

SPEEDLAN 8000 Series

8300/8400 Standard, Shelf-mount 11 Mb Wireless Ethernet Bridges

SPEEDLAN 8000 series products are high-performance 11 Mb wireless broadband solutions tailored to fit the needs of Internet Service Providers and broadband telecommunications providers.

Service Providers utilize these products as alternatives to offering leased lines for subscriber access to Internet service. SPEEDLAN 8000 products offer a complete wireless connectivity solution with a choice of turnkey wireless bridges or single device adapters.

SPEEDLAN 8000 products go where cable cannot go, expanding the subscriber base without dependence upon the telephone company infrastructure and can be installed immediately without waiting for telephone company installation. As a provider's network grows, connections may be expanded incrementally to create entire wireless metropolitan area networks.

SPEEDLAN 8000 series products present an unparalleled level of performance and features, including Network Address Translation (NAT), Dynamic Host Control Protocol (DHCP) Server, and fully configurable bandwidth.

Network Address Translation (NAT) helps increase network security and allows the occupants of an entire building to share a single global IP address for communication with the Internet. Using NAT at each remote location, a service provider can supply the building with just one global IP address regardless of the number of users at that location.

Dynamic Host Configuration Protocol (DHCP) Server provides efficient use of IP addresses by allowing their assignment to be made dynamically. By localizing the DHCP transactions within each remote building, this administrative traffic is kept off of the wireless segment and reduces the load on the entire wireless network.

Bandwidth configuration options are used to limit the traffic burst rate for each remote location to any increment of 1 Kb. Service providers can now gain a better level of control over their wireless network, increase customer satisfaction, and increase revenue generation for each broadband cell.

The 8000 series includes the standard, shelf-mounted **SPEEDLAN 8300/8400**. The 8300 acts as a central base station and the 8400 acts as Customer Premise Equipment (CPE). The 8300 and 8400 are mounted inside the building and connect to the outdoor antenna using up to 200' of low loss RF antenna cable.

SPEEDLAN 8300/8400 Features

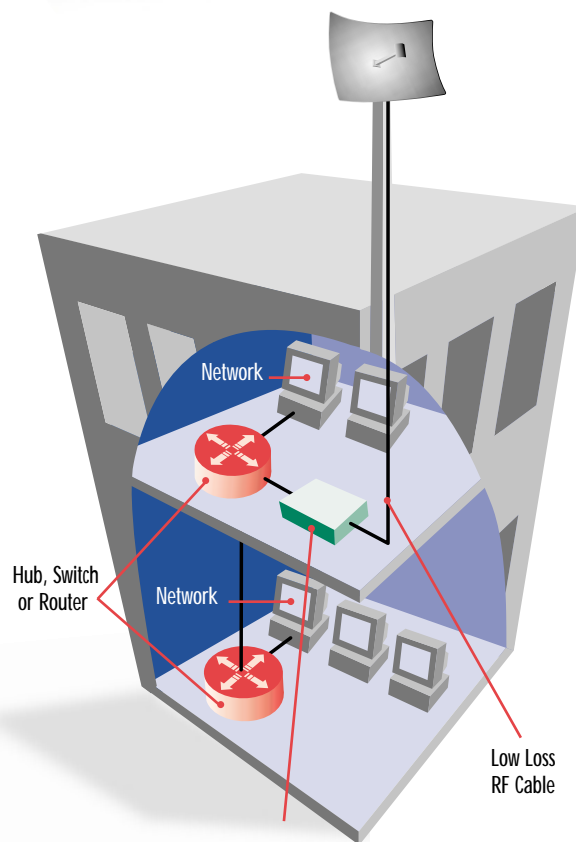
- 11 Mb radio
- SNMP remote monitor and configuration
- Advanced packet and protocol filtering
- Wireless data encryption
- 2.4 GHz
- No software to install on network or workstations
- Secure transmissions
- Includes IP routing
- One year warranty

SPEEDLAN 8300/8400 Advanced Features

- Polling base station
 - supports up to 48 CPE units
- DHCP server
- NAT
- Bandwidth allocation
 - configurable bandwidth from 1Kb to 11 Mb for each remote building

SPEEDLAN 8300/8400 Benefits

- Cost effective
- License-free
- Re-deployable
- Distances to 25 miles
- Rapid implementation
- Plug and play
- Highly secure



SPEEDLAN 8300/8400



SPEEDLAN 8300/8400

TECHNICAL SPECIFICATIONS



Radio	
Type	Direct Sequence Spread Spectrum (DSSS)
Frequency	2400MHz – 2483.5MHz (ISM band)
Channels	11
Modulation	CCK at 11 Mb
Processing Gain	11dB (Nominal)
Communication Method	Half-duplex
Transmit Power	15 dBm (typical)
Receiver Sensitivity	Max -93dBm
Wired LAN Interface	
Compliance	IEEE 802.3, 802.2 Ethernet
Physical Interface	10/100 Base-T
Network Operating Systems Supported	All
Network Protocols Supported	All
Ethernet Interface	10/100 Mb Ethernet
Network Addressing	MAC address of Ethernet interface
Protocols	IEEE 802.3 Ethernet RFC compliant IP Routing
Wireless LAN Interface	
Standard Wireless Interface	Single 11 Mb interface
RF Physical Interface	Reverse TNC bulkhead RF connector
Bit Error Rate	Better than 10 ⁻⁵
RF MAC Protocol	Campus PRC
Configuration and Management	
Upgradeability	Firmware is upgradeable via in-band management
Configuration and Monitoring	In band via SNMP to any unit
SNMP	Supported: MIB_II, Bridge MIB
Mechanical	
Cover	Metal chassis; desktop or rack-mount
Dimensions (H x W x D)	11.2" x 8.6" x 2" (28.4 cm x 21.8 cm x 5 cm)
Weight	Approximately 5.6 Lbs. (2.54 kg)
LED Indicators	Power Wired Network Activity (Tx) (Rx) Wireless Network Activity (Tx) (Rx) Throughput indicator-% of wireless bandwidth in use
Environmental	
Temperature Range	0° C to +60° C (Storage) 0° C to +40° C (Operation)
Humidity (Non-Condensing)	10% to 90%
General	
Power Supply	150 W, 110 VAC/230 VAC
Range	Up to 25 miles (with amplifier)*
Regulatory	FCC Part 15, ETSI, CE
Warranty	1 year depot warranty, extended warranty available
Options	
*Remote Amplifier	Adds up to 1/2 watt for increased signal range
Wireless Encryption	USA and Canada Only

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Bridge and IP Router Functionality

SPEEDLAN comes from the factory as a transparent, MAC layer, self-learning wireless bridge with customer configurable IP routing capability that will connect two or more Ethernet LANs. The bridge/router may pass all protocols including IP, IPX, Appletalk, etc.

Campus PRC

SPEEDLAN products are designed specifically to handle the rigors of the outdoor market. Wave's Campus PRC protocol solves the problem of hidden transmitters and packet retransmissions not addressed by 802.11b compliant indoor wireless products. Using this protocol, up to 6 base stations can be co-located providing a 66 Mb multipoint access solution.

WIN 95/98/NT SNMP Monitor and Configurator

Network managers may see and manage their wireless connections remotely from a single graphical interface. Statistics of wireless packets transmitted and received from each location can be viewed, as well as the Ethernet interface to the network. Tools include antenna alignment utilities, remote configuration, management and reboot capability, equipment temperature and other metrics. In addition, SPEEDLAN may be monitored through SNMP MIB_II and Bridge MIB.

8000 Series FEATURES CHART

	8100	8200	8300	8400
Standard, shelf-mount			•	•
Outdoor, remote-mount	•	•		
Polling Base Station	•		•	
Multipoint CPE		•		•
Point-to-point		•		•
IP Routing	•	•	•	•
SNMP Management	•	•	•	•
MAC Filtering	•	•	•	•
Protocol Filtering	•	•	•	•
Bandwidth Allocation	•	•	•	•
NAT	•	•	•	•
DHCP Server	•	•	•	•



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