

OPG-04X15

4-Channel 15 Gbps Data Pattern Generator



Overview

The OPG04X15 is the industry's most compact, cost-effective, easy-to-use 4-channel 15Gbps data pattern generator (PPG) for testing components, cables and systems in R&D and manufacturing environments. The OPG04X15 incorporates four pattern generators, and internal reference clocks, in one compact module to simultaneously test four channels at data rates up to 14.025 Gb/s. The OPG04X15 also has an option to operate each channel at a different data rate. The OPG04X15 is offered with an RS-232 or USB interface and a standard 2-year warranty.

An intuitive Graphical User Interface enables easy point-and-click operation. Software drivers are available for incorporating the OPG04X15 into test automation suites using programs like LabVIEW, VisualBASIC and VEE.

Applications

- Testing of optical transceiver modules (SFP+, XFP, QSFP, CFP), transponders, line-cards, and subsystems
- Testing of active optical cables, RF cables
- Testing of opto-electronic components and devices (TOSA, ROSA, lasers, etc...)
- Testing of Gb/s ICs, PCBs, electronic modules, subsystems, and systems
- Serial bus and high-speed backplanes
- Source for 40Gb/s test platforms

Key Features

- ▶ **Four Data Generators in one compact unit**
- ▶ **Internal Reference Clock**
- ▶ **Data Output Amplitude Control**
- ▶ **Multiple Patterns: PRBS, User-defined**
- ▶ **Intuitive GUI**
- ▶ **Easy-to-Use, Compact and Cost-Efficient**
- ▶ **2-year Warranty**

Preset Data Rates

SONET / SDH	
OC 192: STS-192 / STM-64	9.95328 Gbps
G.709	10.709 Gbps
ETHERNET	
10G BASE-T	10 Gbps
10G BASE-R (LAN/PHY)	10.3125 Gbps
10G BASE-R OUT 2 FEC	11.096 Gbps
FIBRE CHANNEL	
8.5G FC	8.5 Gbps
10 x FC (10G FC)	10.519 Gbps
10G FC with FEC	11.317 Gbps
16G FC	14.025 Gbps
INFINIBAND & HDMI	
4 x Infiniband	10 Gbps
HDMI 1.3	10.2 Gbps

Additional Preset Data Rates available on request

Specifications

Parameter	Min	Typ	Max	Units
Data Output Type	SMA Female, AC-coupled, Differential.			
Data Patterns	PRBS: $2^7-1, 2^9-1, 2^{11}-1, 2^{15}-1, 2^{23}-1, 2^{31}-1$; 1010 pattern, 20 bits user-defined			
Data Rate Range	8.5		14.025	Gbps
Additional data rates (optional)	1.25		8.5	Gbps
Frequency Accuracy			± 50	ppm
Output Amplitude (single-ended)	100		400	mV _{p-p}
Data Rise/Fall Time, (20 – 80%) ⁽¹⁾		32		ps
Data Output RMS Jitter ⁽¹⁾		1.8		ps
Trigger Output Amplitude	300			mV _{p-p}
Optical interface	MSA compliant SFP+ ports (LC connector)			

System Specifications

PARAMETER	MIN	MAX	UNIT
Chassis Electrical Voltage	100	240	VAC
Operating Temperature Range	5	45	°C
Storage Temperature Range	-40	70	°C
Dimensions (L x W x H)	300 x 240 x 64		mm ³ 12 x 9.5 x 2.5 inch ³
PC Interface	USB/RS-232		
Standard Warranty	2 years		

Software



Ordering Information

OPG04X15-X-X-X-X

- X: Other Custom Options
- 0: No Optical Transceiver;
- 1: Optical Transceiver (SFP+) 850nm
- 2: Optical Transceiver (SFP+) 1310nm
- 3: Optical Transceiver (SFP+) 1550nm
- 4: Optical Transceiver (SFP+) with High-sensitivity APD Receiver
- P: Preset Standard Data Rates
- C: Custom Data Rates
- V: Variable Data Rate
- E: Electrical outputs only
- O: Optical outputs only
- B: Both electrical and optical outputs

Accessories Included

- User Software
- User Manual
- Power cord
- PC Interface cable

Contact Optellent Sales for your custom needs (fewer channels, specific number of optical and electrical channels, etc.)