AIRPAIR™ 50

Broadband Wireless Ethernet Bridge

AirPair 50 provides one of the most affordable broadband wireless connections for synchronous and IP based applications.

The compact system is designed for all-outdoor mounting, and includes an advanced RF/antenna assembly, as well as a high spectral efficiency digital modem.

The AirPair 50 accommodates a variety of international frequency plans and can be configured with a choice of antenna sizes to fit the most demanding of environmental conditions.

Perfectly suited for rapid installation and carrier-grade reliability. AirPair applications include:

- Inter-building LAN Extension
- Wireless ISP Backhaul
- Metro Ethernet Access
- Fiber Path Redundancy

Key Features

- Transparent TCP/IP link extension
- 50 Mbps full-duplex performance and virtually zero delay for multimedia applications
- Rapid installation and commissioning using PDA and PC-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
- Efficient channel bandwidths, from 28 MHz to 56 MHz
- Licensed and license-exempt frequency bands from 18 to 32 GHz

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 - 180 cm (12-72 in) diameter
Polarization	Horizontal or Vertical
Wind Loading	
Operational	110 kph (70 mph)
Survival	200 kph (125 mph)
Mount Adjustment	
Azimuth	+/- 45°
Elevation	+/- 22°

PAYLOADS

Capacity	50 Mbps
Interface	Fast Ethernet

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
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 Part101, ETSI EN 300-431, EN 300-198 Class 4
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	18 GHz	23 GHz	26 GHz	28 GHz	32 GHz
Regional Compliance	FCC/CAN	FCC/CAN/ETSI	ETSI	FCC/CAN	ETSI
Frequency Range	17.7-19.7	21.2-23.6	24.5-26.5	25.35-28.35	31.8-33.4
T/R Spacing (MHz)	1560	1200 / 1008	1008	450	812
Specification	FCC101	FCC101/EN 300-198	EN 300-431	FCC101	EN 300-197
FCC Emission Designator	40M0D1D	50M0D1D		50M0D1D	
Bandwidth					
RF Channel Bandwidth (MHz)	40	28/50/56	28 / 56	50	28 / 56
RF Power (dBm Max)	17	13/ 17	13 / 17	17	13 / 17
Threshold @ 10^{-6} BER	-81	-77 / -81	-77 / -81	-81	-77 / -81
System Gain (no antenna)	98	90/ 98	90 / 98	98	90 / 98
Modulation	QPSK	16 QAM/ QPSK	16 QAM / QPSK	QPSK	16 QAM / QPSK
Dispersive Fade	>43 dB	>43 dB	>43 dB	>43 dB	>43 dB
Frequency Stability	<10 PPM	<10 PPM	<10 PPM	<10 PPM	<10 PPM
Antenna Gain					
12" Antenna Gain	N/A	35.5 dBi	36.3 dBi	36.5 dBi	37.3 dBi
24" Antenna Gain	38.6 dBi	40.7 dBi	41.3 dBi	42.0 dBi	43.2 dBi
36" Antenna Gain	42.0 dBi	44.2 dBi	44.8 dBi	N/A	N/A
48" Antenna Gain	44.5 dBi	46.2 dBi	N/A	N/A	N/A
72" Antenna Gain	47.2 dBi	N/A	N/A	N/A	N/A

Specifications subject to change without notice