

RTX2018
DECT RF TEST PLATFORM
DATA SHEET

The RTX2018 MLM (Multi-Level Modulation) DECT RF tester performs all key RF measurements on multi-level modulation products using for example the Dialog 14495 MLM DECT chip.

RTX2018 MLM DECT RF TESTER

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
- Can be used as standalone unit or integrated into customers' ATE systems through the RTX interface modules (.dll's)
- Includes PC GUI for lab use and manufacturing setup debug
- Future proof, as e.g. new modulation forms and frequencies can be supported through software upgrades
- CMW100 is a flexible & versatile hardware platform to which other functionalities can be added

APPLICATIONS

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

RF MEASUREMENTS

- EVM (PSK modulation family only)
- NTP (Transmit power)
- Frequency offset
- Transmission burst (power envelope)
- Frequency deviation (GFSK only)
- Bit & Frame Error Ratio - requires support in DUT (Device Under Test) firmware

BIT ERROR RATE

For Bit Error Rate test RTX supplies predefined waveforms patterns for RTX supplied DUT firmware. The BER and FER is calculated in the DUT firmware.

SYSTEM COMPONENTS

The RTX2018 system consists of an RTX software application and a Rohde & Schwarz CMW100 (hardware).

CONNECTIONS

The CMW100 has 8 RF IN/OUT ports on the front panel for connection to the DUT. This eliminates the need for switches in the test fixture while testing up to 8 DUTs in parallel.

DUT CONTROL

The GUI has a built-in DUT control when using the RTX DECT Stack. This simplifies test set-up making a "one click" solution. The system allows users to communicate with the DUT through UART or USB while performing all the key RF measurements. Measurements are performed as non-signaling with DUT control through the RTX PROD TEST interface.

GRAPHICAL USER INTERFACE

The RTX2018 can be operated using the supplied Windows-based graphical user interface GUI or by Dynamic Link Library (DLL) API function calls. Using the GUI, all measurements are easily configured and shown in separate windows.

GUI GRAPHICAL RESULTS

- Constellation diagram (PSK modulation family)
- Frequency demodulated data (GFSK)
- Power template

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 -10 dBm.

GRAPHICAL USER INTERFACE

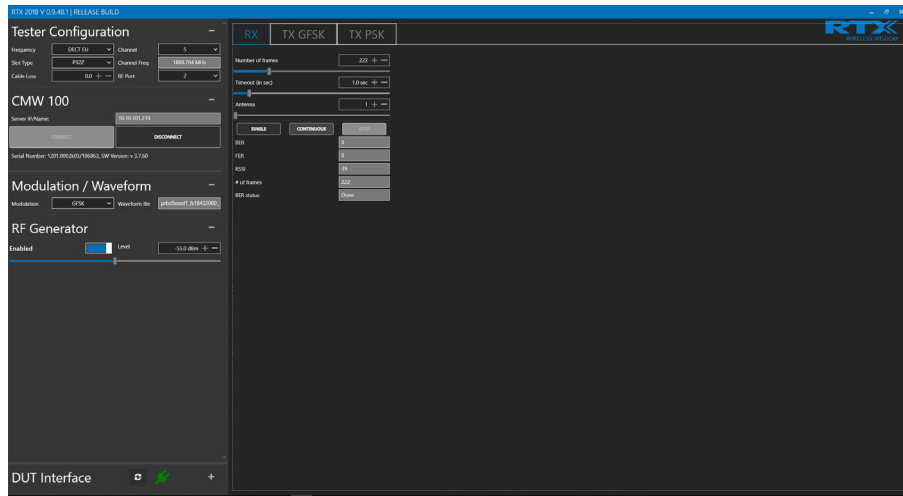


Fig. 1: Screenshot of GUI showing receive measurement window

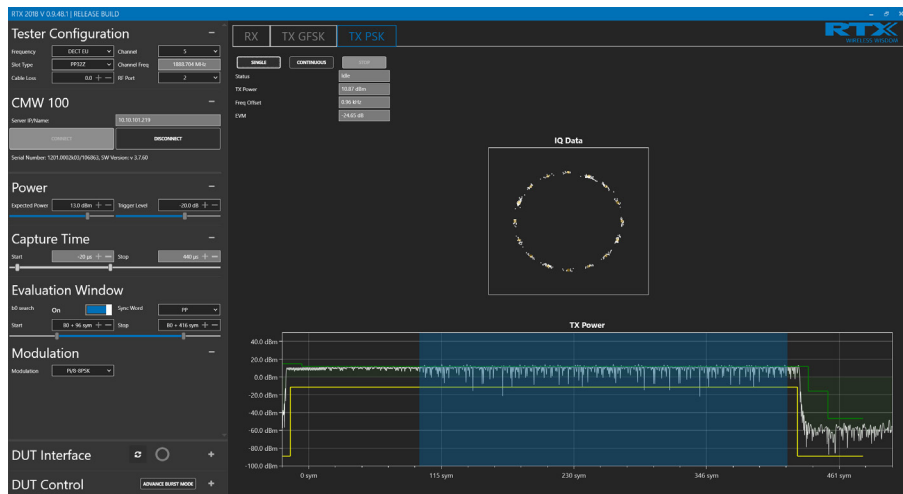


Fig. 2: Screenshot of GUI showing constellation diagram & power template in xPSK mode

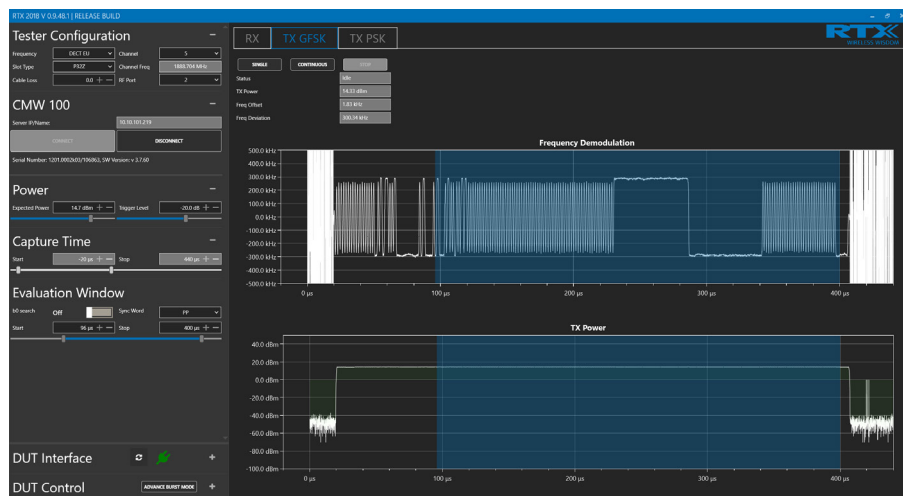


Fig. 3: Screenshot of GUI showing frequency demodulation data & power template in GFSK mode

MEASUREMENT CAPABILITIES

MEASUREMENT TYPE	DESCRIPTION
FREQUENCY BANDS	DECT EU, DECT US , DECT Japan & KDECT
SLOT TYPES	P32, PP32, P64, PP64
MODULATION TYPES	GFSK, $\pi/2$ -DBPSK, $\pi/4$ -DQPSK, $\pi/8$ -D8PSK
TRANSMITTER	NTP, Power Template, EVM, Frequency offset, Deviation
RECEIVER	Sensitivity, BER, PER
RF SWITCH	Embedded 8 port RF switch

TECHNICAL SPECIFICATIONS

GENERAL DATA	SPECIFICATOIONS
CMW100	Please see the data sheet for CMW100



Fig. 4: CMW100 hardware platform for RTX2018

ORDERING DETAILS

RTX NO.	DESCRIPTION
95101349	Complete package with CMW100 and RTX2018 SW application
95200908	RTX2018 SW application only
95201046	RTX2018 5 year warranty including 4 scheduled calibrations
95201047	5 year warranty RTX2018 SW application only