



FOM09-MUX

OVERVIEW

The FOM09-MUX is a versatile SONET/SDH equipment which supports STM-1/4/8 TM by offering various interfaces i.e. **E1/T1, V.35, FE/GbE, E3/T3...** etc to provide any service in any slot. Of which solution, the FOM09-MUX is well used in the applications of GSM/UMTS base station radio access networks (RAN) or MSAN. The SFP cage design in FOM09-MUX offers the flexibility of plug-and-play and the availability of off-the-shelf fiber modules.

Megatel FOM09-MUX is designed as standard 1U fully adapts 19" or 23" chassis to fit in any lab or outdoor cabinet; Although it is only 1U height, FOM09-MUX provides not only tributary /fiber modules but also hot-swappable 1+1 load-sharing power module design to provide similar flexibility of Shelf-type SONET/SDH equipment.

In order to carry more upcoming traffic from wireless / HSDPA base stations to central office in reliable networks, FOM09-MUX provides carry-grade Ethernet (E-Line) with 1Gbps throughput bundled with L2 function to totally control QoS between end to end.

KEY FEATURES

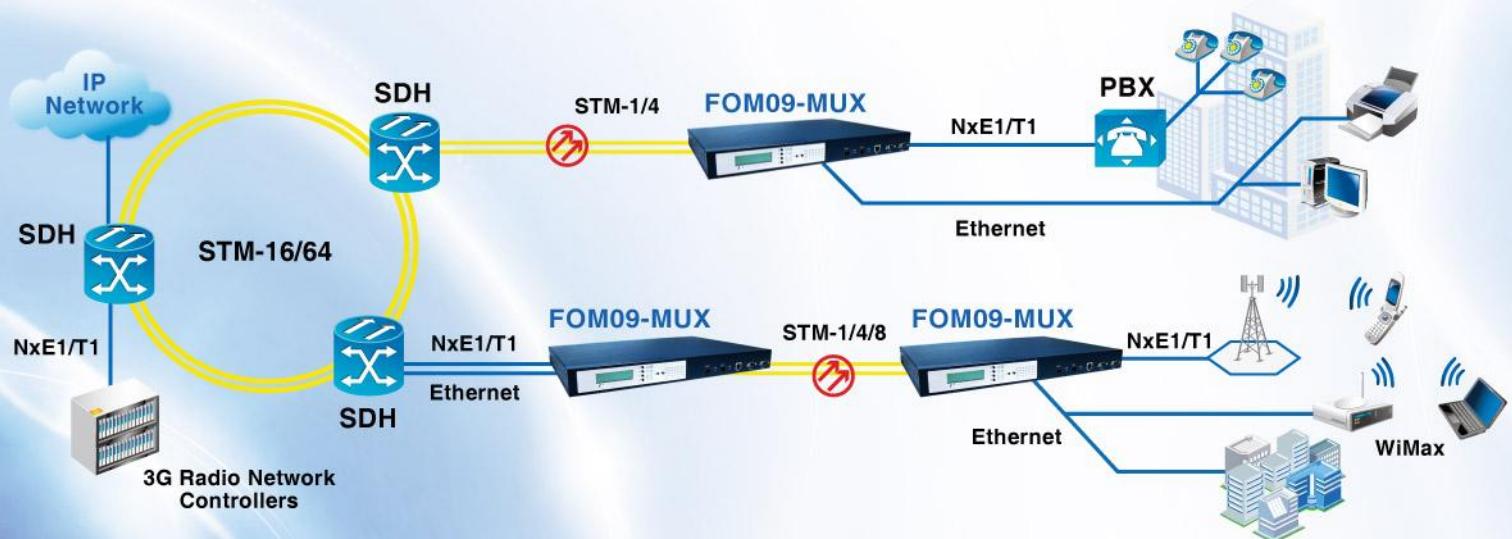
FOM09-MUX provides multiple service solutions with standard point-to-point STM-1/4/8 interfaces (SDH TM).

Multiple hot-swappable tributary modules in any combination:

- 4-channels E1 card (QE1R/B)
- **8-channels E1/T1 card (8ET)**
- **8-channels E1 card (8E1R/B)**
- **4-ports Gigabit Ethernet switch card (GbE)**
- 4-ports V.35 Data communication Interface card (QV35)
- Single port E3/T3 interface card (ET3)
- 4 slots to support combinations of traffics in a 1U-height box
- Ethernet traffic is encapsulated and transported over SDH using Generic Framing Procedure (GFP) & Virtual Concatenation (VCAT)
- Hot swappable fiber optical module in SFP with optional 1+1 automatic protection switching (APS) for optical links.
- Automatic Laser Shutdown (ALS) based on ITU-T G.958/G.664.
- Data Communication Channel for remote control and online remote upgrade.
- Various network management interfaces: RS-232/ Ethernet/ LCD
- **1+1 Redundant AC/DC power modules with load sharing.**
- Cross connect for TDM traffic (E1 & V.35)
- Various framing selections for V35 to E1 traffic
- EMS tool for FOM09-MUX series
- DHCP Client/Telnet/httpd for NMS port
- Keypad Lock/ Password for LCD security

Megatel Industries Corp.

TEL: 610-239-8812 FAX: 215-699-3348
664 Wagner Court North Wales, PA 19401, USA
[Http://www.megatelindustries.com](http://www.megatelindustries.com)



TECHNICAL SPECIFICATIONS



Ethernet Tributary Interface (QSW)

Data rate : 4CHx10/100Mbps with auto negotiation
Compliance : ITU-T G.7041 GFP-F, G.707 VCAT
IEEE 802.3x, 802.1p, 802.1q (Q-in-Q), 802.3ad
Mode : L2 Switch , 100Mbps throughput
Connector : RJ-45



V.35 Tributary Interface (QV35)

Data rate : 4CHx Nx64Kbps(N=1~32)
Compliance : ITU-T V.35, ITU-T G.703
Clock Source : External, Internal and Recovery
Control Signal : DSR, CTS, DCD, RL, LL ...
Test Loops : Local/remote line/terminal/V.54 loopback
Connector : DB44 connector (DB44 to M34 converter cable)



E1 Tributary Interface (QE1B)

Bit rate : 4CHx2.048Mbps±50ppm
Compliance : ITU-T G.703, G.704, G.706, G.732, G.823
Impedance(connector) : 75Ω(BNC)
Line code : HDB3 / AMI



AC Power Card

Input Voltage : AC90V ~ 260V
Input Frequency : 47 ~ 63Hz
Power : 27W Max

DC Power Card

Input Voltage : DC-36V ~ -72V
Power : 27W Max



E3 / DS3 Tributary Interface (ET3)

Bit rate : 34.368 / 44.736 Mbps±20ppm
Compliance : ITU-T G.703, G.823, G.824
Impedance(connector) : 75Ω(BNC)
Line code : HDB3 / B3ZS
Software selectable E3/DS3 mode



8E1/ T1 Tributary Interface (8ET)

Bit rate : 8CHx2.048Mbps±50ppm / 1.544Mbps±50ppm
Impedance(connector) : 120/100Ω software selective (wire-wrap)



Gigabit Ethernet interface (GbE)

Connector : 2xRJ45 + 2x SFP
Compliance : 802.3z, 802.3x, 802.1p, 802.3u, 802.3, G.7041 GFP-F
Up to 1Gbps throughput, 802.1Q VLAN support for the full 4096 VLAN ID
Up to 8K MAC address, Port trunking, Traffic rate control, loopback test



E1 Tributary Interface (8E1B/R)

Bit rate : 8CHx2.048Mbps±50ppm
Impedance(connector) : 75Ω*/120Ω in RJ48 RJ48 to BNC converting cable*

Management Interface

Protocol : VT-100 ANSI/ Telnet and SNMP (EMS)
Craft interface : RS232 Asyc. (EIA561)
Telnet/SNMP/httpd : 10/100 BaseT (RFC 1406)
LCD : 2 X 16 LCD display with key control

Operation Requirement

Operating temperature : 0~60°C
Humidity : 10% ~ 90% (90% at 30°C)
MTBF : > 50000 hours
EMI : CISPR 22 class A
ESD : IEC-61000-4-2 level 2
Lightning and Surge : IEC-61000-4-5 class3

Dimension & Weight

(WxDxH) : 440 x 320 x 44mm
1U, 19" rack mount/ wall mount/standalone
Weight : 3.7kg

Power Consumption

27W in full load