

# R&S® CMW Bluetooth

## Release Notes

### Software Version V3.2.70

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The firmware of the instrument makes use of several valuable open source software packages. For information, see the "Open Source Acknowledgment" on the user documentation CD-ROM (included in delivery).

The following abbreviations are used throughout this document: R&S® **CMW Bluetooth** is abbreviated as R&S **CMW Bluetooth**.

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# 1 Information on the Current Version and History

## 1.1 KS600/610/611 Bluetooth Signaling

### 1.1.1 Version V3.2.70 (August 2014)

#### Firmware package contents

Version	Contents
V3.2.70	CMW KS610 Bluetooth signaling. CMW KS611 Bluetooth Low Energy (LE) signaling.

#### New Functionality

Version	Functions
V3.2.70	CMW KS611 Bluetooth Low Energy (LE) Signalling
V3.2.70	Auto ranging

#### Modified Functionality

Version	Functions
V3.2.70	Rx Quality measurement now supports LE bursts.

#### Improvements

Version	Improvements
V3.2.70	

#### Known Issues

Version	Known Issues
V3.2.70	If the serial communication with the LE EUT is disrupted, the CMW signalling firmware may become unresponsive under certain conditions depending on the used USB serial adapter. In such a case the CMW application has to be restarted (press the 'SYS' button, double click the 'CMW' icon and select 'Shutdown')

### 1.1.2 Version V3.2.60 (July 2014)

#### Firmware package contents

Version	Contents
V3.2.60	CMW KS610 Bluetooth signaling. - Note: requires base V3.2.50 or above.

#### New Functionality

Version	Functions
V3.2.60	Enhanced Power Control
V3.2.60	Receiver Quality measurement can now be operated continuously as well as single shot.

#### Modified Functionality

Version	Functions
V3.2.60	Power control remote command for now includes 'MAX' for Enhanced Power Control CONFigure:BLUetooth:SIGN<i></i>:CONNection:PCONtrol:STEP:ACTion

#### Improvements

Version	Improvements
V3.2.60	-

#### Known Issues

Version	Known Issues
V3.2.60	-

### 1.1.3 Version V3.2.50 (April 2014)

#### Firmware package contents

Version	Contents
V3.2.50	CMW KS610 Bluetooth signaling.

#### New Functionality

Version	Functions
V3.2.50	Added a dialog box which indicates that an EUT is not enabled for test mode.

#### Modified Functionality

Version	Functions
V3.2.50	n/a

#### Improvements

Version	Improvements
V3.2.50	Fixed an issue with connecting in testmode to the default EUT.
V3.2.50	Fixed an issue with connecting to an EUT after multiple EUTs have been inquired.
V3.2.50	Fixed an issue with save/recall of receiver quality parameters
V3.2.50	Fixed an issue with power step remote control command not reporting maximum.
V3.2.50	Fixed an issue with EUT information remote control command not reporting the LMP subversion.

#### Known Issues

Version	Known Issues
V3.2.50	You may see 'synch error' if the CMW BD address is changed and a reset performed.
V3.2.50	You must wait for the "Bluetooth Signaling" button to indicate "RUN" before the KM610 "Multi Evaluation" button can be used to activate the measurements (only noticeable the very first time KM610 is used with KS610).

### 1.1.4 Version V3.2.30 (December 2013)

#### Firmware package contents

Version	Contents
V3.2.30	CMW KS610 Bluetooth signaling.

#### New Functionality

Version	Functions
V3.2.30	Software option KS610: Bluetooth Basic Rate and Enhanced Data Rate signaling and test mode support. Includes receiver quality measurement.

#### Modified Functionality

Version	Functions
V3.2.30	None.

#### Improvements

Version	Improvements
V3.2.30	None.

#### Known Issues

Version	Known Issues
V3.2.30	None.

### 1.1.5 Version V3.2.10 (May 2013)

#### Firmware package contents

Version	Contents
V3.2.10	CMW KS600 Bluetooth signaling connection setup.

#### New Functionality

Version	Functions
V3.2.10	None.

#### Modified Functionality

Version	Functions
V3.2.10	None.

#### Improvements

Version	Improvements
V3.2.10	None.

#### Known Issues

Version	Known Issues
V3.2.10	None.

### 1.1.6 Version V3.0.13 (April 2013)

#### Firmware package contents

Version	Contents
V3.0.13	CMW KS600 Bluetooth signaling connection setup.

#### New Functionality

Version	Functions
V3.0.13	Added support for the CMW 270.

#### Modified Functionality

Version	Functions
V3.0.13	None.

#### Improvements

Version	Improvements
V3.0.13	None.

#### Known Issues

Version	Known Issues
V3.0.13	None.



### 1.1.7 Version V3.0.12 (January 2013)

#### Firmware package contents

Version	Contents
V3.0.12	CMW KS600 Bluetooth signaling connection setup.

#### New Functionality

Version	Functions
V3.0.12	Software option KS600: Bluetooth signaling connection setup.

#### Modified Functionality

Version	Functions
V3.0.12	None.

#### Improvements

Version	Improvements
V3.0.12	None.

#### Known Issues

Version	Known Issues
V3.0.12	None.

## 1.2 KM610/611 Bluetooth BR/EDR/LE Measurements

### 1.2.1 Version 3.2.70 (August 2014)

#### Firmware package contents

Version	Contents
V3.2.70	CMW KM610 Bluetooth Basic Rate and Enhanced Data Rate Transmitter Measurements.
V3.2.70	CMW KM611 Bluetooth Low Energy Transmitter Measurements.
V3.2.70	CMW KM012 Multi-evaluation List Mode (MELM) for Bluetooth

#### New Functionality

Version	Functions
V3.2.70	CSP Measurement for LE.

#### Modified Functionality

Version	Functions
V3.2.70	-

#### Improvements

Version	Improvements

#### Known Issues

Version	Known Issues
V3.2.70	
V3.2.70	
V3.2.70	

## 1.2.2 Version 3.2.60 (July 2014)

### Firmware package contents

Version	Contents
V3.2.60	CMW KM610 Bluetooth Basic Rate and Enhanced Data Rate Transmitter Measurements.
V3.2.60	CMW KM611 Bluetooth Low Energy Transmitter Measurements.
V3.2.60	CMW KM012 Multi-evaluation List Mode (MELM) for Bluetooth

### New Functionality

Version	Functions
V3.2.60	-

### Modified Functionality

Version	Functions
V3.2.60	-

### Improvements

Version	Improvements
V3.2.60	Fixed an issue with Multi-Evaluation List Mode (MELM): LE modulation measurement remote command.
V3.2.60	Fixed an issue with Multi-Evaluation List Mode (MELM): handling single step segments.

### Known Issues

Version	Known Issues
V3.2.60	You must wait for the "Bluetooth Signaling" button to indicate "RUN" before the KM610 "Multi Evaluation" button can be used to activate the measurements (only noticeable the very first time KM610 is used with KS610).
V3.2.60	MELM segment number 1 is labeled as segment number 0 in the local display screen.
V3.2.60	The left part of the Frequency Range diagram may not be accessible with a marker.

### 1.2.3 Version 3.2.50 (April 2014)

#### Firmware package contents

Version	Contents
V3.2.50	CMW KM610 Bluetooth Basic Rate and Enhanced Data Rate Transmitter Measurements.
V3.2.50	CMW KM611 Bluetooth Low Energy Transmitter Measurements.

#### New Functionality

Version	Functions
V3.2.50	Added the Frequency Range measurement.
V3.2.50	Added the Phase Encoding measurement.
V3.2.50	Added KM012 option: Multi-Evaluation List Mode (MELM) measurements.

#### Modified Functionality

Version	Functions
V3.2.50	Updated the 79-channel Adjacent Channel Power measurement to support the combined signal path scenario.

#### Improvements

Version	Improvements
V3.2.50	Various user interface improvements.
V3.2.50	Fixed some issues with save and recall of parameter settings.

#### Known Issues

Version	Known Issues
V3.2.50	You must wait for the "Bluetooth Signaling" button to indicate "RUN" before the KM610 "Multi Evaluation" button can be used to activate the measurements (only noticeable the very first time KM610 is used with KS610).
V3.2.50	MELM segment number 1 is labeled as segment number 0 in the local display screen.
V3.2.50	The left part of the Frequency Range diagram may not be accessible with a marker.

## 1.2.4 Version 3.2.30 (December 2013)

### Firmware package contents

Version	Contents
V3.2.30	CMW KM610 Bluetooth Basic Rate and Enhanced Data Rate Transmitter Measurements.
V3.2.30	CMW KM611 Bluetooth Low Energy Transmitter Measurements.

### New Functionality

Version	Functions
V3.2.30	None.

### Modified Functionality

Version	Functions
V3.2.30	None.

### Improvements

Version	Improvements
V3.2.30	None.

### Known Issues

Version	Known Issues
V3.2.30	None.

## 1.2.5 Version 3.0.13 (April 2013)

### Firmware package contents

Version	Contents
V3.0.13	CMW KM610 Bluetooth Basic Rate and Enhanced Data Rate Transmitter Measurements.
V3.0.13	CMW KM611 Bluetooth Low Energy Transmitter Measurements.

### New Functionality

Version	Functions
V3.0.13	Added support for the CMW 270.

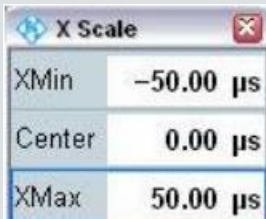
### Modified Functionality

Version	Functions
V3.0.13	None.

### Improvements

Version	Improvements
V3.0.13	None.

### Known Issues

Version	Known Issues
V3.0.13	<p>[GUI] Recall of a save file may fail if values in the 'X Scale' popup (see figure 1) have been altered prior to saving.</p>  <p>Figure 1: Bluetooth Measurement 'X Scale' popup present in some graphical views in GUI.</p>
V3.0.13	[Remote] NAV instead of INV is returned for some abnormal measurement conditions (reliability indicators 3,4,6,8).
V3.0.13	[Remote] Reliability indication value of 0 (no error) and INV results sporadically returned instead of expected indicator value 3,4 or 6 for the fringe condition of signal close to trigger threshold.

## 1.2.6 Version 3.0.12 (January 2013)

### Firmware package contents

Version	Contents
V3.0.12	CMW KM610 Bluetooth Basic Rate and Enhanced Data Rate Transmitter Measurements.
V3.0.12	CMW KM611 Bluetooth Low Energy Transmitter Measurements.

### New Functionality

Version	Functions
V3.0.12	None.

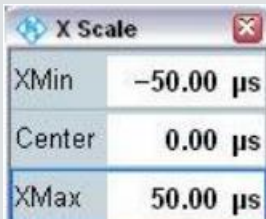
### Modified Functionality

Version	Functions
V3.0.12	None.

### Improvements

Version	Improvements
V3.0.12	None.

### Known Issues

Version	Known Issues
V3.0.12	<p>[GUI] Recall of a save file may fail if values in the 'X Scale' popup (see figure 1) have been altered prior to saving.</p>  <p>Figure 1: Bluetooth Measurement 'X Scale' popup present in some graphical views in GUI.</p>
V3.0.12	[Remote] NAV instead of INV is returned for some abnormal measurement conditions (reliability indicators 3,4,6,8).
V3.0.12	[Remote] Reliability indication value of 0 (no error) and INV results sporadically returned instead of expected indicator value 3,4 or 6 for the fringe condition of signal close to trigger threshold.

## 1.2.7 Version 3.0.10 (July 2012)

### Firmware package contents

Version	Contents
V3.0.10	CMW KM610 Bluetooth Basic Rate and Enhanced Data Rate Transmitter Measurements.
V3.0.10	CMW KM611 Bluetooth Low Energy Transmitter Measurements.

### New Functionality

Version	Functions
V3.0.10	None.

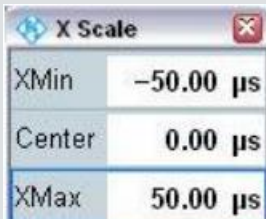
### Modified Functionality

Version	Functions
V3.0.10	None.

### Improvements

Version	Improvements
V3.0.10	Small number of minor GUI and remote problems fixed.

### Known Issues

Version	Known Issues
V3.0.10	<p>[GUI] Recall of a save file may fail if values in the 'X Scale' popup (see figure 1) have been altered prior to saving.</p>  <p>Figure 1: Bluetooth Measurement 'X Scale' popup present in some graphical views in GUI.</p>
V3.0.10	[Remote] NAV instead of INV is returned for some abnormal measurement conditions (reliability indicators 3,4,6,8).
V3.0.10	[Remote] Reliability indication value of 0 (no error) and INV results sporadically returned instead of expected indicator value 3,4 or 6 for the fringe condition of signal close to trigger threshold.



## 1.2.8 Version 2.1.20 (March 2012)

### Firmware package contents

Version	Contents
V2.1.20	CMW KM610 Bluetooth Basic Rate and Enhanced Data Rate Transmitter Measurements.
V2.1.20	CMW KM611 Bluetooth Low Energy Transmitter Measurements.

### New Functionality

Version	Functions
V2.1.20	Option KM 611: Low Energy Measurements (Power, Modulation and Spectrum).
V2.1.20	Different drift limits for Basic Rate packets.
V2.1.20	Modulation ratio limit value for Basic Rate packets.

### Modified Functionality

Version	Functions
V2.1.20	Spectrum 20dB (OBW) measurements have been updated to follow the latest Bluetooth RF Test Specification 3.0.H.1
V2.1.20	Extended value range for the $\Delta f_2$ 99.9% limit value.

### Improvements

Version	Improvements
V2.1.20	Trigger timeout remote control command corrected to seconds as the default unit.

### Known Issues

Version	Known Issues
V2.1.20	None.

### 1.2.9 Version 2.1.10 (May 2011)

#### Firmware package contents

Version	Contents
V2.1.10	CMW KM610 Bluetooth Basic Rate and Enhanced Data Rate Transmitter Measurements.

#### New Functionality

Version	Functions
V2.1.10	Added scalar results to table view of gated and non-gated ACP measurements.

#### Modified Functionality

Version	Functions
V2.1.10	None.

#### Improvements

Version	Improvements
V2.1.10	None.

#### Known Issues

Version	Known Issues
V2.1.10	Description of Spectrum 20dB (OBW) measurement range and units needs improvement. The remote command is: FETCH/READ:BLUetooth:MEAS<i>:MEValuation:TRACe:SOBW:MAXimum? It has the range: -1.333MHz to +1.333MHz. and Spacing: 5.208kHz The unit is dB (not dBm).

## 1.2.10 Version 2.0.20 (March 2011)

### Firmware package contents

Version	Contents
V2.0.20	CMW KM610 Bluetooth Basic Rate and Enhanced Data Rate Transmitter Measurements.

### New Functionality

Version	Functions
V2.0.20	Added Auto-detection of basic rate and enhanced data rate bursts
V2.0.20	Added new measurement of delta-f2avg / delta-f1avg (when in auto-detection mode)
V2.0.20	Added Gated ACP Measurements
V2.0.20	Added full Bluetooth band sweep (79channels) for ACP in gated and non-gated spectrum measurements

### Modified Functionality

Version	Functions
V2.0.20	None.

### Improvements

Version	Improvements
V2.0.20	Fixed on-screen colouring when fH-fL is out of limits
V2.0.20	Fixed configuration of Spectrum 20dB (OBW) measurement limits
V2.0.20	Fixed issue with markers in various measurement screens
V2.0.20	Fixed issue with preset / reset

### Known Issues

Version	Known Issues
V2.0.20	<p>Description of Spectrum 20dB (OBW) measurement range and units needs improvement.</p> <p>The remote command is:            FETCH/READ:BLUetooth:MEAS&lt;i&gt;&gt;:MEValuation:TRACe:SOBW:MAXimum?</p> <p>It has the range: -1.333MHz to +1.333MHz. and Spacing: 5.208kHz</p> <p>The unit is dB (not dBm).</p>

### 1.2.11 Version 2.0.10 (February 2011)

#### Firmware package contents

Version	Contents
V2.0.10	CMW KM610 Bluetooth Basic Rate and Enhanced Data Rate Transmitter Measurements.

#### New Functionality

Version	Functions
V2.0.10	None.

#### Modified Functionality

Version	Functions
V2.0.10	None.

#### Improvements

Version	Improvements
V2.0.10	None.

#### Known Issues

Version	Known Issues
V2.0.10	None.

### 1.2.12 Version 1.0.15 (December 2009)

#### Firmware package contents

Version	Contents
V1.0.15	CMW KM610 Bluetooth Basic Rate and Enhanced Data Rate Transmitter Measurements.

#### New Functionality

Version	Functions
V1.0.15	Spectrum measurements.

#### Modified Functionality

Version	Functions
V1.0.15	None.

#### Improvements

Version	Improvements
V1.0.15	None.

#### Known Issues

Version	Known Issues
V1.0.15	None.

### 1.2.13 Version 1.0.10.50 (September 2009)

#### Firmware package contents

Version	Contents
V1.0.10.50	CMW KM610 Bluetooth Basic Rate and Enhanced Data Rate Transmitter Measurements.

#### New Functionality

Version	Functions
V1.0.10.50	CMW KM610 option: Bluetooth Basic Rate and Enhanced Data Rate Transmitter Measurements.

#### Modified Functionality

Version	Functions
V1.0.10.50	None.

#### Improvements

Version	Improvements
V1.0.10.50	None.

#### Known Issues

Version	Known Issues
V1.0.10.50	None.

## 2 Modifications to the Documentation

The current documentation is up-to-date.

## 3 Firmware Update

### 3.1 Validity Information

If necessary list here the material and model numbers the firmware is referring to

Material Number	Option Name	Description
1203.6408.02	R&S® CMW-KW610	Enable R&S®WinIQSIM2™ Waveforms, Bluetooth®, Basic Rate and EDR
	R&S® CMW-KM012	Multi-Evaluation List Mode (MELM) measurement
1203.6350.02	R&S® CMW-KM610	Bluetooth® BR / EDR, TX measurement
1203.9307.02	R&S® CMW-KM611	Bluetooth® Low Energy, TX measurement
1208.1004.02	R&S® CMW-KS600	Bluetooth®, connection setup, basic signaling
1207.7650.02	R&S® CMW-KS610	Bluetooth® BR/EDR, signaling / test mode support, basic functionality

### 3.2 Update Information

### 3.3 Updating the Firmware



## 4 Customer Support

### Technical support – where and when you need it

For quick, expert help with any Rohde & Schwarz equipment, contact one of our Customer Support Centers. A team of highly qualified engineers provides telephone support and will work with you to find a solution to your query on any aspect of the operation, programming or applications of Rohde & Schwarz equipment.

### Up-to-date information and upgrades

To keep your instrument up-to-date and to be informed about new application notes related to your instrument, please send an e-mail to the Customer Support Center stating your instrument and your wish. We will take care that you will get the right information.

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