

WaveBolt™ Access Point

The WaveBolt™ access point is the ISP end of the WaveBolt Wireless Internet access system from CIRRONET™. Used with the WaveBolt Subscriber Unit (SU), the WaveBolt access point completes the high speed, license-free WaveBolt wireless Internet access system. The WaveBolt access point provides the link from the ISP equipment to the end user WaveBolt SU. The WaveBolt system dynamically allocates bandwidth and provides Internet access at rates up to 921Kbps. The WaveBolt access point is a scalable, co-locatable building block for ISP wireless PoPs. The WaveBolt access point allows the ISP to tailor the system to provide a range of performance levels as well as support different numbers of users in different locations.

The WaveBolt access point is made up of a standard 19 inch 3U high rack-mount access point controller that contains one or more access point cards, one or more access point radios and the associated antennas. The access point controller is installed in an indoor location, such as an equipment shed at the base of a tower. The access point radios are mounted outdoors up to 500 feet from the access point controller and connect to the antennas through short RF cables. The communication between the access point cards and the access point radios is through high speed digital signals avoiding the high cost and power loss of long RF cable runs.

Each WaveBolt access point card can support up to 4 radios to support 240 active SUs within a typical 2-5 mile line-of-sight range. Up to 6 WaveBolt access point cards can be installed in a single access point controller. The WaveBolt access point controller has a built-in hub that allows connection of multiple access point cards to a single 10/100BaseT connection. Up to 16 radios can be co-located to provide access to 960 subscribers per PoP. All in a system where the total cost of access points and SUs to ISPs is a few hundred dollars per subscriber instead of a few thousand dollars per subscriber.

Since the WaveBolt system is based on frequency hopping technology, radios located near each other do not interfere with each other. Frequency hopping technology also provides immunity from other potential jamming sources as well as security from eavesdropping.



The WaveBolt access point controller connects to ISP equipment through a standard 10/100BaseT connection. Communication with end users is through CIRRONET's proven license-free, frequency-hopping, spread spectrum technology. The WaveBolt access point card accepts PPP sessions from the WaveBolt SUs allowing the end users to use the Windows® dial-up networking utility to provide communication with the access point. The WaveBolt access point card provides the ability to deny service to specific remotes and also supports RADIUS servers.

FEATURES:

- License-free frequency-hopping spread spectrum technology
- 100BaseT Ethernet connection
- Supports up to 960 subscribers
- 2 to 5 mile typical range
- Modular design
- Supports industry standard AAA and management software

BENEFITS:

- Easy to install, interference resistant wireless system
- Connects directly to existing ISP equipment
- Cost effective wireless Internet connectivity
- Provides reliable, trouble-free operation
- System can be scaled to desired size
- Easy maintenance of system using standard software tools



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ACCESS POINT CONTROLLER

Mechanical	19 Inch Rack-mount Card Cage 3U High
Voltage	34-75VDC
Power Consumption - Max	100 Watts
Access Point Card Slots	6

Indicators

DC Power	
Hub Power	
Ethernet Link	
Ethernet Alert	
Ethernet Collision	

Connectors

Power	2 Position Terminal Block
Network	10/100BaseT RJ-45
Diagnostic	10/100BaseT RJ-45

ACCESS POINT CARD

Processor	PowerPC
Memory	32MB SDRAM
Radios Supported	4
Simultaneous PPP sessions	240

Indicators

Ethernet Transmit Data	
Ethernet Receive Data	
Ethernet Link	
Transceiver OK	
Power	

Connector

Radio	DB-15
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ACCESS POINT RADIO

RF Frequency	2400 to 2483 MHz
Radio Certification	Certified under FCC 15.247 and ETSI 300.328 rules, license-free
Typical Range	2 - 5 miles line-of-sight
Radio Network Topology	Star Network
Radio Network Protocol	Dynamically assigned TDMA with ARQ
I/O Interface	USB 1.0
I/O Data Rate	921Kbps
Over-the-air Data Rate	1.22Mbps
# of Frequency Channels	43
RF Bandwidth	1.7MHz
Transmit Power Output	+10 dBm or +20 dBm before antenna gain, software selectable
Receiver Sensitivity	-90 dBm
Supply Voltage	3.3V
Power Consumption	750mW peak
Size	130mm x 82mm x 36mm
Weight	250g
Case Material	UV Stabilized Polycarbonate, IP 66, NEMA 4X rated
Operating Temperature	-30°C to +70°C
Humidity	20% to 90% non-condensing

Connectors

RF	TNC Female
Data	18-Pin Weatherproof

