

4 Channel Voice-over-T1/E1 Multiplexer

TC8638-1/2

- 4-ch. FXS (TC8638-1) or 4-ch. FXO (TC8638-2)
- Mux 4 ch. 2-Wire Telephone/Fax/Modem over T1/E1
- Seven LEDs for T1/E1 Status BPV, LOS, SYNC, AMI, RAI, AIS, CRC
- ESF Framing Support for T1
- PCM31C Framing Support for E1
- Very Low Latency
- Optional Power Redundancy
- 1U or 4U Rack Mount or 1S Standalone Chassis
- 12VDC, 24VDC, -48VDC, 125VDC
- "R2" Push Button for Troubleshooting Local Or Remote Units



2x TC8638-1/2 in 1U Chassis (Front)



2x TC8638-1/2 in 1U Chassis (Rear)

The TC8638 is a 4-channel Voice/Fax/Modem over T1/E1 Multiplexer that allows network managers the flexibility of leveraging T1/E1 circuits by adding low cost analog as needed. Dialing and paging between TC8638-1 (FXS) units is supported, providing customers flexibility for voice calls. The device is economical, simple to install and comes standard with built-in power redundancy.

The TC8638 is available in two configurations:

- 4-Channel FXS (TC8638-1)
- 4-Channel FXO (TC8638-2)

Three different types of built-in loopbacks: local, remote, and T1/E1 loopback, assist in isolating whether an issue lies on your serial line or your T1/E1 line. CSU Loop Code Up/Down is also supported.

Each unit provides Ring/Hook LEDs for verifying signals on each FXS/FXO channel, Power LEDs for verifying power inputs, Alarm LEDs for verifying T1/E1 signal, and a Remote LED to monitor the remote unit.

All products part of the Mini Channel Bank series are equipped with the "R2" button. The "R2" button, was developed to isolate causes of disruptions, leveraging the Alarm LEDs and allows users to clear the history on the local unit and mirror and reset the Alarm LEDs on the remote unit. Each of the Alarm LEDs have the ability to show current T1/E1 errors and a history of up to 3 errors.



Applications

A low cost and immediate solution, the TC8638 is typically used to link analog telephones or legacy dial-up devices including data modems, fax machines, meters, ATM, and credit card machines over T1/E1.

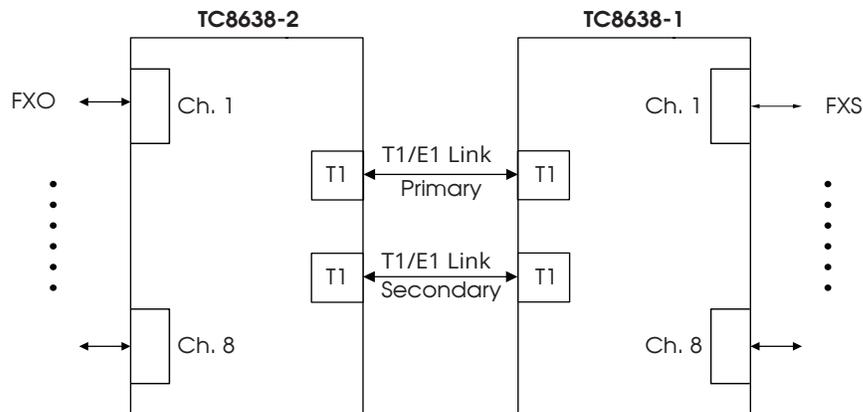
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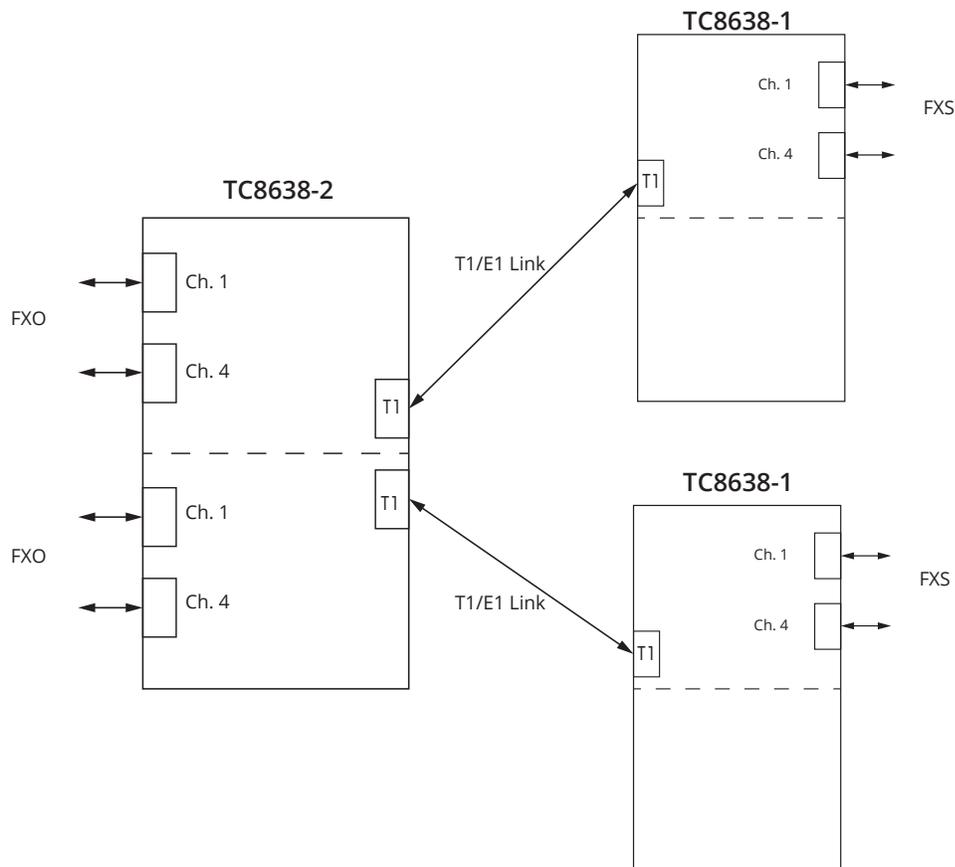
The TC8638 is compatible with standard 100Ω T1 for copper line lengths up to 6000ft and up to 2.5km for 75Ω / 120Ω E1 (copper line length is the distance between the TC8638 and the T1/E1 cross-connect). The T1/E1 uses an RJ48 connector and the serial channels use RJ-11 connectors. Optional BNC adapter cable is available for 75 Ohm E1. Power is 12VDC standard or optional 24VDC, -48VDC, 125VDC, or 115/230VAC with an external power cube. Optionally, a high temperature version (-20°C to 70°C) and extreme temperature version (-40°C to 80°C) are also available.

With two TC8638 cards in one 1U chassis, there are two T1/E1 connections available for following configurations:

- One 8-channel voice multiplexer, T1/E1 primary link and T1/E1 secondary link (in TCRM19F-R chassis).
- Two 4-channel voice multiplexers, each having their own T1/E1 connection (in TCRM19F-I chassis).



TC8638 Redundant Block Diagram



TC8638 Independent Block Diagram

Connection Capacity

600Ω (2-Wire)..... 4 Ports

Interfaces

FXS (TC8638-1)..... 4 Ports

FXO (TC8638-2)..... 4 Ports

T1/E1

T1

Receiver sensitivity0dB to -36dB

Line Code..... AMI / B8ZS

Framing.....ESF

E1

Receiver sensitivity0dB to -43dB

Line Code.....AMI / HDB3

Framing..... PCM31C

Visual Indicators

Channel Status (each ch.)..... Ring (R)/Hook (H),

System..... PWR A, PWR B, Vcc, ALM, RMT

T1/E1..... BPV, LOS, SYNC, AMI, RAI, AIS, CRC

Electrical

Analog Interface Impedance600Ω

Max Input 3Vp-p

Frequency band..... 300 to 3400Hz

Connector RJ-11

System

Bit Error Rate 1 in 10⁹ or better

Alarm

Dry Contact.....Normal Open/Closed

Power

Standard 12VDC @500mA

Optional.....24VDC, -48VDC, 125VDC,

.....or 115/230VAC w/ power cube

Temperature

Operating -10°C to 50°C

Hi-Temp (optional) -20°C to 70°C

Extreme (optional) -40°C to 80°C

Storage..... -40°C to 90°C

Humidity95% non-condensing

Physical (Standalone Unit)

Height (3.53cm) 1.40"

Width (18.14cm) 7.20"

Depth (24.89cm) 9.80"

Weight (907g) 2.0lbs



SAI GLOBAL

ISO 9001

Quality

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