DATA SHEET

IdentiFi™ AP3600

Fully Featured, Enterprise-Grade Wi-Fi

BENEFITS

BUSINESS ALIGNMENT

- Support for demanding voice/video/data applications to enhance mobile worker productivity and convenience
- Role-based grouping of users, devices, and applications to deliver priority, QoS, and security in accordance with business needs
- Seamless roaming across an entire multi-subnet campus without the need for cumbersome client software.
- Integrated management, security, and QoS features reduce operating cost and ensure a consistent user experience regardless of location.

OPERATIONAL EFFICIENCY

- Centralized visibility and control from Extreme Networks Wireless Management Suite and Extreme Networks NMS accelerate problem resolution, optimize network utilization, and automate management
- Adaptive architecture reduces complexity and optimizes information flow for each application
- Dynamic Radio Management ensures optimal AP coverage and maximizes the availability and quality of wireless service across the enterprise
- Flexible Client Access optimizes throughput for 802.11n clients in today's mixed a/b/g and n client environments

SECURITY

- Authentication and authorization functions include role-based access control (using 802.1X, MAC, and captive portal) and authentication at the AP
- Wireless Intrusion Prevention (WIPS) functions provide continuous scanning, threat classification, rogue AP detection, and countermeasures against possible attacks
- Integration of security policies (NAC, IPS) across the wired/wireless networks enables quick diagnosing and resolution of security threats
- Integration of Policy Manager across the wired/ wireless networks dynamically oversees user access at the wireless network point of entry

SUPPORT AND SERVICE

- Industry-leading customer satisfaction and first call resolution rates
- Lifetime warranty for indoor access points
- Personalized services, including site surveys, network design, installation, and training

Overview

The AP3600 series is the first 802.11abgn indoor access point in the industry to support 3x3 MIMO performance using existing 802.3af power investments. This access point is designed to operate in enterprise environments that require always-on connectivity. The AP3600 Series is equally adept at serving high-bandwidth video applications as well as low-latency voice applications. The AP3610 comes with an integrated six antenna array for ease of installation. The AP3620 includes three RP-SMA antenna connectors supporting dual-band antennas for RF complex environments.

The AP3600 platform supports dynamic radio management, spectrum analysis, self-forming and self-healing meshing, security, role-based authentication, authorization, and access control. The 3x3:2 platform is capable of delivering 600Mbps over-the-air-performance and up to 50,000 packets per second on the wire port. Multiple antenna offerings (e.g., omni, sector, panel) ensure that the AP3620 deployment can be optimized to meet any coverage or capacity need.

Technical Specifications

PRODUCT FEATURES	AP3765I/E
GENERAL	
High performance enterprise class AP	√
Number of radios	2
MIMO implementation for high performance 11n throughputs	3x3
Number of spatial streams	3
Maximum Throughput Per Radio / Total	300Mbps / 600Mbps
Wired performance in packets per second (pps)	50,000 pps
Number of SSIDs supported per radio / total	8 / 16
Simultaneous users per radio / total	127 / 254
Simultaneous Voice calls (802.11b, G711, R>80)	12
Mode of operation	Semi-autonomous
Plug and play operation/Zero touch deployment	√
Security and Standards	WPA, WPA2 (AES), 802.11i, 802.1x, IPSec, IKEv2, PKCS #10, X509 DER / PKCS #12
MULTIPLE OPERATING MODES	
Clients serving access points	√
Intelligent thin AP	Encryption, Security, QoS and RF management done on AP
Simultaneous RF monitoring and client services	√
Multi-channel WIDS	
Multi-channel WIPS	√
Remote access point	√
RF spectrum analysis	√
Self-forming and self-healing meshing	√
Bridging data traffic at AP and/or at controller simultaneously	√
RADIO CHARACTERISTICS	
Max transmit power	
Radio 1 (5GHz)	22 dBm
Radio 2 (2.4GHz)	23 dBm
Max antenna gain (integrated antenna)	
Radio 1 (5GHz)	6 dBi (AP3610) 5 dBi (AP3620)
Radio 2 (2.4GHz)	3 dBi (AP3610) 4 dBi (AP3620)
ADAPTIVE RADIO MANAGEMENT	
Dynamic Channel Control	802.11h: DFS & TPC support (ETSI)
Efficient use of the spectrum with a multi-channel architecture	√
Automatic transmit power and channel control	√
Self-healing with coverage gap detection	√
Band steering with multiple steering modes	√
Spectrum load balancing of clients	√
Airtime fairness	√
Performance protection in congested RF environments	√
Mitigates co-channel interference with coordinated access	√
QOS FOR APPLICATIONS	
Quality of Service (WMM, 802.11e)	√
Call Admission Control (TSPEC)	√
Power Save (U-APSD)	√
Fast secure roaming and handover between APs	√

Pre-Authentication (Pre-Auth)	√
Opportunistic Key Caching (OKC)	√
Support voice, video and data using the same SSID	√
Prioritize voice over data for both tagged and untagged traffic	√
Rate limiting (rule and user-based)	√
Rule and role based QoS processing	√
MULTICAST RATE CONTROL	
Multicast to Unicast Conversion	√
Adaptable rate multicast	√
Power save mode optimization for multicast	√
WIRELESS SERVICES	
Media Access Protocol	CSMA/CA with ACK
Data Rates	802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11b: 1, 2, 5.5, 11 Mbps 802.11g: 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, 54 Mbps 802.11n: See 802.11n Performance table below
Frequency Bands	**802.11a/n:** • 5.15 to 5.25 GHz (FCC / IC / ETSI) – Indoor • 5.25 to 5.35 GHz (FCC / IC / ETSI) – Indoor/Outdoor • 5.47 to 5.725 GHz (FCC / IC / ETSI) – Indoor • 5.725 to 5.850 GHz (FCC / IC) – Indoor/Outdoor **802.11b/g/n:** • 2.400 to 2.4835 GHz (FCC / IC / ETSI) – Indoor/Outdoor
Wireless Modulation	802.11a: OFDM 802.11b: DSSS 802.11g: DSSS and OFDM 802.11n: BPSK, QPSK, 16QAM, 64QAM with OFDM 802.11n High-throughput (HT) support: HT 20/40 802.11n Packet aggregation: A-MPDU, A-MSDU
INTERFACES	
# 10/100/1000 Base T Ethernet autosensing link	1
Console port for the ease of installation and management	√
MOUNTING	
Wall mounting bracket	√
Drop-ceiling mounting bracket	Optional
Environmental	**Operating:** Temperature 0º C to +50º C (+32º F to +122º F) Humidity 0% 95% (noncondensing) **Storage:** Temperature -5º C to +50º C (+23º F to +122º F) **Transportation:** Temperature -40º C to +70º C (-40º F to +158º F)
Safety	UL / IEC / EN 60950-1; CAN/CSA 22.2 # 60950-1-03 UL 2043 Plenum Rating (Indoor Access Points) European 2006/95/EC Low Voltage Directive
Compliance	• FCC CFR 47 Part 15.107 and 15.109 Class B (FCC 47 CFR, Part 15.205, 15.207, 15.209, FCC 47 CFR, Part 2.109, 2.1093, FCC OET No. 65) • ICES-003 Class B • RSS-210, RSS-102 (RF Exposure) • R&TTE Directive 1999/5/EC • • EN 301 893 • EN 300 328 • 2004/108/EC EMC Directive • EN 301 489 -1 & 17 • EN55011/CISPR 11 Class B, Group 1 ISM • EN55022/CISPR 22 Class B • EN55024/CISPR 24 • EN / UL 60601-1-2 • EN 50385
MECHANICAL	
Dimensions (W x H x L)	(8.4" x 2.2" x 7.1") – AP3610 / (8.4" x 2.2" x 7.1") – AP3620
Weight	628.4g – AP3610 / 649g – AP3620
Max power consumption	12.8W (Typical 11W)
Warranty	Lifetime

Ordering Information

PART NUMBER	DESCRIPTION
ACCESS POINTS	
WS-AP3610	Dual Radio 802.11a/b/g/n, 3x3:2, indoor access point with six internal antenna array
WS-AP3610-IL	Dual Radio 802.11a/b/g/n, 3x3:2, indoor access point with six internal antenna array – Israel Only
WS-AP3620	Dual Radio 802.11a/b/g/n, 3x3:2, indoor access point with three reverse polarity SMA connectors for external antennas
WS-AP3620-IL	Dual Radio 802.11a/b/g/n, 3x3:2, indoor access point with three reverse polarity SMA connectors for external antennas – Israel Only
ANTENNAS (OPTIONAL FOR AP3620)	
WS-AI-DT04360	Indoor, 2.4GHz / 5GHz, Triple-feed, 3/4 dBi, Omni, Ceiling
WS-AI-DT05120	Indoor, 2.4GHz / 5GHz, Triple-feed, 5 dBi, 120 deg, Sector
WS-AO-5D16060	Outdoor, 5.15-5.875 GHz, Dual-polarization 16 dBi, 60 deg, sector antenna with reverse polarity type-N jack connector
WS-AO-5D23009	Outdoor, 5.15-5.875 GHz, Dual-polarization, 23 dBi, 9 deg, panel antenna with reverse polarity type-N jack connector
WS-AO-DS05360	Outdoor, 2.4-2.5/5.15-5.875 GHz, 5 dBi, omnidirectional, baton antenna with reverse polarity type-N jack connector
CABLES	
WS-CAB-PT20P	20 inch pigtail with reverse polarity type-N plug used to connect AP to lightning protector or directly to an antenna
WS-CAB-PT20J	20 inch pigtail with reverse polarity type-N jack used to connect AP to the LMR cables
WS-CAB-LPM	Dual-band lightning protector with reverse polarity type-N jack on both ends
WS-CAB-6DBATTN	6db attenuator with RSMA connectors
WS-CAB-10DBATTN	10db attenuator with RSMA connectors
WS-CAB-L200C20	20 foot LMR200 cable with reverse polarity type-N plugs on both ends
WS-CAB-L400C06	6 foot LMR400 cable with reverse polarity type-N plugs on both ends
WS-CAB-L400C50	50 foot LMR400 cable with reverse polarity type-N plugs on both ends
ACCESSORIES (OPTIONAL)	
WS-MB361020-01	Secure mounting Kit with Kensington lock slot and integrated cable routing for AP36xx
WS-MB361020-12	Drop ceiling mounting bracket for indoor AP36xx (9/16 or 15/16 rail)
WS-MB361020-13	Drop ceiling mounting bracket for indoor AP36xx (1 1/2 inch rail)
WS-MB361020-21	Drop ceiling rail adjustable bracket for 1/2", 15/16" and 1 1/2 rails" (requires WS-MB361020-01 to be ordered seperately)
WS-MBUNIVERSAL-01	Universal mounting bracket adapter for existing installs (Cisco, Aruba, Trapeze, RoamAbout) - Refer to manual for specific access point model support
WS-PS361020-MR	AP36xx AC Power Supply - Multi-Region (not available in the EU)
WS-PS3X48-MR	AP3000 Series AC Power Supply - Multi-Region
MID-SPAN POE DEVICES (OPTIONAL)	
PD-3501G-ENT	Single port, 1 Gigabit 802.3af PoE Midspan

802.11n Performance Data Rates (Mbps)

2.4GHZ/5GHZ					
	SPATIAL STREAMS	HT20 NORMAL GI	HT20 SHORT GI	HT40 NORMAL GI	HT40 SHORT GI
MCS0	1	6.5	NA	13.5	15
MCS1	1	13	NA	27	30
MCS2	1	19.5	NA	40.5	45
MCS3	1	26	NA	54	60
MCS4	1	39	NA	81	90
MCS5	1	52	NA	108	120
MCS6	1	58.5	NA	121.5	135
MCS7	1	65	72.2	135	150
MCS8	2	13	NA	27	30
MCS9	2	26	NA	54	60
MCS10	2	39	NA	81	120
MCS11	2	52	NA	108	150
MCS12	2	78	NA	162	180
MCS13	2	104	NA	216	240
MCS14	2	117	NA	243	270
MCS15	2	130	144.4	270	300
MCS16	3	19.5	NA	40.5	45
MCS17	3	39	NA	81	90
MCS18	3	58.5	NA	121.5	135
MCS19	3	78	NA	162	180
MCS20	3	117	NA	243	270
MCS21	3	156	173.3	324	360
MCS22	3	175.5	195	364.5	405
MCS23	3	195	216.7	405	450

Receive Sensitivity (dBm)

2.4GHZ/5GHZ				
	SPATIAL STREAMS	HT20 NORMAL GI	HT40 NORMAL GI	HT40 SHORT GI
MCS0	1	6.5	13.5	15
MCS1	1	13	27	30
MCS2	1	19.5	40.5	45
MCS3	1	26	54	60
MCS4	1	39	81	90
MCS5	1	52	108	120
MCS6	1	58.5	121.5	135
MCS7	1	65	135	150
MCS8	2	13	27	30
MCS9	2	26	54	60
MCS10	2	39	81	120
MCS11	2	52	108	150
MCS12	2	78	162	180
MCS13	2	104	216	240
MCS14	2	117	243	270
MCS15	2	130	270	300

Warranty

As a customer-centric company, Extreme Networks is committed to providing quality products and solutions. In the event that one of our products fails due to a defect, we have developed a comprehensive warranty that protects you and provides a simple way to get your products repaired or media replaced as soon as possible. For full warranty terms and conditions please go to:

www.extremenetworks.com/support/warranty.aspx.

Service & Support

Extreme Networks Networks provides comprehensive service offerings that range from Professional Services to design, deploy and optimize customer networks, customized technical training, to service and support tailored to individual customer needs. Please contact your Extreme Networks account executive for more information about Extreme Networks Service and Support.

Extreme networks

http://www.ExtremeNetworks.com/contact / Phone +1-408-579-2800