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 the 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. The chamber can due to its compact size be placed at any location in the lab or office and is easily moved to a new place if required.

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

Test Object Support
The turntable with 20kg loading capacity can carry a Device Under Test (DUT) with a size up to Ø0.7m x 0.5m height. DUT DC power feed through (up to 24V DC) is available as standard in the RTS60 and DUT communication via USB2.0 or 100/1000Mbps Ethernet are available as options.

Wide Range of Systems Options and Accessories
A number of system options like DUT communication, Chamber light, Chamber camera and active MIMO measurement support are available to the RTS series. The active 2x2 or 4x4 MIMO measurement capability can easily be added from the beginning or installed at later stage. Accessories include reference antennas, DUT fixtures and system loads.
Specification RTS60

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) (Incl. in 3GPP TS 37:977)

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: 650 – 6000 MHz

Shielding: >100dB

Supported Technologies (software options)

<table>
<thead>
<tr>
<th>TRP</th>
<th>TIS</th>
<th>Fast TIS</th>
<th>TPUT MAC* (Throughput)</th>
<th>TPUT IP* (Throughput)</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔</td>
<td>✔</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>✔</td>
<td>✔</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>✔</td>
<td>✔</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>✔</td>
<td>✔</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>✔</td>
<td>✔</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>✔</td>
<td>✔</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>✔</td>
<td>✔</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>✔</td>
<td>✔</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>✔</td>
<td>✔</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>✔</td>
<td>✔</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
</tbody>
</table>

* 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: R&S CMW500, Anritsu 8860/Bluetest TTS11
- WiMAX: R&S CMW500/CMW270, Agilent E6651A
- All Cellular Standards: Agilent 8960, Anritsu MT8815/8820, R&S CMU200/CMW500

Outside Dimensions
- Length: 1940 mm
- Height: 2000 mm
- Depth: 1400 mm

Ordering Information
- RTS60 301 Bluetest Reverberation Test System RTS60
  - 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.

Hardware Options
- 119 Chamber LED Lamp
- 116 Active MIMO 2x2
- 120 (121) Active MIMO 4x4 (upgrade of existing chamber)
- 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
- 157 Absorber Kit
- 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
Product specification and descriptions in this document are subject to change without notice.