*air***Point**
Nexus

# intelligent wireless platform

The airPoint™ Nexus is an intelligent, high performance Multi-band access point used in Near-Line-of-Sight deployments for scalable and robust last mile wireless infrastructure.

Built on the award winning Nexus platform, the Point-to-Multipoint airPoint™ Nexus (sB3210) provides as much as 15 Mbps of data throughput with a range of up to 10 miles (16 km). The airPoint™ Nexus is a value creating access point with its intelligent networking features and carrier class attributes.

Value Creating License free broadband

Why pay for expensive licensed bands to avoid RF congestion? The airPoint™ Nexus utilizes the license free ISM (and UNII) bands in 2.4 GHz or 5.2 - 5.8 GHz frequencies to deliver 23 non-overlapping channels. The Dual N-connectors allow Hi-band (5.x GHz) and Lo Band (2.4 GHz) antennas to be installed together. In the event of RF congestion, the Nexus' software tunable radios can remotely change frequency bands. In addition, the radio employs advanced interference mitigation techniques to provide high availability to clients.

Use of the IEEE 802.11 a/b/g industry standards allows interoperability with third party clients. The multi-band radio provides an easy migration path to upgrade the existing 802.11b based wireless networks and investment protection for the equipment.
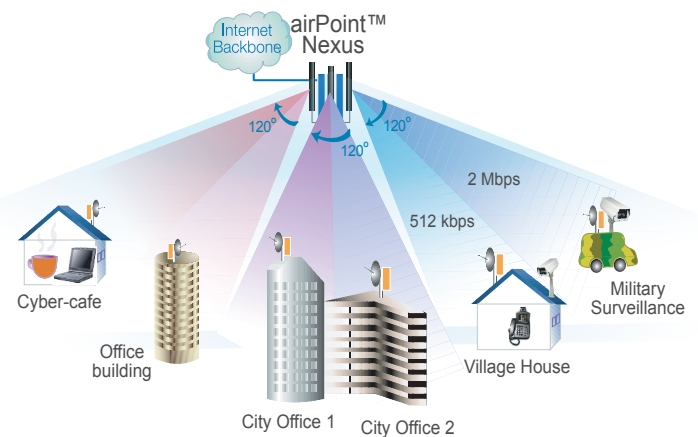
Intelligent Features for Robust and Scalable Networks

The airPoint™ Nexus is an Access Point with the Layer 3 Wide Area Edge Router capabilities for deploying hierarchical networks. Centralized RADIUS access authentication prevents unauthorized use of the infrastructure. The bandwidth management capability coupled with multiple service profiles allows individual time-of-day based upstream/downstream bandwidth allocation for each client.

Carrier Class Attributes

The Spanning Tree Protocol allows installation of redundancy in the network. The WatchGuard feature of the airPoint™ continuously monitors the device and performs an automatic recovery for realizing high availability system. The airPoint™ provides a unified Web and SNMP MIB-II based remote management interface. This allows quick integration of the airPoint™ Nexus with the industry leading EMS solutions.

The purpose built airPoint™ Nexus with electrical overstress protection can withstand harsh outdoor operating environments ranging from -45º C to +60º C (-50º F to 140º F) and very humid or very dry conditions. The rust proof plenum rated metal enclosure with enclosed N-connectors give added protection from environmental conditions.

Quick and Easy Deployment

Deployment of large wireless networks has never been easier. With our easy to use access points and simple to use software, the network can be setup rapidly. Dual powered Ethernet Ports allows for back to back connectivity (daisy chaining) with two other PoE enabled devices. This can be used for setting up a WiPoP or a repeater.

Feature Highlights

- Intelligent multi-band Access Point
- COFDM radio for Near-Line-of-Sight operation
- High transmit radio power and ultra high receive sensitivity for wide area coverage
- Advanced RF interference mitigation and resistance to Multi-path delays
- Based on IEEE 802.11 a/b/g to ensure interoperability with third party client devices
- Ideal migration path for existing 802.11b networks
- Centralized RADIUS based access authentication to prevent unauthorized use of the infrastructure
- Programmable upstream/downstream data throughput setting for individual clients
- Wireless Access Point with integrated Layer 3 wide area edge router functions
- Remote Web and SNMP based Management
- Purpose built for harsh outdoor environments

RADIO PARAMETERS

Radio Frequency Bands	Unlicensed ISM and UNII bands 2.400 - 2.485 GHz, 5.250 - 5.35, 5.47 - 5.725, 5.725 -5.875 GHz
Wireless modulation/ Data Rates	COFDM with BPSK, QPSK, 16 QAM, 64QAM Modulation Data Rates - 54, 48, 36, 24, 18, 12, 11, 9, 6, 5.5, 2 and 1 Mbps
Transmit Power Output (in dBm)	+24 to -4 @ 6 Mbps, +21 to -4 @ 54 Mbps (2.4 GHz) +21 to -4 @ 6 Mbps, +18 to -4 @ 54 Mbps (5.x GHz)
Receive sensitivity (in dBm)	-96 @ 6 Mbps, -73 @ 54 Mbps (2.4 GHz) -93 @ 6 Mbps, -69 @ 54 Mbps (5.x GHz)
RF Interference Mitigation	TPC/DFS (IEEE 802.11d/h), Tight Spectral Mask, Multi-band, Squelch control
RF Channels	23 non-overlapping channels *

OPERATIONAL PARAMETERS

Standards Compliance	IEEE 802.11b, 802.11g, 802.11a and sB Enhanced mode
Recommended Max Link Distance	FCC 5.8 GHz: 10 miles (16 km) using 17 dBi AP Antenna and 23 dBi CPE Antenna FCC 2.4 GHz: 10 miles (16 km) using 14 dBi AP Antenna and 17 dBi CPE Antenna
Operating Modes	Access Point, Wireless Distribution System (WDS)
Data Throughput Turbo Booster	Packet Concatenation, Frame Bursting and compression for high spectrum efficiency
Clients Supported	Up to 128 (Available shared Bandwidth 15 Mbps)
Bandwidth Management	Individual MAC based Bi-directional Bandwidth control for each client
Calendar Function	Time-of-day based service profiles

NETWORK MANAGEMENT AND SECURITY

Data Security	Wi-Fi Protected Access (IEEE 802.11i), 64/128 bit WEP
Access Protection	Built-in MAC Authentication and external RADIUS Authentication
Client Privacy	Block client to client communication for ensuring privacy
VLAN	VLAN Passthrough
External RADIUS Support	Authentication and Bandwidth Control
Fully Transparent Bridge	Spanning Tree Protocol (IEEE 802.1d)
Layer 3 Routing	RIPv2
Network Support	DHCP Server, Relay and Client, NTP Client
Utilities	Link Watchguard, Remote Loopback Test, Link budget calculator, Syslog and SNMP traps
Management Interface	Web and SNMP based management, SNMP v2c (MIB II compliant)

HARDWARE PARAMETERS

CPU/Memory	High performance 400 MHz Intel IXP Network processor, 32MB SDRAM, 32MB FLASH memory
Motherboard	ESD and Electrical overstress protection, Extended temperature range electronics
High Availability System	Self monitoring and auto recovery, Hardened Linux OS

PHYSICAL, ENVIRONMENTAL AND COMPLIANCE PARAMETERS

Network Connection	Dual 10/100BaseT, Auto MDI/MDX, Surge Protected Fast Ethernet ports, Power output on 2nd Ethernet port for Daisy chaining
Antenna Connector	Dual N (Female) Bulkhead Connectors (50 Ohm)
Power Consumption	48V, 150mA (7.2W) with PoE Injector - Lightning protection circuit, Remote reset
Operating Environment	-45°C to +60°C (-50°F to +140°F), 5% to 95% non-condensing humidity, Outdoor rated
Enclosure	Plenum-rated metal enclosure, Wall/Pole mounting brackets
Dimensions and Weight	198 x 62 x 250 mm (7.79" x 2.44" x 9.84"), Approx. 3.3 kg (7.26 lbs)
Certification	USA: FCC 47 CFR Part 15C, Section 15.247 - FCC ID: PWG NEXUS2 Europe: ETSI 301-893, CE Marked, Canada: RSS 139

All channels may not be available in your regulatory domain

For detailed product information, visit **www.smartbridges.com/products/apn.asp**

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