AirPair™ 200

High Capacity Wireless Ethernet Bridge

AirPair 200 offers the highest available bandwidth on the market with 200 Mbps full duplex committed data rates. AirPair 200 provides best-in-class, high capacity wireless connections for synchronous and IP-based applications delivering a 1000/100 BaseT user network interface to provide committed full duplex data rates of 200 Mbps.

The AirPair 200 accommodates a variety of international licensed and frequency plans as well as the new 24 GHz unlicensed spectrum, providing near interference-free operation. The 24 GHz AirPair was designed to overcome the uncertainty of service that may be found in some 2.4 GHz ISM and 5.8 GHz U-NII bands, while offering the benefits of license-exempt rapid deployment.

AirPair 200 is a native Ethernet system, optimized for IP traffic. The ultra-low latency (< 0.5 ms) characteristics enable delay sensitive applications such as VoIP and Video over IP.

AirPair 200 supports traditional TDM services through optional APX modules. The APX provides service adaptation of T1/E1 traffic to be transported seamlessly over AirPair's native Ethernet platform, enabling Service Providers a seamless migration to native IP networks, while still supporting legacy TDM services.

Key Features

- GigE/100 auto-sensing metallic interface.
- Wire-speed 200 Mbps full duplex performance CIR (committed information rate).
- 802.3x auto-negotiation.
- Peak rate of 1000 Mbps.
- High performance Ethernet-based architecture.
- Virtually zero delay for multimedia applications (< 0.5 ms).
- 99.999% availability through mesh and ring support.
- Support for < 50 ms mesh/ring protection switching.
- Rapid installation and commissioning using PDA and PC-based tools.
- In-band or out-of-band remote SNMP management, CLI, SSL HTTP, web management.
- T1/E1 support through service adaptation to native Ethernet.
- Licensed frequency bands from 18 to 32 GHz and license-exempt ETSI & FCC 24 GHz band.
- Supports link distances up to 18 Km (11 miles) with licensed bands and up to 4 Km (2.5 miles) with unlicensed spectrum.
- 802.1 and 802.1q support.
- Rack-Mountable Indoor (IDU) or all-outdoor (ODU) options.
- MEF UNI compliant

AirPair 200 provides carrier class performance through support of point-to-point, hub, ring and mesh configurations, enabling network availability of 99.999% as well as extremely low latency.

The compact AirPair system is designed for all-outdoor or split indoor/outdoor mounting and is very simple to install and commission. Plug and play implementation combined with a PDA configuration tool enables rapid deployment with minimal training.

Sagaxis Inc.
155 Champagne Drive, Suite 7, Toronto, Ontario, Canada M3J 2C6
Tel: + 1 (416) 693-7108 Fax: + 1 (416) 385-1610
info@sagaxis.com **www.sagaxis.com**

AirPair 200 High Capacity Wireless Ethernet Bridge

Technical Specifications

Mechanical

Radio (without antenna)	12 cm x 17.1 cm (diameter) 4.75 in x 6.75 in (diameter)
Modem (ODU)	40 cm x 19.6 cm x 8.1 cm 15.7 in x 7.7 in x 3.2 in
Modem (IDU – rack mountable)	4.3 cm x 15.4 cm x 42.5 cm 1.7 in x 6 in x 16.7 in
Radio Weight	3.2 Kg (7 lbs)
Modem Weight (ODU)	5.4 Kg (12 lbs)
Modem Weight (IDU)	4.1 Kg (9 lbs)
Mounting	Mast or Rack

Antennas

Type	Parabolic Reflector
Size	30 - 180 cm (12 - 72") diameter
Polarization (licensed)	Horizontal or Vertical
Polarization (unlicensed)	T/R Cross Polarized
Wind Loading	
Operational	110 Km/h (70 mph)
Survival	200 Km/h (125 mph)
Mount Adjustment	
Azimuth	+/- 45°
Elevation	+/- 22°

Payloads

Capacity	200 Mbps
Interface	1000/100/10 BaseT
T1/E1 (optional)	4 x T1/E1 ports (with APX-104)
Latency	< 400 µs (typical < 200 µs)

Power

Input	-36 VDC to -60 VDC
Optional Adapter	110/240 VAC
Consumption	50 Watts (per link end)

RF System

Dispersive Fade Margin	> 43 dB
Frequency Stability	< 10 PPM

Connections ODU

Power	-48V, Cable Supplied
Payload	MIL Circular (outdoor) RJ45 (indoor)
Craft Terminal	RS 232
IF Cable	N-Type Connector
NMS	MIL Circular (outdoor) RJ45 (indoor)

Connections IDU

Power	Dual 48V
Payload	RJ45 (100BaseT)
Craft Terminal	RS 232
IF Cable	N-Type Connector
NMS	RJ45 (10BaseT)

Network Management

Alarm Management	SNMP Agent, SNMP Traps, Enterprise MIB, Settable
History	Alarm Window in EMS History file - with polling
NMS Compatibility	OpenView, or any SNMP based NMS
Security	3 Level Authentication
S/W Update	Remote update to flash
EMS	Web Based NMS, SSL HTTP

Standards

System	FCC Part 101, FCC Part 15, ETSI EN 301-785 v1.1 Class 4, EN 300-431, EN 300-197, EN 300-440-1 v1.3.1
EMC	EN 301 489, EN 300 385
Safety	IEC 950, FEC 60950, CSA 22.2

Indicators

LEDs (ODU)	Power, Link, Traffic, Interface Type, RF On, ModSync, Fault
LEDs (IDU)	Power, Link, Activity, Interface Type, RF On, ModSync, Fault, Fan Alarm

Environmental

Operating Temperature	-40°C to + 50°C (-40°F to +122° F)
Humidity	100 % Condensing
Altitude	4500 m (14,760 ft)

	18 GHz	18 GHz	23 GHz	23 GHz	24 GHz	24 GHz	24 GHz	26 GHz	28 GHz
Regional Compliance	FCC/IC	ETSI	FCC/IC	ETSI	FCC/IC	ETSI	FCC/IC	ETSI	FCC/IC
Frequency Range	17.7-19.7	17.7-19.7	21.2-23.6	22.0-23.6	24.05-24.25	24.05-24.25	24.25-25.25	24.5- 26.5	25.35-28.35
T/R Separation (MHz)	1560	1010	1200	1008	X Polarized	X Polarized	800	1008	450
Channel Bandwidth (MHz)	40	27.5 / 55	50	28 / 56	50	50	20 / 40	28 / 56	50
Duplex Capacity (Mbps)	160	120 / 200	200	120 / 200	200	200	90 / 160	120 / 200	200
RF Power (dBm Max)	12	10 / 12	11	10 / 12	-2 / -3 / -6	-22/-26/-29	13 /13	10 / 12	11
Threshold @ 10^{-6} BER	-70	-71 / -69	-68	-71 / -68	-67	-68	-71 / -69	-71 / -68	-68
Modulation	64 QAM	64 QAM	64 QAM	64 QAM	64 QAM	64 QAM	64 QAM	64 QAM	64 QAM
Antenna Gain (dBi) / Beamwidth (°)									
12" (30 cm) Antenna	N/A	N/A	35.1 / 2.7	35.1 / 2.7	35.3 / 2.6	35.3 / 2.6	35.7 / 2.6	35.7 / 2.6	36.1 / 2.2
24" (60 cm) Antenna	38.6 / 2.0	38.6 / 2.0	40.2 / 1.7	40.2 / 1.7	40.7 / 1.4	40.7 / 1.4	41.1 / 1.4	41.1 / 1.4	42.5 / 1.3
36" (90 cm) Antenna	42 / 1.3	42 / 1.3	43.7 / 1.1	43.7 / 1.1	44.2 / 1.0	44.2 / 1.0	44.6 / 1.0	44.6 / 1.0	N/A
48" (120 cm) Antenna	44.5 / 1.2	44.5 / 1.2	46.2 / 0.8	46.2 / 0.8	N/A	N/A	N/A	N/A	N/A
72" (180 cm) Antenna	48 / 0.7	48 / 0.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Specifications subject to change without notice.

Sagaxis Inc.

155 Champagne Drive, Suite 7, Toronto, Ontario, Canada M3J 2C6

Tel: + 1 (416) 693-7108 Fax: + 1 (416) 385-1610

info@sagaxis.com **www.sagaxis.com**