ExtremeCloud IQ Controller v10.19.01.0027 Release Notes

Enhancements, Changes, Supported Devices, and Known Issues

9041091-00
May 28, 2026

ABSTRACT

This release notes document for ExtremeCloud™ IQ Controller version 10.19.01.0027 outlines technical enhancements, supported hardware, installation guidance, and known limitations for IT professionals managing unified access networks. This release introduces AP5022 (with an internal Omni directional antenna), AP5022FX (with selectable internal and external antennas), and AP5022S6D (with internal Sector antenna). These new Extreme Wi-Fi 7 access point models support 6 GHz Standard Power (AFC) and are ideal for deployment in high-density, high-throughput indoor environments, such as schools, warehouses, healthcare facilities, and stadiums. Other new features include new encryption options for 6 GHz radio network authentication on Wi-Fi 7 APs; AP5022/FX/S6D and AP5060D/U sensor radio support for AirDefense Essentials and AirDefense Services Platform (ADSP); and AFC enhancements, including AP4000/AP400-1 and AP3000/X support for 6 GHz Standard Power, and ExtremeCloud IQ Controller Mobile Companion app support for iOS available on Apple iPhone.

INTRODUCTION

The ExtremeCloud IQ Controller is a next generation orchestration application offering all the mobility services required for modern unified access deployments. The ExtremeCloud IQ Controller includes comprehensive critical network services for wireless and wired connectivity, wireless device secure onboarding, distributed and centralized data paths, role-based access control through the Application Layer (Layer 7), integrated location services, and IoT device onboarding through a single platform. Built on field-proven architectures with the latest technology, the embedded operating system supports containerization of applications, enabling future expansion of value-added applications for the unified access edge.

- The CE1000 is an application on the Universal Compute Platform 1130C, replacing the E1120 appliance with similar functionality and limits. It supports up to 250 APs/Defenders and 2,000 users standalone, or 500 APs and 4,000 users in a high-availability setup.

- The CE2000 is an application on the Universal Compute Platform 2130C, replacing the E2120 and E2122 appliances with similar functionality and limits. It supports up to 2000 APs/Defenders and 16,000 users standalone, or 4,000 APs and 32,000 users in a high-availability setup.

- The CE3000 is an application on the Universal Compute Platform 3150C, replacing the E3120 and E3125 appliances with similar functionality and limits. It supports up to 10,000 APs/Defenders and 50,000 users standalone, or 20,000 APs and 100,000 users in a high-availability setup.

- The E1120 is an appliance that meets the needs of entry to mid-level deployments, and is scalable to 250 APs/Defenders, 100 switches, and 4,000 mobility sessions in high-availability mode.

- The E2120 is an appliance that meets the needs of medium-sized, high-density and mission-critical deployments. It supports up to 4,000 APs/Defenders, 800 switches, and 32,000 mobility sessions in high-availability mode. Optionally, a redundant power supply can be ordered separately.

- The E2122 is an appliance that meets the needs of medium-sized, high-density and mission-critical deployments. It supports up to 4,000 APs/Defenders, 800 switches, and 32,000 mobility sessions in high-availability mode. Optionally, a redundant power supply can be ordered separately.

- The E3120 is an appliance that meets the needs of high-density and mission-critical deployments. It supports up to 20,000 APs/Defenders, 2,000 switches, and 100,000 mobility sessions in high-availability mode. Optionally, a redundant power supply can be ordered separately.

- The E3125 is an appliance that meets the needs of high-density and mission-critical deployments. It supports up to 20,000 APs/Defenders, 2,000 switches, and 100,000 mobility sessions in high-availability mode. Optionally, a redundant power supply can be ordered separately.

- The VE6120 is an elastic virtual appliance that supports up to 1,000 APs/Defenders, up to 400 switches, and 16,000 mobility sessions in high-availability mode, depending on the hosting hardware.

- The VE6120, VE6120H, and VE6120K offer elastic capacities to cover the full range of offerings as VMWare/MS Hyper-V/Linux KVM, ranging from VE6120/VE6120H/VE6120K-Small to VE6120/VE6120H/VE6120K-Large.

- The VE6125/VE6125K XL are virtual appliances that support up to 4,000 APs/Defenders, up to 400 switches, and 32,000 mobility sessions in high-availability mode, depending on the hosting hardware.

The ExtremeCloud IQ Controller can expand its capacity to meet any growing business needs. The hardware and virtual packages are available for purchase. The customer purchases adoption capacity as a Right-To-Use Subscription model, supporting flexible quantities (per managed device) and term (multiple-year extended term) options.

Enhancements in 10.19.01.0027	ID
Improved the underlying storage and processing of statistics data, resulting in lower memory usage and faster report generation. UI widgets that display statistics have been updated to better handle large datasets. **Note**: Statistics history will be cleared when upgrading to V10.19 or above from V10.18 or earlier versions.	XCC-5112
Extreme introduces AP5022, AP5022FX, and AP5022S6D access points, which are now generally available (GA) and are fully manageable with ExtremeCloud IQ Controller v10.19.01. These next-generation indoor access points are designed for high-density enterprise environments such as offices, healthcare, warehouses, and education campuses. Built on Wi-Fi 7 (802.11be), the AP5022 family delivers ultra-high throughput, low latency, and enhanced spectrum efficiency across the 2.4 GHz, 5 GHz, and 6 GHz bands. The AP5022 series features a quad-radio architecture with three 4x4:4 data radios and a dedicated tri-band sensor that provides continuous monitoring and improved security with AirDefense Essentials and AirDefense Services Platform (ADSP). Integrated dual IoT radios (BLE, Zigbee, Thread) support modern enterprise and smart-building use cases. The portfolio includes: **AP5022** – omnidirectional internal antennas for general enterprise coverage **AP5022S6D** – 60° directional internal antennas for focused coverage in industrial and warehouse deployments **AP5022FX** – external antenna support and extended temperature range for flexible and specialized environments. Antennas supported are AIO-DQ15021, AI-TQ08055, AIO-HQ17020, and AI-TP05360. **Note**: AI-TQ08055 will support 6 GHz radio in a future release.	XCC-5519
Radio 4 (sensor radio) on AP5060D/U can now be enabled to work with AirDefense Essentials and AirDefense Services Platform (ADSP).	XCC-6493
E2120 Controller is EOL and now deprecated	XCC-6968
Rogue Client Blocking with PMF Termination This release introduces an industry-leading security enhancement to block rogue access points and clients operating with Protected Management Frames (PMF). With the widespread adoption of WPA3 and mandatory PMF in 6 GHz networks, traditional deauthentication-based containment methods are no longer effective. This new capability enables the system to identify and actively terminate unauthorized devices leveraging PMF, strengthening network protection against advanced threats and unauthorized access in modern Wi-Fi environments.	XCC-7230

Enhancements in 10.19.01.0027	ID
Standard Power (SP) operation is now supported on AP3000, AP3000X, AP4000, and AP4000-1 in the United States and Canada. This enhancement allows these access points to operate at increased transmit power levels where permitted, delivering improved coverage and performance for 6 GHz operation.	XCC-7319
This release introduces support for DNS-based AP identification, enabling client devices to discover the connected AP's identity using a simple DNS query. When a client sends a DNS request for a configured virtual FQDN (for example, MyApName), the AP intercepts the request and responds directly with its hostname and management IP address, allowing administrators to infer the client's location based on established AP naming conventions.	XCC-7429
Wi-Fi 7 introduces mandatory support for GCMP-256 encryption on 6 GHz networks. This release adds the ability for users to configure encryption settings for supported network authentication types. • For **OWE**, **WPA3 Personal**, and **WPA3 Compatibility** authentication, options are *AES-CCM-128*, *AES-CCM-128 & GCMP-256*, or *GCMP-256*. • For **WPA3 Enterprise** and **WPA3 Enterprise Transition** authentication, options are *AES-CCM-128* or *AES-CCM-128 & GCMP-256*. Encryption settings are configured under Networks > WLANs > Auth Type > **Edit Privacy**.	XCC-7483
This release introduces the ExtremeCloud IQ Controller Mobile Companion app (AFC Mobile app) for iOS, expanding Indoor AFC deployment workflows to iPhone devices. With seamless ExtremeCloud IQ Controller integration, the app enables operators to configure Anchor APs using site and floor-based selection, ensuring efficient geolocation setup even without native Wi-Fi scanning support on iOS.	XCC-7591
Added support for MLO with Mesh (root and non-root) APs.	XCC-7592
Support for 1Gbps bandwidth option (power profile) at AT power for AP5022, AP5022FX, AP5022S6D and AP5060	XCC-7726

Changes in 10.19.01.0027	ID
Fixed an issue where 6GHz Low (6L) badges and heatmaps were not displayed on floor maps for some access points configured with the 6H/5G/6L Operational Mode. The floorplan now correctly shows a toggle to switch between 6GHz High and 6GHz Low views, with accurate channel legends and badge information for both bands.	XCC-7552
Fixed an issue where the 2.4 GHz channel heatmap was not rendered on RF Floorplan for AP5020 series and AP4060 series access points operating in 2.4G/5H/5L mode.	XCC-7610
Professional Install now allows all supported antenna types to be configured across all socket groups for all APs. Previously, antenna selection was restricted for sockets shared between radios. This	XCC-8066

Changes in 10.19.01.0027	ID
restriction has been removed — the UI now relies on the expert user to select the correct antenna.	
Fixed an issue where FQDN rule entries in policy roles appeared blank after saving the configuration. Thus, FQDN values are properly retained across saves and protocol changes.	CFD-13816
Fixed an issue where downstream throughput was significantly reduced when using secure tunnel with bridge-at-controller topologies. The root cause was a concurrency conflict during ESP encryption, which caused packet drops and degraded TCP performance.	CFD-14550
Fixed a memory leak in the certificate monitor process that could cause the controller to reboot due to low free memory.	CFD-16224
Fixed an issue where the radsecproxy service failed to start after a controller reboot due to a DNS timing issue, thus ensuring Guest Essentials services remain available after upgrades and reboots.	CFD-16616
Fixed an issue where the Save button was unresponsive when adding or editing VLANs from the Configure > Networks > WLANs page. The same page also prevented deletion of Radius server entries. VLAN and Radius server operations on the Networks > WLANs page now function correctly.	CFD-16762

Extreme Networks recommends that you thoroughly review this document prior to installing or upgrading this product.

For the latest firmware versions, visit the download site at:
www.extremenetworks.com/support/

FIRMWARE SPECIFICATION

Status	Version No.	Type	Release Date
Current Version	V.10.19.01.0027	Feature Release	May 28, 2026

SUPPORTED CONTROLLER APPLICATIONS AND APPLIANCES, ACCESS POINTS, AND SWITCHES

Product Name	Image
Applications	
ExtremeCloud IQ Controller CE1000 application for Universal Compute Platform 1130C	XIQC-10.19.01.0027-1.dke
ExtremeCloud IQ Controller CE2000 application for Universal Compute Platform 2130C	XIQC-10.19.01.0027-1.gse
ExtremeCloud IQ Controller CE3000 application for Universal Compute Platform 3150C	XIQC-10.19.01.0027-1.ble

Product Name	Image
Appliances	
ExtremeCloud IQ Controller VE6120 VMware Min Supported ESXi version 5.1 or later, (tested 8.0)	XIQC-10.19.01.0027-1.dle
ExtremeCloud IQ Controller VE6120H (Windows server 2016 or later)	XIQC-10.19.01.0027-1.spe
ExtremeCloud IQ Controller VE6120K Linux KVM	XIQC-10.19.01.0027-1.dve
ExtremeCloud IQ Controller VE6125 Min Supported ESXi version 5.5 or later, (tested 7.0)	XIQC-10.19.01.0027-1.rse
ExtremeCloud IQ Controller VE6125K Linux KVM	XIQC-10.19.01.0027-1.mfe
ExtremeCloud IQ Controller E1120	XIQC-10.19.01.0027-1.sme
ExtremeCloud IQ Controller E2122	XIQC-10.19.01.0027-1.wze
ExtremeCloud IQ Controller E3120	XIQC-10.19.01.0027-1.ose
ExtremeCloud IQ Controller E3125	XIQC-10.19.01.0027-1.dze
Access Points	
AP3000-WW	AP3xxx-LEAN-10.19.1.0-031R.img
AP3000X-WW	AP3xxx-LEAN-10.19.1.0-031R.img
AP302W-CAN AP302W-FCC AP302W-IL AP302W-WR	AP302W-LEAN-10.19.1.0-031R.img
AP305C-1-CAN AP305C-1-FCC AP305C-1-IL AP305C-1-WR AP305C-CAN AP305C-FCC AP305C-IL AP305C-WR AP305CX-CAN AP305CX-FCC AP305CX-IL AP305CX-WR	AP3xxC-LEAN-10.19.1.0-031R.img
AP310e-1-WR AP310e-CAN AP310e-FCC AP310e-IL AP310e-WR AP310i-1-WR AP310i-CAN AP310i-FCC	AP3xx-LEAN-10.19.1.0-031R.img

Product Name	Image
AP310i-IL AP310i-WR	
AP360e-CAN AP360e-FCC AP360e-IL AP360e-WR AP360i-CAN AP360i-FCC AP360i-IL AP360i-WR	AP3xx-LEAN-10.19.1.0-031R.img
AP3912i-FCC AP3912i-ROW	AP391x-10.51.28.0001.img
AP3915e-FCC AP3915e-ROW AP3915i-FCC AP3915i-ROW	AP391x-10.51.28.0001.img
AP3916ic-FCC AP3916ic-ROW	AP391x-10.51.28.0001.img
AP3916-camera	AP3916IC-V1-0-14-1.dlf
AP3917e-FCC AP3917e-ROW AP3917i-FCC AP3917i-ROW AP3917k-FCC AP3917k-ROW	AP391x-10.51.28.0001.img
AP3935e-FCC AP3935e-ROW AP3935i-FCC AP3935i-IL AP3935i-ROW	AP3935-10.51.28.0001.img
AP3965e-FCC AP3965e-ROW AP3965i-FCC AP3965i-ROW	AP3935-10.51.28.0001.img
AP4000-1-WW AP4000-WW	AP4000x-LEAN-10.19.1.0-031R.img
AP4020-WW	AP40xx-10.19.1.0-031R.img
AP4020FX-WW	AP40xx-10.19.1.0-031R.img
AP4020X-WW	AP40xx-10.19.1.0-031R.img
AP4060-WW	AP40xx-10.19.1.0-031R.img
AP4060X-WW	AP40xx-10.19.1.0-031R.img
AP410C-1-CAN AP410C-1-FCC AP410C-1-IL AP410C-1-WR AP410C-CAN	AP4xxC- LEAN-10.19.1.0-031R.img

Product Name	Image
AP410C-FCC AP410C-IL AP410C-WR	
AP410e-CAN AP410e-FCC AP410e-IL AP410e-WR AP410i-1-FCC AP410i-1-WR AP410i-CAN AP410i-FCC AP410i-IL AP410i-WR	AP4xx-LEAN-10.19.1.0-031R.img
AP460C-CAN AP460C-FCC AP460C-IL AP460C-WR AP460S12C-CAN AP460S12C-FCC AP460S12C-IL AP460S12C-WR AP460S6C-CAN AP460S6C-FCC AP460S6C-IL AP460S6C-WR	AP4xxC-LEAN-10.19.1.0-031R.img
AP460e-CAN AP460e-FCC AP460e-IL AP460e-WR AP460i-CAN AP460i-FCC AP460i-IL AP460i-WR	AP4xx-LEAN-10.19.1.0-031R.img
AP5010-WW	AP5xxx-LEAN-10.19.1.0-031R.img
AP5020-WW	AP5020-10.19.1.0-031R.img
AP5022-WW AP5022S6D-WW	AP5020-10.19.1.0-031R.img
AP5022FX-WW	AP5020-10.19.1.0-031R.img
AP5050D-WW	AP5xxx-LEAN-10.19.1.0-031R.img
AP5050U-WW	AP5xxx-LEAN-10.19.1.0-031R.img
AP505i-FCC AP505i-WR	AP5xx-LEAN-10.19.1.0-031R.img
AP5060D-WW AP5060U-WW	AP5020-10.19.1.0-031R.img
AP510e-FCC AP510e-WR AP510i-1-FCC AP510i-1-WR	AP5xx-LEAN-10.19.1.0-031R.img

Product Name	Image
AP510i-FCC AP510i-WR	
AP560h-FCC AP560h-WR AP560i-FCC AP560i-WR	AP5xx-LEAN-10.19.1.0-031R.img
SA201	AP391x-10.51.28.0001.img
Switches	
210-12p-10GE2 210-24p-10GE2 210-48p-10GE2 210-12p-10GE2 POE 210-24p-10GE2 POE 210-48p-10GE2 POE	210-series_V1.02.05.0013.stk fp-connector-3.3.0.4.pyz (cloud connector)
220-12p-10GE2 220-24p-10GE2 220-48p-10GE2 220-12p-10GE2 POE 220-24p-10GE2 POE 220-48p-10GE2 POE	220-series_V1.02.05.0013.stk fp-connector-3.3.0.4.pyz (cloud connector)
X435-24P/T-4S	summitlite_arm-30.7.1.1.xos summitlite_arm-30.5.0.259-cloud_connector-3.4.2.6.xmod
X440G2-12t-10G4 X440G2-24t-10G4 X440G2-48t-10G4 X440G2-12t-10G4 POE X440G2-24t-10G4 POE X440G2-48t-10G4 POE	summitX-30.2.1.8-patch2-5.xos summitX-30.2.1.8-cloud_connector-3.4.1.8.xmod (cloud connector)
X465_24W X465_48T X465_48P X465_48W X465_24MU X465_24MU_24W	onie-30.2.1.8-patch2-5-vpex_controlling_bridge.lst onie-30.2.1.8-cloud_connector-3.4.1.20.xmod
X620-16x	summitX-30.2.1.8-patch2-5.xos summitX-30.2.1.8-cloud_connector-3.4.1.8.xmod (cloud connector)

NETWORK MANAGEMENT SOFTWARE SUPPORT

Network Management	Version
ExtremeControl™	22.3 or higher
ExtremeAnalytics™	22.3 or higher
ExtremeCloud™ A3	4.0

Network Management	Version
ExtremeCloud™ IQ-Site Engine	22.3 or higher

Air Defense	Version
ExtremeAirDefense™	10.6.2-05e4 Patch
ExtremeGuest	**Version**
ExtremeGuest™	6.0.1.0-001

Note:

Platform and Access Point Configuration functions are not supported by ExtremeManagement™. ExtremeCloud™ IQ Site Engine v21.9 or greater is required.

Extreme Platform ONE ─ ExtremeCloud IQ Pilot Twin License Provides Backwards Compatibility

Some versions of ExtremeCloud IQ Site Engine and ExtremeCloud IQ Controller do not support Extreme Platform ONE licenses. To provide you with the necessary time to upgrade to later versions, every Extreme Platform ONE Standard subscription includes an ExtremeCloud IQ Pilot Twin license with the same start date, end date, and licensed quantity.

- The Extreme Portal shows both Extreme Platform ONE Standard and ExtremeCloud IQ Pilot Twin licenses.
- ExtremeCloud IQ (Classic) and ExtremeCloud IQ (New) do not show ExtremeCloud IQ Pilot Twin licenses.
- Extreme Platform ONE (that is, Extreme Platform ONE Networking or Extreme Platform ONE Security) does not show ExtremeCloud IQ Pilot Twin licenses.
- ExtremeCloud IQ Site Engine version 25.2 and earlier supports ExtremeCloud IQ Pilot and ExtremeCloud IQ Pilot Twin licenses.
- ExtremeCloud IQ Site Engine version 25.5 and later supports ExtremeCloud IQ Pilot licenses and Extreme Platform ONE subscriptions.
- ExtremeCloud IQ Controller versions support ExtremeCloud IQ Pilot and ExtremeCloud IQ Pilot Twin licenses.

Note:

If you purchased Extreme Platform ONE subscriptions and are running management application versions that are incompatible with Extreme Platform ONE subscriptions, you can use the provided ExtremeCloud IQ Pilot Twin licenses.

INSTALLATION INFORMATION

Application and Appliance Installations	
CE1000, CE2000, CE3000	ExtremeCloud IQ Controller CE1000, CE2000, CE3000 Deployment Guide
E1120	ExtremeCloud IQ Controller E1120 Installation Guide
E2122	ExtremeCloud IQ Controller E2122 Installation Guide
E3120	ExtremeCloud IQ Controller E3120 Installation Guide
E3125	ExtremeCloud IQ Controller E3125 Installation Guide
VE6120/VE6125	ExtremeCloud IQ Controller VE6120/VE6125 Installation Guide
VE6120H	ExtremeCloud IQ Controller VE6120H Installation Guide
VE6120K/VE6125K	ExtremeCloud IQ Controller VE6120K/VE6125K Installation Guide

KNOWN RESTRICTIONS AND LIMITATIONS

Known Restriction or Limitation	ID
Known Issue: When an AP radio is administratively turned off, the device may be incorrectly displayed as a Sensor on the floor map for the corresponding band, instead of being displayed as an AP.	XCC-8072
For AP4020FX, select AI-TQ08055 in the GUI to represent an AI-TH08055 antenna.	XCC-8050
Antenna AI-TQ08055 does not support 6GHz radio on AP5022FX in V10.19. Availability is planned for future release.	XCC-7853
In some cases, after upgrading to 10.18.01, APs may not receive updated Spectrum (SP) settings, which can result in APs operating at reduced LPI power or disabling 6 GHz radios on outdoor models, even though the GUI shows normal Spectrum refresh activity. The issue has been identified and will be fixed in a future release.	XCC-7772
Language Selection in Internal Captive Portal on iOS Issue Summary: When using the internal captive portal in ExtremeCloud IQ Controller with multiple language options enabled, iOS devices may encounter an error when switching languages. Status: This is a known issue under investigation. Updates will be provided in future releases as feasible.	XCC-6368
On rare occasions, AP5020 may stop accepting client connections after several days have lapsed and while 802.11mc ranging has been enabled. The issue is under investigation. +Workaround+: Disable 802.11mc. If AP5020 is operating at standard power, allow 802.11mc to converge, then disable it once the AP5020 units are on standard power.	WOS-7935

Known Restriction or Limitation	ID
Beacon Protection (BP) is configured per WLAN. If any 6 GHz network has Beacon Protection enabled, all Multi-Link Operation (MLO) networks must also have BP enabled to ensure proper functionality.	WOS-7908
In certain corner situation enabling MLO may result in reduced uplink throughput. This is end client driver dependent.	WOS-7879
AP5020 – Channels 165 (20 MHz) and 106 (80 MHz) are disabled for Isle of Man due to a known issue. This will be resolved in a future release.	WOS-7682
AP3900 series requires a minimum firmware revision of 10.41.01 (or later) for onboarding into ExtremeCloud IQ Controller. Customers migrating from ExtremeWireless installations or onboarding new AP3900 inventory to ExtremeCloud IQ Controller must ensure APs are running at least the minimum revision prior to onboarding. Depending on the age of the inventory, this may require a manual upgrade of the unit firmware outside of the management framework.	XCC-3178
AP4020/X/FX and AP4060/X Radio 4 sensor functionality is restricted to basic WIPS and Reporting.	WOS-7913
The AP4020 Radio 4 sensor may fail to detect its own 2.4 GHz and 5 GHz BSS while detecting other BSS. This behavior is under investigation, and no workaround is currently available.	WOS-7802
Fourth radio detection and sensing capabilities are limited to legacy rates.	WOS-7792
AP4020X/FX radios using Operational Mode 2 (2.4/5H/5L GHz) do not support transmit power for 160 MHz channels, unlike other AP models. Note that 5 GHz Low has only one 160 MHz channel; therefore, it is advised that 160 MHz channel not be used in enterprise deployments.	WOS-7664
11mc not recommended for 2.4GHz band 11mc works better with wider channels.	Info

SUPPORTED WEB BROWSERS

For ExtremeCloud IQ Controller management GUI, the following Web browsers were tested for interoperability:

Browsers	Version	OS
Chrome	117.0.5938.152	Windows 10 Windows 11
Microsoft Edge	117.0.2045.60	Windows 10 Windows 11
Firefox	118.0.01	Windows 10 Windows 11

Note: Microsoft IE browser is not supported for UI management.

For Wireless Clients (Captive Portal, AAA), recommended browsers are:

Browsers	Version	OS
Chrome	117.0.5938.152	Windows 10 Windows 11
Microsoft Edge	117.0.2045.60	Windows 10
Firefox	118.0.01	Windows 10 Windows 11
Safari	15.4 (17613.1.17.1.13)	iOS 16.7.1

PORT LIST

The following list of ports may need to remain open so that the Appliances and APs will function properly on a network that includes protection equipment like a firewall.

ExtremeCloud IQ Controller TCP/UDP Port Assignment Reference

Comp. Source	Comp. Dest	Protocol (TCP/UDP)	Src Port	Dest Port	Service	Remark	Open Firewall Req'd
Ports for AP/Appliance Communication							
Appliance	Access Point	UDP	Any	13910	WASSP	Management and Data Tunnel between AP and Appliance	Yes
Access Point	Appliance	UDP	Any	13910	WASSP	Management and Data Tunnel between AP and Appliance	Yes
Appliance	Access Point	UDP	4500	Any	Secured WASSP	Management Tunnel between AP and Appliance	Optional
Access Point	Appliance	UDP	Any	4500	Secured WASSP	Management Tunnel between AP and Appliance	Optional
Access Point	Appliance	UDP	Any	13907	WASSP	AP Registration to Appliance	Yes
Access Point	Appliance	UDP	Any	67	DHCP Server	If Appliance is DHCP Server for AP	Optional
Access Point	Appliance	UDP	Any	68	DHCP Server	If Appliance is DHCP Server for AP	Optional
Access Point	Appliance	UDP	Any	427	SLP	AP Registration to Appliance	Optional
Appliance	Access Point	TCP/UDP	Any	69	TFTP	AP image transfer	Yes

Comp. Source	Comp. Dest	Protocol (TCP/UDP)	Src Port	Dest Port	Service	Remark	Open Firewall Req'd
Access Point	Appliance	TCP/UDP	Any	69	TFTP	AP image transfer	Yes
Appliance	Access Point	TCP/UDP	Any	22	SCP	AP traces	Yes
Any	Access Point	TCP	Any	2002, 2003	RCAPD	AP Real Capture (if enabled)	Optional
Any	Access Point	TCP/UDP	Any	22	SSH	Remote AP login (if enabled)	Optional
Any	Access Point	TCP/UDP	Any	445	Microsoft CIFS	LDAP support	Optional
Any	Access Point	TCP/UDP	Any	137, 138, 139	NetBIOS	LDAP support	Optional
Ports for Appliance Management							
Any	Appliance	TCP/UDP	Any	22	SSH	Appliance CLI access	Yes
Any	Appliance	TCP/UDP	Any	5825	HTTPS	Appliance GUI access	Yes
Any	Appliance	TCP/UDP	Any	161	SNMP	Appliance SNMP access	Yes
Any	Appliance	TCP/UDP	Any	162	SNMP Trap	Appliance SNMP access	Yes
Any	Appliance	TCP	Any	80	HTTP	Appliance SNMP access ICP Self Registration	Yes
Any	Appliance	TCP	Any	443	HTTPS	ICP Self Registration	Yes
Any	Appliance	UDP	500	500	IKE	IKE phase 1	Yes
Any	Appliance	TCP/UDP	Any	69	TFTP	TFTP support	Yes
Any	Appliance	UDP	Any	4500	IPSec	IPSec NAT traversal	Yes
Any	Appliance	UDP	Any	13907	Discovery	Used by Discovery	Yes
Any	Appliance	UDP	Any	13910	WASSP	Used by L3 WASSP	Yes
Ports for Inter Controller Mobility[1] and Availability							
Appliance	Appliance	UDP	Any	13911	WASSP	Mobility and Availability Tunnel	Yes
Appliance	Appliance	TCP	Any	427	SLP	SLP Directory	Yes
Appliance	Appliance	TCP	Any	20506	Langley	Remote Langley Secure	Yes
Appliance	Appliance	TCP	Any	60606	Mobility	VN MGR	Yes

[1] For extension of ExtremeWireless deployment via Inter Controller Mobility.

Comp. Source	Comp. Dest	Protocol (TCP/UDP)	Src Port	Dest Port	Service	Remark	Open Firewall Req'd
Appliance	Appliance	TCP	Any	123	NTP	Availability time sync	Yes
Appliance	DHCP Server	UDP	Any	67	SLP	Asking DHCP Server for SLP DA	Yes
DHCP Server	Appliance	UDP	Any	68	SLP	RespoECA from DHCP Server for SLP DA request	Yes
Appliance	Appliance	TCP	Any	6380	REDIS	High Availability (HA) Pair Configuration Synchronization	Yes
Core Back-End Communication							
Appliance	DNS Server	UDP	Any	53	DNS	If using DNS	Optional
Appliance	Syslog Server	UDP	Any	514	Syslog	If Appliance logs to external syslog server	Optional
Appliance	RADIUS Server	UDP	Any	1812	RADIUS Authentication and Authorization	If using RADIUS AAA	Optional
Appliance	RADIUS Server	UDP	Any	1813	RADIUS Accounting	If enabled RADIUS accounting	Optional
Appliance	RADIUS server	UDP	Any	1814	RADIUS Authentication and Authorization	If using RADIUS AAA	Optional
Appliance	RADIUS server	UDP	Any	1815	RADIUS Accounting	If enabled RADIUS Accounting	Optional
Dynamic Auth. Server (NAC)	Appliance	UDP	Any	3799	DAS	Request from DAS client to disconnect a specific client	Optional
Appliance	AeroScout Server	UDP	1144	12092	Location Based Service Proxy	Aeroscout Location-Based Service	Optional
AeroScout Server	Appliance	UDP	12092	1144	Location Based Service Proxy	Aeroscout Location-Based Service	Optional
Appliance	Extreme Cloud IQ	TCP	Any	443	NSight	Statistics Report into ExtremeCloud IQ	Yes

IETF STANDARDS MIB SUPPORT

RFC No.	Title	Groups Supported
Draft version of 802.11	IEEE802dot11-MIB	
1213	RFC1213-MIB	Most of the objects supported
1573	IF-MIB	ifTable and interface scalar supported
1907	SNMPv2-MIB	System scalars supported
1493	BRIDGE-MIB	EWC supports relevant subset of the MIB
2674	P-BRIDGE-MIB	EWC supports relevant subset of the MIB
2674	Q-BRIDGE-MIB	EWC supports relevant subset of the MIB

EXTREME NETWORKS PRIVATE ENTERPRISE MIB SUPPORT

Extreme Networks Private Enterprise MIBs are available in ASN.1 format from the Extreme Networks website at: *https://extreme-networks.my.site.com/ExtrSupportHome.*

Standard MIBs

Title	Description
IEEE802dot11-MIB	Standard MIB for wireless devices
RFC1213-MIB.my	Standard MIB for system information
IF-MIB	Interface MIB
SNMPv2-MIB	Standard MIB for system information
BRIDGE-MIB	VLAN configuration information that pertains to EWC
P-BRIDGE-MIB	VLAN configuration information that pertains to EWC
Q-BRIDGE-MIB	VLAN configuration information that pertains to EWC

Siemens Proprietary MIB

Title	Description
HIPATH-WIRELESS-HWC-MIB.my	Configuration and statistics related to EWC and associated objects
HIPATH-WIRELESS-PRODUCTS-MIB.my	Defines product classes
HIPATH-WIRELESS-DOT11-EXTNS-MIB.my	Extension to IEEE802dot11-MIB that complements standard MIB
HIPATH-WIRELESS-SMI.my	Root for Chantry/Siemens MIB

802.11AC AND 802.11N CLIENTS

Please refer to the latest Release Notes for ExtremeWireless™ 10.41.09 or later and/or ExtremeWireless WiNG 5.9.02 or later for the list of compatibility test devices.

RADIUS SERVERS AND SUPPLICANTS

RADIUS Servers Used During Testing

Vendor	Model OS	Version
FreeRADIUS	1.1.6	FreeRADIUS
FreeRADIUS	1.0.1	FreeRADIUS
IAS	5.2.3790.3959	Microsoft Server 2003 IAS
SBR50	6.1.6	SBR Enterprise edition
NPS	6.0.6002.18005	Microsoft Server 2008 NPS

802.1x Supplicants Supported

Vendor	Model OS	Version
Juniper Networks® / Funk	Odyssey client	Version 5.10.14353.0
		Version 5.00.12709.0
		Version 4.60.49335.0
Microsoft®	Wireless Zero Configuration	Version Windows XP-4K-891859-Beta1
	Wireless Network Connection Configuration	Version Microsoft Window Server 2003, Enterprise Edition R2 SP2
	Wi-Fi Protected Access 2 (WPA2)/Wireless Provisioning Services Information Element (WPS IE) update for Windows XP with Service Pack 2	Version WindowsXP-KB893357-v2-x86-ENU.exe
Intel®	Intel PRO Set/Wireless	Version 13.0.0.x (with Windows® Intel® driver version 13.0.0.x)
Microsoft® Wireless Zero	Windows 7, 8, 8.1 Pro, 10 Pro Windows Phone 8.1, Windows Mobile 10	Provided with Windows®

Appliance LAN Switch Verification

Vendor	Model OS	Version	Role
Extreme	X-460-G2	12.5.4.5	XIQC connection
Extreme	X440G2-48p-10G4	21.1.1.4	XIQC connectivity
Extreme	Summit 300-48	7.6e1.4	XIQC connection
Extreme	VSP-4850GTS-PWR	(6.0.1.1_B003) (PRIVATE) HW Base: ERS 4850	XIQC connection
Extreme	K6	08.63.02.0004	XIQC connection
Extreme	K6	08.42.03.0006	XIQC connection
Extreme	X440G2-48p-10GE4	21.1.5.2	XIQC connection
Extreme	X440-G2-12p	21.1.1.4	XIQC connection
Extreme	X460-48p	12.5.4.5	XIQC connection
Cisco	Catalyst 3550	12.1(19)EA1c	XIQC connection

CERTIFICATION AUTHORITY

Server Vendor	Model OS	Version
Microsoft CA	Windows Server 2003 Enterprise Edition	5.2.3790.1830
Microsoft CA	Windows Server 2008 Enterprise Edition	6.0
OpenSSL	Linux	1.1.1g

RADIUS ATTRIBUTES SUPPORT

RADIUS Authentication and Authorization Attributes

Attribute	RFC Source
Called-Station-Id	RFC 2865, RFC 3580
Calling-Station-Id	RFC 2865, RFC 3580
Class	RFC 2865
EAP-Message	RFC 3579
Event-Timestamp	RFC 2869
Filter-Id	RFC 2865, RFC 3580
Framed-IPv6-Pool	RFC 3162

Attribute	RFC Source
Framed-MTU	RFC 2865, RFC 3580
Framed-Pool	RFC 2869
Idle-Timeout	RFC 2865, RFC 3580
Message-Authenticator	RFC 3579
NAS-Identifier	RFC 2865, RFC 3580
NAS-IP-Address	RFC 2865, RFC 3580
NAS-IPv6-Address	RFC 3162
NAS-Port	RFC 2865, RFC 3580
NAS-Port-Id	RFC 2865, RFC 3580
NAS-Port-Type	RFC 2865, RFC 3580
Password-Retry	RFC 2869
Service-Type	RFC 2865, RFC 3580
Session-Timeout	RFC 2865
State	RFC 2865
Termination-Action	RFC 2865, RFC 3580
Tunnel Attributes	RFC 2867, RFC 2868, RFC 3580
User-Name	RFC 2865, RFC 3580
Vendor-Specific	RFC 2865

RADIUS Accounting Attributes

Attribute	RFC Source
Acct-Authentic	RFC 2866
Acct-Delay-Time	RFC 2866
Acct-Input-Octets	RFC 2866
Acct-Input-Packets	RFC 2866
Acct-Interim-Interval	RFC 2869
Acct-Output-Octets	RFC 2866
Acct-Output-Packets	RFC 2866
Acct-Session-Id	RFC 2866
Acct-Session-Time	RFC 2866
Acct-Status-Type	RFC 2866
Acct-Terminate-Cause	RFC 2866

GLOBAL SUPPORT

By Phone: +1 800-998-2408 (toll-free in U.S. and Canada)

For the toll-free support number in your country:
https://www.extremenetworks.com/support/contact

By Email: support@extremenetworks.com

By Web: https://extreme-networks.my.site.com/ExtrSupportHome

For information regarding the latest software release, recent release note revisions and documentation, or if you require additional assistance, please visit the Extreme Networks Support website.

LEGAL

Legal Notice

Extreme Networks, Inc. reserves the right to make changes in specifications and other information contained in this document and its website without prior notice. The reader should in all cases consult representatives of Extreme Networks to determine whether any such changes have been made.

The hardware, firmware, software, or any specifications described or referred to in this document are subject to change without notice.

Trademarks

Extreme Networks and the Extreme Networks logo are trademarks or registered trademarks of Extreme Networks, Inc. in the United States and/or other countries. All other names (including any product names) mentioned in this document are the property of their respective owners and may be trademarks or registered trademarks of their respective companies/owners.

For additional information on Extreme Networks trademarks, please see:
www.extremenetworks.com/company/legal/trademarks