

## E1/T1 Drop &amp; Insert Access Mux

# MX 200-TTX

## Characteristics & Benefits

- E1 / T1 Drop & Insert Mux
- Network interface : balanced 100/120 Ohm RJ45 and unbalanced 75 Ohm BNC
- 3 terminal ports : drop & insert E1/T1, Ethernet, RS232
- Ethernet 10 / 100 BaseT, automatic rate
- E1 : G703, G704 à 2,048 MBPS +/- 50 ppm
- T1 : G704, DSX-1 and CSU Line Build Out, D4 and ESF framing, Red/Yellow/Blue Alarm control.
- Based on up to date technologies for clock recovery, jitter, bandwidth allocation
- Flexible timeslot allocation
- Rate : Nx64 or Nx56 KBPS
- E1 or T1 network mode selectable by the user
- Can be used as a short or long range modem 1.6 km
- Filtering Ethernet bridge : 10,000 address memory, 400 frame buffer, data compression algorithm
- Asynchronous RS232 port: 300 to 115,200 BPS, RJ45 socket
- Easy to manage : VT100 menus, Windows graphical software
- Local and remote Network management : Telnet, FTP, SNMP, TRAP
- Compact metallic enclosure, choice of mains power supply and DC/DC converter 48 Vdc or 12-36 Vdc
- DIN rail kit
- 19" kit for two units / 1U

## E1/T1 G704 DROP & INSERT ACCESS MUX

The **MX-200** is an E1 – 2,048 MBPS, and T1 – 1,544 MBPS access mux that provides three terminal ports : a E1 / T1 Drop & Insert port, an Ethernet interface, and an RS232 port to connect to an asynchronous terminal equipment.

The **MX-200** is a must component to share an E1/T1 network access for LAN / data and E1/T1 / voice traffic.

The **MX-200** fits in a compact metallic enclosure with a choice of 230 Vac or 110 Vac mains power supply, or 48 Vdc or 12-36 Vdc DC/DC converter to satisfy most industrial and Telco's requirements.

The **MX-200** embeds a T1 and E1 network interface. It can easily be deployed in international application and be set by the user for European E1 or USA T1 network access.

The **MX-200** includes a powerful Ethernet bridge. It will suit most network interconnection needs thanks to its Ethernet frame filtering, compression algorithm, VLAN and other protocol transparency features.

The **MX-200** provides an RS232 port to connect to asynchronous equipment such as a payment terminal, an alarm device, a control unit... It runs a tcp-ip terminal server mode in the Ethernet bandwidth.



The **MX-200** may be chained through their E1/T1 interfaces for distributing Ethernet accesses and asynchronous links.

The **MX-200** is very easy to operate, especially thanks to its Windows graphical software offered with the equipment. The **MX-200** can also be managed from the local area network with the IP protocols : Telnet, SNMP, FTP.

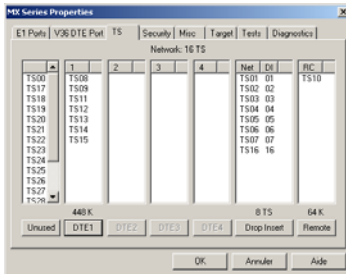
The **MX-200** installation is very flexible. It can be mounted on a DIN rail with an optional kit. Two units may also be installed in a 19 inch bay.

## APPLICATIONS



The MX-200 carries voice from an E1/T1 PBX, data from the local area network over its Ethernet bridge, and an asynchronous serial link, over an E1 or T1 network such as a PDH loop, or a microwave link, or other network with E1/T1 interface, or in a point to point schema. Several MX-200 can be chained through their E1/T1 ports, to distribute Ethernet and serial RS232 accesses in a PDH loop like application.



**E1 / T1 Access Multiplexer****G703/G704 rate manager****Ethernet, D&I, RS232 terminal ports**

**MXCFG** : Windows graphical software to manage the CV and MX range of products



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## SPECIFICATIONS

### E1 Interfaces

- Transparent (G703) or framed mode (G704)
- G704 framing: PCM31, PCM31C, PCM30, PCM30C.
- Impedance 120 Ohms, RJ45 socket
- Impedance 75 on BNC sockets for the network interface
- Phase jitter performance : G823
- Line code: HDB3
- Rate: 2048 Kbps +/- 50 ppm
- Long Haul / Short Haul : -16 / -40 dBm
- Transmit clock : internal, network, external from the D&I E1 terminal
- Insulation : 1500V as per K20 et K21 standards

### T1 Interfaces

- Line code : AMI, B8ZS
- Line Build Out : DSX-1 and CSU
- Framing : D4, ESF
- RJ45 socket
- G704 : 1 to 24 IT
- Timeslot rate : Nx64 or Nx56 KBPS
- Phase jitter performance : G823
- Rate: 1,544 Kbps +/- 50 ppm
- Transmit clock : internal, network, external from the D&I T1 terminal
- Impedance : 100 Ohms on a RJ45 socket
- Insulation : 1500V as per K20 et K21 standards

### Ethernet Interface

- Rate : 10 / 100 MBPS
- Interface : 10/100 BaseT, IEEE 802.3
- Socket : RJ45
- Ethernet bridge with automatic MAC address learning : 10,000 MAC address memory
- 400 Ethernet frame buffer
- Filtering of Ethernet frame can be enabled / disabled
- Padding bit suppression : enable / disable
- Data compression algorithm for rates up to 256 KBPS
- Statistics : sent and received frame counters, filtering diagnostics

### RS232 / V24-V28 Interface

- Rates : 300, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115000 BPS
- UDP/TCP/IP terminal server: raw ip, telnet, ComPort
- RJ45 socket
- Signals : GND, TD, RD, RTS, CTS, DSR, CD, DTR

### Timeslot Allocation

- Timeslot extraction from the network interface to the terminal ports : E1/T1 D&I, Ethernet
- User defined allocation, no restriction
- Nx56KBPS or Nx64KBPS

### Configuration Port

- RS232, V24/V28, RJ45 socket, 8 bits, 19.2 Kbps
- VT 100 menus, AT commands

### LED Indicators

- Power / management in progress
- Test
- Link : LAN is connected
- LAN RX : data received from the LAN
- LAN TX : data sent to the LAN
- WAN CD : signal received on the WAN E1/T1 port
- WAN SYNC : E1/T1 network is synchronized
- D&I CD : signal received on the D&I port
- D&I SYNC : D&I port is synchronized

### Management

- Local management through the console port : AT commands, VT 100 menus
- Windows graphical software MX-CFG : edit and save configuration on the PC, supervision, test control, firmware upgrade
- Diagnostics : network test loop, PING
- TCP-IP management : Telnet, SNMP, FTP for firmware upgrade
- Remote control through TCP-IP protocols
- Statistics over 24 hours : counters for Loss Of Synchronization, loss of carrier, Errored Seconds, Severely Errored Seconds, UnAvailable Seconds

### Power supply

- External 230 Vac : MX-200-TTX-MVE
- External 110 Vac : MX-200-TTX-MVU
- Internal 48 Vdc : MX-200-TTX-MC

### Environment

- Size: 146.5 x 144 x 30.7mm
- Weight : 0.5 kg - Mains power supply: 0.1 kg
- Operating temperature: 0-50 °C (32-130 °F)
- EEC: EN-60950, EN-55024, EN-55022
- FCC Part-15, Class A

## ORDERING INFORMATION

### **MX-200-MYZ**

- Y : power supply  
V External mains adapter  
C Internal 48 Vdc DC/DC converter  
Z Destination E= Europe U= USA

#### Options

- DIN-CPE : wall or DIN rail mounting kit  
RAK-DUAL-CPE : 19" mounting kit for 2 units  
MX200-ALR : external alarm relay

Specifications are subject to change without notice.