Cisco Aironet 700 Series Access Point

Performance with Investment Protection
- Six times faster than 802.11a/g networks
- Dual-radio, simultaneous 2.4GHz and 5GHz support
- Backward-compatible with 802.11a/b/g clients

Easy Installation and Power Efficient
- 802.11n performance with existing Power-over-Ethernet (PoE) switches
- Sleek design blends into a variety of indoor environments
- UL 2043 plenum-rated for above-ceiling installation options or suspended from drop ceilings

Secure Interoperability
- 802.11n compliant

Simplified Network Management
- Controller-based deployment options
- Stand-alone options

Secure Connections
- Supports rogue access point detection and denial of service attacks

Greater Network Capacity
- Dynamic frequency selection 2 (DFS-2) compliant

Easy-to-Install, Multipurpose Mounting Bracket
- Small, compact form factor designed for a variety of mounting options for easy installations for indoor deployments
- Lock options for theft protection

The Cisco® Aironet® 700 Series offers a compact access point for value-minded customers looking to modernize their networks to handle today's increasingly complex wireless access demands.

With 802.11n dual-radio 2 x 2 multiple-input multiple-output (MIMO) technology providing at least six times the throughput of existing 802.11a/g networks, the Cisco Aironet 700 Series offers the performance advantage of 802.11n quality at a competitive price.

As part of the Cisco Unified Wireless Network, the 700 Series Access Point provides low total cost of ownership and investment protection by integrating seamlessly with the existing network.

RF Excellence

Building on the Cisco Aironet heritage of RF excellence, the 700 Series Access Point delivers secure and reliable wireless connections with:

- Simultaneous dual band, dual radio with support for 2.4GHz and 5GHz
- Optimized antenna and radio designs: Consistent network transmit and receive for optimized rate versus range
- Radio resource management (RRM): Automated self-healing optimizes the unpredictability of RF to reduce dead spots and help ensure high-availability client connections
- Cisco BandSelect improves 5-GHz client connections in mixed-client environments
- Advanced security features including Rogue Detection, wIPS and Context-Aware

Scalability

The Cisco Aironet 700 Series is a component of the Cisco Unified Wireless Network, which can provide full Layer 3 mobility across central or remote locations on the enterprise campus, in branch offices, and at remote sites. The Cisco Unified Wireless Network is the industry's most flexible, resilient, and scalable architecture delivering secure access to mobility services and applications, and offering the lowest total cost of ownership and investment protection by integrating seamlessly with the existing wired network.

Cisco Network Assistant

For quick and easy setup of your access points, Cisco Network Assistant provides a centralized network view with a user-friendly GUI that simplifies configuration, management and troubleshooting. Using Cisco Network Assistant you can easily discover and initialize your network of stand-alone access points.

Cisco Network Assistant is available free, and can be downloaded here: http://www.cisco.com/go/cna.

Product Specifications

Table 1 lists the product specifications for Cisco Aironet 700 Series Access Points.

Table 1. Product Specifications for Cisco Aironet 700 Series Access Points

Item	Specification
Part Numbers	**The Cisco Aironet 700 Access Point: Indoor environments, with internal antennas** • AIR-CAP702I-x-K9 - Dual-band controller-based 802.11a/g/n • AIR-CAP702I-xK910 - Eco-pack (dual-band controller-based 802.11a/g/n) 10 quantity access points • AIR-SAP702I-x-K9 - Dual-band stand-alone 802.11a/g/n • AIR-SAP702I-xK9-5 - Multi-unit pack (dual-band stand-alone 802.11a/g/n) 5 quantity access points **Cisco SMARTnet® Service for the Cisco Aironet 700 Series Access Point with internal antennas** • CON-SNT-AIRCAP7x - SMARTnet 8x5xNBD 702i access point (dual-band 802.11 a/g/n) controller-based (e.g. CON-SNT-AIRCAP7A for controller-based 702i internal antenna for A Domain) **Cisco Wireless LAN Services** • AS-WLAN-CNSLT - Cisco Wireless LAN Network Planning and Design Service • AS-WLAN-CNSLT - Cisco Wireless LAN 802.11n Migration Service • AS-WLAN-CNSLT - Cisco Wireless LAN Performance and Security Assessment Service **Regulatory domains: (x = regulatory domain)** Customers are responsible for verifying approval for use in their individual countries. To verify approval and to identify the regulatory domain that corresponds to a particular country, please visit: http://www.cisco.com/go/aironet/compliance. Not all regulatory domains have been approved. As they are approved, the part numbers will be available on the Global Price List.
Software	• Cisco Unified Wireless Network Software Release 7.5 or later (controller-based) • Cisco IOS® Software (stand-alone)
Deployment Modes	• Controller-based, FlexConnect, Monitor, Converged Access and Autonomous
802.11n	• 2 x 2 multiple-input multiple-output (MIMO) with two spatial streams • Maximal ratio combining (MRC) • 20- and 40-MHz channels • PHY data rates up to 300 Mbps • Packet aggregation: A-MPDU (Tx/Rx), A-MSDU (/Rx) • 802.11 dynamic frequency selection (DFS) • Cyclic shift diversity (CSD) support

<table>
<tr><th>Item</th><th>Specification</th></tr>
<tr><td>Data Rates Supported</td><td>
802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps
802.11bg: 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, 54 Mbps
802.11n data rates (2.4 GHz[1] and 5 GHz):
<table>
<tr><th rowspan="2">MCS Index[2]</th><th colspan="2">GI[3] = 800ns</th><th colspan="2">GI = 400ns</th></tr>
<tr><th>20-MHz Rate (Mbps)</th><th>40-MHz Rate (Mbps)</th><th>20-MHz Rate (Mbps)</th><th>40-MHz Rate (Mbps)</th></tr>
<tr><td>0</td><td>6.5</td><td>13.5</td><td>7.2</td><td>15</td></tr>
<tr><td>1</td><td>13</td><td>27</td><td>14.4</td><td>30</td></tr>
<tr><td>2</td><td>19.5</td><td>40.5</td><td>21.7</td><td>45</td></tr>
<tr><td>3</td><td>26</td><td>54</td><td>28.9</td><td>60</td></tr>
<tr><td>4</td><td>39</td><td>81</td><td>43.3</td><td>90</td></tr>
<tr><td>5</td><td>52</td><td>108</td><td>57.8</td><td>120</td></tr>
<tr><td>6</td><td>58.5</td><td>121.5</td><td>65</td><td>135</td></tr>
<tr><td>7</td><td>65</td><td>135</td><td>72.2</td><td>150</td></tr>
<tr><td>8</td><td>13</td><td>27</td><td>14.4</td><td>30</td></tr>
<tr><td>9</td><td>26</td><td>54</td><td>28.9</td><td>60</td></tr>
<tr><td>10</td><td>39</td><td>81</td><td>43.3</td><td>90</td></tr>
<tr><td>11</td><td>52</td><td>108</td><td>57.8</td><td>120</td></tr>
<tr><td>12</td><td>78</td><td>162</td><td>86.7</td><td>180</td></tr>
<tr><td>13</td><td>104</td><td>216</td><td>115.6</td><td>240</td></tr>
<tr><td>14</td><td>117</td><td>243</td><td>130</td><td>270</td></tr>
<tr><td>15</td><td>130</td><td>270</td><td>144.4</td><td>300</td></tr>
</table>
</td></tr>
<tr><td>Frequency Band and 20-MHz Operating Channels</td><td>
A Regulator Domain:

2.412 to 2.462 GHz; 11 channels
5.180 to 5.320 GHz; 8 channels
5.500 to 5.700 GHz, 8 channels (excludes 5.600 to 5.640 GHz)
5.745 to 5.825 GHz; 5 channels

C Regulatory Domain:

2.412 to 2.472 GHz; 13 channels
5.745 to 5.825 GHz; 5 channels

E Regulatory Domain:

2.412 to 2.472 GHz; 13 channels
5.180 to 5.320 GHz; 8 channels
5.500 to 5.700 GHz; 8 channels (excludes 5.600 to 5.640 GHz)

F Regulatory Domain:

2.412 to 2.472 GHz; 13 channels
5.745 to 5.805 GHz; 4 channels

H Regulatory Domain:

2.412 to 2.472 GHz; 13 channels
5180 to 5320, 8 channels
5.745 to 5.825 GHz; 5 channels

I Regulatory Domain:

2.412 to 2.472 GHz, 13 channels
5.180 to 5.320 GHz; 8 channels

N Regulatory Domain:

2.412 to 2.462 GHz; 11 channels
5.180 to 5.320 GHz; 8 channels
5.745 to 5.825 GHz; 5 channels

Q Regulatory Domain:

2.412 to 2.472 GHz; 13 channels
5.180 to 5.320 GHz; 8 channels
5.500 to 5.700 GHz, 11 channels

R Regulatory Domain:

2.412 to 2.472 GHz; 13 channels
5.180 to 5.320 GHz; 8 channels
5.660 to 5.805 GHz; 7 channels

S Regulatory Domain:

2.412 to 2.472 GHz; 13 channels
5.180 to 5.320 GHz; 8 channels
5.500 to 5.700 GHz; 11 channels
5.745 to 5.825 GHz; 5 channels

T Regulatory Domain:

2.412 to 2.462 GHz; 11 channels
5.280 to 5.320 GHz; 3 channels
5.500 to 5.700 GHz, 8 channels (excludes 5.600 to 5.640 GHz)
5.745 to 5.825 GHz; 5 channels

</td></tr>
</table>

[1] 2.4 GHz does not support 40 MHz.

[2] MCS Index: The Modulation and Coding Scheme (MCS) index determines the number of spatial streams, the modulation, the coding rate, and data rate values.

[3] GI: A Guard Interval (GI) between symbols helps receivers overcome the effects of multipath delays.

Item	Specification		
	K Regulatory Domain: • 2.412 to 2.472 GHz; 13 channels • 5.180 to 5.320 GHz; 8 channels • 5.500 to 5.620 GHz; 7 channels • 5.745 to 5.805 GHz; 4 channels	**Z Regulatory Domain:** • 2.412 to 2.462 GHz; 11 channels • 5.180 to 5.320 GHz; 8 channels • 5.500 to 5.700 GHz, 8 channels (excludes 5.600 to 5.640 GHz) • 5.745 to 5.825 GHz; 5 channels	
Note: This varies by regulatory domain. Refer to the product documentation for specific details for each regulatory domain.			
Maximum Number of Nonoverlapping Channels	**2.4 GHz** • 802.11b/g: ◦ 20 MHz: 3 • 802.11n: ◦ 20 MHz: 3	**5 GHz** • 802.11a: ◦ 20 MHz: 21 • 802.11n: ◦ 20 MHz: 21 ◦ 40 MHz: 9	
Note: This varies by regulatory domain. Refer to the product documentation for specific details for each regulatory domain.			
Receive Sensitivity (Combined sensitivity)	**802.11b** –98 dBm @ 1 Mb/s –95 dBm @ 2 Mb/s –93 dBm @ 5.5 Mb/s –91 dBm @ 11 Mb/s	**802.11g** –94dBm @ 6 Mb/s –92 dBm @ 9 Mb/s –91 dBm @ 12 Mb/s –89 dBm @ 18 Mb/s –85 dBm @ 24 Mb/s –82 dBm @ 36 Mb/s –78 dBm @ 48 Mb/s –76 dBm @ 54 Mb/s	**802.11a** –93 dBm @ 6 Mb/s –91 dBm @ 9 Mb/s –90 dBm @ 12 Mb/s –87 dBm @ 18 Mb/s –84 dBm @ 24 Mb/s –81 dBm @ 36 Mb/s –76 dBm @ 48 Mb/s –75 dBm @ 54 Mb/s
	2.4-GHz **802.11n (HT20)** –93 dBm @ MCS0 –90 dBm @ MCS1 –88 dBm @ MCS2 –85 dBm @ MCS3 –81 dBm @ MCS4 –77 dBm @ MCS5 –75 dBm @ MCS6 –74 dBm @ MCS7 –91dBm @ MCS8 –88 dBm @ MCS9 –86 dBm @ MCS10 –83 dBm @ MCS11 –79 dBm @ MCS12 –75 dBm @ MCS13 –73 dBm @ MCS14 –72 dBm @ MCS15	**5-GHz** **802.11n (HT20)** –93 dBm @ MCS0 –90 dBm @ MCS1 –87 dBm @ MCS2 –83 dBm @ MCS3 –80 dBm @ MCS4 –75 dBm @ MCS5 –74 dBm @ MCS6 –72 dBm @ MCS7 –91 dBm @ MCS8 –88 dBm @ MCS9 –85 dBm @ MCS10 –81 dBm @ MCS11 –78 dBm @ MCS12 –73 dBm @ MCS13 –72 dBm @ MCS14 –70 dBm @ MCS15	**5-GHz** **802.11n (HT40)** –89 dBm @ MCS0 –86 dBm @ MCS1 –83 dBm @ MCS2 –79 dBm @ MCS3 –76 dBm @ MCS4 –72 dBm @ MCS5 –71 dBm @ MCS6 –70 dBm @ MCS7 –88 dBm @ MCS8 –84 dBm @ MCS9 –81 dBm @ MCS10 –77 dBm @ MCS11 –74 dBm @ MCS12 –70 dBm @ MCS13 –69 dBm @ MCS14 –68 dBm @ MCS15
Maximum Transmit Power	**2.4 GHz** • 802.11b ◦ 17 dBm with one antenna • 802.11g ◦ 20 dBm with two antennas • 802.11n (HT20) ◦ 20 dBm with two antennas	**5 GHz** • 802.11a ◦ 20 dBm with two antennas • 802.11n non-HT duplicate mode ◦ 20 dBm with two antennas • 802.11n (HT20) ◦ 20 dBm with two antennas • 802.11n (HT40) ◦ 20 dBm with two antennas	
Note: The maximum power setting will vary by channel and according to individual country regulations. Refer to the product documentation for specific details.			

Item	Specification	
Available Transmit Power Settings	**2.4 GHz** 20 dBm (100 mW) 17 dBm (50 mW) 14 dBm (25 mW) 11 dBm (12.5 mW) 8 dBm (6.25 mW) 5 dBm (3.13 mW)	**5 GHz** 20 dBm (100 mW) 17 dBm (50 mW) 14 dBm (25 mW) 11 dBm (12.5 mW) 8 dBm (6.25 mW) 5 dBm (3.13 mW)
Note: The maximum power setting will vary by channel and according to individual country regulations. Refer to the product documentation for specific details.		
Integrated Antenna	• 2.4 GHz, gain 3.0 dBi, horizontal beamwidth 360° • 5 GHz, gain 5.0 dBi, horizontal beamwidth 360°	
Interfaces	• 10/100/1000BASE-T autosensing (RJ-45) • Management console port (RJ-45) • DC power connector	
Indicator	• Status LED indicates boot loader status, association status, operating status, boot loader warnings, boot loader errors	
Dimensions (W x L x H)	• Access point (without mounting bracket): 7 x 7 x 2 inches (177.6 x 177.6 x 50.4 mm)	
Weight	• 1.06 lb (0.48 kg)	
Environmental	**Cisco Aironet 702i** • Nonoperating (storage) temperature: –22 to 158°F (–30 to +70°C) • Nonoperating (storage) Altitude Test: 25°C, 15,000 ft. • Operating temperature: 32 to 104°F (0 to 40°C) • Operating humidity: 10 to 90% percent (noncondensing) • Operating Altitude Test: 40°C, 9843 ft.	
System Memory	• 128 MB DRAM • 128 MB flash	
Input Power Requirements	• 44 to 57 VDC • Power Supply and Power Injector: 100 to 240 VAC; 50 to 60 Hz	
Powering Options	• 802.3af Ethernet Switch • Cisco Power Injectors (AIR-PWRINJ5=, AIR-PWRINJ4=) • Cisco Local Power Supply (AIR-PWR-B=)	
Power Draw	• 9.5W (maximum) **Note:** When deployed using PoE, the power drawn from the power sourcing equipment will be higher by some amount dependent on the length of the interconnecting cable. This additional power may be as high as 1.3W, bringing the total system power draw (access point + cabling) to 10.8W.	
Warranty	Limited Lifetime Hardware Warranty	
Compliance	**Standards** • **Safety:** ◦ UL 60950-1 ◦ CAN/CSA-C22.2 No. 60950-1 ◦ UL 2043 ◦ IEC 60950-1 ◦ EN 60950-1 • **Radio approvals:** ◦ FCC Part 15.247, 15.407 ◦ RSS-210 (Canada) ◦ EN 300.328, EN 301.893 (Europe) ◦ ARIB-STD 33 (Japan) ◦ ARIB-STD 66 (Japan) ◦ ARIB-STD T71 (Japan) ◦ AS/NZS 4268.2003 (Australia and New Zealand) ◦ EMI and susceptibility (Class B) ◦ FCC Part 15.107 and 15.109	

Item	Specification
	◦ ICES-003 (Canada) ◦ VCCI (Japan) ◦ SRRC (China) ◦ EN 301.489-1 and -17 (Europe) ◦ EN 60601-1-2 EMC requirements for the Medical Directive 93/42/EEC • **IEEE Standard:** ◦ IEEE 802.11a/b/g, IEEE 802.11n, IEEE 802.11h, IEEE 802.11d • **Security:** ◦ 802.11i, Wi-Fi Protected Access 2 (WPA2), WPA ◦ 802.1X ◦ Advanced Encryption Standards (AES), Temporal Key Integrity Protocol (TKIP) • **EAP Type(s):** ◦ Extensible Authentication Protocol-Transport Layer Security (EAP-TLS) ◦ EAP-Tunneled TLS (TTLS) or Microsoft Challenge Handshake Authentication Protocol Version 2 (MSCHAPv2) ◦ Protected EAP (PEAP) v0 or EAP-MSCHAPv2 ◦ Extensible Authentication Protocol-Flexible Authentication via Secure Tunneling (EAP-FAST) ◦ PEAPv1 or EAP-Generic Token Card (GTC) ◦ EAP-Subscriber Identity Module (SIM) • **Multimedia:** ◦ Wi-Fi Multimedia (WMM™) • **Other:** ◦ FCC Bulletin OET-65C ◦ RSS-102

Limited Lifetime Hardware Warranty

The Cisco Aironet 700 Series Access Point comes with a Limited Lifetime Warranty that provides full warranty coverage of the hardware for as long as the original end user continues to own or use the product. The warranty includes 10-day advance hardware replacement and ensures that software media is defect-free for 90 days. For more details, visit: http://www.cisco.com/go/warranty.

Cisco Wireless LAN Services

Realize the full business value of your technology investments faster with intelligent, customized services from Cisco and our partners. Backed by deep networking expertise and a broad ecosystem of partners, Cisco Wireless LAN Services enable you to deploy a sound, scalable mobility network that enables rich media collaboration while improving the operational efficiency gained from a converged wired and wireless network infrastructure based on the Cisco Unified Wireless Network. Together with partners, we offer expert plan, build, and run services to accelerate your transition to advanced mobility services while continuously optimizing the performance, reliability, and security of that architecture after it is deployed. For more details, visit: http://www.cisco.com/go/wirelesslanservices.

For More Information

For more information about the Cisco Aironet 700 Series, visit http://www.cisco.com/go/wireless or contact your local account representative.

Americas Headquarters
Cisco Systems, Inc.
San Jose, CA

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
Singapore

Europe Headquarters
Cisco Systems International BV Amsterdam,
The Netherlands

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at www.cisco.com/go/offices.

Printed in USA C78-726725-04 09/14