EKSELANS BY ITS

2025 VERSION

AX WiFi SERIES

CLOUD PRO

PROFESSIONAL RANGE OF WI-FI ACCESS POINTS, MANAGED POE SWITCHES, CONTROLLERS, AND CLOUD PLATFORM

ACCESS POINTS

WiFi 6

AX 8800
331026

Indoor WiFi 6 access point
8800 Mbps

AX 3000
331019

Indoor WiFi 6 access point
3000 Mbps

AX 3000P
331020

WiFi 6 access point for indoor wall-mounted installations
3000 Mbps

AX 3000 OLP
331021

Outdoor omnidirectional WiFi 6 access point
3000 Mbps

SWITCHES

SWG 24-AX
334201

24-port GE PoE+ managed switch with 4 SFP ports

SW10G 48-AXL3
331027

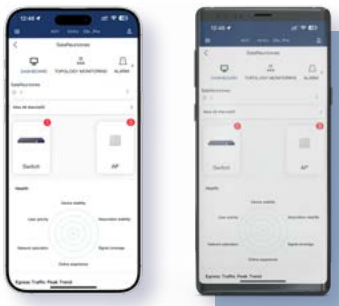
Managed switch with 48 10/100/1000 ports. 4 10GE SFP ports. POE+ up to 405W

CONTROLLER

UC-AX
331022

Controller for WiFi networks

MOBILE APPLICATIONS



Apps for accessing network devices.
Available on Android and iOS.

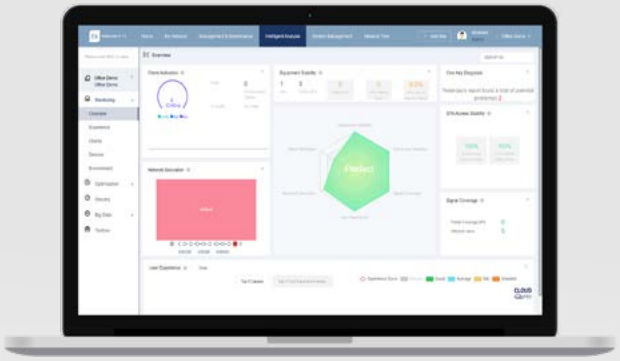
CLOUD PRO

UNIFIED CLOUD-BASED WiFi NETWORK MANAGEMENT PLATFORM

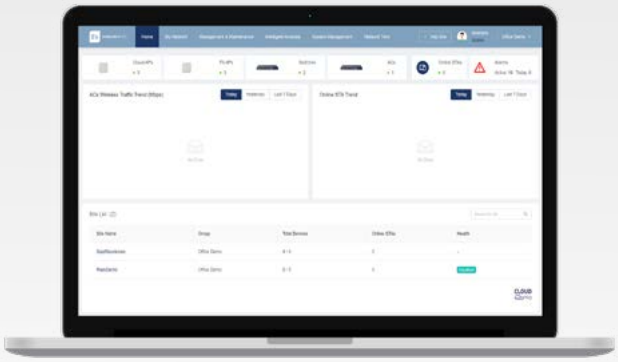
CLOUD PRO

UNIFIED CLOUD-BASED WiFi NETWORK MANAGEMENT PLATFORM

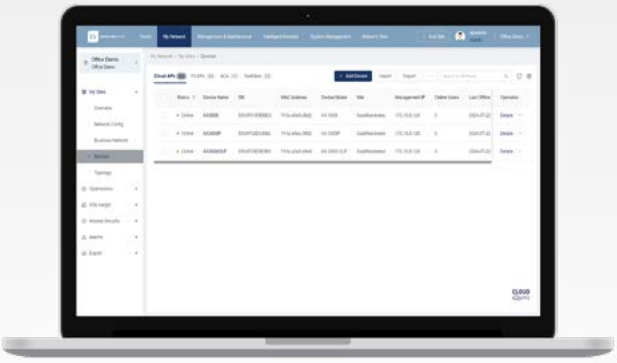
For more information:
https://ek.plus/



Enables the design, deployment, configuration, operation, and real-time analysis of WiFi networks

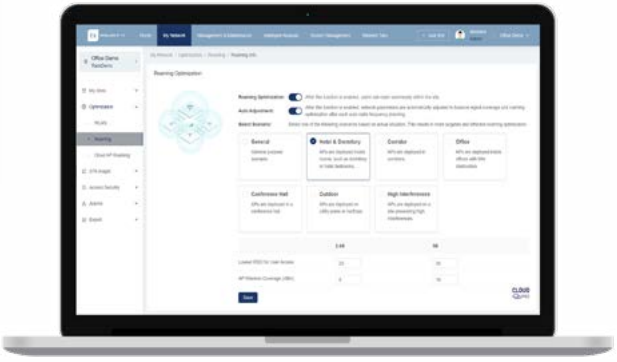


Management of all network devices: access points, switches, and controllers



Remote execution of monitoring and diagnostic tasks for device connection status, configuration deployment, firmware updates, equipment reboots, and more

Automatic network provisioning option with auto-identification of the network topology



Network optimization and smart roaming between devices

WiFi
ACCESS POINTS

INDOOR WiFi 6 ACCESS POINT

Hardware

REFERENCE	AX 3000
Code	331019
802.11n	Four spatial streams - Radio 1 – 2.4 GHz: 2x2 MIMO, two spatial streams - Radio 2 – 5 GHz: 2x2 MIMO, two spatial streams Channels: - Radio 1 – 2.4 GHz: 20 MHz and 40 MHz - Radio 2 – 5 GHz: 20 MHz and 40 MHz Combined peak data rate: 600 Mbps - Radio 1 – 2.4 GHz: 6.5 Mbps to 300 Mbps (MCS0 to MCS15) - Radio 2 – 5 GHz: 6.5 Mbps to 300 Mbps (MCS0 to MCS31) Radio technologies: Orthogonal Frequency-Division Multiplexing (OFDM) Modulation types: BPSK, QPSK, 16-QAM, 64-QAM Packet aggregation: - Aggregate MAC Protocol Data Unit (A-MPDU) - Aggregate MAC Service Data Unit (A-MSDU) Dynamic Frequency Selection (DFS) / Cyclic Delay/Shift Diversity (CDD/CSD) / Maximum Ratio Combining (MRC) / Space-Time Block Coding (STBC) / Low-Density Parity Check (LDPC) / Transmit beam-forming (TxBF)
802.11ac	Two spatial streams - Radio 2 – 5 GHz: 2x2 MIMO, two spatial streams Channels: - Radio 2 – 5 GHz: 20 MHz, 40 MHz, 80 MHz, and 160 MHz Combined peak data rate: 1.733 Gbps - Radio 2 – 5 GHz: 6.5 Mbps to 1.733 Gbps (MCS0 to MCS9) Radio technologies: Orthogonal Frequency-Division Multiplexing (OFDM) Modulation types: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM Packet aggregation: Aggregate MAC Protocol Data Unit (A-MPDU) Aggregate MAC Service Data Unit (A-MSDU) Dynamic Frequency Selection (DFS) / Cyclic Delay/Shift Diversity (CDD/CSD) / Maximum Ratio Combining (MRC) / Space-Time Block Coding (STBC) / Low-Density Parity Check (LDPC) / Transmit beam-forming (TxBF)
802.11ax	Four spatial streams - Radio 1 – 2.4 GHz: 2x2 uplink/downlink MU-MIMO, two spatial streams - Radio 2 – 5 GHz: 2x2 uplink/downlink MU-MIMO, two spatial streams Channels: - Radio 1 – 2.4 GHz: 20 MHz and 40 MHz - Radio 2 – 5 GHz: 20 MHz, 40 MHz, 80 MHz, and 160 MHz Combined peak data rate: 2.976 Gbps: - Radio 1 – 2.4 GHz: 8.6 Mbps to 0.574 Gbps (MCS0 to MCS11) - Radio 2 – 5 GHz: 8.6 Mbps to 2.402 Gbps (MCS0 to MCS11) Radio technologies: uplink/downlink Orthogonal Frequency-Division Multiple Access (OFDMA) Modulation types: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM Packet aggregation: - Aggregate MAC Protocol Data Unit (A-MPDU) - Aggregate MAC Service Data Unit (A-MSDU) Dynamic Frequency Selection (DFS) / Cyclic Delay/Shift Diversity (CDD/CSD) / Maximum Ratio Combining (MRC) / Space-Time Block Coding (STBC) / Low-Density Parity Check (LDPC) / Transmit beam-forming (TxBF) / WPA3
Antennas	Wi-Fi - 2.4 GHz: two built-in omnidirectional smart antennas, the max. antenna gain is 5 dBi. - 5 GHz: two built-in omnidirectional smart antennas, the max. antenna gain is 5.7 dBi. Bluetooth - One onboard omnidirectional antenna, the max. antenna gain is 2.4 dBi.
Ports	1 x 10/100/1000Base-T RJ45 Ethernet port with auto-negotiation 1 x 1/2.5GE combo SFP port 1 x RJ45 console port (serial console port) 1 x Bluetooth 5.1
Status LED	1 x multi-color system status LED - AP power-on status - Software initialization status and upgrade status - Uplink service interface status - Wireless user online status - CAPWAP tunnel timeout - Specific AP locating
Button	1 x Reset button - Press the button for shorter than 2 seconds. Then the device restarts. - Press the button for longer than 5 seconds. Then the device restores to factory settings.
Dimensions (W x D x H)	Main unit: 220 mm x 220 mm x 49 mm (8.66 in. x 8.66 in. x 1.93 in.) Shipping: 507 mm x 319 mm x 278 mm (19.96 in. x 12.56 in. x 10.94 in.)

AX 3000

- √ Dual-band WiFi (2.4 GHz + 5 GHz) IEEE 802.11b/g/n/ac/ax
- √ Maximum data speed up to 2.976 Gbps
- √ 4 spatial streams
- √ MU-MIMO and WMM systems
- √ Fast-Intelligent-Roaming (IEEE 802.11k/v/r)
- √ Maximum transmission power: 26dBm
- √ High WiFi network quality and efficiency (RF power adjustment and intelligent channel allocation)
- √ Local and remote management via CloudPRO
- √ 1Gbps connection via copper structured cabling (RJ45 connector) or 2.5Gbps via fiber optic (SFP)
- √ 48Vdc PoE IEEE802.3af power supply (alternative external PSU)
- √ Bluetooth 5.1
- √ High-security protocols (WPA2/802.1X, WPA3P/WPA3 Enterprise)

Weight	Main unit: 0.6 kg (1.33 lbs) Mounting bracket: 0.2 kg (0.44 lbs) Shipping: 1.04 kg (2.29 lbs)
Mounting	Wall/Ceiling-mount (a mounting bracket is delivered with the main unit)
Lock option	Kensington lock and securing latch
Input power supply	The AP supports the following two power supply modes: - 48 Vdc/0.6 A power input over DC connector: The DC connector accepts 2.1 mm/5.5 mm center-positive circular plug. A DC power supply needs to be purchased independently. - PoE input over LAN 1: The power source equipment (PSE) complies with IEEE 802.3af standard (PoE).
Power consumption	Maximum power consumption: 12.95 W - Vdc power: 12.95 W - 802.3bt (PoE++): 12.95 W - 802.3at (PoE+): 12.95 W - 802.3af (PoE): 12.95 W - Idle mode: 6 W
Environment	Storage temperature: –40°C to +70°C (–40°F to +158°F) Storage humidity: 0% RH to 95% RH (non-condensing) Operating temperature: –10°C to +50°C (14°F to 122°F) Operating humidity: 0% RH to 95% RH (non-condensing)
Max. transmit power	2.4 GHz: 26 dBm (398 mW) / 5 GHz: 26 dBm (398 mW)

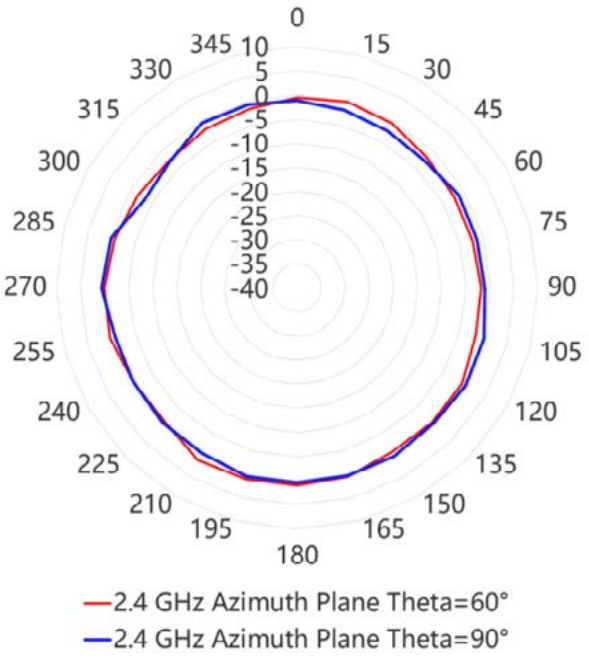
Software

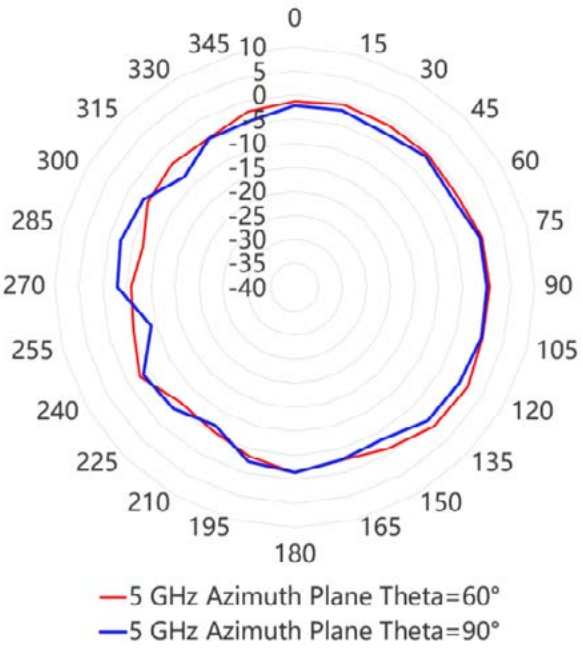
WLAN	
Max. number of associated STAs	256 (up to 128 STAs per radio)
Max. number of BSSIDs	32 (up to 16 BSSIDs per radio)
WLAN service	Max. number of WLAN IDs: 16 Max. number of associated STAs per WLAN: 32
STA management	SSID hiding Each SSID can be configured with the authentication mode, encryption mechanism, and VLAN attributes independently. Remote Intelligent Perception Technology (RIPT) Intelligent STA identification technology Intelligent load balancing based on the STA quantity or traffic
STA limiting	SSID-based STA limiting Radio-based STA limiting
Bandwidth limiting	STA/SSID/AP-based rate limiting
CAPWAP	IPv4/IPv6 CAPWAP CAPWAP through NAT Encryption over CAPWAP data channels Encryption over CAPWAP control channels
Data forwarding	Centralized and local forwarding
Wireless roaming	Layer 2 and Layer 3 roaming
Wireless locating	MU device locating
Security and Authentication	
Authentication and encryption	Remote Authentication Dial-In User Service (RADIUS) PSK ,PPSK, UPSK, PEAP and web authentication QR code-based guest authentication, SMS authentication, and MAC address bypass (MAB) authentication (used with RG-WS series ACs) Data encryption: WEP (64/128 bits), WPA-TKIP, WPA-PSK, WPA2-AES, WPA3-Individual, WPA3-Enterprise
Data frame filtering	Allowlist, static blocklist, and dynamic blocklist
WIDS	Rogue device discovery Optimization of rogue AP containment for all STA types Fuzzy containment SSID-based blocklist DDoS attack identification Automatic detection of STA attacks, and adding STAs to the blocklist when ICMP attacks or TCP SYN attacks are detected STA isolation

ACL	IP standard ACL, MAC extended ACL, IP extended ACL, and expert-level ACL IPv6 ACL Time range-based ACL ACL based on a Layer 2 interface ACL based on a Layer 3 interface Ingress ACL based on a wireless interface ACL Remark Dynamic ACL assignment based on 802.1X authentication (used with the AC)
CPP	CPU Protect Policy (CPP)
NFPP	Network Foundation Protection Policy (NFPP)
Routing and Switching	
MAC	Static and filtered MAC addresses MAC address table size: 1,024 Max. number of static MAC addresses: 1,024 Max. number of filtered MAC addresses: 1,024
Ethernet	Jumbo frame length: 1,518 Ethernet II frame format 1000M SFP ports 2.5GE interfaces
VLAN	Interface-based VLAN assignment Max. number of SVIs (IPv4): 200 Max. number of SVIs (IPv6): 200 Max. number of VLANs: 4,094 VLAN ID range: 1–4,094
ARP	ARP entry aging, gratuitous ARP learning, and proxy ARP Max. number of ARP entries: 1,024 ARP check
IPv4 services	Static and DHCP-assigned IPv4 addresses Max. number of IPv4 addresses configured on each Layer 3 interface: 200 NAT, FTP ALG and DNS ALG
IPv6 services	IPv6 addressing, Neighbor Discovery (ND), ICMPv6, IPv6 ping, IPv6 tracert IPv6 DHCP client
IP routing	IPv4/IPv6 static route Max. number of static IPv4 routes: 1,024 Max. number of static IPv6 routes: 1,000
Multicast	Multicast-to-unicast conversion
VPN	PPPoE client IPsec VPN
Network Management and Monitoring	
Network management	NTP server and NTP client SNTP client SNMPv1/v2c/v3 Fault detection and alarms Information statistics and logging
Network management platform	Direct connection via web management Remote connection via CloudPRO by EK
User access management	Console, Telnet, SSH, FTP client, FTP server, and TFTP client
Switchover among Fat, Fit, and cloud modes	When the AP works in Fit mode, it can be switched to Fat mode through acontroller (UC AX) When the AP works in Fat mode, it can be switched to Fit mode through the console port or Telnet mode. When the AP works in cloud mode, it can be managed through CloudPRO by EK.

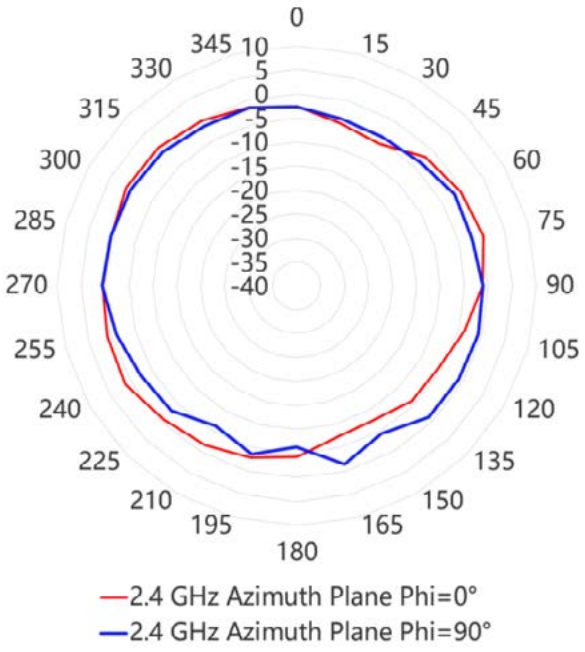
Antenna Pattern Plots

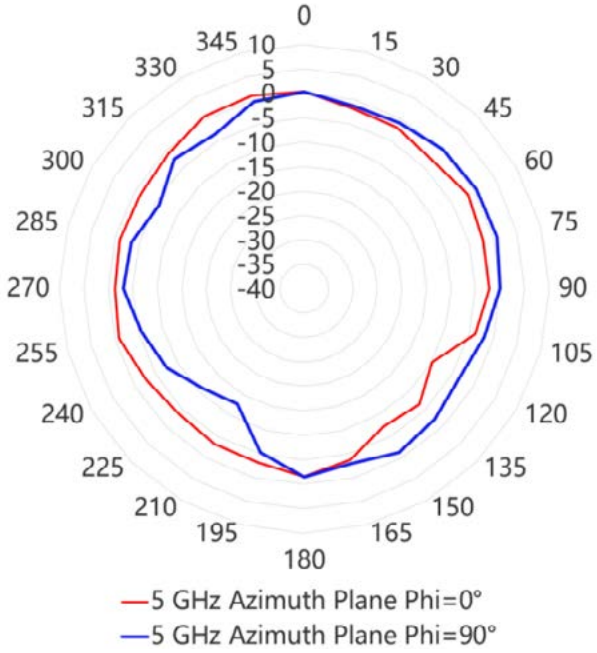
Horizontal Plane (Top View)





Vertical Plane (Side View, AP Facing Down)





INDOOR WiFi 6 ACCESS POINT

AX 8800

- √ WiFi Quad-Band (2.4 GHz + 5 GHz) IEEE 802.11b/g/n/ac/ax
- √ Combined maximum data rate up to 7780Mbps + 1000Mbps
- √ 10 spatial streams
- √ AI-powered smart radio for optimized STA roaming
- √ MU-MIMO and WMM
- √ Fast-Intelligent-Roaming (IEEE 802.11k/v/r)
- √ Maximum transmission power 24dBm
- √ High WiFi quality and efficiency (RF power adjustment and intelligent channel assignment)
- √ Local and remote management via CloudPRO
- √ 1/5Gbps via copper (RJ45) or 2.5Gbps via fiber (SFP)
- √ PoE IEEE802.3af 48Vdc or local power supply
- √ Bluetooth 5.1
- √ WPA2/802.1X, WPA3P/WPA3 Enterprise

Hardware

REFERENCE	AX 8800
Código	331026
802.11n	10 spatial streams: - Radio 1 – 2.4 GHz: 2x2 MIMO, two spatial streams - Radio 2 – 5 GHz: 2x2 MIMO, two spatial streams - Radio 3 – 5 GHz: 4x4 MIMO, four spatial streams - Radio 4 – AI Radio, 2.4 GHz/5 GHz: 2x2 MIMO, two spatial streams Channels: - Radio 1 – 2.4 GHz: 20 MHz and 40 MHz - Radio 2 – 5 GHz: 20 MHz and 40 MHz - Radio 3 – 5 GHz: 20 MHz and 40 MHz - Radio 4 – AI Radio, 2.4 GHz/5 GHz: 20 MHz and 40 MHz Combined maximum data rate: 1.200 Gbps - Radio 1 – 2.4 GHz: 6.5 Mbps to 300 Mbps (MCS0 to MCS15) - Radio 2 – 5 GHz: 6.5 Mbps to 300 Mbps (MCS0 to MCS15) - Radio 3 – 5 GHz: 6.5 Mbps to 600 Mbps (MCS0 to MCS31) - Radio 4 – AI Radio, 2.4 GHz/5 GHz: AI Radio scan only Radio technologies: Orthogonal Frequency-Division Multiplexing (OFDM) Modulation types: BPSK, QPSK, 16-QAM, and 64-QAM Packet aggregation: - Aggregated MAC Protocol Data Unit (A-MPDU) - Aggregated MAC Service Data Unit (A-MSDU) Dynamic Frequency Selection (DFS) Cyclic Delay Diversity / Cyclic Shift Diversity (CDD/CSD) Maximum Ratio Combining (MRC) Space-Time Block Coding (STBC) Low-Density Parity-Check (LDPC) Transmit Beamforming (TxBF)
802.11ac	8 spatial streams - Radio 2 – 5 GHz: 2x2 MU-MIMO – two spatial streams - Radio 3 – 5 GHz: 4x4 MU-MIMO – four spatial streams - Radio 4 – AI Radio, 5 GHz: 2x2 MIMO – two spatial streams Channels - Radio 2 – 5 GHz: 20 MHz – 40 MHz – 80 MHz – 160 MHz - Radio 3 – 5 GHz: 20 MHz – 40 MHz – 80 MHz – 160 MHz - Radio 4 – AI Radio, 5 GHz: 20 MHz – 40 MHz – 80 MHz Combined maximum data rate – 5.200 Gbps - Radio 2 – 5 GHz: 6.5 Mbps – 1.733 Gbps (MCS0 – MCS9) - Radio 3 – 5 GHz: 6.5 Mbps – 3.467 Gbps (MCS0 – MCS9) - Radio 4 – AI Radio, 5 GHz: AI Radio – scan only Radio technologies – Orthogonal Frequency-Division Multiplexing (OFDM) Modulation types – BPSK – QPSK – 16-QAM – 64-QAM – 256-QAM Packet aggregation - Aggregated MAC Protocol Data Unit – A-MPDU - Aggregated MAC Service Data Unit – A-MSDU Dynamic Frequency Selection – DFS Cyclic Delay Diversity / Cyclic Shift Diversity – CDD/CSD Maximum Ratio Combining – MRC Space-Time Block Coding – STBC Low-Density Parity-Check – LDPC Transmit Beamforming – TxBF
802.11ax	8 spatial streams - Radio 1 – 2.4 GHz: 2x2 uplink/downlink MU-MIMO – two spatial streams - Radio 2 – 5 GHz: 2x2 uplink/downlink MU-MIMO – two spatial streams - Radio 3 – 5 GHz: 4x4 uplink/downlink MU-MIMO – four spatial streams Channels - Radio 1 – 2.4 GHz: 20 MHz – 40 MHz - Radio 2 – 5 GHz: 20 MHz – 40 MHz – 80 MHz – 160 MHz - Radio 3 – 5 GHz: 20 MHz – 40 MHz – 80 MHz – 160 MHz Combined maximum data rate – 7.780 Gbps - Radio 1 – 2.4 GHz: 7.3 Mbps – 0.574 Gbps (MCS0 – MCS11) - Radio 2 – 5 GHz: 7.3 Mbps – 2.402 Gbps (MCS0 – MCS11) - Radio 3 – 5 GHz: 7.3 Mbps – 4.804 Gbps (MCS0 – MCS11) Radio technologies – uplink/downlink Orthogonal Frequency-Division Multiple Access (OFDMA) Modulation types – BPSK – QPSK – 16-QAM – 64-QAM – 256-QAM – 1024-QAM Packet aggregation - Aggregated MAC Protocol Data Unit – A-MPDU - Aggregated MAC Service Data Unit – A-MSDU Dynamic Frequency Selection – DFS Cyclic Delay Diversity / Cyclic Shift Diversity – CDD/CSD Maximum Ratio Combining – MRC Space-Time Block Coding – STBC Low-Density Parity-Check – LDPC Transmit Beamforming – TxBF WPA3
Antenas	Wi-Fi - 2.4 GHz: two built-in omnidirectional smart antennas, with peak antenna gain of 5.5 dBi. - 5 GHz: six built-in omnidirectional smart antennas, with peak antenna gain of 7 dBi. Bluetooth - One integrated vertically polarized omnidirectional antenna, with peak antenna gain of 3 dBi.

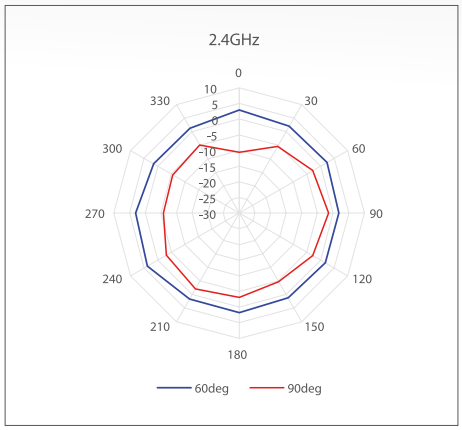
Ports	1 x 100/1000/2.5G/5GBASE-T port, compliant with IEEE 802.3af/at/bt standard (PoE/PoE+/PoE++) 1 x 2.5GE SFP port, compatible with 1GE and 2.5GE SFP modules 1 x 10/100/1000BASE-T port, supplying 48 V/12.95 W power to an IoT unit
LED statuS	1 x multicolor system status LED - AP power status - Software initialization and upgrade status - Uplink service interface status - Wireless user online status - CAPWAP tunnel timeout - Specific AP location
Button	1 x Reset button - Press for less than 2 seconds – the device will reboot - Press for more than 5 seconds – the device will restore factory settings
Dimensions (W x D x H)	Main product: 230 mm x 230 mm x 51 mm (9.06 in. x 9.06 in. x 2.01 in.) Packaging: 618 mm x 450 mm x 350 mm (24.33 in. x 17.72 in. x 13.78 in.)
Weight	Main product: 1.0 kg (2.20 lbs) Mounting bracket: 0.1 kg (0.22 lbs) Packaging: 1.25 kg (2.76 lbs)
Mounting	Wall/ceiling mounting (a mounting bracket is included with the main unit)
Lock option	Kensington lock and security latch
Input power supply	The access point supports the following two power supply modes: - 54 Vdc/1.1 A power input via the DC connector – The DC connector accepts a center-positive circular plug with an inner diameter of 2.1 mm (0.08 in.), outer diameter of 5.5 mm (0.22 in.), and length of 9.5 mm (0.37 in.). A DC power adapter must be purchased separately. - PoE input via LAN 1 – The power sourcing equipment (PSE) complies with the IEEE 802.3af/at/bt standard (PoE/PoE+/PoE++). Note: If both DC and PoE power are available, DC power is preferred.
Maximum power consumption	Maximum power consumption: 40 W - DC power: 40 W – Radio 1 (2.4 GHz) 2x2, Radio 2 (5 GHz) 2x2, Radio 3 (5 GHz) 4x4, Radio 4 (AI Radio) 2x2, LAN 2 PoE output (48 V/12.95 W), and USB port power supply (5 V/5 W) - 802.3bt (PoE++): 40 W – Radio 1 (2.4 GHz) 2x2, Radio 2 (5 GHz) 2x2, Radio 3 (5 GHz) 4x4, Radio 4 (AI Radio) 2x2, LAN 2 PoE output (48 V/12.95 W), and USB port power supply (5 V/5 W) - 802.3at (PoE+): 25 W – Radio 1 (2.4 GHz) 2x2, Radio 2 (5 GHz) 2x2, Radio 3 (5 GHz) 2x2, Radio 4 (AI Radio) 2x2, LAN 2 supports data transmission but does not provide PoE output. The USB port is disabled and does not supply power to external devices. - 802.3af (PoE): 12.2 W – Radio 1 (2.4 GHz) 1x1, Radio 2 (5 GHz) 1x1, Radio 3 (5 GHz) 1x1, Radio 4 (AI Radio) is disabled, LAN 2 supports data transmission but does not provide PoE output. The USB port is disabled and does not supply power to external devices. - Idle mode: 12.2 W
Environmental features	- Operating temperature: –10°C to +50°C (14°F to 122°F) - Storage temperature: –40°C to +70°C (–40°F to +158°F) Note: At altitudes between 3,000–5,000 m (9,842.52–16,404.20 ft), the maximum temperature decreases by 1°C (1.8°F) for every 166 m (544.62 ft) increase in altitude. - Operating humidity: 5% RH to 95% RH (non-condensing) - Storage humidity: 5% RH to 95% RH (non-condensing) - Operating altitude: –500 m to +5,000 m (–1,640.42 ft to +16,404.20 ft) - Storage altitude: –500 m to +5,000 m (–1,640.42 ft to +16,404.20 ft)
System memory	512 MB DRAM, 256 MB flash
Maximum transmission power	2.4 GHz: 24 dBm (398 mW) / 5 GHz: 26 dBm (251 mW) Note: - Transmit power adjustment by percentage (recommended) and in 1 dBm increments - Transmit power is limited by local regulatory requirements

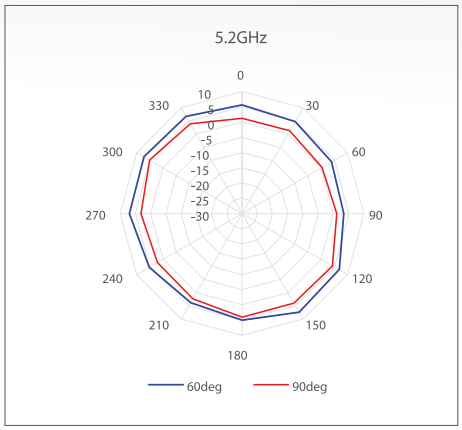
Software

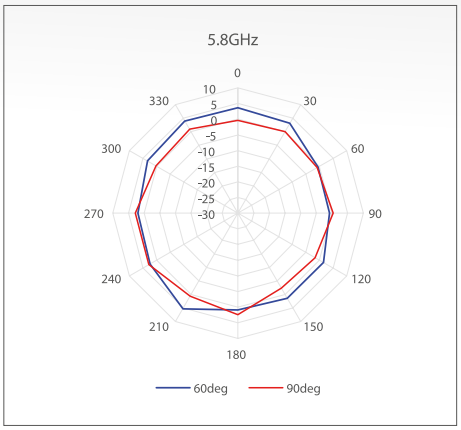
WLAN	
Maximum number of associated STAs	1536 (up to 128 STAs per radio)
Maximum number of BSSIDs	48 (up to 16 BSSIDs per radio)
WLAN service	Maximum number of WLAN IDs: 16
STA management	Hidden SSID option Each SSID can be configured independently with authentication mode, encryption mechanism, and VLAN attributes Remote Intelligent Perception Technology (RIPT) Smart STA identification technology Intelligent load balancing based on the number of STAs or traffic
STA limitation	STA limitation based on SSID STA limitation based on radio
Bandwidth limitation	Speed limitation based on STA/SSID/AP
CAPWAP	CAPWAP IPv4/IPv6 CAPWAP through NAT Encryption in CAPWAP data channels Encryption in CAPWAP control channels
Data transmission	Centralized and local forwarding
Wireless roaming	Layer 2 and Layer 3 roaming
Wireless location	MU device location
Security and Authentication	
Authentication and encryption	Remote Authentication Dial-In User Service (RADIUS) PSK, PPSK, UPSK, PEAP authentication and web authentication Guest authentication via QR code, SMS authentication, and MAC address authentication (MAB) (used with RG-WS series ACs) Data encryption: WEP (64/128 bits), WPA-TKIP, WPA-PSK, WPA2-AES, WPA3-Personal, WPA3-Enterprise
Data filtering	Whitelist, static blacklist, and dynamic blacklist
WIDS	Unauthorized device discovery Optimization of containment for unauthorized APs for all types of STAs Diffuse containment SSID-based blacklist DDoS attack identification Automatic detection of STA attacks and addition of STAs to the blacklist when ICMP or TCP SYN attacks are detected STA isolation
ACL	Standard IP ACL, extended MAC ACL, extended IP ACL, and expert-level ACL IPv6 ACL Time-based ACL Layer 2 interface-based ACL Layer 3 interface-based ACL Inbound ACL based on a wireless interface Comment in ACL Dynamic ACL assignment based on 802.1X authentication (used with AC)
CPP	CPU Protection Policy (CPP)
NFPP	Network Foundation Protection Policy (NFPP)
Routing and Switching	
MAC	Static and filtered MAC addresses MAC address table size: 2048 Maximum number of static MAC addresses: 2048 Maximum number of filtered MAC addresses: 2048
Ethernet	Jumbo frame length: 1,518 Ethernet II frame format 2500M SFP ports 5GE interfaces
VLAN	Interface-based VLAN assignment Maximum number of SVIs (IPv4): 200 Maximum number of SVIs (IPv6): 200 Maximum number of VLANs: 4,094 VLAN ID range: 1–4,094
ARP	ARP entry aging, free ARP learning, and ARP proxy Maximum number of ARP entries: 2048 ARP verification
IPv4 services	Static and DHCP-assigned IPv4 addresses Maximum number of IPv4 addresses configured on each Layer 3 interface: 200 NAT, FTP ALG, and DNS ALG
IPv6 services	IPv6 addresses, Neighbor Discovery (ND), IPv6 ND Proxy, ICMPv6, IPv6 Ping, IPv6 DHCP client
IP Routing	IPv4/IPv6 static route Maximum number of static IPv4 routes: 1,024 Maximum number of static IPv6 routes: 1,000
Multicast	Multicast to unicast conversion
VPN	PPPoE client IPsec VPN
Network management and monitoring	
Network management	NTP server and NTP client SNTP client SNMPv1/v2c/v3 Failure detection and alarms Information statistics and logging
Network management platform	Web management Cloud system CloudPRO by EK
User access management	Console, Telnet, SSH, FTP client, FTP server, and TFTP client
Switching between Fat, Fit, and Cloud modes	When the AP operates in Fit mode, it can be switched to Fat mode through a controller (UC AX) When the AP operates in Fat mode, it can be switched to Fit mode through the console port or Telnet mode. When the AP operates in cloud mode, it can be managed through CloudPRO by EK.

Antenna Pattern Plots

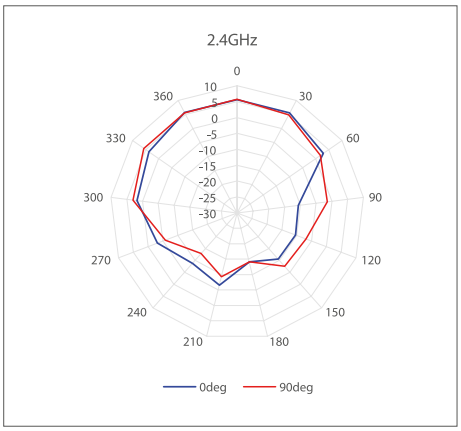
Horizontal Plane (Top View)

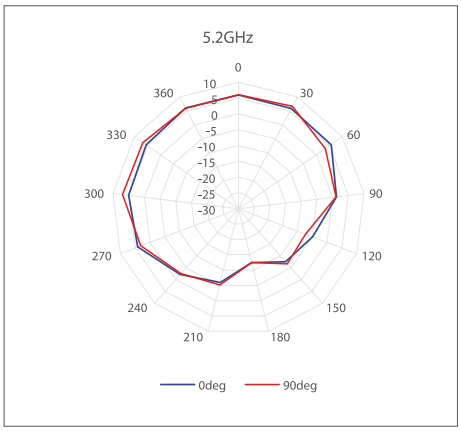


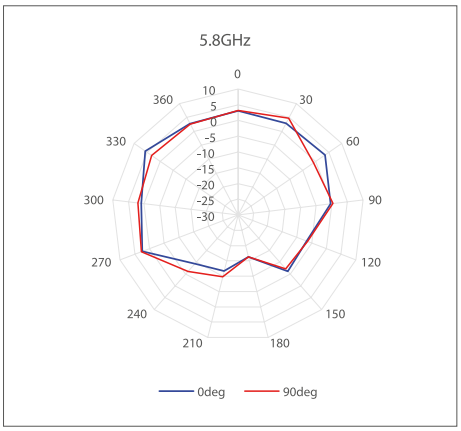




Vertical Plane (Side View, AP Facing Down)







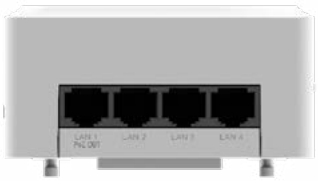
WiFi 6 ACCESS POINT FOR INDOOR WALL-MOUNTED

Hardware

REFERENCE	AX 3000P
Code	331020
802.11n	Four spatial streams Radio 1 – 2.4 GHz: 2x2 MIMO, two spatial streams Radio 2 – 5 GHz: 2x2 MIMO, two spatial streams Channels: Radio 1 – 2.4 GHz: 20 MHz and 40 MHz Radio 2 – 5 GHz: 20 MHz and 40 MHz Combined peak data rate: 600 Mbps Radio 1 – 2.4 GHz: 6.5 Mbps to 300 Mbps (MCS0 to MCS15) Radio 2 – 5 GHz: 6.5 Mbps to 300 Mbps (MCS0 to MCS15) Radio technologies: Orthogonal Frequency-Division Multiplexing (OFDM) Modulation types: BPSK, QPSK, 16-QAM, 64-QAM Packet aggregation: Aggregate MAC Protocol Data Unit (A-MPDU) Aggregate MAC Service Data Unit (A-MSDU) Dynamic Frequency Selection (DFS) Cyclic Delay/Shift Diversity (CDD/CSD) Maximum Ratio Combining (MRC) Space-Time Block Coding (STBC) Low-Density Parity Check (LDPC) Transmit beam-forming (TxBF)
802.11ac	Two spatial streams Radio 2 – 5 GHz: 2x2 MIMO, two spatial streams Channels: Radio 2 – 5 GHz: 20 MHz, 40 MHz, 80 MHz, and 160 MHz Combined peak data rate: 1.733 Gbps Radio 2 – 5 GHz: 6.5 Mbps to 1.733 Gbps (MCS0 to MCS9) Radio technologies: Orthogonal Frequency-Division Multiplexing (OFDM) Modulation types: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM Packet aggregation: Aggregate MAC Protocol Data Unit (A-MPDU) Aggregate MAC Service Data Unit (A-MSDU) Dynamic Frequency Selection (DFS) Cyclic Delay/Shift Diversity (CDD/CSD) Maximum Ratio Combining (MRC) Space-Time Block Coding (STBC) Low-Density Parity Check (LDPC) Transmit beam-forming (TxBF)
802.11ax	Four spatial streams Radio 1 – 2.4 GHz: 2x2 uplink/downlink MU-MIMO, two spatial streams Radio 2 – 5 GHz: 2x2 uplink/downlink MU-MIMO, two spatial streams Channels: Radio 1 – 2.4 GHz: 20 MHz and 40 MHz Radio 2 – 5 GHz: 20 MHz, 40 MHz, 80 MHz, and 160 MHz Combined peak data rate: 2.976 Gbps: Radio 1 – 2.4 GHz: 8.6 Mbps to 0.574 Gbps (MCS0 to MCS11) Radio 2 – 5 GHz: 8.6 Mbps to 2.402 Gbps (MCS0 to MCS11) Radio technologies: uplink/downlink Orthogonal Frequency-Division Multiple Access (OFDMA) Modulation types: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM Packet aggregation: Aggregate MAC Protocol Data Unit (A-MPDU) Aggregate MAC Service Data Unit (A-MSDU) Dynamic Frequency Selection (DFS) Cyclic Delay/Shift Diversity (CDD/CSD) Maximum Ratio Combining (MRC) Space-Time Block Coding (STBC) Low-Density Parity Check (LDPC) Transmit beam-forming (TxBF) WPA3
Antennas	Wi-Fi 2.4 GHz: two built-in omnidirectional antennas, the max. antenna gain is 5.2 dBi. 5 GHz: two built-in omnidirectional antennas, the max. antenna gain is 6 dBi. Bluetooth One onboard omnidirectional antenna, with the peak gain of 2.4 dBi
Ports	Uplink: 1 x 100/1000/2500Base-T Ethernet port with auto-negotiation, in compliance with IEEE 802.3af/at (PoE/PoE +). When powered by 802.3af (PoE), LAN 1 port cannot supply power to external devices. Downlink: 4 x 10/100/1000Base-T Ethernet ports with auto-negotiation. LAN 1 port can source 48 V/10 W power to external devices. 1 x micro USB console port 1 x Bluetooth 5.1

AX 3000P

- √ Designed for wall mounting
- √ Dual-band WiFi (2.4 GHz + 5 GHz) IEEE 802.11b/g/n/ac/ax
- √ Maximum data rate of up to 2.976 Gbps
- √ 4 spatial streams
- √ MU-MIMO and WMM systems
- √ Fast-Intelligent-Roaming (IEEE 802.11k/v/r)
- √ Maximum transmission power 20dBm
- √ High-quality and efficient WiFi network (RF power adjustment and intelligent channel allocation)
- √ Local and remote management via CloudPRO
- √ 1Gbps connectivity via structured copper cabling (4 RJ45 ports)
- √ PoE power IEEE802.3af 48Vdc (alternatively via local power supply)
- √ 48Vdc PoE output through LAN1 port
- √ Bluetooth 5.1
- √ High-security protocols (WPA3-Personal, WPA3-Enterprise



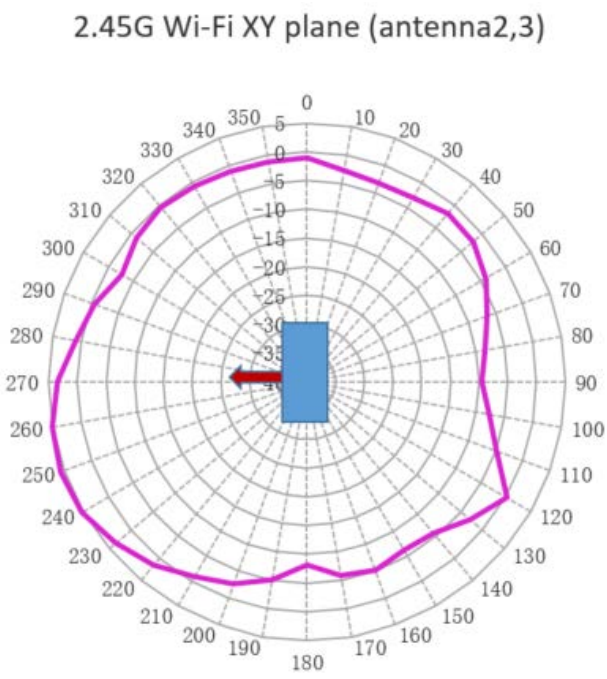
Status LED	1 x multi-color system status LED - AP power-on status - Software initialization status and upgrade status - Uplink service interface status - CAPWAP tunnel timeout - Specific AP locating
Button	1 x Reset button - Press the button for shorter than 2 seconds. Then the device restarts. - Press the button for longer than 5 seconds. Then the device restores to factory settings.
Dimensions (W x D x H)	Main unit: 86 mm x 170 mm x 43 mm (3.39 in. x 6.69 in. x 1.69 in.) Shipping: 104 mm x 187 mm x 69 mm (4.10 in. x 7.37 in. x 2.72 in.)
Weight	Main unit: 0.3 kg (0.66 lbs) Mounting bracket: 0.1 kg (0.22 lbs) Shipping: 0.54 kg (1.19 lbs)
Mounting	Installation in European and American standard junction boxes,and wall mounting (one mounting bracket is supplied with the product)
Lock option	Kensington lock
Input power supply	- The AP supports the following two power supply modes: - - 48 Vdc/0.6 A power input over DC connector: The DC connector accepts 2.1 mm/5.5 mm center-positive circular plug. - A DC power supply needs to be purchased independently. - - PoE input via rear LAN: The power sourcing equipment (PSE) complies with the IEEE 802.3af (PoE) standard If both DC power and PoE are available, DC power is preferred.
Power consumption	Maximum power consumption: 25 W Vdc power: 25 W, 2.4 GHz radio 2x2, 5 GHz radio 2x2, LAN 1 for PoE supply 802.3at (PoE+): 25 W, 2.4 GHz radio 2x2, 5 GHz radio 2x2, LAN 1 for PoE supply 802.3af (PoE): 15 W, 2.4 GHz radio 2x2, 5 GHz radio 2x2, LAN 1 port that fail to provide power for external devices (PoE out disabled of LAN 1 port disabled) Idle mode: 8 W
Environment	Storage temperature: –40°C to +70°C (–40°F to +158°F) Storage humidity: 5% RH to 95% RH (non-condensing) Operating temperature: –10°C to +45°C (14°F to 113°F) Operating humidity: 5% RH to 95% RH (non-condensing)
Max transmit power	2.4 GHz: 20 dBm (100 mW) 5 GHz: 20 dBm (100 mW)

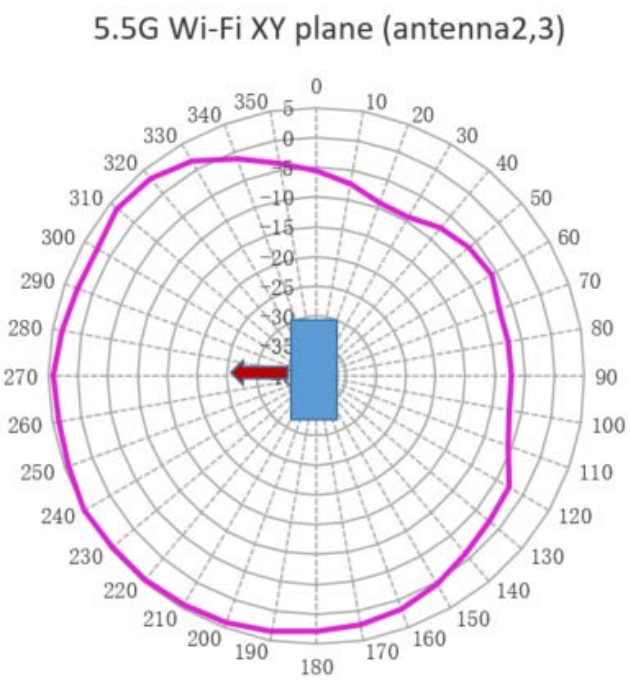
Software

WLAN	
Max. number of associated STAs	256 (up to 128 STAs per radio)
Max. number of BSSIDs	32 (up to 16 BSSIDs per radio)
Max. number of WLAN IDs	16
STA management	SSID hiding Each SSID can be configured with the authentication mode, encryption mechanism, and VLAN attributes independently. Remote Intelligent Perception Technology (RIPT) Intelligent STA identification technology Intelligent load balancing based on the STA quantity or traffic Rate set settings
STA limiting	SSID-based STA limiting Radio-based STA limiting
Bandwidth limiting	STA/SSID/AP-based rate limiting
CAPWAP	IPv4/IPv6 CAPWAP Layer 2 and Layer 3 topology between an AP and an AC An AP can automatically discover the accessible AC. An AP can be automatically upgraded through the AC. An AP can automatically download the configuration file from the AC. CAPWAP through NAT MTU setting and fragmentation over CAPWAP tunnels Encryption over CAPWAP data channels Encryption over CAPWAP control channels
Data forwarding	Centralized and local forwarding
Wireless roaming	Layer 2 and Layer 3 roaming
Wireless locating	MU device locating
Security and Authentication	
Authentication and encryption	Remote Authentication Dial-In User Service (RADIUS) PSK and web authentication QR code-based guest authentication, SMS authentication, and MAC address bypass (MAB) authentication Data encryption: WEP (64/128 bits), WPA-TKIP, WPA-PSK, WPA2-AES, WPA3-Individual, WPA3-Enterprise
Data frame filtering	Allowlist, static blocklist, and dynamic blocklist
WIDS	Rogue device discovery Optimization of rogue AP containment for all STA types Fuzzy containment SSID-based blocklist DDoS attack identification Automatic detection of STA attacks, and adding STAs to the blocklist when ICMP attacks or TCP SYN attacks are detected STA isolation
ACL	IP standard ACL, MAC extended ACL, IP extended ACL, and expert-level ACL Time range-based ACL ACL based on a Layer 2 interface ACL based on a Layer 3 interface Ingress ACL based on a wireless interface Dynamic ACL assignment based on 802.1X authentication (used with the AC)
CPP	CPU Protect Policy (CPP)
NFPP	Network Foundation Protection Policy (NFPP)
Routing and Switching	
MAC	Static and filtered MAC addresses MAC address table size: 1,024 Max. number of static MAC addresses: 1,024 Max. number of filtered MAC addresses: 1,024
Ethernet	Jumbo frame length: 1,518 Full-duplex and half-duplex modes of interfaces IEEE802.1p and IEEE802.1Q
VLAN	Interface-based VLAN assignment Max. number of SVIs: 200 Max. number of VLANs: 4,094 VLAN ID range: 1–4,094
ARP	ARP entry aging and proxy ARP Max. number of ARP entries: 1,024 ARP check
IPv4 services	Static and DHCP-assigned IPv4 addresses Max. number of IPv4 addresses configured on each Layer 3 interface: 200 NAT, FTP ALG and DNS ALG
IPv6 services	IPv6 addressing, Neighbor Discovery (ND), ICMPv6, IPv6 ping, IPv6 tracert IPv6 DHCP client
IP routing	IPv4/IPv6 static route Max. number of static IPv4 routes: 1,024 Max. number of static IPv6 routes: 1,000
Multicast	Multicast-to-unicast conversion
VPN	PPPoE client IPsec VPN
Network Management and Monitoring	
Network management	NTP server and NTP client SNTP client SNMPv1/v2c/v3 Fault detection and alarm Information statistics and logging
Network management platform	Direct connection via web management Remote connection via CloudPRO by EK
User access management	Telnet and TFTP Management
Switchover among Fat, Fit, and cloud modes	When the AP works in Fit mode, it can be switched to Fat mode through an UC AX. When the AP works in Fat mode, it can be switched to Fit mode through the console port or Telnet mode. When the AP works in cloud mode, it can be managed through CloudPRO by EK.

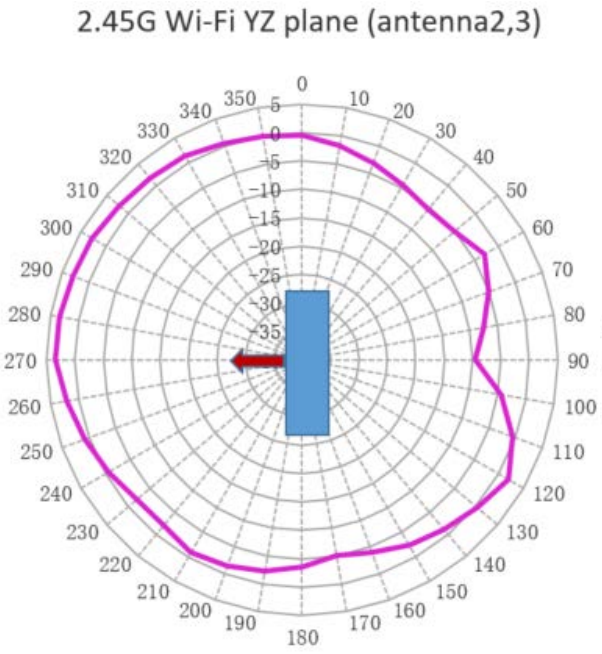
Antenna Pattern Plots

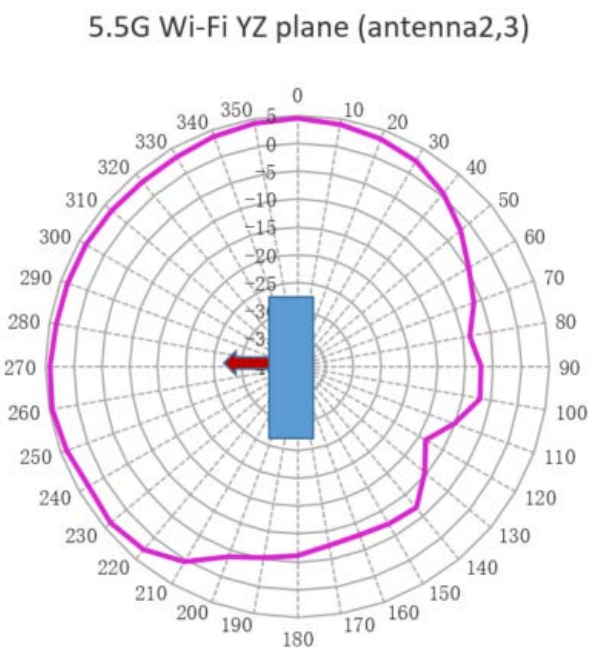
Horizontal Plane (Top View)



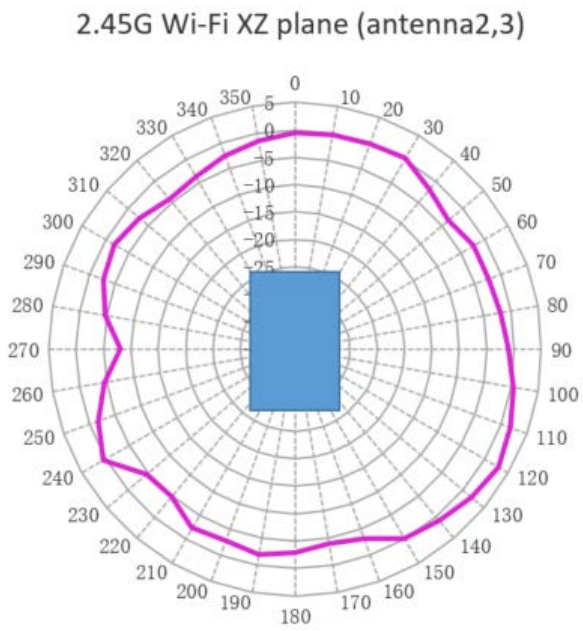


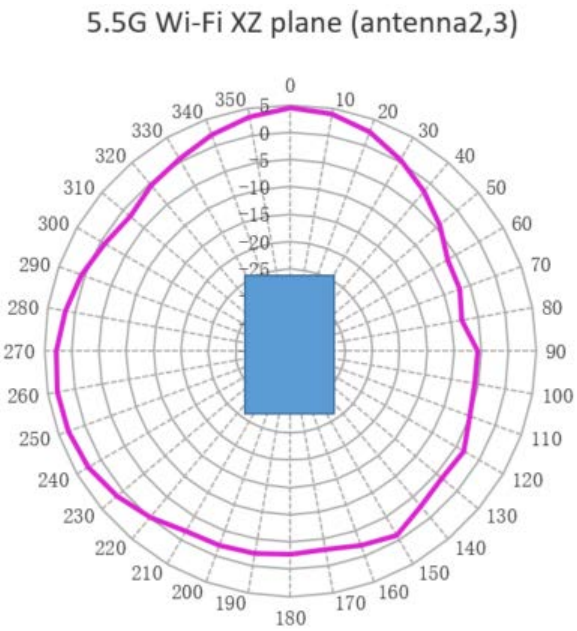
Vertical Plane (Side View, AP Facing Down)





Vertical Plane (Front View)

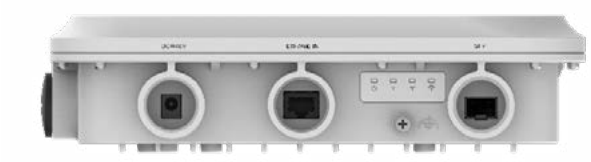




OUTDOOR OMNIDIRECTIONAL WiFi 6 ACCESS POINT

AX 3000 OLP

- √ Designed for outdoor installations (IP68)
- √ Dual-band WiFi (2.4 GHz + 5 GHz) IEEE 802.11b/g/n/ac/ax
- √ Maximum data speed up to 2.976 Gbps
- √ 4 spatial streams
- √ MU-MIMO and WMM systems
- √ Fast-Intelligent-Roaming (IEEE 802.11k/v/r)
- √ Maximum transmission power: 28dBm
- √ High WiFi network quality and efficiency (RF power adjustment and intelligent channel allocation)
- √ Local and remote management via CloudPRO
- √ 1Gbps connection via copper structured cabling (RJ45 connector) or 2.5Gbps via fiber optic (SFP)
- √ 48Vdc PoE power supply
- √ Bluetooth 5.1
- √ High-security protocols (WPA2/802.1X, WPA3P/WPA3 Enterprise)



Hardware

REFERENCE	AX 3000 OLP
Code	331021
802.11n	Four spatial streams - Radio 1 – 2.4 GHz: 2x2 MIMO, two spatial streams - Radio 2 – 5 GHz: 2x2 MIMO, two spatial streams Channels: - Radio 1 – 2.4 GHz: 20 MHz and 40 MHz - Radio 2 – 5 GHz: 20 MHz and 40 MHz Combined peak data rate: 600Mbps - Radio 1 – 2.4 GHz: 6.5 Mbps to 300 Mbps (MCS0 to MCS15) - Radio 2 – 5 GHz: 6.5 Mbps to 300 Mbps (MCS0 to MCS15) - Radio technologies: Orthogonal Frequency-Division Multiplexing (OFDM) - Modulation types: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM Packet aggregation: - Aggregate MAC Protocol Data Unit (A-MPDU) - Aggregate MAC Service Data Unit (A-MSDU) - Dynamic Frequency Selection (DFS) - Cyclic Delay/Shift Diversity (CDD/CSD) - Maximum Ratio Combining (MRC) - Space-Time Block Coding (STBC) - Low-Density Parity Check (LDPC) - Transmit beam-forming (TxBF)
802.11ac	Two spatial streams - Radio 2 – 5 GHz: 2x2 MIMO, two spatial streams Channels: - Radio 2 – 5 GHz: 20 MHz, 40 MHz, 80 MHz, and 160 MHz Combined peak data rate: 1.733 Gbps - Radio 2 – 5 GHz: 6.5 Mbps to 1.733 Gbps (MCS0 to MCS9) - Radio technologies: Orthogonal Frequency-Division Multiplexing (OFDM) - Modulation types: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM Packet aggregation: - Aggregate MAC Protocol Data Unit (A-MPDU) - Aggregate MAC Service Data Unit (A-MSDU) - Dynamic Frequency Selection (DFS) - Cyclic Delay/Shift Diversity (CDD/CSD) - Maximum Ratio Combining (MRC) - Space-Time Block Coding (STBC) - Low-Density Parity Check (LDPC) - Transmit beam-forming (TxBF)
802.11ax	Four spatial streams - Radio 1 – 2.4 GHz: 2x2 uplink/downlink MU-MIMO, two spatial streams - Radio 2 – 5 GHz: 2x2 uplink/downlink MU-MIMO, two spatial streams Channels: - Radio 1 – 2.4 GHz: 20 MHz and 40 MHz - Radio 2 – 5 GHz: 20 MHz, 40 MHz, 80 MHz, and 160 MHz Combined peak data rate: 2.976 Gbps - Radio 1 – 2.4 GHz: 8.6 Mbps to 0.574 Gbps (MCS0 to MCS11) - Radio 2 – 5 GHz: 8.6 Mbps to 2.402 Gbps (MCS0 to MCS11) - Radio technologies: uplink/downlink Orthogonal Frequency-Division Multiple Access (OFDMA) - Modulation types: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM Packet aggregation: - Aggregate MAC Protocol Data Unit (A-MPDU) - Aggregate MAC Service Data Unit (A-MSDU) - Dynamic Frequency Selection (DFS) - Cyclic Delay/Shift Diversity (CDD/CSD) - Maximum Ratio Combining (MRC) - Space-Time Block Coding (STBC) - Low-Density Parity Check (LDPC) - Transmit beam-forming (TxBF) - WPA3
Antennas	Wi-Fi - 2.4 GHz: two built-in omnidirectional antennas, the max. antenna gain is 4 dBi. - 5 GHz: two built-in omnidirectional antennas, the max. antenna gain is 6 dBi. Bluetooth - One integrated vertically polarized omnidirectional antenna, the max. antenna gain is 5 dBi.
Ports	1 x 100/1000Base-T RJ45 Ethernet port with auto-negotiation 1 x 2.5GE SFP port 1 x RJ45 console port 1 x Bluetooth 5.0
Status LED	1 x multi-color system status LED - AP power-on status - Software initialization status and upgrade status - Uplink service interface status - Wireless user online status - CAPWAP tunnel timeout - Specific AP locating - Three single-color signal strength LEDs: - Whether bridging is enabled - Whether bridging is successful - Wireless signal strength after successful bridging

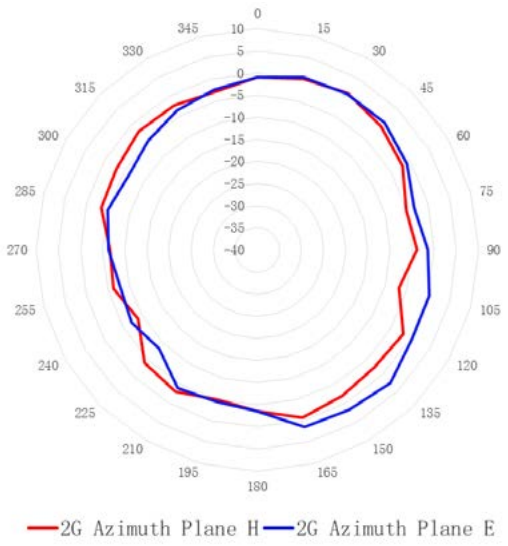
Button	1 x Reset button Press the button for shorter than 2 seconds. Then the device restarts. Press the button for longer than 5 seconds. Then the device restores to factory settings.
Dimensions (W x D x H)	Main unit: 251 mm x 168 mm x 64 mm (9.88 in. x 6.61 in. x 2.52 in.) Shipping: 405 mm x 232 mm x 325 mm (15.94 in. x 9.13 in. x 12.80 in.)
Weight	Main unit: 1.0 kg (2.2 lbs) Mounting bracket: 0.9 kg (1.98 lbs) Shipping: 3.15 kg (6.94 lbs)
Mounting	Ceiling/Wall/Pole-mount (a mounting bracket is delivered with the main unit)
Input power supply	The AP supports the following two power supply modes: 48 Vdc DC/0.35 A power input over DC connector: The DC connector accepts the center-positive circular plug with the inner diameter of 2.0 mm (0.08 in.) or outer diameter of 6.3 mm (0.25 in.) and the length of 9.8 mm (0.39 in.). A DC power supply needs to be purchased independently. PoE input over ETH/PoE: The power source equipment (PSE) complies with IEEE 802.3af/at standard (PoE/PoE+).
Power consumption	Maximum power consumption: 12.95 W Vdc power: 12.95 W 802.3at (PoE+): 12.95 W 802.3af (PoE): 12.95 W Idle mode: 6.0 W
Environment	Storage temperature: –40°C to +85°C (–40°F to +185°F) Storage humidity: 0% RH to 100% RH (non-condensing) Storage altitude: < 5,000 m (16,404.20 ft.) at 25°C (77°F) Operating temperature: –40°C to +65°C (-40°F to +149°F) Operating humidity: 0% RH to 100% RH (non-condensing) Operating altitude: < 5,000 m (16,404.20 ft.) at 55°C (131°F)
IP Rating	IP68
Max transmit power	2.4 GHz Max. transmit power: 28 dBm (630.96 mW) Minimum transmit power: 10 dBm (10 mW) 5 GHz Max. transmit power: 28 dBm (630.96 mW) Minimum transmit power: 10 dBm (10 mW)

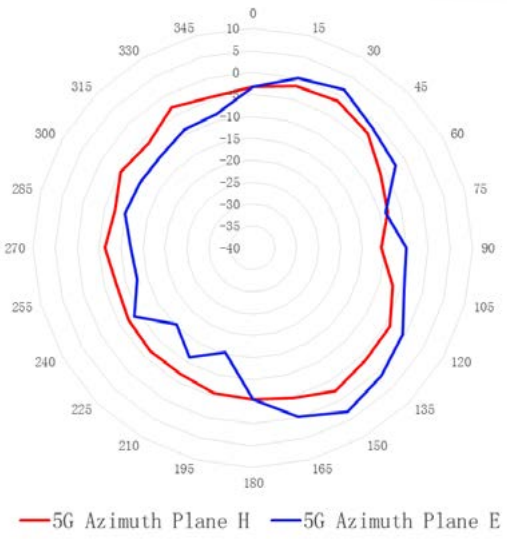
Software

WLAN	
Max. number of associated STAs	1024 (up to 512 STAs per radio)
Max. number of BSSIDs	32 (up to 16 BSSIDs per radio)
Max. number of WLAN IDs	16
STA management	SSID hiding Each SSID can be configured with the authentication mode, encryption mechanism, and VLAN attributes independently. Remote Intelligent Perception Technology (RIPT) Intelligent STA identification Intelligent load balancing based on the STA quantity or traffic
STA limiting	SSID-based STA limiting Radio-based STA limiting
Bandwidth limiting	STA/SSID/AP-based rate limiting
CAPWAP	IPv4/IPv6 CAPWAP Layer 2 and Layer 3 topology between an AP and an AC An AP can automatically discover the accessible AC. An AP can be automatically upgraded through the UC AX. An AP can automatically download the configuration file from the UC AX. CAPWAP through NAT
Data forwarding	Centralized and local forwarding
Wireless roaming	Layer 2 and Layer 3 roaming
Wireless locating	MU and TAG device locating
Security and Authentication	
Authentication and encryption	Remote Authentication Dial-In User Service (RADIUS) PSK and web authentication QR code-based guest authentication, SMS authentication, and MAC address bypass (MAB) authentication Data encryption: WEP (64/128 bits), WPA-TKIP, WPA-PSK, WPA2-AES, WPA3-Individual, WPA3-Enterprise
Data frame filtering	Allowlist, static blocklist, and dynamic blocklist
WIDS	Rogue device discovery Optimization of rogue AP containment for all STA types Fuzzy containment SSID-based blocklist DDoS attack identification Automatic detection of STA attacks, and adding STAs to the blocklist when ICMP attacks or TCP SYN attacks are detected STA isolation
ACL	IP standard ACL, MAC extended ACL, IP extended ACL, and expert-level ACL IPv6 ACL Time range-based ACL ACL based on a Layer 2 interface ACL based on a Layer 3 interface Ingress ACL based on a wireless interface Dynamic ACL assignment based on 802.1X authentication (used with the AC)
CPP	CPU Protect Policy (CPP)
NFPP	Network Foundation Protection Policy (NFPP)
Routing and Switching	
MAC	Static and filtered MAC addresses MAC address table size: 1,024 Max. number of static MAC addresses: 1,024 Max. number of filtered MAC addresses: 1,024
Ethernet	Jumbo frame length: 1,518 Ethernet II 1000M SFP ports modules 2.5G ports
VLAN	Interface-based VLAN assignment Layer 2 isolation of wired interfaces (including aggregate interfaces) within VLANs Max. number of SVIs: 191 Max. number of VLANs: 4,094 VLAN ID range: 1–4,094
ARP	ARP entry aging, gratuitous ARP learning, and proxy ARP Max. number of ARP entries: 1,024 Detection of IP address conflicts among downlink hosts ARP check
IPv4 services	Static and DHCP-assigned IPv4 addresses Maximum number of configured IPv4 addresses per Layer 3 interface: 200 NAT, FTP ALG, and DNS ALG
IPv6 services	IPv6 addressing, Neighbor Discovery (ND), IPv6 ND proxy, ICMPv6, IPv6 ping IPv6 DHCP client
IP routing	IPv4/IPv6 static route Max. number of static IPv4 routes: 1,024 Max. number of static IPv6 routes: 1,000
Multicast	Multicast-to-unicast conversion
VPN	PPPoE client IPsec VPN
Network Management and Monitoring	
Network management	NTP server and NTP client SNTP client SNMPv1/v2c/v3 Fault detection and alarm Information statistics and logging
Network management platform	Direct connection via web management Remote connection via CloudPRO by EK
User access management	Telnet, SSH, FTP client, FTP server, and TFTP client
Switchover among Fat, Fit, and cloud modes	When the AP works in Fit mode, it can be switched to Fat mode through acontroller (UC AX) When the AP works in Fat mode, it can be switched to Fit mode through the console port or Telnet mode. When the AP works in cloud mode, it can be managed through CloudPRO by EK.

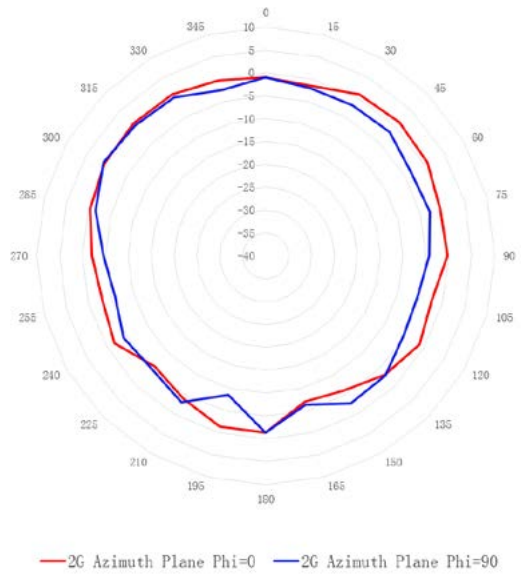
Antenna Pattern Plots

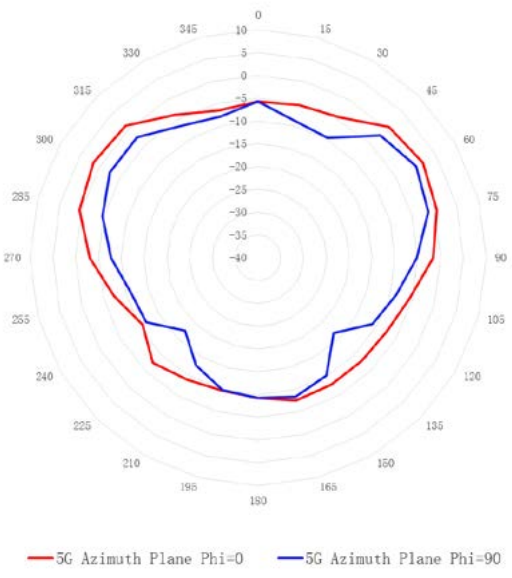
Horizontal Planes (Top View)





Vertical Planes (Side View, AP Facing Down)





MANAGED ETHERNET SWITCHES

Hardware

REFERENCE	SWG 24 AX
Code	334201
Ports	
Fixed service port	24 x 10/100/1000M electrical ports supporting auto negotiation + 4 x 1GE SFP ports
System	
Switching capacity	56 Gbps
Packet forwarding rate	42 Mpps
Dimensions and Weight	
Dimensions (W x D x H)	440 mm x 260 mm x 44 mm (17.32 in. x 10.24 in. x 1.73 in.)
Power Supply and Consumption	
Rated input voltage	AC input: rated voltage range 100 Vdc to 240 Vdc, frequency 50/60 Hz
Maximum input voltage	AC input: rated voltage range 90 Vdc to 264 Vdc, frequency 50/60 Hz
Input voltage	High voltage DC (HVDC) input: input voltage range 192 V to 290 V
PoE power supply	24 x electrical ports supporting PoE and PoE+
Maximum output power of a PoE interface	Maximum PoE/PoE+ output power: 370 W
Environment and Reliability	
Fan monitoring	Fan speed adjustment and fault alarms
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	–40°C to +70°C (–40°F to +158°F)
Operating humidity	10% to 90% RH
Storage humidity	5% to 95% RH
Operating altitude	–500 m to +5000 m (–1640.42 ft to +16404.20 ft)

Software

VLAN	4K VLANs Interface-based VLAN assignment MAC address-based VLAN assignment Protocol-based VLAN assignment Private VLAN Voice VLAN IP subnet-based VLAN GVRP
QinQ	Basic QinQ Selective QinQ
ACL	Standard IP ACL Extended IP ACL Extended MAC ACL (hardware ACL based on the source MAC address, destination MAC address, and optional Ethernet type) Time range-based ACL Expert-level ACL (hardware ACL based on flexible combinations of the VLAN ID, Ethernet type, MAC address, IP address, TCP/UDP port ID, protocol type, and time range) ACL 80 IPv6 ACL Global ACL ACL redirection
QoS	Rate limiting on an interface based on the ingress or egress Flow-based rate limiting on the ingress or egress 802.1p/DSCP/ToS traffic classification Eight priority queues per interface SP, WRR, DRR, SP+WFQ, SP+WRR, SP+DRR, and RED/WRED scheduling
Mirroring	Common service interfaces and aggregate interfaces that can be configured as source and destination interfaces of mirroring 1:1, 1:N, N:1, and flow-based local and remote mirroring RSPAN and ERSPAN Cross-device traffic mirroring
DHCP	DHCP server DHCP client DHCP snooping DHCP relay IPv6 DHCP snooping IPv6 DHCP client IPv6 DHCP relay

SWITCH ETHERNET GESTIONABLE

SWG 24-AX

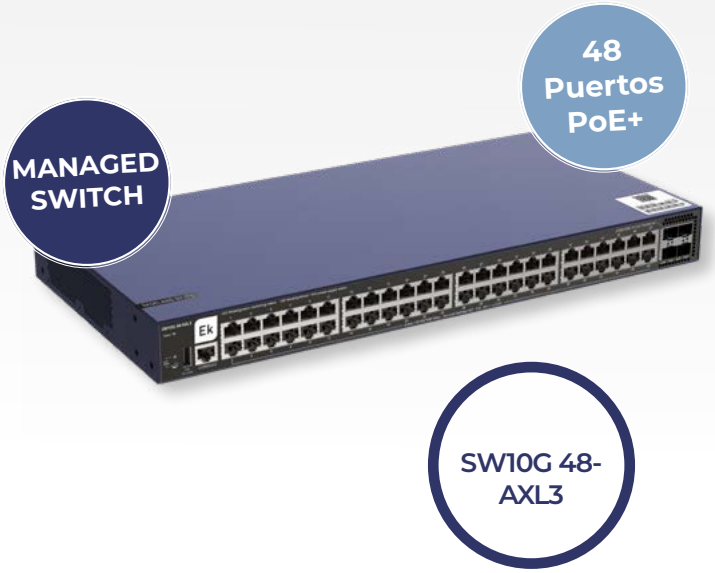
- √ 24 ports 1 Gbps with PoE+ output
- √ 4 SFP 1 Gbps ports
- √ Maximum PoE+ power: 370W
- √ 1U of 19" rack
- √ Layer 2+ features
- √ VLAN management, QinQ, ACL, QoS, mirroring, multicast, IGMP snooping, ...
- √ DHCP server
- √ Management through web interface, SNMP, CLI, SSH, ...
- √ High energy efficiency (IEEE 802.3az)
- √ Web management and remote via CloudPRO by EK

Layer 2 protocols	IEEE 802.3, IEEE 802.3u, IEEE 802.3z, IEEE 802.3x, IEEE 802.3ad, IEEE 802.1p, IEEE 802.1x, IEEE 802.3ab, IEEE 802.1Q (GVRP), IEEE 802.1d, IEEE 802.1w, IEEE 802.1s IEEE 802.1s, and IGMP snooping v1/v2
Security	3-tuple binding (IP address, MAC address, and interface) 3-tuple binding (IPv6 address, MAC address, and interface) Invalid MAC address filtering Interface- and MAC address-based 802.1X authentication MAC address bypass authentication (MAB) Portal and Portal 2.0 authentication ARP check DAI Trusted ARP ARP spoofing prevention Broadcast or multicast storm suppression Unknown multicast suppression and multicast bandwidth suppression Hierarchical management and password protection RADIUS and TACAS+ AAA (IPv4/IPv6) for device login management SSH and SSHv2.0 BPDU guard IP source guard CPP and NFPP Port protection
Cable diagnostics	Cable detection
Energy Efficient Ethernet (EEE)	IEEE 802.3az-compliant EEE: When EEE is enabled, power consumption of interfaces is significantly reduced.
Port sleeping	Port sleeping
PoE	IEEE 802.3af, IEEE 802.3at, and IEEE 802.3bt Automatic and energy-efficient power supply management modes Warm start to implement uninterrupted power supply Interface priority Compatibility with non-standard PDs Scheduled power-on/off of PoE interfaces
IP routing	IPv4/ IPv6 static route RIP, RIPng, OSPFv2, and OSPFv3 Routing policy
IPv6 Basic protocols	IPv6 addressing, Neighbor Discovery (ND), IPv6 ACL, ICMPv6, IPv6 ping, and IPv6 tracert
VSU features	VSU Local and remote stacking Cross-chassis link bundling within the stack
Zero Touch Provisioning (ZTP)	CWMP (TR-069) standard protocol
Management features	SNMP, CLI (Telnet/console), RMON, SSH, Syslog/debugging, NTP/SNTP, FTP, TFTP, web, sFlow and CloudPRO by EK

SWITCH ETHERNET GESTIONABLE

SW10G 48-AXL3

- √ 48 10/100/1000 PoE/PoE+ ports
- √ 4 SFP+ 10GE ports
- √ Maximum PoE+ power: 405W
- √ 1U 19” rack-mountable
- √ Layer 3 features
- √ VLAN management, QinQ, ACL, QoS, mirroring, multicast, IGMP snooping, etc.
- √ DHCP server
- √ Management via web, SNMP, CLI, SSH, etc.
- √ High energy efficiency (IEEE 802.3az)
- √ Direct configuration and via CloudPRO by EK



Hardware

REFERENCE	SW10G 48-AXL3
Code	331027
Ports	
Fixed service port	48 10/100/1000BASE-T ports, supporting PoE/PoE+ 4 1GE/2.5GE/10GE SFP+ ports
System	
Switching capacity	211 Gbps
Packet forwarding rate	158 Mpps
Dimensions and Weight	
Dimensions (W x D x H)	442 mm x 220 mm x 43.6mm - 4kg
Power Supply and Consumption	
Rated input voltage	100 V AC to 240 V AC, 50/60Hz
Maximum input voltage	90 V AC to 264 V AC
Input voltage	6 A
PoE power supply	Ports 1 to 48 support PoE/PoE+ power supply (IEEE 802.3af/at)
Maximum output power per PoE port	Each PoE port provides up to 30 W of power. Maximum total power: 405W
Environmental Conditions and Safety	
Fan monitoring	Multilevel speed adjustment based on PID Fan speed control (manual configuration not supported) Fan failure alarm
Operating temperature	0°C to 45°C (32°F to 113°F)
Storage temperature	–40°C to +70°C (–40°F to +158°F)
Operating humidity	10% to 90% RH (non-condensing)
Storage humidity	5% to 95% RH (non-condensing)
Operating altitude	-500 m to +5,000 m (-1,640.42 ft to +16,404.20 ft)

Software

Ethernet	IEEE 802.1Q (4K VLANs) Voice VLAN Super VLAN and Private VLAN MAC-based VLAN, Port-based VLAN, Protocol-based VLAN, and Subnet-based VLAN Basic QinQ Selective QinQ STP (IEEE 802.1d), RSTP (IEEE 802.1w), and MSTP (IEEE 802.1s) ERPS (G.8032) LLDP/LLDP-MED
Multicast	IGMP v1/v2/v3 and IGMP proxy IGMP Snooping v1/v2 PIM-DM, PIM-SM, and PIM-SSM PIM-SMv6 and PIM-SSMv6 MSDP MLD v1/v2 and MLD proxy MLD Snooping v1/v2 PIM-SMv6 and PIM-SSMv6 Multicast source IP address check Multicast source port check Multicast querier
ACL	Standard IP ACL Extended IP ACLs (hardware ACLs based on IP addresses or TCP/UDP port numbers) Extended MAC ACLs (hardware ACLs based on source MAC address, destination MAC address, and optional Ethernet type) Expert-level ACLs (hardware ACLs based on flexible combinations of VLAN ID, Ethernet type, MAC address, IP address, TCP/UDP port number, protocol type, and time range) Time-based ACLs, ACL 80, and IPv6 ACLs Global ACLs ACL redirection

Protocols	IEEE 802.2 Logical Link Control IEEE 802.1ab Link Layer Discovery Protocol IEEE 802.1ad Provider Bridges IEEE 802.1ax/IEEE802.3ad Link Aggregation IEEE 802.1D Media Access Control (MAC) Bridges IEEE 802.1D Spanning Tree Protocol IEEE 802.1Q Virtual Bridged Local Area Networks (VLAN) IEEE 802.1s Multiple Spanning Tree Protocol IEEE 802.1w Rapid Spanning Tree Protocol IEEE 802.3ad Link Aggregation Control Protocol (LACP) IEEE Std 802.3x Full Duplex and flow control
Security	Multiple AAA modes RADIUS and TACAS+ RADIUS authentication and authorization IEEE802.1X authentication, MAC address bypass (MAB) authentication, and interface-based and MAC address-based 802.1X authentication Web authentication HTTPS SSHv1 and SSHv2 Global IP-MAC binding ICMPv6 Port isolation and port security IP source guard SAVI ARP spoofing prevention CPP and NFPP Portal authentication and Portal 2.0 authentication ARP check DAI ARP packet rate limiting Gateway ARP spoofing prevention
Energy-Efficient Ethernet (EEE)	IEEE 802.3az-compliant EEE: When EEE is enabled, power consumption of interfaces is significantly reduced.
Port Suspension	Port sleeping
PoE Power Supply	IEEE 802.3af and 802.3at Warm start Port priority Automatic and energy-saving power supply management modes Uninterrupted power supply in hot start mode Scheduled power-on or power-off of PoE ports based on the time policy
IP Routing	IPv4/ IPv6 static route RIP, RIPng, OSPFv2, and OSPFv3 Routing policy
IPv6 Protocolos básicos	IPv6 addressing, Neighbor Discovery (ND), IPv6 ACL, ICMPv6, IPv6 ping, and IPv6 tracert
VSU Features	VSU Local and remote stacking Cross-chassis link bundling within the stack
Remote Provisioning (ZTP)	CWMP (TR-069) standard protocol
Management Features	SNMP, CLI (Telnet/console), RMON, SSH, Syslog/debugging, NTP/SNTP, FTP, TFTP, web, sFlow and CloudPRO by EK

CONTROLLER FOR WiFi NETWORKS

REFERENCE	UC-AX
Code	331022
Dimensions and Weight	
Physical Dimensions (W x D x H)	440 mm x 200 mm x 43.6 mm (excluding foot pad) (17.32 in. x 7.87 in. x 1.72 in.)
Rack Height	1 U
Weight	Net weight: 2.9 kg (6.39 lbs)
Port Specification	
Fixed Service Port	Six 10/100/1000Base-T Ethernet ports with auto-negotiation. Port 1 can serve as a management port. Two combo ports. When the electrical port works, 10/100/1000Base-T auto-negotiation is supported.
Fixed Management Port	One RJ45 console port Two USB ports
Status LED	One system status LED One power status LED 10 service port status LEDs
Button	One power switch One reset button
Power Supply and Consumption	
Max. Power Consumption	40W
Input Voltage	100V AC to 240V AC-50Hz to 60Hz
Output Voltage	12V/ 3.33A
Environment and Reliability	
Temperature	Operating temperature: –10°C to +40°C Storage temperature: –40°C to +70°C
Humidity	Operating humidity: 10% to 90% RH (non-condensing) Storage humidity: 5% to 95% RH (non-condensing)
Safety regulations	GB 4943.1 CE Marked, EN/IEC 62368-1 (replacing EN/IEC 60950-1) Low Voltage Directive 2014/35/EU
EMC regulations	EN 300 386, EN301 489, EN 55032 Class A, EN 55035, EN 61000-3-2, EN 61000-3-3, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4,EN 61000-4-5, EN 61000-4-6, EN 61000-4-8, EN 61000-4-11

CONTROLLER FOR WiFi NETWORKS

UC-AX

- √ High-Performance WiFi Controller
- √ Controls and manages medium to large networks both locally and remotely
- √ High-capacity load balancing
- √ Intelligent WiFi signal management (seamless roaming)
- √ Optimized for managing multicast services
- √ Supports high security and reliability standards
- √ Manages from 32 to 448 access points (*)
- √ 8 RJ45 ports or 6 RJ45 ports + 2 SFP ports

(*) Check conditions

UC-AX

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