



Eye-BERT Micro 10G

Bit Error Rate Tester, Optical Signal Generator, Tunable Laser, and XFP Test Set

Product Description

The Eye-BERT Micro 10G is a low cost, easy to use, all-in-one XFP based fiber optic test solution offering high performance bit error rate testing at a fraction of the cost while providing a rich set of features not found in other bit error rate testers. Features include: variable bit rate, user programmable patterns, diagnostic monitoring, and wavelength tuning (per XFP capability). Additionally, with a click of a button, the Eye-BERT Micro 10G will automatically test an XFP module based on the information it reads from the transceiver and generate a detailed test report complete with manufacturer, part number, serial number, date code, fiber type, link length, speed, and test results. The Unit is supplied with anti-skid bumpers for bench use, flanges for chassis mounting, and is small enough to be integrated into larger systems for dedicated link verification.

Features

- 9.9 to 11.4Gbps
- Variable data rates in 10Hz increments
- PRBS 2⁷, 2³¹-1, DCD
- Programmable 64bit patterns
- Wavelength Tunable (per XFP capability)
- Signal generator mode, 155MHz to 5.7GHz
- Compact package (3.5" x 2.5" x 1.2")
- User replaceable XFP transceivers
- Decode and display of XFP registers
- Automated XFP testing / report generation
- Bench top and flange mount configurations



Performance Specifications

	Specification	Unit
Standard Bit Rates ¹	9.95328, 10.3125, 10.5188, 10.7092, 11.049, 11.0957, 11.207, 11.31760	Gbps
Bit Rate Range ¹	9.9 to 11.4	Gbps
Signal Generator Frequency ¹	Bit Rate /2, /4, /8, /16, /32, /64	
Rate / Frequency Resolution ¹	10	Hz
Frequency Accuracy	+/- 20	ppm
Data Patterns	2 ⁷ -1, 2 ³¹ -1, DCD, Repeat/Loop-back, Any 64 bit pattern	
XFP Power	3.5W max, -5V not supported	
Computer Interface	USB-2, (Mini B)	
Power	5VDC, 2A Max	
Unit Dimension	3.5 x 2.5 x 1.2	inchs

1. Depends on transceiver capability.

Applications

- Bit error rate testing
- Media / Wavelength conversion
- Tunable and DWDM applications
- XFP identification, testing, and diagnostics
- Optical signal generator
- Automated test sets
- OEM / Custom versions also available



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Operation

The Eye-BERT Micro 10G is supplied with a USB driver and Window software, shown below. The interface allows the user to choose the data rate from one of the standards or to specify one in the "Custom" rate field. Three standard patterns are provided or the user can specify any 64 bit pattern in the "Custom" pattern field. A loop-back mode provides retiming and repeating.



Error rate, count, bit count, and test time are displayed along with signal, sync, and error indicators. Real time display of receive and transmit power, wavelength, and temperature are also provided. The transmitter can be enabled or disabled at any time by selecting the transmit power field.

Wavelength Tunable Transmitter:

By clicking on the wavelength indicator the transmitter wavelength can easily be changed by specifying the new wavelength or ITU grid channel in the dialog box (providing a tunable XFP is used).



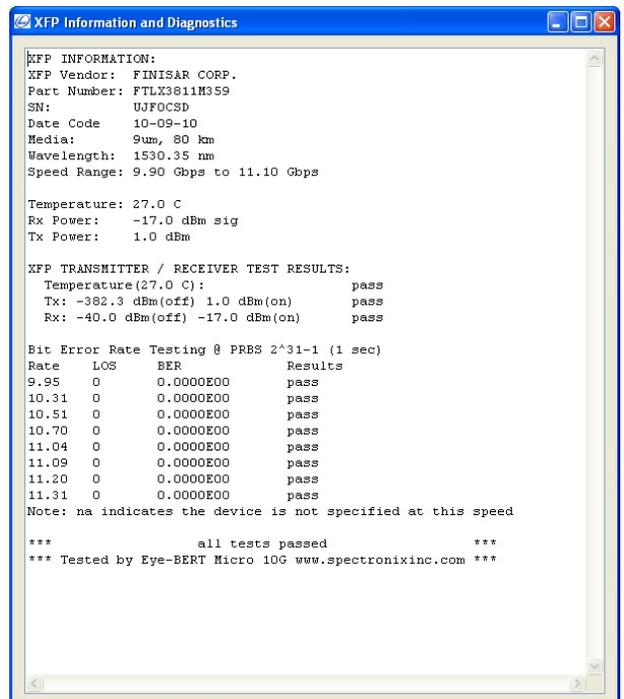
Frequency Generator Mode:

In this mode sub harmonics of the optical signal can be generated at the bit rate /2, /4, /8, /16, /32, and /64.

Applications

XFP Identification and Testing:

XFP identification and testing is easily accomplished without even having to look up the transceiver specifications. Inserting an XFP with a loop-back cable and selecting the "Test XFP" button will cause the Eye-BERT Micro 10G to read the device registers and automatically test the performance against the values read. A detailed test report is generated in less than 20 seconds.



User Configurability:

The Eye-BERT Micro 10G can accept any XFP transceiver allowing a wide variety of interface options including: single/multi mode fiber, DWDM, tunable, etc.

Custom Programming:

The Eye-BERT Micro 10G uses USB / serial port emulation along with a straight forward communication protocol making custom user application development straight forward.

System Requirements:

Windows XP, Vista, and 7

Ordering Information

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Eye-BERT Micro 10G, supplied with power supply, USB cable, USB driver, Windows GUI, transit case, and users manual