

Altitude 4700 Series

Access Points



Extreme Networks® Altitude 4700 series 802.11a/b/g/n adaptive services access points provide the performance, coverage, reliability and security required for delivering mission critical business applications to a mobile workforce. The band-unlocked radios with expandable design provides simultaneous support for three major networking functions: high-speed wireless data, voice, as well as video services for client access, self-healing mesh networking and wireless Intrusion Prevention System (IPS) sensor functionality for around-the-clock protection. The Altitude 4700 series is designed to cost-effectively meet the needs of large, distributed enterprises by converging the functionality of a thick access point and thin access port into a single device. Adaptive mode enables the deployment of a fully featured intelligent access point that can be centrally configured and managed.

As a stand-alone access point, the Altitude 4700 series provides small- to medium-sized businesses and enterprise branch offices with a consolidated wired and wireless networking infrastructure, all in a single device. The integrated router gateway, 3G WAN backhaul, firewall, DHCP and AAA Radius servers, IPSec VPN, hotspot gateway and PoE help simplify and reduce the costs associated with networking by eliminating the need to purchase and manage multiple pieces of equipment. The Altitude 4710 dual-radio access point is ideally suited for remote site deployment. It is equipped with full 802.11n performance and functionality, including support for 802.3af and 802.3at Power over Ethernet (PoE). The multi-band, unlocked mode enables one radio to operate as a dedicated sensor for unauthorized wireless devices and APs.

The Altitude 4700 series APs have a compact form factor for tight spaces and include cost-saving, flexible installation options with built-in mounting brackets. These APs are plenum rated and can be installed out-of-sight above the ceiling. Antenna options optimize Wireless LAN (WLAN) performance for user densities, roaming coverage, security, wireless interference, and network traffic loads.

Remote management is provided via the Summit® WM3000 series controllers and Motorola AirDefense Services Platform (ADSP)* management suite (both available separately).



The Altitude™ 4700 series Access Points (APs) are high-performance, multifunction, adaptive APs that enable secure and flexible deployment of 802.11n-based enterprise wireless LANs. Altitude 4710 is a dual-radio access point with PCI-express card slot. Altitude 4750 is a tri-radio access point with the third radio operating as a dedicated sensor.

Features Summary

Superior Performance

- Up to a six-fold increase in wireless performance
- Gigabit Ethernet connectivity plus PoE
- 3x3 MIMO with spatial diversity
- Band-unlocked, dual-band design

Enterprise-Grade Wireless Services

- Integrated router, DHCP server and NAT
- Hotspot gateway LLDP support
- Quality of Service (QoS)—WMM/UAPSD, Call Admission Control
- Site survivable remote site deployment
- PCIe card slot (Altitude 4710 only) for 3G backup WAN link

Comprehensive Security

- Stateful Packet Inspection Firewall, IPSec VPN
- Wireless IDS/IPS with 24x7 sensor (available separately with Motorola AirDefense Services Platform)
- Dedicated radio (Altitude 4750) for sensor function
- Multi-band, dedicated sensor for rogue clients and APs



Make Your Network Mobile

*Appliance models 1252, 3652 and 4250 are sold separately and are targeted for future availability.

Features and Benefits

Superior Wireless Performance

The fully DFS-compliant 802.11 Altitude 4700 series access points provide superior RF performance and throughput of up to 600 Mbps per access point — six times the bandwidth of an 802.11a/g access point. They offer the required performance to support unicast and multicast multimedia streams in a dense classroom environment for e-learning.

Powerful 27 dBm dual-band radios offers increased wireless range and throughputs. The 3x3 MIMO antenna configuration with dual spatial streams and spatial diversity provides reliable WLAN service for enterprise-class applications and dense deployments of mobile users. Its higher receive sensitivity enables an Altitude 4700 AP to service the most distant wireless device, thus extending network range. These adaptive APs can be deployed to build a resilient mesh network. Self-healing mesh provides continuity of service in the event of a wired or wireless network failure. The self-forming, resilient VLAN and WMM QoS-aware mesh technology enables organizations to wirelessly extend reliable high-performance voice, data and video services to workers in remote and outdoor locations.

Built-in mounting options allow APs to be installed on the T-bar of drop down ceiling or wall/ceiling surfaces. No additional mounting hardware is needed which helps save in installation costs. The Altitude 4700 series access points are plenum rated, and can be installed above drop ceilings for aesthetic appeal and physical security. The included LED light pipe can be extended through the drop down ceiling to display AP status.

Enterprise-Grade Wireless Network Services

These multifunctional APs offer deployment flexibility. Their adaptive AP architecture supports two modes of operation, without changing the firmware — either as a wireless controller-adopted access point for centralized management, or as a stand-alone access point. The Altitude 4700 series APs are designed for campus and remote site deployment. Altitude 4710 is ideally suited for remote deployment and includes a built-in PCI express card slot, which can be used to enable a 3G link that serves as a backup or a primary WAN link. Standard (802.3af) PoE and intelligent power management supply and configure power to both radios, eliminating the need to upgrade network infrastructures.

The Altitude 4700 series APs support 802.11e Quality of Service (QoS), Wi-Fi Multimedia (WMM) and SIP Call Admission Control, which help ensure reliable transport of real-time, low-latency services such as voice and video. Mesh functionality

cost-effectively extends the enterprise network to areas where Ethernet or fiber cabling is cost-prohibitive, or otherwise impractical. Mesh functionality includes multi-node, multi-link networks as well as simple mesh to connect two wired networks.

The hotspot or guest access authentication feature offers a simple way to provide secure, authenticated WLAN access to guest users and devices, by capturing and redirecting a standard Web browser's session to a captive portal login page.

Comprehensive Security

Motorola AirDefense Services Platform (available separately) provides centralized administration across the WLAN, as well as security features such as wireless IDS/IPS, forensic reporting and vulnerability testing.

The Altitude 4700 series APs offer multiple layers of wired and wireless network security. The unique tri-radio Altitude 4750 offers concurrent around-the-clock, dual-band sensing and wireless traffic — eliminating the need for separate devices. Integrated wireless IPS sensor firmware enables one radio to be configured for 24x7 rogue detection and termination, leaving two radios to be dedicated for wireless client access. The sensor can also be managed from the Motorola AirDefense Services Platform which provides advanced wireless security features and 24x7 network protection against attacks. As a result, enterprises can now deploy a robust Wireless IPS solution while saving money — the cost to purchase, deploy and manage dedicated sensor hardware is eliminated.

Additional security features include stateful firewall, encryption and authentication support key standards-based security protocols for enterprise-level protection for the wired and wireless network infrastructure at your headquarters. The Altitude 4700 series APs can authenticate wireless clients using multiple 802.11i standards-based mechanisms, including WPA/WPA2. The built-in, hardware-accelerated encryption engine supports WEP, TKIP and AES encryption schemes.



Product Specifications

	Altitude 4710 Indoor Access Point	Altitude 4750 Indoor Access Point
General Specifications		
802.11 Capabilities	3x3 MIMO with 2 Spatial Streams 20 MHz and 40 MHz Channels 300 Mbps Data Rates per Radio Packet Aggregation (AMSDU, AMPDU) Reduced Inter-frame Spacing 802.11 DFS MIMO Power Save (Static and Dynamic)	
Number of Radios	Dual-band unlocked 802.11 a/b/g/n	Tri-band unlocked 3rd radio dedicated sensor 802.11 a/b/g/n
Layer 2/3 Networking	Layer 2/3: Layer 3 routing, 802.1q, DynDNS, DHCP server/client, BOOTP client, PPPoE, and LLDP	
Security	Stateful Firewall, IP filtering, NAT, 802.1x, 802.11i, WPA2, WPA Triple-Methodology Rogue Detection: 24x7 dual-band WIPS sensing, MU-assisted, on-board IDS and secure guest access (Hotspot)	
Quality of Service (QoS)	WMM, WMM-UAPSD, 802.1p, Diffserv and TOS	
Physical Specifications		
Unit Dimensions	5.50 in. L x 8.00 in. W x 1.5 in. H 13.97 cm L x 20.32 cm W x 3.81 cm H	5.50 in. L x 8.00 in. W x 1.5 in. H 13.97 cm L x 20.32 cm W x 3.81 cm H
Unit Weight	2.67 lbs/1.21 kg	2.67 lbs/1.21 kg
Mounting Options	Above drop ceiling, under ceiling or on wall	
Available Mounting	No additional hardware required to mount	
Housing	Metal - Plenum rated - UL2043	
LEDs	6 top-mounted, 1 bottom-mounted; multiple modes indicate 802.11a/g/n activity, power, Ethernet adoption, Wireless IPS and errors	
Ports	2 ports (GE1, GE2) auto-sensing 10/100/1000 Base-T Ethernet; 802.3af on GE1 LAN port	
Console Port	RJ45	
PCI-Express Card Slot	Yes	No
Antenna Connectors	RP-SMA	
External Antenna Options	See recommended options in the Altitude AP Antenna Selection Guide at www.extremenetworks.com/go/antenna .	
Power Specifications		
Operating Voltage	36-57 VDC	
Operating Current	Not to exceed 600mA @ 48VDC	
Integrated PoE Support	802.3af support for dual radios, 802.3at (draft)	



Product Specifications

	Altitude 4710 Indoor Access Point	Altitude 4750 Indoor Access Point	
Radio Specifications			
Number of Radios	Dual-band, unlocked, 802.11 a/b/g/n	Tri-band, unlocked, 802.11 a/b/g/n, 3rd radio dedicated as sensor	
Number of Radios	2, concurrent, dual-band (2.4 GHz/5 GHz), band unlocked		
Number of ESSIDs	16		
Antenna Configuration	3x3 MIMO (transmit/receive on all three antennas)		
Wireless Standards	IEEE 802.11a/b/g/n, 802.11d and 802.11i WPA2, WMM and WMM-UAPSD		
Wireless Modulation	Direct Sequence Spread Spectrum (DSSS), Orthogonal Frequency Division Multiplexing (OFDM) and Spatial multiplexing (MIMO)		
Operating Bands	FCC	EU	Japan
	2.412 to 2.462 GHz	2.412 to 2.472 GHz	2.412 to 2.484 GHz
	5.150 to 5.250 (UNII -1)	5.150 to 5.250 GHz	4.900 to 5.000 GHz
	5.250 to 5.350 (UNII -2)	5.250 to 5.350 GHz	5.150 to 5.250 GHz (W52)
	5.470 to 5.725 (UNII -3)	5.470 to 5.725 GHz	5.250 to 5.350 GHz (W53)
	5.725 to 5.850 ISM	(Country Specific)	5.470 to 5.725 GHz (W56)
Data Rates Supported	802.11b/g: 1, 2, 5.5, 11, 6, 9, 12, 18, 24, 36, 48, and 54 Mbps 802.11a: 6, 9, 12, 18, 24, 36, 48, and 54 Mbps 802.11n: MCS 0-15 up to 300 Mbps		
Operating Channels	5 GHz: All channels from 4920 MHz to 5825 MHz 2.4 GHz: Chan 1-13 (2412-2472 MHz), Chan 14 (2484 MHz) Japan only Actual operating frequencies depend on national regulatory limits		
Data Rates (Mbps)	802.11b/g: 1, 2, 5.5, 11, 6, 9, 12, 18, 24, 36, 48, and 54 Mbps 802.11a: 6, 9, 12, 18, 24, 36, 48, and 54 Mbps 802.11n: MCS 0-15 up to 300 Mbps		
Maximum Available Transmit Power per Chain	24 dBm		
Maximum Available Transmit Power per AP	27 dBm		
Transmit Power Adjustment	1 dB increments		



Product Specifications

Receiver Sensitivity				
2400 MHz Band		Operating Mode	5200 MHz Band	
Rate/MCS	Average (dBm)		Rate/MCS	Average (dBm)
Not applicable to 2400 MHz Band		802.11a	6	-93
			9	-93
			12	-93
			18	-92
			24	-89
			36	-86
			48	-82
			54	-80
1	-95	802.11b	Not applicable to 5200 MHz Band	
2	-94			
5.5	-93			
11	-90			
6	-94	802.11g	Not applicable to 5200 MHz Band	
9	-94			
12	-95			
18	-94			
24	-90			
36	-87			
48	-83			
54	-82			
MCS0	-95			
MCS1	-93	MCS1	-92	
MCS2	-91	MCS2	-90	
MCS3	-87	MCS3	-86	
MCS4	-85	MCS4	-83	
MCS5	-81	MCS5	-79	
MCS6	-79	MCS6	-78	
MCS7	-78	MCS7	-76	
MCS8	-94	MCS8	-92	
MCS9	-91	MCS9	-90	
MCS10	-88	MCS10	-87	
MCS11	-85	MCS11	-84	
MCS12	-82	MCS12	-81	
MCS13	-79	MCS13	-77	
MCS14	-77	MCS14	-75	
MCS15	-75	MCS15	-73	



Product Specifications

Receiver Sensitivity				
2400 MHz Band		Operating Mode	5200 MHz Band	
Rate/MCS	Average (dBm)		Rate/MCS	Average (dBm)
MCS0	-90	802.11n HT40	MCS0	-90
MCS1	-89		MCS1	-89
MCS2	-87		MCS2	-86
MCS3	-84		MCS3	-83
MCS4	-82		MCS4	-80
MCS5	-78		MCS5	-76
MCS6	-76		MCS6	-74
MCS7	-75		MCS7	-73
MCS8	-87		MCS8	-89
MCS9	-87		MCS9	-86
MCS10	-85		MCS10	-84
MCS11	-83		MCS11	-81
MCS12	-80		MCS12	-78
MCS13	-75		MCS13	-74
MCS14	-74		MCS14	-72
MCS15	-72	MCS15	-71	

	Altitude 4710 Indoor Access Point	Altitude 4750 Indoor Access Point
Regulatory		
Product Safety Certifications	UL/cUL 60950-1, IEC/EN60950-1, UL2043, RoHS	
Radio Approvals	FCC (USA), Industry Canada, CE (Europe), TELEC (Japan), China, Korea, Australia, Brazil	
Environmental		
Operating Temperature	0° C to 50° C (32° F to 122° F)	
Storage Temperature	-40° C to 70° C (-40° F to 158° F)	
Operating Humidity	5% to 95%, non-condensing	
Operating Altitude	8,000 ft (2,438 m) @ 82° F/28° C	
Storage Altitude	15,000 ft (4,572 m) @ 53° F/12° C	
Electrostatic Discharge	+/- 15 kV (air), +/- 8 kV (contact)	



Warranty

- Limited one year
- For warranty details, visit www.extremenetworks.com/go/warranty

Ordering Information

Part Number	Description
15751	Altitude 4710 dual-radio 802.11an/bgn indoor adaptive access point for US regulatory domain. Does not come with antennas. Facade antenna (15755) or 6x paddle antennas (ML2452APA201) available for application-specific installations. 802.3af-PoE powered. Optional 5014000247R power supply connects to AP power port or APPSBIAS1P3AFR PoE injector for maximum performance.
15752	Altitude 4710 dual-radio 802.11an/bgn indoor adaptive access point for Rest of the World Regulatory domain except Israel. Does not come with antennas. Facade antenna (15755) or 6x paddle antennas (ML2452APA201) available for application-specific installations. 802.3af-PoE powered. Optional 5014000247R power supply connects to AP power port or APPSBIAS1P3AFR PoE injector for maximum performance.
15753	Altitude 4750 tri-radio 802.11an/bgn indoor adaptive access point for US regulatory domain. Third radio functions as a sensor only. Does not come with antennas. Facade antenna (15755) or 6x paddle antennas (ML2452APA201) available for application-specific installations. 802.3af-PoE powered. Optional 5014000247R power supply connects to AP power port or APPSBIAS1P3AFR PoE injector for maximum performance.
15754	Altitude 4750 tri-radio 802.11an/bgn indoor adaptive Access Point for Rest of the World Regulatory domain except Israel. Third radio functions as a sensor only. Does not come with antennas. Facade antenna (15755) or 6x paddle antennas (ML2452APA201) available for application-specific installations. 802.3af-PoE powered. Optional 5014000247R power supply connects to AP power port or APPSBIAS1P3AFR PoE injector for maximum performance.
15755	Integrated snap-on dual band omni-directional façade antenna for Altitude 4700 series access points. Snaps over the AP housing and connects to the AP antenna ports. Antenna gain of 3 dBi/5 dBi for 2.4/5 GHz bands.
ML2452APA201*	Omni-directional dual band paddle antenna for use with Altitude 3500/4600/4700 series access points. Antenna gain of 3 dBi/5 dBi for 2.4/5 GHz bands.
APPSBIAS1P3AFR	Midspan PoE injector with GE interface and 802.3at rated. Used to power Altitude 4600 and 4700 series access points. Does not include power cord, which must be ordered separately.

*Please refer to the *Altitude AP Antenna Selection Guide* at www.extremenetworks.com/go/antenna for a complete list of external antennas recommended for use with Altitude 4700 series APs.



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