

# OPG-04X28

## 4-Channel 28 Gbps Data Pattern Generator



### Overview

The OPG04X28 is the industry's most compact, cost-effective, easy-to-use 4-channel 28Gbps data pattern generator (PPG) for testing components, cables and systems in R&D and manufacturing environments. The OPG04X28 incorporates four pattern generators, and internal reference clocks, in one compact module to simultaneously test four channels at data rates up to 28.05 Gb/s. The OPG04X28 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 OPG04X28 into test automation suites using programs like LabVIEW, VisualBASIC and VEE.

### Applications

- Testing of optical transceiver modules (QSFP+, CFP, CXP), 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 100Gb/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

<b>25 Gbps</b>	
100 GbE	25.78125 Gbps
OTU4	27.95 Gbps
32GFC	28.05 Gbps
<b>ETHERNET</b>	
10G BASE-T	10 Gbps
10G BASE-R (LAN/PHY)	10.3125 Gbps
10G BASE-R OUT 2 FEC	11.096 Gbps
<b>FIBRE CHANNEL</b>	
10 x FC (10G FC)	10.519 Gbps
10 x FC with FEC	11.317 Gbps
16G FC	14.025 Gbps
<b>INFINIBAND &amp; HDMI</b>	
4 x Infini Band	10 Gbps
HDMI 1.3	10.2 Gbps

Additional Preset Data Rates available on request

## Specifications

Parameter	Min	Typ	Max	Units
Data Output Type	2.92 mm Female, AC-coupled, Differential.			
Data Patterns	PRBS: 2 <sup>7</sup> -1, 2 <sup>9</sup> -1, 2 <sup>11</sup> -1, 2 <sup>15</sup> -1, 2 <sup>23</sup> -1, 2 <sup>31</sup> -1; 1010 pattern, 64 bits user-defined			
Data Rate Range	25		28.05	Gbps
Additional Data Rates (optional)	10		14.25	Gbps
Frequency Accuracy			± 50	ppm
Output Amplitude (single-ended)	100		400	mV <sub>p-p</sub>
Data Rise/Fall Time, (20 – 80%) <sup>(1)</sup>		20		ps
Data Output RMS Jitter <sup>(1)</sup>		1		ps
Trigger Output Amplitude	300			mV <sub>p-p</sub>

## 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 12 x 9.5 x 2.5		mm <sup>3</sup> inch <sup>3</sup>
PC Interface	USB/RS-232		
Standard Warranty	2 years		

## Software



## Ordering Information

OPG04X28-E-X-0-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
- **I**: Independent Data Rate for each channel
- **E**: Electrical outputs only

### Accessories Included

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

Contact Optellent Sales for your custom needs

Specifications are subject to change without notice.

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