

# 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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## Point-to-Point Wireless TDM/IP Multiplexer

### 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

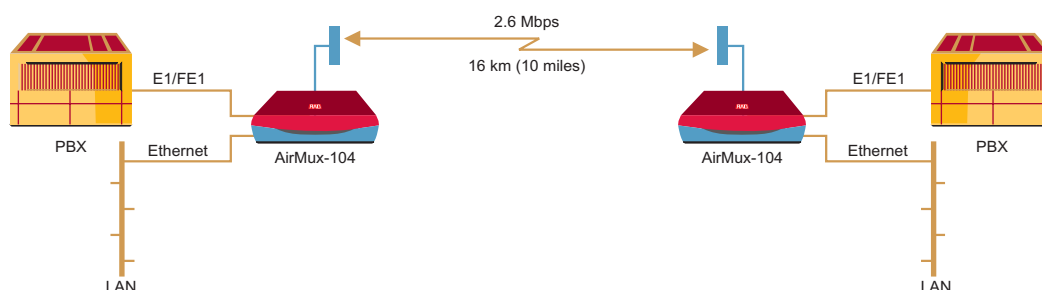
**100** for 100m cable

#### 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



Specifications are subject to change without prior notice.

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