

C37.94-over-T1/E1 Multiplexer

TC8616

- Extends IEEE C37.94 interfaces over T1/E1
- For T1:
 - Channel 1 supports N=1 to 12
 - Channel 2 supports N=1 to 8
- For E1:
 - Both channels support N=1 to 12
- ESF Framing Support for T1
- PCM31C Framing Support for E1
- Very Low Latency
- Built-in Power Redundancy
- Rack Mount or Stand Alone



TC8616S Front Panel



TC8616S Rear Panel

The TC8616 is a one or two channel C37.94-over-T1/E1 multiplexer. For T1 Channel 1 supports N=1 to 12 and Channel 2 support N=1 to 8. For E1 both channels support N=1 to 12. This allows network managers the flexibility to leverage existing T1/E1 circuits by adding teleprotection relays. It is economical, simple to install and comes standard with built-in power redundancy.

The TC8616 is available in two configurations:

- Multimode
- Single-mode

The device requires no additional equipment for T1/E1 link and device verification. Extensive diagnostics are available to quickly identify issues with your C37.94 or digital lines. Three different types of loopbacks: local, remote, and T1/E1 loopback assist in isolating whether an issue lies on your C37.94 line or your T1/E1 line. CSU Loop Code Up/Down is also supported. Each unit provides RX/TX LEDs for verifying signals on each C37.94 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.

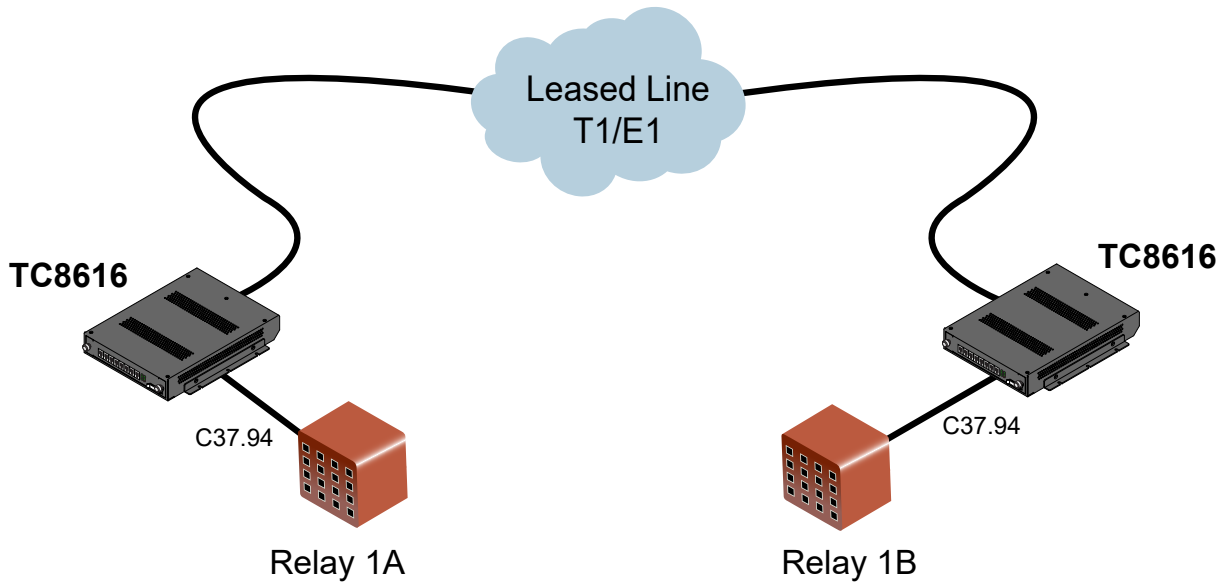
The TC8616 is compatible with standard T1 and 75Ω / 120Ω E1. The T1/E1 uses a RJ48 connector. (Optional BNC adapter cable is available for 75 Ohm E1.) The C37.94 uses either multimode or single-mode connectors. Power is 12VDC standard or optional 24VDC, -48VDC, 125VDC, or 115/230VAC with an external power cube. High temperature (-20°C to 70°C) and extreme temperature versions (-40°C to 80°C) are also available.



Applications

A low cost and immediate solution, the TC8616 is typically used to link or extend C37.94 Teleprotection relays over existing T1/E1 links.

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Typical Application using the TC8616 C37.94-over-T1/E1

Connection Capacity

-C37.94
- For T1**
- Channel 1 N=1 to 12
- Channel 2 N=1 to 8
- For E1**
- Channel 1 N=1 to 12
- Channel 2 N=1 to 12

T1/E1

- T1**
- Receiver sensitivity0dB to -36dB
- Line Code AMI / B8ZS
- Framing ESF (Only)
- E1**
- Receiver sensitivity0dB to -43dB
- Line CodeAMI / HDB3
- Framing PCM31C

Optical (C37.94)

- Transmitter LED/ELED
- Receiver..... PIN Diode
- Wavelength 850nm MM
- 1300/1550nm SM
- Fiber Optic Connector..... ST
- Loss Budget* - 850/1300/1550nm
- Multimode @ 62.5/125µm 15dB
- Single Mode @ 9/125µm20dB

*Contact factory for higher requirements

Visual Indicators

- Channel Status..... RX/TX
- System... PWR A, PWR B, Vcc, ALM, RMT
- T1/E1 AMI, RAI, AIS, CRC
- BPV, LOS, SYNC

System

- Bit Error Rate 1 in 10⁹ or better

Alarm

- Dry ContactNormal Open/Closed

Power

- Standard 12VDC @300mA
- 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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Note: Information contained in this data sheet is subject to change without prior notice.