

AirMux-104



Point-to-Point Wireless TDM/IP Multiplexer



- 5.7250–5.850 GHz is a newly allocated license-exempt band. It provides uninterrupted and more reliable transmission in comparison with the legacy 2.4 GHz unlicensed band, resulting in higher QoS.
- Unlicensed bands allow faster and more affordable deployment without frequency coordination and license fees.
- A powerful Forward Error Correction (FEC) mechanism is employed to ensure integrity of transmission, providing higher quality of service with BER as low as 1E-10.
- Time Division Duplex (TDD) technology considerably simplifies installation and free channel selection procedure. The TDD technology enables to transmit and receive data over a single channel and supports 12 operation channels in the 5.725–5.850 GHz band.

FEATURES

- Wireless point-to-point multiplexer operating at 5.725–5.850 GHz over ANSI UNII and ISM license-exempt bands
- Configurable combination of E1/Fractional E1 and Ethernet traffic over 2.6 Mbps full duplex wireless link
- Operates at ranges of up to 16 km (10 miles)
- Carrier resolution at 12 × 10 MHz intervals
- Time Division Duplex (TDD) for simplified installation and free channel selection
- Extensive diagnostics, including performance monitoring and loopbacks on the local and remote units

DESCRIPTION

- The AirMux-104 point-to-point multiplexer operates at 5.725 GHz–5.850 GHz, a license-free band in many countries.
- AirMux-104 transmits E1 or fractional E1 and Ethernet traffic at distances of up to 16 km (10 miles).
These unique capabilities make AirMux-104 ideal for a variety of applications:
 - Building-to-building or campus-to-campus PBX and LAN connectivity
 - Cellular BTS to BSC backhauling
 - Connection to temporary locations, such as, construction and mining sites, military camps etc.
- Operation over 5.725–5.850 GHz bands is not affected by harsh weather conditions, such as fog or heavy rain.

- To minimize system downtime, AirMux-104 provides comprehensive diagnostic capabilities that include:
 - Traffic monitoring
 - Real-time alarms generation that alert users on faulty conditions
 - Internal and external loopbacks on the local and remote units.
- AirMux-104 consists of an outdoor radio terminal (RT) and an indoor radio terminal connection box (RTCB).

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SPECIFICATIONS

WIRELESS LINK

- **Technology**
Spread spectrum
- **Frequency Band**
5.725–5.850 GHz, as specified by:
 - ANSI Unlicensed National Information Infrastructure (UNNII)
 - ISM
- **Standards**
FCC 15.401&15.407 UNII,
ETSI TS-101-475
- **Capacity**
2.6 Mbps, full duplex
- **Duplexing Method**
Time Division Duplex (TDD)
- **Channel Bandwidth**
10 MHz
- **Modulation**
QPSK
- **Transmitter Power**
16 dBm max
- **Receiver Sensitivity**
-90 dBm at BER 1E-8
- **Antenna Type and Polarization**
Integrated flat panel, vertical and horizontal polarization
- **Antenna Gain**
23 dBi
- **Antenna Beam**
±9°, directional
- **RT Installation Method**
Mast or wall mounting

LAN INTERFACE

- **Type**
10/100BaseT, autonegotiation
- **Framing/Coding**
IEEE 802.3/U

- **Bridging**
Self-learning, up to 4000 MAC addresses
- **Traffic Handling**
MAC layer bridging, self-learning
- **Line Impedance**
100Ω
- **VLAN Support**
Transparent
- **Data Rate**
2.3 Mbps max
- **Connector**
RJ-45

E1 INTERFACE

- **Framing**
G.703, G.704 with or without CRC
- **Data Rate**
N x 64 kbps (n = 1, 2, ..., 32), user-selectable
- **Timing**
Plesiochronous
- **Connector**
RJ-45

GENERAL

- **Indicators**
SERVICE (green/red) – E1 status
AIR I/F (green/red) – Wireless link status
RTCB (green) – RTCB self-test results
RT (green/red) – RT-to-RTCB link status
PWR (green) – Power status
- **Upgrade Capabilities**
Local and remote software download
- **Power**
100–240 VAC via external AC/DC converter
- **Power Consumption**
25W max (RT and RTCB)

Physical

RT (outdoor unit):
Height: 305 mm / 12 in
Width: 305 mm / 12 in
Depth: 72 mm / 2.8 in
Weight 3.3 kg / 7.2 lb

RTCB (indoor unit):
Height: 44 mm / 1.7 in
Width: 237 mm / 9.3 in
Depth: 107 mm / 6.7 in
Weight 0.58 kg / 1.4 lb

Environment

RT:
Enclosure: all-weather case
Temperature: -45–60°C/-49–140°F
RTCB:
Temperature: -5–45°C/23–113°F
Humidity: Up to 90%, non-condensing

ORDERING

AirMux-104/OD

Point-to-point wireless TDM/IP multiplexer, outdoor unit (RT)

AirMux-104/ID

Point-to-point wireless TDM/IP multiplexer, indoor unit (RTCB)

CBL-AirMux/@

RT-to-RTCB connection cable

@ Specify cable length:

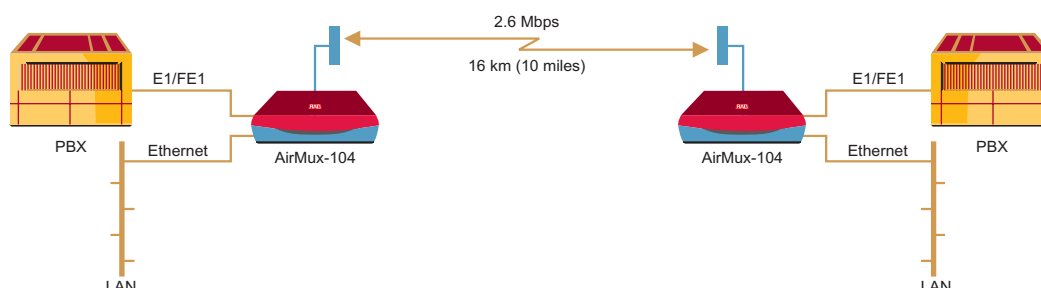
25 for 25m cable
50 for 50m cable
75 for 75m cable
100 for 100m cable

CBL-AirMux-Config

RT-to-RTCB connection cable for indoor initial setup, 2m long with DB-25 and 16-pin Krone-type connectors

Note: The CBL-AirMux-Config cable is required only for initial setup of the system. It is also recommended to include it into technician kits.

APPLICATION



data communications

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