2 Ch. 4-Wire E&M Channel Bank   TC8714-2

- **Up to 2-ch 600Ω Analog & Dry Contact**
- **2-Wire or 4-Wire Analog**
- **ESF/SF Framing Support for T1**
- **PCM30/PCM30C Framing Support for E1**
- **Very Low Latency**
- **Dry contact detectors with Isolated Ground**
- **Compatible with all dispatch consoles**
- **Built-in Power Redundancy**
- **Rackmount or Standalone**
- **Extreme temp (-40˚C to +80˚C) optional**

TC8714S Front Panel

TC8714S Rear Panel

The TC8714-2 is a 2-channel 2-/4-Wire E&M Channel Bank that allows network managers the flexibility of leveraging their existing T1/E1 circuits by adding low cost analog or dry contact links as needed. It is economical, simple to install and comes standard with built-in power redundancy.

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

The TC8714-2 is compatible with standard 100Ω T1 and 75Ω / 120Ω E1. The T1/E1 uses a RJ48 connector and the analog and dry contact 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.

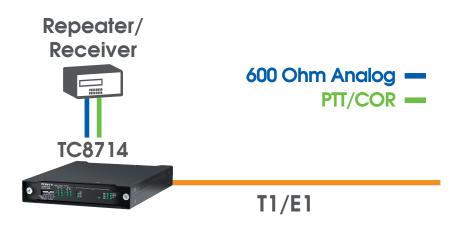## TC COMMUNICATIONS®
FIBER OPTIC CONNECTIVITY

Applications

A low cost and immediate solution, the TC8714-2 is typically used to link or extend various 600Ω analog, audio and intercom devices (e.g. FSK modems, E&M, teleprotection relay controllers, etc.), and dry contacts over existing T1/E1 links.

The primary use of the TC8714-2 is for the replacement of exisiting channel banks.

The TC8714-2 is specifically designed for remote sites with limited connectivity and providing a simple and cost effective solution.

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Repeater/
Receiver

TC8714

600 Ohm Analog ▬
PTT/COR ▬

T1/E1

Typical Application using the TC8714 600Ω Analog & Dry Contact-over-T1/E1

Connection Capacity

Analog (2/4 Wire).........................2 Ports
Bi-Directional Dry Contact...........2 Ports
T1/E1... 1 Port

Electrical

Analog interface
 Impedance 600Ω
 Signal range.............-36.5 to +4.5 dBm
 Frequency band............ 300 to 3400Hz
 Connector RJ11

Dry Contact Interface
 Normal open...........................standard
 Normal close .... optional
 Max Load Voltage 60V
 Continuous load current.............0.55A
 Peak load current 1.2A
 Detector max input voltage.............9V
 Connector RJ11

T1 Interface
 Line Code .... AMI, B8ZS
 Framing...ESF, SF
 Standards .... AT&T TR-62411, G.703,
 .... G.704, G.824, ANSI T1.403
 Connector RJ48
 Impedance 100Ω

E1 Interface
 Line Code ....AMI, HDB3
 Framing.....................PCM30, PCM30C
 Standards G.703, G.704, G.706
 .... G.732, G.823
 Connector ....RJ48, BNC
 Impedance 120Ω, 75Ω

Visual Indicators

Unit Status ......PWR A, PWR B, Vcc, ALM
Analog .... TX, RX
Dry Contact.............................. RLY, DET
T1/E1..........................AMI, RAI, AIS, CRC,
.... BPV, LOS, SYNC

Power

Standard .... 12VDC @200mA
Optional.........24VDC, –48VDC, 125VDC,
.... or 100/240VAC 50-60Hz
Power consumption ....<10W

Operating Temperature

Standard .... –10°C to 50°C
Hi-Temp (optional) .... –20°C to 70°C
Extreme (optional) .... –40°C to 80°C

Storage

Temperature .... –40°C to 90°C
Humidity ....95% non-condensing

Physical (Standalone Unit)

Height ....(3.53cm) 1.40"
Width .... (18.14cm) 7.20"
Depth .... (24.89cm) 9.80"
Weight .... (907g) 2.0lbs

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TAA
Compliant

TC Communications Quality
Management System is certified
as being in conformity with
ISO 9001:2015 by Intertek

ISO 9001:2015
CERTIFICATION ™
intertek

Note: Information contained in this data sheet is subject to change without prior notice.