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Product Profile

Airmux-200 Power over Ethernet Fast Ethernet Broadband Wireless Solution

The Airmux-200 broadband wireless multiplexer from RAD Data Communications delivers TDM and Ethernet services over a single platform in the 2.4GHz and 4.9-5.8 GHz bands at high capacity, long range, and with carrier-class reliability.

The Airmux-200 Power over Ethernet (PoE) solution is ideal for service providers and private networks requiring immediate deployment of Ethernet only services at an affordable price. Extremely simple to install and operate, the Airmux-200 PoE solution can be up and running in less than one hour, eliminating the delays and costs associated with expensive leased line and fiber-based solutions.

Typical Applications

Broadband Access

The Airmux-200 PoE enables ISPs and WISPs to meet the high capacity bandwidth requirements of customers such as small and medium enterprises, government offices, education facilities and more. With the Airmux-200, service providers can rapidly deploy broadband data last-mile services and realize almost immediate return on investment.

WiFi Backhauling

The Airmux-200 PoE is the ideal solution for backhauling WiFi Ethernet data traffic. The solution is capable of supporting large-scale metro WiFi installations, providing backhaul to multiples of WiFi Access Points in crowded environments.

Remote Site Connectivity

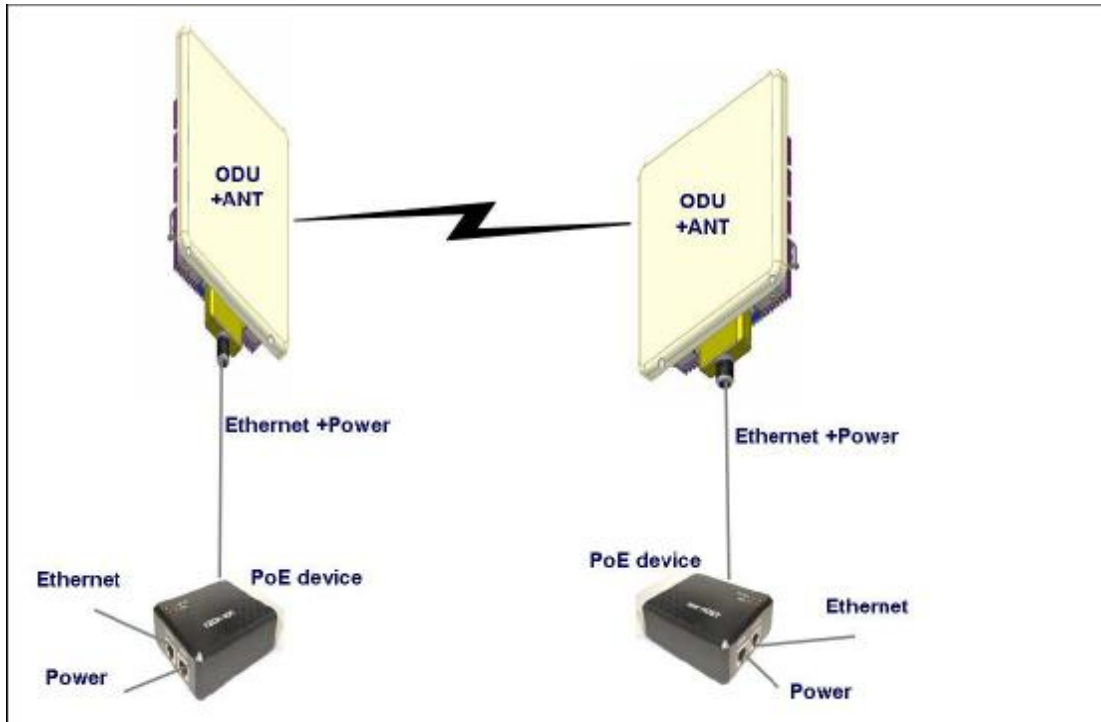
The Airmux-200 PoE meets the needs of private networks such as enterprises, campuses, municipalities and government institutions that want to establish high-speed broadband connectivity between two offices quickly and affordably.

Surveillance applications

The Airmux-200 PoE is capable of transmitting high-resolution video Ethernet streams from established point of presence back to the command and control center.

Airmux-200 Architecture

The Airmux-200 PoE comes equipped with an outdoor unit device (ODU), integrated/external antenna, and a Power over Ethernet device, which supplies power over the same CAT5e twisted-pair cable that carries the Ethernet traffic to the ODU.



Airmux-200 PoE Highlights

- Delivers Ethernet traffic
- High data capacity (48 Mbps symmetric)
- Long range - up to 80 Km/50 miles
- Available in various frequency bands:
 - 2.400 – 2.4835 GHz
 - 4.940 – 4.990 GHz
 - 5.150 – 5.350 GHz
 - 5.470 – 5.725 GHz
 - 5.725 – 5.850 GHz
- Complies with FCC, ETSI and IC regulations
- SNMP-based local and remote management

Key Benefits

- Fast time to deployment
- Unrivaled price - More competitive than any other Ethernet link of similar performance levels
- License-exempt frequencies eliminate regulatory delays and costs
- Carrier grade performance - designed for high reliability and robust performance in the harshest weather conditions and difficult terrain
- Extremely simple installation – link is established and running in less then an hour



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Ordering Guidelines

The Power over Ethernet solution is only supported by a specific AirMux-200 identified by 'PoE' service in its name definition. When ordering this specific Airmux-200 ODU/PoE, the PoE device is included. Please refer to the price list for available ODU PoE configurations.

Configuration

Architecture	Outdoor Unit (ODU) with PoE device
IDU to ODU Interface	Outdoor CAT-5 cable; Maximum length: 100m total

Radio

Frequency Bands	2.400 – 2.4835 GHz 4.940 – 4.990 GHz 5.150 – 5.350 GHz (supports DFS/TPC) 5.470 – 5.725 GHz 5.725 – 5.850 GHz
Data Rate	Configurable up to 48 Mbps
Channel Bandwidth	20 MHz (5, 10 MHz in Q3 of 2006)
Duplex Technique	TDD
Modulation	OFDM – BPSK/QPSK/16QAM/64QAM
Transmit Power	18dBm max
Received Dynamic Range	>60dB
Error Correction	FEC k=1/2, 2/3, 3/4

LAN Interface

Type	10/100BaseT Interface with Auto-negotiation (IEEE 802.3)
Number of Ethernet Ports	1
Framing/Coding	IEEE 802.3/U
Line Impedance	100Ω
VLAN Support	Transparent
Connector	RJ-45
Maximum Frame Size	1800 bytes

Management

Protocol	SNMP based
Network Management	SNMPc based
Upgrade Capabilities	Local and remote 'over the air' software upgrade

Mechanics

ODU Dimensions (with 1 ft flat integrated antenna)	30.5cm(H) x 30.5cm(W) x 5.8cm(D) Weight: 1.5kg/3.3lb
ODU Dimensions (with no integrated antenna)	24.5cm(H) x 13.5cm(W) x 4.0cm(D) Weight: 1.0kg/2.2lb
PoE Device Dimensions	3.2cm(H) x 9cm(W) x 7.5cm(D) Weight: 0.16kg/0.35lb

Power and Mounting

Power Feeding	110/220VAC, 50/60Hz
Power Consumption	<10 W (ODU + PoE device)
Mounting Pole and Wall	Pole and Wall



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Environmental

Outdoor Unit Enclosure	All weather cases
ODU Operating Temperatures	-35°C – 60°C
PoE Device Operating Temperatures	0°C – 80°C
Humidity	Up to 100% non-condensing

Antenna

	2.400-2.4835 GHz	4.940-4.990 GHz	5.150-5.350 GHz	5.470-5.725 GHz	5.725-5.850 GHz
Integrated Antenna 1ft					
Gain	16dBi	NA	22dBi	22dBi	22dBi
Beam Width	20°	9°	9°	9°	9°
Polarization	Linear	Linear	Linear	Linear	Linear
Antenna 2ft					
Gain	24dBi	27dBi	28dBi	28dBi	28dBi
Beam Width	8°	4.5°	4.5°	4.5°	4.5°
Polarization	Linear	Linear	Linear	Linear	Linear

* Higher gain antennas are available as well

Regulation

	2.400-2.4835 GHz	4.940-4.990 GHz	5.150-5.350 GHz	5.470-5.725 GHz	5.725-5.850 GHz
Radio					
FCC: 47CFR	Part 15, Subpart C	Part 90	Part 15, Subpart E		Part 15, Subparts C&B
IC	RSS-210		RSS-210		RSS-210
ETSI	EN 300 328			EN 300 216 V1.2.1	EN 300 440 V1.3.1
Dynamic Frequency Selection and Transmission Power Control (DFS/TPC)	Supported	Supported	Supported	EN 301 893 V1.2.2	Supported
Safety					
TUV	60950, According to UL 60950				
CAN-USA	C22.2 No.60950				
EMC					
FCC	CFR Part15, Subpart B				
CAN-ETSI	EN 301 489-1				
Environmental					
ETSI	IEC 60721-3-4 Class 4M5 IP67				