EKSELANS BY ITS

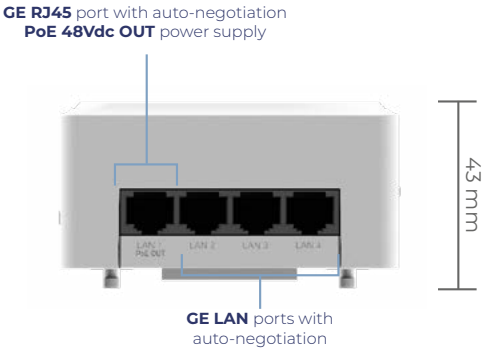
INDOOR WIFI ACCESS POINT

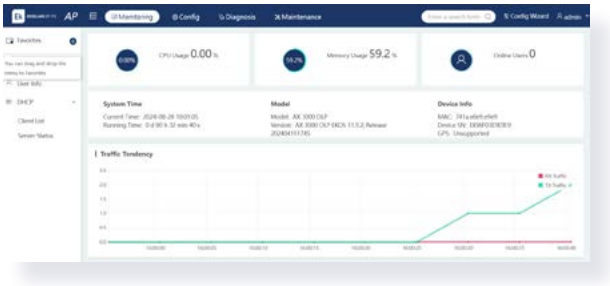
AX 3000P

WiFi 6 · AX · CLOUD PRO

- √ 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

AX 3000P





AX 3000P Interface

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TECHNICAL INFORMATION

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

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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)

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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

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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.

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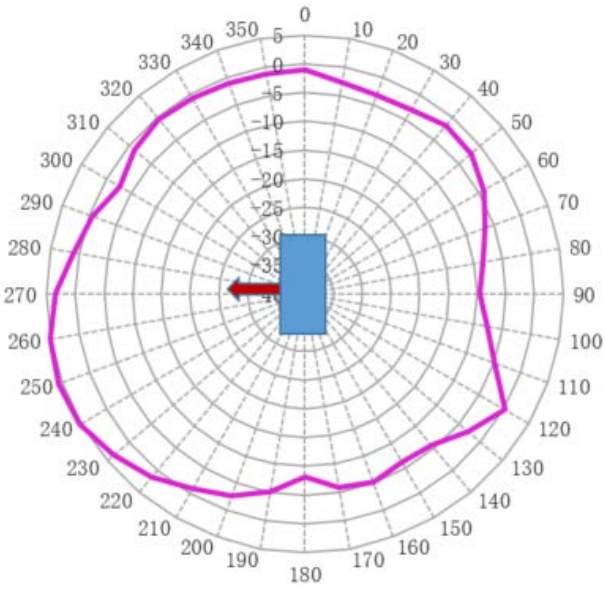
TECHNICAL INFORMATION

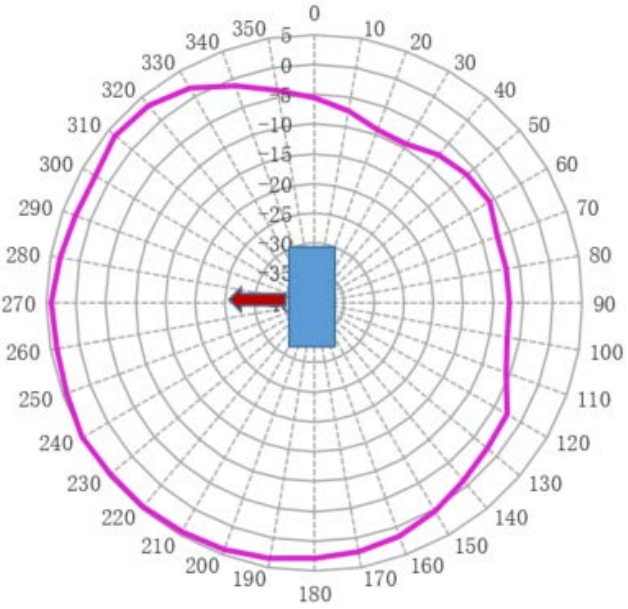
Antenna Pattern Plots

Horizontal Plane (Top View)

2.45G Wi-Fi XY plane (antenna2,3)

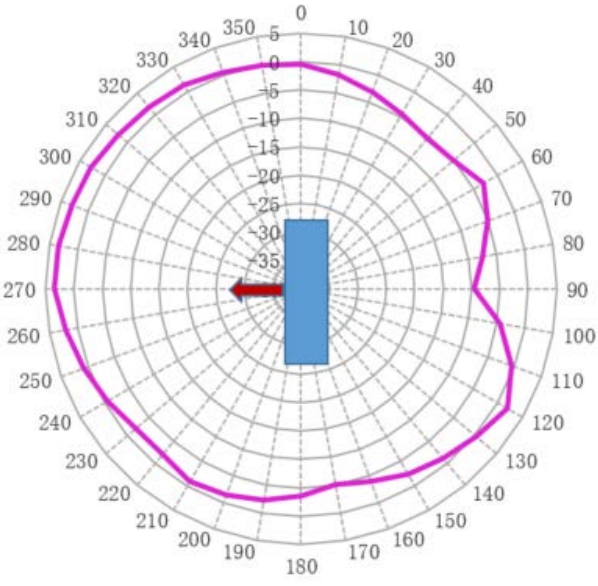


5.5G Wi-Fi XY plane (antenna2,3)

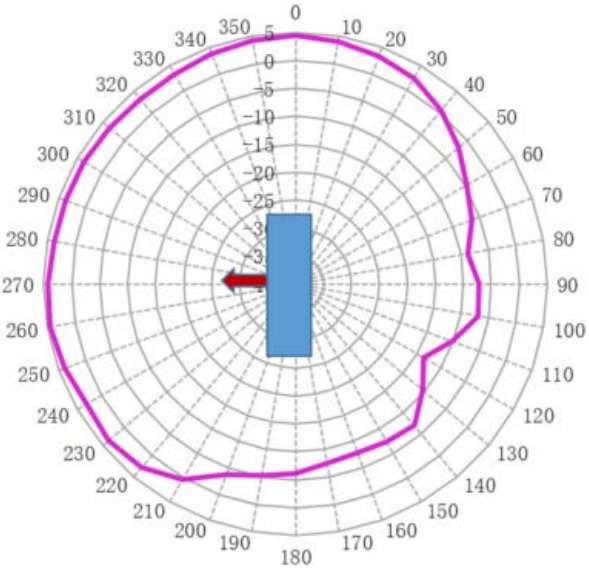


Vertical Plane (Side View, AP Facing Down)

2.45G Wi-Fi YZ plane (antenna2,3)



5.5G Wi-Fi YZ plane (antenna2,3)



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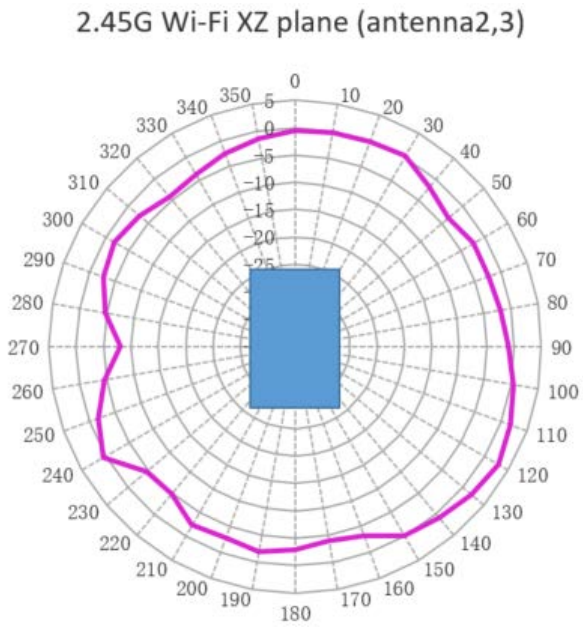
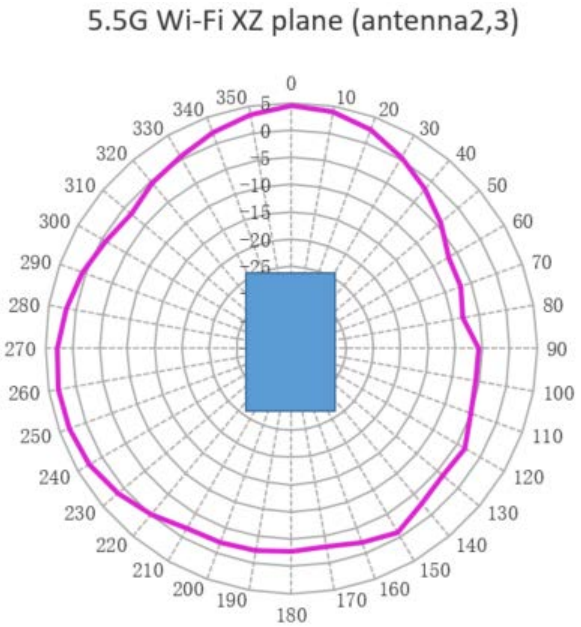
Vertical Plane (Front View)





CLOUD PRO

https://cloudpro.ek.plus/

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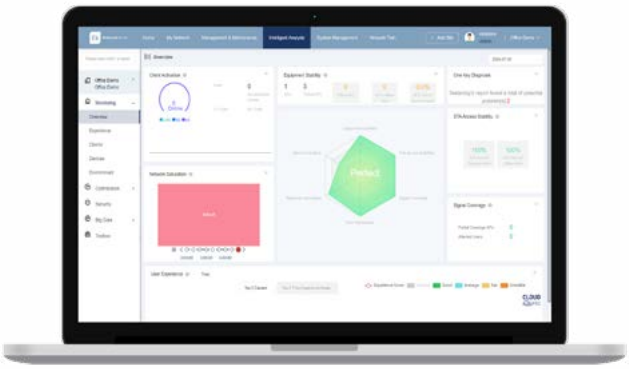
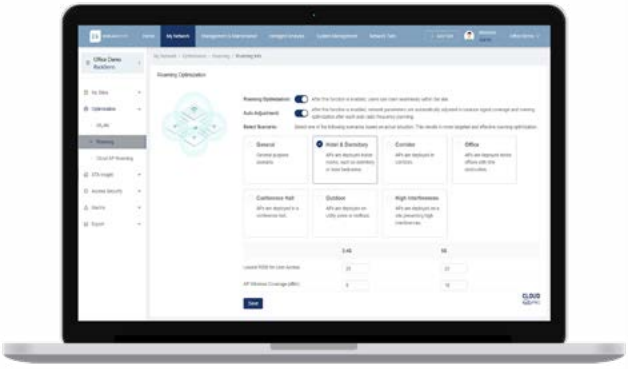
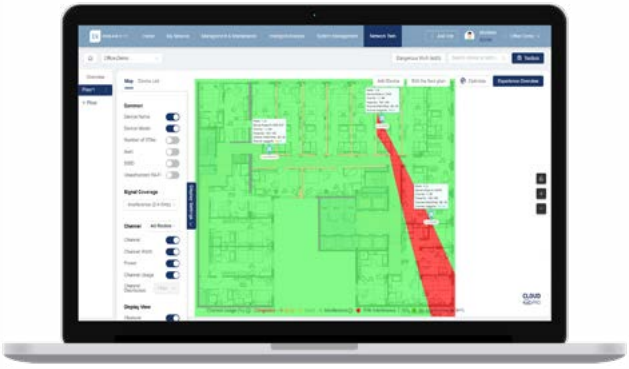
- √ Unified Cloud-Based WiFi Network Management Platform
- √ Enables the design, deployment, configuration, operation, and real-time analysis of WiFi networks
- √ Management of all network devices: access points, switches, and controllers
- √ Remote execution of monitoring and diagnostic tasks for device 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
- √ Includes a WiFi network design and planning tool (site survey and heat maps)
- √ Allows the creation and monitoring of an unlimited number of projects/installations for each user
- √ All of this with the highest standards of cybersecurity, based on cloud servers located in Europe







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