Cisco Aironet 340 Series Ethernet Bridges—Building-to-Building Wireless Solutions

THE CISCO AIRONET WIRELESS BRIDGE SERIES PRODUCTS PROVIDE HIGH-SPEED, LONG-RANGE WIRELESS CONNECTIONS BETWEEN ETHERNET NETWORKS.

Designed to connect two or more networks (typically located in different buildings), Cisco Aironet wireless bridges[1] deliver high data rates and superior throughput for data-intensive, line-of-sight applications. The high-speed links between Cisco Aironet wireless bridges deliver throughput faster than E1/T1 lines for a fraction of the cost—eliminating the need for expensive and difficult-to-install leased lines or fiber-optic cable. The initial hardware investment can be quickly paid for with the money saved on leased-line service. Wireless bridges connect discrete sites into a single LAN, even when they're separated by obstacles such as freeways, railroads, and bodies of water that are practically insurmountable for copper and fiber-optic cable.

Cisco Aironet 340 Series Direct Sequence Ethernet Bridge

- Offers up to 25-mile range[2]
- Offers up to 11 Mbps data rate
- Links buildings into a single LAN
- Requires no license

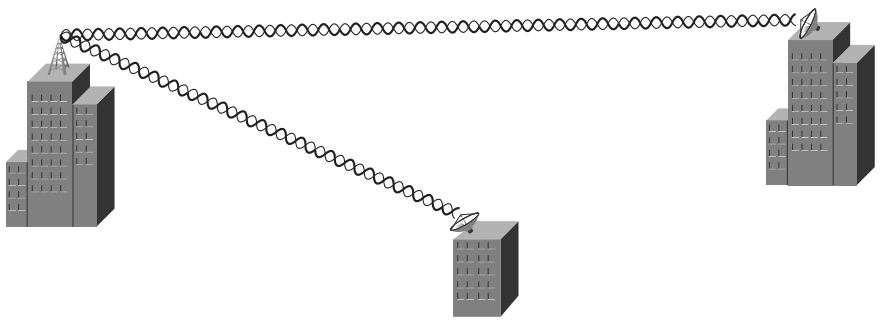
Cisco Systems, with proven reliability and robust product design, provides a dependable, high-performance solution for IS professionals. Remote bridges connect hard-to-wire sites, noncontiguous floors, satellite offices, school or corporate campus settings, temporary networks, and warehouses. Aironet wireless bridges also allow multiple sites to share a single, high-speed connection to the Internet. Understanding the security requirements of both small business and the enterprise, Cisco provides up to 128-bit Wired Equivalent Privacy (WEP). WEP's integrated with standard authentication features providing a level of data security equal to traditional wired networks.

Aironet wireless bridges are flexible, supporting high data rates over medium and short ranges or lower data rates for long-range support. Easy to install and configure, the bridges are compact and unobtrusive and can be redeployed quickly as network requirements or company locations change. Designed with the Cisco award-winning direct sequence spread spectrum (DSSS)[3] radio frequency technology, Aironet bridges are not affected by bad weather and require no FCC (or applicable agency) license. Configuration and management options include direct console or remote configuration via Telnet, File Transfer Protocol (FTP), Simple Network Management Protocol (SNMP) or browser graphical user interface (GUI). An enhanced Management Information Base (MIB) allows network managers to choose from a variety of SNMP-compliant network management packages. The Cisco Aironet 340 series bridge also supports configuration and management via generally available scripting tools. Other features include support for 802.1 Spanning-Tree protocol and advanced diagnostics to simplify troubleshooting.

1. A device used to connect LANs by forwarding packets across connections at the Media Access Control (MAC) layer.

2. A linear measure of the distance that a transmitter can send a signal.
3. A type of spread spectrum radio transmission that spreads its signal continuously over a wide frequency band.

Figure 1 Wireless bridges connect networks in buildings located miles apart into a single LAN.



Compare Cisco Aironet Wireless Bridges to Other Alternatives

Direct Cable Connection (copper, fiber)

- Physical barriers can deter installation
- High installation costs
- Inflexible

Telephone Lines (56K, T1)

- Monthly service fees
- Installation costs
- Extra equipment needed

Microwave

- Licensing required
- Difficult installation
- High cost

Table 1: Cisco Aironet Wireless Bridge Specifications

Data Rates Supported	1, 2, 5.5, and 11 Mbps
Range* (typical)	Up to 18 miles (30 km) at 11 Mbps
Frequency Band	2400–2483.5 MHz
Wireless Medium	DSSS
Media Access Protocol	CSMA/CA[1]
Network Protocols Supported	IEEE 802.3 and Ethernet blue book
Modulation	DBPSK[2] @ 1 Mbps DQPSK @ 2 Mbps CCK[3] @ 5.5 and 11 Mbps
Operating Channels	11 channels (U.S., Canada, and Japan) 13 channels (ETSI)
Simultaneous Channels	Three

Table 1: Cisco Aironet Wireless Bridge Specifications (Continued)

Antenna Connection	Reverse polarity TNC (RP-TNC)[4]
Security	System ID required, up to 32 ASCII characters AIR-BR340: No WEP (100 mW) AIR-BR342: 128-bit WEP (100 mW) AIR-BRI340: No WEP (50 mW) AIR-BRI341: 40-bit WEP (50 mW)
Configuration Security	Password protected
Processing Gain	10.4 dB nominal
Network Connection Types	10Base2, 10Base5, 10BaseT
Wired LAN Filtering	Intelligent packet filtering by network address, protocol, or packet content
SNMP Compliance	MIB I, MIB II
Bridging Protocol	IEEE 802.1d spanning-tree support
Wireless Bridges per LAN	Unlimited
Maximum Users per Bridge	2048 (wireless)
Local Configuration	System console port (Serial EIA-232-E, DB-9 female)
Remote Configuration	Any wired or wireless LAN station via Telnet, FTP, SNMP, or HTML via Web browser
Automatic Configuration	BOOTP or DHCP
LED Indicators	System status, wired network activity, wireless network activity
Output Power	+36 dBm EIRP (FCC compliant)
Transmit Power	AIR-BR340: 100 mW AIR-BR342: 100 mW AIR-BRI340: 50 mW, 5 mW, 1 mW AIR-BRI341: 50 mW, 5 mW, 1 mW
Warranty	One year

Table 1: Cisco Aironet Wireless Bridge Specifications (Continued)

Power Supply	Standard Power Pack: 120 VAC, 50/60 Hz to 18 VDC @ 1A or 12 VDC @1.5A
Power Supply Certification	Universal Power Pack: 90–264 VAC, 50/60 Hz to 12 VDC @ 1.5A or 18 VDC @ 1A UL, CSA, TUV
Certifications	Meets FCC Part 15 subpart B, Class B; FCC Part 15.247; UL,RSS-139-1, CSA, AS/NZS3548, VCCI; Call for other information on use outside the USA
Temperature	–4 to +122 F (–20 to +50 C)
Dimensions	7.8 x 5.9 x 1.9 in. (20 x 15 x 5 cm)
Weight	1 lb 8 oz. (0.7 kg)

1. Carrier Sense Multiple Access with Collision Avoidance
2. Differential Binary Phase Shift Keying
3. Complementary Code Keying
4. Connector types unique to Aironet radios and antennas. Part 15.203 of the FCC rules covering spread-spectrum devices limits the types of antennas that may be used with transmission equipment. In compliance with this rule, Cisco, like all other wireless LAN providers, equips its radios and antennas with unique connectors to prevent attachment of nonapproved antennas to radios.

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