

FMUX1001/FMUX101

16x E1/T1 + 4x GbE/FE Managed Fiber Multiplexer



- Redundant Power and Hot Support Design
- E1/T1, Data, Voice and Ethernet Interface Module cards (option)

The FMUX1001/FMUX101 is a 1U, 19" rack mountable, PDH fiber optic multiplexer that transmits up to 16 channels plus a 10/100/1000Base-T (FMUX1001) / 10/100Base-TX (FMUX101) Ethernet channel over a single fiber optic link. The FMUX1001/FMUX101 chassis supports redundant power and hot swappable design. The AC supplies operate from 100~240VAC while DC supplies operate from 18~60VDC. From the rear of the chassis, one to four hot swappable quad E1 or T1 line cards, serial data communications (V.35, X.21, RS-530) or FXO/FXS voice cards are supported. The standard FMUX1001 configuration may be viewed or set via the front panel LCD/menu keys, serial VT-100 terminal connection, Telnet, web HTTP or SNMP.

Features

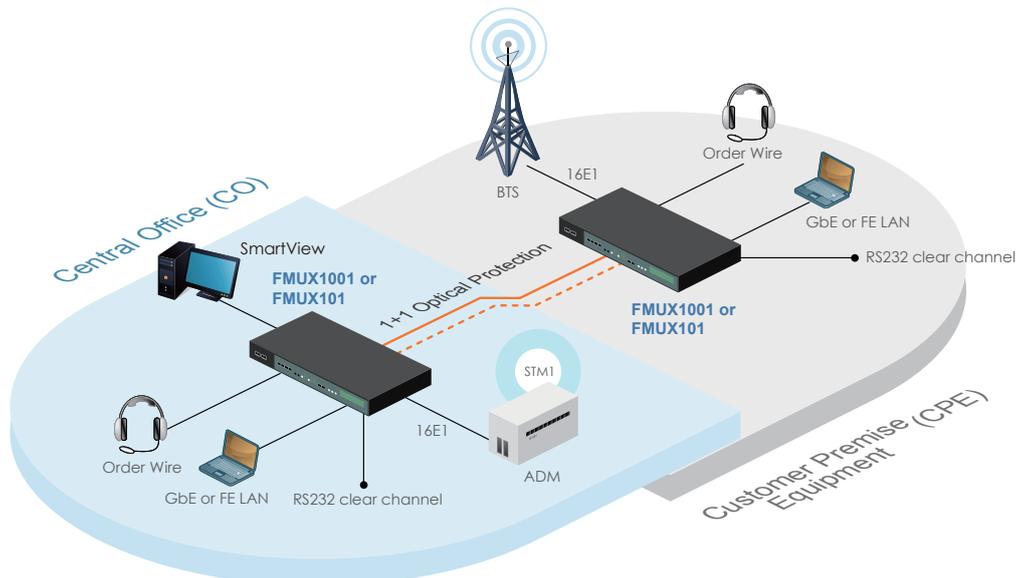
- 1U, 19 (23)" 4-slot chassis
- 16 E1 (2.048Mb/s) Multiplexer with 100/1000Mbps Ethernet and RS-232 data (async) Interface (FMUX1001)
- 16 E1 (2.048Mb/s) Multiplexer with 10/100Mbps Ethernet and RS-232 data (async) Interface (FMUX101)
- RS-232 port for system console
- One alarm output port, one Order Wire port
- 4x 10/100/1000Base-T Ethernet ports (FMUX1001)
- 4x 10/100Base-TX Ethernet ports (FMUX101)
- SNMP management
- LCD plus menu keys for local configuration
- Port based VLAN, tag based VLAN & bandwidth control
- Telnet and web based remote configuration
- 2 plug-in SFP slot for optical SFP module
- Forward 1024K byte packets on Ethernet port

Specifications

Optical Interface	Connector	SFP - LC	Standards	E1:ITU-T, T1:ITU-T, AT&T, ANSI, Ethernet: IEEE 802.3x	
	Data rate	1.25G (FMUX1001), 155M (FMUX101)		Indications	PWR, Alarm, Phone, ACO, Port, Channels
	Bit Error Rate	Less than 10 ⁻¹¹			Power Input
	Fiber	MM 62.2/125µm, 50/125µm SM 9/125µm		Power Consumption	
	Distance	MM 2km, SM 15/30/50/80/120km WDM 20/40/60/80km			Dimensions
	Wavelength	1310, 1550nm		Weight	
	Electrical Interface	Console, SNMP			RJ45
Ethernet		4x RJ45	Humidity	10 ~ 90% non-condensing	
Alarm		RJ45		Certification	CE, FCC
			MTBF		50,000 hrs

Application

Remote 3G BTS Connection Application



-Related Products: FMUX1600/160, FMUX800/80, FMUX04E (16 or 8x E1/T1 + 4x GbE/FE FOM, 4E1/T1 + 3x FE FOM)

FMUX1001 & FMUX101 Interface Module



4x E1/T1 RJ45 I/F

Standards	ITU-T G.703, G.704, AT&T TR-62411, ANSI T1.403
Ports	4 ports
Framing	Unframed (clear channel)
E1	Data rate: 2.048 Mbps \pm 50 ppm Line code: HDB3 / AMI Line impedance: 120 ohms \pm 5%, 75ohms \pm 5%
T1	Data rate: 1.544 Mbps \pm 50 ppm Line code: B8ZS / AMI Line impedance: 100 ohms \pm 5%
Receive Level	Short haul - 15dB
Connector	RJ-45



4x E1 BNC I/F

Standards	ITU-T G.703, G.704, G.706, G.732
Ports	4 ports
Framing	Unframed (clear channel)
Data rate	E1 2.048 Mbps \pm 50 ppm
Line code	E1 HDB3/AMI
Receive Level	Short haul - 15dB
Line impedance	E1 75 ohms \pm 5%
Connector	BNC 75 ohms

Related Cables (Please see order information for more details)



V35



RS530



RS449



X21



RS232

4x Data Com I/F

Standards	ITU-T, E1A
Card Type	V.35/ RS-530 (Include X.21 and RS-449)/ RS-232 I/F
Bit rate	n x 64K, n = 1 to 32 V.35 & RS-530 up to 2Mbps RS-232 up to 115.2Kbps (ASYNC)
Line code	NRZ
Clock Mode	Transparent, Recovery, External (From data port ETC) Internal (From oscillator)

Control Signal	CTS always On or follows RTS DSR constantly ON, except during test loops (RS-530 DSR always connect to DTR) DCD constantly ON, except during fiber signal loss
Test Loops	Local loop back, Remote loop back, V.54
Connector	Type Uses HD-68 pin D type Female with adapter cables



4x FXO I/F

Standards	G.711 A-law (separate modules for FXO)
Distance	2km
Bandwidth	64K voice channel
Connector	RJ45 x 4 (4 voice channel /per unit)



4x FXS I/F

Standards	G.711 A-law (separate modules for FXS)
Distance	2km
Bandwidth	64K voice channel
Connector	RJ45 x 4 (4 voice channel /per unit)

Ordering Information

Model Name	Description
FMUX1001-CH	1U 19" 4-Slot Rack Mount Chassis
FMUX101-CH	1U 19" 4-Slot Rack Mount Chassis
FMUX-AC	Chassis Power Module 90~264VAC
FMUX-DC	Chassis Power Module 18~72VDC
FMUX-4E1/T1-RJ45	4ch E1/T1 RJ45 interface card
FMUX-4E1/T1-Wire	4ch E1/T1 Wire Wrap interface card
FMUX-4E1/BNC	4ch G.703 E1 BNC interface card
FMUX-V35	V35 interface card with HD68M to 4 x MB34F cable (30cm)

FMUX-530	RS-530 interface card with HD68M to 4 x DB25F cable (30cm)
FMUX-449	RS-449 interface card with one HD68M to 4 x DB37F cable (30cm)
FMUX-X21	X.21 interface card with one HD68M to 4 x DB15F cable (30cm)
FMUX-232/Sync	RS-232 Sync card with one HD68M to 4 x DB9F cable (30cm)
FMUX-232/Async	RS-232 Async card with one HD68M to 4 x DB9F cable (30cm)
FMUX-4FXO	4 x FXO interface card
FMUX-4FXS	4 x FXS interface card
FMUX-Phone-2W	2 Wires order Wire (connect to analogue Telephone set)
FMUX-Phone-4W	4 Wires order Wire (connect to Ear-Mic set)
FMUX-EXT/CLK	External clock interface card

Example:

Chassis/Power/Line card Only

FMUX 1 0 0 1 - CH

1001 : GbE Fiber Multiplexer
101 : FE Fiber Multiplexer

FMUX A C

Power Module

FMUX V 3 5

I/F Line Card

Whole Set

FMUX 1 0 0 1 - A C - 2 W - A B C D

1001 : GbE
101 : FE

Power Type
AC
DC
AA : AC + AC
DD : DC + DC
AD : AC + DC

Order Wire
2W : 2 Wire Phone
4W : 4 Wire Phone

Card Type

A : 4x E1 BNC
B : 4x E1/T1 RJ45
C : 4x E1/T1 Wire
D : 4x V.35
E : 4x RS-232/Async
F : 4x RS-530
G : 4x X.21
H : 4x RS-449
I : 4x FXO
J : 4x FXS
L : EXT/CLK
M : 4x RS232/Sync