



# OC-3/12/48 Optical Access MUX

## Product Features

- Carrier-class OC-3/12/48 SONET multiplexer in a compact (2U high), full capacity arrangement
- Single or double ended deployment into most GR-253 SONET multiplexers
- Ethernet over SONET capability; GFP ITU-T G.7041 compliant
- Supports high- and low-order VCAT
- OSI and IP/PPP over DCC
- Optional auto in-service for network and trib connections
- DS1, DS3/EC-1, Ethernet, OC-3 and OC-12 transport services with optional redundancy
- No stranded capacity – capital savings are immediate – all capacity is available for revenue producing services
- Range of up to 40 km using 1310/1550 nm, one or two fiber
- Comprehensive maintenance capabilities – TL1, SNMP, craft menus; Total Access EMS support; alarm and event log
- Management functions and alarms over the DCC for manageability within the SONET framework
- Up to 84 DS1s fed directly from the system
- Up to 12 DS3s fed directly from the system
- NEBS extended-temperature hardened
- Industry-leading, 10-year warranty
- SFP optics for OC-48 optical modules

## OPTI-6100 OC-3/12/48 SONET Multiplexer

**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.

The ADTRAN® OPTI-6100® 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-6100 consolidates discrete optical and multiplexer network elements into one small 2U (3.5-inch) high chassis. Two chassis options are available, the MX (17.5 inches wide) and the SMX (8.5 inches wide). The MX mounts in a standard 19-inch or 23-inch rack. The SMX is wall or rack mountable with the option to mount two units side by side in a 19- or 23-inch rack.

The feature set, small footprint, low cost, and diverse deployment options of the OPTI-6100 make it a powerful tool for optical delivery of DS1, DS3/EC-1 (STS-1 electrical interface), OC-3, OC-12 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.

The OPTI-6100 is the industry's first OC-3/OC-12/OC-48 multiplexer to deliver a combination of DS1, DS3/EC-1s, Ethernet, OC-3 and OC-12 drops. ADTRAN provides the ability to utilize all of the bandwidth in an optical network interface 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-6100 (MX or SMX)
- UPSR ADM ring, OC-3/12/48

### 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, OC-12

### Services OPTI-6100 (SMX Chassis)

- DS1 (1 to 28 with redundancy)
- DS3/EC-1 (1 to 6 with redundancy)
- Ethernet (1 to 16)
- OC-3, OC-12 (1 to 2 with redundancy)
- DS3 TRANSMUX (1 to 6 with redundancy)

### Services OPTI-6100 (MX Chassis)

- DS1 (1 to 84 with redundancy)
- DS3/EC-1 (1 to 12 with redundancy)
- Ethernet (1 to 48)
- OC-3, OC-12 (1 to 6 with redundancy)
- DS3 TRANSMUX (1 to 12 with redundancy)

The OPTI-6100 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.



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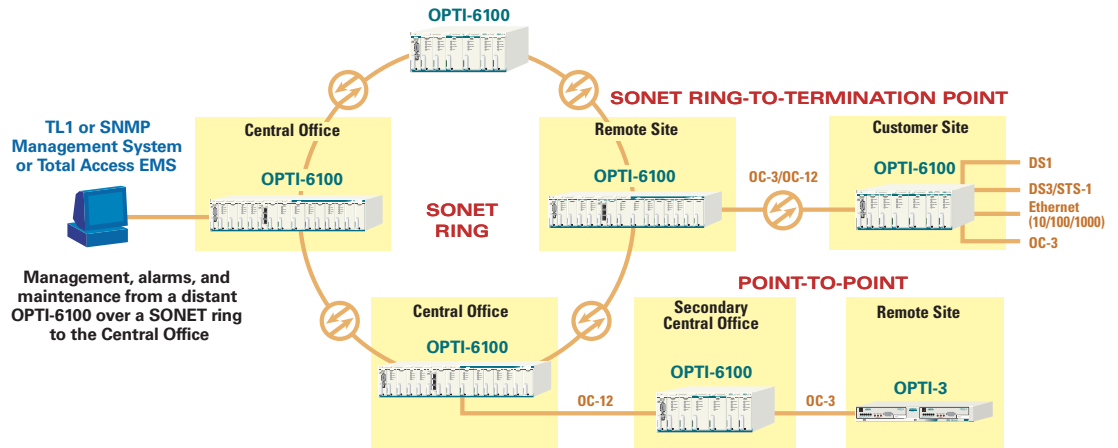


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# OC-3/12/48 Optical Access MUX

## OPTI-6100 OC-3/12/48 SONET Multiplexer



## Product Specifications

### Front Panel Features

- **SCM module:** Status and Alarm LEDs
- **OMM, DS3, DS1, and TRANSMUX modules:** Status, Alarm, Online, and Test LEDs
- **Ethernet 10/100/1000 modules:** Status, Link, and Activity LEDs

### Mechanical

- **Dimensions MX:** 3.5 in. H X 17.5 in. W X 11.5 in. D
- **Dimensions SMX:** 3.5 in. H X 8.5 in. W X 11.5 in. D
- **Weight MX:** Chassis 8.5 lb, 14 lb fully loaded
- **Weight SMX:** Chassis 4.6 lb, 7 lb fully loaded
- **Mounting MX:** Rackmount
- **Mounting SMX:** Rackmount or wallmount
- **Fiber connectors:** SC, LC
- **Coax connectors:** BNC
- **DS1 connectors:** Champ
- **Fan assembly:** 1U with integrated alarming

### Interfaces

#### Network Interfaces

- OC-3, SONET LR, IR (Terminal or UPSR), 1310,1550 nm
- OC-12, SONET LR, IR (Terminal or UPSR), 1310,1550 nm
- OC-48, SONET, SR, IR, LR, VLR2 (Terminal or UPSR)

Note: OC-3/12/48 UPSR modules have integrated any-to-any VT and STS cross connect capabilities

#### Tributary Interfaces

- DS1
- DS3/EC-1
- DS3 Transmux
- OC-3 IR, LR, MM
- OC-12 IR, LR, MM
- Ethernet 10/100/1000

### Protection

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

### Regulatory Standards

- NEBS Level 3
- Telcordia OSMINE
- GR-63-CORE, Issue 2
- GR-1400
- 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
- Earthquake Zone 4
- ITU G.7041
- FCC Class A

### Electrical

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

### Management

- **Local:** Craft port on front panel
- **Remote:** TL1 (DCC), SNMP, Telnet, Ethernet
- **Environmental alarms:** 19 inputs (with EFANM)

### Environmental

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

### Ordering Information

For equipment ordering information visit:  
<http://www.adtran.com/opti-6100>

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