

OVERVIEW

The QuantumTest™ Signal Generator is a versatile and cost-effective solution designed to emulate a cable plant digital spectrum. Its primary function is to test various Cable Plant Network elements, such as amplifiers, nodes, and more. By generating both the Upstream and Downstream Spectrum of a cable system, the QuantumTest Signal Generator meets the critical demands of cable system operators and is a valuable tool for cable plant equipment vendors and manufacturers of broadband amplifiers.

Upstream and Downstream Spectrum Generation:

Equipped to generate both Upstream and Downstream Spectrum of a cable system.

- Enables thorough testing of cable plant network elements, ensuring comprehensive performance assessments.

Superior MER and Support for Higher Splits: Offers high Modulation Error Ratio (MER) and support for ultra-high splits.

- Ensures a high-quality signal and provides versatility in different testing scenarios.

Support QAM's and/or OFDM's up to 1.8GHz: Supports SC-QAM's up to 1.8GHz or 6 OFDM's or a combination of both.

- Demonstrates readiness to handle complex cable network challenges, catering to modern transmission techniques.

Flexible User Interface with Predefined Configurations:

Provides a user-friendly browser-based interface with predefined configurations.

- Allows creation of customer-specific configurations that combine both OFDM and QAM channels, enhancing adaptability for varied test requirements.

Remote Control and Visualize Feature: Boasts a browser-based user interface that supports remote device control.

- Users can easily see the channel load graphically, offering a more intuitive experience in analyzing the cable system.

DOCSIS 3.1, DOCSIS 3.0 J.83/A/B Multichannel Signal Generator: Capable of producing RF channels to simulate a Cable TV network's full digital channel loading.

- Ideal for a wide range of testing scenarios, reinforcing its versatility in simulating real-world cable TV environments.



Technical Specifications			
Parameter	Units	Downstream	Upstream
Total Frequency Range	MHz	54 MHz -1794 MHz	5 MHz-684 MHz
Flatness	dB	< 1.0 typical, < 2.0 max	< 1.0 typical, < 2.0 max
Return Loss	dB	≤ -14.0 typical	≤ -14.0 typical
QAM format		64-QAM, 256-QAM ¹	64-QAM, 256-QAM ^{1,2}
OFDM format		192 MHz wide, 50 kHz subcarrier spacing. Max 6 channels (combination of US & DS)	192 MHz wide, 50 kHz subcarrier spacing. Max 6 channels (combination of US & DS)
Output Channel Power	dBmV	+25.0 ¹	+35 min ¹
Total Composite Power	dBmV	+49 nominal	+59 min Typ (5 MHz - 204 MHz) +63 min Typ (5 MHz - 684 MHz)
MER SC-QAM	dB (Equal-ized)	+50 min (54 - 1002 MHz) +47 min (1002 - 1794 MHz)	+54 min (5 MHz - 204 MHz) +50 min (5 MHz - 684 MHz)
Tilt	dB	0 dB to 26 dB (in 0.1dB increments)	0 dB to 6 dB (in 0.1dB increments)
Isolation US to DS	dB	60 Min	60 Min

Notes:

1. Supports Annex B
2. Upstream QAM signals are ITU based J-83. Not DOCSIS 6.4MHz

General Specifications		
Parameter	Units	
Operating Temperature	°C	0 to 50
Operating Humidity	-	5 to 95 % (non-condensing)
RF Connectors	-	75 ohm, female F-connector
Ethernet Connector	-	RJ45 (non-POE Networks only)
Local Connector	-	USB (Type A)
Dimensions	-	11.8 x 18.9 x 3.2 inches 299.7 x 480.1 x 80.2 mm
Weight	lbs	14.5
AC Voltage	volt	90 - 230
Total Power	W	< 100

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