

## DSLAMs and T1/E1 Multiplexers

### ForeFront 1195 Multi-E1 (TDM) and Ethernet Extender over Fiber Mux and Extender



*The Patton ForeFront™ Model 1195 TDM and Ethernet Extender over Fiber eases the extension of voice and data with the simultaneous multiplexing of 4 to 8 x E1 TDM circuits and one 10/100Base-T Ethernet interface over SMF at up to 80 km distances.*

### Overview

The Model 1195 is an Optical Multiplexer that simultaneously extends up to eight E1s and one 10/100 Mbps Ethernet connection over 1310nm single-mode fiber cable for distances of 50 km or 1550nm single-mode fiber cable for distances up to 80 km. With built-in high speed switching support, the Model 1195 offers a robust 1+1 protection switched path over two fiber optic pairs.



Carriers, service providers and wireless GSM operators use the Model 1195 for simple extension and backhaul of up to four voice-bearing E1s and data-bearing Ethernet connections from a remote cell site, Point-of-Presence (PoP), or MxU to a Central Office (CO). It is the ideal solution for 3G cellular telephony solutions requiring the simultaneous backhaul of voice and mobile data from remote cell sites to local telephone exchanges.

Enterprise customers use the ForeFront™ E1/Ethernet Mux to extend the reach of E1 leased lines and broadband Ethernet traffic from the telco demarcation point to on-campus buildings.

The Model 1195 is offered in both 220 VAC and -48 VDC power options. The fiber optic port is available standard on an FC/PC optical connector supporting 1310 or an optional 1550nm wavelength.

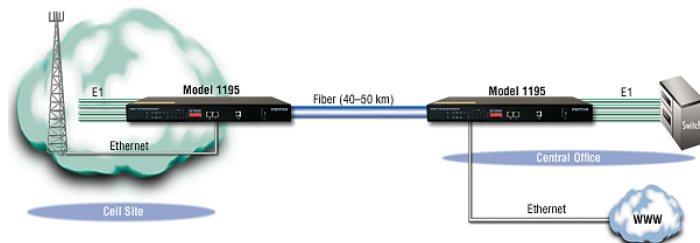
The E1 electrical ports are available with either an RJ-48C balanced 120-ohm interface or a 75-ohm dual-BNC unbalanced interface with HDB3 line coding. E1 ports can be set to internal or loop timing. The Ethernet port is a 10/100Base-T auto-negotiating interface that supports full and half-duplex operation.

Ports can be easily configured from front panel DIP switches. The fiber mux is completely managed via a CLI interface accessible via a DB-9 RS-232 console as well as from a telnet session. Alternately, a complete SNMPv2 agent is included for management via any standard SNMP based management system. An optional SNMP based PC management application is likewise available.

### Features

- **Wire Speed Extension of E1 and Ethernet up to 80 km**—Multiplex 4 or 8 E1s and a single 10/100 Ethernet at wire speed up to 80 km over single mode fiber (SMF) link
- **1+1 Fiber Path Protection**—Protect the backhaul and extension of even the most mission critical applications with a built-in 1+1 Fiber Path protection switched line
- **Robust Diagnostics**—Both local and remote loopback is supported on all the E1 ports. Visible and audible alarm indicators show when a port is down.
- **Carrier Grade Installation**—The Model 1195 is a low power consuming device (less than 18 Watts) designed for a 1U high telco rack. With Engineering Order Wire (EOW) included, the installation time of a unit is greatly reduced.
- **Integrated Management**—The NeLink™ Mux includes an RS-232 DB-9 port with a complete command line interface (CLI). Management can also be effected via a Telnet session or any SNMP application.

### Applications



# Specifications

<b>E1 Interfaces</b>	Connector: RJ-48C • Line Code: HDB3 • Bit Rate: 2.048 Mbps ±50 ppm • Electrical Interface: Conforms to ITU-T G.703 • Nominal Impedance: 120 ohm balanced / 75 ohm unbalanced (optional) • Jitter Characteristics: Conforms to ITU-T G.742 and G.823 • Clocking/Timing: Internal & Loop Timing
<b>Ethernet Interface</b>	Connector: RJ-45 • Interface: 10/100BaseT auto-negotiating • Bit Rate: 100 Mbps • Duplex: Full and Half Duplex
<b>Optical Interface</b>	Connector: FC/PC • Transmitter Type: Class 1 Laser compliant with IEC 60825-1 • Transmitter Power: ≥ -3dBm, ≥ -6 dBm, ≥ -9 dBm options • Wavelength: 1310nm standard/1550nm optional • Receiver Sensitivity: ≥ -36dBm • Distance: 50 km (80 km optional)
<b>Power Supply</b>	Input: 220 VAC or -48 VDC • DC Input: -36 to -72 VDC • AC Input: 185 to 265 VA • Power Consumption: 18 Watts Maximum
<b>Serial Console Interface</b>	Connector: DB-9 • Interface: RS-232
<b>Environment</b>	Temperature: -5 to +55 °C operating • -40 to +70 °C storage • Humidity: 5 to 95%
<b>Physical Specifications</b>	Dimensions: 440 W x 43.5 H x 202 D mm • Fits in a standard 19-in. EIA rack • Weight: 2 kg
<b>Compliance</b>	E1 Interface: ITU-T G.703, G.742 and G.823 • Laser Interface: ITU-T G.957 and G.958 Telcordia (Bellcore) GR-468-CORE

# Ordering

#	Model #	Description	Availability
1	1195/4E1/50KM/220DC-NRC	ForeFront 4 E1/100BaseTX TDM; 50km; 220VAC & 48VDC; No CE; No RoHS	Special Order
2	1195/4E1/50KM/220-NRC	ForeFront 4 E1/100BaseTX TDM; 50km; 220VAC; No CE; No RoHS	Special Order
3	1195/4E1/50KM/DC-NRC	ForeFront 4 E1/100BaseTX TDM; 50km; 48VDC; No CE; No RoHS	Special Order
4	1195/4E1/80KM/220-NRC	ForeFront 4 E1/100BaseTX TDM; 80km; 220VAC; No CE; No RoHS	Special Order
5	1195/4E1/80KM/DC-NRC	ForeFront 4 E1/100BaseTX TDM; 80km; 48VDC; No CE; No RoHS	Special Order
6	1195/8E1/50KM/220-NRC	ForeFront 8 E1/100BaseTX TDM; 50km; 220VAC; No CE; No RoHS	Special Order
7	1195/8E1/50KM/DC-NRC	ForeFront 8 E1/100BaseTX TDM; 50km; 48VDC; No CE; No RoHS	General Availability
8	1195/8E1/80KM/220-NRC	ForeFront 8 E1/100BaseTX TDM; 80km; 220VAC; No CE; No RoHS	Special Order
9	1195/8E1/80KM/DC-NRC	ForeFront 8 E1/100BaseTX TDM; 80km; 48VDC; No CE; No RoHS	General Availability

Item Number	Item Description	Price
SVC-SmartCare-BH (/support/support.asp)	Premium Support for Business Hours	Contact us (/howtobuy/) for availability and pricing.
SVC-SmartCare-24/7 (/support/support.asp)	Premium Support, 24 x 7 Coverage	Contact us (/howtobuy/) for availability and pricing.
SVC-SmartAssist-BH (/support/support-professional.asp)	Business Hour Support Services	Contact us (/howtobuy/) for availability and pricing.
SVC-SmartAssist-AH (/support/support-professional.asp)	After Hours Support Services	Contact us (/howtobuy/) for availability and pricing.
SVC-ENHWAR1 (/support/support-warranty.asp)	1 Year Enhanced Warranty	Contact us (/howtobuy/) for availability and pricing.
SVC-ENHWAR2 (/support/support-warranty.asp)	2 Year Enhanced Warranty	Contact us (/howtobuy/) for availability and pricing.
SVC-ENHWAR3 (/support/support-warranty.asp)	3 Year Enhanced Warranty	Contact us (/howtobuy/) for availability and pricing.
SVC-ENHWAR4 (/support/support-warranty.asp)	4 Year Enhanced Warranty	Contact us (/howtobuy/) for availability and pricing.
SVC-ENHWAR5 (/support/support-warranty.asp)	5 Year Enhanced Warranty	Contact us (/howtobuy/) for availability and pricing.
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SVC-EXTWAR3 (/support/support-warranty.asp)	3 Year Extended Warranty	Contact us (/howtobuy/) for availability and pricing.
SVC-EXTWAR4 (/support/support-warranty.asp)	4 Year Extended Warranty	Contact us (/howtobuy/) for availability and pricing.
SVC-EXTWAR5 (/support/support-warranty.asp)	5 Year Extended Warranty	Contact us (/howtobuy/) for availability and pricing.
SVC-NETENG-HOUR (/support/support-professional.asp)	Network technician hour rate for pre-config services, after hours support, etc.	Contact us (/howtobuy/) for availability and pricing.

## Backgrounders

FiberPlex Capabilities Guide (/backgrounders/FiberPlex\_Capabilities\_Statement.pdf)

October 6, 2017

## Certifications

## Data Sheets

Patton Product Life Cycle Color Codes (/datasheet/Life-Cycle-Availability-Codes.pdf)

April 24, 2015

Model 1195 Datasheet (/datasheet/1195\_datasheet.pdf)

April 4, 2012

Model 1195 Datasheet (A4 page size) (/datasheet/1195-A4\_datasheet.pdf)

April 4, 2012

## Product & Solution Guides

Enterprise Networking Products Guide (/guides/07MENTNET-PG-lo.pdf)

November 10, 2010

## User Manuals & Configuration Guides

BroadSoft Configuration Guide for SmartNode SmartWare (/manuals/BroadSoft\_PartnerConfigGuide\_Patton\_SmartNode.pdf)

December 2, 2013

Model 1195 4E1 Guide, Getting Started (/manuals/1195-4E1-gsg.pdf)

April 27, 2012

Model 1195 4E1 Guide, Quick Start (/manuals/1195-4E1-qs.pdf)

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Model 1195 8E1 Guide, Getting Started (/manuals/1195-8E1-gsg.pdf)

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April 27, 2012

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