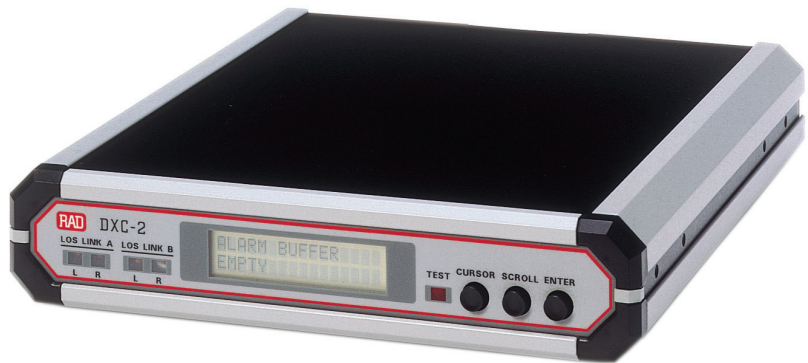


DXC-2

T1/E1 Converter and Timeslot Cross-Connect



Converts between T1 and E1 data and signaling

- Configurable A-law/ μ -law and signaling conversion, or transparent conversion at 64 kbps timeslot level
- Complies with ITU Rec. G.802, Annex 2
- Controlled slip for buffer overflow/underflow
- Monitoring and control from terminal or front panel LCD

DXC-2 enables conversion between one T1 signal and one E1 signal (24 timeslots).

For conversion between T1 and E1 trunks, DXC-2 can perform the required A-law/ μ -law and signaling conversion, in compliance with T1 and E1 (CEPT) standards.

The T1 to E1 conversion can be set to comply with ITU G.802, Annex 2. This enables the location of the T1 F-bit to be specified in the E1 data stream.

A user-programmable connection table allows DXC-2 to connect any incoming 64 kbps timeslot to any outgoing 64 kbps timeslot. Programming can be performed during system operation without any disruption to service.

The T1 interface complies with AT&T TR-62411 and ANSI T1.403 requirements, supporting D4 or ESF framing formats and AMI line code. Zero suppression is selectable for transparent, B7Z5 or B8Z5.



DXC-2

T1/E1 Converter and Timeslot Cross-Connect

The E1 interface complies with ITU Rec. G.703, G.704, G.732 and G.823, and supports both 2 and 16 frames per multiframe with or without CRC-4. Line code is HDB3.

Maintenance capabilities include local and remote loopbacks. When operating in ESF format, T1 link statistics are stored in memory in compliance with both the ANSI and AT&T standards. When operating in CRC-4 format, E1 link statistics are stored in memory in compliance with ITU G.706.

Selectable timing options cover all timing possibilities for the T1/E1 interface. These include internal clock and loopback timing, for either the T1 or E1 interface.

Setup, control, status, alarms and diagnostic information can be monitored and controlled via the front panel LCD display or via an ASCII terminal.

DXC-2 is a compact 1U-high desktop standalone unit. A rack mount adapter kit enables installation of one or two (side by side) standalone units in a 19" rack (see *Ordering*).

Specifications

E1 INTERFACE

Data Rate

2.048 Mbps

Compliance

ITU-T Rec. G.703, G.704, G.732

Framing

256N – no MF, CCS

256N – no MF, CCS with CRC-4

256S – TS16 MF, CAS

256S – TS16 MF, CAS with CRC-4

Unframed (T1→E1 conversion only)

Line Code

HDB3

Signal Level

Receive: 0 to -10 dB

Transmit:

±3V (±10%), balanced

±2.37V (±10%), unbalanced

Impedance

Balanced: 120Ω

Unbalanced: 75Ω

Jitter Performance

As per ITU-T Rec. G.823

Connectors

Balanced: 15-pin D-type female

Unbalanced: two BNC coaxial

T1 INTERFACE

Data Rate

1.544 Mbps

Compliance

AT&T TR-62411, ANSI T1.403

ITU-T Rec.G.703, G.704

Framing

D4(SF)

ESF

Unframed

Line Code

AMI

Impedance

Balanced: 100Ω

Zero suppression

Transparent, B7ZS, B8ZS

Signal Level

Receive: 0 to -10 dB

Transmit: (nominal level) ±3V (±10%),
balanced

Jitter Performance

As per AT&T TR-62411

Connectors

15-pin D-type, female

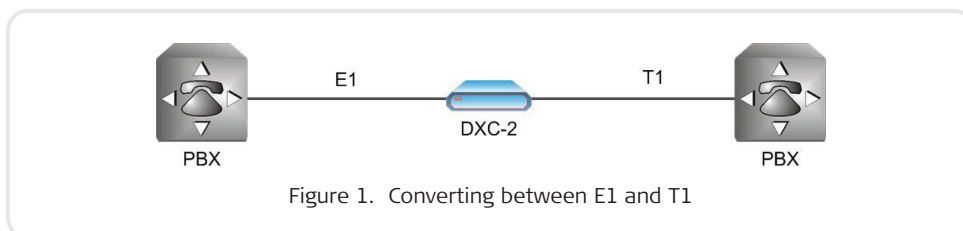


Figure 1. Converting between E1 and T1

GENERAL**Timing**

Main Source (soft-selectable):

- Internal oscillator ± 30 ppm
- Locked to receive clock of link A
- Locked to receive clock of link B

Fallback Source (independently soft-selectable):

- Locked to receive clock of link A
- Locked to receive clock of link B

Timeslot Mapping

Any timeslot to any timeslot, with/without A-law/ μ -law and signaling conversion per timeslot

Elastic Buffer

Buffer length: ± 1 frame
 Underflow: 1 frame repeated
 Overflow: 1 frame skipped (No frame sync loss for buffer overflow or underflow)
 Data delay: up to 375 ms

Unused Timeslot

User-defined both for E1 and T1 interfaces

Diagnostics

Local E1 or T1 loopbacks
 Remote E1 or T1 loopbacks
 Code-activated network loopback per ANSI T1.403

Statistics

T1 ESF diagnostics:
 ANSI T1.403 full support
 AT&T 54016 local support
 Transparent FDL between two T1 ports
 E1 CRC-4 diagnostics: per ITU-T G.706

Alarm Response

OOS indications in individual timeslots:
 DSO pattern
 OOS A, B signaling bits

Link alarms:

- Local loss of link input signal
- Local loss of synchronization to link signal
- Local reception of AIS signal
- Remote loss of synchronization or remote loss of link signal

Supervisory Port

Interface: V.24/RS-232, async
 Connector: 9-pin D type, female
 Data Rate: 300-9600 bps, autobaud

Indicators

Local sync loss: LINK A, LINK B
 Remote sync loss: LINK A, LINK B
 TEST

Front Panel Controls

LCD: 2 rows x 16 characters
 Push-buttons: CURSOR, SCROLL, ENTER

Power

100, 115 or 230 VAC; 47 to 63 Hz
 -48 VDC (-36 to -72 VDC), 15W

Physical

Height: 4.4 cm/1.7 in
 Width: 21.6 cm/8.4 in
 Depth: 2.4 cm/9.5 in
 Weight: 1.4 kg/3.1 lb

Environment

Temperature: 0–50°C/32–122°F
 Humidity: Up to 90%, non-condensing

DXC-2

T1/E1 Converter and Timeslot Cross-Connect

Ordering

DXC-2/~

Legend

~	Power supply:
100	100 VAC operation
115	115 VAC operation
230	230 VAC operation
48	48 VDC

SUPPLIED ACCESSORIES

AC power cord (when AC power supply is ordered)

DC connection kit (when DC power supply is ordered)

OPTIONAL ACCESSORIES

RM-1/NEW

Mechanical adaptor, for mounting one or two units (side by side) in a 19" rack

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