

OptoBERT™ OPB-400G

8-Channel 30 Gbaud/s PAM4 Bit-Error-Rate Tester (BERT)



Overview

The OptoBERT™ OPB-BERT-400G-P8 is the industry’s most compact, cost-effective, easy-to-use 8-channel 30Gbaud/s electrical bit-error-ratio tester (BERT) for testing components, cables and systems in R&D and manufacturing environments. The OPB-BERT-400G-P8 incorporates eight pattern generators, eight BER analyzers, internal reference clocks, and clock recovery circuits in one compact module to simultaneously test eight channels at data rates up to 30 Gb/s. The OPB-BERT-400G-P8 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.

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

Applications

- Testing of optical transceiver modules (QSFP-DD, OSFP, QSFP+, CFPx, CXP), transponders, line-cards, and subsystems
- Source for 400Gb/s test platforms
- Testing of active optical cables, RF cables
- Testing of opto-electronic components and devices (TOSA, ROSA, lasers, etc...)
- Testing of ICs, PCBs, electronic modules, subsystems, and systems

Key Features

- ▶ Eight integrated Generators and BER Analyzers in one compact unit
- ▶ Internal Reference Clock
- ▶ Supports PAM4 and NRZ
- ▶ Data Output Pre-emphasis Control
- ▶ Multiple Patterns: PRBS, User-defined
- ▶ Autonomous input equalization
- ▶ Easy-to-Use, Compact and Cost-Efficient
- ▶ 2-year Warranty

PAM4 and NRZ data rate options

PAM4 data rates

24.33024	25.78125	26.5625
27.890625	28.125	30 GBaud

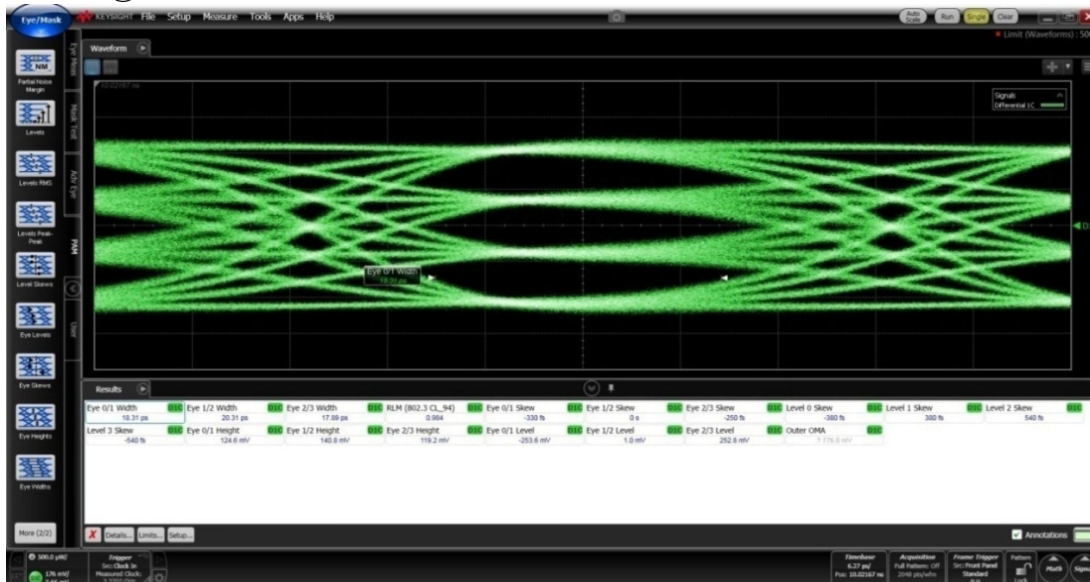
NRZ data rates

9.8304	9.95328	10.1376	10.3125
10.709225	11.049107	11.095727	11.270089
11.317642	14.025	24.33024	25
25.78125	26.5625	27.95249325	28.05 Gbps

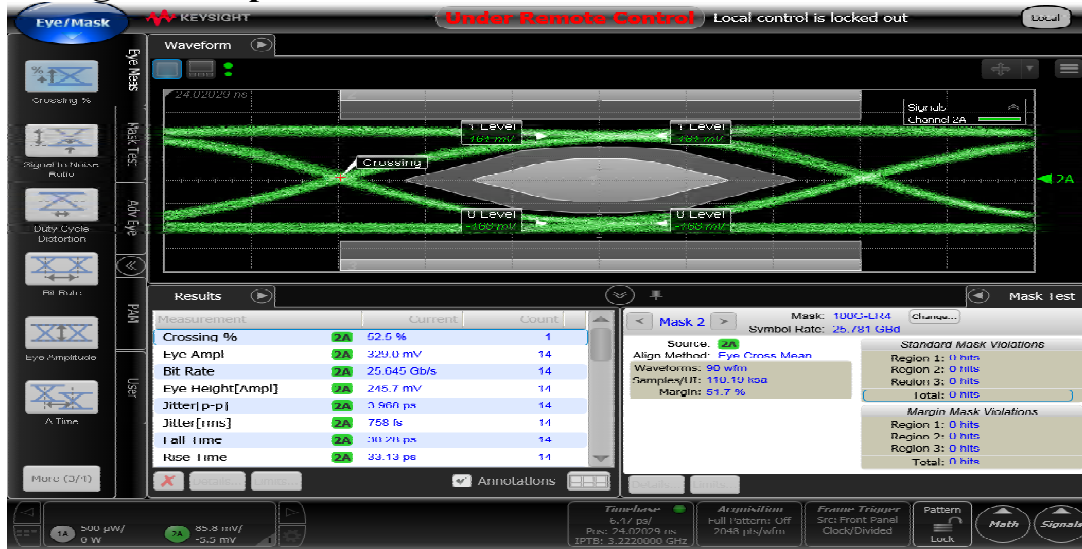
Electrical Specifications

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	NOTE
Data Rate	DR		26.5625		GBaud	24,33/25.78/26.5 625/27.9/28.125/ 30
No. of channels			8			
NRZ Pattern		PRBS 7/9/11/13/15/16/23/31				
PAM4 Pattern		PRBS 7/9/11/15/16/23/PRBS13Q/PRBS31Q JP03A/JP03B/LIN/CJT/SSPRQ				
Signal Termination		AC-Coupled				
Data Output Amplitude	V _{diff}		600		mV	
Data Output Resistance	R _{dout}	85	100	115	Ω	Differential
Data input Resistance	R _{din}	85	100	115	Ω	
Trigger output Frequency	f _{trigger}		3.2225		Gbps	Data rate / 8
Equalizer		CTLE & DFE				
Synchronization		Automatically on level and phase				
Connector		2.92 mm RF				

PAM4@26.5625 GBaud



NRZ@25.78Gbps



Software Interface

System Specifications

PARAMETER	MIN	MAX	UNIT
Chassis Electrical Voltage	100	240	VAC
Operating Temperature Range	10	40	°C
Storage Temperature Range	-40	70	°C
Dimensions (L x W x H)	350 x 450 x 86		mm ³
	13.8 x 17.7x 3.4		inch ³
PC Interface	USB/RS-232		

Contact Optellent Sales for your custom needs