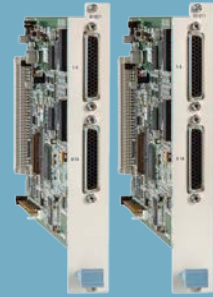**Megaplex-4**

M16E1, M16T1

16-Port E1 and T1 Modules

- Up to 16 E1 or T1 interfaces
- E1 interface compliant with ITU-T Rec. G.703, G.704 and G.732
- T1 interface compatible with ANSI requirements
- Multiple clock source selection
- Up to 160 E1/T1 links in a single MP-4100 chassis
- IEEE-1613 compliant options

The M16E1 and M16T1 modules enable direct connection of Megaplex-4 to up to 16 E1 or T1 lines. Up to 10 modules can be installed in a single Megaplex-4100 chassis, providing it with up to 160 E1/T1 ports. The compact Megaplex-4104 chassis accommodates up to 4 modules, providing up to 64 E1/T1 ports.
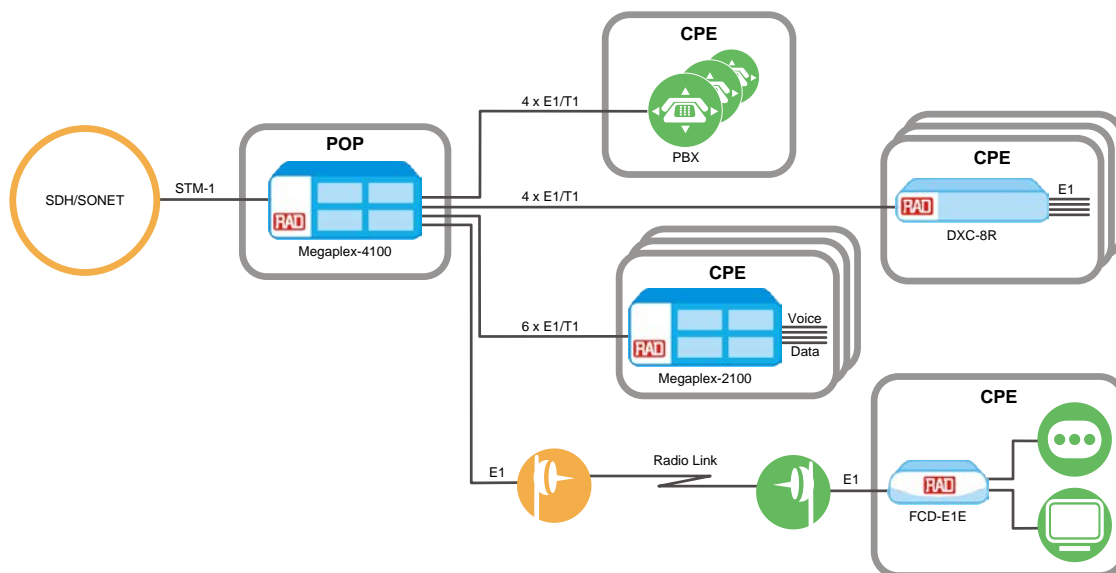
The M16E1, M16T1 modules have 16 independently configurable E1/T1 external ports. The E1 interface is compatible with all carrier-provided E1 services, meeting the requirements of ITU-T Rec. G.703, G.704 and G.732.

It operates in both 2 (G732N) and 16 (G732S) frames per multiframe formats, as well as in unframed mode. CRC-4 and E-bit are also supported, complying with G.704 recommendations. Zero suppression over the line is HDB3.

The T1 interface is compatible with ANSI requirements. Both D4 and ESF framing formats are supported. Zero suppression is selectable for Transparent, B7, or B8ZS.

Diagnostic capabilities include local and remote loopbacks and BER test on the E1/T1 ports and inband code-activated loopbacks specified in ANSI T1E1.2/93-003 (T1 interface only). Performance statistics for the E1/T1 ports may be obtained and analyzed via the Megaplex management system.

E1/T1 Cross-Connect and Access to SDH/SONET Networks

M16E1, M16T1

16-Port E1 and T1 Modules

Specifications

E1 INTERFACE

Compliance
ITU-T G.703, G.704, G.732 (Including CRC-4 and E bit)

Connectors
Dual DB-44, female for channels 1-8 and 9-16 (see *Ordering* for cables available from RAD)

Framing
2 frames (G732N), or 16 frames (G732S) per multiframe, with or without CRC-4

Unframed

Data Rate (per link)
2.048 Mbps

Line Code
HDB3

Jitter Performance
As per ITU-T G.823

Impedance
Balanced 4-wire: 120Ω
Unbalanced coax: 75Ω

Signal Level
Receive: 0 to -12 dBm
Transmit:
   Balanced: ±3V (±10%)
   Unbalanced: ±2.37V (±10%)

T1 INTERFACE

Compliance
ANSI T1.107 and T1.403

Connectors
Dual DB-44, female for channels 1-8 and 9-16 (see *Ordering* for cables available from RAD)

Framing
D4, ESF

Data Rate (per link)
1.544 Mbps

Line Code
Bipolar AMI

Zero Suppression
Transparent, B7, B8ZS

Signal Level
Receive: 0 to -12 dBm
Transmit: 0.6, 1.2, 1.8, 2.4, 3.0 dBm
user-adjustable, measured at 0 to 655 ft

Jitter Performance
As per AT&T TR-62411

Impedance
Balanced 4-wire: 100Ω

DIAGNOSTICS

Loopbacks
User-activated local and remote loopback
   on each port
BER test on each port
Local and remote loopbacks per timeslot
T1 interface only:
Network line loopback
Network payload loopback

Statistics
Full statistical diagnostics capability according to ANSI T1.403

GENERAL

Environment
Operating temperature:
- Regular: -10°C to 55°C (14°F to 131°F) (including -5°C - +45°C in compliance with ETSI ETS 300 019 Class 3.2)
- IEEE-1613 certified options: -20°C to 55°C (-4°F to 131°F)
Storage temperature: -20°C to +70°C
   (-4°F to +160°F)
Humidity: up to 95%, non-condensing

Power Consumption
10.5W

Ordering

RECOMMENDED CONFIGURATIONS

MP-4100M-16E1
16-port E1 module

MP-4100M-16T1
16-port T1 module

SPECIAL CONFIGURATIONS

Please contact your local RAD partner for additional configuration options.

OPTIONAL ACCESSORIES

CBL-G703-8/RJ45/ST
Splitter cable for splitting each 44-pin module connector to 8 E1 or 8 T1 balanced RJ-45 connectors

CBL-G703-8/RJ45/X
Splitter cross-cable for splitting each 44-pin module connector to 8 E1 or 8 T1 balanced RJ-45 connectors

CBL-G703-8/COAX
Splitter cable for splitting each 44-pin M16E1 module connector to 8 pairs of unbalanced BNC connectors

CBL-G703-8/OPEN/2M
Open-ended cable with DB-44 connector on the Megaplex side for balanced E1 or T1 applications

CBL-G703-8/RJ45/Y
Y-cable with two DB-44 connectors on the Megaplex side and 8 T1 balanced RJ-45 connectors on the user's side for I/O group protection (ver 3.x and higher)

All cables are 2m (6.6 ft) long.

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