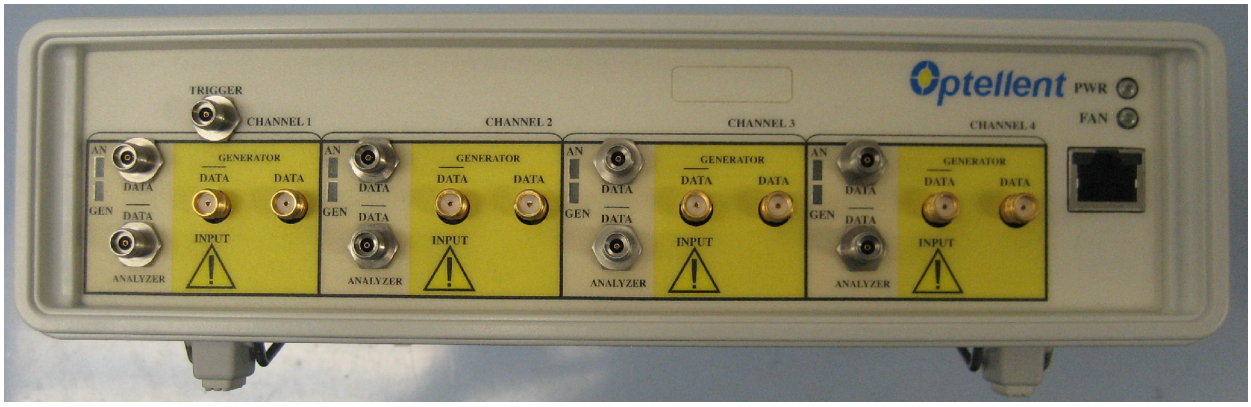
OptoBERT™ OPB-04X28

4-Channel 28 Gbps Bit-Error-Rate Tester (BERT)



Overview

The OptoBERT™ OPB04X28 is the industry's most compact, cost-effective, easy-to-use 4-channel 28Gbps electrical bit-error-ratio tester (BERT) for testing components, cables and systems in R&D and manufacturing environments. The OPB04X28 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 28.05 Gb/s. The OPB04X28 has input equalization algorithms to counteract signal degradation through input cables.

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 (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 integrated Generators and BER Analyzers in one compact unit**
- **Internal Reference Clock**
- **Built-in Clock Recovery**
- **Data Output Pre-emphasis Control**
- **Multiple Patterns: PRBS, User-defined**
- **Autonomous input equalization**
- **Easy-to-Use, Compact and Cost-Efficient**
- **2-year Warranty**

Preset Data Rates

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

Additional Preset Data Rates available on request

Optellent Inc. Phone: (408) 230-1329 Fax: (408) 228-8976 Email: sales@optellent.com http://www.optellent.com/

Pattern Generator

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

Error Analyzer

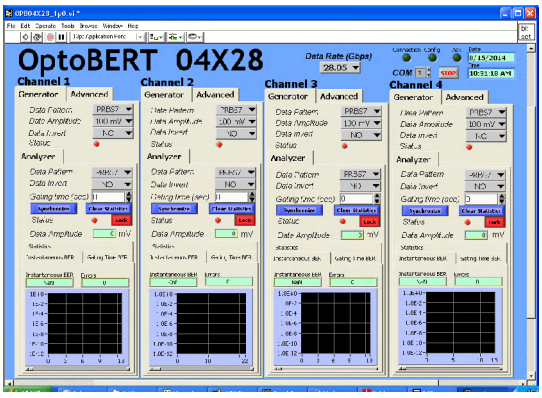
Parameter	Min	Typ.	Max	Units
Input Type	2.92mm female, AC-coupled, Single-ended			
Input equalization	Autonomous adaptation using DFE and CTLE			
Data Patterns	PRBS: 2^7-1,2^9-1,2^{11}-1,2^{15}-1,2^{23}-1,2^{31}-1; 1010 pattern, 64 bits user-defined			
Data Rate Range	25		28.05	Gbps
Additional Data Rate range (optional)		10.3125		Gbps
Data Input (1) (Single-ended)	100		1000	mV p-p
Clocking Mode	Built-in clock recovery			

(1) Measurements based on PRBS2^{31}-1 data at 28.05 Gbps

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^3 $inch^3$
PC Interface	USB/RS-232		
Standard Warranty	2 years		

Software



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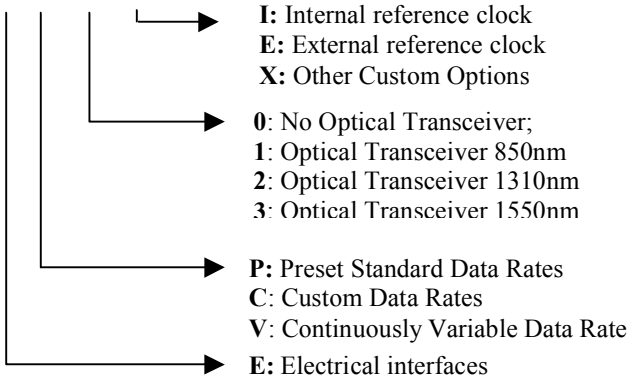
Ordering information

OPB04X28-E-X-0-X



Contact Optellent Sales for your custom needs