

LMBTS10-L 10 Gb/s Bit Error-Rate Tester

Technical Specifications V1.03

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 UC INSTRUMENTS CORP.

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LMBTS10-L 10 Gb/s Bit Error-Rate Tester

The UC INSTRUEMNTS' LMBTS10-L is a costeffective easy-to-use 10G optical and electrical bit-error ratio tester (BERT) for R&D and manufacturing environments as well as field installations. The LMBTS10-L incorporates an internal reference clock, a pattern generator, clock recovery circuits, and a BER analyzer, in one compact module that provides both electrical and optical interfaces at data rates up to 11.5Gb/s. The LMBST10-L is offered with an RS-232 or USB interface.

LMBST10-L are models with built-in device module slot for SFP+ and XFP transceivers, respectively. The PPRBS outputs optical NRZ waveform with bit rate within 9.95~11.32 Gbps, with settable data pattern of 2⁷-1, 2²³-1, 2³¹-1 and a fixed 64-bit user-defined pattern. The BERT system is controlled by external computer via a USB port, with full software support, drivers and programming guide for automation.

Features

- Bit rates from 9.95 ~ 11.32 Gb/s
- PRBS 2⁷-1, 2²³-1, 2³¹-1; user defined pattern , and 64bit definable
- Pre-emphasis output signal functionality
- SFP+/XFP module slot option available
- Computer control via USB
- Cost effective solution for production

Applications

- Testing of optical transceiver modules (SFP+, XFP, X2, Xenpak, XPAK), 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
- Installation testing and troubleshooting in optical transport networks

Specification

System & General Specifications

PARAMETER	MIN	MAX	UNIT
Chassis Electrical Voltage	100	240	VAC
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)	300 x 240 x 64 12 x 9.5 x 2.5		mm ³ inch ³
Optical Interface	Standard SFP+		
PC Interface	USB		

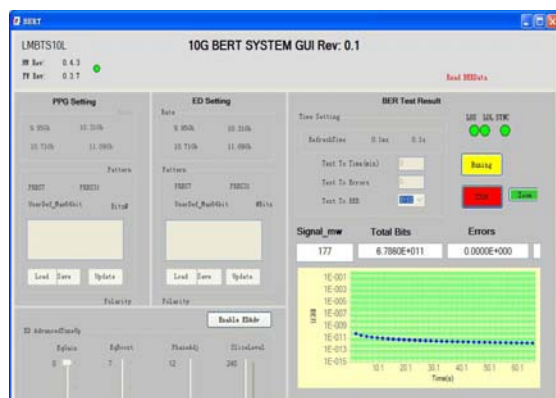
Pattern Generator

Parameter	Min	Typ	Max	Units
Data Output (Electrical)				
Output Type	Differential			
Output Format	NRZ			
Termination	AC-Coupled			
Data Patterns	PRBS : 2 ⁷ -1, 2 ³¹ -1; user defined pattern			
Data Rates (Using the internal clock source)	- OC192 10GBE LAN - OC192 with FEC 10GBE LAN with FEC	9.95328 Gb/s 10.3125 Gb/s 10.709225 Gb/s 11.095727 Gb/s		
Frequency Accuracy			± 50	ppm
Output Amplitude (Differential)	300		800	mV _{p-p}
Data Rise Time, (20 – 80%)		34		ps
Data Fall Time, (20 – 80%)		34		ps
Data Output RMS Jitter		2		ps
Connector	50ohm Nominal, SMA Female			
Data Output (Optical)				
Interface	MSA-Compliant SFP+ Transceiver housing			
Wavelength	Flexible 850nm, 1310nm, 1550nm, DWDM			
Optical Connector	LC			
Trigger Output				
Output Amplitude	300			mV _{p-p}
Output Type	Single-ended, AC-coupled			
Connector	50 . SMA Female			

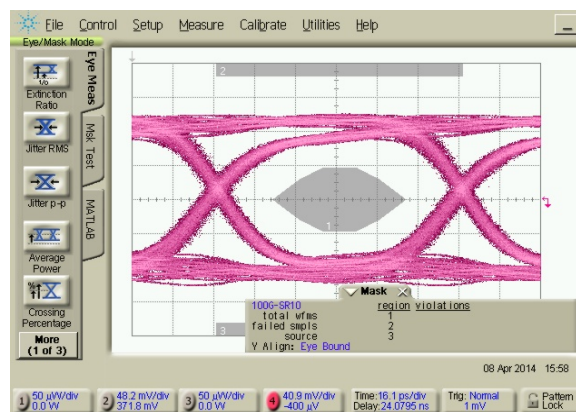
Error Analyzer

Parameter	Min	Typ.	Max	Units
Data Input (Electrical)				
Input Type	Differential			
Termination	AC-Coupled			
Data Patterns	PRBS : 2 ⁷ -1, 2 ³¹ -1; user defined pattern			
Data Rates	Variable from 9.95Gb/s-11.4Bb/s			
Data Input Amp (Differential)	100		1000	mV p-p
Clocking Mode	Built-in clock recovery			
Pattern Synchronization	Automatic			
Connector	50ohm SMA Female			
Data Input (Optical)				
Interface	SFP+ housing provided as a standard feature MSA-Compliant SFP+ Transceiver (Optional)			
Wavelength	Flexible 850nm, 1310nm, 1550nm, CWDM, DWDM			
Fiber Type	Multimode and Single Mode Fiber			
Optical Connector	LC			

Software Interface



Typical Performance



Accessories Included:

User Software

User Manual

Power cord

PC Interface cable

Contact Information

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