OC-3/OC-12 Compact Optical Access MUX

OPTI-SMX OC-3/OC-12 SONET Multiplexer

Product Features

- Carrier-class OC-3/OC-12 SONET multiplexer in a compact (2U), full capacity arrangement
- Single or double deployment ended into most GR-253 SONET multiplexers
- Ethernet over SONET capability; GFP ITU-T G.7041 compliant
- Optional auto in-service for network and trib connections
- DS1, DS3/EC-1, Ethernet, and OC-3 transport services with optional redundancy
- No stranded capacity – capital savings are immediate – all capacity is available for revenue producing services
- Range of 40 km using 1310/1550 nm two fiber
- Comprehensive maintenance capabilities – TL1, SNMP, craft menus; Total Access EMS support (planned)
- Management functions and alarms over the DCC for manageability within the SONET framework
- Up to 28 DS1s fed directly from the system
- Wallmount,19-inch, or 23-inch rackmount options. Dual chassis placement with units mounted side by side.
- Both 24 and 48 VDC powering; optional AC kit
- Industry-leading 10-year warranty

Service providers are faced with capital constraints and the continuing need to incrementally expand existing infrastructures in a cost-effective manner. They frequently face challenges posed by the limited electrical range of DS3s and DS1s and the cost of converting optical to electrical interfaces for transport through expensive high-capacity network elements.

Where conserving space is your primary concern, the ADTRAN® OPTI-SMX™ delivers all the versatility and functionality that today's service providers need for cost-effective network expansion. This compact, state-of-the-art unit seamlessly integrates with and modernizes existing networks. The OPTI-SMX consolidates discrete optical and multiplexer network elements into one small 2U (3.5-inch) high chassis. Its feature set, small footprint, low cost, and diverse deployment options make the OPTI-SMX a powerful tool for optical delivery of DS1, DS3/EC-1 (STS-1 electrical interface), and Ethernet. It supports all of the maintenance and administration tools necessary for service providers to administer their networks efficiently. Its fully integrated design provides the management and redundancy features expected of carrier-class broadband multiplexers.

OPTI-SMX is the industry's first OC-3/OC-12 multiplexer to deliver a combination of DS1, DS3/EC-1s, Ethernet, and OC-3 drops. ADTRAN provides the ability to utilize all of the bandwidth in an OC-3 or OC-12 for customer services without stranded bandwidth. Its compact design is significantly smaller than similar products and it delivers superior functionality at a fraction of the price.

Topology

- Terminal mode, subtended off a GR-253 compliant SONET ADM
- End-to-end OPTI-MX or OPTI-SMX

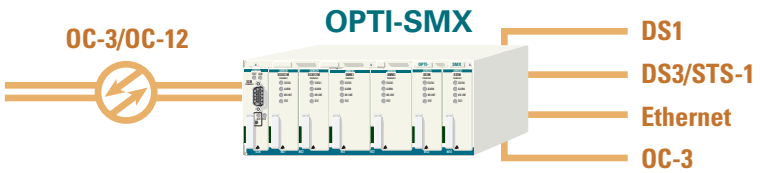
Architecture

- Very low card count, high degree of integration, compact design
- Optional protection of high-speed interfaces
- Optional protection of low-speed interfaces, DS1, DS3/EC-1, OC-3

Services

- DS1 (1 to 28 with redundancy)
- DS3/EC-1 (1 to 6 with redundancy)
- Ethernet (1 to 12)
- OC-3 (1 to 4 with redundancy)

The OPTI-SMX consists of a common equipment module (the OMM), a maintenance interface module (the SCM), and line cards (tributary modules). The common equipment module contains a high-speed interface and common circuitry.



ADTRAN, Inc.
901 Explorer Boulevard
Huntsville, AL 35806

P.O. Box 140000
Huntsville, AL 35814-4000

256 963 8000 voice
256 963 8030 fax
877 457 5007 fax back

General Information
800 9ADTRAN
info@adtran.com
www.adtran.com

Pre-Sales Technical Support
888 5ADTRAN
support@adtran.com
www.adtran.com/support

Where to Buy
800 827 0807
www.adtran.com/where2buy

Post-Sales Technical Support
800 726 8663
support@adtran.com
www.adtran.com/support

Regional Offices
Dallas, TX
972 830 9070
Denver, CO
303 471 9150
Irvine, CA
949 260 3500
Kansas City, KS
800 471 8649
Newark, NJ
800 471 8656
Ontario, Canada
416 290 0585
Quebec, Canada
877 923 8726
San Antonio, TX
888 223 7671

International Inquiries
+1 256 963 8716 voice
+1 256 963 6300 fax
international@adtran.com
www.adtran.com/international

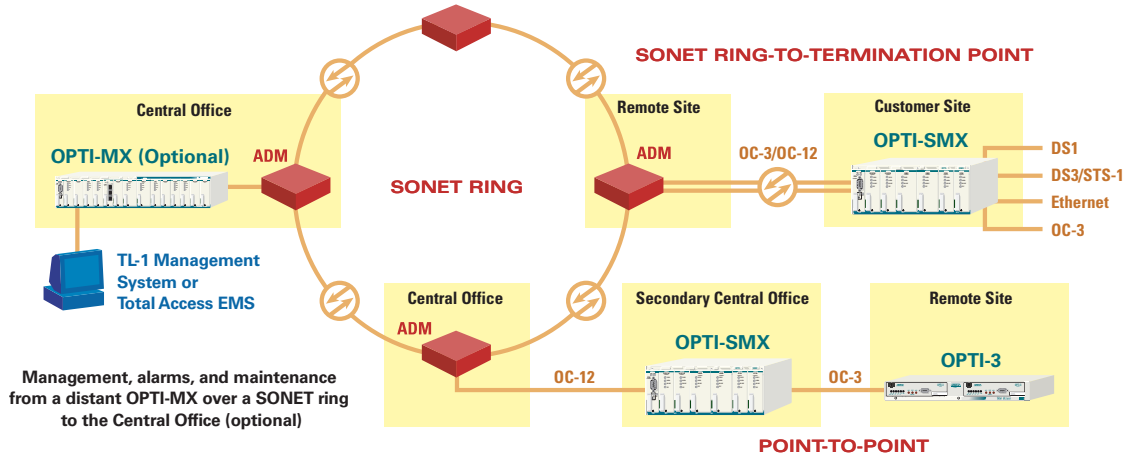
ADTRAN is an ISO 9001:2000 registered company.

ADTRAN is a TL 9000 registered company.

61184514L1-8A January 2004
Copyright © 2004 ADTRAN, Inc.
All rights reserved.

OC-3/OC-12 Compact Optical Access MUX

OPTI-SMX OC-3/OC-12 SONET Multiplexer



Product Specifications

Front Panel Features

- **SCM module:** Status and Alarm LEDs
- **OMM, DS3EC1M, DS1M, and DS1VM modules:** Status, Alarm, Online, and Test LEDs
- **Ethernet 10/100 module:** Status, Link, and Activity LEDs

Mechanical

- **Dimensions:** 3.5 in. H X 8.5 in. W X 11.5 in. D
- **Weight:** Chassis 4.6 lb, 7 lb fully loaded
- **Mounting:** Rackmount
- **Fiber connectors:** SC
- **Coax connectors:** BNC
- **DS1 connectors:** Amp Champ

Interfaces

Network Interfaces

- OC-3, SONET LR, IR
- OC-12, SONET LR, IR

Tributary Interfaces

- DS1
- DS3/EC-1
- OC-3
- Ethernet

Protection

- **Network:** 1+1 (SONET APS) (optional)
- **Tributary:** 1:1 (optional)

Regulatory Standards

- NEBS Level 3
- GR-63-CORE, Issue 2
- GR-253-CORE, GR-499-CORE, GR-833-CORE, GR-1093-CORE, and GR-1244-CORE
- ANSI T1.105-2001 and T1.102-1995
- NRTL Safety Listed
- ITU G.7041
- Earthquake Zone 4
- FCC Class A

Electrical

- ±20 to 60 VDC, optional AC power supply is available

Management

- **Local:** Craft port on front panel
- **Remote:** TL1 (DCC), SNMP, Telnet

Environmental

- **Operating temperature:** –40°C to +65°C
- **Storage temperature:** –40°C to +85°C
- **Relative humidity:** 5 to 95 percent, noncondensing

Ordering Information

Equipment	Part #
OPTI-MX/SMX OMM3LR	1184502L1
OPTI-MX/SMX OMM3IR	1184502L4
OPTI-MX/SMX OMM12LR	1184504L1
OPTI-MX/SMX OMM12IR	1184504L4
OPTI-MX/SMX DS1	1184513L1
OPTI-MX/SMX DS1 VT 1.5	1184515L1
OPTI-MX/SMX DS3/STS-1	1184503L1
OPTI-MX/SMX Ethernet	1184510L1
OPTI-MX/SMX OC-3 Tributary	1184543L1
OPTI-MX/SMX SCM	1184500L1
OPTI-MX Chassis	1184501L1
OPTI-MX/SMX MS Tributary Blank Front Panel	1184505L1
OPTI-MX/SMX HS (OMM) Blank Front Panel	1184506L1
Fan Assembly	1184507L1
OPTI-SMX Chassis	1184514L1
OPTI-SMX 19/23 in. Dual Chassis Bracket	1184517L1
OPTI-SMX Wallmount Bracket	1184521L1
OPTI-SMX 19-in. Mounting Bracket	1184522L1
OPTI-SMX 23-in. Mounting Bracket	1184523L1

Specifications are subject to change without notice. OPTI-SMX is a trademark, and ADTRAN and Total Access are registered trademarks of ADTRAN, Inc. All other registered trademarks and trademarks mentioned in this publication are the property of their respective owners.