

3805i/e Indoor Access Point

Enterprise-Grade Performance and Security Without the Premium Cost

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 Control Center accelerates problem resolution, optimize network utilization, and automate management
- Adaptive architecture reduces complexity and optimizes information flow for each application
- Dynamic Radio Management when used for planning and monitoring ensures optimal spectrum coverage resulting in the best end-user quality of experience
- Flexible Client Access optimizes throughput for 802.11ac/n clients in today's mixed ac, n, and a/b/g client environments

FLEXIBLE MANAGEMENT OPTIONS

- On premise, with hardware or virtual ExtremeWireless Appliance (for WS-AP3805i/e, 30912 & 30913)
- ExtremeCloud™ Cloud-Managed Networking Platform (for 30912 & 30913)



Product Overview

The AP3805 is a feature rich 802.11ac and 802.11abgn indoor access point that delivers enterprise-grade performance and security without the premium cost. Designed to blend into the office, classroom or hotel environment, the AP3805 is ideal for providing secure 802.11ac and 802.11abgn connectivity for medium-density environments such as schools, hotels and conference centers.

The AP3805i comes with an integrated four antenna array for ease of installation. The AP3805e requires professional installation and includes four RP-SMA antenna connectors supporting both 2.4GHz and 5GHz band antennas. AP3805 uses 802.3af Power over Ethernet (PoE) without reducing its performance nor degrading its enterprise-grade capabilities. An optional external power supply is available for deployments that do not support Power over Ethernet.

The AP3805 is built on the latest Wi-Fi technology including 802.11ac, dynamic radio management, and spectrum analysis with interference classification, beam forming, self-forming and self-healing meshing, security, role-based authentication, authorization, and access control. The 2x2:2 platform is capable of delivering up to 1.17Gbps over-the-air-performance and up to 40,000 packets per second on the wire port. The AP3805 comes with brackets to be installed on to most drop ceiling and wall mounts. Multiple antenna offerings (e.g., omni, sector, and panel) ensure that the AP3805e deployment can be optimized to meet any unique 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

Specifications

| PRODUCT FEATURES | AP3805I/E |
|--|---|
| GENERAL | |
| High performance enterprise class AP | ✓ |
| Number of radios | 2 |
| MIMO implementation for high performance 11ac and 11n throughputs | 2x2 |
| Number of spatial streams | 2 |
| Maximum Throughput 2.4GHz Radio | 300Mbps |
| Maximum Throughput 5GHz Radio | 867Mbps |
| Maximum Throughput per AP | 1.17Gbps |
| RFC2285 Wire/Wireless Forwarding Rate | 40,000 packets per second |
| Number of SSIDs supported per radio/total | 8 / 16 |
| Simultaneous users per radio/total | 312 |
| Simultaneous Voice Calls (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 |
| MULTIPLE OPERATING MODES | |
| 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 user/device 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 encryption of control traffic | ✓ |
| Private and public cloud deployments | ✓ |
| HYBRID OPERATION | |
| 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 | ✓ |
| MAX RADIATED POWER | |
| Radio 1 (5GHz) | 26 dBm* |
| Radio 2 (2.4GHz) | 25 dBm* |
| Max antenna gain (integrated antenna) | |

* Actual available power would vary based on local regulatory requirement and actual channels used for operation

| PRODUCT FEATURES | AP3805I/E |
|--|---|
| MAX ANTENNA GAIN (INTEGRATED ANTENNA) | |
| Radio 1 (5GHz) | 5 dBi (AP3805i) |
| Radio 2 (2.4GHz) | 3 dBi (AP3805i) |
| ADAPTIVE RADIO MANAGEMENT | |
| Dynamic Channel Control | 802.11h: DFS and TPC support (ETSI) |
| Protection Management Frame (802.11w) | ✓ |
| Radio Resource Management (802.11k) | ✓ |
| 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 interference without dedicated radios | ✓ |
| QOS FOR APPLICATIONS | |
| Quality of Service (WMM, 802.11e) | ✓ |
| Power Save (U-APSD) | ✓ |
| Fast secure roaming and handover between APs | ✓ |
| Fast transition roaming (802.11r) | ✓ |
| Pre-Authentication (Pre-Auth) | ✓ |
| Opportunistic Key Caching (OKC) | ✓ |
| Bonjour/LLMNR/UPnP identification, containment and control | ✓ |
| Supports voice, video and data using the same SSID | ✓ |
| Prioritizes 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 | <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 802.11ac: See 802.11ac Performance Table below</p> <p>Receiver Sensitivity</p> <p>802.11a: • -92dBm @ 6Mbps • -77dBm @ 54Mbps</p> <p>802.11g: • -91dBm @ 6Mbps • -78dBm @ 54Mbps</p> <p>802.11n: See 802.11n Receiver Sensitivity Table below 802.11ac: See 802.11ac Receiver Sensitivity Table below</p> |

| PRODUCT FEATURES | AP3805I/E |
|--|--|
| WIRELESS SERVICES | |
| Frequency Bands | 802.11ac/a/n: <ul style="list-style-type: none"> • 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) 802.11b/g/n: <ul style="list-style-type: none"> • 2.400 to 2.4720 GHz (FCC/IC) • 2.400 to 2.4835 GHz (ETSI) *FCC/IC DFS certification in progress |
| Wireless Modulation | 802.11ac: BPSK, QPSK, 16QAM, 64QAM, 256QAM with OFDM 802.11ac Packet aggregation: A-MPDU, A-MSDU 802.11ac Very High-Throughput (VHT): VHT20/40/80 802.11ac Advanced Features: LDPC, STBC, Maximum Likelihood (ML) Detection 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 802.11a: BPSK, QPSK, 16QAM, 64QAM with OFDM 802.11g: DSSS and OFDM 802.11b: DSSS |
| INTERFACES | |
| # 10/100/1000 Base T Ethernet autosensing link | 1 |
| MOUNTING | |
| Wall mounting (included) | ✓ |
| Flush and Protruded drop-ceiling mounting bracket (9/16" and 15/16" flat T-bar included) | ✓ |
| ENVIRONMENTAL | |
| Environmental | Plenum rated (UL 2043) Operating: Temperature 0° C to +45° C (+32° F to +113° F) Humidity 0%-95% (noncondensing) Storage: Temperature -50° C to +70° C (-58° F to +158° F) Transportation: Temperature -50° C to +70° C (-58° F to +158° F) |
| WIRELESS AND EMC | |
| Compliance | •FCC CFR 47 Part 15, Class B •ICES-003 Class B •FCC Subpart C 15.247 •FCC Subpart E 15.407 •RSS-210 •EN 301 893 •EN 300 328 •EN 301 489 1 and 17 •EN 62311 •EN 55022 (CISPR 22) •EN 60601-1-2 •AS/NZS4268 + CISPR22 |
| Safety | •IEC 60950-1 •EN 60950-1 •UL 60950-1 •CSA 22.2 No.60950-1-03 •AS/NZS 60950.1 |
| MECHANICAL | |
| Dimensions (Outer Diameter x Height) | 6.18" x 1.63" - AP3805i 6.71" x 2.03" - AP3805e |
| Weight | 0.75 lbs (0.34 kg) - AP3805i 0.84 lbs (0.38 kg) - AP3805e |
| Max power consumption | 9.6W |
| Warranty | Lifetime |

Ordering Information

| PART NUMBER | DESCRIPTION |
|--|--|
| ACCESS POINTS | |
| WS-AP3805i | Dual Radio 802.11ac/abgn, 2x2:2 MIMO indoor access point with four internal antenna array (Requires V9.15.01 or higher) |
| WS-AP3805e | Dual Radio 802.11ac/abgn, 2x2:2 MIMO indoor access point with four reverse polarity SMA connectors for external antenna array (Requires V9.15.02 or higher, and antennas must be ordered separately) |
| 30912 | AP3805i_FCC (US, Puerto Rico, Colombia) ExtremeCloud™ Ready Dual Radio 802.11ac/abgn, 2x2:2 MIMO indoor access point with four internal antenna array (Requires 10.01.04 or higher) |
| 30913 | AP3805i_ROW ExtremeCloud™ Ready Dual Radio 802.11ac/abgn, 2x2:2 MIMO indoor access point with four internal antenna array (Requires 10.01.04 or higher) |
| ANTENNAS (REQUIRED FOR AP3805E) | |
| WS-ANT-2DIP-2 | 2.4GHz Indoor Dipole Antenna for 3805e only (2 pack) |
| WS-ANT-5DIP-2 | 5GHz Indoor Dipole Antenna for 3805e only (2 pack) |
| WS-AI-DD05120 (Only is ETSI regulatory domain countries) | Indoor, 2.4GHz/5GHz, Dual-feed, 5/5 dBi, 120 deg, Sector antenna (not available in the FCC/NAM regulatory domain) |
| WS-AI-DQ04360 | Indoor, 2.4GHz/5GHz, Quad-feed, 4/4 dBi, Omni |
| ACCESSORIES | |
| WS-MBI-DCU01 | Universal Mounting brackets for drop ceiling rails |
| WS-PSI12V-MR1 | Multi-region 12V Indoor External Power Supply for the AP3805i/e |
| WS-MBI-WALL02 | Indoor wall jack mounting bracket |
| MID-SPAN POE DEVICES | |
| PD-3501G-ENT | Single port, 1 Gigabit 802.3af PoE Midspan |

802.11ac Performance

DATA RATES (MBPS)

| | STREAMS | VHT20 | | VHT40 | | VHT80 | |
|------|---------|-----------|----------|-----------|----------|-----------|----------|
| | | NORMAL GI | SHORT GI | NORMAL GI | SHORT GI | NORMAL GI | SHORT GI |
| MCS0 | 1 | 6.5 | 7.2 | 13.5 | 15 | 29.3 | 32.5 |
| MCS1 | 1 | 13 | 14.4 | 27 | 30 | 58.5 | 65.0 |
| MCS2 | 1 | 19.5 | 21.7 | 40.5 | 45 | 87.8 | 97.5 |
| MCS3 | 1 | 26 | 28.9 | 54 | 60 | 117.0 | 130.0 |
| MCS4 | 1 | 39 | 43.3 | 81 | 90 | 175.5 | 195.0 |
| MCS5 | 1 | 52 | 57.8 | 108 | 120 | 234.0 | 260.0 |
| MCS6 | 1 | 58.5 | 65 | 121.5 | 135 | 263.3 | 292.5 |
| MCS7 | 1 | 65 | 72.2 | 135 | 150 | 292.5 | 325.0 |
| MCS8 | 1 | 78.0 | 86.7 | 162.0 | 180.0 | 351.0 | 390.0 |
| MCS9 | 1 | NA | NA | 180.0 | 200.0 | 390.0 | 433.3 |
| MCS0 | 2 | 13 | 14.4 | 27 | 30 | 58.5 | 65.0 |
| MCS1 | 2 | 26 | 28.9 | 54 | 60 | 117.0 | 130.0 |
| MCS2 | 2 | 39 | 43.3 | 81 | 90 | 175.5 | 195.0 |
| MCS3 | 2 | 52 | 57.8 | 108 | 120 | 234.0 | 260.0 |
| MCS4 | 2 | 78 | 86.7 | 162 | 180 | 351.0 | 390.0 |
| MCS5 | 2 | 104 | 115.6 | 216 | 240 | 468.0 | 520.0 |
| MCS6 | 2 | 117 | 130 | 243 | 270 | 526.5 | 585.0 |
| MCS7 | 2 | 130 | 144.4 | 270 | 300 | 585.0 | 650.0 |
| MCS8 | 2 | 156.0 | 173.3 | 324.0 | 360.0 | 702.0 | 780.0 |
| MCS9 | 2 | NA | NA | 360.0 | 400.0 | 780.0 | 866.7 |

802.11n Performance

DATA RATES (MBPS)

| | | 2.4GHZ | | 5GHZ | |
|-------|--------------|-------------------|------------------|-------------------|------------------|
| | DATA STREAMS | 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 |

Receiver Sensitivity (dBm)

| RECEIVER SENSITIVITY | | | |
|----------------------|--------------|--------------|--------------|
| RATE | 20 MHZ (dBm) | 40 MHZ (dBm) | 80 MHZ (dBm) |
| (MCS0, 1) | -92 | -89 | -86 |
| (MCS1, 1) | -91 | -88 | -85 |
| (MCS2, 1) | -88 | -85 | -82* |
| (MCS3, 1) | -84 | -81 | -78 |
| (MCS4, 1) | -81 | -78 | -75 |
| (MCS5, 1) | -77 | -74 | -71 |
| (MCS7, 1) | -75 | -72 | -69 |
| (MCS6, 1) | -74 | -71 | -68 |
| (MCS8, 1) | -70 | -67 | -64 |
| (MCS9, 1) | NA | -65 | -62 |
| (MCS0, 2) | -89 | -86 | -83 |
| (MCS1, 2) | -88 | -85 | -82 |
| (MCS2, 2) | -85 | -82 | -79 |
| (MCS3, 2) | -81 | -78 | -75 |
| (MCS4, 2) | -78 | -75 | -72 |
| (MCS5, 2) | -74 | -71 | -68 |
| (MCS6, 2) | -72 | -69 | -66 |
| (MCS7, 2) | -71 | -68 | -65 |
| (MCS8, 2) | -67 | -64 | -61 |
| (MCS9, 2) | NA | -62 | -59 |

| RATE | dBm |
|--------|-----|
| 54Mbps | -77 |
| 48Mbps | -80 |
| 36Mbps | -83 |
| 24Mbps | -85 |
| 18Mbps | -88 |
| 11Mbps | -91 |
| 9Mbps | -92 |
| 6Mbps | -92 |