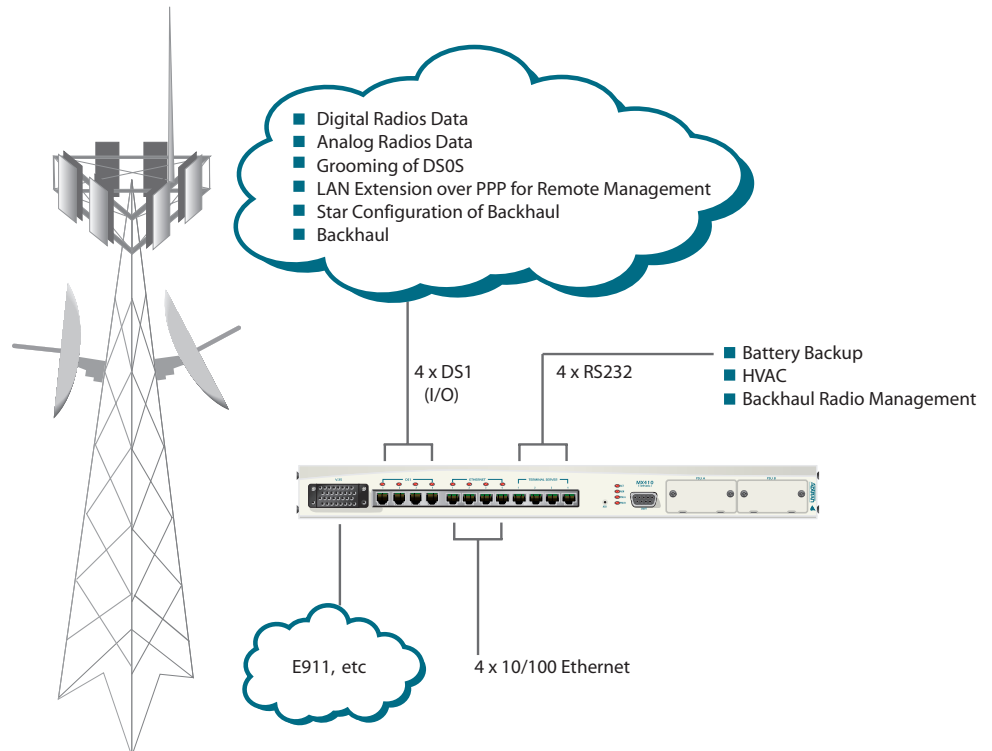# Efficient DS1 Networking

MX410

Product Features

- System provides DS0 drop and insert capability for DS1 networks

- Drop and continue DS1s and/or groom DS0s anywhere along your DS1 route - modularity allows 1 to 4 DS1s to be dropped at any single site

- DS0s can be assigned to local ports (Ethernet or V.35) up to full DS1 bandwidths and shared anywhere along the DS1 path

- DS0 grooming allows for bandwidth to be allocated for special services such as E911, etc., via a V.35 port

- Fractional T1s may be groomed for maximum bandwidth efficiency

- Technicians can utilize the Ethernet for Data or LAN connectivity to check E-mail, etc.

- Power supply redundancy provided with additional PSU card (1:1)

- Full T1 bandwidth router

- Terminal server - allows other devices to be remotely managed

- Delivers 1/0 DCS ability

- DB9 craft interface for access to user-friendly configuration menus

ADTRAN's MX410 delivers full DS0 control to service locations, allowing carriers full utilization of DS1 bandwidth. Up to four full T1s of bandwidth are provided and are accessible at any point along the DS1 path. Data Ethernet connectivity is provided via four PPP connections. The MX410 costs less than half the price of other early generation remote management and bandwidth utilization products.
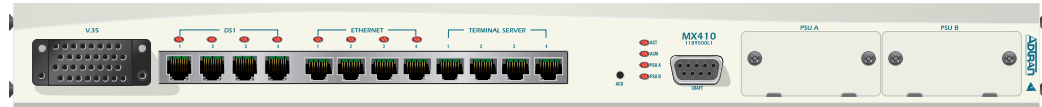
DS1 networking is practical and efficient with the ADTRAN MX410. Packaged in a 1RU, 19-inch chassis (optional 23-inch adapter), the MX410 routes DS0s between the four DS1 interfaces and allows access to any DS0 at any node. The MX410 interfaces to four RJ48 connectors and provides the ability to drop and insert up to 24 DS0 signals from any DS1 interface on the terminal side. The DS0s may be routed to another DS1, V.35 port, or used for Ethernet network extension throughout the network and Telnet-based terminal server ports.

Complete Remote Management And Bandwidth Utilization With the MX410

- Digital Radios Data
- Analog Radios Data
- Grooming of DS0S
- LAN Extension over PPP for Remote Management
- Star Configuration of Backhaul
- Backhaul

4 x DS1 (I/O)

4 x RS232

- Battery Backup
- HVAC
- Backhaul Radio Management

E911, etc

4 x 10/100 Ethernet

ADTRAN®

Efficient DS1 Networking

MX410

![MX410 device front panel]

Product Specifications

Interfaces

T1 Network Interface
- **Line build out:** 0 to 655 ft (0, 7.5, 15, 22.5 dB)
- **Line interface:** RJ48
- **Line rate:** 1.544 Mbps
- **Line code:** AMI or B8ZS
- **Framing:** SF or ESF
- Robbed bit signaling
- **DS0 assignment:** user selectable

Serial Interface
- CCITT V.35, 34 pin
- Nx64 up to 1.536 Mbps

Diagnostics

T1 Network
- Local and network loopbacks
- CSU and NIU loopbacks

Mechanical
- **Dimensions:** 1.72 in. H x 7.70 in. D x 17.12 in. W
- **Weight:** 6 lbs (fully redundant)

Electrical
- **Power:** 24 VDC or 48 VDC, 7 W

Timing
- **Network:** Receive from any DS1 network
- **Local:** Internally generated

Alarms
- External alarm contacts for critical and non-critical alarms
- Normally open and normally closed pinouts
- Front panel alarm cutoff switch

Regulatory Standards
- NEBS Level 3
- UL 60950 and ETL

Local Management

VT100 Terminal Interface
- EIA-232 compatible, one female DB-9 adapter provided

Remote Management
- Up to four DS1 interfaces can be dropped and used in PPP across T1/FT1 channel
- Provides ability to remotely manage the system using 10Base-T/100Base-TX Ethernet Interface
- Four Terminal Server ports (RS232 Tx and Rx using RJ45 jack) - accessed via a Telnet session to user definable TCP port number
- Integrated Telnet 10/100Base-T Ethernet

Environmental
- **Operating temperature:** –40°C to 65°C
- **Storage temperature:** –40°C to 85°C
- **Relative humidity:** meets GR63

Product Includes
- Mounting ears for 19-in. rack or wallmount
- Adapter for 23-in. racks

Ordering Information

Equipment	Part #
MX410	1189500L1
MX410 PSU	1189501L1

![PulseSupply logo]

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