

OptoBERT™ OPBX280

28 Gbps Compact Bit-Error-Rate Tester (BERT)



Overview

The OPTELLENT OptoBERT™ OPBX280 is a cost-effective easy-to-use bit-error-ratio tester (BERT) for testing components and systems in R&D and manufacturing environments at data rates up to 28 Gb/s. The OPBX280 incorporates an internal reference clock, a pattern generator, clock recovery, and a BER analyzer, in an extremely compact module. The OPBX280 is offered with USB interface and a standard 2-year warranty.

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, HP VEE.

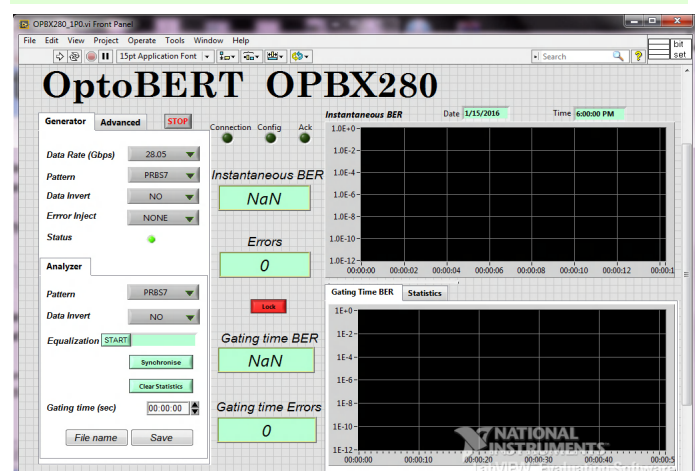
BER test data from the OptoBERT are output directly into a spreadsheet file without any programming.

Applications

- ▶ Testing of optical transceiver modules, transponders, linecards, and subsystems
- ▶ 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 backplane design
- ▶ Production and compliance testing

Key Features

- ▶ Integrated Generator and Analyzer
- ▶ Internal Reference Frequency
- ▶ Differential Data Interfaces
- ▶ Multiple Patterns: PRBS and User-defined
- ▶ Intuitive GUI and Automated Test Report
- ▶ Easy-to-Use, Compact and Cost-Efficient
- ▶ 2-year Warranty



Pattern Generator

Parameter	Min	Typ	Max	Units
Data Output Type	NRZ Differential			
Termination	AC-Coupled			
Data Patterns	<ul style="list-style-type: none"> • PRBS: 2^7-1, 2^9-1, $2^{11}-1$, $2^{15}-1$, $2^{23}-1$, $2^{31}-1$; 101010...pattern • User-defined: 64 bits 			
Data Rate Range	25		28.05	Gbps
Extended Data Rate Range	9.9		14.025	Gbps
Frequency Accuracy			± 50	ppm
Output Amplitude (peak-to-peak)	300		800	mV _{p-p}
Data Rise Time, (20 – 80%)		15		ps
Data Fall Time, (20 – 80%)		15		ps
Data Output RMS Jitter		1.2		ps
Error Injection	$\sim 2.0E-10$, $\sim 2.0E-9$, $\sim 2.0E-8$, $\sim 2.0E-7$, $\sim 2.0E-6$			
Data Connector	2.92 mm or 2.4 mm Female			
Trigger Output Amplitude	300			mV _{p-p}
Trigger division ratio		1/64		
Trigger output type	Single-ended, AC-coupled, 50Ω SMA female			

Error Analyzer

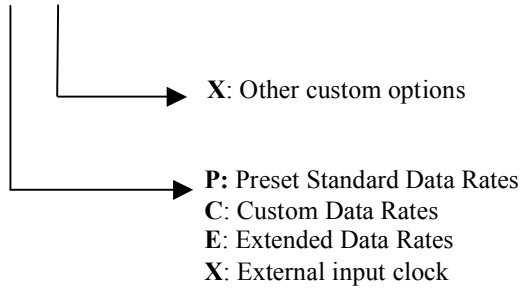
Parameter	Min	Typ.	Max	Units
Input Type	Single-ended or Differential			
Termination	AC-Coupled			
Data Patterns	<ul style="list-style-type: none"> • PRBS: 2^7-1, 2^9-1, $2^{11}-1$, $2^{15}-1$, $2^{23}-1$, $2^{31}-1$; 101010...pattern 			
Data Input	100		1000	mV p-p
Clock methodology	Internal clock recovery			
Connector	2.92 mm or 2.4 mm Female			

System & General Specifications

PARAMETER	MIN	MAX	UNIT
Chassis Electrical Voltage	5.0	5.5	V (DC)
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)	160 x 106 x 56 6.4 x 4.25 x 2.25		mm ³ inch ³
PC Interface	USB (B)		
Standard Warranty	2 years		

Ordering Information

OPBX280-X-X



Accessories Included

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

Specifications are subject to change without notice.

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