

# OPGX280

## 28 Gbps Compact Data Pattern Generator



### Overview

The OPTELLENT OptoBERT™ OPBX280 is a cost-effective easy-to-use 28 Gbps data pattern generator (PPG) for testing components, cables, and systems in R&D and manufacturing environments at data rates up to 28 Gb/s. The OPGX280 incorporates an internal reference clock, and a pattern generator in an extremely compact module. The OPGX280 is offered with 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 OptoBERT into test automation suites using programs like LabVIEW, VisualBASIC, HP VEE.

### Applications

- ▶ Testing of optical transceiver modules, transponders, linecards, and subsystems
- ▶ 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 backplane design
- ▶ Production and compliance testing

### Key Features

- ▶ Compact data pattern generator
- ▶ Internal Reference Frequency
- ▶ Differential Data Interfaces
- ▶ Multiple Patterns: PRBS and User-defined
- ▶ Intuitive GUI
- ▶ Easy-to-Use, 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

10 G Preset Data Rates available as custom data rate option

## Pattern Generator

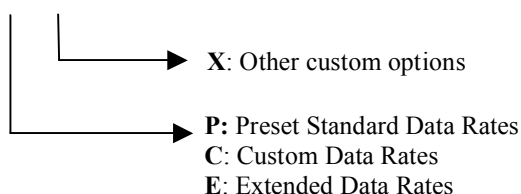
Parameter	Min	Typ	Max	Units
Data Output Type	NRZ Differential			
Termination	AC-Coupled			
Data Patterns	<ul style="list-style-type: none"> <li>• PRBS: <math>2^7-1</math>, <math>2^9-1</math>, <math>2^{11}-1</math>, <math>2^{15}-1</math>, <math>2^{23}-1</math>, <math>2^{31}-1</math>; 101010...pattern</li> <li>• User-defined: 64 bits</li> </ul>			
Data Rate Range	25		28.05	Gbps
Extended Data Rate Range	9.9		14.025	Gbps
Frequency Accuracy			$\pm 50$	ppm
Output Amplitude (peak-to-peak)	300		800	mV <sub>pp</sub>
Data Rise Time, (20 – 80%)		15		ps
Data Fall Time, (20 – 80%)		15		ps
Data Output RMS Jitter		1.2		ps
Error Injection	$\sim 2.0E-10$ , $\sim 2.0E-9$ , $\sim 2.0E-8$ , $\sim 2.0E-7$ , $\sim 2.0E-6$			
Data Connector	2.92 mm or 2.4 mm Female			
Trigger Output Amplitude	300			mV <sub>pp</sub>
Trigger division ratio		1/64		
Trigger output type	Single-ended, AC-coupled, 50Ω SMA female			

## System & General Specifications

PARAMETER	MIN	MAX	UNIT
Chassis Electrical Voltage	5.0	5.5	V (DC)
Current Drain at Normal Voltage		2.5	A
Operating Temperature Range	5	45	°C
Storage Temperature Range	-40	70	°C
Dimensions (L x W x H)	160 x 106 x 56		mm <sup>3</sup>
	6.4 x 4.25 x 2.25		inch <sup>3</sup>
PC Interface	USB (B)		
Standard Warranty	2 years		

## Ordering Information

OPGX280-X-X



### Accessories Included

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

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