

# Clock Recovery Modules for OI2125 O/E Receiver

► OM1200 • OM1420



## High-performance OM1200 and OM1420 Modules Add Clock Recovery to the OI2125 O/E Receiver up to 10.664 Gb/s (OC-192/STM-64 FEC)

The Tektronix OI2125 O/E Receiver receives modulated optical signals up to 12.5 Gb/s and converts them to electrical signals for further testing with an instrument such as a BER (bit error rate) analyzer. With the user-installable OM1420 and OM1200 modules, a single receiver can be used over a broad range of signal bit rates. The OM1420 OC-192 Dual-rate Clock Recovery Module extracts

the clock for both OC-192 9.953 Gb/s and OC-192 FEC 10.664 Gb/s rates. The OM1200 OC-48 Multi-rate Clock Recovery Module adds the capability to recover clock signals for OC-48 FEC, OC-48, OC-12 and OC-3 signals. The recovered clock signal can then be used to trigger a CSA8000 sampling oscilloscope or be used as the clock input to an error analyzer.

### ► Features & Benefits

Simplifies Testing by Enabling Use of a Single Receiver Over a Broad Range of Bit Rates

Supports Multiple Data Rates up to 10.664 Gb/s:

- OC-192/STM-64 (9.953 Gb/s)
- OC-192 FEC (10.664 Gb/s)
- OC-48/STM-16 (2.488 Gb/s)
- OC-48 FEC (2.666 Gb/s)
- OC-12/STM-4 (622 Mb/s)
- OC-3/STM-1 (155 Mb/s)

Increases Capability of the OI2125 O/E Receiver by Adding Clock Recovery

Easily Installed Modules

### ► Applications

Bit Error Rate Testing

Optical Component and Fiber Loop Testing

Optical Transmitter Testing

### ► OM1420 OC-192/STM-64 Clock Recovery Module

Specification	Min	Typ	Max	Units	Comments
Clock Recover Data Rate		9.953280		Gb/s	Switchable
		10.66423		Gb/s	
Jitter Generation			2	pS <sub>RMS</sub>	
Clock Bandwidth			10	MHz	
Input Amplitude	0.15		0.75	V <sub>p-p</sub>	
Clock Output Amplitude	1.0		2.0	V <sub>p-p</sub>	

# Clock Recovery Modules for OI2125 O/E Receiver

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## ▶ OM1200 OC-48/STM-16 Clock Recovery Module

Preliminary Specification	Min	Typ	Max	Units	Comments
Clock Recover Data Rate		2.666057 2.488320 622.080 155.520		Gb/s Gb/s Mb/s Mb/s	Switchable
Jitter Generation			0.01	U <sub>RMS</sub>	
Input Amplitude	0.2		1.2	V <sub>p-p</sub>	
Clock Output Amplitude		0.4		V <sub>p-p</sub>	
Data Output Amplitude		0.4		V <sub>p-p</sub>	

## ▶ Characteristics

### Environment

#### Temperature –

Operating: 0°C to +40°C.

Nonoperating: -40°C to +71°C.

#### Humidity –

Operating: 5% to 95% RH (up to +30°C).

5% to 45% RH (30°C to +50°C).

Nonoperating: 5% to 95% RH (up to +30°C).

5% to 45% RH (30°C to +50°C).

#### Altitude –

Operating: Up to 3000 m (10,000 ft.).

Nonoperating: Up to 12,000 m (40,000 ft.).

#### EMC Compliance – Meets or exceeds EN55011

Class A Radiated and Conducted Emissions:

FCC47 CFR, Part 15, Subpart B, Class A.

#### Safety – EN61010-1; IEC61010-1.

### I/O Interface

#### OM1420 OC-192 Clock Recovery Module –

Data In (Electrical SMA).

Clock Out (Electrical SMA).

#### OM1200 OC-48 Clock Recovery Module –

Data In (Electrical SMA).

Data Out (Electrical SMA).

Clock Out (Electrical SMA).

## Physical Characteristics

### Shipping Weight with Packaging

Instrument/Module	kg	lbs.
OI1125	5.12	11.29
OI2125	5.49	12.10
OM1200	3.76	8.29
OM1420	3.76	8.29

## ▶ Ordering information

### OM1420 OC-192 Clock Recovery Module

Instrument – OM1420.

### OM1200 OC-48 Clock Recovery Module

Instrument – OM1200.

### Service Options

Opt. C3 – 3 years of calibration services.

Opt. C5 – 5 years of calibration services.

Opt. R3 – Repair warranty extended to cover 3 years.

Opt. R5 – Repair warranty extended to cover 5 years.

Opt. D1 – Calibration data report.

Opt. D3 – Calibration data report; must order with C3.

Opt. D5 – Calibration data report; must order with C5.

### Included Accessories – OM1420

071-1055-00 – User Reference: English only.

006-8018-01 – Important Documents Folder.

Certificate of Calibration: NIST, MIL-STD-45662A and ISO Calibration Certificate.

Placed inside “Important Documents Folder.”

174-4699-00 – Cable, RF, Semi-rigid Jumper.

015-1022-01 – Terminator (2 each).

015-0561-00 – Electrical Cable, SMA (1 m long).

### Included Accessories – OM1200

071-1054-00 – User Reference: English only.

006-8018-01 – Important Documents Folder.

Certificate of Calibration: NIST, MIL-STD-45662A and ISO Calibration Certificate.

Placed inside “Important Documents Folder.”

174-4699-00 – Cable, RF, Semi-rigid Jumper.

015-1022-01 – Terminator (3 each).

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