

# ISS11

### ATTENUATOR SYSTEM



## ENABLING THROUGHPUT MEASUREMENTS ON 802.11a/b/g/n/ac/ax/be/p

The rapid evolution of the WLAN standard with the introduction of new versions such as 802.11ax and be (Wi-Fi 7), higher order MIMO, larger bandwidths, new frequency bands and more complex modulations is a challenge for the test solution manufacturers. Bluetest address this need for a flexible and adapting test system with the ISS11 Attenuator System. The ISS11 Attenuator System enables IP throughput versus attenuation performance measurements on both access points and stations with up to 4 x 4 MIMO in the 2.4, 5 and 6 GHz bands. Any access point or station with connectorized antenna ports can be used as the reference source for the throughput measurements making the system future-proof. The flexible solution also makes it possible to test devices operating on the vehicular communication standard 802.11p in the 5.9-6.0 GHz band.

### MEASURE LORA AND SIGFOX

IoT applications using LoRa or Sigfox communication is another area where the ISS11 Attenuator System can be used to evaluate device or base station performance. The ISS11 Attenuator System supports frequencies all the way down to 700 MHz.

### **FULL INTEGRATION**

The ISS11 Attenuator System is fully integrated with Bluetest's software platform Flow and Bluetest's Reverberation Test Systems (RTS) RTS25, RTS65 and RTS95 for fast and efficient measurements.

The ISS11 is equipped with rack mount flanges and handles as default.

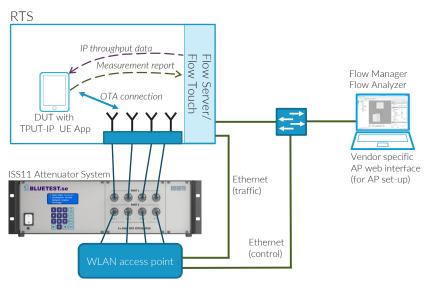
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### FOR A COMPLETE WLAN OTA TEST SOLUTION

Combining ISS11 Attenuator System with Bluetest TRU2 will allow you to do throughput measurements in both uplink and downlink direction. TRU2 is a WLAN reference radio that can be set both to access point mode or WLAN client mode. It would replace the generic WLAN access point in the test setup. TRU2 features calibrated power levels and 802.11ax STA/AP mode with 4 x 4 MIMO in a well shielded enclosure.

### TYPICAL TEST SETUP

The ISS11 Attenuator System is normally used together with Bluetest's reverberation chambers RTS25, RTS65 and RTS95. Bluetest Flow controls the ISS11 Attenuator System through Ethernet. It can also be controlled manually with the front keypad. Both TCP and UDP throughput measurements are supported and the tested device reports back the amount of received data using a small application available for most of the common operating systems.



Configuration examples for measurements on 802.11ax stations

#### **TECHNICAL SPECIFICATIONS**

Power Supply	100-240 V AC, 50/60 Hz
Power Consumption	Max 40 W
Size (w x h x d)	450 x 133 x 320 mm (17.7 x 52.4 x 12.6")
Weight	5.5 kg (12 lb)
Operating Temperature Range	+5 to +45° C (41-113° F)
Supported Frequency Range	700 MHz - 8 GHz
Dynamic Range (Typical)	< 6 GHz: 95 dB
	> 6 GHz: 75 dB
Attenuation Step Size (Typical)	1 dB
Insertion Loss at 0 dB Attenuation (Typical)	4-10 dB over frequency range
Return Loss (Typical)	>10 dB
Relative Attenuation Accuracy	+/-0.5 dB
Absolute Attenuation Accuracy (vs. Displayed Value)	+/- 0.25 dB
Input Power	Max 20 dBm
RF-Connectors	N-type 50 ohm Coaxial

## **Bluetest**

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