

Airmux-200 AIND

All-Indoor Wireless Broadband Multiplexer



- Combines the IDU and ODU in a single enclosure
- Four T1s plus Ethernet over the 5.8 GHz spectrum band
- Enables outdoor placement of antenna only
- Minimizes maintenance costs

Point-to-point radio solution for combined TDM and Ethernet traffic over license-free frequencies in a single enclosure

Airmux-200 AIND is a point-to-point radio solution for combined TDM and Ethernet traffic over license free frequencies.

It delivers T1s and Ethernet over the 5.8 GHz spectrum bands with high reliability at an unprecedented price.

Providing a unique single enclosure design for the radio and multiplexer units, Airmux-200 AIND affords maximum flexibility in installation and maintenance processes, enabling the placement of only an antenna on the outdoor tower.

Airmux-200 AIND significantly reduces radio installation and maintenance costs by enabling installation in street cabinets, and eliminating the need to deploy radios on outdoor towers or rooftops.

Costs are further reduced through remote maintenance, easy upgrades, and diagnostics that provide the ability to address problems on the spot.

Airmux-200 AIND is FCC-compliant.



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Operating at ranges of up to 50 miles with high-capacity connectivity of up to 48 Mbps, Airmux-200 AIND provides high reliability and robustness for cellular backhauling and broadband access applications.

Since Airmux-200 AIND operates in license-exempt frequencies, it can be deployed in record time eliminating the costs and delays involved in leasing lines or trenching fiber.

For operators who want to deliver T1 plus Ethernet services, require hassle-free installation and maintenance, and need to lower total cost of ownership, RAD's Airmux-200 AIND is the answer.

Airmux-200 AIND provides a unique single enclosure design for the radio and multiplexer units. The indoor unit is connected to an external antenna via a coaxial RF cable.

Specifications

RADIO

Frequency Band

5.725 – 5.850 GHz

Data Rate

Configurable up to 48 Mbps(bi-directional)

Channel Bandwidth

20 MHz

Duplex Technique

TDD

Modulation

OFDM – BPSK/QPSK/16QAM/64QAM

Max Transmitter Power

23 dBm max

Received Dynamic Range

>60 dB

Error Correction

FEC k=1/2, 2/3, 3/4

Encryption

AES 128

Antenna Specifications

See *Table 1*

Antenna connector

Female N-type, 50Ω impedance

Note: When calculating the Link Budget, consider losses of the RF cable that connects the AIND device to the antenna

T1 INTERFACES

Framing

Unframed (transparent)

Number of T1 Ports

Up to 4

Standard Compliance

ITU-T G.703, G.826

Timing

Plesynchronous (independent Tx and Rx timing)

Line Code

B8ZS/AMI @ 1.544 Mbps

Latency

8 msec

Impedance

100Ω, balanced

Connector

RJ-45

Jitter and Wander

According to ITU-T G.823, G.824

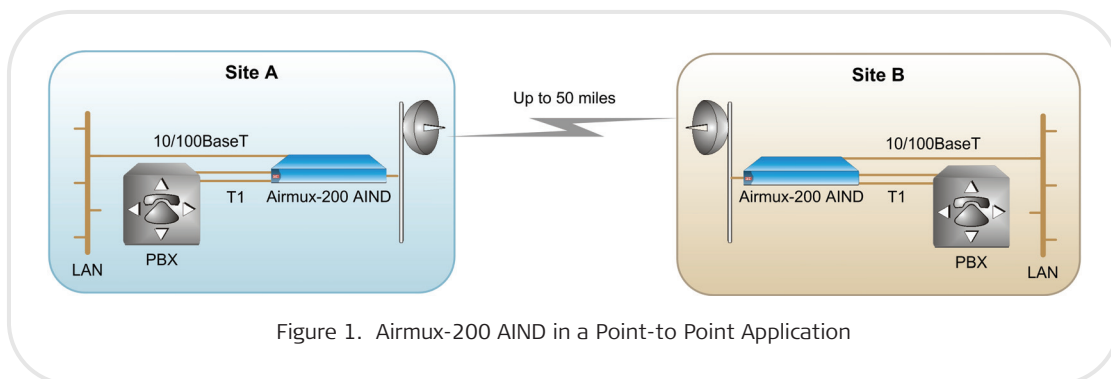


Figure 1. Airmux-200 AIND in a Point-to-Point Application

LAN INTERFACES**Type**

10/100BaseT Interface with Autonegotiation (IEEE 802.3)

Number of Ethernet Ports

2

Framing/Coding

IEEE 802.3/U

Maximum Frame Size

1,536 Bytes

Bridging

Self-learning up to 2047 MAC addresses (according to IEEE 802.1Q)

Traffic Handling

MAC layer bridging, self-learning

Data Latency

3 msec typical

Line Impedance

100Ω

VLAN Support

Transparent

Connector

RJ-45

MANAGEMENT**Network Management and Protocol**

SNMPc based

Upgrade Capabilities

Local and remote software upgrades

Diagnostics

Local and remote loopbacks

POWER AND MOUNTING**Power Feeding**

110/220VAC, 50/60Hz, -24VDC/-48VDC

Power Consumption

14W Max

Mounting

19-inch rack

Environmental**Operating Temperatures**

-35°C–60°C (-31°F–140°F)

Humidity

Up to 95% non-condensing

MECHANICS**Dimensions**

Height: 45.7 mm (1.8 in)

Width: 429.3 mm (16.9 in)

Depth: 289.5 mm (11.4 in)

Weight: 3 kg (6.6 lb)

Table 1. Antenna Specifications

Antennas		5.725–5.850 GHz
External Antenna 2 ft	Gain	28 dBi
	Beam Width	4.5°
	Polarization	Linear
External Antenna 3 ft	Gain	32.5 dBi
	Beam Width	4°
	Polarization	Linear
Regulation		
Radio	FCC: 47CFR	Part 15, Subpart C&B
	IC	RSS-210
Safety	TUV	60950, according to UL60950
	CAN-USA	C22.2 No. 60950
EMC	FCC	CFR Part 15, Subpart B
	CAN-ETSI	EN 301 489-1

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Ordering

Use the following syntax:

Airmux-200AIND/F58F/EXT/4T1/@

Airmux-200 All-indoor, 4T1, 2 ETH, 5.8GHz

FCC for external antenna

@ Specify power supply type:

AC AC power adaptor

48 48VDC power supply

24 24 VDC power supply

OPTIONAL ACCESSORIES

RM-33

Hardware kit for mounting one

Airmux-200 AIND unit into a 19-inch rack

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data communications

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