quadAtten Programmable Attenuator

Module with 4 programmable RF attenuators individually controllable via USB or Ethernet/PoE * 90 dB range * 0.5 dB step

octoBox® quadAtten module contains 4 individually programmable RF attenuators. quadAtten offers the best RF isolation on the market, making it suitable for controlled octoBox wireless testbed environment. With its high power handling, quadAtten can be directly connected to an antenna port of an 802.11 device while maintaining signal linearity. Each of the 4 attenuators is individually programmable.

APPLICATIONS

- Wi-Fi (802.11a/b/g/p/n/ac) and cellular (GSM, UMTS, LTE, FDD, TD-LTE and LTE-Advanced) testing
- Throughput vs. range measurements when used with the octoBox testbed
- RX sensitivity measurements

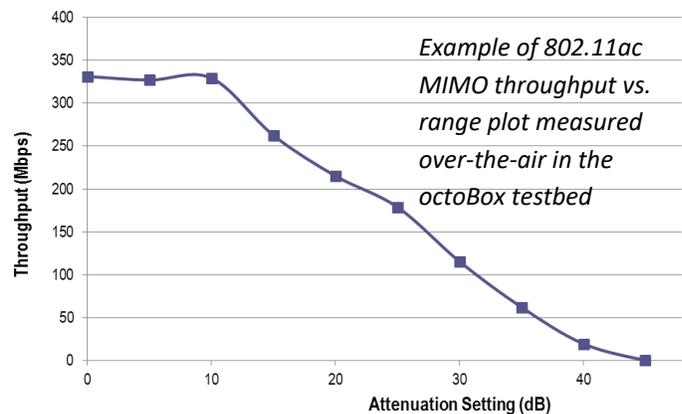octoBox quadAtten is an exceptionally well isolated with filtered USB and Ethernet interfaces.

octoBox quadAtten module

FEATURES & BENEFITS

- Frequency range: DC to 6000 MHz
- Dynamic range: 90 dB
- Step: 0.5 dB
- Insertion loss: 9 dB at 6000 MHz, typical
- 1 dB compression: 30 dBm
- IP3: 55 dBm
- Ethernet/PoE power and control interface
- USB power and control interface
- Programmable via browser

octoBox software suite controls attenuators to produce throughput vs. range and throughput vs. range vs. orientation plots.
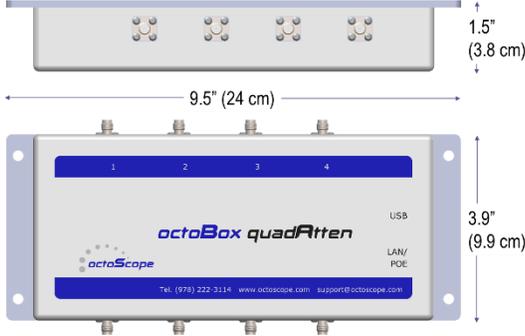
Example of 802.11ac MIMO throughput vs. range plot measured over-the-air in the octoBox testbed

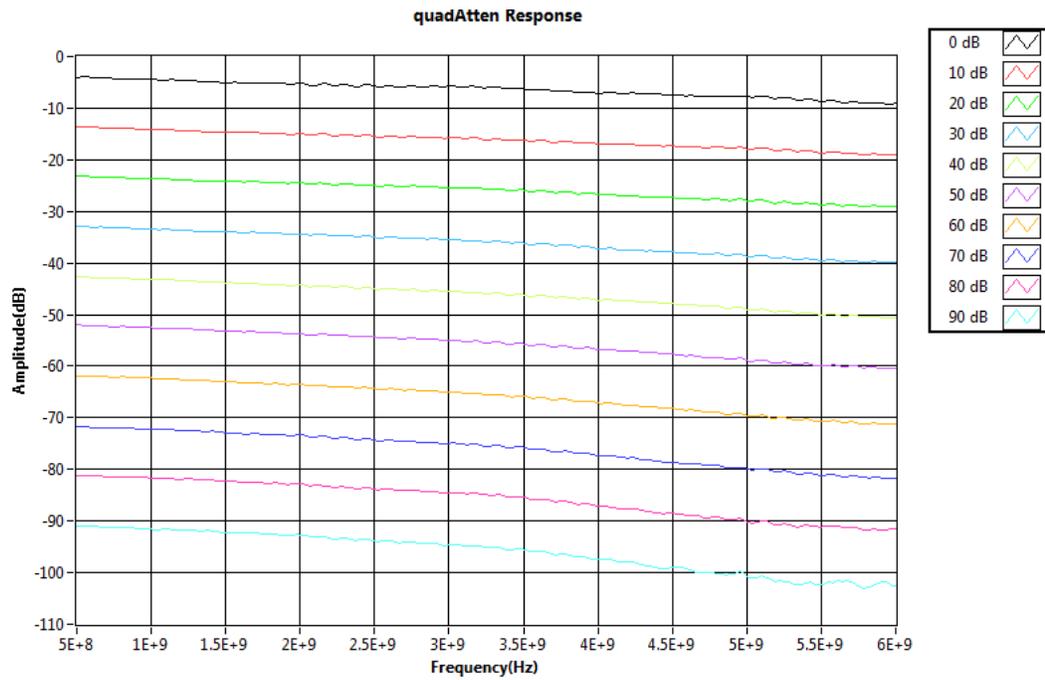*Plot produced by OB-THROUGHPUT script*

SPECIFICATIONS

Parameter	Specification	
Frequency range	DC to 6000 MHz	
Dynamic range	0 to 90 dB	
Insertion loss	<3 GHz: 6 dB typical, 7 dB max	3-6 GHz: 9 dB typical, 10 dB max
RF power	1 dB compression: 30 dBm	IP3: 55 dBm
Resolution and accuracy	Resolution: +/- 0.5 dB steps	Accuracy: +/- 0.6 dB + 6% of value
Isolation between attenuators	80 dB min	
RF connectors	SMA	
Dimensions		
Power	Power over Ethernet (PoE), 2W max	

ATTENUATOR PROGRAMMING

QuadAttenuatorControl command line parameters

	Example	Description
-d	-d COM11 -d QuadName -d 192.168.15.56 -d QA40516-02	Selects the device to use either the com port, name, IP address, or serial number. If –d is not specified will look for a QuadAtten that is connected via USB.
-c	-a 14.5 –c 1	Specifies the channel to set.
-a	-a 14.5 -a 14.5 –c 1	Sets the attenuation value. If no channel is specified will set all channels equal to this value.
-i	-i 192.168.15.56	Sets the IP address of the device.
-g	-g 192.168.15.1	Sets the Gateway address of the device.
-s	-s 255.255.255.0	Sets the subnet mask of the device.
-n	-n SignalAtten1	Sets a custom name used to help identify and address multiple quadAttens. (Max 20 characters no spaces)
-z	-z	Returns information settings of the device. (Name, serial, firmware, IP address, subnet, gateway, MAC address, Ch1/2/3/4 settings)

TYPICAL RESPONSE VS. FREQUENCY

quadAtten Response

CONTACT

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