



The FME-TW is a powerful Fiber Optic Modem, which can aggregate three types of service into a pair of fiber. Any combination of four kinds (4\*E1, 4\*V.35, 1\*V.35, 1\*10/100M Ethernet) of tributary card is allowed to plug-in the system and its maximum capacity is 16 channels E1. It supports the 1+1 hot-swappable optical protection. The FME-TW can be managed through SNMP, VT100 craft port or LCD/menu keys. It also supports orderwire function for maintenance purpose. It is 1U, 19" rack mountable or desktop type model.

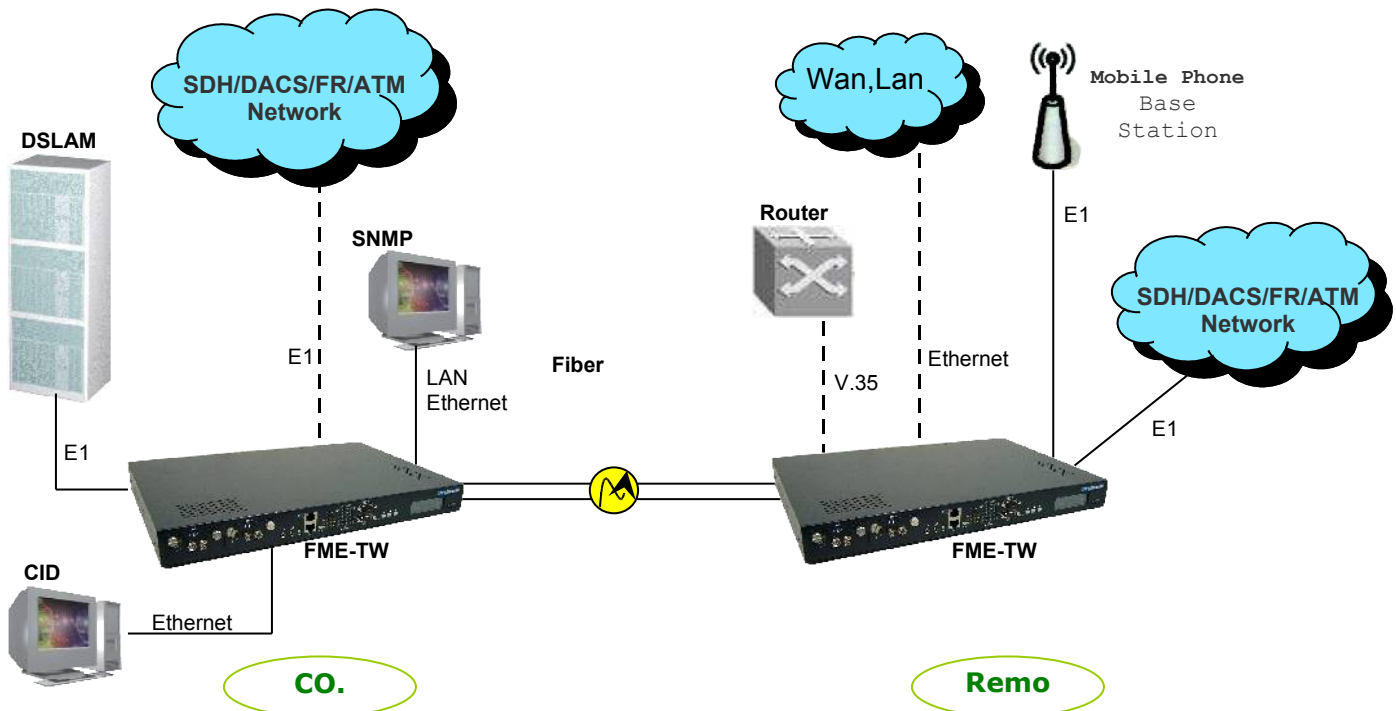
The FME-TW provides local/remote loopback functions for optical and E1 interfaces. It is very convenient for network testing and maintenance. Embedded operation channel (EOC) is built between local and remote sides for system configuration, testing, performance and alarm monitoring of each E1 channel and optical link. For performance monitoring, the FME-TW also provides BPV and CRC error count for each E1 electrical link and parity error count for optical link.

## Feature

- | **Channel Capacity: 4, 8, 12, 16 E1 ( or datacom service)**
- | **Tributary card type: E1 interface ( 75ohms or 120ohms)/ Datacom interface (V.35/ RS-530/ X.21)**  
**10/100Base-T Ethernet bridge port.**
- | **Optical module: Auto Laser shutdown, hot swappable 1+1 protection**
- | **Alarm relay contact: major and minor alarms (audible and visible alarm output )**
- | **Support SNMP function, TFTP remote software upgradeable**
- | **Performance monitor: E1 CV, CRC, ES, SES.**
- | **Configurations can be backup to nonvolatile memory.**
- | **Support the TELNET function to configure and monitor local and remote devices through the TCP/IP network.**
- | **Provides the optical line local loopback and remote loopback function.**
- | **Low speed (E1, datacom) Local and remote loopback function**
- | **Management interface: LCD / keys button, VT100 (DB9),RJ45 (for SNMP)**
- | **External clock (Optional): E1 external TTL clock or PCM data Input through RJ45 connector**
- | **OE module: Class 1 Laser product. Safety Standard IEC 825 compliant**



## Application



## Technical information

### Optical Interface:

Optical Source: MLM 1310/1550nm  
 Wavelength: 1310/1550 ± 50nm  
 System Gain: 19~30dB  
 Fiber connector types: SC,FC,ST type  
 Bi-directional Fiber Optical Module (Option)

### E1 module:

Channel Capacity: 4/8/12/16 channels  
 Bit Rate: 2.048Mbps ± 50ppm  
 Line Code: HDB3 / AMI  
 Frame Format: Framed or Unframed  
 Electrical Interface: Compliant with international standards ITU-T G.703  
 Jitter Tolerance: Compliant with ITU-T G.823  
 Jitter Transfer: Compliant with ITU-T G.742  
 Line impedance: 120Ω (DB25 Wire Wrap,RJ45) or 75Ω (BNC)  
 Surge protection (optional): Compliance with (or better than) IEC 1000-4-5 class 2 or FCC part 68



## Power Supply:

AC: 90~240 V (47Hz~63Hz)  
DC: -36~-72 V  
Power consumption 20W maximum

## Datacom module:

(Datacom module supports one channel(V35U1) or four channels(V35U) on each card)

Card type: V.35, RS-530, X.21,

Data rate: n\*64K, n=1~32 (64~2048kb/s)

Clock mode: Internal, External, DTE, Recovery.

Control signal: CTS follows RTS, DSR always ON except at test loop mode, DCD always ON except at fiber loss of signal condition.

Loop-back: local loop back, remote loop back, V.54

Connector: HD-68 (SCSI-III) Female with optional cables:  
HD-68 to 4\*V35(M34 female) cable  
HD-68 to 4\*RS530(DB25 female) cable  
HD-68 to 4\*X.21(DB15 female) cable

## 10/100M Ethernet module:

Compliance: IEEE 802.3, 802.3u

Configuration modes: 10/100M, full/half-duplex, auto-negotiation and auto MDI/MDIX.

Maximum frame length: 1536 byte tolerance of padded-frame in IEEE 802.1Q

Frame buffer: 329 frames

MAC Table: 1024-address LAN table.

WAN speed: mapped into n \*E1(n=1~4)  
(auto or manual selectable for speedcontrol, maximum bit rate is 7.68M when n=4)

Surge protection: IEC61000-4-5 class 2 or FCC part 68

## Dimension:

W \* D \* H: 440 x 285 x 44.5 mm

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