1.8 GHz
CABLE PLANT SIGNAL GENERATOR

Features

The AOI Cable Plant Signal Generator (CPSG) is a 2-RU shelf that can generate OFDM and 256-QAM signals from 54MHz to 1794MHz. It is intended to simulate a cable TV network with full channel loading.

- OFDM (192MHz wide, QAM4096) and 256-QAM (ITU-J.83B) signals from 54MHz to 1794MHz
- 256-QAM output at +22 dBmV / channel
- Pre-configured spectrum selection for quick selection with customized channel loading option
- 1 RF Output Port, 75-ohm F-connector
- Local Control & Monitoring GUI via Ethernet 10/100 Port
- Future features available through remote software updates
- USB port provides access to advanced features

Applications

- Test nonlinearities, micro reflections, distortions of the cable plant under 1.8 GHz loading
- Drive Node/Amps with full 1.8 GHz of spectrum to test performance
- Test hybrid amplifiers (components) under full test load

Technical Specifications

Parameter	Unit	RF Output
Frequency range	MHz	54MHz-1794MHz RF output, available with the following software defined configurations: 1) 192MHz-OFDM starting at 54MHz, and 6MHz-wide 256-QAMs at 258MHz-1794MHz, 2) 6MHz-wide 256-QAMs at 54MHz-1584MHz, and 192MHz-OFDM starting at 1602MHz, 3) 6MHz-wide 256-QAMs at 54MHz-1218MHz.
Flatness	dB	<2.0
Return Loss	dB	≤-16
QAM		256-QAM (ITU-J83.B)
OFDM		192MHz wide, QAM4096, 50KHz subcarrier spacing
Downstream Output Power Range	dBmV	+20 dBmV / 6MHz
Total Channel Power	dBmV	46.6
MER SC-QAM	dB	≥47

General Specifications	
Operating Temperature	0 to 50° C
Operating Humidity	5 to 95 % (non-condensing)
RF Connectors	75 Ω female F-connector
Ethernet Connector	RJ45
Local Connector	USB (Type B)
Dimensions	11.8 x 18.9 x 3.2 inches 299.7 x 480.1 x 80.2 mm
Weight	14.5 lbs. 6.5 kg
AC Voltage	90 – 230 AC
Total Power	< 100 W

Remote PHY Part Numbers	
CPSG-5102	Cable Plant Signal Generator

About Applied Optoelectronics

Applied Optoelectronics Inc. (AOI) is a leading developer and manufacturer of advanced optical products, including components, modules, and equipment. AOI's products are the building blocks for broadband fiber access networks around the world, where they are used in the CATV broadband, internet data center, and fiber-to-the-home markets. AOI supplies optical networking lasers, components and equipment to tier-1 customers in all three of these markets. In addition to its corporate headquarters, wafer fab and advanced engineering and production facilities in Sugar Land, TX, AOI has an R&D lab in Atlanta, Georgia, and engineering and manufacturing facilities in Taipei, Taiwan and Ningbo, China. For additional information, visit www.ao-inc.com.