

CA9803 4 x 28 Gb/s Bit Error-Rate Tester

Technical Specifications V1.01

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 UC INSTRUMENTS CORP.

www.ucinstruments.com

CA9803 4 x 28 Gb/s Bit Error-Rate Tester

The UC INSTRUEMNTS CA9803 is a high performance, easy to use, all-in-one, costeffective, 4 x 28 Gb/s Bit Error-Rate Tester(BERT) for current 100 G TOSA/ROSA components R&D and manufacturing environments as well as field installations. The CA9803 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 28 Gb/s. The CA9803 is offered with an RS-232 or USB interface.

The PPRBS outputs optical NRZ waveform with bit rate within 25 ~ 28 Gbps, with settable data pattern of 2^7-1 , 2^9-1 , $2^{11}-1$, $2^{15}-1$, $2^{23}-1$, $2^{31}-1$, 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 25 ~ 28 Gb/s
- PRBS 2^7-1 , 2^9-1 , $2^{11}-1$, $2^{15}-1$, $2^{23}-1$, $2^{31}-1$; user defined pattern , and 64bit definable
- Pre-emphasis output signal functionality
- 4 CH PPG and 4 CH Error Detector were integrated in one compact mainframe
- 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
PC Interface	USB		

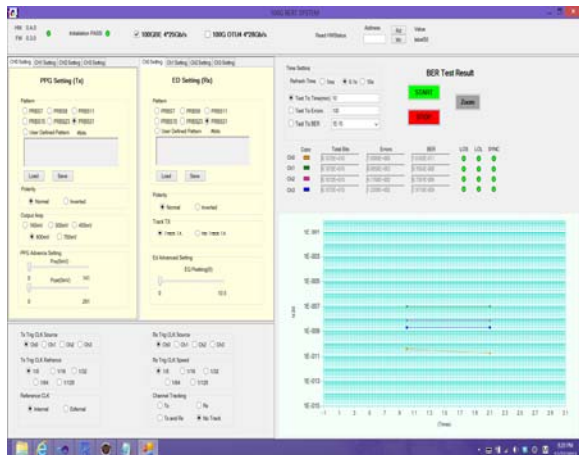
Pattern Generator

Parameter	Min	Typ	Max	Units
Data Output (Electrical)				
Output Type	Differential			
Output Format	NRZ			
Termination	DC-Coupled			
Data Patterns	PRBS : 2 ⁷ -1, 2 ⁹ -1, 2 ¹¹ -1, 2 ¹⁵ -1, 2 ²³ -1, 2 ³¹ -1; user defined pattern			
Data Rates	<ul style="list-style-type: none"> • 100GBE 4x25.78Gb/s • OTU4 4x27.95Gb/s 			
Frequency Accuracy			± 50	ppm
Output Amplitude (Differential)	160		750	mV _{p-p}
Data Rise Time, (20 – 80%)		14		ps
Data Fall Time, (20 – 80%)		14		ps
Data Output RMS Jitter		1		ps
Connector	50ohm Nominal, K Female			
Trigger Output				
Output Amplitude	300			mV _{p-p}
Output Type	Differential , AC-coupled			
Connector	50ohm SMA Female			

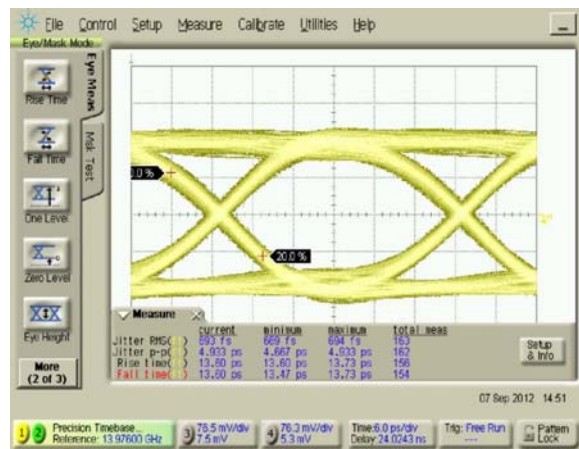
Error Analyzer

Parameter	Min	Typ.	Max	Units
Data Input (Electrical)				
Input Type	Differential			
Termination	DC-Coupled			
Data Patterns	PRBS : 2^7-1 , 2^9-1 , $2^{11}-1$, $2^{15}-1$, $2^{23}-1$, $2^{31}-1$; user defined pattern			
Data Rates	<ul style="list-style-type: none"> •100GBE 4x25.78Gb/s •OTU4 4x27.95Gb/s 			
Data Input Amp (Differential)	100		1000	mV p-p
Clocking Mode	Built-in clock recovery			
Pattern Synchronization	Automatic			
Connector	50ohm K Female			
Trigger Output				
Output Amplitude	300			mV _{p-p}
Output Type	Differential , AC-coupled			
Connector	50ohm SMA Female			

Software Interface



Typical Performance



Accessories Included:

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

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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.

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