

MX-4EM / CV-4EM

4xE&M AND E1 G704 OPTICAL MULTIPLEXER 4xE&M TO E1 CONVERTER CSU/DSU

TRANSPORT OF ANALOGIC SIGNAL OVER FIBER OR E1

Specification

Functions

- **MX-4EM** : fiber optic multiplexer of 4xE&M and one G704 2Mbps with CAS signalization
- **CV-4EM** : 4xE&M multiplexer over E1 2Mbps with CAS signalization

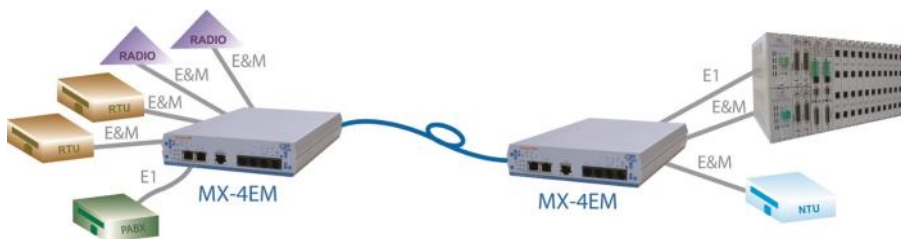
- 4 E&M interfaces
- 8 E&M by daisy chain of MX-4EM and CV-4EM

By software selection of:

- 2 or 4 wires interface
- E&M type I/II/III/IV/V
- Gain of E&M channel
- E1/T1 interface, 2 / 1.544 Mbps, G704 with CAS
- PBX interconnection
- Leased Line Emulation
- Ethernet port 10/100BT for outband management , Telnet, SNMP
- Metal desktop
- DC 48Vdc power supply with an external DC48V to 110/230Vac converter
- Rackmount AMS16/AMS4 version available.

The MX-4EM is a fiber optic multiplexer which carry for analogue interfaces E&M and one E1 G704 CAS. This E&M interfaces permit the interconnection of equipment within the voice band 300-3400 Hz like: voice, modem, PBX LIA, analogue Radio, SCADA, etc.

As CV-4EM it can be a low cost solution to support analogue interfaces in small density of application concentrated in large PDH multiplexer.



The analogue interfaces can be set-up as 2 or 4 wires transmission with E&M signalization or without as an analogue Leased Line. The E&M signalization Type 1/2/3/4/5 can be set-up per port and carried transparently in TS16 with CAS mode.

The MX-4EM is compatible with all equipment supporting E&M with law A or law μ with or without signalization like the DACS CXR QX3440.

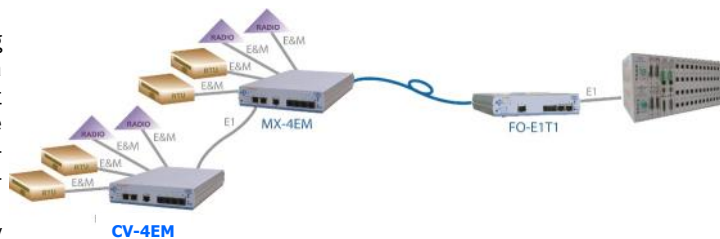
The MX-4EM is multiplexing also an E1 G704 port from a PBX or a data equipment with the 4 E&M signals. The E&M signalizations are multiplexed with the CAS signalization of the E1 in the fiber. The MX-4EM can be daisy chained with a CV-4EM to carry over the fiber up to 8 E&M analogues signal.

This multiplexer is optimized to provide performances requested by industrial application like dynamic of vocal band and trans-

it delay.

The MX-4EM can run face to a E1 fiber optic modem FO-E1T1 to transport the analogue signal over an PDH E1 network.

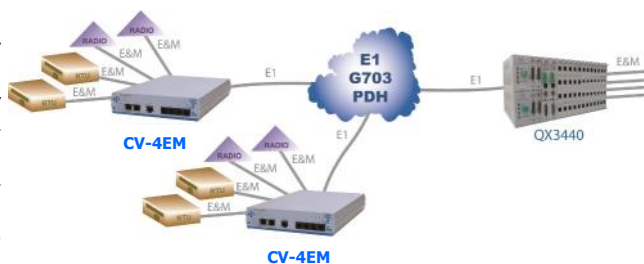
The MX-4EM is available with a SFP socket for any optical module SFP-STM1 multimode up to 2km or single mode from 10 to 120km or single fiber WDM or colored



CWDM module to multiplexer with other lambda. On demand we supply also fixed interface multimode 850nm ST..

The MX-4EM loaded with another software can be used as a CV-4EM. This E1 G704 converter can carry four E&M interface over an E1 interface 2 Mbps and PDH network. Each channel use a 64K TS and the signalization share the TS16 with CAS format. In this case the FO interface is deactivated...

The CV-4EM is managed over a consol port with intuitive menus. The CV-4EM is a 48Vdc power supply equipment delivered with AC/DC adapter.



Fiber optic multiplexer for Interfaces E&M et G704 / 2Mbps

MX-4EM :
Optical multiplexer of 4x E&M and 1 x E1/G704

CV-4EM
4x E&M to E1/G704 converter



This document is not contractual. CXR continuously improves its products. Specifications are subject to change without notice.



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TECHNICAL SPECIFICATIONS

E&M Interfaces

- 4 E&M interfaces
- RJ45 connector
- 2/ 4 wires transmission
- Signalization E&M type I/II/III/IV/V
- CAS signalization on the trunk
- Codec : G711
- E&M Coding : loi A / loi μ
- E&M Impedance : 600 Ohms
- TX Gain: -3 à +13 dB
- RX Gain: -13 à +3 dB

E1 interface 2 Mbps / G704

- Electrical interface E1, 2.048 Mbps
- Framing format : G704
- Coding : HDB3
- IT multiplexing of voices and signalization CAS in TS16.
- Connector RJ45 and 2xBNC
- Impedance : 75 / 120 Ohms
- Clock : internal, external, distant
- Line sensitivity long / short haul

Fiber optic Interface

- 1 SFP slot for interface SFP module
- Multi mode SFP module 2 km, LC
- Single mode SFP module 20 km to 120 km w LC , connector
- Multimode 850nm fixed transceiver for 2 km, ST connector
- Multimode 1310nm fixed transceiver for 20 km, SC connector

Ethernet Interface

- Rate : 10 / 100 MBPS
- Interface : 10/100 BaseT, IEEE 802.3
- Socket : RJ45
- Outband management Telnet SNMP

Power

- Power consumption : 10 W, typical 5,5W without SFP
- Internal power 48Vdc : 46-50 Vdc
- AC external adapter.

Administration

- Over RS232 local port
- French and English intuitive menus
- Diagnostic per interfaces
- Protocol Statistics
- Graphical GUI over MS Windows™ the MX-CFG : configuration, diagnostics, save and restore configuration mode
- Records of event log
- Administration of local and distant device over a TS.

LEDs

- Power ON
- FO : synchronization of FO with LOS / LOF
- LOS-E1/T1 : Loss of signal on E1/T1 interface
- LOF-E1/T1: Loss of synchronization E1/T1
- Relay-E&M : status of E&M interface
- Detect-E&M : detection of current on E&M
- Mode :2 or 4 wire

Others

- Dimensions (DxLxH): 287 x 175 x 41 mm
- Weigh : 1.15 kg / 2.20 lb
- Operational temperature : -10 à +60°C / 14 to 140°F
- Humidity : 10 to 90%, w/o condensation
- MTBF : 150 000 H
- Safety : EN-60950
- CEM : EN-55022, EN-55024

REFERENCE ORDER

MX-4EM-SFP-V	Fiber optic multiplexer w SFP (w/o module) to 4E&M and 1 E1 G704/2Mbps, 48Vdc power supply input desktop with 48V to AC adapter
MX-4EM-SFP-C	Fiber optic multiplexer w SFP (w/o module) to 4E&M and 1 E1 G704/2Mbps, 48Vdc power supply input desktop
MX-4EM-SFP-R	Fiber optic multiplexer w SFP (w/o module) to 4E&M and 1 E1 G704/2Mbps, Rackmount device with side channel control. 2 slots size for AMS16 / AMS4.
MX-4EM-M8T-V	Fiber optic multiplexer MM 850nm ST to 4E&M and 1 E1 G704/2Mbps, 48Vdc power supply input desktop with external 48V to AC adapter
MX-4EM-M8T-C	Fiber optic multiplexer MM 850nm ST to 4E&M and 1 E1 G704/2Mbps, 48Vdc power supply input desktop
MX-4EM-SLC-V	Fiber optic multiplexer SM 1310nm SC to 4E&M and 1 E1 G704/2Mbps, 48Vdc power supply input desktop with external 48V to AC adapter
MX-4EM-SLC-C	Fiber optic multiplexer SM 1310nm SC to 4E&M and 1 E1 G704/2Mbps, 48Vdc power supply input desktop
CV-4EM-V	4E&M to E1 G704/2Mbps converter, 48Vdc power supply desktop with external 48V to AC adapter
CV-4EM-R	4E&M to E1 G704/2Mbps converter, Rackmount device with side channel control. 2 slots size for AMS16 / AMS4.
RACK-2-UNIVERSAL	Assembly kit 1U 19" for 2 devices: MD4000, FO-xxxx, SpeederLAN-Bis, MX-4EM, CV-4EM

Front Panel
MX-4EM-SFP



Front panel
MX-4EM-ST and
10/100BT port

