# RTX2254 BLUETOOTH RF TESTER

Dedicated Bluetooth Low-energy (4.0, 4.1, 4.2 & 5.0) RF Tester for Manufacturing Test

The RTX2254 allows you to perform key parametric tests of the receive and transmit paths of BLE devices in an efficient and cost-effective way on both PCBA and final assembly level. Test cases cover the typical key parameters, and provides a very efficient way of monitoring quality and performance throughout the manufacturing process.

The RTX2254 has an integrated HCI interface with support for RTX's driver as well as drivers for the various Bluetooth chip manufacturers. This funcionality enables users to support both standard HCI and vendor-specific commands.

Features & Benefits

- Supports Bluetooth 4.0,4.1,4.2 & 5.0
- Parametric test of key parameters
- Full HCI control of DUT during RF test via embedded interface
- Auto-sensing level converter (HCI)
- Interface to all devices through same USB port
- Available with single or dual DUT support
- Supports all generally available BLE chipsets
- Competitively priced

www.rtx.dk
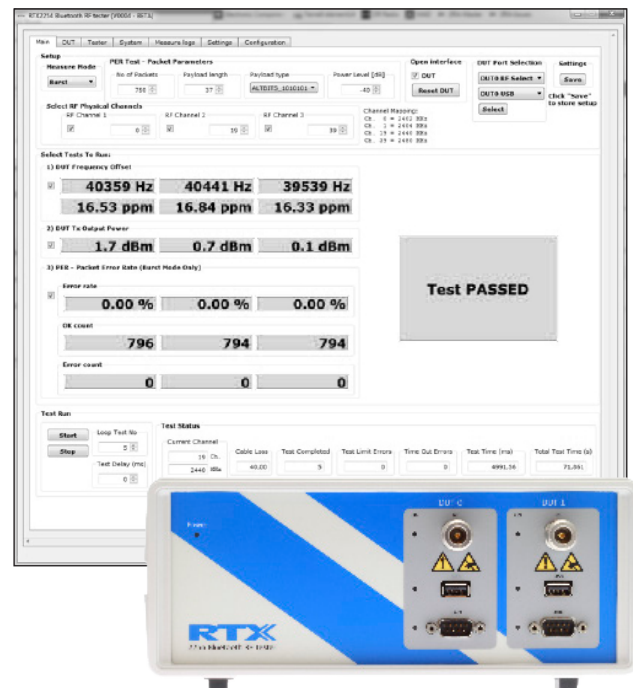
INTERFACING WITH THE TESTER
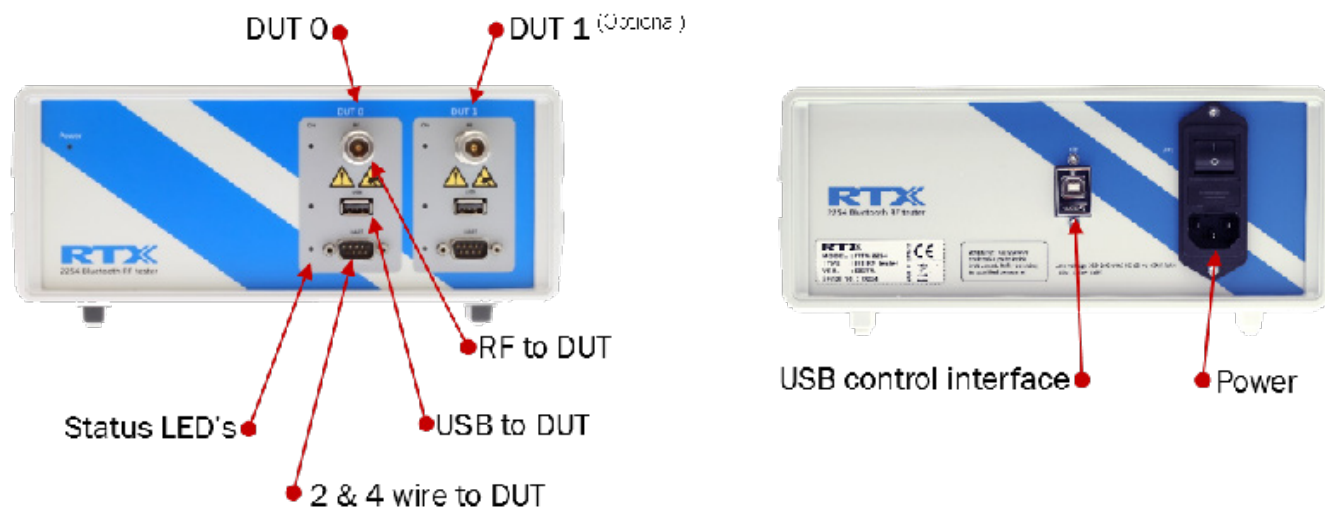

FUNCTIONAL BLOCK DIAGRAM
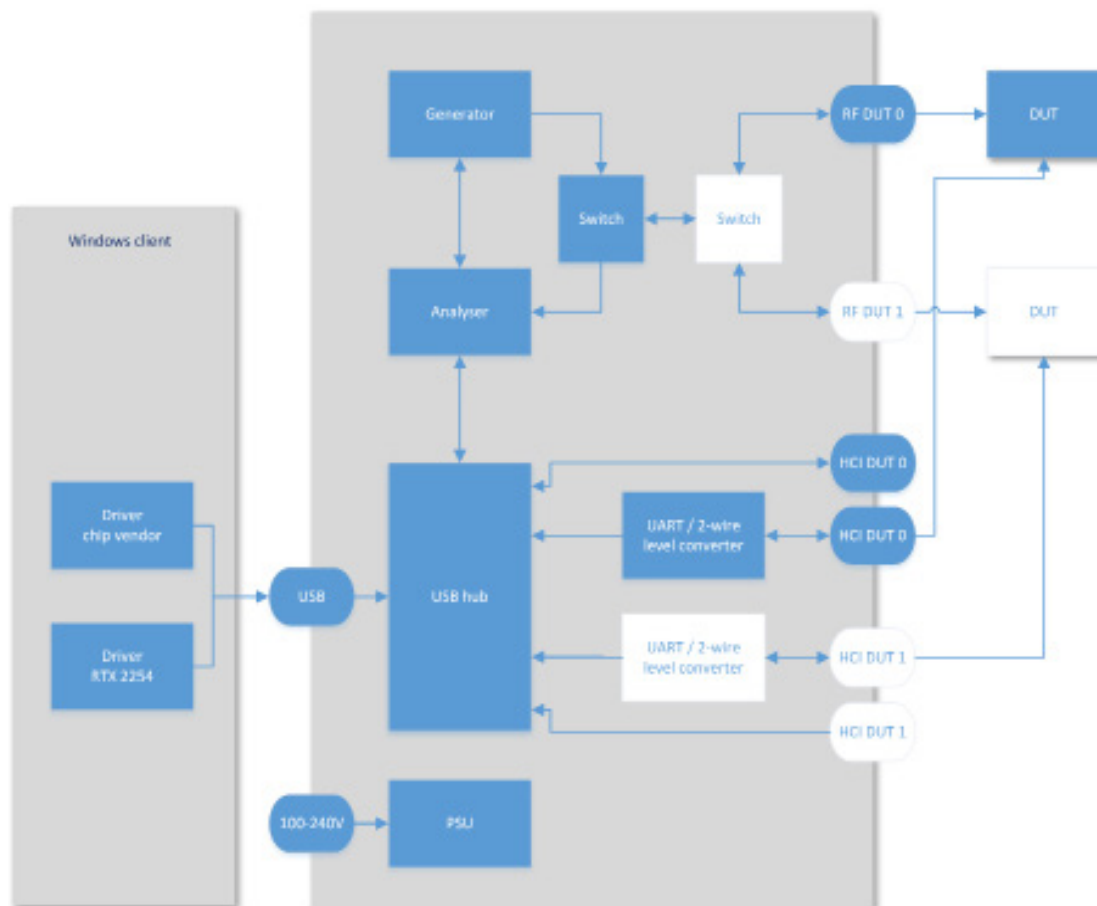
RTX'S VERSATILE DRIVER

- Can co-exist with Bluetooth chip vendors dedicated drivers
- Enables support for all HCI commands and firmware downloads etc
- RTX graphical user interface for either control or monitoring of communication to tester

TEST COVERAGE

KEY TEST PARAMETERS

- Transmit power
- Carrier frequency offset
- Reciever sensitivity
- Packet error rate
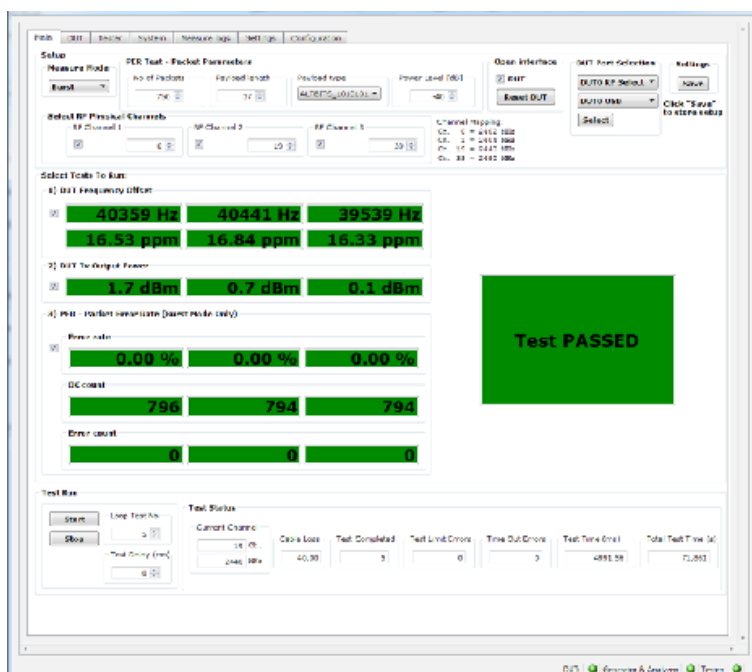
APPLICATIONS

MANUFACTURING

- Automatic Test System (ATE) for inline test of BLE products
- ATE system performing combined test of BLE product (firmware download, baseband and RF test) to acheive low cost for test
- Dual slot and combined ATE system to optimize tact time and equipment utilization

QA USE

- Manual or automatic sample test of manufactured BLE products

R&D

- Controlling BLE device in R&D measurement setup
- Swift verification of RF performance on prototypes

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TECHNICAL SPECIFICATIONS

SUPPORT	SPECIFICATIONS
Bluetooth versions	4.0, 4.1, 4.2 & 5.0

SIGNAL GENERATOR	SPECIFICATIONS
Frequency range	2402 MHz to 2480 MHz
Frequency accuracy	+/- 1.0 ppm
Aging	<0.5 ppm/year at 35°C
Output level	-100 dBm to -40 dBm
Resolution	0.5 dB
Level error	+/- 1.5 dB
Modulation	GFSK

ANALYZER	SPECIFICATIONS
Frequency range	Same as signal generator
Level meter (NTP) range	-50 dBm to +10 dBm
Level meter (NTP) resolution	0.1 dB
Accuracy for NTP	+/- 1.0 dB

CONNECTIONS	SPECIFICATIONS
RF in/out (DUT 0 & 1)	N (50Ω)
DUT HCI (DUT 0 &1)	USB, UART 2 & 4 wire, 1.8 - 5.0 V (auto-level sensing)

GENERAL DATA	SPECIFICATIONS
Power consumption	Approx. 18 W
Operating temperature range	15°C to +40°C (59°F to 95°F)
Storage temperature range	-20°C to +60°C (35°F to 140°F)
Operating humidity	< 75% relative humidity at 40°C (104°F) non-condensing
Dimensions (WxHxD)	255 x 105 x 270 mm (approx. 10 x 4 ⅛ x 10 ½ in)
Weight	3.9 kg (8 lbs 10 oz)

ORDERING DETAILS

RTX NO.	INSTRUMENTATION	DESCRIPTION
95101348	RTX2254SA-1 BLE RF tester	BLE RF tester for support for one DUT
95101347	RTX2254SA-2 BLE RF tester	BLE RF tester for support for two DUTs