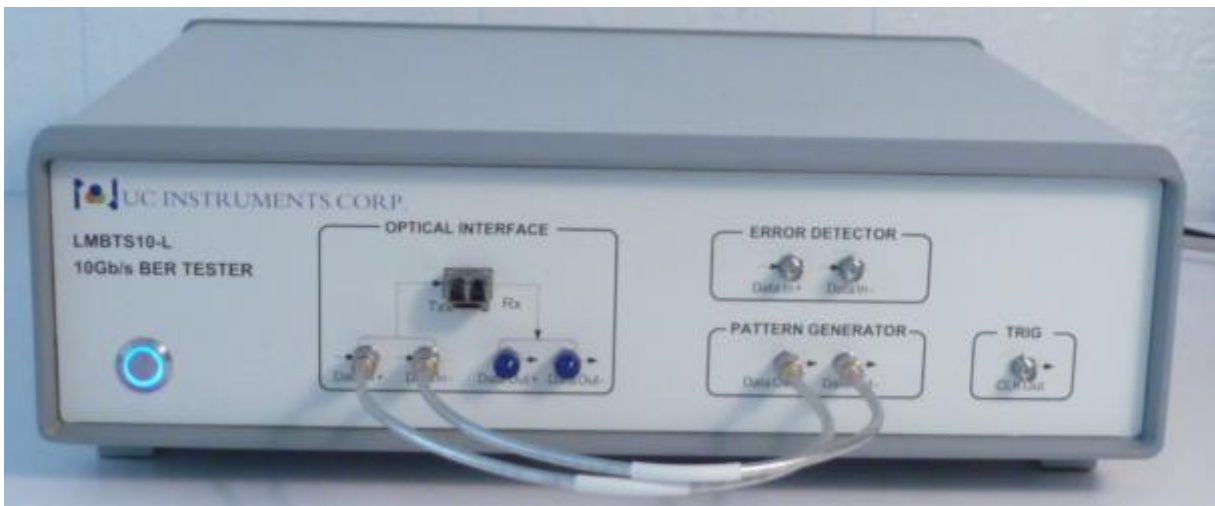


LMBTS10-L 10 Gb/s Bit Error-Rate Tester

Technical Specifications V1.02

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 UC INSTRUMENTS CORP.

www.ucinstruments.com

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)	<ul style="list-style-type: none"> • 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			

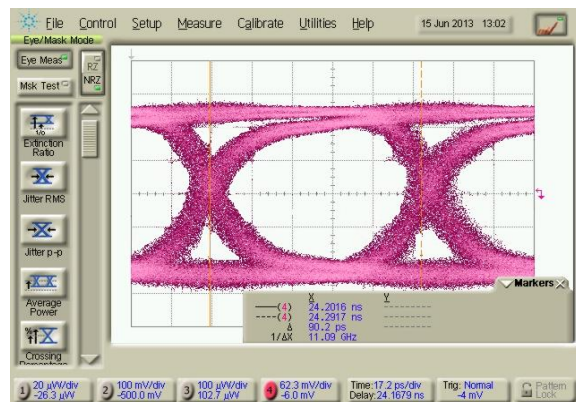
Error Analyzer

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

UC INSTRUMENTS' Test and Measurement Support, Services and Assistance

UC INSTRUMENTS provides high performance, high value, low cost, affordable test and measurement instruments solution for our customers. Our extensive support sources can help you choose right UC INSTRUMENTS' products for your application and apply them successfully. Every instruments and system we sell a global warranty. All of our instruments with at least 18 months factory warranty.

Our Promise

All of UC INSTRUMENTS' test and measurement instruments and system will met its advertised performance and functionality. When you select UC INSTRUMENTS' products, we can verify if it is work properly, help with products operation, and provides the basic measurement assistance for the use of special capabilities.

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