

ForeFront™ E1/Ethernet Mux

Model 1195 TDM and Ethernet Extender over Fiber



The Patton Model 1195 eases the extension of voice and data with the simultaneous multiplexing of 4 x E1 TDM circuits and one 10/100BaseT Ethernet interface over SMF at up to 50 km distances.

Wire Speed Extension of E1 and Ethernet up to 50 km

Multiplex up to 4 E1s and a single 10/100 Ethernet at wire speed up to 50 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 ForeFront™ 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.

The Model 1195 is an Optical Multiplexer that simultaneously extends up to four E1s and one 10/100 Mbps Ethernet connection over 1310nm single-mode fiber cable up to 50 km distances. 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.

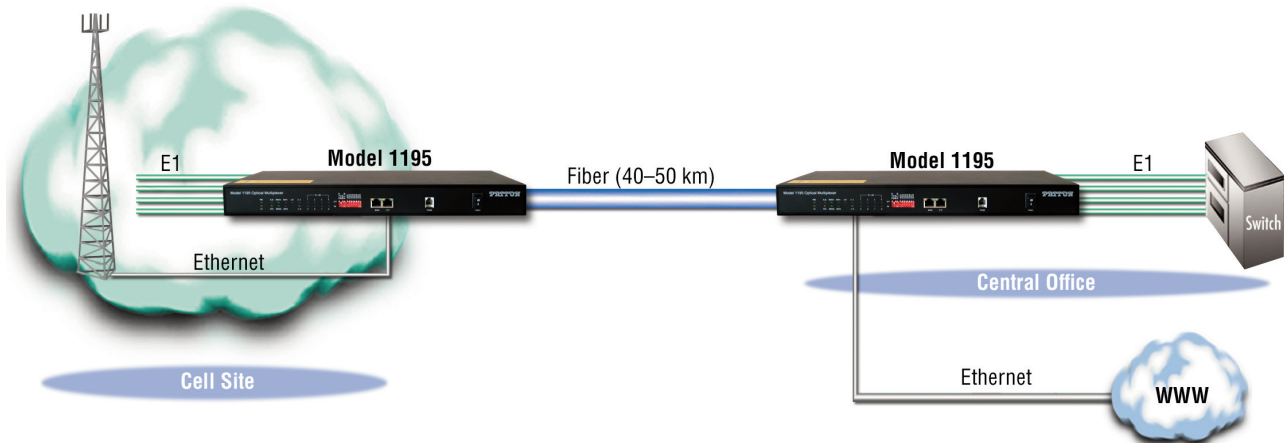
The E1 electrical ports are available with either an RJ-48C balanced 120Ω interface or a 75Ω dual-BNC unbalanced interface with HDB3 line coding. E1 ports can be set to internal or loop timing. The Ethernet port is a 10/100BaseT auto-negotiating interface that supports full and half-duplex operation.

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.

Visit www.patton.com for more information.



Typical Application



Specifications

E1 Interfaces

Connector: RJ-48C

Line Code: HDB3

Bit Rate: 2.048 Mbps \pm 50 ppm

Electrical Interface: Conforms to ITU-T G.703

Nominal Impedance: 120 Ω balanced/75 Ω unbalanced (optional)

Jitter Characteristics: Conforms to ITU-T G.742 and G.823

Clocking/Timing: Internal & Loop Timing

Ethernet Interface

Connector: RJ-45

Interface: 10/100BaseT auto-negotiating

Bit Rate: 100 Mbps

Duplex: Full and Half Duplex

Optical Interface

Connector: FC/PC

Transmitter Type: Class 1 Laser compliant with IEC 60825-1

Transmitter Power: \geq -3 dBm, \geq -6 dBm, \geq -9 dBm options

Wavelength: 1310 nm standard/1550 nm optional

Receiver Sensitivity: \geq -36dBm

Distance: 40 km (50 km optional)

Power Supply

Input: 220 VAC or -48 VDC

DC Input: -36 to -72 VDC

AC Input: 185 to 265 VA

Power Consumption: 18 W maximum

Serial Console Interface

Connector: DB-9

Interface: RS-232

Environment

Temperature: -5 to +55 $^{\circ}$ C operating

-40 to +70 $^{\circ}$ C storage

Humidity: 5 to 95%

Physical Specifications

Dimensions:

440 W x 43.5 H x 202 D mm

Fits in a standard 19-in. EIA rack

Weight: 2 kg

Compliance

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 Codes

1195/4E1/50KM/220: E1 Ethernet Mux with 4 x E1 ports presented on an RJ-48C and 1 x 10/100 Ethernet port; 50KM interface; AC Power

1195/4E1/50KM/DC: E1 Ethernet Mux with 4 x E1 ports presented on an RJ-48C and 1 x 10/100 Ethernet port; 50KM interface; DC Power

1195/4E1/80KM/220: E1 Ethernet Mux with 4 x E1 ports presented on an RJ-48C and 1 x 10/100 Ethernet port; 80KM interface; AC Power

1195/4E1/80KM/DC: E1 Ethernet Mux with 4 x E1 ports presented on an RJ-48C and 1 x 10/100 Ethernet port; 80KM interface; DC Power

1195/8E1/50KM/220: E1 Ethernet Mux with 8 x E1 ports presented on an RJ-48C and 1 x 10/100 Ethernet port; 50KM interface; AC Power

1195/8E1/50KM/DC: E1 Ethernet Mux with 8 x E1 ports presented on an RJ-48C and 1 x 10/100 Ethernet port; 50KM interface; DC Power

1195/8E1/80KM/220: E1 Ethernet Mux with 8 x E1 ports presented on an RJ-48C and 1 x 10/100 Ethernet port; 80KM interface; AC Power

1195/8E1/80KM/DC: E1 Ethernet Mux with 8 x E1 ports presented on an RJ-48C and 1 x 10/100 Ethernet port; 80KM interface; DC Power

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