

# OptoBERT™ OPG-X150

## 15 Gbps Data Pattern Generator



### Overview

The OPTELLENT OPGX150 is a cost-effective easy-to-use 15G data pattern generator (PPG) for testing components and systems in R&D and manufacturing environments as well as field installations. The OPGX150 is offered with electrical and an optional optical port. The OPGX150 generates multiple PRBS patterns, popular stress patterns, and user-defined patterns using an internal clock source. An optional input for an external clock source is also available. The OPGX150 comes with a standard 2-year warranty.

An intuitive Graphical User Interface enables easy point-and-click operation. The Optellent OPGX150 software runs on Windows 98/2000/NT/XP and VISTA over USB or RS-232 serial interface via an RJ-45 Connector provided on the front panel.

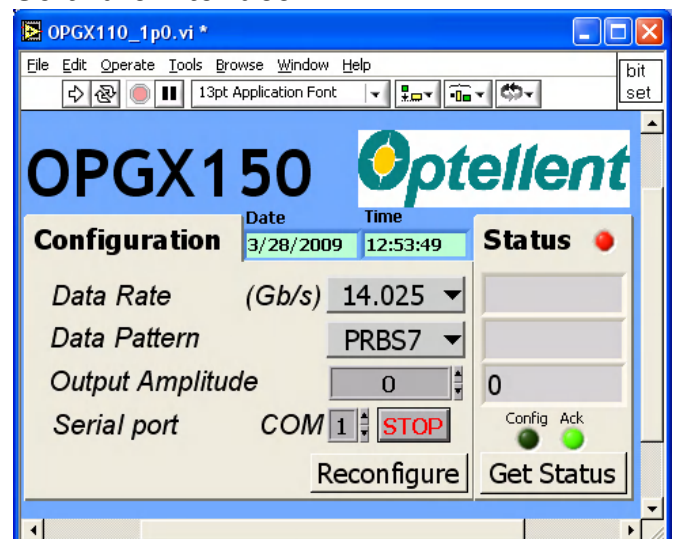
### Applications

- ▶ Testing of optical transceivers, transponders, linecards, and subsystems
- ▶ Testing of opto-electronic components and devices (TOSA, ROSA, lasers, etc...)
- ▶ Testing of Gb/s ICs, electronic modules, subsystems, and systems
- ▶ Serial bus design and high-speed backplane design
- ▶ Compliance testing (EMI, EMC)
- ▶ Installation testing and troubleshooting in optical transport networks

### Key Features

- ▶ Differential Data and Clock Outputs
- ▶ Multiple PRBS Patterns:  $2^7-1$ ,  $2^{23}-1$ ,  $2^{31}-1$
- ▶ Stress Patterns: K28.5, CJPAT, CRPAT
- ▶ User-defined Patterns
- ▶ Low frequency trigger output
- ▶ Intuitive GUI

### Software Interface



## Specifications

Parameter	Min	Typ	Max	Units
<b>Data Output</b>				
Output Type	AC-coupled, Differential			
Output Format	NRZ			
Data Patterns	<ul style="list-style-type: none"> <li>• <b>PRBS:</b> 2<sup>7</sup>-1, 2<sup>23</sup>-1, 2<sup>31</sup>-1; 101010...pattern</li> <li>• <b>Pre-defined:</b> K28.5, CJPAT, CRPAT (Optional)</li> <li>• <b>User-defined:</b> 128 bits to 2000 bits (Optional)</li> </ul>			
Output Amplitude (Single-ended)		300	500	mV
Data Rise/Fall Time, (20 – 80%) <sup>(1)</sup>		16		ps
Data Output RMS Jitter <sup>(1)</sup>		1.7		ps
Error Injection	Single error; 10 <sup>-7</sup> , 10 <sup>-8</sup> , 10 <sup>-9</sup>			
<b>Clock Output</b>				
Output Type	AC-coupled, Differential			
Output Amplitude (peak-to-peak, S.E.)		200		mV <sub>p-p</sub>
Frequency	8.5		14.2	GHz
<b>Trigger Output</b>				
Output Amplitude	300			mV <sub>p-p</sub>
Output Type	AC-coupled, Single-ended			
Electrical connectors	50Ω SMA Female			

(1) Measurements based on PRBS2<sup>31</sup>-1 data at 14.025 Gbps (16GFC)

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## System & General Specifications

PARAMETER	MIN	MAX	UNIT
Chassis Electrical Voltage	100	240	VAC
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)	300 x 240 x 64 12 x 9.5 x 2.5		mm <sup>3</sup> inch <sup>3</sup>
Optical Interface (optional)	Standard SFP+ housing		
PC Interface	RS232		
Standard Warranty	2 years		

## Ordering Information

OPGX150-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
- P: Preset Standard Data Rates
- C: Custom Data Rates
- V: Variable Data Rate

### Accessories Included

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