



# FMUX160 FMUX80

16 or 8x E1/T1 + 4x FE, Managed  
Fiber Multiplexer

The FMUX160/FMUX80 is 1U 19" rack mountable, PDH fiber optical Multiplexer that transmits up to 16/8 E1/T1 + 4 x 10/100Base-TX Fast Ethernet over a single fiber optic link. The FMUX160/FMUX80 chassis is available in three different power configurations; single AC, single DC, or AC+DC. The AC supplies operate from 90 ~ 240VAC while DC supplies operate from 18~60VDC. On the rear of the chassis, the BNC model provides 32/16 unbalanced 75 Ohm coaxial connections with BNC connectors while the RJ-45 model provides 16/8 balanced 120 Ohm connections over twisted pair wiring with RJ45 connectors. The FMUX160/FMUX80 gives you the fiber cabling connector ST SC FC, both multi-mode and single-mode are available as well as BiDi which allows bi-directional transmissions using only a single fiber cable. 1+1 Automatic optical line protection is also supported for the aggregate fiber ports. The standard FMUX160/FMUX80 configuration may be viewed or set via serial VT-100 terminal connection or SNMP card with web, telnet, and SNMP management.

## Features

- Provides 16/8 E1/T1 G.703 transparent transmission over fiber
- Provide 4x 10/100 Mbit/s Ethernet Ports (100Mbps aggregate)
- Provides one RS232 channel
- Loopback test on E1/T1 fiber port
- Provides one hotline channel (order-wire)
- Supports full/half duplex, 10M/100M, auto-Negotiation
- Forward 1792 byte packets on Ethernet port
- Supports 1+1 fiber line protection. Less than 50ms
- Complete alarm function and can monitor remote device status
- Power combination AC220V and DC-48V for redundant options
- Supports RS232 local management ; Supports on-line f/w upgrade
- Supports Web, Telnet, SNMP management (optional)

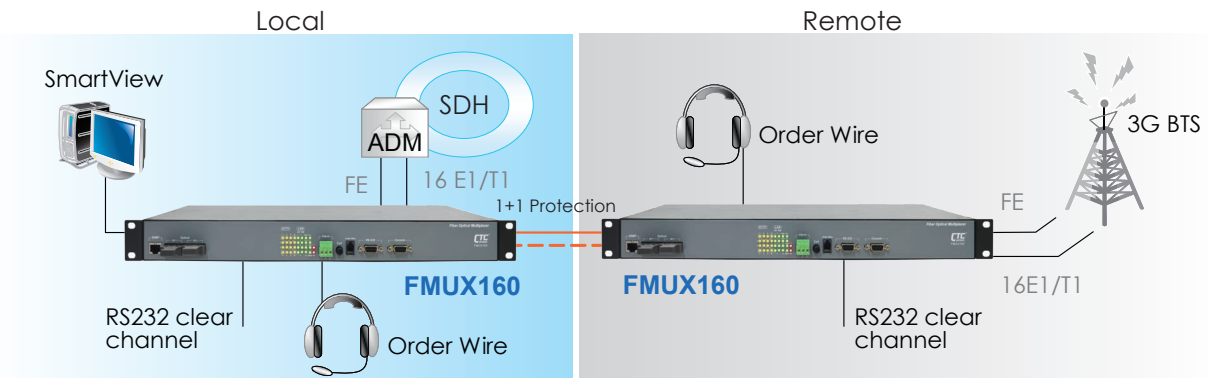
## Specifications

<b>Optical Interface</b>	Connector	ST, SC, FC (Fixed)
	Data rate	155.52Mbps
	Bit Error Rate	Less than 10 <sup>-11</sup>
	Distance	MM 2km, SM 15/30/50/80/120km WDM 20/40/60/80km
	Wavelength	1310nm, 1550nm, CWDM 1471nm~1611nm
<b>Electrical Interface</b>	Connector	Console : RS232 / SNMP : RJ45 Ethernet : RJ45 (4-port)
		Alarm : RS232 / Order wire : RJ11
<b>E1 Interface</b>	Standards	ITU-T G.703, G.704, G.706, G.732
	Ports	8/16 ports
	Data Rate	2.048 Mbps ± 50 ppm
	Line Code	HDB3/AMI
	Connector	RJ-45 for 120 ohms BNC for 75 ohms

<b>T1 Interface</b>	Standards	ITU-T G.703, G.704, AT&T TR-62411, ANSI T1.403
	Ports	8/16 ports
	Data Rate	1.544 Mbps ± 50 ppm
	Line Code	B8ZS / AMI
	Connector	RJ-45 for 100 ohms
<b>Certification</b>		CE, FCC, RoHS compliant
<b>Standards</b>		ITU-T G.703, G.823 and G.742, ANSI, AT&T, IEEE 803.2, IEEE 802.3u
<b>Indications</b>		Power, Alarm, LBK, RD, LCK, RNG, ACO, Port, channel
<b>Power Input</b>		90 ~ 240VAC, 18~60VDC
<b>Power Consumption</b>		<25W
<b>Dimensions</b>		250 x 438 x 43mm (D x W x H)
<b>Weight</b>		3.58kg
<b>Temperature</b>		0 ~ 60°C (Operating), -10 ~ 70°C (Storage)
<b>MTBF</b>		75,000 hrs

## Application

### Remote 3G BTS connection Application



-Related Products: FMUX1001/101, FMUX1600, FMUX04E (16x E1/T1 + 4x GbE/FE FOM, 4E1/T1 + 3x FE FOM)

## Ordering Information

### Two Fiber model

Model Name	Description
FMUX160B-AD-2SC002	16x E1 BNC + 4 x 10/100Base-T Ethernet Fiber Multiplexer, with two MM 2km SC fiber, AC+DC Power
FMUX160R-AD-2SC002	16x E1/T1 RJ45 + 4 x 10/100Base-T Ethernet Fiber Multiplexer, with two MM 2km SC fiber, AC+DC Power
FMUX80B-AD-2SC002	8x E1 BNC + 4 x 10/100Base-T Ethernet Fiber Multiplexer, with two MM 2km SC fiber, AC+DC Power
FMUX80R-AD-2SC002	8x E1/T1 RJ45 + 4 x 10/100Base-T Ethernet Fiber Multiplexer, with two MM 2km SC fiber, AC+DC Power

### One Fiber model

Model Name	Description
FMUX160B-AD-SC002	16x E1 BNC + 4 x 10/100Base-T Ethernet Fiber Multiplexer, with one MM 2km SC fiber, AC+DC Power
FMUX160R-AD-SC002	16x E1/T1 RJ45 + 4 x 10/100Base-T Ethernet Fiber Multiplexer, with one MM 2km SC fiber, AC+DC Power
FMUX80B-AD-SC002	8x E1 BNC + 4 x 10/100Base-T Ethernet Fiber Multiplexer, with one MM 2km SC fiber, AC+DC Power
FMUX80R-AD-SC002	8x E1/T1 RJ45 + 4 x 10/100Base-T Ethernet Fiber Multiplexer, with one MM 2km SC fiber, AC+DC Power

### Optional modules

Model Name	Description
FMUX160-SNMP	SNMP Card with 10/100Base-TX Ethernet Port
FMUX80-SNMP	SNMP Card with 10/100Base-TX Ethernet Port
FMUX-Phone-2	2 Wires Order Wire with RJ9 to RJ11 cable
FMUX-Phone-4	4 Wires Order Wire

**Note:** SNMP option only required in one unit of paired link

Example:

