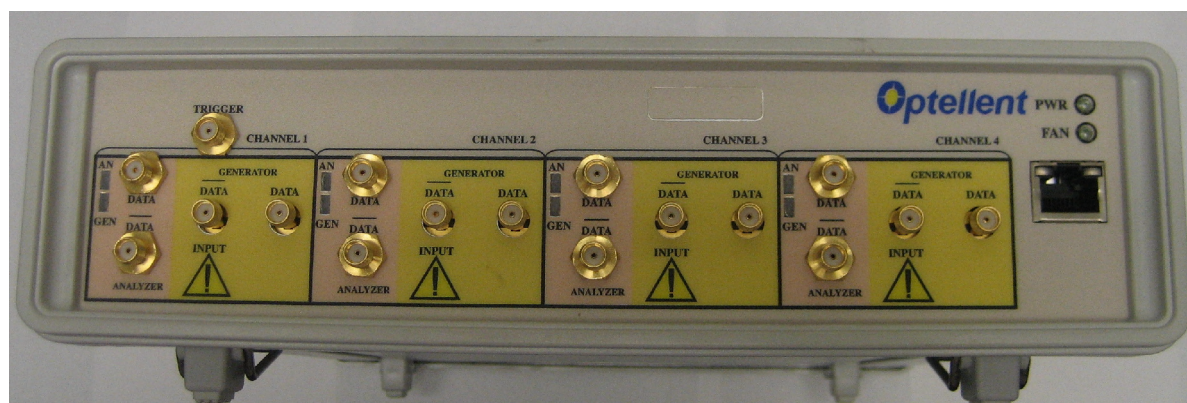


# OptoBERT™ OPB-04X15

## 4-Channel 15 Gbps Bit-Error-Rate Tester (BERT)



### Overview

The OptoBERT™ OPB04X15 is the industry's most compact, cost-effective, easy-to-use 4-channel 15Gbps electrical bit-error-ratio tester (BERT) for testing components, cables and systems in R&D and manufacturing environments. The OPB04X15 incorporates four pattern generators, four BER analyzers, internal reference clocks, and clock recovery circuits in one compact module to simultaneously test four channels at data rates up to 14.025 Gb/s. The OPB04X15 has an option to operate each channel at different data rates especially for cross-talk testing purposes.

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 and VEE.

BER test data from the OptoBERT are output directly to a spreadsheet file without any programming.

### Applications

- Testing of optical transceiver modules (SFP+, XFP, 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 40Gb/s test platforms

### Key Features

- ▶ Four integrated Generators and BER Analyzers in one compact unit
- ▶ Internal Reference Clock
- ▶ Built-in Clock Recovery
- ▶ Data Output Amplitude Control
- ▶ Multiple Patterns: PRBS, User-defined
- ▶ Multiple data rates (1.25 Gb/s to 14.025 Gb/s)
- ▶ Easy-to-Use, Compact and Cost-Efficient
- ▶ 2-year Warranty

### Preset Data Rates

<b>SONET / SDH</b>	
OC 192: STS-192 / STM-64	9.95328 Gbps
G.709	10.709 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>	
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
<b>INFINIBAND &amp; HDMI</b>	
4 x Infiniband	10 Gbps
HDMI 1.3	10.2 Gbps

Additional Preset Data Rates available on request

## Pattern Generator

Parameter	Min	Typ	Max	Units
Data Output Type	SMA Female, AC-coupled, Differential.			
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 <sub>p-p</sub>
Data Rise/Fall Time (20 – 80%) <sup>(1)</sup>		30		ps
Data Output RMS Jitter <sup>(1)</sup>		1.5		ps
Trigger Output Amplitude	300			mV <sub>p-p</sub>
Optical interface (optional)	MSA compliant SFP+ port (LC interface)			

## Error Analyzer

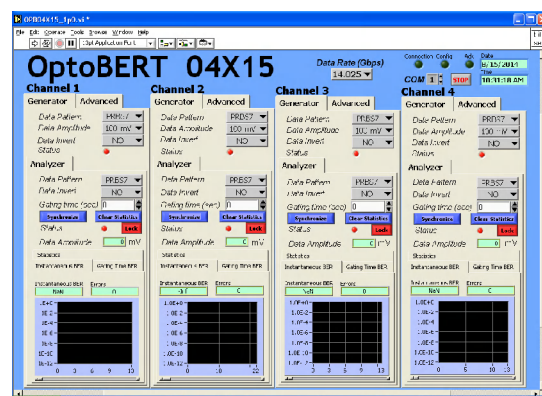
Parameter	Min	Typ.	Max	Units
Input Type	SMA female, AC-coupled, Single-ended			
Data Patterns	PRBS: 2 <sup>7</sup> -1, 2 <sup>9</sup> -1, 2 <sup>11</sup> -1, 2 <sup>15</sup> -1, 2 <sup>23</sup> -1, 2 <sup>31</sup> -1; 1010 pattern, 20 bits user-defined			
Data Rate Range	8.5		14.025	Gbps
Data Input <sup>(1)</sup>	100		1000	mV p-p
Clocking Mode	Built-in clock recovery			

(1) Measurements based on PRBS<sup>23</sup>-1 data at 9.95328 Gbps (OC-192)

## System Specifications

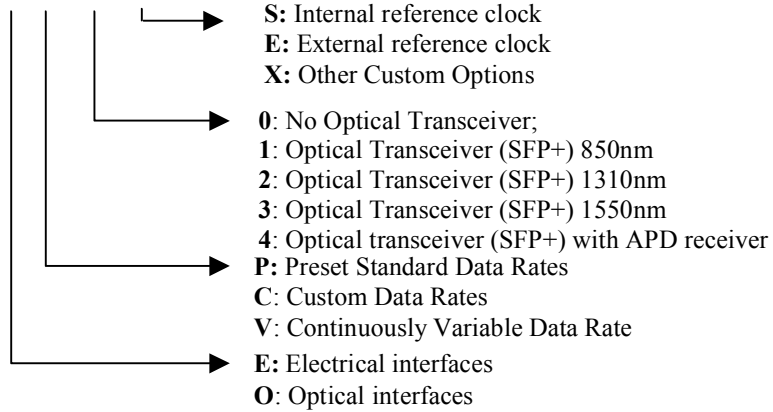
PARAMETER	MIN	MAX	UNIT
Chassis Electrical Voltage	100	240	VAC
Operating Temperature Range	5	45	°C
Storage Temperature Range	-40	70	°C
Dimensions (L x W x H)	300 x 240 x 64		mm <sup>3</sup>
	12 x 9.5 x 2.5		inch <sup>3</sup>
PC Interface	USB/RS-232		
Standard Warranty	2 years		

## Software



## Ordering information

OPB04X15-X-X-X-X



Contact Optellent Sales for your custom needs (mix of electrical and optical channels, custom data rates, etc.)

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