

Clock Recovery Modules for OI2125 O/E Receiver

► OM1200 • OM1420



High-performance OM 1200 and OM 1420 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

► OM 1420 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 _{RMS}	
Clock Bandwidth			10	MHz	
Input Amplitude	0.15		0.75	V _{p-p}	
Clock Output Amplitude	1.0		2.0	V _{p-p}	

Clock Recovery Modules for OI2125 O/E Receiver

▶ OM1200 • OM1420

▶ OM 1200 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 _{FRMS}	
Input Amplitude	0.2		1.2	V _{p-p}	
Clock Output Amplitude		0.4		V _{p-p}	
Data Output Amplitude		0.4		V _{p-p}	

▶ 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

OM 1420 OC-192 Clock Recovery Module

Instrument – OM1420.

OM 1200 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 – OM 1420

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 – OM 1200

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).

Contact Tektronix:

ASEAN Countries & Pakistan (65) 6356 3900

Australia & New Zealand (65) 6356 3900

Austria +43 2236 8092 262

Belgium +32 (2) 715 89 70

Brazil & South America 55 (11) 3741-8360

Canada 1 (800) 661-5625

Central Europe & Greece +43 2236 8092 301

Denmark +45 44 850 700

Finland +358 (9) 4783 400

France & North Africa +33 (0) 1 69 86 80 34

Germany +49 (221) 94 77 400

Hong Kong (852) 2585-6688

India (91) 80-2275577

Italy +39 (02) 25086 1

Japan (Sony/Tektronix Corporation) 81 (3) 3448-3111

Mexico, Central America & Caribbean 52 (55) 56666-333

The Netherlands +31 (0) 23 569 5555

Norway +47 22 07 07 00

People's Republic of China 86 (10) 6235 1230

Poland +48 (0) 22 521 53 40

Republic of Korea 82 (2) 528-5299

Russia, CIS & The Baltics +358 (9) 4783 400

South Africa +27 11 254 8360

Spain +34 (91) 372 6055

Sweden +46 8 477 6503/4

Taiwan 886 (2) 2722-9622

United Kingdom & Ire +44 (0) 1344 392400

USA 1 (800) 426-2200

For other areas contact Tektronix, Inc. at: 1 (503) 627-7111

Updated 8 February 2002



For the most up-to-date product information visit our web site at www.tektronix.com

Copyright © 2002, Tektronix, Inc. All rights reserved. Tektronix products are covered by U.S. and foreign patents, issued and pending. Information in this publication supersedes that in all previously published material. Specification and price change privileges reserved. TEKTRONIX and TEK are registered trademarks of Tektronix, Inc. All other trade names referenced are the service marks, trademarks or registered trademarks of their respective companies.

02/02 HB/PP

56W-15442-0