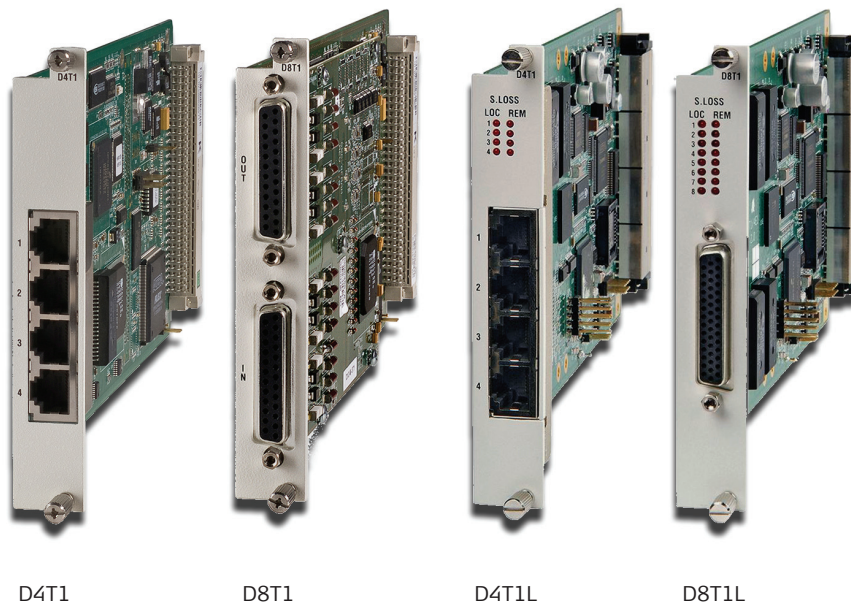


# DXC Modules

## D4T1, D8T1, D4T1L, D8T1L

### 4/8-Port T1 Interface Modules

4- or 8-port T1 interface modules for the DXC family of modular digital cross-connect units



- Four- or eight-port T1 interface modules for the DXC family
- D4 (SF) or ESF framing and unframed mode
- Data rate up to 1.544 Mbps per port
- AT&T TR-62411, ANSI T1.403, ITU-T Rec. G.703, G.704 and G.733 compliance
- Routing of up to 192 timeslots (D8T1 modules) and 96 timeslots (D4T1 module)

D4T1 and D8T1 are 4- or 8-port T1 interface modules for use with the DXC-8R, DXC-10A and DXC-30 modular digital cross-connect units (not including DXC-100). The modules provide T1 links over copper cable, and operate at T1 or fractional T1 rates.

D4T1 and D8T1 support D4 (SF) and ESF framing, as well as unframed mode. Special "light" module versions D4T1L and D8T1L can be ordered if only framed mode is needed. For long range applications, the modules feature an integral CSU option, operating at ranges of 2.2 km (1.4 miles).

# D4T1, D8T1, D4T1L, D8T1L

## 4/8-Port T1 Interface Modules

D4T1 and D4T1L modules provide four balanced 4-wire interfaces terminated with an RJ-45 connector per port. D8T1 and D8T1L modules provide eight balanced 4-wire interfaces terminated with two DB-25 connectors and one DB-44 connector, respectively.

Setup, control, and diagnostics can be performed via a supervisory port using an ASCII terminal or by the RADview-EMS.

Diagnostic capabilities include remote, local, remote inband code-activated, FDL line, and FDL payload loopbacks. All loopbacks can be independently activated on each port.

When used in signaling monitoring applications, D4T1, D8T1, D4T1L and D8T1L modules enable DXC to collect the signaling timeslots (such as SS7) from multiple leased lines and groom them over a single full T1 link to the protocol analyzer at a central site (see *Figure 3*).

Single-slot line redundancy (1:1) ensures protective switching within less than 50 msec, between ports on the same module.

The modules occupy one I/O slot in the DXC chassis.

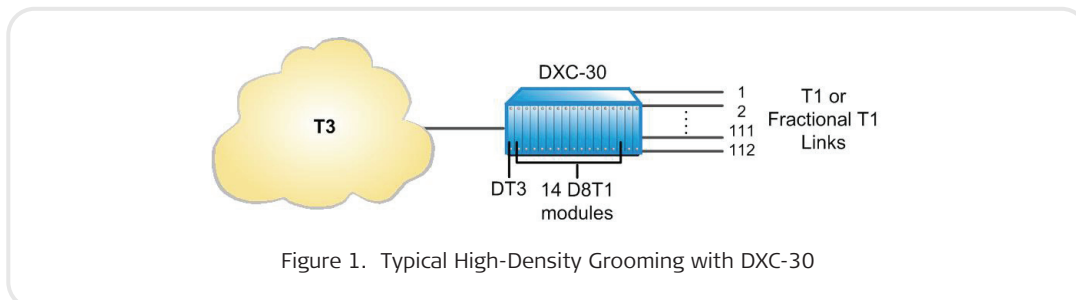


Figure 1. Typical High-Density Grooming with DXC-30

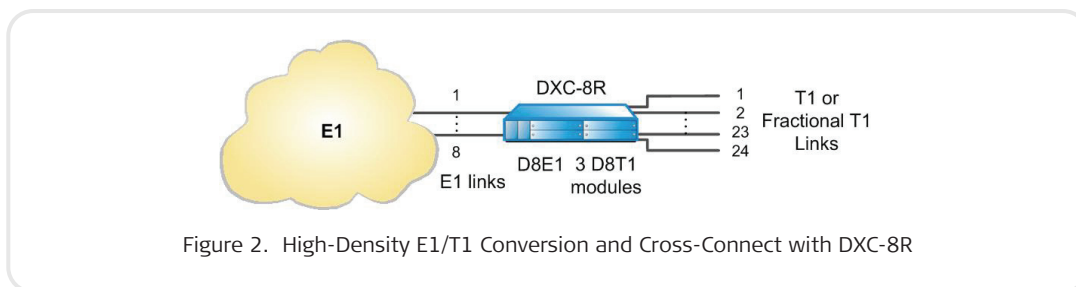


Figure 2. High-Density E1/T1 Conversion and Cross-Connect with DXC-8R

## Specifications

### Number of T1 Ports

D4T1, D4T1L: 4  
D8T1, D8T1L: 8

### Data Rate

1.544 Mbps per port

### Compliance

AT&T TR-62411, ANSI T1.403,  
ITU-T Rec. G.703, G.704, G.733

### Framing

D4T1, D8T1: SF (D4), ESF, unframed  
D4T1L, D8T1L: SF (D4), ESF

### Line Code

Bipolar AMI

### Zero Suppression

Transparent (no zero suppression)  
B7ZS  
B8ZS

### Transmit Levels

DSU emulation:  
 $\pm 3V \pm 10\%$ , soft-adjustable, measured at 0  
through 655 ft  
CSU mode:  
0, -7.5, -15, -22.5 dB, soft-selectable LBO

### Line Attenuation

Short Haul (DSU): -10 dB  
Long Haul (CSU): -36 dB

### Resistive Attenuation in Monitoring

Lower gain: 12 dB  
Higher gain: 20 dB

### Jitter Performance

Per AT&T TR-62411

### Line Impedance

4-wire, 100 $\Omega$

### Pulse Shape

Per ITU-T Rec. G.703

### Port Timing

Receive timing recovered from incoming  
line signal

Transmit timing locked to the DXC master  
clock

### Timeslot Allocation

User-defined, any timeslot to any timeslot  
mapping

### Connectors

D4T1, D4T1L: 4 x RJ-45  
D8T1: 2 x DB-25 female  
D8T1L: 1 x DB-44 female

### Indicators (per port)

D4T1, D8T1: no indicators  
D4T1L, D8T1L:  
Sync loss (red) – LOC, REM

### Diagnostics

Local and remote loopbacks on each  
module port

Inband code activated loopback as per  
ANSI T1.403

### Power Consumption

D4T1, D4T1L: 5.5W (1.1A at +5 VDC)  
D8T1, D8T1L: 7.25W (1.45A at +5 VDC)

### Physical

Occupies a single slot in a DXC-8R,  
DXC-10A or DXC-30 chassis

For comparison of DXC chassis, see  
*Table 2*. For the list of DXC I/O modules,  
refer to the DXC-8R/10A/30 folder.

### Configuration

Programmable using DXC management via  
ASCII terminal, Telnet, or RADview-EMS

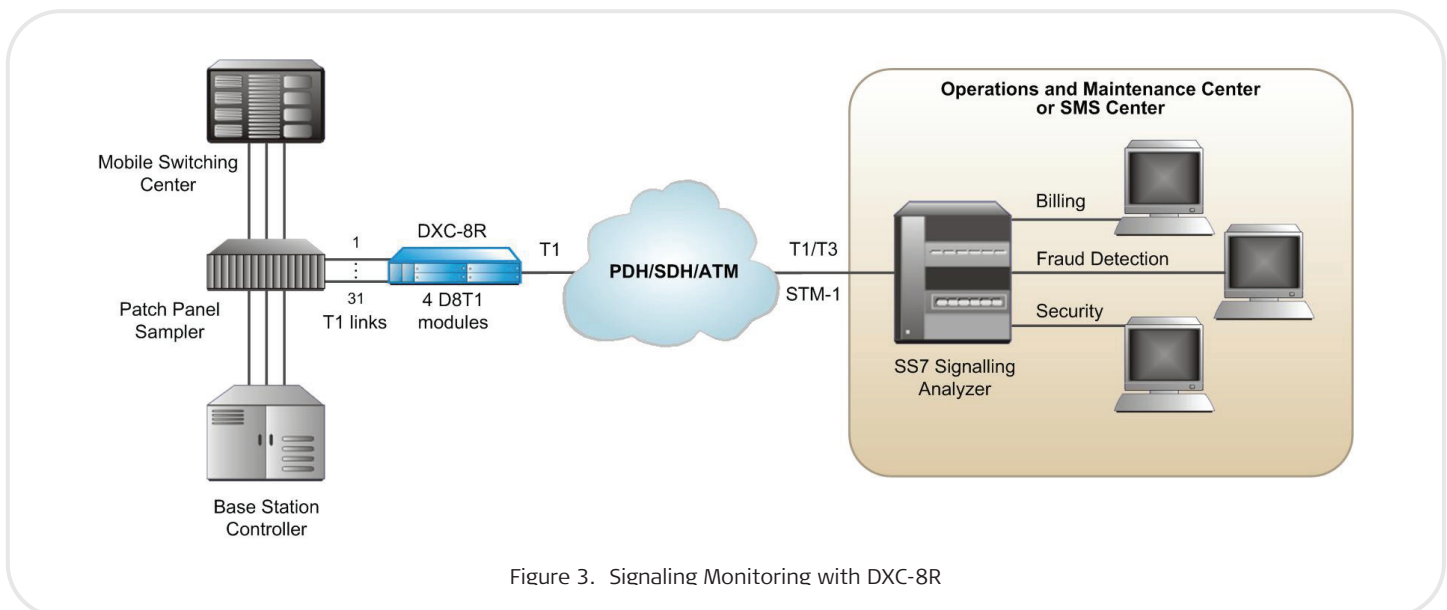


Figure 3. Signaling Monitoring with DXC-8R

# D4T1, D8T1, D4T1L, D8T1L

## 4/8-Port T1 Interface Modules

### Ordering

#### DXC-M-4T1

4-port framed and unframed T1 interface module

#### DXC-M-8T1

8-port framed and unframed T1 interface module

#### DXC-M-4T1L

4-port framed T1 interface module

#### DXC-M-8T1L

8-port framed T1 interface module

### OPTIONAL ACCESSORIES

#### CBL-D8T1-RJ45/X

Adapter cable for converting two DB-25 connectors to 8 RJ-45 connectors (D8T1 only)



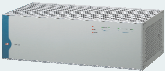

#### CBL-G703-8/RJ45/ST

Splitter cross-cable with station clock for splitting the 44-pin module connector to 8 RJ-45 connectors (D8T1L only)

#### CBL-G703-8/RJ45/X

Splitter cross-cable for splitting the 44-pin module connector to 8 RJ-45 connectors (D8T1L only)

Table 2. DXC Chassis Comparison Table

Feature	DXC-8R	DXC-10A	DXC-30	DXC-100*
				
Height	1U	1U	3U	6U per nest
Maximum number of ports	32	40	120	688 (8 nests)
Number of I/O slots	4	5	15	86 (8 nests)
System redundancy	Built-in	None	Optional	Optional
E1, T1, E3, T3, STM-1 modules	✓	✓	✓	✓
XDSL, inverse multiplexing modules	✓	✓	✓	-
n x 56/64 kbps modules	✓	✓	✓	✓
Router, OC-3 modules	-	-	-	✓
ASCII, SNMP, RADview management	✓	✓	✓	✓

*\*The DXC-8R/10A/30 modules and DXC-100 modules are not interchangeable.*

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