

# OC-3 Multiplexer



### **OPTI-3 Single OC-3 to Three DS3s**

## **Product Features**

- One GR-253 compliant OC-3 port, three DS3 ports
- 1+1 optical and 1:1 electrical protection, 1+1 SONET Automatic Protection Switch (APS)
- Interoperable with industrystandard SONET multiplexers
- Two or, with redundancy, four SM fibers at 1310 nm over a 40 km range or 1550 nm over an 80 km range
- DS3 signals, channelized/ unchannelized
- Space-saving wallmount chassis (WMC) or a one rack unit high 19-in. or 23-in. rackmounted chassis (RMC)
- Single card, hot swappable solution increases reliability and reduces cost
- Management functions over the DCC, TL-1 (including GNE), and SNMP
- Local craft port interface for local management and Telnet for remote menu operation
- Telcordia OSMINE compliant and NMA (via DCC) supported
- Alarm history
- Management of subtended units via IP/DCC
- NEBS Level 3 compliant
- Industry-leading 10-year warranty



Service providers are continually challenged to provide cost-effective DS3 service off SONET rings and point-to-point. Some common types of deployment are to cell sites and customer premises. The ADTRAN® OPTI-3<sup>™</sup> sets a new mark for OC-3 multiplexers, delivering three DS3 circuits from a single OC-3 feed. Designed to meet the growing demand for DS3 deployment in today's economy, the OPTI-3 eliminates the need for expensive SONET multiplexer equipment in terminal mode applications and provides the fullest use of OC-3 capacity.

The OPTI-3 is interoperable with other SONET devices complying with GR-253 for easy deployment in new and existing SONET networks. A carrier-class device, the OPTI-3 meets the needs of applications that require extended temperature range operation such as remote terminals. The fully integrated design supports optional redundancy and is easily managed with support for TL1 commands over the Data Communications Channel (DCC). Additional management features include a local craft interface, remote alarm transport via DCC, and alarm reporting to legacy alarm systems. Front panel LEDs conveniently display status information. The unit requires only a fraction of the footprint normally needed for optical deployments. The space-saving OPTI-3 occupies standard slots in either a small two rack unit high wallmount chassis (WMC) or one rack unit high rackmount chassis (RMC). The OPTI-3 can also be configured to operate redundantly with optional protection. It can upgrade online from unprotected to protected status.

The DS3 BNC coax connectors are located on the rear of the OPTI-3 chassis. This permits easy access to the customer side of the network for a convenient demarcation point, or to extend services to DS3 multiplexer applications. The fiber optics enter the chassis from the front of the unit and terminate on the card with a dual SC connector for simple installation. The unit provides for external auxiliary alarm inputs, and the RMC chassis provides additional alarm outputs for CO alarms.





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Rackmount Chassis		Rack or Wallmount Chassis
Central Office DS3 #1	OC-3, 4 fibers, 40 km	Remote Site
DS3 #2	1:1 protected optics, APS as per GR-253, 1:1 protected DS3	DS3 #2
DS3 #1		
DS3 #2	0C-3, 2 fibers, 40 km	DS3 #2
DS3 #3	unprotected optics, unprotected DS3	DS3 #3
SONET Multiplexer, IR or LR DS3 #1 GR-253	<b>OC-3</b> , 4 fibers, 40 km	0123 DS3 #1
DS3 #2 compliant DS3 #3	1:1 protected optics, APS as per GR-253, 1:1 protected DS3	DS3 #2
SONET Multiplexer, IR or LR		327935
DS3 #1 DS3 #2 Compliant	<b>OC-3, 2 fibers, 40 km</b>	sww         org.3           DS3 #1           DS3 #2
DS3 #3	unprotected optics, unprotected DS3	DS3 #3
DS3 #1	<b>OC-3, 2 fibers</b> , 40 km	Active DS3 #1
DS3 #3	"Y Cable" - electronics protected 1:1 protected DS3	BS3 #3
		<u>.</u>

## **Product Specifications**

## Front Panel Features

LEDS		
Board status	Optics status	DS3-1
DS3-2	DS3-3	AC0
Switches		

- AC0
- Test/APS enable
- Craft interface connector

# APS Mechanical

- Dimensions of WMC: 3.5 in. H x 6 in. W x 12 in. D
- Mounting of WMC: Wall, shelf, or cabinet mountable
- Dimensions of RMC: 1.75 in. H x 13.5 in. W x 12 in. D
- Mounting of RMC: 19-in. or 23-in. rack mountable

#### Interfaces

- Single OC-3 standard optical interface to network with dual SC connector
- GR-253 compliant, 1310 nm or 1550 nm
- 3 DS3 level signals with standard 75 ohm BNC connectors, DS3 or DS3 UNI
- 2 BITS clock inputs, wire wrap

#### Electrical

#### **Power Requirements**

- -48 VDC nominal (-42 to -56 VDC) or +24 VDC nominal (+22 to +26 VDC) or -24 VDC nominal (-22 to -26 VDC)
- 8.5 watts nominal at -48 VDC

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#### **Regulatory Standards**

- NEBS Level 3
- NRTL Safety Listed
- GR-1089-CORE, Issue 3
   GR-63-CORE, Issue 2

#### Environmental

#### **Rackmount Chassis**

- Operating temperature: -40°C to +65°C (19 in. and 23 in.)
- Storage temperature: -40°C to +85°C (19 in. and 23 in.)
- Relative humidity: 5 to 95 percent, noncondensing

#### Wallmount Chassis

- Operating temperature: -40°C to +70°C
- Storage temperature: -40°C to +50°C
- Relative humidity: 5 to 95 percent, noncondensing

## **Ordering Information**

Equipment	Part #
OPTI-3 wallmount chassis	1184001L1
OPTI-3 card (1310 nm)	1184002L3
OPTI-3 card (1550 nm)	1184002L4
OPTI-3 19-in. or 23-in. rackmount chassis	1184003L1
Bundles	
WMC OPTI-3 with redundancy	4184001L1
RMC OPTI-3 with redundancy	4184003L1
WMC OPTI-3 no redundancy	4184001L2
RMC OPTI-3 no redundancy	4184003L2
WMC OPTI-3 with redundancy and battery backup	4184001L3
RMC OPTI-3 with redundancy and battery backup	4184003L3