

# IdentiFi™ AP3710i/e

High Performance, Enterprise-Grade for High-Density Deployments

## 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



## Product Overview

The AP3710 is a high-performance 802.11abgn indoor access point purpose built for high-density deployments. This access point is designed to operate in heavy-user environments such as universities, schools, hotel lobbies, conference centers, and stadiums. The high-performance AP is equally adept at serving high-bandwidth video applications as well as low-latency voice applications. The AP3710i comes with an integrated six antenna array for ease of installation. The AP3710e requires professional installation and includes six RP-SMA antenna connectors supporting both 2.4GHz and 5GHz band antennas. The power efficient access point is powered via 802.3af Power over Ethernet.

The AP3710 comes packed with the latest in Wi-Fi technology including dynamic radio management, spectrum analysis with interference classification, beamforming, self-forming and self-healing meshing, security, role-based authentication, authorization, and access control. This 3x3:3 platform is capable of delivering 900Mbps over-the-air-performance and up to 60,000 packets per second on the wire port. Multiple antenna offerings (e.g., omni, sector, and panel) ensure that the AP3710e deployment can be optimized to meet any coverage or capacity need.

## 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

## Technical Specifications

PRODUCT FEATURES	AP3710i/e
<b>GENERAL</b>	
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	450Mbps / 900Mbps
Wired performance in packets per second (pps)	60,000 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 or greater
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
<b>MULTIPLE OPERATING MODES</b>	
Clients serving access points	✓
Intelligent thin AP	Encryption, Security, QoS and RF management done on AP
Distributed and centralized data paths within same SSID	✓
Application based distributed and centralized data paths within same session	✓
Simultaneous RF monitoring and client services	✓
In-channel WIDS	✓
In-channel WIPS	✓
Dedicated multi-channel WIDS (Guardian mode)	✓
Dedicated multi-channel WIPS (Guardian mode)	✓
Dedicated multi-channel RF spectrum analysis and fingerprinting	✓
Locates devices and threats via RF triangulation	✓
Self-forming and self-healing meshing	✓
Remote access point	✓
Hardware-based, end-to-end data and control plane encryption	✓
Private and public cloud deployments	✓
<b>HYBRID OPERATION</b>	
Security scanning and serve clients on same radio	✓
Security scanning and spectrum analysis on same radio	✓
Spectrum analysis and serve clients on same radio	✓
Multi-channel dedicated security scanning and spectrum analysis	✓
<b>RADIO CHARACTERISTICS</b>	
<b>Max transmit power</b>	
Radio 1 (5GHz)	25 dBm
Radio 2 (2.4GHz)	26 dBm

<b>Max antenna gain (integrated antenna)</b>	
Radio 1 (5GHz)	3 dBi (AP3710i)
Radio 2 (2.4GHz)	3 dBi (AP3710i)
<b>ADAPTIVE RADIO MANAGEMENT</b>	
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	✓
Mitigates adjacent channel interference with optimized receive sensitivity	✓
Efficient reuse of channels at shorter intervals	✓
Mitigates non 802.11 inference without dedicated radios	✓
<b>QOS FOR APPLICATIONS</b>	
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)	✓
Bonjour/LLMNR/UPnP identification, containment and control	✓
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	✓
<b>MULTICAST RATE CONTROL</b>	
Multicast to Unicast Conversion	✓
Adaptable rate multicast	✓
Power save mode optimization for multicast	✓
<b>WIRELESS SERVICES</b>	
Media Access Protocol	CSMA/CA with ACK
Data Rates	<p>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</p> <p><b>Receive Sensitivity</b></p> <p>802.11a:  • -92dBm @ 6Mbps  • -78dBm @ 54Mbps</p> <p>802.11g:  • -92dBm @ 6Mbps  • -79dBm @ 54Mbps</p> <p>802.11b:  • -92dBm @ 1Mbps  • -90dBm @ 11Mbps</p> <p>802.11n: See 802.11n Receive Sensitivity Table below</p>
Frequency Bands	<p>802.11a/n:  • 5.15 to 5.25 GHz (FCC / IC / ETSI)  • 5.25 to 5.35 GHz (FCC / IC / ETSI)  • 5.47 to 5.725 GHz (FCC / IC / ETSI)  • 5.725 to 5.850 GHz (FCC / IC)</p> <p>802.11b/g/n:  • 2.400 to 2.4835 GHz (FCC / IC / ETSI)</p>

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 802.11n Advanced Features: LDPC, STBC and TxBF
<b>INTERFACES</b>	
# 10/100/1000 Base T Ethernet autosensing link	1
Console port for the ease of installation and management	√
<b>MOUNTING</b>	
Wall mounting bracket	√
Drop-ceiling mounting bracket	Optional
Environmental	Plenum rated (EN/UL 2043)  <b>Operating:</b> Temperature 0° C to +50° C (+32° F to +122° F) Humidity 0% 95% (noncondensing)  <b>Storage:</b> Temperature -5° C to +50° C (+23° F to +122° F) <b>Transportation:</b> Temperature 40° C to +70° C (40° F to +158° F)
Compliance	<ul style="list-style-type: none"> <li>• FCC CFR 47 Part 15, Class B</li> <li>• ICES-003 Class B</li> <li>• FCC Subpart C 15.247</li> <li>• FCC Subpart E 15.407</li> <li>• RSS-210</li> <li>• EN 301 893</li> <li>• EN 300 328</li> <li>• EN 301 489 1 &amp; 17</li>   <li>• EN 50385</li> <li>• EN 55011 (CISPR 11) Class B Group 1 ISM</li> <li>• EN 55022 (CISPR 22)</li> <li>• AS/NZS3548 (CISPR22)</li> </ul> <p><b>International (including China)</b></p> <ul style="list-style-type: none"> <li>• IEC 60950-1</li> <li>• IEC 60825</li> </ul> <p><b>Europe</b></p> <ul style="list-style-type: none"> <li>• EN 60950-1</li> <li>• EN 60825</li> </ul> <p><b>USA/Canada/Mexico (NAFTA)</b></p> <ul style="list-style-type: none"> <li>• UL 60950-1</li> <li>• CSA 22.2 No.60950-1-03</li> </ul> <p><b>Australia</b></p> <ul style="list-style-type: none"> <li>• AS/NZS 60950.1</li> </ul>
<b>MECHANICAL</b>	
Dimensions (W x H x L)	7.39" x 1.50" x 7.89" (AP3710i) 9.44" x 1.50" x 7.89" (AP3710e)
Weight	810g (AP3710i) 910g (AP3710e)
Max power consumption	12.8W
Warranty	Lifetime

## Ordering Information

PART NUMBER	DESCRIPTION
<b>ACCESS POINTS</b>	
WS-AP3710i	Dual Radio 802.11a/b/g/n, 3x3:3, indoor access point with six internal antenna array
WS-AP3710e	Dual Radio 802.11a/b/g/n, 3x3:3, indoor access point with six reverse polarity SMA connectors for external antennas (antennas must be ordered separately)
<b>ANTENNAS (REQUIRED FOR AP3710E)</b>	
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-AI-DX02360	Indoor, 2.4GHz / 5GHz, Six-feed, 2 dBi, Omni, Ceiling
WS-AI-DX07025	Indoor, 2.4GHz / 5GHz, Six-feed, 7 dBi, 25 deg, Sector
<b>CABLES / CONNECTORS</b>	
WS-CAB-6DBATTN	6db attenuator with RSMA connectors
WS-CAB-10DBATTN	10db attenuator with RSMA connectors
<b>ACCESSORIES</b>	
WS-MB3700-01	Adjustable drop ceiling mounting bracket for the 3710
<b>MID-SPAN POE DEVICES (OPTIONAL)</b>	
PD-3501G-ENT	Single port, 1 Gigabit 802.3af PoE Midspan

## 802.11n Performance Data Rates (Mbps)

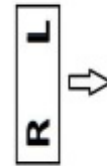
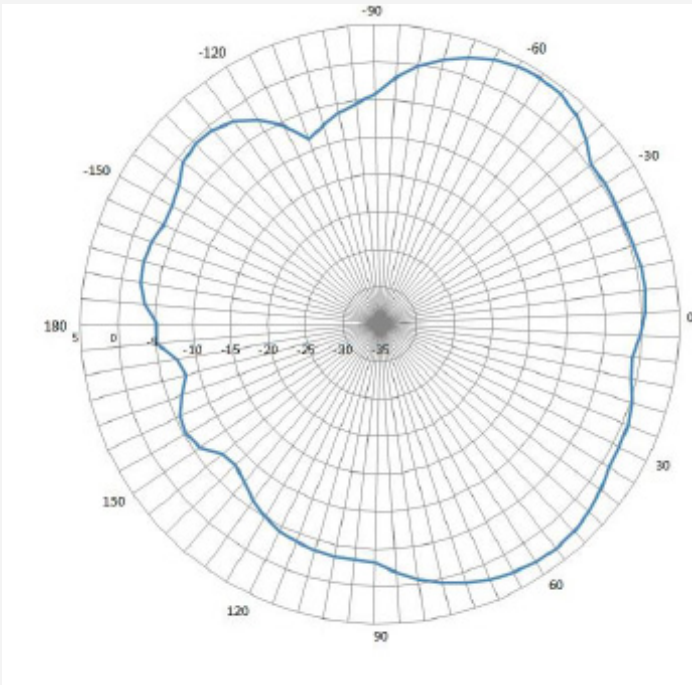
	SPATIAL STREAMS	2.4GHZ		5GHZ	
		HT20 NORMAL GI	HT20 SHORT GI	HT40 NORMAL GI	HT40 SHORT GI
MCS0	1	6.5	7.2	13.5	15
MCS1	1	13	14.4	27	30
MCS2	1	19.5	21.7	40.5	45
MCS3	1	26	28.9	54	60
MCS4	1	39	43.3	81	90
MCS5	1	52	57.8	108	120
MCS6	1	58.5	65	121.5	135
MCS7	1	65	72.2	135	150
MCS8	2	13	14.4	27	30
MCS9	2	26	28.9	54	60
MCS10	2	39	43.3	81	90
MCS11	2	52	57.8	108	120
MCS12	2	78	86.7	162	180
MCS13	2	104	115.6	216	240
MCS14	2	117	130	243	270
MCS15	2	130	144.4	270	300
MCS16	3	19.5	21.7	40.5	45
MCS17	3	39	43.3	81	90
MCS18	3	58.5	65	121.5	135
MCS19	3	78	86.7	162	180
MCS20	3	117	130	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)

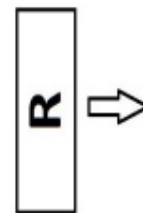
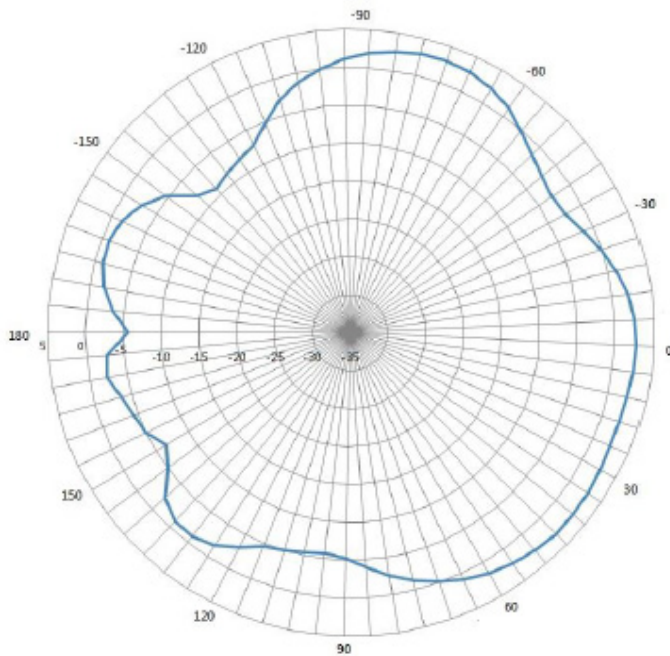
	SPATIAL STREAMS	2.4GHZ		5GHZ	
		HT20 NORMAL GI	HT40 SHORT GI	HT20 NORMAL GI	HT40 SHORT GI
MCS0	1	-85	-82	-90.5	-86.5
MCS1	1	-86	-83	-88	-85
MCS2	1	-86.5	-82.5	-85.5	-82
MCS3	1	-85	-82	-83	-80
MCS4	1	-81	-78	-79	-76
MCS5	1	-73	-70	-71.5	-68
MCS6	1	-71	-68	-70	-67
MCS7	1	-70.5	-67.5	-68	-64
MCS8	2	-82.5	-80	-88.5	-79
MCS9	2	-86	-83	-86	-83
MCS10	2	-86.5	-83.5	-85	-82
MCS11	2	-82	-79	-86	-83
MCS12	2	-79.5	-77	-78	-75.5
MCS13	2	-78	-75	-74	-72
MCS14	2	-75	-72	-72	-69
MCS15	2	-74	-71.5	-70	-66
MCS16	3	-93	-90.5	-93	-90
MCS17	3	-86	-83	-87	-84
MCS18	3	-87	-84.5	-88	-85
MCS19	3	-82	-79	-89	-86
MCS20	3	-80.5	-78	-81	-78.5
MCS21	3	-81	-78	-77	-74
MCS22	3	-74	-71	-71	-68
MCS23	3	-71	-68.5	-69	-64

# 3710i Antenna Radiation Patterns

## HORIZONTAL RADIATION PATTERN 2.4GHZ



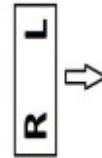
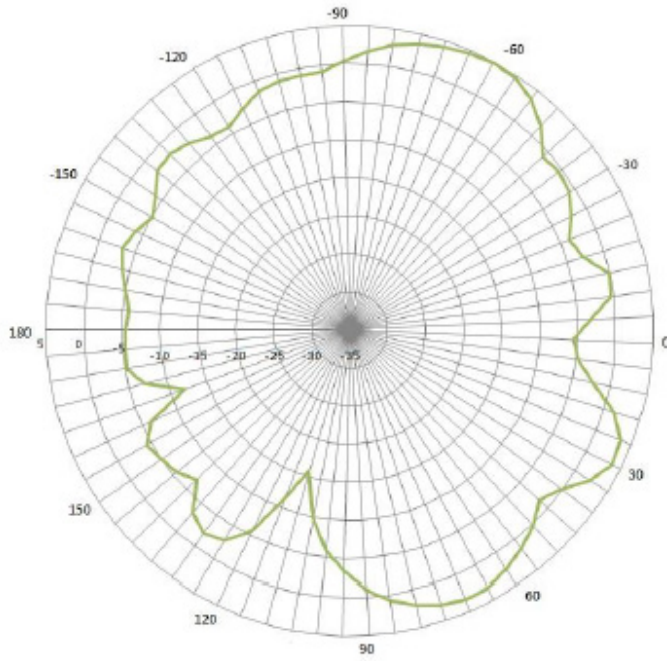
## VERTICAL RADIATION PATTERN 2.4GHZ



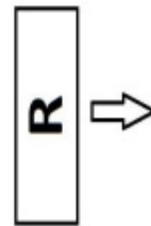
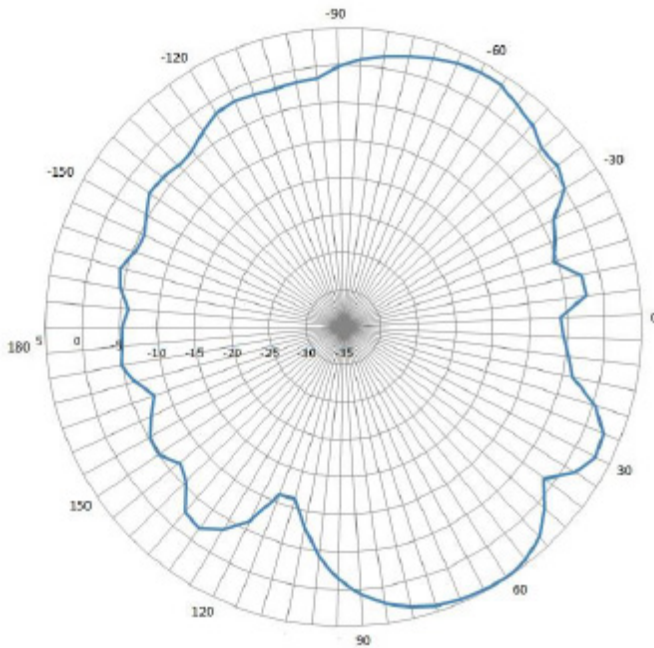


# 3710i Antenna Radiation Patterns Cont.

## HORIZONTAL RADIATION PATTERN 5GHZ



## VERTICAL RADIATION PATTERN 5GHZ



## 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: <http://www.extremenetworks.com/support/enterasys-support/how-to/warranty/>.

## Service & Support

Extreme Networks provides comprehensive service offerings that range from Professional Services to design, deploy and optimization of 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.



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