

TraverseEdge 206

Multiservice Edge Multiplexer

Key Features

- Ethernet Rapid Ring Protection (ERRP) provides restoration for packet services in <50ms
- Carrier-class design provides full protection for all ports/services and common components
- SFP transceivers provide flexible connectivity for optical Ethernet and OC-N interfaces
- Ideally suited for metro access as well as OSP and cell site deployments
- Compliments the Traverse® Multiservice Transport Switch

Versatility and Reliability

The versatile, reliable design of the TE-206 makes the platform ideally suited for metro access deployments in central offices, co-location sites, and multi-tenant units (MTUs). Because the TE-206 is environmentally hardened (without fans), it can also be deployed in outside plant cabinets, cell sites and other extreme environments. In these deployments, the TE-206 complements the flagship Traverse Multiservice Transport Switch and other TraverseEdge products.



TraverseEdge™ 206 is fully integrated for SONET ADM and Ethernet switching in a rugged shelf. The TE 206 utilizes GFP and VCAT for efficient Ethernet over SONET transport and offers Affordable delivery of Ethernet, DS1, DS3, and OC-3/12 services from a compact 2RU system.

A Flexible Multiservice Edge Multiplexer

The TraverseEdge 206 (TE-206) is flexible edge multiplexer that integrates SONET ADM and Ethernet TDM services, all of which can be fully protected, the TE-206 is optimized for applications in a variety of environments. The TE-206 has been certified by the MEF as supporting standard E-Line (point-to-point) and ELAN Ethernet services. The NEBS-compliant, fully redundant architecture of the TE-206 provides:

- Fully protected high-speed optical (OC-48) trunks
- Fully protected Ethernet services
- Fully protected DS1/DS3 services
- Fully protected OC-3/OC-12 services

Packing Many Services Into Very Little Space

The TE-206 is a 2-slot, 2-RU high shelf that can operate in a single-module, unprotected configuration, or an optional dual-module configuration that provides full 1:1 protection for all ports and common components. Each module provides 4 FastE, GbE, OC-3 or OC-12 front access ports, selectable on a per-port basis by simply installing the appropriate Small Form-factor Pluggable (SFP) interfaces, plus 4 FastE, 14 DS1, and 3 DS3 rear-access ports. Each module also includes an SFP optical port for high-speed OC-48 ring connectivity. Using SFPs and the identical module for both working and protect reduces engineering and sparing costs.

GbE (T,SX,LX,ZX), FastE (RJ45 or FX optical), or OC-3/12 (R4.1) ports

- Up to 8 protected
- Up to 4 protected

• OC-48 UPSR Trunk Interfaces

- 3 protected DS3 ports
- 14 protected DS1 ports (with integrated M13 function)



TE-206 Multiservice Edge Multiplexer

Chassis

TraverseEdge 206 (TE-206)

Size: 3.5" H x 17.5" W x 9.7" D
Weight (max): 8.7 kg (19.1 lbs)
19" or 23" EIA rack-mountable
Wall mount option
Wall mount cabinet kit option

Network Architectures

OC-48 UPSR, protected and unprotected

Customer Alarms

Housekeeping Inputs: 14
Outputs: 2

Power Requirements

Voltage (A and B feeds): -42.5 to -56.5 Vdc
Maximum Load Configuration: 90 Watts
AC power options with optional battery backup

Environmental

Temperature: -40 to 65°C (-40 to 149°F)
Humidity: 5% to 90%, non-condensing
No fans

Cross Connect Matrix and Capabilities

STS-1, STS-3c, STS-12c, and VT1.5 mapping

DS1s can be VT1.5 or M13 mapped into an STS-1

Ethernet virtual concatenation (VCAT) with STS-1 or STS-3c granularity

Per-port provisionable, granular Ethernet traffic policing and shaping (in increments of 244 Kbps for GbE, 48.8 Kbps for FastE)

Ethernet Layer 2 switching with VLAN tagging, tunneling, translation, and trunking

Interfaces and Connector Types

Module (front connectors)

FastE (optical) * SFP Dual LC
GbE (optical) * SFP Dual LC
GbE (electrical) * SFP RJ-45 (MDI)
OC-3/12 * SFP Dual LC
OC-48 SFP Dual LC
Craft Port RJ-45 (MDI and MDI-X, auto sensing)

Chassis (rear connectors)

DS1 Champ 64
DS3 Standard BNC
FastE (electrical) RJ-45 (MDI)
Management Port RJ-45 (MDI and MDI-X, auto sensing)
Customer Alarms Wire-wrap pins

Modules per Shelf and Protection

2 per shelf 1:1 protection

The same module type is used for both working and protect

Maximum Ports per TE-206 Shelf

DS1	14 protected	14 unprotected
DS3	3 protected	3 unprotected
OC-48	1 protected	1 unprotected

Plus a mix of the following:

FastE (electrical)	4 protected	4 unprotected
FastE (optical)	4 protected	8 unprotected
GbE (electrical /optical)	4 protected	8 unprotected
OC-3	4 protected	8 unprotected
OC-12	4 protected	8 unprotected

SFP Ethernet Optical Characteristics

1000Base-SX	850 nm MMF	6.5 dB gain
1000Base-LX	1310 nm SMF	8.5 dB gain
1000Base-ZX	1550 nm SMF	20.5 dB gain
100Base-FX	1310 nm MMF	13.5 dB gain
100Base-FX	1310 nm SMF	13.5 dB gain

SFP OC-3/12 Optical Characteristics

SR (OC-3)	1310 nm MMF	8 dB gain
IR (OC-3/12) **	1310 nm SMF	13 dB gain
LR (OC-3/12) **	1310 nm SMF	25 dB gain

SFP OC-48 Optical Characteristics

IR	1310 nm	13 dB gain
LR-1	1310 nm	26 dB gain
LR-2	1550 nm	26 dB gain
LR DWDM	44 lambda, ITU 100 GHz	28 dB gain

Optional 1550/1310 splitter for low-cost, dual lambda applications

Ethernet Ring Restoration Options

Ethernet Rapid Ring Protection (ERRP) [<50 ms switching]

Ethernet Rapid Spanning Tree Protocol (RSTP)
SONET UPSR ring switching [<50 ms switching]

Operations Management

NE-embedded, browser based GUI

TransNav Xpert PC EMS – PC-based (Windows® NT®, Windows 2000, or Windows XP), multi-user GUI for small networks

TransNav Xpert EMS – Unix-based, multi-user, server platform supporting PC (Windows NT, Windows 2000, or Windows XP) and Unix GUI clients for larger networks

TL-1 network element management protocol

SNMP traps, sets, and gets (in addition to TL-1)

Synchronization

Internal timing

Redundant timing derived from SONET OC-48 line interfaces

Synchronization Status Messaging

Standards Compliances

NEBS Level 3 Certified

Telcordia GR-253-CORE, GR-1400-CORE, GR-1089-CORE, and GR-63-CORE

FCC Part 15

Ethernet MAC layer (802.3), RSTP (802.1w), VLAN (802.1Q)

* Any FastE, GbE or OC-3/12 SFP can be used in any front service port

** Software provisionable as OC-3 or OC-12