Altitude 3500 Series Access Points

Altitude™ 3510 and 3550 multiservice dual-radio access points help enable the deployment of resilient, secure and cost effective enterprise wireless LAN services indoors and outdoors.

Comprehensive Security Features

- Wireless security with advanced IEEE 802.11i standards-based WPA2 mechanisms
- IPSec VPN client – Secure connectivity to corporate network
- Wired 802.1X authentication
- Rogue AP detection with dual-band WIPS sensor mode
- Tamper-proof housing

Campus-Wide Mobility

- Fast, secure roaming
- Outdoor deployment in harsh environments
- Mesh and bridging capabilities to extend wireless coverage
- 16 SSIDs per radio to enable multiple virtual wireless networks

Enterprise-Grade Wireless Services

- Wi-Fi Multimedia (WMM™) QoS for voice prioritization
- WMM Power Save mode to extend client battery life
- Remote site survivability maintains service during infrastructure outage

Altitude 3500 series are dual-radio access points that support simultaneous operation of 802.11a and 802.11b/g wireless networks. Each radio is dual band which can be configured for 802.11a or 802.11 b/g operation. Altitude 3500 series Access Points (APs), in conjunction with Summit® WM3000 series WLAN controllers enable enterprise-grade wireless service with enhanced mobility and security. This easy-to-deploy solution offers the flexibility to connect securely to remote corporate private networks, the Internet and local network resources with high speed and reliability. The all-in-one Altitude 3500 APs offer a new level of cost-efficiency and networking simplicity for employees in branch offices or telecommuters working at home.

Altitude 3510 AP is for indoor deployment. It comes with four (4) external omni-directional detachable antennas. It is suitable for wall, ceiling or out-of-sight plenum installation. Altitude 3550 AP is specifically designed for outdoor use, and offers enterprise-class wireless service in harsh environments. In addition to a NEMA 4X-weatherized housing, severe-weather features include integrated lightning arrestors, surge protectors, extreme temperature range operation. Customers can select from an array of external antennas that fit the need for a wireless application.

Target Applications

- Campus-wide multiservice wireless LAN
- Remote site wireless service with survivability
- Secure wired and wireless connectivity with guest access

Comprehensive Security

Altitude 3500 series APs offer a high level of security features for wired and wireless connectivity. The access point supports standards-based, over-the-air encryption schemes to protect the integrity of user data. The AP participates in wireless client authentication using 802.11i standards-based WPA or WPA2 mechanisms. The AP also participates in its own authentication with the wired switch port using 802.1X.

Altitude 3500 series operates as an IPSec VPN client to enable secure connection between the AP and the Summit WM3000 series controller across the wired network. This offers an added level of security. The AP is out of the box PCI compliant. Along with Summit WM3000 series of controllers, the AP participates in Wireless Intrusion Detection. The AP radio operates as a monitor and detects rogue AP threats that are communicated to the controller for display and mitigation.

A customer can deploy a single Altitude 3500 AP as both a traditional infrastructure access point and a WIPS sensor. Sensor conversion on the AP provides infrastructure support on one radio while scanning on the other radio and using the frames received by the sensor to provide WIPS algorithms. The WIPS sensor on one radio and AP service on another radio can run simultaneously.

The dedicated sensor in conjunction with AirDefense WIPS solution enables 24x7 compliance monitoring, rogue detection and mitigation, and troubleshooting. Dedicating a radio for AirDefense sensor functionality gives the highest level of security as compared to other IPS solutions that share the same radio for WLAN coverage and IPS on a time sliced basis. The integrated AirDefense sensor also eliminates the need for dedicated sensor hardware and associated cabling thereby reducing the overall deployment cost.

With a tamper-proof design, the AP can be securely deployed in remote locations. If the AP is stolen, it does not compromise data integrity since the sensitive configuration data is lost on power interruption.

Campus-Wide Mobility

Altitude 3550 AP is designed for outdoor deployment in harsh environments, enabling seamless roaming across a campus environment. It comes standard with integrated lightning arrestors and surge protection. The optional heavy weather mounting kit is designed to protect the AP from windblown debris while the surge-protected outdoor power supply can be powered from the light pole power.

Using its mesh capability, the dual-radio Altitude 3500 series APs can connect to other access points for data backhaul while providing network access to local users. Enabling an array of applications, from simple point-to-point bridges connecting two wired networks to complex multi-node, multi-link networks, this feature offers a simple way to extend the network to outdoor or remote locations. Altitude 3500 AP supports up to 16 SSIDs per radio. This enables a customer to deploy highly granular virtual AP services that can be mapped to VLANs in the enterprise wired network.

Enterprise-Grade Wireless Services

Altitude 3500 series AP supports over-the-air QoS protocol based on 802.11e/WMM specifications. The series also supports standards-based (802.11e) Unscheduled Automatic Power Save Delivery (UAPSD)/WMM Power Save that extends the battery life of handheld client devices like VoWLAN handsets. It enables fast roaming using several mechanisms including pre-authentication and WPA2 based PMK caching.

In addition, the Altitude 3500 AP supports deployments at remote branch offices. This enables customers to deploy access points at remote sites and centrally manage them from Summit WM3000 controllers located at the headquarters site. The remote site survivability feature allows the AP to continue uninterrupted wireless service even when the connection to the WLAN controller is lost.

Product Specifications

	Altitude 3510 Indoor Access Point			Altitude 3550 Outdoor Access Point		
Physical Specifications						
Number of SSIDs	16 per radio			16 per radio		
Unit Dimensions	5.32 in. L x 9.45 in. W x 1.77 in. H 135 mm L x 240 mm W x 45 mm H			12 in. L x 8.2 in. W x 3.55 in. H 305 mm L x 210 mm W x 89 mm H		
Unit Weight	1.95 lbs/0.884kg			5.50lbs/2.50kg		
Packaging Dimensions	9.38 in L x 11.5 in W x 4.38 in H 238.1 mm L x 292.1 mm W x 111.1 mm H			11.25 in L x 15.88 in W x 5.88 in H 285.8 mm L x 403.2 mm W x 149.2 mm H		
Packaging Weight	Approx 4.05 lbs/1.84 kg			Approx 7.90 lbs/3.58 kg		
Housing	Metal, plenum-rated housing (UL2043)			Die cast aluminum alloy; NEMA 4X-modified; IP56		
LEDs	4 top mounted LEDs, 2 bottom mounted LEDs, with multiple modes indicating 802.11a/802.11g activity, power, adoption and errors			4 back-mounted LEDs, indicating radio activity, power, adoption and errors		
Ports	2x (WAN, LAN) Auto-sensing 10/100Base-T			2x (LAN, WAN) Auto-sensing 10/100Base-T		
Antennas	Comes with 4x detachable omni-direction paddle antennas			External antennas sold separately		
Power Specifications						
Input Voltage	48V DC			48V DC		
Operating Current	200mA			280mA		
Integrated PoE Support	802.3af on LAN Port			802.3af mid-span on LAN Port		
Radio Specifications						
Number of Radios	2 – concurrent – dual band (2.4GHz/5GHz)			2 – concurrent – dual band (2.4GHz/5GHz)		
Wireless Standards	802.11a, 802.11b, 802.11g			802.11a, 802.11b, 802.11g		
Wireless Modulation	802.11a: OFDM 802.11b: DSSS/CCK 802.11g: DSSS/CCK/OFDM			802.11a: OFDM 802.11b: DSSS/CCK 802.11g: DSSS/CCK/OFDM		
Operating Bands	FCC 2.400 – 2.4835 GHz; 5.150 – 5.250 GHz1; 5.725 – 5.850 GHz1 EU 2.400 – 2.4835 GHz; 5.150 – 5.250 GHz1 Japan 2.400 – 2.484 GHz; 5.150 – 5.250 GHz; 5.250 – 5.350 GHz			FCC 2.400 – 2.4835 GHz; 5.150 – 5.250 GHz1; 5.725 – 5.850 GHz1 EU 2.400 – 2.4835 GHz; 5.150 – 5.250 GHz1 Japan 2.400 – 2.484 GHz; 5.150 – 5.250 GHz; 5.250 – 5.350 GHz		
Operating Channels	Chan 36 – 165 (5180 – 5825MHz) Chan 1 – 13 (2412 – 2472 MHz) Chan 14 (2484 MHz) Japan only Actual operating frequencies depend on regulatory rules and certification agency			Chan 36 – 165 (5180 – 5825 MHz) Chan 1 – 13 (2412 – 2472 MHz) Actual operating frequencies depend on regulatory rules and certification agency		
Data Rates (Mbps)	1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, 54			1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, 54		
Available Transmit Power Settings	4-20 dBm			4-20 dBm		
Receiver Sensitivity (dBm) 11a Radio	10% PER for 1000 bytes IEEE 802.11a Section 17.3.10.1 (MIN) & 17.3.10.4 (MAX)	6 Mbps -91 9 Mbps -89 12 Mbps -87 18 Mbps -83	24 Mbps -81 36 Mbps -78 48 Mbps -74 54 Mbps -73	10% PER for 1K bytes IEEE 802.11a Sec 17.3.10.1 (MIN) & 17.3.10.4 (MAX)	6 Mbps -91 9 Mbps -89 12 Mbps -87 18 Mbps -83	24 Mbps -81 36 Mbps -78 48 Mbps -74 54 Mbps -73
Receiver Sensitivity (dBm) 11b Radio	1 Mbps -94 8% PER for 1,024 Octets	2 Mbps -90 5.5 Mbps -88 11 Mbps -84		8% PER for 1,024 Octets	1 Mbps -94 2 Mbps -90 5.5 Mbps -88 11 Mbps -84	
Receiver Sensitivity (dBm) 11g Radio	10% PER for 1000 Octets IEEE 802.11g sect 19.5.1 (MIN) & 19.5.3 (MAX)	6 Mbps -89 9 Mbps -88 12 Mbps -85 18 Mbps -82	24 Mbps -80 36 Mbps -77 48 Mbps -72 54 Mbps -70	10% PER for 1000 Octets IEEE 802.11g sect 19.5.1 (MIN) & 19.5.3 (MAX)	6 Mbps -89 9 Mbps -88 12 Mbps -85 18 Mbps -82	24 Mbps -80 36 Mbps -77 48 Mbps -72 54 Mbps -70

Product Specifications

	Altitude 3510 Indoor Access Point	Altitude 3550 Outdoor Access Point
Regulatory		
Standards Compliance	802.11a/b/g, 802.11i, WPA2, WMM, UAPSD, RoHS, WEEE	802.11a/b/g, 802.11i, WPA2, WMM, UAPSD, RoHS, WEEE
Product Safety Certifications	UL/cUL 60950-1, IEC/EN60950-1, UL2043, TUV GS, RoHS	UL/cULus 60950-1, IEC/EN60950-1
Radio Approvals	FCC (USA), Industry Canada (IC), CE (R&TTE Europe), TELEC (Japan), KCC (Korea), C–Tick (Australia/New Zealand), CMII (China), ANATEL (Brazil) For additional country certifications see: http://www.extremenetworks.com/go/wirelesscertification	FCC (USA), Industry Canada (IC), CE (R&TTE Europe), TELEC (Japan), KCC (Korea), C–Tick (Australia/New Zealand), CMII (China), ANATEL (Brazil) For additional country certifications see: http://www.extremenetworks.com/go/wirelesscertification
Environmental		
	Operating Temperature: -4°F to 122°F/-20°C to 50°C Storage Temperature: -40°F to 158°F/-40°C to 70°C Operating Humidity: 5 to 95% RH non-condensing Operating Altitude: 8000 ft./2438m @ 82°F/28°C Storage Altitude: 15000 ft./4572m @ 53°F/12°C Electrostatic Discharge: 15kV air, 8kV contact	Operating Temperature: -22°F to 131°F/-30°C to 55°C Storage Temperature: -40°F to 185°F/-40°C to 85°C Operating Humidity: 5 to 95% RH non-condensing Operating Altitude: 8,000 ft./2438m @ 82°F/28°C Storage Altitude: 15,000 ft./4572m @ 53°F/12°C Electrostatic Discharge: IEEE 61000-4-2, 20kV air, 8kV contact Weather Rating: IP56 weather-tight, NEMA 4X (See Housing) Wind Survivability: >170 mph, 148 knots (without antenna) Wind Loading (165 mph): <60 lbs, 267 Newtons (without antenna) Shock & Vibration: MIL-STD-810F method 514 procedure 1 Transportation/Cargo: ASTM D775-80 D4169 level 3
Antenna Protection		
	N/A	Antenna Protection: Transient IEEE 61000-4-4, level 4, EFT; Surge IEEE 61000-4-5 Class 5, 1.2x50uS & 8x20uS Waveform
Warranty		
	Limited One Year	Limited One Year

Ordering Information

Part Number	Description
Altitude 3510 Indoor Access Point	
15720	Altitude 3510-US 11a/b/g Indoor Access Point for U.S. Regulatory Domain
15721	Altitude 3510-ROW 11a/b/g Indoor Access Point for Rest of The World Regulatory Domain
15723	Altitude 3510-IL 11a/b/g Indoor Access Point for Israel Regulatory Domain
15728	Power Supply for Altitude 3510 Access Point – Optional Accessory
For a list of external antennas recommended for use with the Altitude 3550 AP, please refer to the Antenna Selection Guide	
Altitude 3550 Outdoor Access Point	
15722	Altitude 3550-US 11a/b/g Outdoor Access Point for U.S. Regulatory Domain
15726	Altitude 3550-ROW 11a/b/g Outdoor Access Point for Rest of The World Regulatory Domain
15729	Outdoor Power Supply for Altitude 3550 Outdoor Access Point
15732	Heavy Weather Kit for Altitude 3550 Access Point – Optional Accessory
15733	Wall/Pole Mounting kit for Altitude 3550 Access Point – Optional Accessory
For a list of external antennas recommended for use with the Altitude 3550 AP, please refer to the Antenna Selection Guide	

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