Megaplex-2100/2104

Modular Integrated Access Multiplexers
Ver 2.x

- Multiple n x 64 kbps, E1/T1 or fractional E1/T1 main links, with combined TDM capacity of up to 8 Mbps (124 timeslots)

- 10/100-Mbps IP access link for transparent circuit extension over IP, employing RAD's TDMoIP technology

- Self-healing TDM E1/T1 rings and Resilient Fast Ethernet Ring (RFER) technology (under 50 msec switchover protection)

- Wide range of I/O modules for ISDN, voice, low-speed, high-speed, teleprotection, Ethernet, ISDN and more

MP-2100/2104 is a modular integrated access TDM multiplexer, which integrates multiple dedicated data, voice, ISDN and LAN channels over multiple main (network) links. MP-2100/2104 equipped with 8-port main link modules in conjunction with 12-port high-speed modules provides a traffic payload capacity of up to 248 DS0 timeslots.

The flexible, modular MP-2100/2104 with a wide choice of I/O (user interface) modules was designed for applications ranging from small campus networks to multi-site corporate networks or extensive carrier access solutions.

The equipment conforms to international standards, ensuring compatibility in multi-vendor environments worldwide.

MARKET SEGMENTS

Megaplex-2100/2104 can be used in the following applications:

- Megaplex provides multiservice access for utility and transportation companies, to reduce the number of units needed to collect all the traffic, low speed, high speed, teleprotection, voice, teleconference and more (see *Figure 1* and *Figure 2)*

- Megaplex can be used to keep the huge installed base by maintaining legacy and special services while enabling carrier network migration to NGN/PSN. It can be deployed at the carrier's point-of-presence, in the exchange, or at an organization's central office, as well as remote sites, (see *Figure 3* for carrier extension over copper lines).

Megaplex enables carriers to successfully deploy bundled services, ISDN services and Internet access. The integration of a broad range of services makes Megaplex a cost-effective access device, with reduced deployment and maintenance costs.

Megaplex with TDMoIP technology provides a cost-effective, versatile and modular solution for transmitting legacy TDM traffic over IP networks. This is especially suitable for large corporations, utilities or power companies that are seeking a future-proof migration path to IP networks.

INTEROPERABILITY

Megaplex-2100/2104 is interoperable with Megaplex-4100, ASMi, IPMUX, DXC and FCD devices, and can interwork with third-party devices or networks complying with PDH and Ethernet standards.

TDMoIP Driven®
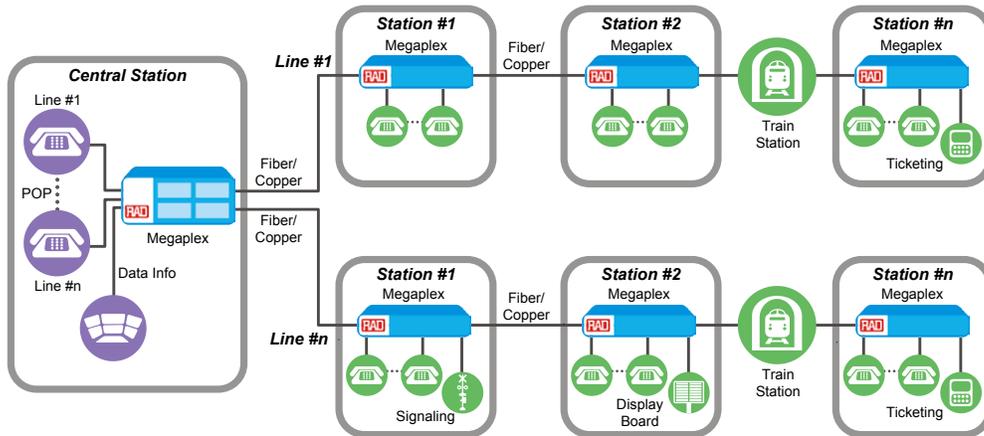
RAD

Applications

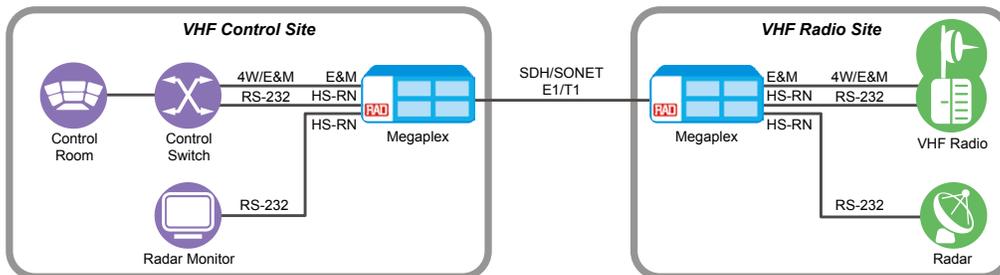Figure 1. Omnibus Teleconference Voice Application for Railway Connectivity

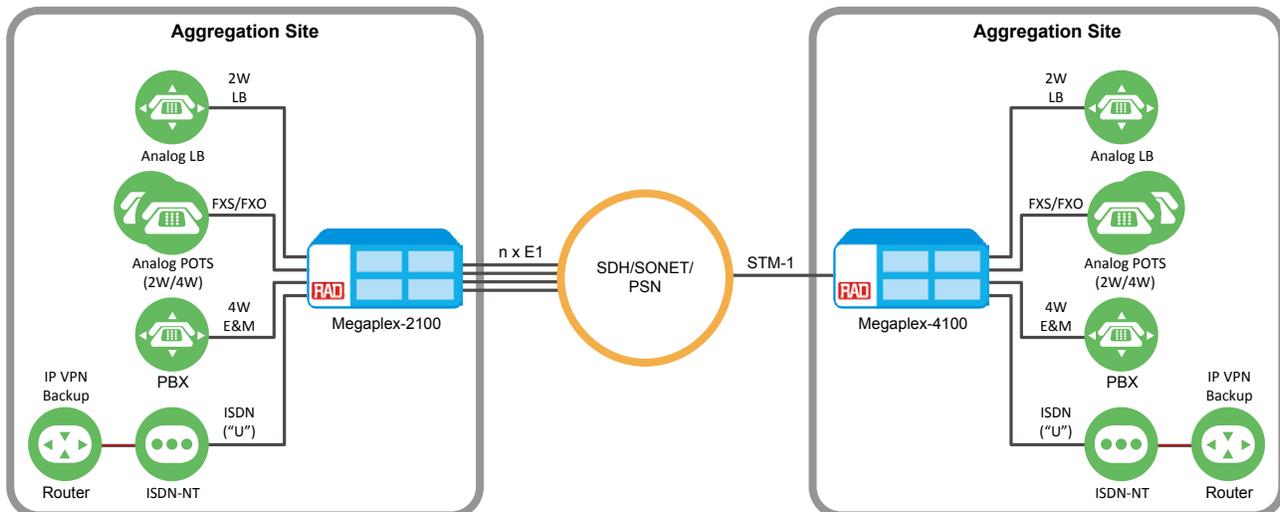

Figure 2. Air Traffic Control using VC-4/E&M/POS Modules

Figure 3. Carrier Network Migration

Specifications

Compliance

E1: ITU-T Rec. G.704 and G.706, G.736

T1: AT&T TR-62411, ANSI T1.403-1989 ITU-T Rec. G.703, G.704, and G.733

Ethernet : IEEE 802.3, 802.1p, 802.1Q, 802.3U

MANAGEMENT

Control Port

Interface: RS-232 sync DCE port

Data Rate: 0.3, 1.2, 2.4, 4.8, 9.6, 19.2, 38.4, and 57.6 kbps

Connector: 9-pin D-type female

Ethernet Management Port

Type: 10BaseT

Connector: 8-pin RJ-45

Management Options

Menu-driven interface with password-protected access, authorization levels, Telnet, RADview-EMS, SNMPv2:

- Out-of-band

- Inband, via the TDM main link ports using frame overhead or over a dedicated timeslot

DIAGNOSTICS

Tests

Local main link loopback

Local main link loop towards remote unit

Local and remote BERT on channels, ports, bundles, individual timeslots and individual bits in a timeslot

Local and remote loopbacks on channels, ports, and timeslots

Forward and remote tone injection in individual timeslots (voice channels only)

IP connectivity check (ping)

Alarms

Time and date stamped

Last 256 alarms stored in RAM on CL module, readable by management system or terminal

Current alarms status

Statistics

AT&T statistics when using ESF framing for T1 trunks, or CRC-4 multiframing for E1 trunks

Performance statistics for bundles and LAN ports

GENERAL

Environment

Operating temperature: -10°C to 55°C (14°F to 131°F)

Storage temperature: -20°C to +70°C (-4°F to +158°F)

Humidity: up to 95%, non-condensing

Note: Actual operating temperature range is determined by the specific modules installed in the chassis, and might require special ordering options.

For extended operating temperature ranges, contact your local RAD Business Partner.

Physical

MP-2100 (4U-high)

2 power supply module slots

2 CL module slots

12 slots for I/O and ML modules

Height: 18 cm (7 in) (4U)

Width: 44 cm (17 in)

Depth: 33 cm (13 in)

Weight (fully loaded):less than 17 kg (37 lb)

MP-2104 (2U-high)

Built-in power supply (optional built-in voice ringer or ISDN power feeder is available)

1 CL module slot

5 slots for I/O and ML modules

Height: 9 cm (3.5 in) (2U)

Width: 44 cm (17 in)

Depth: 33 cm (13 in)

Weight (fully loaded): less than 6 kg (13 lb)

Megaplex-2100/2104

Modular Integrated Access Multiplexers

Power

Power Supply Input

110/115 VAC (85 to 150 VAC), 50/60 Hz
220/230 VAC (150 to 264 VAC), 50/60 Hz
-48 VDC (-36 to -57 VDC)
-24 VDC (-18 to -40 VDC)
24 VDC with floating ground (18 to 40 VDC)

MP-2100 (without Ringer)

Maximum Output Power:
- AC: 250W
- DC: 250W

Maximum Input Power:
- AC: 250W
- DC: 315W

Note: *Maximum power consumption for a system with redundant power supplies is 250W.*

MP-2104

Maximum Output Power
- AC: 120W
- DC: 120W
- AC w/Ringer: 300W
- DC w/Ringer: 290W

Maximum Input Power:
- AC: 160W
- DC: 160W
- AC w/Ringer: 300W
- DC w/Ringer: 350W

Ordering

Basic unit includes a chassis, single common logic module, single power supply and power supply cables. Main link and I/O modules are ordered separately (see separate module data sheets for details and ordering information).

RECOMMENDED CONFIGURATIONS

MP-2100/115/2UTP

Modular integrated access multiplexer, 4U chassis with 12 module slots and CL.2 common logic module, 115 VAC, 10BaseT management port

MP-2100/115/R/2UTP

Modular integrated access multiplexer, 4U chassis with 12 module slots and CL.2 common logic module, 115 VAC, redundant power supply and common logic, 10BaseT management port

MP-2100/230/2UTP

Modular integrated access multiplexer, 4U chassis with 12 module slots and CL.2 common logic module, 230 VAC, 10BaseT management port

MP-2100/230/R/2UTP

Modular integrated access multiplexer, 4U chassis with 12 module slots and CL.2 common logic module, 230 VAC, redundant power supply and common logic, 10BaseT management port

MP-2100/48/2UTP

Modular integrated access multiplexer, 4U chassis with 12 module slots and CL.2 common logic module, -48 VDC, 10BaseT management port

MP-2100/48/R/2UTP

Modular integrated access multiplexer, 4U chassis with 12 module slots and CL.2 common logic module, -48 VDC, redundant power supply and common logic, 10BaseT management port

MP-2100M-CL.2/UTP

Common Logic 2 for MP-2100, 10BaseT UTP Ethernet management port

MP-2104/115/2UTP

Modular integrated access multiplexer, 2U chassis with 5 module slots and CL.2 common logic module, 115 VAC, 10BaseT management port

MP-2104/230/2UTP

Modular integrated access multiplexer, 2U chassis with 5 module slots and CL.2 common logic module, 230 VAC, 10BaseT management port

MP-2104/48/2UTP

Modular integrated access multiplexer, 2U chassis with 5 module slots and CL.2 common logic module, -48 VDC, 10BaseT management port

SPECIAL CONFIGURATIONS

Please contact your local RAD partner for additional configuration options.

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