

Eye-BERT Micro 100286A



Bit Error Rate Tester and SFP Test Set

4.25Gb

BERT

SFP

CDR

Low Cost



Features:

- 125Mbps to 4.25Gbps
- Variable Data Rate
- Wavelength Tuning Support
- PRBS Patterns
- Jitter Patterns
- Programmable 40bit Pattern
- Compact Package
- User Replaceable SFP
- Decode of SFP Registers
- Internal CDR

Applications:

- Bit Error Rate Testing
- SFP Identification and Testing
- Jitter Testing
- Automated Test Sets
- Dedicated Link Verification

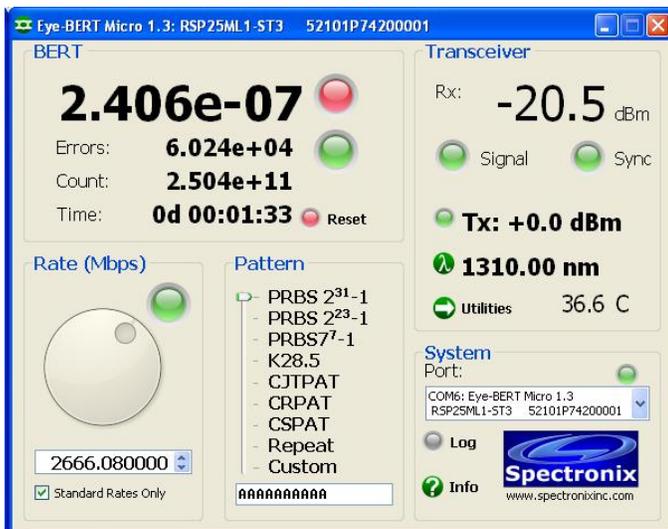


Overview

The Eye-BERT Micro is a low cost, easy to use, all-in-one SFP 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, and optical power and temperature monitoring (per SFP capability), and wavelength tuning (per SFP capability). Additionally, with a click of a button, the Eye-BERT Micro will automatically test an SFP module based on the information it reads from the module 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 and is small enough to be integrated into larger systems for dedicated link verification.

Operation

The Eye-BERT Micro 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 pre-programmed standards or to specify one in the "Custom" rate field. Seven standard patterns are also provided or the user can specify any 40 bit pattern in the "Custom" pattern field.

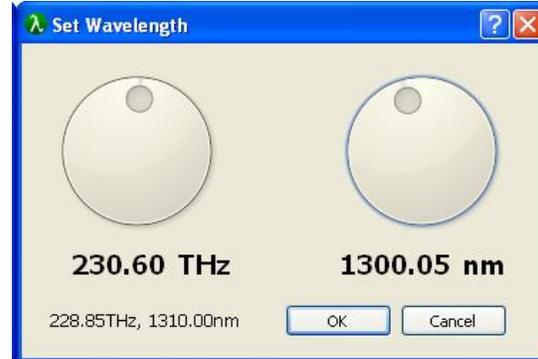


Error rate, error count, bit count, and test time are displayed along with signal, sync, error, and error history indicators. If digital diagnostics are supported by the SFP, receive

power, transmit power, and temperature are also displayed.

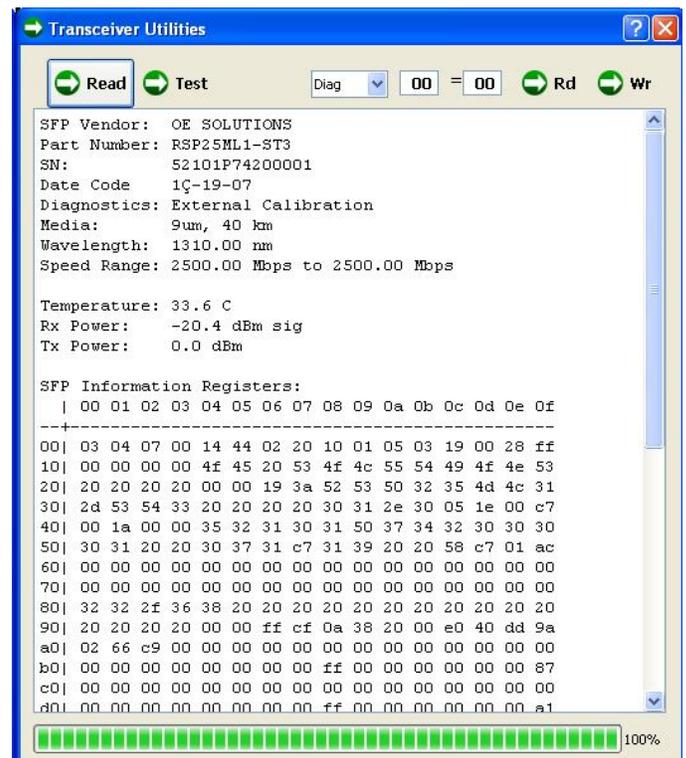
Wavelength Tunable Transmitter

When using a tunable SFP, the user can easily adjust the wavelength or frequency using the pop-up control shown below.



SFP Identification and Testing

SFP identification and testing is easily accomplished without even having to look up the transceiver specifications. Inserting an SFP with a loopback cable and selecting the "Test SFP" button will cause the Eye-BERT Micro 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 can accept any SFP transceiver allowing a wide variety of interface options including: single/multi mode fiber, electrical coax, twisted pair, etc.

Custom Programming

The Eye-BERT Micro uses USB / serial port emulation along with a straight forward

communication protocol making custom user application development straight forward.

Ordering Information

Part Number	Description
100286	Eye-BERT Micro, supplied with power supply, USB cable, USB driver, Windows GUI, and users manual

Specifications

Parameter	Units	Typical Specifications
Standard Rates Supported ¹	Mbps	125, 155.52, 200, 622.08, 1062.5, 1250, 2125, 2488.32, 2500, 2666.08, 4250
Standards Supported ¹		Fast Ethernet, Gigabit Ethernet, OC3/STS-3/STM-4, OC48/STS-48/STM-16, OC48+FEC, ESCON/SBCON, 1X/2X/4X Fiber Channel, 2.5G Infiniband / PCI Express
Frequency Resolution ¹	Hz	1
Bit Rate Adjustability ¹		+/- 5% typical, from standard rates
Frequency Accuracy	ppm	+/- 20
Data Pattern		2 ⁷ -1, 2 ²³ -1, 2 ³¹ -1, K28.5, CJTPAT ² , CRPAT ² , CSPAT ² , Any 40 bit user pattern
Transceiver Interface		MSA SFP, SFP+ (channel and wavelength tuning)
Computer Interface		USB-2, (Mini B)
Power		5VDC, 1A Max
Unit Dimension	inches	3.5 x 2.5 x 1.2

Notes:

1. Depends on transceiver and CDR capability, typically rates can be varied by more than +/-5%. See applications information for other supported rates.
2. CJTPAT, CRPAT, CSPAT are intended for jitter testing and are not supported by the pattern detector.