAN\_ATTR\_AMPLIFIER\_POWER\_SERVOING\_CAPTURE\_LENGTH)
- Amplifier Power Servoing Start  
(RSSPECAN\_ATTR\_AMPLIFIER\_POWER\_SERVOING\_START)
- Amplifier Power Servoing Stop  
(RSSPECAN\_ATTR\_AMPLIFIER\_POWER\_SERVOING\_STOP)
- LTE Downlink PDSCH Configurable Subframes FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_CONFIGURABLE\_SUBFRAMES\_FSV)
- LTE Downlink PDSCH Used Allocations FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_USED\_ALLOCATIONS\_FSV)
- LTE Downlink PDSCH Allocation ID FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_ALLOCATION\_ID\_FSV)
- LTE Downlink PDSCH Allocation VRB Gap FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_ALLOCATION\_VRB\_GAP\_FSV)
- LTE Downlink PDSCH Allocation Power FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_ALLOCATION\_POWER\_FSV)
- LTE Downlink PDSCH Allocation Start Offset FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_ALLOCATION\_START\_OFFSET\_FSV)
- LTE Downlink PDSCH Allocation Resource Blocks FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_ALLOCATION\_RESOURCE\_BLOCKS\_FSV)
- LTE Downlink PDSCH Allocation Resource Blocks Offset FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_ALLOCATION\_RESOURCE\_BLOCKS\_OFFSET\_FSV)
- LTE Downlink PDSCH Allocation Modulation FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_ALLOCATION\_MODULATION\_FSV)
- LTE Downlink PDSCH Allocation Precoding FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_ALLOCATION\_PRECODING\_FSV)

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- LTE Downlink PDSCH Allocation Codeword To Layer Mapping FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_ALLOCATION\_CODEWORD\_TO\_LAYER\_MAPPING\_FSV)
- LTE Downlink PDSCH Allocation Scrambling Identity FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_ALLOCATION\_SCRAMBLING\_IDENTITY\_FSV)
- LTE Downlink PDSCH Allocation Single Layer Antenna Port FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_ALLOCATION\_SINGLE\_LAYER\_ANTENNA\_PORT\_FSV)
- LTE Downlink PDSCH Allocation Codebook Index FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_ALLOCATION\_CODEBOOK\_INDEX\_FSV)
- LTE Downlink PDSCH Allocation Cyclic Delay Diversity FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_ALLOCATION\_CYCLIC\_DELAY\_DIVERSITY\_FSV)
- LTE Downlink Positioning Reference Signal Enabled FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_POSITIONING\_REFERENCE\_SIGNAL\_ENABLED\_FSV)
- LTE Downlink Positioning Reference Signal Bandwidth FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_POSITIONING\_REFERENCE\_SIGNAL\_BANDWIDTH\_FSV)
- LTE Downlink Positioning Reference Signal Configuration Index FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_POSITIONING\_REFERENCE\_SIGNAL\_CONFIGURATION\_INDEX\_FSV)
- LTE Downlink Positioning Reference Signal Subframes FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_POSITIONING\_REFERENCE\_SIGNAL\_SUBFRAMES\_FSV)
- LTE Downlink Positioning Reference Signal Relative Power FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_POSITIONING\_REFERENCE\_SIGNAL\_RELATIVE\_POWER\_FSV)
- LTE Downlink Positioning Reference Signal Frame Number Offset FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_POSITIONING\_REFERENCE\_SIGNAL\_FRAME\_NUMBER\_OFFSET\_FSV)
- LTE Downlink CSI RS State FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CSI\_RS\_STATE\_FSV)
- LTE Downlink CSI RS Antenna Ports FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CSI\_RS\_ANTENNA\_PORTS\_FSV)
- LTE Downlink CSI RS Configuration Index FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CSI\_RS\_CONFIGURATION\_INDEX\_FSV)
- LTE Downlink CSI RS Overwrite PDSCH FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CSI\_RS\_OVERWRITE\_PDSCH\_FSV)
- LTE Downlink CSI RS Relative Power FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CSI\_RS\_RELATIVE\_POWER\_FSV)
- LTE Downlink CSI RS Subframe Configuration FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CSI\_RS\_SUBFRAME\_CONFIGURATION\_FSV)
- LTE Downlink CSI RS Frame Number Offset FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CSI\_RS\_FRAME\_NUMBER\_OFFSET\_FSV)
- LTE Downlink Symbol Offset FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PRB\_SYMBOL\_OFFSET\_FSV)
- LTE Downlink PBCH State FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PBCH\_STATE\_FSV)
- LTE Downlink PBCH Relative Power FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PBCH\_RELATIVE\_POWER\_FSV)
- LTE Downlink PCFICH State FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PCFICH\_STATE\_FSV)
- LTE Downlink PCFICH Relative Power FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PCFICH\_RELATIVE\_POWER\_FSV)
- LTE Downlink PHICH Duration FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PHICH\_DURATION\_FSV)
- LTE Downlink PHICH Number Of Groups FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PHICH\_NUMBER\_OF\_GROUPS\_FSV)

- LTE Downlink PHICH Enhanced Test Models FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PHICH\_ENHANCED\_TEST\_MODELS\_FSV)
- LTE Downlink PHICH Ng Parameter FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PHICH\_NG\_PARAMETER\_FSV)
- LTE Downlink PHICH Relative Power FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PHICH\_RELATIVE\_POWER\_FSV)
- LTE Downlink PDCCH Format FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDCCH\_FORMAT\_FSV)
- LTE Downlink PDCCH Number of PDCCHs FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDCCH\_NUMBER\_OF\_PDCCHS\_FSV)
- LTE Downlink PDCCH Relative Power FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDCCH\_RELATIVE\_POWER\_FSV)
- LTE Downlink PDSCH Power Ratio FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_POWER\_RATIO\_FSV)
- LTE Downlink EPDCCH PRB Pairs FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EPDCCH\_PRB\_PAIRS\_FSV)
- LTE Downlink EPDCCH Localized FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EPDCCH\_LOCALIZED\_FSV)
- LTE Downlink EPDCCH Relative Power FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EPDCCH\_RELATIVE\_POWER\_FSV)
- LTE Downlink EPDCCH RB Assignment FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EPDCCH\_RB\_ASSIGNMENT\_FSV)
- LTE Downlink EPDCCH Set ID FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EPDCCH\_SET\_ID\_FSV)
- LTE Downlink MBSFN State FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_MBSFN\_ENABLED\_FSV)
- LTE Downlink MBSFN Relative Power FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_MBSFN\_RELATIVE\_POWER\_FSV)
- LTE Downlink MBSFN Area ID FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_MBSFN\_AREA\_ID\_FSV)
- LTE Downlink MBSFN Non MBSF Region Length FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_MBSFN\_NON\_MBSF\_REGION\_LENGTH\_FSV)
- LTE Downlink MBSFN Subframe State FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_MBSFN\_SUBFRAME\_ENABLED\_FSV)
- LTE Downlink MBSFN Subframe PMCH State FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_MBSFN\_SUBFRAME\_PMCH\_ENABLED\_FSV)
- LTE Downlink MBSFN Subframe PMCH Modulation FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_MBSFN\_SUBFRAME\_PMCH\_MODULATION\_FSV)
- LTE Downlink Measurement Signal Detection  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_MEASUREMENT\_SIGNAL\_DETECTION)
- LTE Downlink Constellation Allocation FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CONSTELLATION\_ALLOCATION\_FSV)
- LTE Downlink Constellation Allocation All FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CONSTELLATION\_ALLOCATION\_ALL\_FSV)
- LTE Downlink Constellation Carrier FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CONSTELLATION\_CARRIER\_FSV)
- LTE Downlink Constellation Carrier All FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CONSTELLATION\_CARRIER\_ALL\_FSV)
- LTE Downlink Constellation Codeword FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CONSTELLATION\_CODEWORD\_FSV)
- LTE Downlink Constellation Codeword All FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CONSTELLATION\_CODEWORD\_ALL\_FSV)
- LTE Downlink Beamforming Antenna Port FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_BEAMFORMING\_ANTENNA\_PORT\_FSV)
- LTE Downlink EVM PDSCH QPSK Limit Check Result Average FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EVM\_PDSCH\_QPSK\_LIMIT\_CHECK\_RESULT\_AVERAGE\_FSV)
- LTE Downlink EVM PDSCH QPSK Limit Check Result Maximum FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EVM\_PDSCH\_QPSK\_LIMIT\_CHECK\_RESULT\_MAX\_FSV)

- LTE Downlink EVM PDSCH 16QAM Limit Check Result Average FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EVM\_PDSCH\_16QAM\_LIMIT\_CHECK\_RESULT\_AVERAGE\_FSV)
- LTE Downlink EVM PDSCH 16QAM Limit Check Result Maximum FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EVM\_PDSCH\_16QAM\_LIMIT\_CHECK\_RESULT\_MAX\_FSV)
- LTE Downlink EVM PDSCH 64QAM Limit Check Result Average FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EVM\_PDSCH\_64QAM\_LIMIT\_CHECK\_RESULT\_AVERAGE\_FSV)
- LTE Downlink EVM PDSCH 64QAM Limit Check Result Maximum FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EVM\_PDSCH\_64QAM\_LIMIT\_CHECK\_RESULT\_MAX\_FSV)
- LTE Downlink EVM PDSCH 256QAM Result Minimum FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EVM\_PDSCH\_256QAM\_RESULT\_MIN\_FSV)
- LTE Downlink EVM PDSCH 256QAM Result Average FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EVM\_PDSCH\_256QAM\_RESULT\_FSV)
- LTE Downlink EVM PDSCH 256QAM Result Maximum FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EVM\_PDSCH\_256QAM\_RESULT\_MAX\_FSV)
- LTE Downlink EVM Physical Channel Limit Check Result Average FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EVM\_PHYSICAL\_CHANNEL\_LIMIT\_CHECK\_RESULT\_AVERAGE\_FSV)
- LTE Downlink EVM Physical Channel Limit Check Result Maximum FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EVM\_PHYSICAL\_CHANNEL\_LIMIT\_CHECK\_RESULT\_MAX\_FSV)
- LTE Downlink EVM Physical Signal Limit Check Result Average FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EVM\_PHYSICAL\_SIGNAL\_LIMIT\_CHECK\_RESULT\_AVERAGE\_FSV)
- LTE Downlink EVM Physical Signal Limit Check Result Maximum FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EVM\_PHYSICAL\_SIGNAL\_LIMIT\_CHECK\_RESULT\_MAX\_FSV)
- LTE Downlink Frequency Error Limit Check Result Average FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_FREQUENCY\_ERROR\_LIMIT\_CHECK\_RESULT\_AVERAGE\_FSV)
- LTE Downlink Frequency Error Limit Check Result Maximum FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_FREQUENCY\_ERROR\_LIMIT\_CHECK\_RESULT\_MAX\_FSV)
- LTE Downlink IQ Gain Imbalance Limit Check Result Average FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_IQ\_GAIN\_IMBALANCE\_LIMIT\_CHECK\_RESULT\_AVERAGE\_FSV)
- LTE Downlink IQ Gain Imbalance Limit Check Result Maximum FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_IQ\_GAIN\_IMBALANCE\_LIMIT\_CHECK\_RESULT\_MAX\_FSV)
- LTE Downlink IQ Offset Limit Check Result Average FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_IQ\_OFFSET\_LIMIT\_CHECK\_RESULT\_AVERAGE\_FSV)
- LTE Downlink IQ Offset Limit Check Result Maximum FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_IQ\_OFFSET\_LIMIT\_CHECK\_RESULT\_MAX\_FSV)
- LTE Downlink IQ Quadrature Error Limit Check Result Average FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_IQ\_QUADRATURE\_ERROR\_LIMIT\_CHECK\_RESULT\_AVERAGE\_FSV)
- LTE Downlink IQ Quadrature Error Limit Check Result Maximum FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_IQ\_QUADRATURE\_ERROR\_LIMIT\_CHECK\_RESULT\_MAX\_FSV)
- LTE Downlink Sampling Error Limit Check Result Average FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_SAMPLING\_ERROR\_LIMIT\_CHECK\_RESULT\_AVERAGE\_FSV)
- LTE Downlink Sampling Error Limit Check Result Maximum FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_SAMPLING\_ERROR\_LIMIT\_CHECK\_RESULT\_MAX\_FSV)
- LTE Downlink Marker Z-Axis (RSSPECAN\_ATTR\_LTE\_DOWNLINK\_MARKER\_Z\_AXIS)

- LTE Uplink Number of Resource Blocks FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_NUMBER\_OF\_RESOURCE\_BLOCKS\_FSV)
- LTE Uplink Frame Number Offset FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_FRAME\_NUMBER\_OFFSET\_FSV)
- LTE Uplink UE Radio Network Temporary Identifier FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_UE\_RADIO\_NETWORK\_TEMPORARY\_IDENTIFIER\_FSV)
- LTE Uplink DRS Cell ID (RSSPECAN\_ATTR\_LTE\_UPLINK\_DRS\_CELL\_ID)  
- LTE Uplink DRS Cell ID Value  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_DRS\_CELL\_ID\_VALUE)
- LTE Uplink Sounding Reference Signal Present FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SOUNDING\_REFERENCE\_SIGNAL\_PRESENT\_FSV)
- LTE Uplink Sounding Reference Signal Subframe Configuration FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SOUNDING\_REFERENCE\_SIGNAL\_SUBFRAME\_CONFIGURATION\_FSV)
- LTE Uplink Sounding Reference Signal MaxUpPts FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SOUNDING\_REFERENCE\_SIGNAL\_MAXUPPTS\_FSV)
- LTE Uplink Sounding Reference Signal Bandwidth B\_SRS FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SOUNDING\_REFERENCE\_SIGNAL\_BANDWIDTH\_B\_SRS\_FSV)
- LTE Uplink Sounding Reference Signal Hopping BW FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SOUNDING\_REFERENCE\_SIGNAL\_HOPPING\_BW\_FSV)
- LTE Uplink Sounding Reference Signal Cyclic Shift N\_CS FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SOUNDING\_REFERENCE\_SIGNAL\_CYCLIC\_SHIFT\_N\_CS\_FSV)
- LTE Uplink Sounding Reference Signal Power FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SOUNDING\_REFERENCE\_SIGNAL\_POWER\_FSV)
- LTE Uplink Sounding Reference Signal Bandwidth Configuration C\_SRS FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SOUNDING\_REFERENCE\_SIGNAL\_BANDWIDTH\_CONFIGURATION\_C\_SRS\_FSV)
- LTE Uplink Sounding Reference Signal Configuration Index FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SOUNDING\_REFERENCE\_SIGNAL\_CONFIGURATION\_INDEX\_FSV)
- LTE Uplink Sounding Reference Signal Transmission Comb FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SOUNDING\_REFERENCE\_SIGNAL\_TRANSMISSION\_COMB\_FSV)
- LTE Uplink Sounding Reference Signal N-RRC FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SOUNDING\_REFERENCE\_SIGNAL\_N\_RRC\_FSV)
- LTE Uplink Sounding Reference Signal AN TX FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SOUNDING\_REFERENCE\_SIGNAL\_AN\_TX\_FSV)
- LTE Uplink PUCCH Resource Blocks FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PUCCH\_RESOURCE\_BLOCKS\_FSV)
- LTE Uplink PUCCH Resource Blocks Auto FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PUCCH\_RESOURCE\_BLOCKS\_AUTO\_FSV)
- LTE Uplink PUCCH Cyclic Shifts FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PUCCH\_CYCLIC\_SHIFTS\_FSV)
- LTE Uplink PUCCH Delta Shift FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PUCCH\_DELTA\_SHIFT\_FSV)
- LTE Uplink PUCCH Format FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PUCCH\_FORMAT\_FSV)
- LTE Uplink PUCCH Bandwidth FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PUCCH\_BANDWIDTH\_FSV)
- LTE Uplink PUCCH Resource Index FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PUCCH\_RESOURCE\_INDEX\_FSV)
- LTE Uplink PUCCH Cell ID (RSSPECAN\_ATTR\_LTE\_UPLINK\_PUCCH\_CELL\_ID)  
- LTE Uplink PUCCH Cell ID Value  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PUCCH\_CELL\_ID\_VALUE)
- LTE Uplink PRACH Configuration FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PRACH\_CONFIGURATION\_FSV)
- LTE Uplink PRACH Restricted Set FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PRACH\_RESTRICTED\_SET\_FSV)



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- LTE Uplink PRACH Frequency Offset FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PRACH\_FREQUENCY\_OFFSET\_FSV)
- LTE Uplink PRACH Ncs Configuration FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PRACH\_NCS\_CONFIGURATION\_FSV)
- LTE Uplink PRACH Logical Root Seq Index FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PRACH\_LOGICAL\_ROOT\_SEQ\_INDEX\_FSV)
- LTE Uplink PRACH Sequence Index FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PRACH\_SEQUENCE\_INDEX\_FSV)
- LTE Uplink PRACH Sequence Index Value FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PRACH\_SEQUENCE\_INDEX\_VALUE\_FSV)
- LTE Uplink PRACH Automatic Preamble Mapping FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PRACH\_AUTOMATIC\_PREAMBLE\_MAPPING\_FSV)
- LTE Uplink PRACH Frequency Index FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PRACH\_FREQUENCY\_INDEX\_FSV)
- LTE Uplink PRACH Half Frame Indicator FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PRACH\_HALF\_FRAME\_INDICATOR\_FSV)
- LTE Uplink Local Oscillator Location  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_LOCAL\_OSCILLATOR\_LOCATION)
- LTE Uplink Measurement Signal Detection  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_MEASUREMENT\_SIGNAL\_DETECTION)
- LTE Uplink Preamble Selection FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PREAMBLE\_SELECTION\_FSV)
- LTE Uplink Preamble Selection All FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PREAMBLE\_SELECTION\_ALL\_FSV)
- LTE Uplink Constellation Allocation FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_CONSTELLATION\_ALLOCATION\_FSV)
- LTE Uplink Constellation Allocation All FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_CONSTELLATION\_ALLOCATION\_ALL\_FSV)
- LTE Uplink Constellation Carrier FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_CONSTELLATION\_CARRIER\_FSV)
- LTE Uplink Constellation Carrier All FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_CONSTELLATION\_CARRIER\_ALL\_FSV)
- LTE Uplink EVM DMRS PUSCH QPSK Limit Check Result FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_DMRS\_PUSCH\_QPSK\_LIMIT\_CHECK\_RESULT\_FSV)
- LTE Uplink EVM DMRS PUSCH 64QAM Limit Check Result FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_DMRS\_PUSCH\_64QAM\_LIMIT\_CHECK\_RESULT\_FSV)
- LTE Uplink EVM DMRS PUSCH 16QAM Limit Check Result FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_DMRS\_PUSCH\_16QAM\_LIMIT\_CHECK\_RESULT\_FSV)
- LTE Uplink EVM DMRS PUCCH Limit Check Result FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_DMRS\_PUCCH\_LIMIT\_CHECK\_RESULT\_FSV)
- LTE Uplink EVM PUCCH Limit Check Result FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_PUCCH\_LIMIT\_CHECK\_RESULT\_FSV)
- LTE Uplink EVM PRACH Limit Check Result FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_PRACH\_LIMIT\_CHECK\_RESULT\_FSV)
- LTE Uplink EVM PUSCH QPSK Limit Check Result FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_PUSCH\_QPSK\_LIMIT\_CHECK\_RESULT\_FSV)
- LTE Uplink EVM PUSCH 64QAM Limit Check Result FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_PUSCH\_64QAM\_LIMIT\_CHECK\_RESULT\_FSV)
- LTE Uplink EVM PUSCH 16QAM Limit Check Result FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_PUSCH\_16QAM\_LIMIT\_CHECK\_RESULT\_FSV)
- LTE Uplink EVM AI Limit Check Result Average FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_AI\_LIMIT\_CHECK\_RESULT\_AVERAGE\_FSV)
- LTE Uplink EVM AI Limit Check Result Maximum FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_AI\_LIMIT\_CHECK\_RESULT\_MAX\_FSV)
- LTE Uplink EVM Physical Channel Limit Check Result Average FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_PHYSICAL\_CHANNEL\_LIMIT\_CHECK\_RESULT\_AVERAGE\_FSV)

- LTE Uplink EVM Physical Channel Limit Check Result Maximum FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_PHYSICAL\_CHANNEL\_LIMIT\_CHECK\_RESULT\_MAX\_FSV)
- LTE Uplink EVM Physical Signal Limit Check Result Average FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_PHYSICAL\_SIGNAL\_LIMIT\_CHECK\_RESULT\_AVERAGE\_FSV)
- LTE Uplink EVM Physical Signal Limit Check Result Maximum FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_PHYSICAL\_SIGNAL\_LIMIT\_CHECK\_RESULT\_MAX\_FSV)
- LTE Uplink Frequency Error Limit Check Result Average FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_FREQUENCY\_ERROR\_LIMIT\_CHECK\_RESULT\_AVERAGE\_FSV)
- LTE Uplink Frequency Error Limit Check Result Maximum FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_FREQUENCY\_ERROR\_LIMIT\_CHECK\_RESULT\_MAX\_FSV)
- LTE Uplink IQ Gain Imbalance Limit Check Result Average FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_IQ\_GAIN\_IMBALANCE\_LIMIT\_CHECK\_RESULT\_AVERAGE\_FSV)
- LTE Uplink IQ Gain Imbalance Limit Check Result Maximum FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_IQ\_GAIN\_IMBALANCE\_LIMIT\_CHECK\_RESULT\_MAX\_FSV)
- LTE Uplink IQ Offset Limit Check Result Average FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_IQ\_OFFSET\_LIMIT\_CHECK\_RESULT\_AVERAGE\_FSV)
- LTE Uplink IQ Offset Limit Check Result Maximum FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_IQ\_OFFSET\_LIMIT\_CHECK\_RESULT\_MAX\_FSV)
- LTE Uplink IQ Quadrature Error Limit Check Result Average FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_IQ\_QUADRATURE\_ERROR\_LIMIT\_CHECK\_RESULT\_AVERAGE\_FSV)
- LTE Uplink IQ Quadrature Error Limit Check Result Maximum FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_IQ\_QUADRATURE\_ERROR\_LIMIT\_CHECK\_RESULT\_MAX\_FSV)
- LTE Uplink Sampling Error Limit Check Result Average FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SAMPLING\_ERROR\_LIMIT\_CHECK\_RESULT\_AVERAGE\_FSV)
- LTE Uplink Sampling Error Limit Check Result Maximum FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SAMPLING\_ERROR\_LIMIT\_CHECK\_RESULT\_MAX\_FSV)
- LTE Uplink Marker Z-Axis (RSSPECAN\_ATTR\_LTE\_UPLINK\_MARKER\_Z\_AXIS)
- Noise Local Oscillator Mode (RSSPECAN\_ATTR\_NOISE\_LOCAL\_OSCILLATOR\_MODE)
- Noise Local Oscillator Frequency  
(RSSPECAN\_ATTR\_NOISE\_LOCAL\_OSCILLATOR\_FREQUENCY)
- Source DUT Bypass (RSSPECAN\_ATTR\_SOURCE\_DUT\_BYPASS)
- Source Pulse Modulation (RSSPECAN\_ATTR\_SOURCE\_PULSE\_MODULATION)
- Source Pulse Period (RSSPECAN\_ATTR\_SOURCE\_PULSE\_PERIOD)
- Source Pulse Width (RSSPECAN\_ATTR\_SOURCE\_PULSE\_WIDTH)
- Source Pulse Trigger Output  
(RSSPECAN\_ATTR\_SOURCE\_PULSE\_TRIGGER\_OUTPUT)
- Phase Pulse External Gate Type  
(RSSPECAN\_ATTR\_PHASE\_PULSE\_EXTERNAL\_GATE\_TYPE)
- Phase Signal Capture Range (RSSPECAN\_ATTR\_PHASE\_SIGNAL\_CAPTURE\_RANGE)
- Phase Y Axis Unit (RSSPECAN\_ATTR\_PHASE\_Y\_AXIS\_UNIT)
- WLAN Spectrum Flatness Unit  
(RSSPECAN\_ATTR\_WLAN\_SPECTRUM\_FLATNESS\_UNIT)
- WIGIG Fetch BER PDU Header Minimum  
(RSSPECAN\_ATTR\_WIGIG\_FETCH\_BER\_PDU\_HEADER\_MIN)
- WIGIG Fetch BER PDU Header Average  
(RSSPECAN\_ATTR\_WIGIG\_FETCH\_BER\_PDU\_HEADER\_AVERAGE)
- WIGIG Fetch BER PDU Header Maximum  
(RSSPECAN\_ATTR\_WIGIG\_FETCH\_BER\_PDU\_HEADER\_MAX)
- WIGIG Fetch BER PDU Payload Minimum  
(RSSPECAN\_ATTR\_WIGIG\_FETCH\_BER\_PDU\_PAYLOAD\_MIN)

- WIGIG Fetch BER PPDU Payload Average  
(RSSPECAN\_ATTR\_WIGIG\_FETCH\_BER\_PPDU\_PAYLOAD\_AVERAGE)
- WIGIG Fetch BER PPDU Payload Maximum  
(RSSPECAN\_ATTR\_WIGIG\_FETCH\_BER\_PPDU\_PAYLOAD\_MAX)
- Transient Trace Evaluation (RSSPECAN\_ATTR\_TRANSIENT\_TRACE\_EVALUATION)
- DOCSIS OFDM US Spectrum Location  
(RSSPECAN\_ATTR\_DOCSIS\_OFDM\_US\_SPECTRUM\_LOCATION)
- DOCSIS Next Codeword Pointer Number Of Entries  
(RSSPECAN\_ATTR\_DOCSIS\_NEXT\_CODEWORD\_POINTER\_NUMBER\_OF\_ENTRIES)
- DOCSIS Next Codeword Pointer Modulation  
(RSSPECAN\_ATTR\_DOCSIS\_NEXT\_CODEWORD\_POINTER\_MODULATION)
- DOCSIS Next Codeword Pointer Start  
(RSSPECAN\_ATTR\_DOCSIS\_NEXT\_CODEWORD\_POINTER\_START)
- DOCSIS Next Codeword Pointer Stop  
(RSSPECAN\_ATTR\_DOCSIS\_NEXT\_CODEWORD\_POINTER\_STOP)
- DOCSIS Next Codeword Pointer Increment  
(RSSPECAN\_ATTR\_DOCSIS\_NEXT\_CODEWORD\_POINTER\_INCREMENT)
- DOCSIS Limit Check State (RSSPECAN\_ATTR\_DOCSIS\_LIMIT\_CHECK\_STATE)
- DOCSIS Evaluation Range Symbol Size  
(RSSPECAN\_ATTR\_DOCSIS\_EVALUATION\_RANGE\_SYMBOL\_SIZE)
- DOCSIS Auto Detect (RSSPECAN\_ATTR\_DOCSIS\_AUTO\_DETECT)
- DOCSIS Result Summary Unit  
(RSSPECAN\_ATTR\_DOCSIS\_RESULT\_SUMMARY\_UNIT)
- DOCSIS Fetch Continuous Pilots Average  
(RSSPECAN\_ATTR\_DOCSIS\_FETCH\_CONTINUOUS\_PILOTS\_AVERAGE)
- DOCSIS Fetch Continuous Pilots Maximum  
(RSSPECAN\_ATTR\_DOCSIS\_FETCH\_CONTINUOUS\_PILOTS\_MAXIMUM)
- DOCSIS Fetch Continuous Pilots Minimum  
(RSSPECAN\_ATTR\_DOCSIS\_FETCH\_CONTINUOUS\_PILOTS\_MINIMUM)
- DOCSIS Fetch Data Average (RSSPECAN\_ATTR\_DOCSIS\_FETCH\_DATA\_AVERAGE)
- DOCSIS Fetch Data Maximum (RSSPECAN\_ATTR\_DOCSIS\_FETCH\_DATA\_MAXIMUM)
- DOCSIS Fetch Data Minimum (RSSPECAN\_ATTR\_DOCSIS\_FETCH\_DATA\_MINIMUM)
- DOCSIS Fetch Power Pilots Average  
(RSSPECAN\_ATTR\_DOCSIS\_FETCH\_POWER\_PILOTS\_AVERAGE)
- DOCSIS Fetch Power Pilots Maximum  
(RSSPECAN\_ATTR\_DOCSIS\_FETCH\_POWER\_PILOTS\_MAXIMUM)
- DOCSIS Fetch Power Pilots Minimum  
(RSSPECAN\_ATTR\_DOCSIS\_FETCH\_POWER\_PILOTS\_MINIMUM)
- DOCSIS Fetch Scattered Pilots Average  
(RSSPECAN\_ATTR\_DOCSIS\_FETCH\_SCATTERED\_PILOTS\_AVERAGE)
- DOCSIS Fetch Scattered Pilots Maximum  
(RSSPECAN\_ATTR\_DOCSIS\_FETCH\_SCATTERED\_PILOTS\_MAXIMUM)
- DOCSIS Fetch Scattered Pilots Minimum  
(RSSPECAN\_ATTR\_DOCSIS\_FETCH\_SCATTERED\_PILOTS\_MINIMUM)
- DOCSIS Fetch Physical Link Channel Average  
(RSSPECAN\_ATTR\_DOCSIS\_FETCH\_PHYSICAL\_LINK\_CHANNEL\_AVERAGE)
- DOCSIS Fetch Physical Link Channel Maximum  
(RSSPECAN\_ATTR\_DOCSIS\_FETCH\_PHYSICAL\_LINK\_CHANNEL\_MAXIMUM)
- DOCSIS Fetch Physical Link Channel Minimum  
(RSSPECAN\_ATTR\_DOCSIS\_FETCH\_PHYSICAL\_LINK\_CHANNEL\_MINIMUM)
- Avionics Mode (RSSPECAN\_ATTR\_AVIONICS\_MODE)
- Avionics Measurement Type (RSSPECAN\_ATTR\_AVIONICS\_MEASUREMENT\_TYPE)
- Avionics Fundamental Frequency Identity  
(RSSPECAN\_ATTR\_AVIONICS\_FUNDAMENTAL\_FREQUENCY\_IDENTITY)
- Avionics Total Harmonic Distortion Frequency  
(RSSPECAN\_ATTR\_AVIONICS\_TOTAL\_HARMONIC\_DISTORTION\_FREQUENCY)
- Avionics Harmonic Distortion State  
(RSSPECAN\_ATTR\_AVIONICS\_HARMONIC\_DISTORTION\_STATE)
- Avionics Harmonic Frequency  
(RSSPECAN\_ATTR\_AVIONICS\_HARMONIC\_FREQUENCY)

- Avionics Bandwidth Auto (RSSPECAN\_ATTR\_AVIONICS\_BANDWIDTH\_AUTO)
- Avionics Demodulation Bandwidth  
(RSSPECAN\_ATTR\_AVIONICS\_DEMODULATION\_BANDWIDTH)
- Avionics Resolution Bandwidth State  
(RSSPECAN\_ATTR\_AVIONICS\_RESOLUTION\_BANDWIDTH\_STATE)
- Avionics Resolution Bandwidth  
(RSSPECAN\_ATTR\_AVIONICS\_RESOLUTION\_BANDWIDTH)
- Avionics AF Start Frequency (RSSPECAN\_ATTR\_AVIONICS\_AF\_START\_FREQUENCY)
- Avionics AF Stop Frequency (RSSPECAN\_ATTR\_AVIONICS\_AF\_STOP\_FREQUENCY)
- Avionics AF Center Frequency  
(RSSPECAN\_ATTR\_AVIONICS\_AF\_CENTER\_FREQUENCY)
- Avionics AF Span (RSSPECAN\_ATTR\_AVIONICS\_AF\_SPAN)
- Avionics AF Full Span (RSSPECAN\_ATTR\_AVIONICS\_AF\_FULL\_SPAN)
- Avionics ILS DDM Unit (RSSPECAN\_ATTR\_AVIONICS\_ILS\_DDM\_UNIT)
- Avionics VOR Direction (RSSPECAN\_ATTR\_AVIONICS\_VOR\_DIRECTION)
- Avionics Morse Code (RSSPECAN\_ATTR\_AVIONICS\_MORSE\_CODE)
- Avionics RF Level Results (RSSPECAN\_ATTR\_AVIONICS\_RF\_LEVEL\_RESULTS)
- Avionics Difference In Depth of Modulation  
(RSSPECAN\_ATTR\_AVIONICS\_DIFFERENCE\_IN\_DEPTH\_OF\_MODULATION)
- Avionics Carrier Offset Results  
(RSSPECAN\_ATTR\_AVIONICS\_CARRIER\_OFFSET\_RESULTS)
- Avionics VOR FM Deviation (RSSPECAN\_ATTR\_AVIONICS\_VOR\_FM\_DEVIATION)
- Avionics VOR FM Frequency (RSSPECAN\_ATTR\_AVIONICS\_VOR\_FM\_FREQUENCY)
- Avionics Phase Results (RSSPECAN\_ATTR\_AVIONICS\_PHASE\_RESULTS)
- Avionics RF Frequency Signal  
(RSSPECAN\_ATTR\_AVIONICS\_RF\_FREQUENCY\_SIGNAL)
- Avionics ILS SDM (RSSPECAN\_ATTR\_AVIONICS\_ILS\_SDM)
- Avionics Harmonic Distortion Result  
(RSSPECAN\_ATTR\_AVIONICS\_HARMONIC\_DISTORTION\_RESULT)

\* Deleted attributes:

- LTE Uplink Compensate DC Offset  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_COMPENSATE\_DC\_OFFSET)

\* Modified attributes:

- Marker State (RSSPECAN\_ATTR\_MARKER\_ENABLED) - Added window RepCap.
- Assign Marker to Trace (RSSPECAN\_ATTR\_MARKER\_TRACE) - Added window RepCap.
- All Markers Off (RSSPECAN\_ATTR\_MARKER\_AOFF) - Added window RepCap.
- Marker Search Right Minimum (RSSPECAN\_ATTR\_MARKER\_SEARCH\_MIN\_RIGHT) - Added window RepCap.
- Marker Search Left Minimum (RSSPECAN\_ATTR\_MARKER\_SEARCH\_MIN\_LEFT) - Added window RepCap.
- Marker Search Peak Maximum (RSSPECAN\_ATTR\_MARKER\_SEARCH\_PEAK) - Added window RepCap.
- Marker Search Peak Next Maximum  
(RSSPECAN\_ATTR\_MARKER\_SEARCH\_PEAK\_NEXT) - Added window RepCap.
- Marker Search Peak Right Maximum  
(RSSPECAN\_ATTR\_MARKER\_SEARCH\_PEAK\_RIGHT) - Added window RepCap.
- Marker Search Peak Left Maximum  
(RSSPECAN\_ATTR\_MARKER\_SEARCH\_PEAK\_LEFT) - Added window RepCap.
- Marker Search Peak Minimum (RSSPECAN\_ATTR\_MARKER\_SEARCH\_MIN) - Added window RepCap.
- Marker Search Next Minimum (RSSPECAN\_ATTR\_MARKER\_SEARCH\_MIN\_NEXT) - Added window RepCap.
- Marker Zoom (RSSPECAN\_ATTR\_MARKER\_ZOOM) - Added window RepCap.
- Marker To Center (RSSPECAN\_ATTR\_MARKER\_TO\_CENTER) - Added window RepCap.
- Marker To Step Width (RSSPECAN\_ATTR\_MARKER\_TO\_STEP) - Added window RepCap.

- Marker To Reference (RSSPECAN\_ATTR\_MARKER\_TO\_REFERENCE) - Added window RepCap.
- Marker Link To Another Marker (RSSPECAN\_ATTR\_MARKER\_LINK\_TO\_MARKER) - Added window RepCap.
- External Gate Mode (RSSPECAN\_ATTR\_EXTERNAL\_GATE\_TRIGGER\_TYPE) - The range table rsspecan\_rngExtGateTrigType was updated.
- Service Input Source (RSSPECAN\_ATTR\_SERVICE\_INPUT\_SOURCE) - Added Second Synthetiser value.
- B2000 State (RSSPECAN\_ATTR\_B2000\_STATE) - Updated short command.
- Digital Baseband Input Trigger Level (RSSPECAN\_ATTR\_DIGITAL\_BASEBAND\_INPUT\_TRIGGER\_LEVEL) - Deleted range table.
- Load Default Carrier Table (RSSPECAN\_ATTR\_3GBS\_LOAD\_DEFAULT\_CARRIER\_TABLE) - FSV support instrument added
- New Carrier Table (RSSPECAN\_ATTR\_3GBS\_NEW\_CARRIER\_TABLE) - FSV support instrument added
- Save Carrier Table (RSSPECAN\_ATTR\_3GBS\_SAVE\_CARRIER\_TABLE) - FSV support instrument added
- Delete Carrier Table (RSSPECAN\_ATTR\_3GBS\_DELETE\_CARRIER\_TABLE) - FSV support instrument added
- Carrier Table Catalog (RSSPECAN\_ATTR\_3GBS\_CARRIER\_TABLE\_CATALOG) - FSV support instrument added
- Number of Carriers (RSSPECAN\_ATTR\_3GBS\_NUMBER\_OF\_CARRIERS) - FSV support instrument added
- Insert New Carrier (RSSPECAN\_ATTR\_3GBS\_INSERT\_NEW\_CARRIER) - FSV support instrument added
- Delete Carrier (RSSPECAN\_ATTR\_3GBS\_DELETE\_CARRIER) - FSV support instrument added
- Delete All Carriers (RSSPECAN\_ATTR\_3GBS\_DELETE\_ALL\_CARRIERS) - FSV support instrument added
- Carrier Frequency Offset (RSSPECAN\_ATTR\_3GBS\_CARRIER\_FREQUENCY\_OFFSET) - FSV support instrument added
- Carrier Scrambling Code (RSSPECAN\_ATTR\_3GBS\_CARRIER\_SCRAMBLING\_CODE) - FSV support instrument added
- Carrier CPICH (RSSPECAN\_ATTR\_3GBS\_CARRIER\_CPICH) - FSV support instrument added
- Carrier Pattern (RSSPECAN\_ATTR\_3GBS\_CARRIER\_PATTERN) - FSV support instrument added
- LTE Downlink PDSCH Configurable Subframes FSV (RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_CONFIGURABLE\_SUBFRAMES\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink PDSCH Configurable Subframes (RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_CONFIGURABLE\_SUBFRAMES) - Short command updated.
- LTE Downlink PDSCH Used Allocations FSV (RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_USED\_ALLOCATIONS\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink PDSCH Used Allocations (RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_USED\_ALLOCATIONS) - Short command updated.
- LTE Downlink PDSCH Allocation ID FSV (RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_ALLOCATION\_ID\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink PDSCH Allocation VRB Gap FSV (RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_ALLOCATION\_VRB\_GAP\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Downlink PDSCH Allocation Power FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_ALLOCATION\_POWER\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Downlink PDSCH Allocation Start Offset FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_ALLOCATION\_START\_OFFSET\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Downlink PDSCH Allocation Resource Blocks FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_ALLOCATION\_RESOURCE\_BLOCKS\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Downlink PDSCH Allocation Resource Blocks Offset FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_ALLOCATION\_RESOURCE\_BLOCKS\_OFFSET\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Downlink PDSCH Allocation Modulation FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_ALLOCATION\_MODULATION\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Downlink PDSCH Allocation Precoding FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_ALLOCATION\_PRECODING\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Downlink PDSCH Allocation Codeword To Layer Mapping FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_ALLOCATION\_CODEWORD\_TO\_LAYER\_MAPPING\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Downlink PDSCH Allocation Scrambling Identity FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_ALLOCATION\_SCRAMBLING\_IDENTITY\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Downlink PDSCH Allocation Single Layer Antenna Port FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_ALLOCATION\_SINGLE\_LAYER\_ANTENNA\_PORT\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Downlink PDSCH Allocation Codebook Index FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_ALLOCATION\_CODEBOOK\_INDEX\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Downlink PDSCH Allocation Cyclic Delay Diversity FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_ALLOCATION\_CYCLIC\_DELAY\_DIVERSITY\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Downlink PDSCH Allocation ID  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_ALLOCATION\_ID) - Short command updated.

- LTE Downlink PDSCH Allocation VRB Gap  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_ALLOCATION\_VRB\_GAP) - Short command updated.

- LTE Downlink PDSCH Allocation Power  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_ALLOCATION\_POWER) - Short command updated.

- LTE Downlink PDSCH Allocation Start Offset  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_ALLOCATION\_START\_OFFSET) - Short command updated.

- LTE Downlink PDSCH Allocation Resource Blocks  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_ALLOCATION\_RESOURCE\_BLOCKS) - Short command updated.

- LTE Downlink PDSCH Allocation Resource Blocks Offset  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_ALLOCATION\_RESOURCE\_BLOCKS\_OFFSET) - Short command updated.
- LTE Downlink PDSCH Allocation Modulation  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_ALLOCATION\_MODULATION) - Short command updated.
- LTE Downlink PDSCH Allocation Precoding  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_ALLOCATION\_PRECODING) - Short command updated.
- LTE Downlink PDSCH Allocation Codeword To Layer Mapping  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_ALLOCATION\_CODEWORD\_TO\_LAYER\_MAPPING) - Short command updated.
- LTE Downlink PDSCH Allocation Scrambling Identity  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_ALLOCATION\_SCRAMBLING\_IDENTITY) - Short command updated.
- LTE Downlink PDSCH Allocation Single Layer Antenna Port  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_ALLOCATION\_SINGLE\_LAYER\_ANTENNA\_PORT) - Short command updated.
- LTE Downlink PDSCH Allocation Codebook Index  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_ALLOCATION\_CODEBOOK\_INDEX) - Short command updated.
- LTE Downlink PDSCH Allocation Cyclic Delay Diversity  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_ALLOCATION\_CYCLIC\_DELAY\_DIVERSITY) - Short command updated.
- LTE Downlink Positioning Reference Signal Enabled FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_POSITIONING\_REFERENCE\_SIGNAL\_ENABLED\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink Positioning Reference Signal Bandwidth FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_POSITIONING\_REFERENCE\_SIGNAL\_BANDWIDTH\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink Positioning Reference Signal Configuration Index FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_POSITIONING\_REFERENCE\_SIGNAL\_CONFIGURATION\_INDEX\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink Positioning Reference Signal Subframes FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_POSITIONING\_REFERENCE\_SIGNAL\_SUBFRAMES\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink Positioning Reference Signal Relative Power FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_POSITIONING\_REFERENCE\_SIGNAL\_RELATIVE\_POWER\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink Positioning Reference Signal Frame Number Offset FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_POSITIONING\_REFERENCE\_SIGNAL\_FRAME\_NUMBER\_OFFSET\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink Positioning Reference Signal Enabled  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_POSITIONING\_REFERENCE\_SIGNAL\_ENABLED) - Short command updated.
- LTE Downlink Positioning Reference Signal Bandwidth  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_POSITIONING\_REFERENCE\_SIGNAL\_BANDWIDTH) - Short command updated.
- LTE Downlink Positioning Reference Signal Configuration Index  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_POSITIONING\_REFERENCE\_SIGNAL\_CONFIGURATION\_INDEX) - Short command updated.
- LTE Downlink Positioning Reference Signal Subframes  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_POSITIONING\_REFERENCE\_SIGNAL\_SUBFRAMES) - Short command updated.

- LTE Downlink Positioning Reference Signal Relative Power  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_POSITIONING\_REFERENCE\_SIGNAL\_RELATIVE\_POWER) - Short command updated.

- LTE Downlink Positioning Reference Signal Frame Number Offset  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_POSITIONING\_REFERENCE\_SIGNAL\_FRAME\_NUMBER\_OFFSET) - Short command updated.

- LTE Downlink CSI RS State FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CSI\_RS\_STATE\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Downlink CSI RS Antenna Ports FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CSI\_RS\_ANTENNA\_PORTS\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Downlink CSI RS Configuration Index FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CSI\_RS\_CONFIGURATION\_INDEX\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Downlink CSI RS Overwrite PDSCH FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CSI\_RS\_OVERWRITE\_PDSCH\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Downlink CSI RS Relative Power FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CSI\_RS\_RELATIVE\_POWER\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Downlink CSI RS Subframe Configuration FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CSI\_RS\_SUBFRAME\_CONFIGURATION\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Downlink CSI RS Frame Number Offset FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CSI\_RS\_FRAME\_NUMBER\_OFFSET\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Downlink CSI RS State (RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CSI\_RS\_STATE) - Short command updated.

- LTE Downlink CSI RS Antenna Ports  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CSI\_RS\_ANTENNA\_PORTS) - Short command updated.

- LTE Downlink CSI RS Configuration Index  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CSI\_RS\_CONFIGURATION\_INDEX) - Short command updated.

- LTE Downlink CSI RS Overwrite PDSCH  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CSI\_RS\_OVERWRITE\_PDSCH) - Short command updated.

- LTE Downlink CSI RS Relative Power  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CSI\_RS\_RELATIVE\_POWER) - Short command updated.

- LTE Downlink CSI RS Subframe Configuration  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CSI\_RS\_SUBFRAME\_CONFIGURATION) - Short command updated.

- LTE Downlink Symbol Offset  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PRB\_SYMBOL\_OFFSET) - Short command updated.

- LTE Downlink CSI RS Frame Number Offset  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CSI\_RS\_FRAME\_NUMBER\_OFFSET) - Short command updated.

- LTE Downlink Symbol Offset FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PRB\_SYMBOL\_OFFSET\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.



- LTE Downlink PBCH State FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PBCH\_STATE\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink PBCH Relative Power FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PBCH\_RELATIVE\_POWER\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink PBCH State (RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PBCH\_STATE) - Short command updated.
- LTE Downlink PBCH Relative Power  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PBCH\_RELATIVE\_POWER) - Short command updated.
- LTE Downlink PCFICH State FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PCFICH\_STATE\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink PCFICH Relative Power FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PCFICH\_RELATIVE\_POWER\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink PCFICH State (RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PCFICH\_STATE) - Short command updated.
- LTE Downlink PCFICH Relative Power  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PCFICH\_RELATIVE\_POWER) - Short command updated.
- LTE Downlink PHICH Duration FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PHICH\_DURATION\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink PHICH Number Of Groups FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PHICH\_NUMBER\_OF\_GROUPS\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink PHICH Enhanced Test Models FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PHICH\_ENHANCED\_TEST\_MODELS\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink PHICH Ng Parameter FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PHICH\_NG\_PARAMETER\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink PHICH Relative Power FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PHICH\_RELATIVE\_POWER\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink PHICH Duration  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PHICH\_DURATION) - Short command updated.
- LTE Downlink PHICH Number Of Groups  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PHICH\_NUMBER\_OF\_GROUPS) - Short command updated.
- LTE Downlink PHICH Enhanced Test Models  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PHICH\_ENHANCED\_TEST\_MODELS) - Short command updated.
- LTE Downlink PHICH Ng Parameter  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PHICH\_NG\_PARAMETER) - Short command updated.
- LTE Downlink PHICH Relative Power  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PHICH\_RELATIVE\_POWER) - Short command updated.
- LTE Downlink PDCCH Format FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDCCH\_FORMAT\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Downlink PDCCH Number of PDCCHs FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDCCH\_NUMBER\_OF\_PDCCHS\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink PDCCH Relative Power FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDCCH\_RELATIVE\_POWER\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink PDSCH Power Ratio FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_POWER\_RATIO\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink PDCCH Format  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDCCH\_FORMAT) - Short command updated.
- LTE Downlink PDCCH Number of PDCCHs  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDCCH\_NUMBER\_OF\_PDCCHS) - Short command updated.
- LTE Downlink PDCCH Relative Power  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDCCH\_RELATIVE\_POWER) - Short command updated.
- LTE Downlink PDSCH Power Ratio  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_PDSCH\_POWER\_RATIO) - Short command updated.
- LTE Downlink EPDCCH PRB Pairs FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EPDCCH\_PRB\_PAIRS\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink EPDCCH Localized FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EPDCCH\_LOCALIZED\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink EPDCCH Relative Power FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EPDCCH\_RELATIVE\_POWER\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink EPDCCH RB Assignment FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EPDCCH\_RB\_ASSIGNMENT\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink EPDCCH Set ID FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EPDCCH\_SET\_ID\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink EPDCCH PRB Pairs  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EPDCCH\_PRB\_PAIRS) - Short command updated.
- LTE Downlink EPDCCH Localized  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EPDCCH\_LOCALIZED) - Short command updated.
- LTE Downlink EPDCCH Relative Power  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EPDCCH\_RELATIVE\_POWER) - Short command updated.
- LTE Downlink EPDCCH RB Assignment  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EPDCCH\_RB\_ASSIGNMENT) - Short command updated.
- LTE Downlink EPDCCH Set ID  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EPDCCH\_SET\_ID) - Short command updated.
- LTE Downlink MBSFN State FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_MBSFN\_ENABLED\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink MBSFN Relative Power FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_MBSFN\_RELATIVE\_POWER\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink MBSFN Area ID FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_MBSFN\_AREA\_ID\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Downlink MBSFN Non MBSF Region Length FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_MBSFN\_NON\_MBSF\_REGION\_LENGTH\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink MBSFN State (RSSPECAN\_ATTR\_LTE\_DOWNLINK\_MBSFN\_ENABLED)  
- Short command updated.
- LTE Downlink MBSFN Relative Power  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_MBSFN\_RELATIVE\_POWER) - Short command updated.
- LTE Downlink MBSFN Area ID  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_MBSFN\_AREA\_ID) - Short command updated.
- LTE Downlink MBSFN Non MBSF Region Length  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_MBSFN\_NON\_MBSF\_REGION\_LENGTH) - Short command updated.
- LTE Downlink MBSFN Subframe State FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_MBSFN\_SUBFRAME\_ENABLED\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink MBSFN Subframe PMCH State FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_MBSFN\_SUBFRAME\_PMCH\_ENABLED\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink MBSFN Subframe PMCH Modulation FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_MBSFN\_SUBFRAME\_PMCH\_MODULATION\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink MBSFN Subframe State  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_MBSFN\_SUBFRAME\_ENABLED) - Short command updated.
- LTE Downlink MBSFN Subframe PMCH State  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_MBSFN\_SUBFRAME\_PMCH\_ENABLED) - Short command updated.
- LTE Downlink MBSFN Subframe PMCH Modulation  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_MBSFN\_SUBFRAME\_PMCH\_MODULATION) - Short command updated.
- LTE Downlink On Off Unit (RSSPECAN\_ATTR\_LTE\_DOWNLINK\_ON\_OFF\_UNIT) - Added FSV as supported instrument
- LTE Downlink Home Area Basestation Power Auto  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_HOME\_AREA\_BASESTATION\_POWER\_AUTO) - Added FSV as supported instrument
- LTE Downlink Constellation Allocation FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CONSTELLATION\_ALLOCATION\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink Constellation Allocation All FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CONSTELLATION\_ALLOCATION\_ALL\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink Constellation Carrier FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CONSTELLATION\_CARRIER\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink Constellation Carrier All FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CONSTELLATION\_CARRIER\_ALL\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink Constellation Codeword FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CONSTELLATION\_CODEWORD\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Downlink Constellation Codeword All FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CONSTELLATION\_CODEWORD\_ALL\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink Beamforming Antenna Port FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_BEAMFORMING\_ANTENNA\_PORT\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink Subframe Selection  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_SUBFRAME\_SELECTION) - Short command updated.
- LTE Downlink Subframe Selection All  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_SUBFRAME\_SELECTION\_ALL) - Short command updated.
- LTE Downlink Constellation Modulation  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CONSTELLATION\_MODULATION) - Short command updated.
- LTE Downlink Constellation Modulation All  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CONSTELLATION\_MODULATION\_ALL) - Short command updated.
- LTE Downlink Constellation Allocation  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CONSTELLATION\_ALLOCATION) - Short command updated.
- LTE Downlink Constellation Allocation All  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CONSTELLATION\_ALLOCATION\_ALL) - Short command updated.
- LTE Downlink Constellation Symbol  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CONSTELLATION\_SYMBOL) - Short command updated.
- LTE Downlink Constellation Symbol All  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CONSTELLATION\_SYMBOL\_ALL) - Short command updated.
- LTE Downlink Constellation Carrier  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CONSTELLATION\_CARRIER) - Short command updated.
- LTE Downlink Constellation Carrier All  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CONSTELLATION\_CARRIER\_ALL) - Short command updated.
- LTE Downlink Constellation Codeword  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CONSTELLATION\_CODEWORD) - Short command updated.
- LTE Downlink Constellation Codeword All  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CONSTELLATION\_CODEWORD\_ALL) - Short command updated.
- LTE Downlink Constellation Location  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CONSTELLATION\_LOCATION) - Short command updated.
- LTE Downlink Beamforming Antenna Port  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_BEAMFORMING\_ANTENNA\_PORT) - Short command updated.
- LTE Downlink EVM PDSCH QPSK Limit Check Result Average FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EVM\_PDSCH\_QPSK\_LIMIT\_CHECK\_RESULT\_AVERAGE\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink EVM PDSCH QPSK Limit Check Result Maximum FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EVM\_PDSCH\_QPSK\_LIMIT\_CHECK\_RESULT\_MAX\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink EVM PDSCH QPSK Limit Check Result Average  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EVM\_PDSCH\_QPSK\_LIMIT\_CHECK\_RESULT\_AVERAGE) - Short command updated.

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- LTE Downlink EVM PDSCH QPSK Limit Check Result Maximum  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EVM\_PDSCH\_QPSK\_LIMIT\_CHECK\_RESULT\_MAX) -  
Short command updated.

- LTE Downlink EVM PDSCH 16QAM Limit Check Result Average FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EVM\_PDSCH\_16QAM\_LIMIT\_CHECK\_RESULT\_AVER  
AGE\_FSV) - Only FSV was added to the attribute name because the same attribute was created  
for FSW with carrier component.

- LTE Downlink EVM PDSCH 16QAM Limit Check Result Maximum FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EVM\_PDSCH\_16QAM\_LIMIT\_CHECK\_RESULT\_MAX\_  
FSV) - Only FSV was added to the attribute name because the same attribute was created for  
FSW with carrier component.

- LTE Downlink EVM PDSCH 16QAM Limit Check Result Average  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EVM\_PDSCH\_16QAM\_LIMIT\_CHECK\_RESULT\_AVER  
AGE) - Short command updated.

- LTE Downlink EVM PDSCH 16QAM Limit Check Result Maximum  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EVM\_PDSCH\_16QAM\_LIMIT\_CHECK\_RESULT\_MAX)  
- Short command updated.

- LTE Downlink EVM PDSCH 64QAM Limit Check Result Average FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EVM\_PDSCH\_64QAM\_LIMIT\_CHECK\_RESULT\_AVER  
AGE\_FSV) - Only FSV was added to the attribute name because the same attribute was created  
for FSW with carrier component.

- LTE Downlink EVM PDSCH 64QAM Limit Check Result Maximum FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EVM\_PDSCH\_64QAM\_LIMIT\_CHECK\_RESULT\_MAX\_  
FSV) - Only FSV was added to the attribute name because the same attribute was created for  
FSW with carrier component.

- LTE Downlink EVM PDSCH 64QAM Limit Check Result Average  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EVM\_PDSCH\_64QAM\_LIMIT\_CHECK\_RESULT\_AVER  
AGE) - Short command updated.

- LTE Downlink EVM PDSCH 64QAM Limit Check Result Maximum  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EVM\_PDSCH\_64QAM\_LIMIT\_CHECK\_RESULT\_MAX)  
- Short command updated.

- LTE Downlink EVM Physical Channel Limit Check Result Average FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EVM\_PHYSICAL\_CHANNEL\_LIMIT\_CHECK\_RESULT  
\_AVERAGE\_FSV) - Only FSV was added to the attribute name because the same attribute was  
created for FSW with carrier component.

- LTE Downlink EVM Physical Channel Limit Check Result Maximum FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EVM\_PHYSICAL\_CHANNEL\_LIMIT\_CHECK\_RESULT  
\_MAX\_FSV) - Only FSV was added to the attribute name because the same attribute was  
created for FSW with carrier component.

- LTE Downlink EVM Physical Channel Limit Check Result Average  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EVM\_PHYSICAL\_CHANNEL\_LIMIT\_CHECK\_RESULT  
\_AVERAGE) - Short command updated.

- LTE Downlink EVM Physical Channel Limit Check Result Maximum  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EVM\_PHYSICAL\_CHANNEL\_LIMIT\_CHECK\_RESULT  
\_MAX) - Short command updated.

- LTE Downlink EVM Physical Signal Limit Check Result Average FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EVM\_PHYSICAL\_SIGNAL\_LIMIT\_CHECK\_RESULT\_A  
VERAGE\_FSV) - Only FSV was added to the attribute name because the same attribute was  
created for FSW with carrier component.

- LTE Downlink EVM Physical Signal Limit Check Result Maximum FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EVM\_PHYSICAL\_SIGNAL\_LIMIT\_CHECK\_RESULT\_M  
AX\_FSV) - Only FSV was added to the attribute name because the same attribute was created  
for FSW with carrier component.

- LTE Downlink EVM Physical Signal Limit Check Result Average  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EVM\_PHYSICAL\_SIGNAL\_LIMIT\_CHECK\_RESULT\_A  
VERAGE) - Short command updated.

- LTE Downlink EVM Physical Signal Limit Check Result Maximum  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_EVM\_PHYSICAL\_SIGNAL\_LIMIT\_CHECK\_RESULT\_M  
AX) - Short command updated.

- LTE Downlink Frequency Error Limit Check Result Average FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_FREQUENCY\_ERROR\_LIMIT\_CHECK\_RESULT\_AVERAGE\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink Frequency Error Limit Check Result Maximum FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_FREQUENCY\_ERROR\_LIMIT\_CHECK\_RESULT\_MAX\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink Frequency Error Limit Check Result Average  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_FREQUENCY\_ERROR\_LIMIT\_CHECK\_RESULT\_AVERAGE) - Short command updated.
- LTE Downlink Frequency Error Limit Check Result Maximum  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_FREQUENCY\_ERROR\_LIMIT\_CHECK\_RESULT\_MAX) - Short command updated.
- LTE Downlink IQ Gain Imbalance Limit Check Result Average FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_IQ\_GAIN\_IMBALANCE\_LIMIT\_CHECK\_RESULT\_AVERAGE\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink IQ Gain Imbalance Limit Check Result Maximum FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_IQ\_GAIN\_IMBALANCE\_LIMIT\_CHECK\_RESULT\_MAX\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink IQ Gain Imbalance Limit Check Result Average  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_IQ\_GAIN\_IMBALANCE\_LIMIT\_CHECK\_RESULT\_AVERAGE) - Short command updated.
- LTE Downlink IQ Gain Imbalance Limit Check Result Maximum  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_IQ\_GAIN\_IMBALANCE\_LIMIT\_CHECK\_RESULT\_MAX) - Short command updated.
- LTE Downlink IQ Offset Limit Check Result Average FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_IQ\_OFFSET\_LIMIT\_CHECK\_RESULT\_AVERAGE\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink IQ Offset Limit Check Result Maximum FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_IQ\_OFFSET\_LIMIT\_CHECK\_RESULT\_MAX\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink IQ Offset Limit Check Result Average  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_IQ\_OFFSET\_LIMIT\_CHECK\_RESULT\_AVERAGE) - Short command updated.
- LTE Downlink IQ Offset Limit Check Result Maximum  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_IQ\_OFFSET\_LIMIT\_CHECK\_RESULT\_MAX) - Short command updated.
- LTE Downlink IQ Quadrature Error Limit Check Result Average FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_IQ\_QUADRATURE\_ERROR\_LIMIT\_CHECK\_RESULT\_AVERAGE\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink IQ Quadrature Error Limit Check Result Maximum FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_IQ\_QUADRATURE\_ERROR\_LIMIT\_CHECK\_RESULT\_MAX\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Downlink IQ Quadrature Error Limit Check Result Average  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_IQ\_QUADRATURE\_ERROR\_LIMIT\_CHECK\_RESULT\_AVERAGE) - Short command updated.
- LTE Downlink IQ Quadrature Error Limit Check Result Maximum  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_IQ\_QUADRATURE\_ERROR\_LIMIT\_CHECK\_RESULT\_MAX) - Short command updated.
- LTE Downlink Sampling Error Limit Check Result Average FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_SAMPLING\_ERROR\_LIMIT\_CHECK\_RESULT\_AVERAGE\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Downlink Sampling Error Limit Check Result Maximum FSV  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_SAMPLING\_ERROR\_LIMIT\_CHECK\_RESULT\_MAX\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Downlink Sampling Error Limit Check Result Average  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_SAMPLING\_ERROR\_LIMIT\_CHECK\_RESULT\_AVERAGE) - Short command updated.

- LTE Downlink Sampling Error Limit Check Result Maximum  
(RSSPECAN\_ATTR\_LTE\_DOWNLINK\_SAMPLING\_ERROR\_LIMIT\_CHECK\_RESULT\_MAX) - Short command updated.

- LTE Uplink Number of Resource Blocks FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_NUMBER\_OF\_RESOURCE\_BLOCKS\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Uplink Number of Resource Blocks  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_NUMBER\_OF\_RESOURCE\_BLOCKS) - Short command updated.

- LTE Uplink Operating Band Index  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_OPERATING\_BAND\_INDEX) - Short command updated.

- LTE Uplink Extreme Conditions  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EXTREME\_CONDITIONS) - Short command updated.

- LTE Uplink Frame Number Offset FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_FRAME\_NUMBER\_OFFSET\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Uplink UE Radio Network Temporary Identifier FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_UE\_RADIO\_NETWORK\_TEMPORARY\_IDENTIFIER\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Uplink Frame Number Offset  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_FRAME\_NUMBER\_OFFSET) - Short command updated.

- LTE Uplink UE Radio Network Temporary Identifier  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_UE\_RADIO\_NETWORK\_TEMPORARY\_IDENTIFIER) - Short command updated.

- LTE Uplink Sounding Reference Signal Present FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SOUNDING\_REFERENCE\_SIGNAL\_PRESENT\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Uplink Sounding Reference Signal Subframe Configuration FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SOUNDING\_REFERENCE\_SIGNAL\_SUBFRAME\_CONFIGURATION\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Uplink Sounding Reference Signal MaxUpPts FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SOUNDING\_REFERENCE\_SIGNAL\_MAXUPPTS\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Uplink Sounding Reference Signal Bandwidth B\_SRS FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SOUNDING\_REFERENCE\_SIGNAL\_BANDWIDTH\_B\_SRS\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Uplink Sounding Reference Signal Hopping BW FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SOUNDING\_REFERENCE\_SIGNAL\_HOPPING\_BW\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Uplink Sounding Reference Signal Cyclic Shift N\_CS FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SOUNDING\_REFERENCE\_SIGNAL\_CYCLIC\_SHIFT\_N\_CS\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Uplink Sounding Reference Signal Power FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SOUNDING\_REFERENCE\_SIGNAL\_POWER\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Uplink Sounding Reference Signal Bandwidth Configuration C\_SRS FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SOUNDING\_REFERENCE\_SIGNAL\_BANDWIDTH\_CONFIGURATION\_C\_SRS\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Uplink Sounding Reference Signal Configuration Index FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SOUNDING\_REFERENCE\_SIGNAL\_CONFIGURATION\_INDEX\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Uplink Sounding Reference Signal Transmission Comb FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SOUNDING\_REFERENCE\_SIGNAL\_TRANSMISSION\_COMB\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Uplink Sounding Reference Signal N-RRC FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SOUNDING\_REFERENCE\_SIGNAL\_N\_RRC\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Uplink Sounding Reference Signal AN TX FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SOUNDING\_REFERENCE\_SIGNAL\_AN\_TX\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Uplink Sounding Reference Signal Present  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SOUNDING\_REFERENCE\_SIGNAL\_PRESENT) - Short command updated.

- LTE Uplink Sounding Reference Signal Subframe Configuration  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SOUNDING\_REFERENCE\_SIGNAL\_SUBFRAME\_CONFIGURATION) - Short command updated.

- LTE Uplink Sounding Reference Signal MaxUpPts  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SOUNDING\_REFERENCE\_SIGNAL\_MAXUPPTS) - Short command updated.

- LTE Uplink Sounding Reference Signal Bandwidth B\_SRS  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SOUNDING\_REFERENCE\_SIGNAL\_BANDWIDTH\_B\_SRS) - Short command updated.

- LTE Uplink Sounding Reference Signal Hopping BW  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SOUNDING\_REFERENCE\_SIGNAL\_HOPPING\_BW) - Short command updated.

- LTE Uplink Sounding Reference Signal Cyclic Shift N\_CS  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SOUNDING\_REFERENCE\_SIGNAL\_CYCLIC\_SHIFT\_N\_CS) - Short command updated.

- LTE Uplink Sounding Reference Signal Power  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SOUNDING\_REFERENCE\_SIGNAL\_POWER) - Short command updated.

- LTE Uplink Sounding Reference Signal Bandwidth Configuration C\_SRS  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SOUNDING\_REFERENCE\_SIGNAL\_BANDWIDTH\_CONFIGURATION\_C\_SRS) - Short command updated.

- LTE Uplink Sounding Reference Signal Configuration Index  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SOUNDING\_REFERENCE\_SIGNAL\_CONFIGURATION\_INDEX) - Short command updated.

- LTE Uplink Sounding Reference Signal Transmission Comb  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SOUNDING\_REFERENCE\_SIGNAL\_TRANSMISSION\_COMB) - Short command updated.

- LTE Uplink Sounding Reference Signal AN TX  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SOUNDING\_REFERENCE\_SIGNAL\_AN\_TX) - Short command updated.

- LTE Uplink Sounding Reference Signal N-RRC  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SOUNDING\_REFERENCE\_SIGNAL\_N\_RRC) - Short command updated.



- LTE Uplink PUCCH Resource Blocks FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PUCCH\_RESOURCE\_BLOCKS\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Uplink PUCCH Resource Blocks Auto FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PUCCH\_RESOURCE\_BLOCKS\_AUTO\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Uplink PUCCH Cyclic Shifts FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PUCCH\_CYCLIC\_SHIFTS\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Uplink PUCCH Delta Shift FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PUCCH\_DELTA\_SHIFT\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Uplink PUCCH Format FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PUCCH\_FORMAT\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Uplink PUCCH Bandwidth FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PUCCH\_BANDWIDTH\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Uplink PUCCH Resource Index FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PUCCH\_RESOURCE\_INDEX\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Uplink PUCCH Resource Blocks  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PUCCH\_RESOURCE\_BLOCKS) - Short command updated.
- LTE Uplink PUCCH Resource Blocks Auto  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PUCCH\_RESOURCE\_BLOCKS\_AUTO) - Short command updated.
- LTE Uplink PUCCH Cyclic Shifts  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PUCCH\_CYCLIC\_SHIFTS) - Short command updated.
- LTE Uplink PUCCH Delta Shift  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PUCCH\_DELTA\_SHIFT) - Short command updated.
- LTE Uplink PUCCH Format (RSSPECAN\_ATTR\_LTE\_UPLINK\_PUCCH\_FORMAT) - Short command updated.
- LTE Uplink PUCCH Bandwidth  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PUCCH\_BANDWIDTH) - Short command updated.
- LTE Uplink PUCCH Resource Index  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PUCCH\_RESOURCE\_INDEX) - Short command updated.
- LTE Uplink PRACH Configuration FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PRACH\_CONFIGURATION\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Uplink PRACH Restricted Set FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PRACH\_RESTRICTED\_SET\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Uplink PRACH Frequency Offset FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PRACH\_FREQUENCY\_OFFSET\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Uplink PRACH Ncs Configuration FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PRACH\_NCS\_CONFIGURATION\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Uplink PRACH Logical Root Seq Index FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PRACH\_LOGICAL\_ROOT\_SEQ\_INDEX\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Uplink PRACH Sequence Index FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PRACH\_SEQUENCE\_INDEX\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Uplink PRACH Sequence Index Value FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PRACH\_SEQUENCE\_INDEX\_VALUE\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Uplink PRACH Automatic Preamble Mapping FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PRACH\_AUTOMATIC\_PREAMBLE\_MAPPING\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Uplink PRACH Frequency Index FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PRACH\_FREQUENCY\_INDEX\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Uplink PRACH Half Frame Indicator FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PRACH\_HALF\_FRAME\_INDICATOR\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Uplink PRACH Configuration  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PRACH\_CONFIGURATION) - Short command updated.
- LTE Uplink PRACH Restricted Set  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PRACH\_RESTRICTED\_SET) - Short command updated.
- LTE Uplink PRACH Frequency Offset  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PRACH\_FREQUENCY\_OFFSET) - Short command updated.
- LTE Uplink PRACH Ncs Configuration  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PRACH\_NCS\_CONFIGURATION) - Short command updated.
- LTE Uplink PRACH Logical Root Seq Index  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PRACH\_LOGICAL\_ROOT\_SEQ\_INDEX) - Short command updated.
- LTE Uplink PRACH Sequence Index  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PRACH\_SEQUENCE\_INDEX) - Short command updated.
- LTE Uplink PRACH Sequence Index Value  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PRACH\_SEQUENCE\_INDEX\_VALUE) - Short command updated.
- LTE Uplink PRACH Automatic Preamble Mapping  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PRACH\_AUTOMATIC\_PREAMBLE\_MAPPING) - Short command updated.
- LTE Uplink PRACH Frequency Index  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PRACH\_FREQUENCY\_INDEX) - Short command updated.
- LTE Uplink PRACH Half Frame Indicator  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PRACH\_HALF\_FRAME\_INDICATOR) - Short command updated.
- LTE Uplink Preamble Selection FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PREAMBLE\_SELECTION\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Uplink Preamble Selection All FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PREAMBLE\_SELECTION\_ALL\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Uplink Constellation Allocation FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_CONSTELLATION\_ALLOCATION\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Uplink Constellation Allocation All FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_CONSTELLATION\_ALLOCATION\_ALL\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Uplink Constellation Carrier FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_CONSTELLATION\_CARRIER\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Uplink Constellation Carrier All FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_CONSTELLATION\_CARRIER\_ALL\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Uplink Slot Selection (RSSPECAN\_ATTR\_LTE\_UPLINK\_SLOT\_SELECTION) - Short command updated.
- LTE Uplink Subframe Selection  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SUBFRAME\_SELECTION) - Short command updated.
- LTE Uplink Subframe Selection All  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SUBFRAME\_SELECTION\_ALL) - Short command updated.
- LTE Uplink Preamble Selection  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PREAMBLE\_SELECTION) - Short command updated.
- LTE Uplink Preamble Selection All  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_PREAMBLE\_SELECTION\_ALL) - Short command updated.
- LTE Uplink Constellation Modulation  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_CONSTELLATION\_MODULATION) - Updated values.
- LTE Uplink Constellation Modulation All  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_CONSTELLATION\_MODULATION\_ALL) - Short command updated.
- LTE Uplink Constellation Allocation  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_CONSTELLATION\_ALLOCATION) - Short command updated.
- LTE Uplink Constellation Allocation All  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_CONSTELLATION\_ALLOCATION\_ALL) - Short command updated.
- LTE Uplink Constellation Symbol  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_CONSTELLATION\_SYMBOL) - Short command updated.
- LTE Uplink Constellation Symbol All  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_CONSTELLATION\_SYMBOL\_ALL) - Short command updated.
- LTE Uplink Constellation Carrier  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_CONSTELLATION\_CARRIER) - Short command updated.
- LTE Uplink Constellation Carrier All  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_CONSTELLATION\_CARRIER\_ALL) - Short command updated.
- LTE Uplink EVM DMRS PUSCH QPSK Limit Check Result FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_DMRS\_PUSCH\_QPSK\_LIMIT\_CHECK\_RESULT\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Uplink EVM DMRS PUSCH 64QAM Limit Check Result FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_DMRS\_PUSCH\_64QAM\_LIMIT\_CHECK\_RESULT\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Uplink EVM DMRS PUSCH 16QAM Limit Check Result FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_DMRS\_PUSCH\_16QAM\_LIMIT\_CHECK\_RESULT\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Uplink EVM DMRS PUCCH Limit Check Result FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_DMRS\_PUCCH\_LIMIT\_CHECK\_RESULT\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Uplink EVM PUCCH Limit Check Result FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_PUCCH\_LIMIT\_CHECK\_RESULT\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Uplink EVM PRACH Limit Check Result FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_PRACH\_LIMIT\_CHECK\_RESULT\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Uplink EVM PUSCH QPSK Limit Check Result FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_PUSCH\_QPSK\_LIMIT\_CHECK\_RESULT\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Uplink EVM PUSCH 64QAM Limit Check Result FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_PUSCH\_64QAM\_LIMIT\_CHECK\_RESULT\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Uplink EVM PUSCH 16QAM Limit Check Result FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_PUSCH\_16QAM\_LIMIT\_CHECK\_RESULT\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Uplink EVM DMRS PUSCH QPSK Result  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_DMRS\_PUSCH\_QPSK\_RESULT) - Short command updated.
- LTE Uplink EVM DMRS PUSCH 64QAM Result  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_DMRS\_PUSCH\_64QAM\_RESULT) - Short command updated.
- LTE Uplink EVM DMRS PUSCH 16QAM Result  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_DMRS\_PUSCH\_16QAM\_RESULT) - Short command updated.
- LTE Uplink EVM DMRS PUCCH Result  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_DMRS\_PUCCH\_RESULT) - Short command updated.
- LTE Uplink EVM PUCCH Result  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_PUCCH\_RESULT) - Short command updated.
- LTE Uplink EVM PRACH Result  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_PRACH\_RESULT) - Short command updated.
- LTE Uplink EVM PUSCH QPSK Result  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_PUSCH\_QPSK\_RESULT) - Short command updated.
- LTE Uplink EVM PUSCH 64QAM Result  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_PUSCH\_64QAM\_RESULT) - Short command updated.
- LTE Uplink EVM PUSCH 16QAM Result  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_PUSCH\_16QAM\_RESULT) - Short command updated.
- LTE Uplink EVM DMRS PUSCH QPSK Limit Check Result  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_DMRS\_PUSCH\_QPSK\_LIMIT\_CHECK\_RESULT) - Short command updated.
- LTE Uplink EVM DMRS PUSCH 64QAM Limit Check Result  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_DMRS\_PUSCH\_64QAM\_LIMIT\_CHECK\_RESULT) - Short command updated.
- LTE Uplink EVM DMRS PUCCH Limit Check Result  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_DMRS\_PUCCH\_LIMIT\_CHECK\_RESULT) - Short command updated.
- LTE Uplink EVM DMRS PUSCH 16QAM Limit Check Result  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_DMRS\_PUSCH\_16QAM\_LIMIT\_CHECK\_RESULT) - Short command updated.
- LTE Uplink EVM PUCCH Limit Check Result  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_PUCCH\_LIMIT\_CHECK\_RESULT) - Short command updated.
- LTE Uplink EVM PRACH Limit Check Result  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_PRACH\_LIMIT\_CHECK\_RESULT) - Short command updated.
- LTE Uplink EVM PUSCH QPSK Limit Check Result  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_PUSCH\_QPSK\_LIMIT\_CHECK\_RESULT) - Short command updated.
- LTE Uplink EVM PUSCH 64QAM Limit Check Result  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_PUSCH\_64QAM\_LIMIT\_CHECK\_RESULT) - Short command updated.

- LTE Uplink EVM PUSCH 16QAM Limit Check Result  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_PUSCH\_16QAM\_LIMIT\_CHECK\_RESULT) - Short command updated.
- LTE Uplink EVM AI Limit Check Result Average FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_AI\_LIMIT\_CHECK\_RESULT\_AVERAGE\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Uplink EVM AI Limit Check Result Maximum FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_AI\_LIMIT\_CHECK\_RESULT\_MAX\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Uplink EVM AI Limit Check Result Average  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_AI\_LIMIT\_CHECK\_RESULT\_AVERAGE) - Short command updated.
- LTE Uplink EVM AI Limit Check Result Maximum  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_AI\_LIMIT\_CHECK\_RESULT\_MAX) - Short command updated.
- LTE Uplink EVM Physical Channel Limit Check Result Average FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_PHYSICAL\_CHANNEL\_LIMIT\_CHECK\_RESULT\_AVERAGE\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Uplink EVM Physical Channel Limit Check Result Maximum FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_PHYSICAL\_CHANNEL\_LIMIT\_CHECK\_RESULT\_MAX\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Uplink EVM Physical Channel Limit Check Result Average  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_PHYSICAL\_CHANNEL\_LIMIT\_CHECK\_RESULT\_AVERAGE) - Short command updated.
- LTE Uplink EVM Physical Channel Limit Check Result Maximum  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_PHYSICAL\_CHANNEL\_LIMIT\_CHECK\_RESULT\_MAX) - Short command updated.
- LTE Uplink EVM Physical Signal Limit Check Result Average FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_PHYSICAL\_SIGNAL\_LIMIT\_CHECK\_RESULT\_AVERAGE\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Uplink EVM Physical Signal Limit Check Result Maximum FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_PHYSICAL\_SIGNAL\_LIMIT\_CHECK\_RESULT\_MAX\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Uplink EVM Physical Signal Limit Check Result Average  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_PHYSICAL\_SIGNAL\_LIMIT\_CHECK\_RESULT\_AVERAGE) - Short command updated.
- LTE Uplink EVM Physical Signal Limit Check Result Maximum  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_EVM\_PHYSICAL\_SIGNAL\_LIMIT\_CHECK\_RESULT\_MAX) - Short command updated.
- LTE Uplink Frequency Error Limit Check Result Average FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_FREQUENCY\_ERROR\_LIMIT\_CHECK\_RESULT\_AVERAGE\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Uplink Frequency Error Limit Check Result Maximum FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_FREQUENCY\_ERROR\_LIMIT\_CHECK\_RESULT\_MAX\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.
- LTE Uplink Frequency Error Limit Check Result Average  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_FREQUENCY\_ERROR\_LIMIT\_CHECK\_RESULT\_AVERAGE) - Short command updated.
- LTE Uplink Frequency Error Limit Check Result Maximum  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_FREQUENCY\_ERROR\_LIMIT\_CHECK\_RESULT\_MAX) - Short command updated.

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- LTE Uplink IQ Gain Imbalance Limit Check Result Average FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_IQ\_GAIN\_IMBALANCE\_LIMIT\_CHECK\_RESULT\_AVERAGE\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Uplink IQ Gain Imbalance Limit Check Result Maximum FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_IQ\_GAIN\_IMBALANCE\_LIMIT\_CHECK\_RESULT\_MAX\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Uplink IQ Gain Imbalance Limit Check Result Average  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_IQ\_GAIN\_IMBALANCE\_LIMIT\_CHECK\_RESULT\_AVERAGE) - Short command updated.

- LTE Uplink IQ Gain Imbalance Limit Check Result Maximum  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_IQ\_GAIN\_IMBALANCE\_LIMIT\_CHECK\_RESULT\_MAX) - Short command updated.

- LTE Uplink IQ Offset Limit Check Result Average FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_IQ\_OFFSET\_LIMIT\_CHECK\_RESULT\_AVERAGE\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Uplink IQ Offset Limit Check Result Maximum FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_IQ\_OFFSET\_LIMIT\_CHECK\_RESULT\_MAX\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Uplink IQ Offset Limit Check Result Average  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_IQ\_OFFSET\_LIMIT\_CHECK\_RESULT\_AVERAGE) - Short command updated.

- LTE Uplink IQ Offset Limit Check Result Maximum  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_IQ\_OFFSET\_LIMIT\_CHECK\_RESULT\_MAX) - Short command updated.

- LTE Uplink IQ Quadrature Error Limit Check Result Average FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_IQ\_QUADRATURE\_ERROR\_LIMIT\_CHECK\_RESULT\_AVERAGE\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Uplink IQ Quadrature Error Limit Check Result Maximum FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_IQ\_QUADRATURE\_ERROR\_LIMIT\_CHECK\_RESULT\_MAX\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Uplink IQ Quadrature Error Limit Check Result Average  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_IQ\_QUADRATURE\_ERROR\_LIMIT\_CHECK\_RESULT\_AVERAGE) - Short command updated.

- LTE Uplink IQ Quadrature Error Limit Check Result Maximum  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_IQ\_QUADRATURE\_ERROR\_LIMIT\_CHECK\_RESULT\_MAX) - Short command updated.

- LTE Uplink Sampling Error Limit Check Result Average FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SAMPLING\_ERROR\_LIMIT\_CHECK\_RESULT\_AVERAGE\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Uplink Sampling Error Limit Check Result Maximum FSV  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SAMPLING\_ERROR\_LIMIT\_CHECK\_RESULT\_MAX\_FSV) - Only FSV was added to the attribute name because the same attribute was created for FSW with carrier component.

- LTE Uplink Sampling Error Limit Check Result Average  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SAMPLING\_ERROR\_LIMIT\_CHECK\_RESULT\_AVERAGE) - Short command updated.

- LTE Uplink Sampling Error Limit Check Result Maximum  
(RSSPECAN\_ATTR\_LTE\_UPLINK\_SAMPLING\_ERROR\_LIMIT\_CHECK\_RESULT\_MAX) - Short command updated.

- DOCSIS Evaluation Range Constellation Object  
(RSSPECAN\_ATTR\_DOCSIS\_EVALUATION\_CONSTELLATION\_OBJECT) - Range table was updated

\* Modified Range Tables:

- rsspecan\_rngUnits - RSSPECAN\_LIMIT\_UNITS  
New items: RSSPECAN\_VAL\_UNIT\_DBUV\_M
- rsspecan\_rngListRangDet - RSSPECAN\_ATTR\_SE\_LIST\_RANG\_DET  
New items: RSSPECAN\_VAL\_LIST\_RANG\_DET\_APE
- rsspecan\_rngDISPConfPreDefColour.RSSPECAN\_VAL\_DISP\_COL\_LGRA -  
RSSPECAN\_ATTR\_DISP\_COL\_PREDEFINED,  
RSSPECAN\_ATTR\_HCOPY\_COLOR\_PREDEFINED  
Command changed ("LGRAY", "LGRA")
- rsspecan\_rngDISPConfPreDefColour.RSSPECAN\_VAL\_DISP\_COL\_LGRE -  
RSSPECAN\_ATTR\_DISP\_COL\_PREDEFINED,  
RSSPECAN\_ATTR\_HCOPY\_COLOR\_PREDEFINED  
Command changed ("LGREEN", "LGRE")
- rsspecan\_rngHcopyDeviceLang -  
RSSPECAN\_ATTR\_HCOPY\_DEVICE\_LANG\_OUT\_FORM  
New items: RSSPECAN\_VAL\_HCOPY\_DEVICE\_LANG\_PDF,  
RSSPECAN\_VAL\_HCOPY\_DEVICE\_LANG\_SVG
- rsspecan\_rngServiceInput - RSSPECAN\_ATTR\_SERVICE\_INPUT\_SOURCE  
New items: RSSPECAN\_VAL\_INPUT\_WB2CAL, RSSPECAN\_VAL\_INPUT\_SYNT
- rsspecan\_rngMeasPowerSelect - RSSPECAN\_ATTR\_MEAS\_POW\_SELECT  
New items: RSSPECAN\_VAL\_MEAS\_POW\_PPOW,  
RSSPECAN\_VAL\_MEAS\_POW\_GACL, RSSPECAN\_VAL\_MEAS\_POW\_MACM,  
RSSPECAN\_VAL\_MEAS\_POW\_COB
- rsspecan\_rngSourceIntExt.RSSPECAN\_VAL\_SOUR\_E10 -  
RSSPECAN\_ATTR\_ROSC\_SOURCE, RSSPECAN\_ATTR\_ROSC\_SOURCE\_EAUTO,  
RSSPECAN\_ATTR\_EXT\_GEN\_ROSC\_SOURCE  
Help changed ("Available only on FSW. The external reference from REF INPUT 1..20 MHZ connector is used with a fixed 10 MHZ frequency; if none is available, an error flag is displayed in the status bar", "The external reference from REF INPUT 1..20 MHZ connector is used with a fixed 10 MHZ frequency; if none is available, an error flag is displayed in the status bar")
- rsspecan\_rngSourceIntExt.RSSPECAN\_VAL\_SOUR\_E100 -  
RSSPECAN\_ATTR\_ROSC\_SOURCE, RSSPECAN\_ATTR\_ROSC\_SOURCE\_EAUTO,  
RSSPECAN\_ATTR\_EXT\_GEN\_ROSC\_SOURCE  
Help changed ("Available only on FSW. The external reference from REF INPUT 100 MHZ connector is used; if none is available, an error flag is displayed in the status bar", "The external reference from REF INPUT 100 MHZ connector is used; if none is available, an error flag is displayed in the status bar")
- rsspecan\_rngSourceIntExt.RSSPECAN\_VAL\_SOUR\_SYNC -  
RSSPECAN\_ATTR\_ROSC\_SOURCE, RSSPECAN\_ATTR\_ROSC\_SOURCE\_EAUTO,  
RSSPECAN\_ATTR\_EXT\_GEN\_ROSC\_SOURCE  
Help changed ("Available only on FSW. The external reference is used; if none is available, an error flag is displayed in the status bar", "The external reference is used; if none is available, an error flag is displayed in the status bar")
- rsspecan\_rngExtGateTrigType -  
RSSPECAN\_ATTR\_EXTERNAL\_GATE\_TRIGGER\_TYPE  
New items: RSSPECAN\_VAL\_EGAT\_TRIG\_OFF
- rsspecan\_rngLayoutQueryWindowType -  
New items: RSSPECAN\_VAL\_LAYOUT\_TYPE\_DSUMMARY,  
RSSPECAN\_VAL\_LAYOUT\_TYPE\_SSUMMARY,  
RSSPECAN\_VAL\_LAYOUT\_TYPE\_MSPECTRUM, RSSPECAN\_VAL\_LAYOUT\_TYPE\_DPH,  
RSSPECAN\_VAL\_LAYOUT\_TYPE\_GDVT, RSSPECAN\_VAL\_LAYOUT\_TYPE\_PDVT,  
RSSPECAN\_VAL\_LAYOUT\_TYPE\_MERM, RSSPECAN\_VAL\_LAYOUT\_TYPE\_PCAR,  
RSSPECAN\_VAL\_LAYOUT\_TYPE\_PHAC
- 
- rsspecan\_rngLTEUplinkSlotSelection.RSSPECAN\_VAL\_LTE\_UPLINK\_SLOT\_SELECTION\_ALL  
- RSSPECAN\_ATTR\_LTE\_UPLINK\_SLOT\_SELECTION  
Description changed ("Both Slots", "Both slots")
- rsspecan\_rngVSAModulPSKFormat -  
RSSPECAN\_ATTR\_VSA\_MODULATION\_PSK\_FORMAT  
New items: RSSPECAN\_VAL\_MOD\_PSK\_NPI2, RSSPECAN\_VAL\_MOD\_PSK\_DPI2

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- RsSpecAn\_rngLTEDownlinkConstellationModulation -  
RSSPECAN\_ATTR\_LTE\_DOWNLINK\_CONSTELLATION\_MODULATION  
Range changed to <1;14>
- rsspecan\_rngTransientLayoutType -  
New items: RSSPECAN\_VAL\_LAYOUT\_TYPE\_IQTIME
- rsspecan\_rngAmplifierLayoutQueryWindowType -  
New items: RSSPECAN\_VAL\_LAYOUT\_TYPE\_GDVT,  
RSSPECAN\_VAL\_LAYOUT\_TYPE\_PDVT
- rsspecan\_rngDOCSISLayoutType -  
New items: RSSPECAN\_VAL\_LAYOUT\_TYPE\_MERM,  
RSSPECAN\_VAL\_LAYOUT\_TYPE\_PCAR, RSSPECAN\_VAL\_LAYOUT\_TYPE\_PHAC
- RsSpecAn\_rngDOCSISChannelEstimation -  
RSSPECAN\_ATTR\_DOCSIS\_CHANNEL\_ESTIMATION  
New items: RSSPECAN\_VAL\_DOCSIS\_CHANNEL\_ESTIMATION\_PILOTS,  
RSSPECAN\_VAL\_DOCSIS\_CHANNEL\_ESTIMATION\_PDATA,  
RSSPECAN\_VAL\_DOCSIS\_CHANNEL\_ESTIMATION\_EMER,  
RSSPECAN\_VAL\_DOCSIS\_CHANNEL\_ESTIMATION\_UMER,  
RSSPECAN\_VAL\_DOCSIS\_CHANNEL\_ESTIMATION\_PEQ
- rsspecan\_rngDOCSISConstellationObject -  
RSSPECAN\_ATTR\_DOCSIS\_EVALUATION\_CONSTELLATION\_OBJECT  
New items: RSSPECAN\_VAL\_DOCSIS\_CONSTELLATION\_OBJECT\_PILOTS,  
RSSPECAN\_VAL\_DOCSIS\_CONSTELLATION\_OBJECT\_CPILOTS,  
RSSPECAN\_VAL\_DOCSIS\_CONSTELLATION\_OBJECT\_SPILOTS,  
RSSPECAN\_VAL\_DOCSIS\_CONSTELLATION\_OBJECT\_CONPILOTS,  
RSSPECAN\_VAL\_DOCSIS\_CONSTELLATION\_OBJECT\_PROFILE
- RsSpecAn\_rngPresetFilter - RSSPECAN\_ATTR\_PRESET\_FILTER  
New items: RSSPECAN\_VAL\_PRESET\_FILT\_NOISE

### 3.15 Version 3.6.0 / 02 – 2016

\* FSWP 2.30

\* New Subsystems

- WiGig

\* Updated:

- cosmetic changes in documentation

\* New in Utility Functions:

- ID Query Response.vi

- Query OPC.vi

- Process All Previous Commands.vi

- Clear Status.vi

- Bin Data From File To Instrument.vi

- Bin Data To File From Instrument.vi

\* Updated in Utility Functions:

- Configure Error Checking.vi

\* Updated in Base system:

- Configure Marker Band Power.vi - new Display mode Relative Power

- Configure Delta Marker Band Power.vi - new Display mode Relative Power

- Add Windo.viw - new Window Type - WiGig

- Replace Window.vi - new Window Type - WiGig

- Query Marker.vi - used reserved parameter for Window

- Configure Preamplifier.vi - only set the rsspecan ATTR\_AMPL\_PREAMPLIFIER\_LEVEL

for FSW. For FPS,FSV,FSVR skipped setting this attribute



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- ATTR\_SWEEP\_POINTS - changed max value to 100001
  - All methods and attributes in RsSpecAnFileSaveRecallChannel changed required instruments from All to FSW,FSWP

\* New in Pulse Measurement:

- Configure Pulse Reference Type.vi
- Configure Pulse User Defined Reference IQ File Window.vi
- Configure Pulse Polynomina Phase Reference Waveform.vi
- Configure Pulse Barker Reference Waveform.vi
- Configure Pulse Embedded Barker Reference Waveform.vi

\* New in Amplifier:

- Configure Amplifier System Model Scale.vi

\* Updated in Amplifier:

- Configure Amplifier Result Parameter Sweep Table.vi - ACLR Balanced Magnitude added
- Configure Amplifier Result Parameter Sweep Display.vi - ACLR Balanced Magnitude added
- Get Amplifier Parameter Sweep Table Results.vi - ACP Balanced
- Get Amplifier Parameter Sweep Table Results Position.vi - ACP Balanced

\* New in VSA:

- Configure VSA Eye Diagram Absolute Limit Line.vi
- Configure VSA Eye Diagram Relative Limit Line.vi
- Read VSA Trace Symbols.vi

\* Updated in VSA:

- Configure VSA Modulation Settings.vi - Shaped Offset QPSK
- Configure VSA Symbols.vi - Result type used
- Get VSA Result.vi - fixed proper check for Modifier range

\* New in DOCSIS 3.1:

- ConfigureDOCSISStreamDirection
- DOCSIS Upstream class
- Configure DOCSIS Excluding Subcarriers.vi
- Configure DOCSIS Excluding User Subcarriers.vi

\* Update in DOCSIS 3.1:

- Configure DOCSIS OFDM Channel Description.vi - N\_FTT 2K added

\* New attributes:

- Active Window (rsspecan ATTR\_ACTIVE\_WINDOW)
- Amplifier Modeling Scale (rsspecan ATTR\_AMPLIFIER\_MODELING\_SCALE)
- Amplifier ACP Balanced Maximum (rsspecan ATTR\_AMPLIFIER\_PTABLE\_ACP\_BALANCED\_MAXIMUM)
- Amplifier ACP Balanced Minimum (rsspecan ATTR\_AMPLIFIER\_PTABLE\_ACP\_BALANCED\_MINIMUM)
- Amplifier ACP Balanced X Maximum (rsspecan ATTR\_AMPLIFIER\_PTABLE\_ACP\_BALANCED\_X\_MAXIMUM)
- Amplifier ACP Balanced X Minimum (rsspecan ATTR\_AMPLIFIER\_PTABLE\_ACP\_BALANCED\_X\_MINIMUM)
- Amplifier ACP Balanced Y Maximum (rsspecan ATTR\_AMPLIFIER\_PTABLE\_ACP\_BALANCED\_Y\_MAXIMUM)
- Amplifier ACP Balanced Y Minimum (rsspecan ATTR\_AMPLIFIER\_PTABLE\_ACP\_BALANCED\_Y\_MINIMUM)
- Pulse Reference IQ Window (rsspecan ATTR\_PULSE\_REFERENCE\_IQ\_WINDOW)
- Pulse Reference IQ Polynomial Phase Window (rsspecan ATTR\_PULSE\_REFERENCE\_IQ\_POLYNOMIAL\_PHASE\_WINDOW)
- Pulse Reference IQ Polynomial Phase Width (rsspecan ATTR\_PULSE\_REFERENCE\_IQ\_POLYNOMIAL\_PHASE\_WIDTH)

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- Pulse Reference IQ Barker Width (rsspecan ATTR\_PULSE\_REFERENCE\_IQ\_BARKER\_WIDTH)
- Pulse Reference IQ Barker Primary Code (rsspecan ATTR\_PULSE\_REFERENCE\_IQ\_BARKER\_PRIMARY\_CODE)
- Pulse Reference IQ Embedded Barker Primary Code (rsspecan ATTR\_PULSE\_REFERENCE\_IQ\_EMBEDDED\_BARKER\_PRIMARY\_CODE)
- Pulse Reference IQ Embedded Barker Secondary Code (rsspecan ATTR\_PULSE\_REFERENCE\_IQ\_EMBEDDED\_BARKER\_SECONDARY\_CODE)
- Pulse Reference IQ Embedded Barker Width (rsspecan ATTR\_PULSE\_REFERENCE\_IQ\_EMBEDDED\_BARKER\_WIDTH)
- VSA Eye Diagram Vertical Limit Line Absolute Enabled (rsspecan ATTR\_VSA\_EYE\_DIAGRAM\_VERTICAL\_LIMIT\_LINE\_ABSOLUTE\_ENABLED)
- VSA Eye Diagram Vertical Limit Line Absolute (rsspecan ATTR\_VSA\_EYE\_DIAGRAM\_VERTICAL\_LIMIT\_LINE\_ABSOLUTE)
- VSA Eye Diagram Vertical Limit Line Relative Enabled (rsspecan ATTR\_VSA\_EYE\_DIAGRAM\_VERTICAL\_LIMIT\_LINE\_RELATIVE\_ENABLED)
- VSA Eye Diagram Vertical Limit Line Relative (rsspecan ATTR\_VSA\_EYE\_DIAGRAM\_VERTICAL\_LIMIT\_LINE\_RELATIVE)
- VSA Eye Diagram Horizontal Limit Line Absolute Enabled (rsspecan ATTR\_VSA\_EYE\_DIAGRAM\_HORIZONTAL\_LIMIT\_LINE\_ABSOLUTE\_ENABLED)
- VSA Eye Diagram Horizontal Limit Line Absolute (rsspecan ATTR\_VSA\_EYE\_DIAGRAM\_HORIZONTAL\_LIMIT\_LINE\_ABSOLUTE)
- VSA Eye Diagram Horizontal Limit Line Relative Enabled (rsspecan ATTR\_VSA\_EYE\_DIAGRAM\_HORIZONTAL\_LIMIT\_LINE\_RELATIVE\_ENABLED)
- VSA Eye Diagram Horizontal Limit Line Relative (rsspecan ATTR\_VSA\_EYE\_DIAGRAM\_HORIZONTAL\_LIMIT\_LINE\_RELATIVE)
- WIGIG Mode (rsspecan ATTR\_WIGIG\_MODE)
- WIGIG Auto Level (rsspecan ATTR\_WIGIG\_AUTO\_LEVEL)
- WIGIG Auto Level Once (rsspecan ATTR\_WIGIG\_AUTO\_LEVEL\_ONCE)
- WIGIG Tracking Phase Enabled (rsspecan ATTR\_WIGIG\_TRACKING\_PHASE\_ENABLED)
- WIGIG Tracking Timing Enabled (rsspecan ATTR\_WIGIG\_TRACKING\_TIMING\_ENABLED)
- WIGIG Tracking Level Enabled (rsspecan ATTR\_WIGIG\_TRACKING\_LEVEL\_ENABLED)
- WIGIG IQ Compensation Enabled (rsspecan ATTR\_WIGIG\_IQ\_COMPENSATION\_ENABLED)
- WIGIG Bitstream Format (rsspecan ATTR\_WIGIG\_BITSTREAM\_FORMAT)
- WIGIG Statistic Count Enabled (rsspecan ATTR\_WIGIG\_STATISTIC\_COUNT\_ENABLED)
- WIGIG Statistic Count (rsspecan ATTR\_WIGIG\_STATISTIC\_COUNT)
- WIGIG PPDU to Analyze (rsspecan ATTR\_WIGIG\_PPDU\_TO\_ANALYZE)
- WIGIG PPDU Index (rsspecan ATTR\_WIGIG\_PPDU\_INDEX)
- WIGIG Equal Burst Length Enabled (rsspecan ATTR\_WIGIG\_EQUAL\_BURST\_LENGTH\_ENABLED)
- WIGIG Number of Symbols Maximum (rsspecan ATTR\_WIGIG\_NUMBER\_OF\_SYMBOLS\_MAXIMUM)
- WIGIG Number of Symbols Minimum (rsspecan ATTR\_WIGIG\_NUMBER\_OF\_SYMBOLS\_MINIMUM)
- WIGIG Fetch Burst Count (rsspecan ATTR\_WIGIG\_FETCH\_BURST\_COUNT)
- WIGIG Fetch Crest Factor Average (rsspecan ATTR\_WIGIG\_FETCH\_CREST\_FACTOR\_AVERAGE)
- WIGIG Fetch Crest Factor Maximum (rsspecan ATTR\_WIGIG\_FETCH\_CREST\_FACTOR\_MAXIMUM)
- WIGIG Fetch Crest Factor Minimum (rsspecan ATTR\_WIGIG\_FETCH\_CREST\_FACTOR\_MINIMUM)
- WIGIG Fetch Center Frequency Error Average (rsspecan ATTR\_WIGIG\_FETCH\_CENTER\_FREQUENCY\_ERROR\_AVERAGE)
- WIGIG Fetch Center Frequency Error Maximum (rsspecan ATTR\_WIGIG\_FETCH\_CENTER\_FREQUENCY\_ERROR\_MAXIMUM)
- WIGIG Fetch Center Frequency Error Minimum (rsspecan ATTR\_WIGIG\_FETCH\_CENTER\_FREQUENCY\_ERROR\_MINIMUM)

- WIGIG Fetch EVM All Symbols Average (rsspecan  
ATTR\_WIGIG\_FETCH\_EVM\_ALL\_SYMBOLS\_AVERAGE)
- WIGIG Fetch EVM All Symbols Maximum (rsspecan  
ATTR\_WIGIG\_FETCH\_EVM\_ALL\_SYMBOLS\_MAXIMUM)
- WIGIG Fetch EVM All Symbols Minimum (rsspecan  
ATTR\_WIGIG\_FETCH\_EVM\_ALL\_SYMBOLS\_MINIMUM)
- WIGIG Fetch EVM Data Symbols Average (rsspecan  
ATTR\_WIGIG\_FETCH\_EVM\_DATA\_SYMBOLS\_AVERAGE)
- WIGIG Fetch EVM Data Symbols Maximum (rsspecan  
ATTR\_WIGIG\_FETCH\_EVM\_DATA\_SYMBOLS\_MAXIMUM)
- WIGIG Fetch EVM Data Symbols Minimum (rsspecan  
ATTR\_WIGIG\_FETCH\_EVM\_DATA\_SYMBOLS\_MINIMUM)
- WIGIG Fetch EVM Pilot Symbols Average (rsspecan  
ATTR\_WIGIG\_FETCH\_EVM\_PILOT\_SYMBOLS\_AVERAGE)
- WIGIG Fetch EVM Pilot Symbols Maximum (rsspecan  
ATTR\_WIGIG\_FETCH\_EVM\_PILOT\_SYMBOLS\_MAXIMUM)
- WIGIG Fetch EVM Pilot Symbols Minimum (rsspecan  
ATTR\_WIGIG\_FETCH\_EVM\_PILOT\_SYMBOLS\_MINIMUM)
- WIGIG Fetch Fall Time Average (rsspecan  
ATTR\_WIGIG\_FETCH\_FALL\_TIME\_AVERAGE)
- WIGIG Fetch Fall Time Maximum (rsspecan  
ATTR\_WIGIG\_FETCH\_FALL\_TIME\_MAXIMUM)
- WIGIG Fetch Fall Time Minimum (rsspecan  
ATTR\_WIGIG\_FETCH\_FALL\_TIME\_MINIMUM)
- WIGIG Fetch Rise Time Average (rsspecan  
ATTR\_WIGIG\_FETCH\_RISE\_TIME\_AVERAGE)
- WIGIG Fetch Rise Time Maximum (rsspecan  
ATTR\_WIGIG\_FETCH\_RISE\_TIME\_MAXIMUM)
- WIGIG Fetch Rise Time Minimum (rsspecan  
ATTR\_WIGIG\_FETCH\_RISE\_TIME\_MINIMUM)
- WIGIG Fetch Gain Imbalance Average (rsspecan  
ATTR\_WIGIG\_FETCH\_GAIN\_IMBALANCE\_AVERAGE)
- WIGIG Fetch Gain Imbalance Maximum (rsspecan  
ATTR\_WIGIG\_FETCH\_GAIN\_IMBALANCE\_MAXIMUM)
- WIGIG Fetch Gain Imbalance Minimum (rsspecan  
ATTR\_WIGIG\_FETCH\_GAIN\_IMBALANCE\_MINIMUM)
- WIGIG Fetch IQ Offset Average (rsspecan  
ATTR\_WIGIG\_FETCH\_IQ\_OFFSET\_AVERAGE)
- WIGIG Fetch IQ Offset Maximum (rsspecan  
ATTR\_WIGIG\_FETCH\_IQ\_OFFSET\_MAXIMUM)
- WIGIG Fetch IQ Offset Minimum (rsspecan  
ATTR\_WIGIG\_FETCH\_IQ\_OFFSET\_MINIMUM)
- WIGIG Fetch Quadrature Error Average (rsspecan  
ATTR\_WIGIG\_FETCH\_QUADRATURE\_ERROR\_AVERAGE)
- WIGIG Fetch Quadrature Error Maximum (rsspecan  
ATTR\_WIGIG\_FETCH\_QUADRATURE\_ERROR\_MAXIMUM)
- WIGIG Fetch Quadrature Error Minimum (rsspecan  
ATTR\_WIGIG\_FETCH\_QUADRATURE\_ERROR\_MINIMUM)
- WIGIG Fetch Symbol Clock Error Average (rsspecan  
ATTR\_WIGIG\_FETCH\_SYMBOL\_CLOCK\_ERROR\_AVERAGE)
- WIGIG Fetch Symbol Clock Error Maximum (rsspecan  
ATTR\_WIGIG\_FETCH\_SYMBOL\_CLOCK\_ERROR\_MAXIMUM)
- WIGIG Fetch Symbol Clock Error Minimum (rsspecan  
ATTR\_WIGIG\_FETCH\_SYMBOL\_CLOCK\_ERROR\_MINIMUM)
- WIGIG Fetch Time Domain Power Average (rsspecan  
ATTR\_WIGIG\_FETCH\_TIME\_DOMAIN\_POWER\_AVERAGE)
- WIGIG Fetch Time Domain Power Maximum (rsspecan  
ATTR\_WIGIG\_FETCH\_TIME\_DOMAIN\_POWER\_MAXIMUM)
- WIGIG Fetch Time Domain Power Minimum (rsspecan  
ATTR\_WIGIG\_FETCH\_TIME\_DOMAIN\_POWER\_MINIMUM)

- WIGIG Fetch Time Skew Average (rsspecan ATTR\_WIGIG\_FETCH\_TIME\_SKEW\_AVERAGE)
  - WIGIG Fetch Time Skew Maximum (rsspecan ATTR\_WIGIG\_FETCH\_TIME\_SKEW\_MAXIMUM)
  - WIGIG Fetch Time Skew Minimum (rsspecan ATTR\_WIGIG\_FETCH\_TIME\_SKEW\_MINIMUM)
  - DOCSIS Stream Direction (rsspecan ATTR\_DOCSIS\_STREAM\_DIRECTION)
  - DOCSIS Upstream Symbols Per Frame (rsspecan ATTR\_DOCSIS\_UPSTREAM\_SYMBOLS\_PER\_FRAME)
  - DOCSIS Upstream Excluded Subcarrier Number Of Entries (rsspecan ATTR\_DOCSIS\_UPSTREAM\_EXCLUDED\_SUBCARRIER\_NUMBER\_OF\_ENTRIES)
  - DOCSIS Upstream Excluded Subcarrier Type (rsspecan ATTR\_DOCSIS\_UPSTREAM\_EXCLUDED\_SUBCARRIER\_TYPE)
  - DOCSIS Upstream Excluded Subcarrier Start (rsspecan ATTR\_DOCSIS\_UPSTREAM\_EXCLUDED\_SUBCARRIER\_START)
  - DOCSIS Upstream Excluded Subcarrier Stop (rsspecan ATTR\_DOCSIS\_UPSTREAM\_EXCLUDED\_SUBCARRIER\_STOP)
  - DOCSIS Upstream Excluded Subcarrier Range Increment (rsspecan ATTR\_DOCSIS\_UPSTREAM\_EXCLUDED\_SUBCARRIER\_RANGE\_INCREMENT)
  - DOCSIS Upstream Profile Configuration Number Of Minislots (rsspecan ATTR\_DOCSIS\_UPSTREAM\_PROFILE\_CONFIGURATION\_NUMBER\_OF\_MINISLOTS)
  - DOCSIS Upstream Profile Configuration Modulation (rsspecan ATTR\_DOCSIS\_UPSTREAM\_PROFILE\_CONFIGURATION\_MODULATION)
  - DOCSIS Upstream Profile Configuration Pilot Pattern (rsspecan ATTR\_DOCSIS\_UPSTREAM\_PROFILE\_CONFIGURATION\_PILOT\_PATTERN)
  - DOCSIS Evaluation Range MER Excluding Subcarriers Mode (rsspecan ATTR\_DOCSIS\_EVALUATION\_RANGE\_MER\_EXCLUDING\_SUBCARRIERS\_MODE)
  - DOCSIS Evaluation Range MER Excluding Subcarriers Count (rsspecan ATTR\_DOCSIS\_EVALUATION\_RANGE\_MER\_EXCLUDING\_SUBCARRIERS\_COUNT)
  - Operation Complete (OPC) Timeout (rsspecan ATTR\_OPC\_TIMEOUT)
  - Query OPC (rsspecan ATTR\_QUERY\_OPC)
  - Visa Timeout (rsspecan ATTR\_VISA\_TIMEOUT)
  - Process All Previous Commands (rsspecan ATTR\_PROCESS\_ALL\_PREVIOUS\_COMMANDS)
  - Visa Manufacturer (rsspecan ATTR\_VISA\_MANUFACTURER)
  - Clear Status (rsspecan ATTR\_CLEAR\_STATUS)
  - Option Checking (rsspecan ATTR\_OPTION\_CHECKING)
  - \* Modified attributes:
    - Marker Amplitude (rsspecan ATTR\_MARKER\_AMPLITUDE) - Added repeated capability
- Window - specify through selector ActiveWindow
- Marker Position (rsspecan ATTR\_MARKER\_POSITION) - Added repeated capability
- Window - specify through selector ActiveWindow
- Delta Marker Band Power Mode (rsspecan ATTR\_DELTA\_MARKER\_BAND\_POWER\_MODE) - Relative Power added.
- \* Modified Range Tables:
  - rsspecan rngSwePoints - rsspecan ATTR\_SWEEP\_POINTS, rsspecan ATTR\_SE\_LIST\_RANG\_POINTS
    - Range changed to <101;100001>
  - rsspecan rngBandPowerMode - rsspecan ATTR\_MARKER\_BAND\_POWER\_MODE, rsspecan ATTR\_DELTA\_MARKER\_BAND\_POWER\_MODE
    - New items: rsspecan VAL\_BPOWER\_REL\_POWER
  - rsspecan rngLayoutQueryWindowType - rsspecan ATTR\_LAYOUT\_WINDOW\_RANGE
    - New items: rsspecan VAL\_LAYOUT\_TYPE\_CFR, rsspecan VAL\_LAYOUT\_TYPE\_DBST, rsspecan VAL\_LAYOUT\_TYPE\_DDBS, rsspecan VAL\_LAYOUT\_TYPE\_HBST, rsspecan VAL\_LAYOUT\_TYPE\_HDBS, rsspecan VAL\_LAYOUT\_TYPE\_HEAD, rsspecan VAL\_LAYOUT\_TYPE\_PEVs, rsspecan VAL\_LAYOUT\_TYPE\_PTVs, rsspecan VAL\_LAYOUT\_TYPE\_PSP\_WIGIG
  - rsspecan rngVSAResultFormat - rsspecan ATTR\_VSA\_RESULT\_FORMAT

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New items: rspecan VAL\_VSA\_RESULT\_FORMAT\_BIN, rspecan  
VAL\_VSA\_RESULT\_FORMAT\_OCT, rspecan VAL\_VSA\_RESULT\_FORMAT\_DEC, rspecan  
VAL\_VSA\_RESULT\_FORMAT\_HEX  
- rspecan rngVSAModulQPSKFormat - rspecan  
ATTR\_VSA\_MODULATION\_QPSK\_FORMAT  
New items: rspecan VAL\_MOD\_QPSK\_SOFF  
- rspecan rngDOCSISNFFT - rspecan ATTR\_DOCSIS\_N\_FFT  
New items: rspecan VAL\_DOCSIS\_NFFT\_FFT2K  
- rspecan rngPulseReferenceIQType - rspecan ATTR\_PULSE\_REFERENCE\_IQ\_TYPE  
New items: rspecan VAL\_PULSE\_REFERENCE\_IQ\_TYPE\_PFM, rspecan  
VAL\_PULSE\_REFERENCE\_IQ\_TYPE\_BARK, rspecan  
VAL\_PULSE\_REFERENCE\_IQ\_TYPE\_EBAR  
- rspecan rngAmplifierParametersSweepResultType - rspecan  
ATTR\_AMPLIFIER\_PARAMETERS\_SWEEP\_RESULT\_TYPE  
New items: rspecan VAL\_RESULT\_PSWEEP\_ACBM

## 3.16 Version 3.5.0 / 10 – 2015

\* Support for FSWP 1.10

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\* New in Base system:

- Configure Preset Filter.vi
- Set Reference Level To Limit.vi
- Get Reference Level Range.vi

\* Updated in Base system:

- Configure RF Input State.vi
- Configure Trigger Source.vi
- Configure External Gate.vi
- Configure Preset Operating Mode.vi
- Data Set File Select Items.vi
- Data Set File Select Items From Channel.vi
- Set Status Register.vi
- Get Status Register.vi
- Add Window.vi - added Window Type values, 106 - 113 for k7 option
- Replace Window.vi - added Window Type values, 106 - 113 for k7 option
- Marker Search.vi - fixed parameter values order

\* New in Phase Noise:

- Configure Phase Spot Noise.vi
- Configure Phase Spot Noise Custom.vi
- Configure Phase Spot Noise Display Info.vi
- Configure Phase Level Shifting.vi
- Configure Phase Pulse Settings.vi
- Configure Phase Pulse Detection Once.vi
- Configure Phase Cross Correlation.vi
- Configure Phase Signal Searching.vi
- Configure Phase Display Y Axis.vi
- Configure Phase Display Y Axis Once.vi
- Configure Phase Trace.vi
- Configure Phase Trace Math.vi
- Configure Phase Trace Label.vi
- Add Phase Window.vi
- Replace Phase Window.vi
- Configure Phase Residual Calculations Trace.vi
- Configure Phase Integration Range.vi

- Phase Weighting Filter Create.vi
- Phase Weighting Filter Delete.vi
- DC Output Power State.vi
- DC Output Power Coupling.vi
- Configure DC Supply Port State.vi
- Configure DC Supply Port.vi
- Configure DC Tuning Port State.vi
- Configure DC Tuning Port.vi
- Configure DC AUX Port State.vi
- Configure DC AUX Port.vi
- Query DC Port Maximum.vi
- Query DC Output Voltage Results.vi
- Query DC Output Current Results.vi
- Query DC Output Power Results.vi
- Signal Source State.vi
- Signal Source Signal Characteristics.vi
- Signal Source Coupling.vi
- Trace Phase Cross Correlation.vi
- Get Half Decade Meas Characteristics.vi
- Read Phase Cross Correlation Gain Data.vi
- Fetch Phase Spurious List.vi
- Fetch Phase Spurious Jitter.vi
- Get Phase Jitter Result.vi
- Get Phase Integrated Measurement Result.vi
- Configure Phase Resolution Bandwidth.vi
- Configure Phase RF Input.vi

\* Updated in Phase Noise:

- Configure Phase Spot Noise Trace Selection.vi
- Get Phase Spot Noise Y Position.vi

\* Updated in 1xEV-DO:

- Query BDO Code Domain Analyzer General Results.vi
- Query MDO Code Domain Analyzer Result Summary.vi

\* New attributes:

- Preset Filter (rssipecan ATTR\_PRESET\_FILTER)
- Instrument Mode (rssipecan ATTR\_INSTRUMENT\_MODE)
- Reference Level Set To Min Max (rssipecan ATTR\_REFERENCE\_LEVEL\_SET\_TO\_MIN\_MAX)
- Reference Level Min (rssipecan ATTR\_REFERENCE\_LEVEL\_MIN)
- Reference Level Max (rssipecan ATTR\_REFERENCE\_LEVEL\_MAX)
- File Items to Save Recall Weighting (rssipecan ATTR\_FILE\_ITEMS\_SAVE\_RECAL\_WEIGHTING)
- File Items to Save Recall Channel Weighting (rssipecan ATTR\_FILE\_ITEMS\_SAVE\_RECAL\_CHANNEL\_WEIGHTING)
- Service Calibration Frequency Microwave (rssipecan ATTR\_SERVICE\_CAL\_FREQ\_MICROWAVE)
- Phase Arithmetic Level Offset (rssipecan ATTR\_PHASE\_ARITHMETIC\_LEVEL\_OFFSET)
- Signal Search Auto State (rssipecan ATTR\_SIGNAL\_SEARCH\_AUTO\_ENABLED)
- Signal Search Auto Limit Min (rssipecan ATTR\_SIGNAL\_SEARCH\_AUTO\_LIMIT\_MIN)
- Signal Search Auto Limit Max (rssipecan ATTR\_SIGNAL\_SEARCH\_AUTO\_LIMIT\_MAX)
- Signal Search Threshold (rssipecan ATTR\_SIGNAL\_SEARCH\_THRESHOLD)
- DC Power Output State (rssipecan ATTR\_OUTPUT\_DC\_POWER\_ENABLED)
- DC Power Coupling (rssipecan ATTR\_OUTPUT\_DC\_POWER\_COUPLING\_ENABLED)
- DC Power Supply Port State (rssipecan ATTR\_OUTPUT\_DC\_POWER\_SUPPLY\_PORT\_ENABLED)
- DC Power Supply Port Mode (rssipecan ATTR\_OUTUPT\_DC\_POWER\_SUPPLY\_PORT\_MODE)

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- DC Power Supply Port Level (rsspecan ATTR\_OUTPUT\_DC\_POWER\_SUPPLY\_PORT\_LEVEL)
- DC Power Supply Port Limit Maximum (rsspecan ATTR\_OUTPUT\_DC\_POWER\_SUPPLY\_PORT\_LIMIT\_MAX)
- DC Power Supply Port Limit Minimum (rsspecan ATTR\_OUTPUT\_DC\_POWER\_SUPPLY\_PORT\_LIMIT\_MIN)
- DC Power Supply Port Maximum (rsspecan ATTR\_OUTPUT\_DC\_POWER\_SUPPLY\_PORT\_MAXIMUM)
- DC Power Supply Port Current Maximum (rsspecan ATTR\_OUTPUT\_DC\_POWER\_SUPPLY\_PORT\_CURRENT\_MAXIMUM)
- DC Power Tuning Port State (rsspecan ATTR\_OUTPUT\_DC\_POWER\_TUNING\_PORT\_ENABLED)
- DC Power Tuning Port Level (rsspecan ATTR\_OUTPUT\_DC\_POWER\_TUNING\_PORT\_LEVEL)
- DC Power Tuning Port Limit Maximum (rsspecan ATTR\_OUTPUT\_DC\_POWER\_TUNING\_PORT\_LIMIT\_MAX)
- DC Power Tuning Port Limit Minimum (rsspecan ATTR\_OUTPUT\_DC\_POWER\_TUNING\_PORT\_LIMIT\_MIN)
- DC Power Tuning Port Current Maximum (rsspecan ATTR\_OUTPUT\_DC\_POWER\_TUNING\_PORT\_CURRENT\_MAXIMUM)
- DC Power AUX Port State (rsspecan ATTR\_OUTPUT\_DC\_POWER\_AUX\_PORT\_ENABLED)
- DC Power AUX Port Level (rsspecan ATTR\_OUTPUT\_DC\_POWER\_AUX\_PORT\_LEVEL)
- DC Power AUX Port Limit Maximum (rsspecan ATTR\_OUTPUT\_DC\_POWER\_AUX\_PORT\_LIMIT\_MAX)
- DC Power AUX Port Limit Minimum (rsspecan ATTR\_OUTPUT\_DC\_POWER\_AUX\_PORT\_LIMIT\_MIN)
- DC Power AUX Port Current Maximum (rsspecan ATTR\_OUTPUT\_DC\_POWER\_AUX\_CURRENT\_MAXIMUM)
- Signal Source State (rsspecan ATTR\_OUTPUT\_SIGNAL\_ENABLED)
- Signal Source Frequency (rsspecan ATTR\_OUTPUT\_SIGNAL\_FREQUENCY)
- Signal Source Level (rsspecan ATTR\_OUTPUT\_SIGNAL\_LEVEL)
- Signal Source Coupling (rsspecan ATTR\_OUTPUT\_SIGNAL\_SOURCE\_COUPLING\_ENABLED)
- Phase Noise Measurement (rsspecan ATTR\_PHASE\_MEASUREMENT)
- Phase Pulse Detection Mode (rsspecan ATTR\_PHASE\_PULSE\_DETECTION\_MODE)
- Phase Pulse Detection Mode Once (rsspecan ATTR\_PHASE\_PULSE\_DETECTION\_MODE\_ONCE)
- Phase Pulse Repetition Interval (rsspecan ATTR\_PHASE\_PULSE\_REPETITION\_INTERVAL)
- Phase Cross Correlation Optimize State (rsspecan ATTR\_PHASE\_CROSS\_CORREL\_OPTIMIZE\_ENABLED)
- Phase Cross Correlation Factor (rsspecan ATTR\_PHASE\_CROSS\_CORREL\_FACTOR)
- Phase Start Frequency Offset (rsspecan ATTR\_PHASE\_RANGE\_START\_FREQUENCY\_OFFSET)
- Phase Stop Frequency Offset (rsspecan ATTR\_PHASE\_RANGE\_STOP\_FREQUENCY\_OFFSET)
- Phase Cross Correlation Operations (rsspecan ATTR\_PHASE\_RANGE\_CROSS\_CORRELATION\_OPERATIONS)
- Phase Integration Trace (rsspecan ATTR\_PHASE\_INTEGRATION\_TRACE)
- Phase Integration Range State (rsspecan ATTR\_PHASE\_INTEGRATION\_RANGE\_ENABLED)
- Phase Integration Range Start (rsspecan ATTR\_PHASE\_INTEGRATION\_RANGE\_START)
- Phase Integration Range Stop (rsspecan ATTR\_PHASE\_INTEGRATION\_RANGE\_STOP)
- Phase Integration Weighting Filter (rsspecan ATTR\_PHASE\_INTEGRATION\_WEIGHTING\_FILTER)
- Phase Integration Weighting Filter None (rsspecan ATTR\_PHASE\_INTEGRATION\_WEIGHTING\_FILTER\_NONE)

- Phase Integration Weighting Filter Select (rsspecan ATTR\_PHASE\_INTEGRATION\_WEIGHTING\_FILTER\_SELECT)
- Phase Integration Weighting Filter Name (rsspecan ATTR\_PHASE\_INTEGRATION\_WEIGHTING\_FILTER\_NAME)
- Phase Integration Weighting Filter Comment (rsspecan ATTR\_PHASE\_INTEGRATION\_WEIGHTING\_FILTER\_COMMENT)
- Phase Integration Weighting Filter Delete (rsspecan ATTR\_PHASE\_INTEGRATION\_WEIGHTING\_FILTER\_DELETE)
- Phase Y Axis Auto Scaling Enabled (rsspecan ATTR\_PHASE\_DISPLAY\_TRACE\_Y\_AUTO)
- Phase Y Axis Auto Scaling Once (rsspecan ATTR\_PHASE\_DISPLAY\_TRACE\_Y\_AUTO\_ONCE)
- Phase Y Axis Top (rsspecan ATTR\_PHASE\_DISPLAY\_TRACE\_Y\_RLEV)
- Phase Y Axis Range (rsspecan ATTR\_PHASE\_DISPLAY\_TRACE\_Y)
- Phase Y Axis Bottom (rsspecan ATTR\_PHASE\_DISPLAY\_TRACE\_Y\_BOTTOM)
- Phase Trace Cross Correlation Gain Indicator State (rsspecan ATTR\_PHASE\_DISP\_TRACE\_XGAIN\_ENABLED)
- Phase Trace Spur Threshold (rsspecan ATTR\_PHASE\_TRACE\_SPUR\_THRESHOLD)
- Phase Trace Offset State (rsspecan ATTR\_PHASE\_DISPLAY\_TRACE\_OFFSET\_ENABLED)
- Phase Trace Offset (rsspecan ATTR\_PHASE\_DISPLAY\_TRACE\_OFFSET)
- Phase Trace Label State (rsspecan ATTR\_PHASE\_TRACE\_LABEL\_ENABLED)
- Phase Trace Label (rsspecan ATTR\_PHASE\_TRACE\_LABEL)
- Phase Trace Displayed Result (rsspecan ATTR\_PHASE\_TRACE\_DISPLAYED\_RESULT)
- Phase Trace Smoothing Aperture (rsspecan ATTR\_PHASE\_DISPLAY\_TRACE\_SMO\_APERTURE)
- Phase Trace Smoothing Enabled (rsspecan ATTR\_PHASE\_DISPLAY\_TRACE\_SMO\_ENABLED)
- Phase Trace Spur Suppression Enabled (rsspecan ATTR\_PHASE\_DISPLAY\_TRACE\_SPUR\_SUPP\_ENABLED)
- Phase Trace Spur Threshold (rsspecan ATTR\_PHASE\_DISPLAY\_TRACE\_SPUR\_THRESHOLD)
- Phase Spot Noise Display Info (rsspecan ATTR\_PHASE\_SPOT\_NOISE\_DISPLAY\_INFO\_ENABLED)
- Phase Spot Noise Select Trace FSWP (rsspecan ATTR\_PHASE\_SPOT\_NOISE\_SELECT\_TRACE\_FSWP)
- Phase Custom Spot Noise (rsspecan ATTR\_PHASE\_CUSTOM\_SNO\_ENABLED)
- Phase Discrete Jitter Result (rsspecan ATTR\_PHASE\_DISCRETE\_JITTER\_RESULT)
- Phase Random Jitter Result (rsspecan ATTR\_PHASE\_RANDOM\_JITTER\_RESULT)
- Phase Integrated Phase Noise (rsspecan ATTR\_PHASE\_RANGE\_RESIDUAL\_IPN)
- Phase Residual FM (rsspecan ATTR\_PHASE\_RANGE\_RESIDUAL\_FM)
- Phase Residual RMS Jitter (rsspecan ATTR\_PHASE\_RANGE\_RESIDUAL\_RMS\_JITTER)
- Phase Residual PM (rsspecan ATTR\_PHASE\_RANGE\_RESIDUAL\_PM)
- VSA Burst Length (rsspecan ATTR\_VSA\_BURST\_LENGTH)
- DOCSIS Channel Estimation (rsspecan ATTR\_DOCSIS\_CHANNEL\_ESTIMATION)
- DOCSIS Bitstream Decoded (rsspecan ATTR\_DOCSIS\_BITSTREAM\_DECODED)
- DOCSIS Evaluation Range Specified Frame State (rsspecan ATTR\_DOCSIS\_EVALUATION\_SPECIFIED\_FRAME\_STATE)
- DOCSIS Evaluation Range Selected Frame (rsspecan ATTR\_DOCSIS\_EVALUATION\_SELECTED\_FRAME)
- DOCSIS Evaluation Range Frame Statistic Count State (rsspecan ATTR\_DOCSIS\_EVALUATION\_FRAME\_STATISTIC\_COUNT\_STATE)
- DOCSIS Evaluation Range Number Of Frame (rsspecan ATTR\_DOCSIS\_EVALUATION\_NUMBER\_OF\_FRAME)
- DOCSIS Evaluation Range Constellation Modulation (rsspecan ATTR\_DOCSIS\_EVALUATION\_CONSTELLATION\_MODULATION)
- DOCSIS Evaluation Range Constellation Object (rsspecan ATTR\_DOCSIS\_EVALUATION\_CONSTELLATION\_OBJECT)
- DOCSIS Bitstream Format (rsspecan ATTR\_DOCSIS\_BITSTREAM\_FORMAT)
- DOCSIS Bitstream Layout (rsspecan ATTR\_DOCSIS\_BITSTREAM\_LAYOUT)



- DOCSIS Fetch Zero Bit Average (rssipecan ATTR\_DOCSIS\_FETCH\_ZBIT\_AVERAGE)
- DOCSIS Fetch Zero Bit Maximum (rssipecan ATTR\_DOCSIS\_FETCH\_ZBIT\_MAXIMUM)
- DOCSIS Fetch Zero Bit Minimum (rssipecan ATTR\_DOCSIS\_FETCH\_ZBIT\_MINIMUM)
- DOCSIS Fetch Frame Count (rssipecan ATTR\_DOCSIS\_FETCH\_FRAME\_COUNT)
- DOCSIS Fetch Frame Count All (rssipecan ATTR\_DOCSIS\_FETCH\_FRAME\_COUNT\_ALL)
- Logging (rssipecan ATTR\_LOGGING)

\* Deleted attributes:

\* Modified attributes:

- Preset Operating Mode (rssipecan ATTR\_PRESET\_OPERATING\_MODE) - PNO added.
- Trigger Source (rssipecan ATTR\_TRIGGER\_SOURCE) - EXT4 added.
- External Gate Signal Source (rssipecan ATTR\_EXTERNAL\_GATE\_SIGNAL\_SOURCE) - EXT4 added
- Hcopy Print (rssipecan ATTR\_HCOPY\_PRINT) - Command modified, \*WAI before command.
- Self Test (rssipecan ATTR\_SERVICE\_STEST) - \*OPC added
- Phase Trace Label State (rssipecan ATTR\_PHASE\_TRACE\_LABEL\_ENABLED) - Added Window repeated capability.
- Phase Trace Label (rssipecan ATTR\_PHASE\_TRACE\_LABEL) - Added Window repeated capability.
- Phase Trace Displayed Result (rssipecan ATTR\_PHASE\_TRACE\_DISPLAYED\_RESULT) - Added Window repeated capability.

\* Deleted Repeated Capabilities:

\* Modified Repeated Capabilities:

- Snoise - Identifiers ("SN1,SN2,SN3,SN4,SN5,SN6", "SN1,SN2,SN3,SN4,SN5")
- Snoise - Command Values ("1,2,3,4,5,6", "1,2,3,4,5")

\* Modified Range Tables:

- rssipecan rngExtGateSource - rssipecan ATTR\_EXTERNAL\_GATE\_SIGNAL\_SOURCE  
New items: rssipecan VAL\_EGAT\_SOUR\_EXT4
- rssipecan rngTriggerSource - rssipecan ATTR\_TRIGGER\_SOURCE  
New items: rssipecan VAL\_TRG\_EXT4
- rssipecan rngPresetOperatingMode - rssipecan ATTR\_PRESET\_OPERATING\_MODE  
New items: rssipecan VAL\_PRESET\_PNO
- rssipecan rngLayoutQueryWindowType - rssipecan ATTR\_LAYOUT\_WINDOW\_RANGE  
New items: rssipecan VAL\_LAYOUT\_TYPE\_ADEM\_RF\_TIME\_DOMAIN, rssipecan VAL\_LAYOUT\_TYPE\_ADEM\_AM\_TIME\_DOMAIN, rssipecan VAL\_LAYOUT\_TYPE\_ADEM\_AM\_SPECTRUM, rssipecan VAL\_LAYOUT\_TYPE\_ADEM\_FM\_TIME\_DOMAIN, rssipecan VAL\_LAYOUT\_TYPE\_ADEM\_FM\_SPECTRUM, rssipecan VAL\_LAYOUT\_TYPE\_ADEM\_PM\_TIME\_DOMAIN, rssipecan VAL\_LAYOUT\_TYPE\_ADEM\_PM\_SPECTRUM, rssipecan VAL\_LAYOUT\_TYPE\_ADEM\_RF\_SPECTRUM
- rssipecan rngTraceResultType -  
New items: rssipecan VAL\_TRACE\_RESULT\_XGAIN
- rssipecan rngStatusRegister -  
New items: rssipecan VAL\_STAT\_REG\_POW\_DCPN, rssipecan VAL\_STAT\_REG\_PNOISE
- rssipecan rngRFInputEnabled - rssipecan ATTR\_RF\_INPUT  
New items: rssipecan VAL\_RF\_INPUT\_ABB
- rssipecan rngIQFFTWindowType.rssipecan VAL\_IQ\_WIN\_TYPE\_BLACK - rssipecan ATTR\_IQ\_FFT\_WINDOW\_TYPE  
Command changed ("BLAC", "BLACK")
- rssipecan rngIQFFTWindowType.rssipecan VAL\_IQ\_WIN\_TYPE\_BLACK - rssipecan ATTR\_IQ\_FFT\_WINDOW\_TYPE  
Help changed ("Blackman-Harris", "Balckman-Harris")

- rssipecan rngDOCSISLayoutType -  
New items: rssipecan VAL\_LAYOUT\_TYPE\_BITS, rssipecan VAL\_LAYOUT\_TYPE\_SCS

## 3.17 Version 3.4.0 / 06 – 2015

- \* Support for FSW 2.20
- \* New subsystems:
  - DOCSIS 3.1 OFDM Downstream Measurements (K192)
- \* Added Sub Block repeated capability to Spectrum Emission Mask Measurement

- \* New in Base system

- Clear Remote Errors.vi
- Display Remote Errors.vi
- Query Remote Errors.vi
- Configure Direct Path.vi
- Configure B2000 State.vi
- Configure Oscilloscope Display Update.vi
- Configure Oscilloscope TCPIP Address.vi
- Query Oscilloscope LAN Connection State.vi
- Query Oscilloscope Info.vi
- Oscilloscope Alignment.vi
- Query Oscilloscope Alignment Date.vi
- Configure IF Power Trigger Coupling.vi
- Configure SE Detail.vi
- Configure Marker Info.vi
- Configure SEM Sub Block Count.vi
- Configure SEM Sub Block Center Frequency.vi
- Configure SEM Range Minimum Sweep Points.vi
- Configure SEM Range Multi Limit Calc.vi
- Configure SEM MSRA Additional Settings.vi

- \* Updated in Base system

- Configure RF Input State - added 'I/Q Data File' as Source value
- Fetch X Trace.vi - added Window parameter
- Fetch Y Trace.vi - added Window parameter
- Read Y Trace.vi - added Window parameter
- Read Y Trace Previous.vi - added Window parameter
- Configure Trace.vi - added Window parameter
- Export Trace To File.vi - added Window parameter
- Get Transducer Factor Catalog.vi - help updated
- Configure Transducer Factor.vi - parameter State renamed to Display State
- File Manager Operations.vi - removed 'Delete Immediate' and 'Format Disk' from Operation
- Configure Signal Statistic Gate.vi - removed repeated capability at 'Period' parameter
- Configure Reference Oscillator.vi - 'External Frequency' is only for FSV/FSVR instruments
- Configure Marker Peak List State.vi - alternative attribute with the same SCPI command

used

- Configure Calibration Frequency MW.vi - instrument model checking updated
- Display Set Active Window.vi - instrument model checking updated
- Hardcopy Print.vi - removed 'Trace' from Item parameter

- \* New in Phase Noise (K40)

- Configure Phase Spot Noise Trace Selection.vi

- \* New in LTE (K10x)

- Configure LTE Downlink Number Of Devices.vi

- LTE Downlink Add Window.vi
- LTE Downlink Replace Window.vi
- Configure LTE Uplink Carrier Aggregation.vi
- LTE Uplink Add Window.vi
- LTE Uplink Replace Window.vi
- Query LTE Uplink Measurement Time Alignment Error.vi

\* Updated in LTE (K10x)

- Configure LTE Downlink Measurement.vi - added 'Multi-Carrier SEM' as Measurement value
- Query LTE Downlink Measurement Result Summary.vi - added 'EVM PDSCH 256QAM' as Frame Result value
- Configure LTE Uplink SignalCharacteristics.vi - added Component Carrier repeated capability to Frequency and Cyclic Prefix
- Configure LTE Uplink TDD Frames.vi - added Component Carrier repeated capability
- Configure LTE Uplink Physical Layer Cell Identity.vi - added Component Carrier repeated capability
- Configure LTE Uplink MIMO.vi - added Component Carrier repeated capability
- Configure LTE Uplink ConfigurableS ubframes.vi - added Component Carrier parameter
- Configure LTE Uplink Subframe Table.vi - added Component Carrier parameter
- Configure LTE Uplink Reference Signal.vi - added Component Carrier parameter
- Configure LTE Uplink PUSCH Structure.vi - added Component Carrier parameter
- Configure LTE Uplink Measurement.vi - added 'Time Alignment Error', 'Transmit On/Off Power', 'Multicarrier ACLR', 'Multi-Carrier SEM'
- Query LTE Uplink Measurement EVM All.vi - added Component Carrier repeated capability
- Query LTE Uplink Measurement EVM Physical Channel.vi - added Component Carrier repeated capability
- Query LTE Uplink Measurement EVM Physical Signal.vi - added Component Carrier repeated capability
- Query LTE Uplink Measurement Frequency Error.vi - added Component Carrier repeated capability
- Query LTE Uplink Measurement Sampling Error.vi - added Component Carrier repeated capability
- Query LTE Uplink Measurement IQ Offset.vi - added Component Carrier repeated capability
- Query LTE Uplink Measurement IQ Gain Imbalance.vi - added Component Carrier repeated capability
- Query LTE Uplink Measurement IQ Quadrature Error.vi - added Component Carrier repeated capability
- Query LTE Uplink Measurement Frame Power.vi - added Component Carrier repeated capability
- Query LTE Uplink Measurement Crest Factor.vi - added Component Carrier repeated capability

\* New for WCDMA (K72)

- WCDMA TAE Load Default Carrier Table.vi
- WCDMA TAE Carrier Table Operations.vi
- Get WCDMA TAE Carrier Table Catalog.vi
- Get WCDMA TAE Number Of Carriers.vi
- WCDMA TAE Carrier Operations.vi
- Configure WCDMA TAE Carrier Table.vi

\* New for GSM (K10)

- Add GSM K10 Window.vi
- Replace GSM K10 Window.vi
- Fetch GSM MCWN Narrowband Results.vi
- Fetch GSM MCWN Wideband Noise Results.vi

\* Updated in GSM (K10)

- Configure GSM K10 Maximum Output Power Per Carrier.vi - parameter 'Value' data type changed from Int32 to Double

\* New for Transient Analysis

- Configure Transient Analysis Hop Result Table Phase.vi
- Configure Transient Analysis Chirp Result Table Phase.vi
- Configure Transient Analysis Parameter Distribution Hop Phase.vi
- Configure Transient Analysis Parameter Distribution Chirp Phase.vi
- Configure Transient Analysis Parameter Trend Hop Phase.vi
- Configure Transient Analysis Parameter Trend Hop Phase Axis.vi
- Configure Transient Analysis Parameter Trend Chirp Phase.vi
- Configure Transient Analysis Parameter Trend Chirp Phase Axis.vi
- Query Transient Analysis Hop Result Phase.vi
- Query Transient Analysis Chirp Result Phase.vi

\* Updated for Transient Analysis

- Transient Analysis Add Window.vi
- Transient Analysis Replace Window.vi
- Query Transient Analysis Hop Result Additional State.vi
- Query Transient Analysis Hop Result Frequency.vi
- Query Transient Analysis Hop Result Power.vi
- Query Transient Analysis Hop Result State.vi
- Query Transient Analysis Hop Result Table.vi
- Query Transient Analysis Hop Result Timing.vi
- Query Transient Analysis Chirp Result Additional State.vi
- Query Transient Analysis Chirp Result Frequency.vi
- Query Transient Analysis Chirp Result Power.vi
- Query Transient Analysis Chirp Result State.vi
- Query Transient Analysis Chirp Result Table.vi
- Query Transient Analysis Chirp Result Timing.vi

\* New for VSA (K70)

- Add VSA Window.vi
- Replace VSA Window.vi

\* Updated for VSA (K70)

- Configure VSA Trace Eval.vi

\* New for WLAN (K91)

- Configure WLAN MIMO Reference Frequency Coupling.vi
- Select WLAN IQ Measurement.vi
- Fetch WLAN Stream Burst Error.vi
- Fetch WLAN Stream Burst Power.vi

\* Updated for WLAN (K91)

- Configure WLAN Result Summary Display.vi

\* New for Pulse measurement (K6S)

- Configure Pulse User Defined Reference IQ File.vi
- Configure Pulse User Defined Reference IQ File Range.vi
- Configure Pulse Measurement FM Video Bandwidth.vi
- Configure Pulse Marker Link Trend M1 To Selected Pulse.vi
- Configure Pulse Measurement Trace Normalization.vi
- Pulse Measurement Add Window.vi
- Pulse Measurement Replace Window.vi
- Configure Pulse Reference For Pulse Pulse Measurement.vi
- Configure Pulse Time Sidelobe Range.vi
- Configure Pulse Time Sidelobe Keep Out Time.vi
- Configure Pulse Phase Normalization.vi

- Configure Pulse Result Parameter Trend Time Sidelobe.vi
- Configure Pulse Result Parameter Distribution Time Sidelobe.vi
- Configure Pulse Result Parameter Spectrum Time Sidelobe.vi
- Configure Pulse Result Table Time Sidelobe.vi
- Configure Pulse Result Table Time Sidelobe Limit Check All.vi
- Configure Pulse Result Table Time Sidelobe Limit.vi
- Query Pulse Result Time Sidelobe.vi
- Query Pulse Result Limit Time Sidelobe.vi

\* Updated for Pulse measurement (K6S)

- Configure Pulse Signal Model.vi
- Configure Pulse Measurement Point.vi
- Configure Pulse Result Reference Point.vi
- Configure Pulse Top Level.vi
- Query Pulse Result Frequency.vi - 'Result Type' parameter updated
- Query Pulse Result Phase.vi - 'Result Type' parameter updated
- Query Pulse Result Timing.vi - 'Result Type' parameter updated
- Query Pulse Result Power.vi - 'Result Type' parameter updated
- Query Pulse IDs.vi - parameter 'Pulse IDs' data type changed from array of Int32 to array

of Double

- Query Pulse Numbers.vi - parameter 'Pulse Numbers' data type changed from array of Int32 to array of Double

\* New for Amplifier - K18:

- Configure Amplifier Reference Signal Waveform File Transfer.vi
- Configure Amplifier Reference Signal Waveform File Segment.vi
- Configure Amplifier Generator Level Offset.vi
- Configure Amplifier Generator Segment.vi
- Configure Amplifier Synchronization State.vi
- Configure Amplifier Synchronization Confidence Level.vi
- Configure Amplifier Estimation Range.vi
- Query Amplifier Synchronization State.vi
- Configure Amplifier Evaluation Range.vi
- Configure Amplifier System Model Sequence.vi
- Configure DPD Power Linearity Tradeoff.vi
- Configure Amplifier Power Evaluate Only DUT Power.vi
- Configure Amplifier Power Compression Point Calculation.vi
- Configure Amplifier Parameter Sweep State.vi
- Configure Amplifier Parameter Sweep X Axis.vi
- Configure Amplifier Parameter Sweep Y Axis State.vi
- Configure Amplifier Parameter Sweep Y Axis.vi
- Configure Amplifier Parameter Sweep Adjust Level.vi
- Configure Amplifier Result Parameter Sweep Table.vi
- Configure Amplifier Result Parameter Sweep Display.vi
- Get Amplifier Parameter Sweep Table Results.vi
- Get Amplifier Parameter Sweep Table Results Position.vi
- Get Amplifier General Numeric Results.vi

\* Updated for Amplifier - K18:

- Get Amplifier Generator Setup Led State.vi
- Configure Amplifier System Model Settings.vi
- Configure Amplifier DPD Shaping.vi
- Amplifier Add Window.vi
- Amplifier Replace Window.vi
- Configure Amplifier Result Summary Display.vi
- Get Amplifier Power Results.vi
- Configure Amplifier Generator Settings.vi ... behavior changed according CVI, Center Frequency is set only if Attach To FSW Frequency is set Off

\* Removed:

- Configure SEM Transition.vi
- Get Selected Subwindow.vi
- Query Frontend Temperature.vi
- Query Active Measurement Window.vi

## 3.18 Version 3.3.0 / 11 – 2014

- \* Support for FSW 2.1
- \* New Subsystems
  - Amplifier Measurements (K18)
  - Transient Analysis (K60) - Parameter Distribution, Parameter Trend
- \* New:
  - Query Sweep Duration.vi
  - Configure Wideband Calibration Frequency.vi
  - Configure MSR Symmetrical Adj Setup.vi
  - Configure MSR Upper Channel Name.vi
  - Configure MSR Activate Gaps.vi
  - Query MSR Measurement Power Result.vi
  - Configure MSR Gap Size.vi
  - Configure MSR Upper Adj Channel.vi
  - Configure MSR Upper Alternate Channel.vi
  - Configure Analog Baseband High Accuracy Timing.vi
  - Configure Analog Baseband Probe Common Mode Offset.vi
  - Configure Analog Baseband DC Offset.vi
  - Configure Analog Demod Relative Unit.vi
  - Configure Analog Demod Detector Mode.vi
  - Configure Analog Demod Detector State.vi
  - Configure Analog Demod Detector Reference.vi
  - Configure Analog Demod Detector Meas To Ref.vi
  - Get Analog Demod Marker Modulation Relative Value.vi
  - Configure Noise ENR Noise Source.vi
  - Configure Noise ENR Resistor Temperatures.vi
  - Configure Noise ENR Calibration Noise Source.vi
  - Configure Noise ENR Calibration Resistor Temperatures.vi
  - Configure Noise ENR Temperature Table.vi
  - Delete Noise ENR Temperature Table.vi
  - Query Noise ENR Temperature Table List.vi
  - Query Noise Delta Marker Position.vi
  - Configure Noise Temperature Uncertainty.vi
  - Configure Noise Temperature Uncertainty Calibration.vi
  - Noise Add Window.vi
  - Noise Replace Window.vi
  - Configure Noise Power Measurement.vi
  - Configure Phase Decimation.vi
  - Configure Phase Online IQ.vi
  - Get Transient Analysis Number Of States.vi
  - Transient Analysis Signal State Table Operation.vi
  - Get Transient Analysis Generated Hop States Parameters.vi
  - Add Transient Analysis Hop States.vi
  - Replace Transient Analysis Hop States.vi
  - Apply Transient Analysis Hop States Global Values.vi
  - Transient Analysis Add Window.vi
  - Transient Analysis Replace Window.vi
  - Configure Transient Analysis Hop Result Table Frequency.vi
  - Configure Transient Analysis Hop Result Table Frequency.vi

- Configure Transient Analysis Hop Result Table State.vi
- Configure Transient Analysis Hop Result Table Timing.vi
- Configure Transient Analysis Chirp Result Table Frequency.vi
- Configure Transient Analysis Chirp Result Table Power.vi
- Configure Transient Analysis Chirp Result Table State.vi
- Configure Transient Analysis Chirp Result Table Timing.vi
- Query Transient Analysis Hop Result Additional State.vi
- rsspecan ATTR\_LTE\_DOWNLINK\_HOME\_AREA\_BASESTATION\_POWER\_AUTO
- \* Updated:
- ConfigureCalibrationSignal
- QueryNoiseMarkerAmplitude
- ConfigureTransientAnalysisHopResultTable
- ConfigureTransientAnalysisChirpResultTable
- QueryTransientAnalysisHopResultFrequency
- QueryTransientAnalysisHopResultPower
- QueryTransientAnalysisHopResultState
- QueryTransientAnalysisChirpResultPower
- ConfigureLTEDownlinkMIMO
- ConfigureLTEDownlinkFrequencySweepMeasurements
- ConfigureVSAModulationSettings

### 3.19 Version 3.2.0 / 08 – 2014

- \* Support for FSV 2.30
- \* Updated:
- Conf Wlan Trigger.vi
- rsspecan ATTR\_WLAN\_TRIG\_MODE
- Get TDS Result.vi
- Configure LTE Uplink MIMO.vi ... bug in help fixed
- rsspecan ATTR\_TRANSIENT\_EVALUATION\_BASIS ... removed Signal, added Chirp and

Hop

- Query LTE Downlink ACP Channel Limit Check Results.vi ... removed All

### 3.20 Version 3.1.0 / 07 – 2014

- \* Support for FSW 2.0
- \* New Subsystems
- Transient Analysis (K60)
- \* New:
- Query IF Output Sideband.vi
- Configure Pulse Result Range Spectrum.vi
- Configure Pulse Frequency Unit.vi
- Configure Pulse Segment Data Capturing Enabled.vi
- Configure Pulse Segment Data Capturing.vi
- Query Pulse Segmented Data Capturing Boundary.vi
- Query Pulse Segmented Data Capturing Timestamps.vi
- Query Pulse Segmented Data Capturing Trigger.vi
- Configure LTE Downlink EPDCCH.vi
- Configure LTE Downlink MBSFN.vi
- Configure LTE Downlink MBSFN Subframe.vi
- Configure LTE Downlink Number Of Subframes To Analyze.vi
- Configure LTE Uplink Carrier Agregation Bandwidth.vi
- Configure LTE Uplink Carrier Configuration.vi
- Get VSA X Axis Last Value.vi
- Get VSA Result Start.vi
- Configure 3GPP QPSK Modulation Only.vi

- Configure LTE Uplink PUCCH Resource Blocks Auto.vi

- \* Updated:

- ConfigureMSRPowerMeasurement
- ConfigureMSRGapLimitChecking
- AddWindow
- ReplaceWindow
- ConfigureLTEDownlinkPDSCHUsedAllocation
- ConfigureLTEDownlinkMeasurement
- ConfigureLTEUplinkSignalCharacteristics
- ConfigureWlanResultSummaryDisplay
- FetchWlanIQImp
- ConfigureIFOutput

### **3.21 Version 3.0.0 / 06 – 2014**

- \* Removed support of older instruments. From now on, only FSW, FSV, FSVR and FPS are supported

- \* Redesigned LTE - added carrier aggregation

- \* Removed parameter Window and Trace where applicable

- \* Added support for FSW 1.93 and FSV 2.20

Note: please note that some major changes in API might apply. For backward compatibility older APIs are temporarily accessible, but will not be updated. Old APIs shall be removed in near future.



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