BLUETEST.se

RTS60

Reverberation Test System

High Speed, High Performance OTA Test System

RTS

The Bluetest Reverberation Test Systems emulates a rich and isotropic multipath environment. The DUT (Device Under Test) is exposed to many simultaneous incident waves from uniformly distributed directions. This behavior in the RTS Systems has the advantage that tests like TRP, TIS and TPUT (Throughput) can be performed faster than any today existing technology, with very high accuracy and repeatability. The environment created in the chamber also allows for very fast MIMO measurements (active or passive) without any expensive or complex extra equipment.

Improve your Test Throughput

The easy handling of the RTS systems makes the testing faster and more effective than with other solutions on the market. The downtime due to maintenance is reduced to a bare minimum. The calibration is extremely simple and can be performed by the operator in 15 minutes.

Best in Class Accuracy, Repeatability and Stability

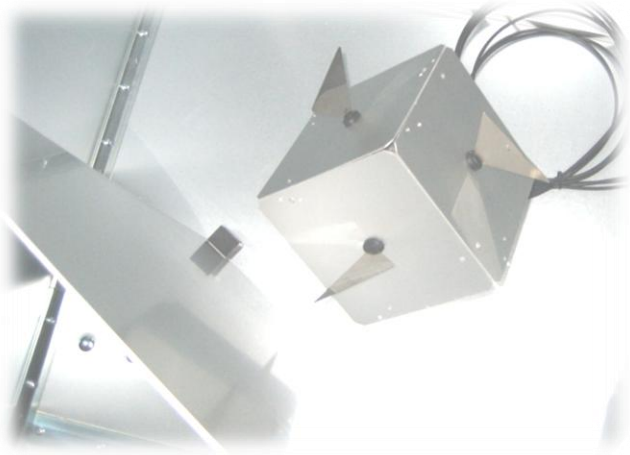
Accuracy of the measurements in a Bluetest RTS is excellent and measurements can be repeated over again with the same result. The robust design of software and hardware makes the stability something that users do not need to worry about.

Future Proof Investment

Due to the realistic multi-path test method used in RTS systems it is easily extended to any future technologies. The design is scalable, which means that an investment only needs to contain the technology that is used in the development right now. Technologies that will be used tomorrow can be added tomorrow. Small footprint means that the chamber easily can be placed at any location in the lab or office and is easily movable to a new place if required.

Highly Improved Measurement Concept

The RTS60 includes a superior mode stirring and measurement antenna concept, called C67. The C67 takes the Bluetest reverberation test technology to a new level and makes it possible to do OTA measurements with an extreme accuracy and repeatability. Bluetest's long experience in OTA reverberation technology has been used to perfect the mode stirrer and measurement antenna concept in the RTS60.



Active MIMO Measurement

The electronic control system in the RTS60 means that the RTS60 easily can be upgraded to active MIMO measurements capability from the beginning or at later stage.

Throughput Measurements

Throughput measurement on especially LTE, WLAN and HSPA becomes the future standard to characterize devices. Bluetest offers throughput measurements for many standards, both on MAC layer* and IP layer*.

* Depends on the capabilities of the selected base station simulator

Turntable

The turntable with 20kg loading capacity can carry a DUT with a size up to 0,7m.

DUT Control

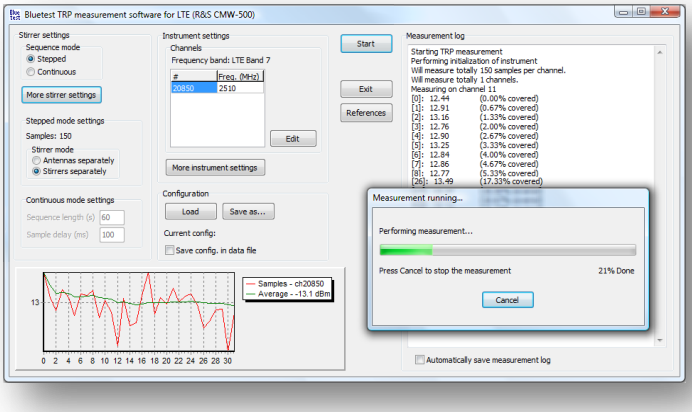
DUT control via USB or Ethernet is available as an option to the RTS60. It enables the DUT to be controlled outside the system.

DUT Power

DC power (up to 24V DC) to a laptop or a DUT is available as standard in the RTS60.

LTE

Software for TRP, TIS and TPUT for LTE/MIMO 2x2 is available and in use at a number of sites around the globe.



Wide Range of Systems Options

A number of system options are available to the RTS series of test systems. The options include reference antennas, DUT fixtures, system loads and table to place DUT's on (see specification below).

Specification RTS60

Supported Passive Measurements
Antenna Efficiency Measurements
Diversity
MIMO

Supported Active Measurements
TRP
TIS
TPUT (Throughput)

Accuracy

Passive Measurements	0.3 dB (STD)
TRP	0.3 dB (STD)
TIS	0.5 dB (STD)

Repeatability
0.1 dB (STD)

Test Time (Typical)

Passive Antenna Measurements	1 min
Passive Diversity Gain	1 min
Passive MIMO Capacity	1 min
Test Time TRP	1 min/channel
Test Time TIS	10 min/channel
Test Time TPUT	1-2 min
Test Time Fast TIS	3 min/channel*

*GSM and WCDMA

Frequency Range 650 – 6000 MHz

Supported Technologies (software options)

	TRP	TIS	Fast TIS	TPUT MAC* (Throughput)	TPUT IP* (Throughput)
GSM	✓	✓	✓		
GPRS/EGPRS	✓	✓			
WCDMA	✓	✓	✓		
HSPA/HSPA+ (SISO/SIMO)	✓	✓		✓	✓
CDMA2000 1x	✓	✓			✓
EVDO Rev 0 and A	✓	✓		✓	✓
LTE (SISO/SIMO/ MIMO 2x2)	✓	✓		✓	✓
WiMAX (SISO)	✓	✓		✓	✓
WLAN 802.11b/g/n	✓	✓			✓
Bluetooth	✓	✓			

* Depends on the capabilities of the selected base station simulator

Supported Network Analyzers
Most available Agilent, R&S and Anritsu analyzers

Supported Base Station Simulators

Bluetooth:	Agilent N4010A
WLAN:	Anritsu 8860
WiMAX:	R&S CMW 500/CMW 270
All Cellular Standards:	Agilent 8960, Anritsu MT8815/8820, R&S CMU 200/CMW 500

Outside Dimensions

Length:	1940 mm
Height:	2000 mm
Depth:	1400 mm

Shielding >100dB

Ordering Information

RTS60

301	**Bluetest Reverberation Test System RTS60** High speed, high accuracy RTS Frequency range 650MHz - 6 GHZ Measurement antennas and cables 650 MHz - 6 GHz, Mode stirrers C67, prepared for Active MIMO measurements, DUT DC Power, DUT Data Interface (USB/Ethernet enabled access panel), Turntable for up to 20kg load.

Hardware Options

115	Chamber Lamp
116	Active MIMO 2x2 Upgrade to enable Active 2x2 MIMO measurements

DUT Communication Interfaces

174-1	Basic equipment, shielded box, wave trap, etc (Mandatory to be able to have data interfaces)
174-2	USB 2.0, includes filters, optical converters, power supplies, fiber, cables, etc.
174-3	Ethernet 10/100Mb, includes filters, optical converters, power supplies, fiber, cables, etc.

Measurement Accessories

151	Cylinder for lossy liquid Used as load in the system
152	Antenna/Mobile holder Flexible positioning of the DUT
153	Small table for DUT (Laptop or head phantom)

Calibration Antennas

131	Calibration antenna 650 MHz – 3.5 GHz
132	Calibration antenna 2.0 GHz – 6.0 GHz

Bluetest AB

Götaverksgatan 1, SE-417 55 Göteborg
SWEDEN,
sales@bluetest.se
Tel: +46 733 24 48 58

Worldwide Sales

AUSTRIA, GERMANY and SWITZERLAND
GIGACOMP
Bernd Fleischmann
bernd.fleischmann@gigacomp.de
Tel. +49 89 3220 8957

FINLAND
Weltest Systems Ky
Vesa Kauppinen
vesa.kauppinen@weltestsystems.com
Tel. +35 8500 553 009

USA, CANADA and MEXICO
MI Technologies
Kirk Anderson
kanderson@mi-technologies.com
Tel. +1 678 475 8378

JAPAN
TOYO Corporation
Shogo Etoh
etoh@toyo.co.jp
Tel. +81 3 3279 0771

KOREA
Dymstec
Elena Cho
elena@dymstec.com
Tel. +82 31 777 8450

TAIWAN
QuieTek Corporation
David Cheng
davidcheng@quietek.com
Tel. +886 2 8601 3638

CHINA
Corad Technology Limited
Ken Guan
hj.guan@tnmcorad.com
Tel +86 21 6466 9185

QuieTek Corporation
David Cheng
davidcheng@quietek.com
Tel. +886 2 8601 3638

SINGAPORE and MALAYSIA
ST Electronics
Simon Yip Weng Peng
simonyip@stee.stengg.com
Tel. +65 6568 6346

INDIA
AIMIL Ltd.
Sunil Grover
sunilgrover@aimil.com
Tel. +91 11 30810220

BRAZIL
QEMC
Roberto Menna Barreto
menna@qemc.com.br
Tel. +55 21 8111 6661