BLUETEST.se

RTS90

Reverberation Test System

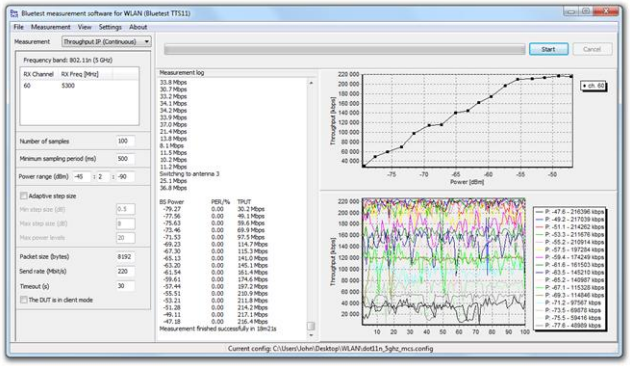
High Speed, High Performance OTA Test System

The Bluetest Reverberation Test Systems is the ideal choice for developers of wireless devices and components as well as operators wanting to verify their suppliers' wireless devices. Over-The-Air (OTA) measurements reflect the true performance of the device and ensure that the tested product performs as intended once released to the market. The patented design creates a rich and isotropic multipath environment inside the chamber allowing for fast, easy and realistic performance measurements on SISO as well as MIMO devices like LTE and WLAN.

The RTS is capable of performing passive measurements like antenna efficiency, diversity and MIMO gain as well as active measurements like TRP, TIS and Throughput (TPUT).

Improve your Time to Market

The Bluetest reverberation test system technology combined with the easy handling of the RTS system and user friendly software makes the testing faster and more effective than with other solutions on the market. Active and passive MIMO measurements are performed as fast and easy as SISO measurements without any expensive or complex additional equipment. The downtime due to maintenance is reduced to a bare minimum and calibration can be performed by the operator in 15 minutes.



Best in Class Accuracy and Repeatability

Bluetest's long experience in OTA reverberation measurement technology has resulted in a superior mode stirring and measurement antenna concept that produce excellent Accuracy and Repeatability of the measurements.

Future Proof Investment

Due to the realistic multi-path test method used in RTS systems it is easily extended to future wireless communication technologies. The design is scalable, which means that an investment only needs to support the technology that is used in the development right now. Technologies that will be used tomorrow can be added tomorrow.

Throughput Measurements

Throughput measurement on data communication focused standards like LTE, WLAN and HSPA is becoming the method to characterize wireless data devices. Bluetest offers throughput measurements for most of the wireless data communication standards, on MAC layer* as well as the IP layer*.

* Depends on the capabilities of the selected base station simulator

DUT Support

The advantage with the RTS90 is that the spacious system allows for measurements of larger test objects such as television screens and other larger consumer electronic devices, or automotive applications. It is also possible to do measurements with a live person inside the chamber, allowing comparison measurements between phantom heads/hands and a real person.
DUT DC power feed through (up to 24V DC) is available as standard in the RTS90 and DUT communication via USB2.0 or 100/1000Mbps Ethernet are available as options.

Low Frequency Measurements

The size of the RTS90 enables the user to do accurate measurements on lower frequencies. It is possible to do active and passive measurements from 6GHz down to 400MHz.

Wide Range of Systems Options and Accessories

Chamber light is available in the RTS90 as standard. A number of system options like Chamber camera and DUT communication are available for the RTS90. The active 4x4 MIMO measurement capability is included as standard in the RTS90. Accessories include reference antennas, DUT fixtures and system loads.

Specification RTS90

Supported Passive Measurements

Antenna Efficiency Measurements
Diversity
MIMO

Supported Active Measurements

TRP	(Incl. in 3GPP TS 34:114)
TIS	(Incl. in 3GPP TS 34:114)
TPUT (Throughput)	

Accuracy & Repeatability

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, GPRS/EGPRS, and WCDMA

Frequency Range 400 – 6000 MHz

Shielding >100dB

Supported Technologies (software options)

	TRP	TIS	Fast TIS	TPUT MAC* (Throughput)	TPUT IP* (Throughput)
GSM	✓	✓	✓		
GPRS/EGPRS	✓	✓	✓		
WCDMA	✓	✓	✓		
HSPA/HSPA+	✓	✓		✓	✓
CDMA2000 1x	✓	✓			✓
EVDO Rev 0 and A	✓	✓		✓	✓
TD-SCDMA	✓	✓			
TD-SCDMA HSPA	✓	✓			
LTE FDD/TDD	✓	✓		✓	✓
WiMAX	✓	✓		✓	✓
WLAN 802.11a/b/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 Communication Testers

Bluetooth:	Agilent N4010A
WLAN:	Anritsu 8860/Bluetest TTS11
WiMAX:	R&S CMW500/CMW270 Agilent E6651A
All Cellular Standards:	Agilent 8960/PXT E6621 Anritsu MT8815/8820, R&S CMU200/CMW500

Outside Dimensions

Length:	3340 mm
Height:	2610 mm
Depth:	4240 mm

Ordering Information

RTS90

310	**Bluetest Reverberation Test System RTS90** High speed, high accuracy RTS prepared for active MIMO measurements Measurement antennas and cables DUT DC Power interface Prepared for DUT Data communication Turntable for up to 20kg load. 4x4 MIMO Chamber LED Lamp

Hardware Options

118	Chamber camera

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.
174-4	Gb Ethernet, includes filters, optical converters, power supplies, fiber, cables, etc.

Measurement Accessories

151	Cylinder for lossy liquid
152	Universal Antenna/Mobile holder
153	Small table for DUT (Laptop or head phantom)
154	Low loss mobile holder
155	Low loss tablet PC holder
158	ISS11, Instrument Switch
160	Laptop Phantom

Calibration Antennas

131	Calibration antenna 650 MHz – 3.5 GHz
132	Calibration antenna 2.0 GHz – 6.0 GHz
133	Calibration antenna 400 MHz – 1.5 GHz

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