

8 or 16 Channel 600Ω Analog & Dry Contact-over-T1/E1 Multiplexer

TC8624

- 8 CH or 16 CH 600Ω Analog & Dry Contact or Closure Detect
- Modular Design with 8 Channels Per Module
- 64K Full Bandwidth Voice Transport
- Passes All Tones used for FSK, EIA Tone Control/Remote and Paging
- Supports Pilot/Guard Tone Operation
- 2-Wire or 4-Wire Analog
- 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
- LEDs for analog volume, T1/E1 signal status and remote unit status
- "R2" Push button for troubleshooting local or remote units



2x TC8624 in 1U Chassis (Front)



2x TC8624 in 1U Chassis (Rear)

As shown 2x TC8624 as 16-Ch 600 ohm Analog & Dry Contact over T1/E1 Multiplexer

The TC8624 is part of the Mini Channel Bank series of products from TC Communications. As with all products in the series, the TC8624 is designed to be simple yet robust.

TC8624 is available in three configurations, each one contains 8 channel dry contact detectors, or 8 channel dry contact relays:

- 8-channel 4-wire analog
- 8-channel 2-wire analog
- 4-channel 4-wire analog (Ports 1-4) and 4-channel 2-wire analog (Ports 5-8)

Extensive diagnostics are available to quickly identify issues with your analog or digital lines. The following four loopbacks assist in the isolation process during troubleshooting:

- Local loopback
- Remote loopback
- T1/E1 loopback
- CSU loop code up/down



Applications

- Radio Analog Voice Transmission
- Data Modem Connection for SCADA Applications
- Power Teleprotection Communications that requires low latency
- Microwave with T1/E1 channels
- Sonet/SDH with T1/E1 channels
- Replace end of life T1/E1 channel banks

TC Communications, Inc.
17881 Cartwright Rd. Irvine, CA 92614 U.S.A.
Tel: (949) 852-1972, Fax: (949) 852-1948

Web Site: tcomm.com

As part of the Mini Channel Bank series, the TC8624 is equipped with the "R2" button. The "R2" button, was developed to isolate causes of disruptions, allowing users to see the remote unit's LED status on the local unit, including T1/E1 signal errors. The T1/E1 error LED can log up to three errors, which becomes very useful when voice communication is interrupted during the night.

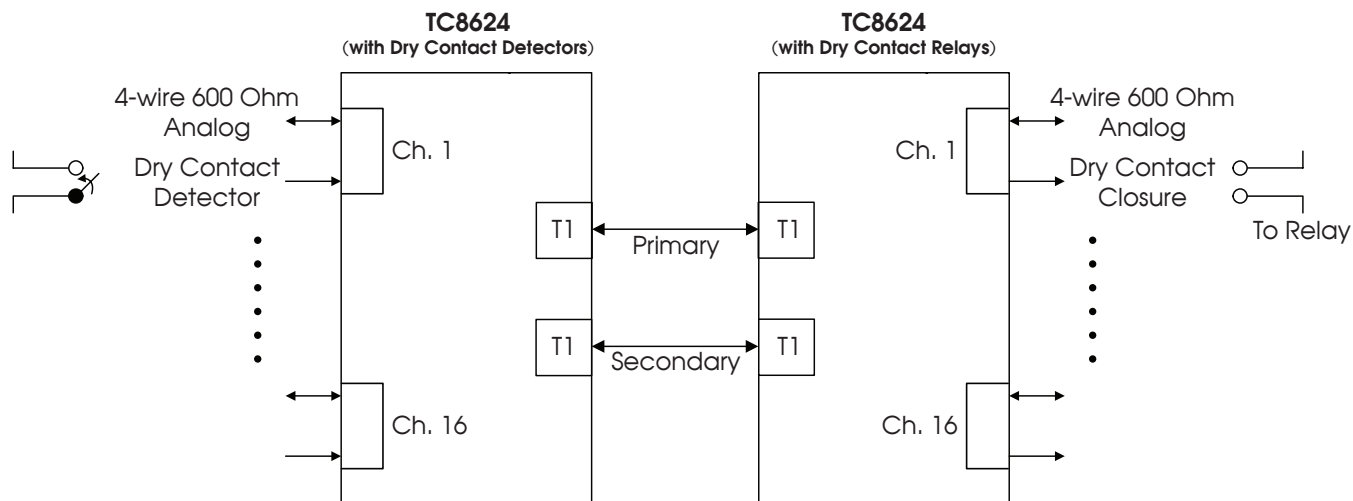
The TC8624 has one RJ48C connector which may be either 100Ω T1 or 75Ω/120Ω E1. Optional BNC adapter cable is available for 75Ω E1 connection. There are eight RJ11 connectors, each contain 2- or 4-wire 600Ω analog and either closure detector or dry contact relay.

TC8624 is a modular card. It can be plugged into the following chassis':

- 1S : only one TC8624 card can be plugged in
- 1U: up to two TC8624 cards can be plugged in to support 16 analog channels
- 4U: up to eight TC8624 cards can be plugged in to support up to four remote locations with T1/E1 links

With two TC8624 cards in one 1U chassis, there are two T1/E1 connections available for following configurations:

- Two 8 channel analog multiplexer, each having their own T1/E1 connection
- One 16 channel analog multiplexer, T1/E1 primary link and T1/E1 secondary link



TC8624 Block Diagram

Connection Capacity (per interface card)

600Ω (2/4 Wire) 8 Ports
 Dry Contact 8 Ports

T1/E1

T1
 Receiver sensitivity 0dB to -36 dB
 Line Code AMI / B8ZS
 Framing ESF (Only)

E1
 Receiver sensitivity 0dB to -43 dB
 Line Code AMI / HDB3
 Framing PCM31C

Electrical

Dry Contact Interface
 Normal open standard
 Normal close optional
 Load Voltage (peak AC) 60V
 Load Voltage (DC) 60V
 Continuous load current 0.55A
 Peak load current 1.2A
 Max On Resistance 2.5 Ω
 Output Capacitance 150pF

600Ω Analog interface
 Impedance 600Ω
 Max Input 3Vp-p
 Frequency band 300 to 3400Hz
 Output Volume -10 dB
 Volume Detection Level (2-Wire) -36.5 dBm

Channel Options

8 CH. 600 Ohm Analog with 8 CH. Dry Contact over T1 or E1 options:

- 8 CH 2-Wire with 8 CH Closure Detector
- 8 CH 2-Wire with 8 CH Relay
- 8 CH 4-Wire with 8 CH Closure Detector
- 8 CH 4-Wire with 8 CH Relay
- 4 CH 2-Wire + 4 CH 4-Wire with 8 CH Closure Detector
- 4 CH 2-Wire + 4 CH 4-Wire with 8 CH Relay

**16 Channels can be supported by combining units within the 1U chassis.*

Visual Indicators

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

System

Bit Error Rate 1 in 10⁹ or better

Alarm

Dry Contact NormalOpen/Closed

Power

Standard 12VDC @500mA MAX
 Optional 24VDC, -48VDC, 125VDC, or 100-240VAC

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
 Humidity 95% non-condensing

Physical (1U Rackmount)

Height (4.3cm) 1.7"
 Width (48.3cm) 19"
 Depth (26.7cm) 10.5"



SAI GLOBAL
 ISO 9001
 Quality

TC Communications, Inc.
 17881 Cartwright Road
 Irvine, CA 92614 U.S.A.
 Factory Tel: (949) 852-1972
 Fax: (949) 852-1948

Sales Office
 U.S.A. Domestic & International
 (949) 852-1973

Web Site: tccomm.com