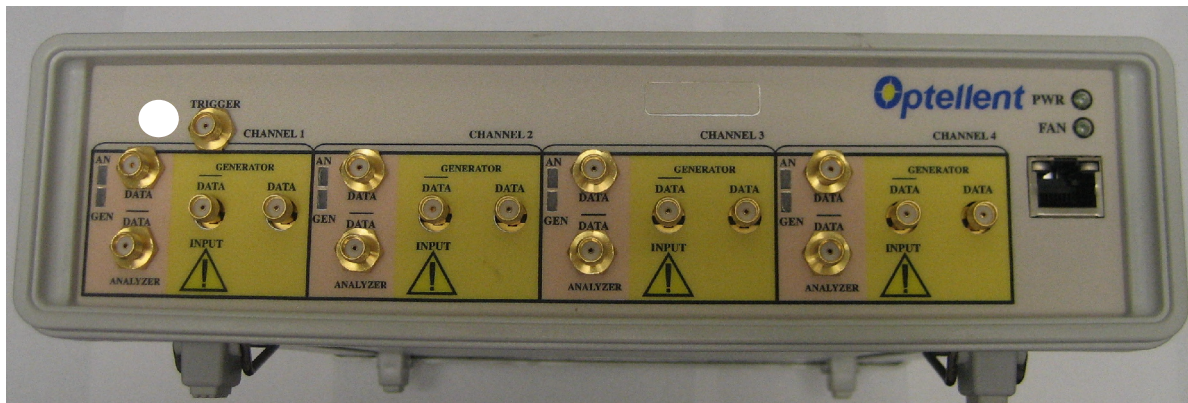


OptoBERT™ OPB-04X10

4-Channel 11 Gbps Bit-Error-Rate Tester (BERT)



Overview

The OptoBERT™ OPB04X10 is the industry's most compact, cost-effective, easy-to-use 4-channel 11Gbps electrical bit-error-ratio tester (BERT) for testing components, cables and systems in R&D and manufacturing environments. The OPB04X10 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 11.5 Gb/s. The OPB04X10 has an option to operate each channel using an independent reference clock 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 Clocks (single/quad)**
- ▶ **Internal Clock Recovery**
- ▶ **Data Output Amplitude Control**
- ▶ **Multiple Patterns: PRBS, User-defined**
- ▶ **Independent data/databar analysis option**
- ▶ **Easy-to-Use, Compact and Cost-Efficient**
- ▶ **2-year Warranty**

Preset Data Rates

SONET / SDH	
0C-192: STS-192 / STM-64	9.95328 Gbps
G.709	10.709 Gbps
ETHERNET	
10GBASE-T	10 Gbps
10GBASE-R (LAN/PHY)	10.3125 Gbps
10GBASE-R OTU2 FEC	11.096 Gbps
FIBRE CHANNEL	
10 x FC (10GFC)	10.519 Gbps
10GFC with FEC	11.317 Gbps
INFINIBAND & HDMI	
4 x Infiniband	10 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	9.5*		11.5	Gbps
Frequency Accuracy			± 50	ppm
Output Amplitude (single-ended)	40		400	mV _{p-p}
Data Rise/Fall Time (20 – 80%) ⁽¹⁾		28		ps
Data Output RMS Jitter ⁽¹⁾		1.5		ps
Trigger Output Amplitude	300			mV _{p-p}
Optical interface (optional)	MSA compliant SFP+ port (LC interface)			

* 8.9 Gbps data rate available as an option

Error Analyzer

Parameter	Min	Typ.	Max	Units
Input Type	SMA female, AC-coupled, Single-ended			
Data Patterns	PRBS: 2 ⁷ -1, 2 ³¹ -1; 101010... pattern, 64 bits user-defined			
Data Rate Range	9.5*		11.5	Gbps
Data Input ⁽¹⁾ (Single-ended)**	100		1000	mV p-p
Data to databar switching speed ***			100	ns
Clocking Mode	Built-in clock recovery			

(1) Measurements based on PRBS2³¹-1 data at 9.95328 Gbps (OC-192)

* 8.9 Gbps data rate available as an option

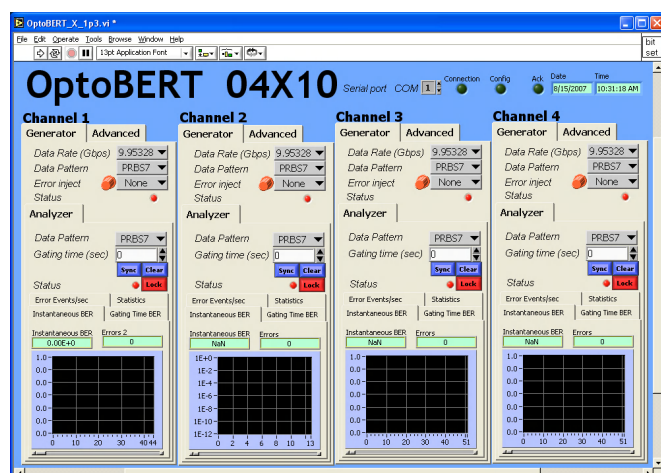
** Applicable to data or databar input if switching option (-IDB) is available

*** If data/databar switch option (-IDB) is available

System Specifications

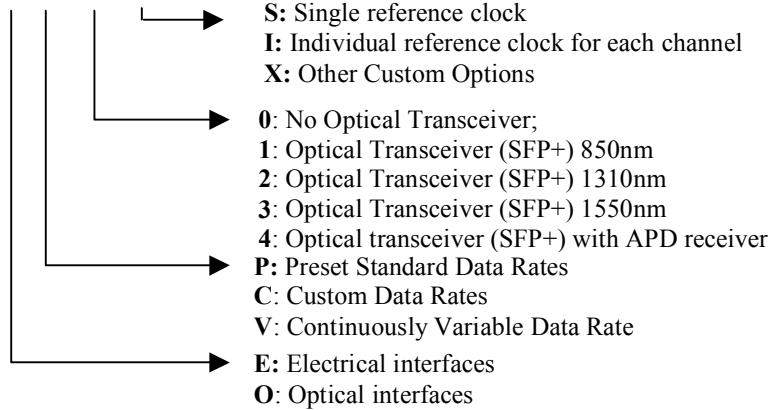
PARAMETER	MIN	MAX	UNIT
Chassis Electrical Voltage	100	240	VAC
Operating Temperature Range	5	45	°C
Storage Temperature Range	-40	70	°C
Dimensions (L x W x H)	300 x 240 x 64		mm ³ 12 x 9.5 x 2.5 inch ³
PC Interface	USB/RS-232		
Standard Warranty	2 years		

Software



Ordering information

OPB04X10-X-X-X-X



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

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