



# AIRPAIR™ 100-UL

## Unlicensed Wireless Ethernet Bridge

**AirPair 100-UL** delivers high capacity (wire-speed 100 Mbps) broadband wireless point-to-point connections utilizing the now available 24 GHz license-exempt frequency band.

Building on the market proven capability of AirPair 100 Licensed products, the AirPair 100-UL provides near-interference free operation over distances of up to 5 km/3 miles.

AirPair 100-UL is a compact "all-in-one" system, designed for all-outdoor mounting, that includes an advanced RF/antenna assembly, as well as a high spectral efficiency digital modem.

Designed to overcome the uncertainty of service with the congested 2.4 GHz ISM and 5.8 GHz U-NII bands, while offering the benefits of licensed exempt rapid deployment. The AirPair 100-UL is ideally suited to high reliability applications which include:

- › Inter-building LAN Extension
- › Wireless ISP Backhaul
- › Metro Ethernet Access
- › Fiber Path Redundancy
- › Homeland Security
- › Disaster Recovery

## Key Features

- › Transparent TCP/IP link extension
- › Wire-speed 100 Mbps full duplex performance and virtually zero delay for multimedia applications
- › Rapid installation and commissioning using PDA and web-based tools
- › In or out-of-band remote SNMP management
- › Supports 802.1q VLAN encapsulation for payloads and optional management
- › High system gain with direct Cat-5 attachment and integrated antenna
- › Compact, weatherproof all-outdoor packaging requires no indoor space
- › Secure over-the-air encryption and authentication available
- › Up to 4 x T1/E1 wayside channel options
- › License-exempt ETSI & FCC Part 15 frequency band 24.05 - 24.25 GHz; 6 channels available



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### MECHANICAL (ALL OUTDOOR)

Radio (without antenna)	12 cm x 17.1 cm (diameter) 4.75 in x 6.75 in (diameter)
Modem	40 cm x 19.6 cm x 8.1 cm 15.7 in x 7.7 in x 3.2 in
Weight (Radio & Modem)	7.25 Kg (16 lbs)
Mounting	Mast

### ANTENNAS

Type	Parabolic Reflector
Size	30.5 - 90 cm (12-36 in) diameter
Polarization	T/R Cross Polarized
Wind Loading	
Operational	110 kph (70 mph)
Survival	200 kph (125 mph)
Mount Adjustment	
Azimuth	+/- 45°
Elevation	+/- 22°

### PAYLOADS

Capacity	100 & 50 Mbps
Interface	Fast Ethernet
T1/E1 (Optional)	4 x T1/E1 Extension Ports with optional APX-104 T1/E1 Unit with AP-100

### POWER

Input	-36 VDC to -60 VDC
Optional Adapter	110/240 VAC
Consumption	50 Watts

### CONNECTIONS

Power	-48V, Cable Supplied
Payload	MIL Circular (outdoor) RJ45 (indoor)
Craft Terminal	RS 232

### NETWORK MANAGEMENT (NMS)

Alarm Management	SNMP Agent, Settable Criticality
History	Alarm Window in EMS, History file - with polling
NMS Compatibility	OpenView, or any SNMP based network manager
Security	3 Level Authentication; Any, NOC, Unique Peer to Peer
S/W Update	Remote update to flash, via management channel
EMS	Supplied, PC Application, connect locally or through network

### STANDARDS

System	FCC Part 15
EMC	EN 301 489, EN 300 385,
Safety	IEC 950, FEC 60950, CSA 22.2

### INDICATORS

Power
Fault
Network Sync
TX Mute
Modem Sync
Activity (Network)

### ENVIRONMENTAL

Operating Temperature	-40°C to + 55°C (-40°F to +131° F)
Humidity	100 % Condensing
Altitude	4500 m (14,760 ft)

### RF SYSTEM

General	AP-100 24 GHz UL	AP-50 24 GHz UL
Regional Compliance	FCC	FCC
Frequency Range	24.05-24.25	24.05-24.25
T/R	X Polarized	X Polarized
<b>Bandwidth</b>		
RF Channel Bandwidth (MHz)	50	50
RF Power (dBm Max)	3 / -2 / -5 **	3 / -2 / -5 **
Threshold @ 10 <sup>-6</sup> BER	-74	-78
System Gain (no Antenna)	77 / 72 / 69	81 / 76 / 73
Modulation	16 QAM	QPSK
Dispersive Fade Margin	>43 dB	>43 dB
Frequency Stability	<10 PPM	<10 PPM
<b>Antenna Gain</b>		
12" Antenna Gain	36.5 dBi	36.5 dBi
24" Antenna Gain	41.5 dBi	41.5 dBi
36" Antenna Gain	44.5 dBi	44.5 dBi

\*\* For Antenna Sizes of 12", 24" and 36"

Specifications subject to change without notice



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