Engage Communication

IP•Tube T1 MUX E&M

T1 MUX VF 4 Wire E&M

Choice of 1, 2, 3 or 4 ports are available on separate models

1 Balanced 4-Wire 600 ohm VF Interface

Voice with E&M Signaling Multiplexed onto T1 Wide Area Networks

The **T1 MUX E&M 1 PORT** has one E&M balanced 4-Wire 600 ohm Voice Frequency interfaces with Push to Talk Relay transfer signaling that are multiplexed onto a T1 WAN interface.

Interconnect 600Ω analog, audio and intercom devices such as Radio Wireline, FSK modems, E&M, teleprotection relay controllers, etc. and dry contacts over T1 links.
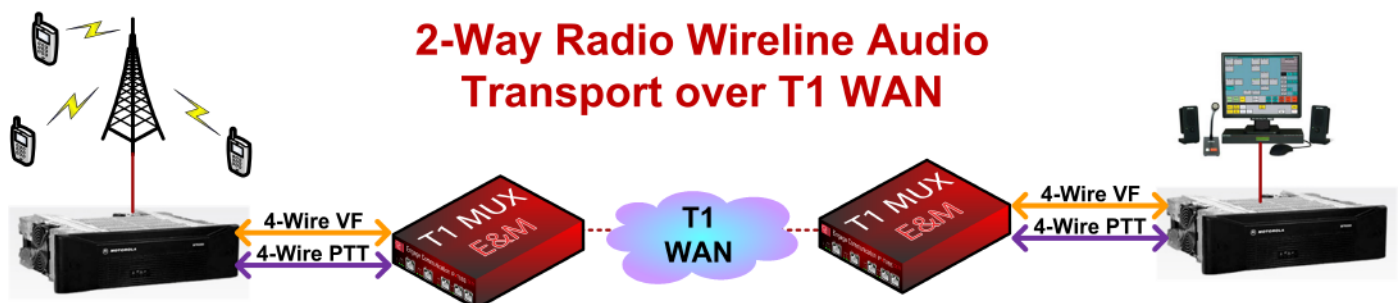
The **T1 MUX E&M** employs high resolution Analog to Digital circuitry that maintains the quality of the original audio signal. The PCM CODEC converts 600 Ohm Analog Voice Band into Pulse Code Modulated m-Law G.711.

Public Safety Radio Tower Wireline Audio over T1 WANs

A primary application for the **T1 MUX E&M** is the conversion of Voice Grade E&M circuit interfaces with Push to Talk, that connect Public Safety Radio Base Stations to concentrator hubs.

4-Wire leased line analog networks interconnect VoiceBand Communications for Utilities Municipalities and Public Safety Agencies.

2-Way Radio Wireline Audio Transport over T1 WAN

Technical Specifications

T1/Fractional T1 Specifications:
- Line Interface: RJ45
- Receiver Sensitivity: 0dB to -36dB
- Line Build Out: 0 - 655 ft. (0, 7.5, 15, 22.5 dB)
- Line Rate: 1.544 Mbps
- Framing: ESF or SF/D4
- Line Coding: B8ZS or AMI
- Supports DS0 assignments from 1 to 24
- Diagnostics
    - Local and Network Loopbacks
    - CSU and NIU Loopbacks
- Timing: Network or Internal
- Alarm Relay

E&M Interface(s):
- 1 E&M 4-Wire Full Duplex Voice; 600 Ohm Balanced

- Frequency 200 to 3400 Hertz
- CoDec: G711; uLaw
- Signalization E&M Type I/II/III/IV/V

Dry Contact
- 1 to 4 Normally Open
- Optically Coupled
- PTT Relay Support

Terminal Interface
- RJ45 RS232 DTE: Console Port for Management

LAN Network Interface:
- LAN1 10/100 Base T

LAN Network Protocols Supported:
- IP, TCP, UDP, ICMP, Telnet, DHCP, DDNS, SSH
- SNMP V3 Public and Private MIB with configured traps

Management:
- Secure Socket Shell - SSH V2 - Session Encryption
- Centralized Authentication, Authorization and Accounting
    - TACACS+, RADIUS, Two Factor Authentication
- Syslog with NTP Time Stamping
- Console Port for Out of Band Management

Regulatory:
- CE • Safety -IEC60950 • EMC - CFR 47 Part 15 Sub Part B:2002, EN55022:1994+A1&A2, EN55024, ICES-003 1997, CISPR 22 Level A

Dimensions:
- Dimensions: 9" (L) x 7.3" (W) x 1.50" (H)

Environmental:
- (-10°C - 60°C) operating temperature
- Up to 90% operating humidity (non-condensing)

Power:
- 12-30 VDC, 1.0A. • Screw Locking Connector
- Universal Adapter 100/240 VAC 50/60 Hz
- Optional -48V 0.25 Amp • Hot Standby

How to Order –– T1 MUX E&M

Part No.	Description	Notes
VF4W-T1MUX-01	1 Balanced 4-Wire 600 ohm VF Interface Extended Temperature Range (-10°C - 60°C)	Choice of 1, 2, 3 or 4 ports are available on separate models
Power Options	Specify as suffix	Purchase Qty2 for Redundancy
-094-2411	AC Power Adapter -26 VDC Supply 90-220 VAC International	Wire to Screw Terminal Removable Connector
-094-1500	Power Supply Module 10 to 24 VDC Screw Terminal	Wire to Screw Terminal Removable Connector
-N48VDC	Power Supply Module Negative 48 Volt DC	Wire to Screw Terminal Removable Connector
Rack Mount Option		Specify as suffix
-RACKMNT	19" Wide Rack Mount Brackets	Enclosure Nut Serts Installed