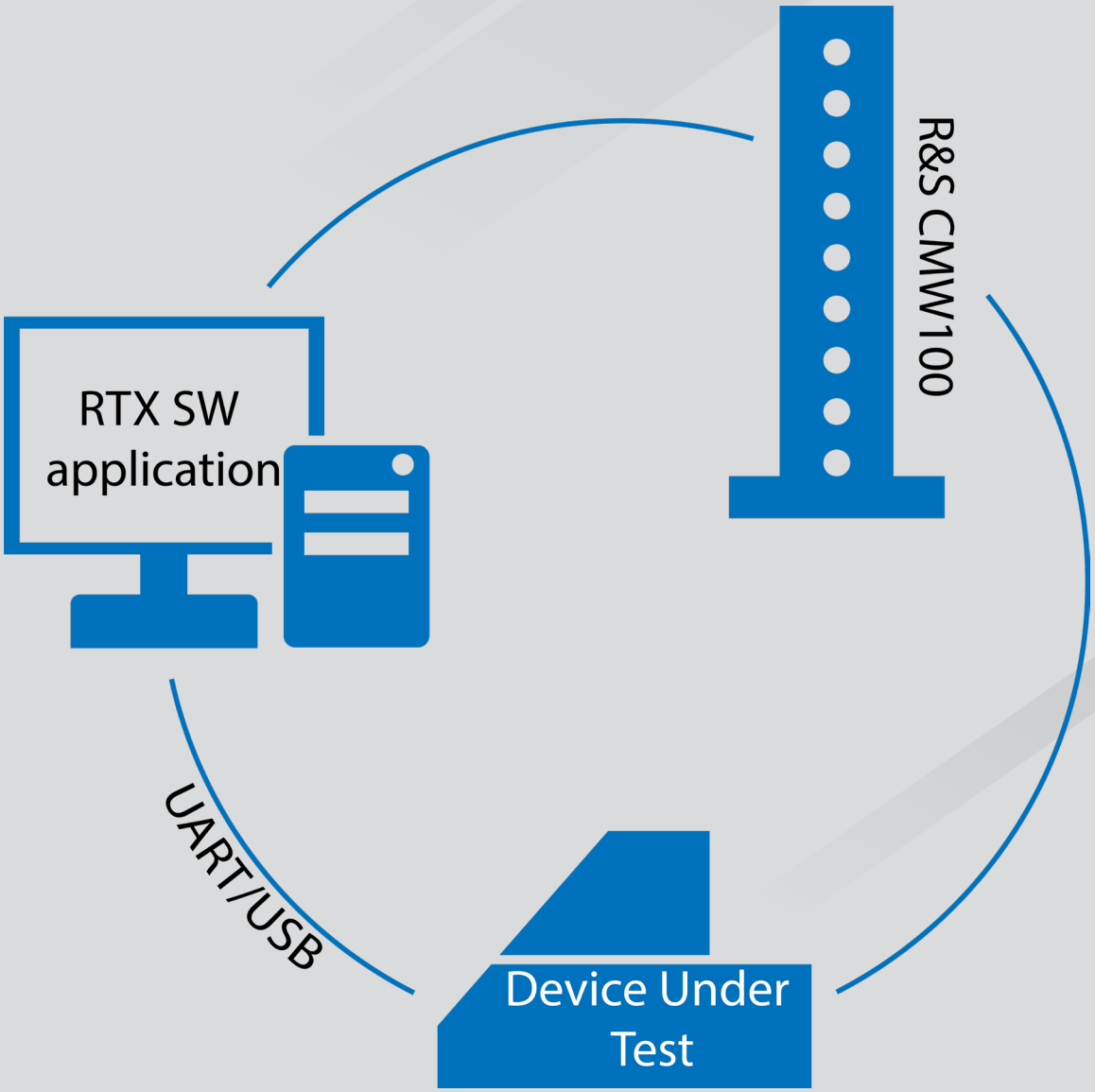
RTX
WIRELESS WISDOM



RTX2018

MLM DECT RF TESTER

DATA SHEET

The RTX2018 MLM DECT RF tester performs all key RF measurements on Multi-Level Modulation DECT products using MLM DECT chipsets such as the Dialog DA14495. RF measurements on GFSK modulation products are also supported.

RTX2018 MLM DECT RF TESTER

SYSTEM COMPONENTS

The RTX2018 system consists of an RTX software application for DECT RF performance testing and a hardware unit (RF signal generator and analyzer) in the form of a Rohde & Schwarz CMW100.

FEATURES & BENEFITS

- Comprehensive non-signaling application well-suited for both R&D and manufacturing
- Designed for super-high-speed testing including no connection setup time
- Includes PC GUI (Graphical User Interface) for manual operation of RTX2018
- Can be used as standalone unit or integrated into customers' ATE systems through the RTX interface modules (.dll's)
- Future-proof, as e.g. new modulation forms and frequencies can be supported through software upgrades
- R&S CMW100 is a flexible & versatile hardware platform which supports a range of wireless technologies

APPLICATIONS

- R&D - its extended measurement capabilities and high accuracy makes it a perfect tool for R&D.
- Manufacturing - its high-performance measurement capability optimized for high throughput makes it a perfect match for manufacturing.

RF MEASUREMENTS

- EVM (PSK modulation family only)
- NTP (Transmit power)
- Power template
- Carrier frequency offset
- Frequency deviation (GFSK only)
- BER / FER / RSSI (requires RTX DUT firmware[1])

RF OUTPUT LEVEL

The RF output level can be adjusted "on-the-fly" for determining sensitivity of the device under test. The RF level output range is between -100 to -15 dBm.

BIT ERROR RATE / FRAME ERROR RATE

The RTX2018 includes predefined waveforms patterns for GFSK and PSK. The BER and FER performance can be measured if the DUT utilizes an RTX DUT firmware[1].

DUT CONTROL

The GUI has an embedded DUT control when testing DUT's with RTX DUT firmware[1]. This simplifies test set-up making a "one application" solution. The system allows users to communicate with the DUT through UART or USB while performing all the key RF measurements, which are performed as non-signaling with DUT control through the RTX API.

GRAPHICAL USER INTERFACE

The RTX2018 is operated by using the RTX Microsoft Windows-based GUI where all measurements are easily configured and shown in separate windows.

REMOTE CONTROL

For use in automated test systems, the RTX2018 can easily be integrated and remotly controlled via the Dynamic Link Library (DLL) function calls.

RF PORTS

The RTX2018 has 8 RF IN/OUT ports on the front panel for connection to up to 8 DUTs eliminating the need for switches in the test fixture during testing.

Fig. 1: R&S CMW100 hardware platform for RTX2018

[1] RTX DECT protocol stack software package including RTX API

RTX2018 USER INTERFACE

The included RTX software application provides an intuitive GUI to access all functions and measurement capabilities in the RTX2018.

TRANSMITTER TEST

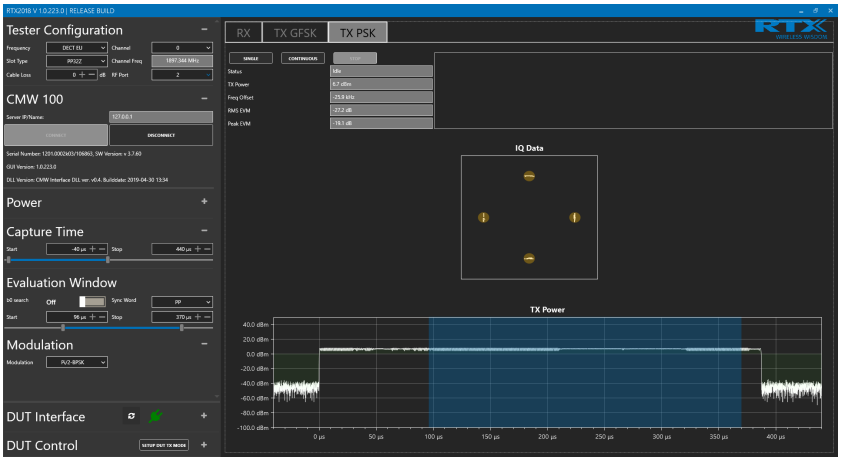


Fig. 2: The measurement of constellation diagram (PSK modulation family) and power template

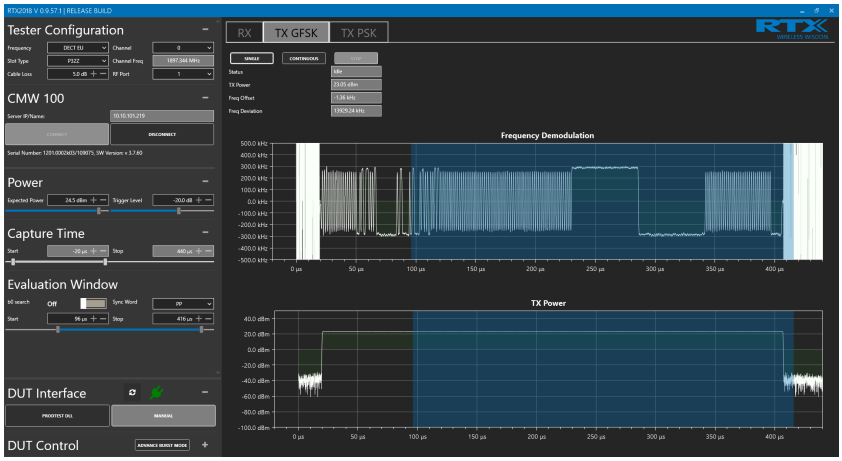
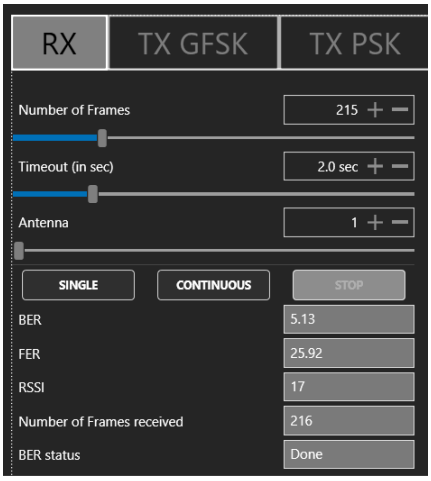


Fig. 3: The measurement of frequency demodulated data (GFSK) and power template

RECEIVER TEST



RX measurements are easily performed with the embedded DUT control [1] removing the need for signaling test according to ETSI 300-175-3.

Fig. 4: Measuring receiver performance on either PSK or GFSK DECT signals

MEASUREMENT CAPABILTIES

MEASUREMENT TYPE	DESCRIPTION
FREQUENCY BANDS	• DECT EU • DECT US • DECT Japan • DECT Korea
SLOT TYPES	• P32 • PP32 • P64 • PP64
MODULATION TYPES	• π/2-DBPSK • π/4-DQPSK • π/8-D8PSK • GFSK
TRANSMITTER	• EVM • NTP • Power template • Carrier frequency offset • Frequency deviation
RECEIVER	• Sensitivity • BER • PER

TECHNICAL SPECIFICATIONS

GENERAL DATA	SPECIFICATIONS
R&S CMW100	Please see the data sheet for CMW100 on R&S website

ORDERING DETAILS

RTX NO.	DESCRIPTION
95101349	RTX2018 HW unit & SW application
95200908	RTX2018 SW application only
95201046	RTX2018 5 year warranty for HW & SW incl. 4 scheduled calibrations
95201047	RTX2018 5 year warranty for SW application only