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Product Information
› **Introduction**
Characteristics/Specs

Optical Transmitter and Receiver

OI1125 • OI2125

Features & Benefits

OI1125 E/O Transmitter

- Generates SONET/SDH Compliant Optical Waveforms up to 12.5 Gb/s
- Internal DFO Laser at 1550.9 nm
- Adjustable Extinction Ratio from 5 dB to >12 dB (>12 dB nominal) to Test with Worst-case Conditions
- Accepts a Wide Range of Input Voltage Levels from 0.25 to 1.5 V_{p-p}
- Remote Operation and Monitoring

OI2125 O/E Receiver

- High Performance Receiver Supports Data Rates up to 12.5 Gb/s
- User-installable Modules for Clock Recovery at 10.664 Gb/s and 9.953 Gb/s
- Broad Wavelength from 1100 to 1620 nm
- High Sensitivity (-16 dBm) to Detect Low-level Optical Input Signals
- Amplified Electrical Output to Connect Directly to Most Commercial Error Analyzers

Applications

- Bit Error Rate Testing
- Optical Receiver and Transmitter Testing
- Optical Component and Fiber Loop Testing
- Optical Signal Analysis
- Remote Operation for System Integration

A High-performance Optical Interface for Bit Error Rate Testing of Optical Systems, Subsystems and Components up to 12.5 Gb/s

The Tektronix high-performance OI1125 E/O transmitter and OI2125 O/E receiver offer a simple and cost-effective solution for generating and receiving SONET/SDH compliant optical signals for bit error rate (BER) testing and optical signal analysis up to 12.5 Gb/s. Both include a remote port for easy integration and remote monitoring and control in a test system environment. Users can completely control instrument settings, monitor instrument status and access additional features through the remote port.

Transmitter Generates SONET/SDH Compliant Optical Waveforms up to 12.5 Gb/s for Testing Optical Subsystems and Components

Using the internal 1550 nm DFB laser or an external C-band tunable laser, the OI1125 is excellent for generating optical signals modulated by a high-performance pattern generator and is designed so most commercial generators connect directly to the modulation input. The input voltage range (250 mV to 1.5 V) accommodates most commercial pattern generators for bit error ratio (BER) testing of optical components and receiver testing. The adjustable extinction ratio allows testing the receiver sensitivity at worst-case conditions without complex test setups. The OI1125 also generates optical signals for optical signal analysis of components, systems and subsystems using a CSA8000 sampling oscilloscope.

Receiver Clock Recovery and Multi-data Rate Support Simplify Testing of High-performance Optical Transmitters, Laser Diodes, Optical Components and Fiber Loops

The OI2125 O/E Receiver receives modulated optical signals up to 12.5 Gb/s from transmission systems, including SONET/SDH compatible systems, and converts them to electrical signals for further testing by equipment such as a bit error rate tester (BERT). The OI2125 electrical output can be connected directly to most commercial error analyzers, and does not require an external amplifier. The data and clock output voltage ranges (0.5 to 1.5 V_{p-p}) make the OI2125 an excellent optical interface for most commercial error analyzers.

With the optional OM1420 module, the receiver can extract the clock on signals up to 10.664 Gb/s (OC-192 FEC). The recovered clock signal can then be used to trigger a CSA8000 sampling oscilloscope or serve as the clock input to an error analyzer. Used with the Tektronix TDS/CSA8000 series sampling oscilloscope and a pattern generator, the OI1125 can create modulated optical signals for high-speed optical communications testing, extinction ratio measurements, eye-pattern analysis and optical signal analysis. The optical signal is passed through the DUT and received by the appropriate 80Cxx sampling head on the oscilloscope.

The OM1420 OC-192 Dual-rate Clock Recovery Module supports standard OC-192 (9.953 Gb/s) and OC-192 FEC (10.664 Gb/s).

▲back to top

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CE

ISO 9001 Product(s) are manufactured in ISO registered facilities.

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