

Benefits and Features

- ❖ Virtual concatenation (VC) for efficient delivery of Ethernet using existing SONET networks
- ❖ Highest, most flexible drop port options available in its class (T3, T1, and Ethernet)
- ❖ Extended temperature operation for uncontrolled environments
- ❖ GR-253 compliant OC-3 transport
- ❖ Compact – only 3 RU high by 7" wide - three units can be mounted side-by-side in a 23" rack
- ❖ OSMINE support (TIRKS, NMA)
- ❖ 1:1 circuitry protection, 1+1 optical redundancy
- ❖ Hot insertion and card swap out
- ❖ Interoperability and DCC compatibility to higher-order Add/Drop Multiplexers
- ❖ CPE packaging
- ❖ Flow through TL1 and SNMP management
- ❖ TL1 sets and gets support
- ❖ Menu-driven RS-232 interface
- ❖ NEBS Level 3 certified
- ❖ Custom rack-and-stack configurations available

EdgeLink OTM1000 OC-3 Terminal Multiplexer



Most efficient delivery of voice and Ethernet services over SONET networks

EdgeLink OTM1000® is the first optical SONET edge solution that allows service providers to deliver traditional T1 and T3 services over an OC-3 fiber feed as well as Ethernet, via virtual concatenation, without the wasted bandwidth found with traditional Packet over SONET (PoS) offerings.

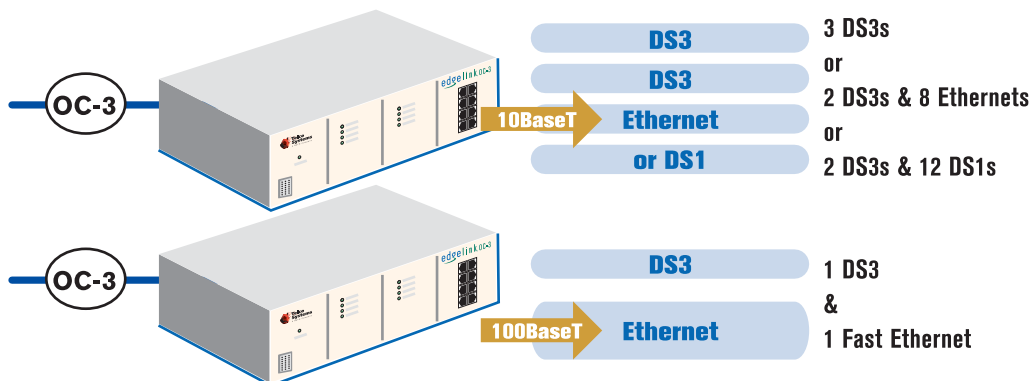
EdgeLink OTM1000 was designed to address the need for compact and efficient last-mile delivery of voice and data services. It optically transports an OC-3 to locations where copper cannot reach, where voice and data service delivery needs exceed T1 or T3. EdgeLink OTM1000 is ideal for connection to fiber spurs off a carrier's SONET backbone ADM or in point-to-point applications for extension of T1, T3, and Ethernet from a CO or POP.

Key differentiators for EdgeLink OTM1000 in the SONET terminal multiplexer market are its flexibility and efficiency. It has the ability to virtually concatenate (VC) two STS-1 payloads into a single payload that can carry a 100BaseT Ethernet (fast Ethernet) connection with a DS3 available for delivery or to be used with an M13 for T1 fan out. Other configurations include: 3 DS3s, 2 DS3s and 8 10BaseT Ethernet ports, or 2 DS3s and 12 DS1s. The VC scheme uses maximum efficiency as opposed to wasting bandwidth by mapping a 100BaseT Ethernet connection to a single OC-3 155 Mbps, which is typical with PoS.

Description of Product Technology

Flexible Scalable Design

EdgeLink OTM1000 can be configured with 3 DS3s, 2 DS3s and 8 Ethernet ports, 1 DS3 and 1 Fast Ethernet port, or 2 DS3s and 12 DS1s. The later application allows service providers to offer 8 individual customers transparent LAN services, where each transparent LAN connection occupies a software selectable number of virtually concatenated VT1.5s. These VT1.5 groups can then be mapped by higher order SONET ADMs as individual SONET payloads to remote equipment terminating the virtual concatenated Transparent LAN connections.



Efficient Use of Rack Space

Three units can be mounted side-by-side in a 23" rack to hub to EdgeLink OTM1000s located in the field or for fiber feeds up-the-riser to extend T3, T1, and Ethernet. Optics support both unprotected or APS protection on a 1+1 basis, and is fully interoperable with other SONET equipment for transport and DCC management.

EdgeLink OTM1000 is also compact, up to 50-60% smaller than traditional OC-3 multiplexers with the same class of features. The unit is wall or rack-mountable ideal for CPE wire closets, cell-sites, or COs.

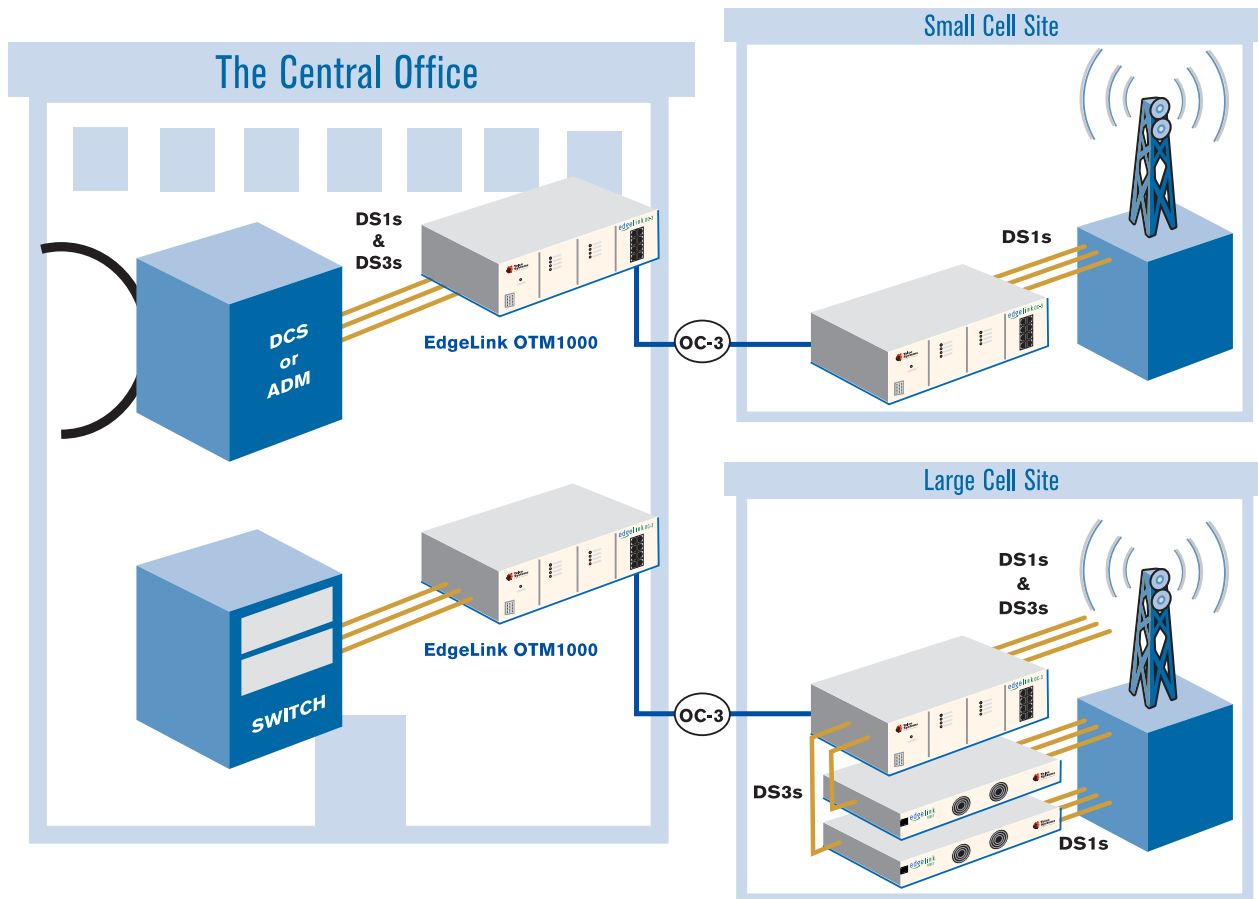
Extended Performance Management

EdgeLink OTM1000 offers flow-thru TL1 and SNMP management and provisioning to downstream Telco Systems' EdgeLink100 DS3 multiplexers for a complete OC-3-to-84 T1 solution. Flow through provisioning reduces provisioning and network management complexity while conserving network management ports and IP addresses.

Service providers can reach the customer premises from their SONET POPs, have full TL1 and SNMP visibility for network performance through the higher-order SONET ADM, while also allowing them to offer their customers converged voice and data services without overlaying networks. EdgeLink OTM1000's ability to provide bandwidth in VT1.5 increments also allows service providers to offer tiered data services where customer demand for greater bandwidth for Ethernet can be provided for additional revenue.

Available for any Environment

EdgeLink OTM1000 is extended temperature rated and rugged enough to handle any environment. It is ideal for applications that require it to be located in uncontrolled remote locations, such as RTs or cell sites. This feature, in tandem with its compact size, makes it a perfect fit in cramped CPE installations.



Custom Configuration Services

Service providers count on Telco Systems for complete, customized telecommunications solutions that meet their specific deployment needs from CO to CPE and remote Co-Lo applications. Our team has the experience, knowledge and resources to create tailored solutions for any environment, including: rack-up assemblies, cabinet systems, out-door cabinet systems, multi-vendor systems, wall-mount configurations and easy-mount equipment configurations. No matter what the network requirements are, Telco Systems can create a complete, custom solution that gives service providers an edge.

Specifications

Network Side

OC-3 Interface

Line Rate	155.52 Mbps \pm 32ppm
Redundancy	1+1
Fiber	Single-Mode 1310 nm
Span	15 KM IR 40 KM LR
Receive Sensitivity	-36dBm
Power Level	-8 dBm to -15 dBm

Drop Side

DS3 Interface

Number of Duplex Lines	Up to 3 per shelf
Line Rate	44.736 Mbps \pm 20 ppm
Line Code	B3ZS
Framing	P-Bit (M13) or C-Bit
Redundancy	1:1
Line Impedance	75 ohm, unbalanced
Pulse Amplitude	.36V to .85V
Cable	728A, RG-6/U, 734U, 735U
Span	450 ft. to cross-connect
Power Level	-2.7dBm to +4.7dBm

DS1 Interface

Number of Lines	Up to 12 per shelf
Line Rate	1.544 Mbps \pm 32ppm
Line Code	Selectable AMI/B8ZS
AIS Line Rate	1.544 Mbps \pm 32ppm
Line Impedance	100 ohm, nominal balanced
Pulse Amplitude	2.4V to 3.6V
Cable	ABAM or equivalent
Span	655 ft. to cross-connect

Ethernet Interface

Number of Lines	Up to 8 10BaseTs or 1 100BaseT per shelf
Transmission	Full duplex Flow control
Range	100 m

Interfaces

OC-3 Optical	SC
DS3 Electrical	BNC, male
DS1	RJ45
Ethernet	RJ45
Craft/Modem	9 pin D Male
Ethernet/Telnet	10BaseT RJ45
Alarm Contact	Wire wrap
External Clock	Dual source wire wrap
Power	Dual feed terminals

System Management

Embedded SNMP Management	
TELNET	
TL1 over TCP/IP, DCC, or TELNET	
Local Craft VT-100/ANSI Terminal (menu-driven)	
Office Alarms (4 Input, and 4 output)	
Status LEDs	
DCC Formats IP, OSI, PPP (Header only), PPP (Full stack)	
4 Levels of Security	

Power Requirements

Voltage	-41.5 to -56.3 Vdc
Power Consumption	23 Watts typical
Heat Dissipation	78 BTU
Current Draw	500 mA typical
Recommended Max Fuse	5 Amps

Environmental

Operating Temperature	-40°C to +65°C
Relative Humidity	Up to 90%, non-condensing
Altitude	Up to 13,000 ft. above sea level

Compliance

FCC Part 15 Class A
UL 1950
CSA 22.2
GR-499-CORE, GR-253-CORE
GR-1089, GR-63 (NEBS Level 3)
ITU-T G.707, G.7041 (GFP, VC)

Dimensions

Height	5.25" - 3 rack unit
Width	7"
Depth	10"
Weight	8 lbs fully loaded