

intelligent wireless backhaul

LongRange™ multi-band COFDM radio operating in license free ISM 2.4 GHz or 5.2 - 5.8 GHz bands (software selectable)

Intelligent Layer 3 networking features for scalable Wireless WAN infrastructure deployment

Advanced QoS, Bandwidth Management, Routing, Protocol Filters and VLAN segmentation capabilities

Packet bursting, packet concatenation and data compression techniques increases the wireless data throughput to unprecedented rates

Strong data security with Wi-Fi Protected Access (IEEE 802.11i) and 128 Bit Advanced Encryption System (AES)

Flexible one and two radio configurations supporting Point-to-Point, Point-to-Multipoint, high throughput Double-Link™ and Repeater modes of operation

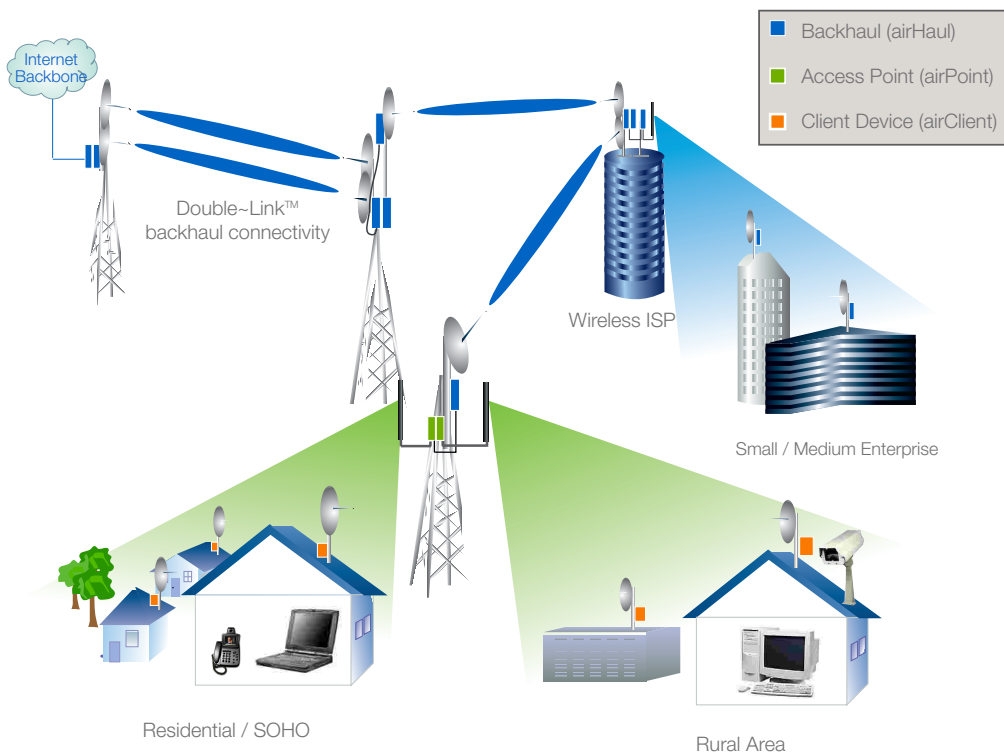
Remote management by SNMP, rapid installation and deployment using PDA and web browser interface



applications and benefits

The possibility of “unwiring our world” and enabling wireless Internet access across entire towns, states or even countries is a significant opportunity for Internet Service Providers (ISPs) as well as incumbent carriers. smartBridges’ intelligent wireless solutions help open up new lucrative market segments.

smartBridges developed the airHaul™ Nexus platform in recognition of the need to provide cost-effective wireless coverage across wide areas. Whether the wireless coverage is at urban or rural areas, small medium enterprises or residential areas, cafés or restaurants, the airHaul™ Nexus provides a new benchmark for intelligent wireless backhaul and enterprise class last mile broadband access.



product highlights

The airHaul™ Nexus is a family of LongRange™ multi band radios used in Near-Line-Of-Sight applications for Point-to-(multi)Point wireless wide area networks. Its unique features will help Service Providers enhance the stability of their existing infrastructure by deploying large and scalable networks



airHaul²
Nexus PRO
[sB3021]

- High data throughput backhaul configuration with two bonded radio channels (Double-Link™)
- Repeater configuration for very long distance backhaul links
- Cell extender configuration for increasing service coverage area
- Standby radio configuration for high reliability link



airHaul
Nexus PRO
[sB3011]

- Point-to-(multi)Point configuration
- Data throughput booster
- Wi-Fi Protected access (802.11i)
- 128 bit Advanced Encryption System (AES)
- Intelligent Layer 3 networking
- QoS by subscriber and application
- Protocol filters
- VLAN segmentation



airHaul
Nexus
[sB3010]

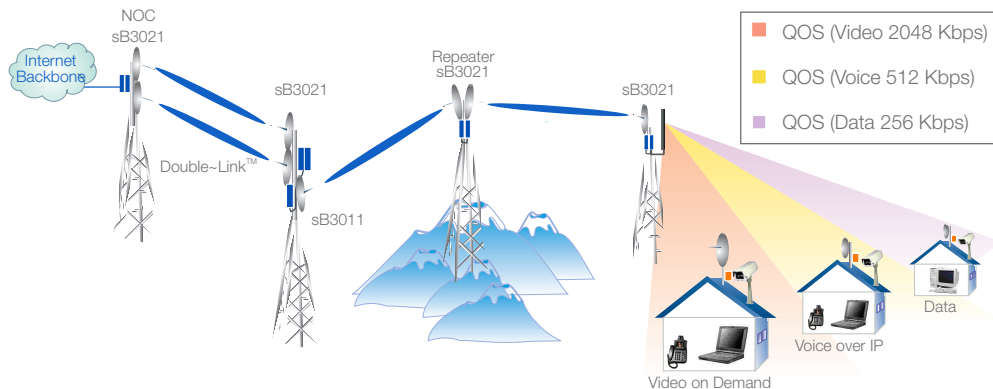
- Point-to-Point configuration
- High transmit power and receive sensitivity
- Bridged or routed network (STP or RIPv2)
- Bandwidth Management
- DHCP server or relay
- Web and SNMP based remote management

application scenarios

The airHaul™ Nexus family of products are versatile and can be used in a wide variety of applications. They can be used in Point-to-(multi)Point modes to provide backhaul connectivity for up to 8 remote nodes. The units can be software configured for Root or Remote modes of operation. In addition, the radio frequency band is software selectable enabling the airHaul Nexus family to be used in various regions.

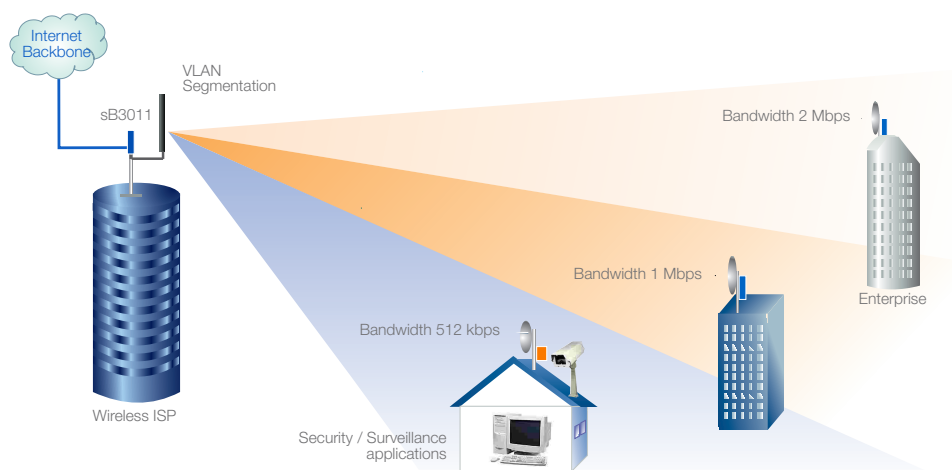
airHaul² Nexus PRO [sB3021] Repeater or Double-Link™ Modes for Long Distances or High Throughput

The airHaul² Nexus PRO's repeater mode is useful for back-to-back operation with another airHaul Nexus unit when performing wireless backhaul applications. This mode covers long distances without incurring throughput loss. The Double-Link™ mode facilitates high data throughput by configuring the radios to work together via data traffic bonding. Quality of Service allows traffic and protocol prioritization for "triple-play" applications: video, voice and data over one broadband connection.



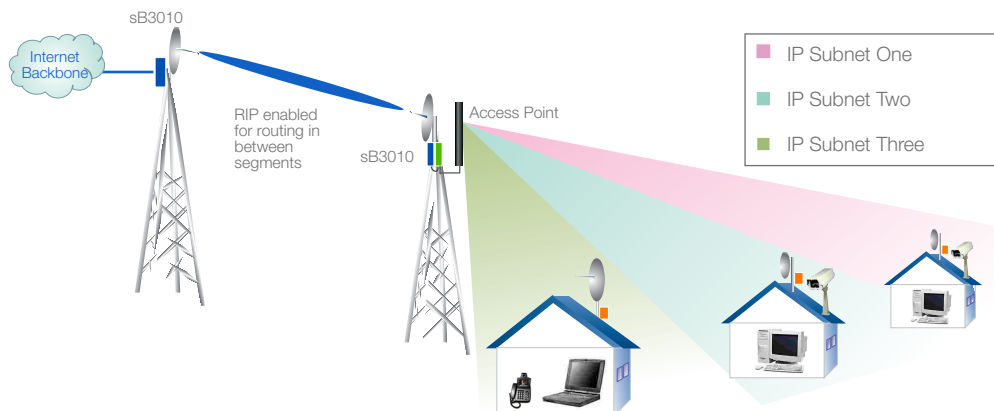
airHaul Nexus PRO [sB3011] Point-to-Multipoint for Bandwidth Management, VLAN and Net Filters

The airHaul Nexus PRO's Point-to-Multipoint operation allows bandwidth management within enterprise, school and hospital campuses. In addition, it manages network traffic data to allow optimal bandwidth allocation, pricing and customer management. The airHaul Nexus PRO's VLAN segmentation can be further employed for traffic isolation. It can also set Mac, IP, Protocol and Port filters.



airHaul Nexus [3010] Point-to-Point for Microcell Extension

The airHaul Nexus offers a cost effective point-to-point solution to provide coverage for suburban and rural areas. Intelligent Layer 3 routing (RIPv2) capabilities help to deploy robust and scalable networks.



contact

E-mail: sales@smartbridges.com

Singapore

smartBridges Pte Ltd
745 Toa Payoh Lorong 5
#04-01 HBM Building
Singapore 319445

USA

smartBridges LLC
1701 Quincy Ave #12A
Naperville, IL 60540
USA

Caribbean and Latin America (CALA)

Ave Rodrigues Alves,
737 Suite 32
Sao Paulo, 04014-012
Brazil

Global Customer Support Centre

Comprehensive technical support is available on our website at www.smartbridges.com/web/support/

Our technical support sections are regularly updated to provide the latest technical information. For 24 x 7, send an e-mail: support@smartbridges.com

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technical specifications

Model Name	airHaul Nexus	airHaul Nexus PRO	airHaul ² Nexus PRO
Model	sB3010	sB3011	sB3021
Number of Radios	One	One	Two
Radio Frequency Bands	Unlicensed ISM and UNII bands 2.400 GHZ - 2.485 GHZ, 5.200 - 5.900 GHZ		
Wireless Modulations	Coded Orthogonal Frequency Division Multiplexing (COFDM) 64-QAM @ up to 54 Mbps		
Transmit power (at the N connector, 25°C)	Adjustable -8.0 dBm to +23.0 dBm		
Receive sensitivity	-93 dBm @ 6 Mbps, -72 dBm @ 54 Mbps		
Bandwidth Management	Link Bandwidth Management for upstream and downstream rates		
Data Throughput Turbo Booster		Packet Concatenation, Packet Bursting and Compression	
Quality of Service (QoS)		Allows prioritization of traffic and protocols (e.g. for VoIP and VoD)	
Access Protection	MAC Authentication	Wi-Fi Protected Access™ - WPA2 (IEEE 802.11i)	
Protocol Filters		Filters control the flow of specific protocols through Ethernet and radio ports	
VLAN		Multiple SSID, VLANs provide the segmentation services by adding IEEE 802.11Q tag awareness to the bridge, VLAN 802.1Q trunking is supported	
Data Security	64/128 bit WEP	128 bit Advanced Encryption System (AES)	
Operating Modes	Point-to-Point Links	Point-to-(multi)Point links (Up to 8 remote nodes)	
Fully Transparent Bridge	With Spanning Tree Protocol (STP) - a Layer 2 link management protocol that provides path redundancy while preventing loops in the network (IEEE 802.1D)		
Layer 3 Routing	RIPv2	RIPv2, OSPF	
Network Support Utilities	DHCP Server, Relay and Client. NTP Client		
Management, Monitoring and Diagnostics	Unified Web GUI and SNMP based management. SNMP v2c, MIB II, Bridge MIB, RIPv2 MIB, Remote Link Test, Syslog and SNMP traps to a list of IP numbers		
Calendar Function	Pre-schedule device activities (e.g. for time-of-day based device profiling)		
CPU/Memory	High performance 266 MHz Intel IXP network processor, 16MB SDRAM, 16MB FLASH memory	High performance 400 MHz Intel IXP network processor, 32MB SDRAM, 32MB FLASH memory	High performance 533 MHz Intel IXP network processor, 64MB SDRAM, 64MB FLASH memory
Motherboard	ESD and electrical overstress protection on all I/O ports, Extended temperature range electronics, Temp. sensor, Multiple watchdog timers to ensure high availability, Compressed journaling file system, RAM disk, Fail safe network boot-loader, System configuration database with factory default settings.		
Network Connection	Dual 10/100 BaseT, Auto MDX, RJ45 Fast Ethernet ports with built-in surge protection		
Antenna	Audio tone antenna alignment aid For smartBridges Certified Antenna, visit http://www.smartbridges.com/web/products/antenna.asp		
Power Supply	Power over Ethernet for the radio unit, Power output on 2nd Ethernet port for seamlessly daisy chaining additional devices		
Power Consumption	48V, 150mA (7.2W)	48V, 150mA (7.2W)	48V, 200 mA (9.6W)
PoE Injector (sB2840)	Includes lightning and overstress protection circuit, Remote reset and factory default of radio, Wall mountable unit, Grounding cable, 48V-30W power brick (Indoor rated) For details visit, http://www.smartbridges.com/web/products/poeinexus.asp		
Operating System	Open Source Linux		
Operating Temperature	-40°C to +60°C (-40°F to +150°F), Plenum-rated metal enclosure		

For detailed product information visit

www.smartbridges.com/web/products/ah.asp



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contact

E-mail: sales@smartbridges.com

Singapore

smartBridges Pte Ltd
745 Toa Payoh Lorong 5
#04-01 HBM Building
Singapore 319445

USA

smartBridges LLC
1701 Quincy Ave #12A
Naperville, IL 60540
USA

Caribbean and Latin America (CALA)

Ave Rodrigues Alves,
737 Suite 32
Sao Paulo, 04014-012
Brazil

Global Customer Support Centre

Comprehensive technical support is available on our website at www.smartbridges.com/web/support/

Our technical support sections are regularly updated to provide the latest technical information. For 24 x 7, send an e-mail: support@smartbridges.com

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