

## intelligent wireless platform

**airClient**  
**Nexus**



The airClient™ Nexus is a high performance Multi-band Customer Premise Equipment (CPE) used in Near-Line-of-Sight conditions for providing service to the enterprise subscribers.

Built on the award winning Nexus platform, the airClient™ Nexus (sB3410) provides as much as 6 Mbps of data throughput with a range of up to 10 miles (16km). The airClient™ is a best value CPE with its intelligent networking features and Enterprise class attributes.

### Investment Protection in License free broadband

The airClient™ Nexus uses the license free ISM (and UNII) bands in 2.4 GHz or 5.2 - 5.8 GHz frequencies, giving 23 non-overlapping channels. In addition, the radio employs advanced interference mitigation techniques to provide high service availability to the subscribers. Use of the IEEE 802.11 a/b/g industry standards allows interoperability with third party access points. The multi-band radio provides an easy migration path to upgrade existing 802.11b based wireless networks and provides investment protection for the equipment.

### Intelligent Features for Enterprise class service

The airClient™ Nexus includes Network Address Translation (NAT) and Router capabilities for isolating the service provider's network. When used with airPoint™ Nexus, the airClient™ can support unlimited MACs as a fully transparent bridge for joining remote network segments. The bandwidth management capability coupled with multiple operating profiles allows individual time-of-day based upstream/downstream bandwidth allocation to the subscriber.

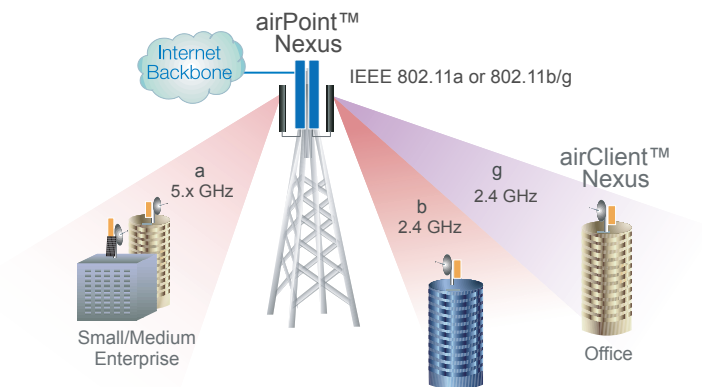
### Enterprise Class Attributes

The WatchGuard feature of the airClient™ continuously monitors the device and radio link. For enhanced reliability, it performs an automatic recovery for ensuring high availability service to the subscriber. In case of malfunction, the airClient™ provides a unified Web and SNMP (MIB II compliant) based remote management interface. This allows quick integration of the airClient™ management with the industry leading EMS solutions.

The purpose built airClient™ Nexus with electrical overstress protection can withstand harsh outdoor operating environments ranging from -45° C to +60° C (-50° F to 140° 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

A technician's time for field installation is expensive. With this in mind, the airClient™ CPE is designed for rapid out-of-the-box installation. The airClient™ Nexus can be integrated with a variety of high performance, narrow beam CPE antennas as per the installation requirements. With easy to use client devices, simple to use software and audio tone antenna alignment aid, the network can be setup rapidly and cost-effectively.



### Feature Highlights

- ◆ □ Enterprise class client device
- ◆ □ COFDM radio for Near-Line-of-Sight operation
- ◆ □ High transmit radio power and ultra high receive sensitivity for LongRange™
- ◆ □ Advanced RF interference mitigation and resistance to Multi-path delays
- ◆ □ Built-in NAT and routing function to isolate Service Provider's network
- ◆ □ Programmable upstream/downstream data.
- ◆ □ Fully transparent bridging for unlimited MAC address
- ◆ □ Secure data communication using 128 bit WEP and Wi-Fi Protected Access (WPA® - IEEE802.11i)
- ◆ □ Remote Web and SNMP based Management
- ◆ □ Purpose built for harsh outdoor environments
- ◆ □ Multiple DNS support with DHCP server and relay

## RADIO PARAMETERS

Radio Frequency Bands	Unlicensed ISM and UNII bands 2.400 - 2.485 GHz, 5.250 - 5.350, 5.470 - 5.725, 5.725 - 5.875 GHz
Wireless Modulation/ Data Rates	COFDM with BPSK, QPSK, 16 QAM, 64QAM Modulation DSSS with CCK, BPSK, QPSK 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)	-91 @ 6 Mbps, -73 @ 54 Mbps (2.4 GHz) -90 @ 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
Typical Useful Throughput	Configurable up to 6 Mbps
Bandwidth Management	Bandwidth Management for upstream/downstream rates
Calendar Function	Time-of-day based service profiles

## NETWORK MANAGEMENT AND SECURITY

Data Security	Wi-Fi Protected Access (WPA® - IEEE 802.11i), 64/128 bit WEP
Fully Transparent Bridge	Unlimited MACs
Layer 3 Routing	RIPv2, NAT
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 266 MHz Intel IXP Network processor, 16MB SDRAM, 16MB 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)
Antenna Alignment Aid	Audio Tone Antenna Alignment aid
Power Consumption	48V, 200mA (9.6W) 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, 15.407 - FCC ID: PWG NEXUS2 Europe: ETSI 301 893, CE Marked Canada: RSS 139

\*All channels may not be available in your regulatory domain  
# Upcoming software upgrade

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