



H3C WA6320 New Generation Access Point

802.11ax Indoor Series Access Point

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New H3C Technologies Co., Limited

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Overview

H3C WA6320 series access point is the latest generation wireless access point developed based on 802.11ax standard. They are designed with creative dual-radio 802.11ax technology standard respectively, and provide a transmission speed at least 2 times faster than 802.11ac products. This makes the series suitable for high-density access scenarios, such as hotel, retail stores and smart enterprise campus. It is compact in appearance and support both wall mounting and ceiling mounting.



H3C WA6320 Internal Antennas 4 Streams Dual Radio 802.11ax/ac/n AP

Features and benefits

New-generation Wi-Fi standard 802.11ax (Wi-Fi 6)

WA6320 dual-radio AP adopts 802.11ax technology can provide up to 1.775Gbps access rate, which is suitable for all high-density access scenarios and provides better access experience.

MU-MIMO

H3C WA6320 series AP supports MU-MIMO technology, which is the most important feature of 802.11ax. DL MU-MIMO technology allows AP to send data to multiple stations simultaneously, breaking through the

traditional wireless serial communication mechanism, increasing the utilization rate of wireless spectrum resources, improving the number of effective access users and access experience under high-density deployment.

Smart cloud access and optimal WLAN TCO

The WA6320 series complies with the 802.11ax standard. It works on dual radio and provides high-speed transmission that is at least 2 times faster than 802.11ac products under the same conditions. The WA6320 series is available for easy maintenance and management from the H3C Oasis platform. Through smart RF optimization technologies, the series provides mobile cloud access in coverage scope, access density, and operation stability, and achieves the optimal wireless network Total Cost of Ownership (TCO).

Orthogonal frequency division multiple access (OFDMA)

802.11ax uses OFDMA to allow multiple users to transmit data simultaneously. OFDMA splits a channel into sub-channels, known as resource units (RUs), with specific subcarriers, and assigns RUs to different users for simultaneous transmission. OFDMA enables simultaneous multi-user transmission and reduces latency caused by channel contention.

Spatial multiplexing

802.11ax assigns a different color per BSS to help WA6320 identify co-channel interference and stop transmission in time. If a radio detects 802.11ax signals from a BSS that has the same color as the radio's BSS, it determines that co-channel interference exists and stops data transmission. This optimizes frequency reuse and improves network capacity.

Target Wake Time (TWT)

TWT improves power efficiency and reduces contention by increasing client sleep time and allowing negotiation of the times that clients can access the medium.

Green design

WA6320 employs a green design that supports dynamic MIMO power saving (DMPS), enhanced automatic power save delivery (E-APSD), and smart identification of terminal network requirements. It can dynamically adjust the MIMO working mode and efficiently put terminals to sleep.

WA6320 supports green AP mode that enables single radio standby and allows for more precise power control.

WA6320 supports the innovative per-packet power control (PPC) technology, which reduces standby power consumption and improves mobile device standby time.

Local forwarding

WA6320 supports both centralized forwarding and local forwarding. With centralized forwarding, APs tunnel incoming data frames to the AC and the AC forwards the data frames. With local forwarding, APs directly forward data frames. The local forwarding mode significantly saves wired bandwidth.

IPv4 and IPv6 dual stack (Native IPv6)

WA6320 is fully compliant with IPv6, and implements dual IPv4/IPv6 protocol stacks. It can automatically associate with an AC to provide wireless services no matter in an IPv4 or IPv6 network, so that it never runs as an information silo.

End user Admission Defense (EAD)

As one of components of H3C iMC, EAD integrates network access and endpoint security products, and helps ensure that only wireless clients that comply with enterprise security policies can access the network. When working with a security policy server, it can remind users, isolate or log them off when their systems are infected or not patched correctly. Only wireless clients that are complied with security policies are admitted. This enhances overall wireless security.

Built-in Bluetooth

H3C WA6320 adopts built-in Bluetooth module which can support 10m long-distance Console function, avoid additional workload in the process of equipment installation and maintenance, reduce the difficulty of troubleshooting, and support iBeacon shaking.

Remote probing and analysis

WA6320 can act as a remote probing and analysis sensor to monitor a WLAN, collect channel information, and report the information to the local device for further analysis. This can satisfy wireless network monitoring and maintenance requirements.

RF Optimizing Engine (ROE)

ROE, through feature- and protocol-based RF optimization, provides greater speed and QoS in middle- to high-density access and streaming media transmission scenarios. It provides features such as multi-user fairness, mixed access fairness, interference filtering, speed optimization, band navigation, multicast optimization (IPv4/IPv6), per-packet power control, and intelligent bandwidth guarantee.



Intelligent load balancing

WA6320 supports session- and traffic-based load balancing. When the load of the AP reaches the upper limit, the AC rejects the association requests of new clients and directs the clients to another AP with smaller load. What sets H3C intelligent load balancing apart from existing load balancing solutions is that it starts load balancing only for clients that are in the overlapping AP coverage. This maximizes wireless network capacity.

Real Time Spectrum Guard (RTSG)

Real Time Spectrum Guard (RTSG) is the innovative H3C professional state-monitoring program for the wireless spectrum. H3C 802.11ax series AP supports the internal RF data acquisition module to achieve deeply integrated monitoring and real time spectrum protection.

The RTSG Console is integrated into the iMC (intelligent Management Center), and performs data acquisition through the CAPWAP tunnel management and Sensor AP. It can achieve 24x7 wireless signal quality monitoring, trend assessment and unauthorized interference alert. Through active probe and 2.4GHz/5GHz RF interference source (WiFi or non-WiFi) in every band, it provides a graphic representation of real-time FFT plot of the spectral density plot, spectrum diagram, the duty cycle map, event spectrum diagram, channel gain and interference gain. It can also automatically identify the source of interference, to determine the location of rogue wireless equipment, to ensure the wireless network is always in great shape. Combined with H3C iMC IAR (Intelligent Analysis Report) module, it can maintain a complete history of RF quality in the coverage area, including its trace and playback, automatically generate customized trend, compliance and audit reports.

To cater for the different supervision demands in user's wireless environment, the RTSG solution can be deployed in either Local mode or Monitor mode. In Local Mode, you can maintain normal user access and data packet forwarding without compromising effective spectrum protection.

H3C Cellular Coexistence Feature (CCF)

H3C uses built-in hardware filtering to minimize the impact of interference from 3G/4G cellular networks.

Cloud-based Management

H3C cloud-managed APs were developed based on the Cloudnet platform, on which network administrators can manage the cloud-managed APs directly, for example, view cloud-managed AP status in real time and deploy configurations from the cloud to cloud-managed APs. This greatly improves network efficiency and enhances security and stability.

Intelligent unified wired and wireless management

The whole series of H3C wireless products can be managed by the Wireless Service Manager (WSM) component of H3C Intelligent Management Center (IMC). WSM provides unified management of wired and wireless networks, adding wireless network management functions into existing wired network management systems.

WSM offers a simple and user friendly management platform for wireless network administrators. It implements panel management, troubleshooting, performance monitoring, software version control, configuration management, and user access management of wireless devices. In addition, it can manage wired devices by cooperating with other components in IMC.

Technical specifications

Hardware specifications

| | |
|--|---|
| Name | WA6320 |
| Weight(excluding mounting accessories) | 0.4Kg |
| Dimensions(excluding mounting and accessories) | 185mm×185mm×43mm |
| Ethernet ports | one for 100/1000M Rj45 |
| PoE | Port1: 802.3af |
| Local Power supply | 54V DC |
| Console port | One (RJ-45) |
| Built-in antenna | Built-in omni-directional antenna 3dBi antenna gain @2.4GHz 5dBi antenna gain @5GHz |
| Built-in Bluetooth | Built-in Bluetooth 5.0(Support to switch RFID through software), Support iBeacon standard |



| | |
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| Working frequencies | 802.11ax/ac/n/a : 5.725GHz-5.850GHz ; 5.47 ~ 5.725GHz; 5.15~5.35GHz 802.11ax/b/g/n : 2.4GHz-2.483GHz |
| Modulation technology | OFDM : BPSK@6/9Mbps、 QPSK@12/18Mbps、 16-QAM@24Mbps、 64-QAM@48/54Mbps DSSS : DBPSK@1Mbps、 DQPSK@2Mbps、 CCK@5.5/11Mbps (file://dbpsk@1mbps、 dqpsk@2mbps、 cck@5.5/11Mbps) MIMO-OFDM (11n) : MCS 0-31 MIMO-OFDM (11ac) : MCS 0-11 MIMO-OFDM (11ax) : MCS 0-11 |
| Modulation mode | 11b: DSS:CCK@5.5/11Mbps,DQPSK@2Mbps,DBPSK@1Mbps 11a/g: OFDM:64QAM@48/54Mbps,16QAM@24Mbps,QPSK@12/18Mbps,BPSK@6/9Mbps 11n: MIMO-OFDM:BPSK,QPSK,16QAM,64QAM 11ac: MIMO-OFDM:BPSK,QPSK,16QAM,64QAM,256QAM 11ax: MIMO-OFDM: BPSK,QPSK,16QAM,64QAM,256QAM,1024QAM |
| Maximum transmit power | 20dBm (Transmit power is multi-chain combined power, no antenna gain is included. The actual transmit power depends on local laws and regulations) |
| Adjustable power granularity | 1dBm |
| Reset/restoration to factory default | Supported |
| State LED | Alternating flashing mode, orange/green/blue for different working states, breathing mode |
| Working Temperature/ Storage Temperature | -10°C ~ 55°C(32°F to 113°F)/-40°C ~ 70°C(-40°F to +158°F) |
| Working Humidity/ Storage Humidity | 5%~95%(non-condensing) |
| Protection class | IP41 |



| | |
|-------------------------------|--|
| Overall power consumption | ≤12.42W |
| Safety compliance | GB4943、EN60601-1-2(medical electrical equipment)、UL/CSA 60950-1、EN/IEC 60950-1、EN/IEC 60950-22 |
| EMC | GB9254、EN301 489、EN55022、FCC Part 15、RSS-210 |
| Radio frequency certification | FCC Part 15、EN 300 328、EN 301 893、and MIIT SRRC |
| Health | FCC Bulletin OET-65C、EN 50385、IC Safety Code 6 |
| MTBF | >250000H |

Software specifications

| Item | | WA6320 |
|------------|-----------------------------------|--|
| Compliance | 802.11 | Indoor, compliant with 802.11a/b/g/n/ac/ax |
| 802.11ax | Working frequencies and MIMO | 2.4G 2*2 MIMO 0.575Gbps 5G 2*2 MIMO 1.2Gbps |
| | 20MHz/40MHz bandwidth | Supported |
| | 80MHz bandwidth | Supported |
| | Maximum transmission speed | 1.775Gbps |
| | A-MPDU | Supported |
| | A-MSDU | Supported |
| | Maximum likelihood decoding (MLD) | Supported |
| | Maximum-ratio combining (MRC) | Supported |
| | Space-time block coding (STBC) | Supported |
| | Low-density parity-check (LDPC) | Supported |



| Item | | WA6320 |
|-------------|---|-----------|
| | Cyclic Delay Diversity (CDD)/Cyclic Shift Diversity (CSD) | Supported |
| | DFS(dynamic frequency selection) | Supported |
| | Transmit Beamforming | Supported |
| WLAN basics | Maximum number of clients per radio | 512 |
| | Maximum number of SSIDs for each radio | 16 |
| | Open system/shared key authentication | Supported |
| | Broadcast probe request acknowledge control | Supported |
| | Concurrent login of WPA, WPA2,WPA3 and Pre- RSNA users | Supported |
| | RTS/CTS | Supported |
| | CTS-to-self | Supported |
| | 802.11k and 802.11v smart roaming | Supported |
| | 802.11r fast transition roaming | Supported |
| | Advanced Traffic Management | Supported |
| | Restrict low rate/sticky terminals access | Supported |
| | Channel reuse | Supported |
| | Receiver sensitivity adjustment | Supported |
| | Automatic channel/power/bandwidth adjustment | Supported |
| | Hide SSID | Supported |
| Hotspot 2.0 | Supported | |



| Item | | WA6320 |
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| WLAN extension | Station related | Abnormal offline check, station aging, statistics and status query |
| | Client number limit | Supported |
| | Link integrity check | Supported |
| | Repeater mode | Supported |
| Security policy | Encryption | WEP-64/128/152bit, dynamic WEP, TKIP, AES, EAP, CCMP ,WPA3 |
| | | Multiple triggering conditions for unicast and broadcast key update |
| | 802.11i | Supported |
| | Authentication | 802.1X authentication, MAC authentication, PSK authentication, Portal authentication, PPSK H3C WX series access controllers might be required for authentication. |
| | User isolation | Layer 2 user isolation SSID-based user isolation |
| | Forwarding security | Packet filtering |
| | | MAC address filtering Broadcast storm suppression |
| | Wireless terminal access | Wireless EAD |
| | SSID and VLAN binding | Supported |
| | WIDS/WIPS | Supported |
| | Rogue device detection and countermeasure | Supported |
| | Dynamic ARP Inspection (DAI) | Supported |
| | IP Source Guard (IPSG) | Supported |
| Management frame protection (802.11w) | Supported | |
| AAA | RADIUS client | Supported |
| | Multiple-domain authentication server | Supported |
| | Backup authentication server | Supported |
| | IP address configuration | Static IP (available only in fat AP mode) DHCP assigned IP (Option 60) |

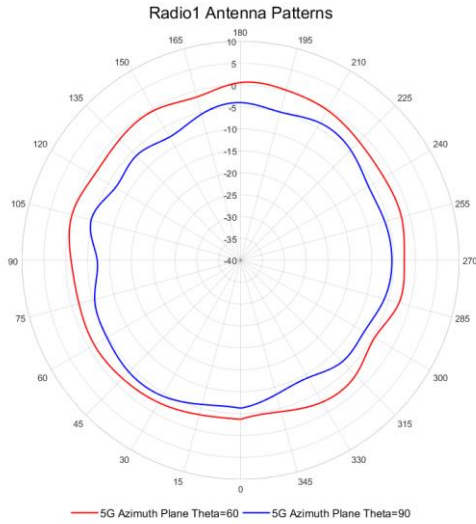
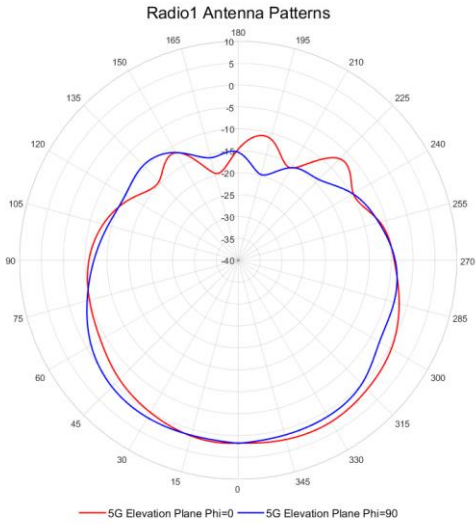
| Item | WA6320 | |
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| Layer 2 and Layer 3 features | Native IPv6 | Supported |
| | IPv6 Portal | Supported |
| | IPv6 SAVI | Supported |
| | ACL | IPv4/IPv6 |
| | Local forwarding | Local forwarding based on SSID and VLAN |
| | Link Layer Discovery Protocol (LLDP) | Supported |
| | SSID-based VLAN assignment | Supported |
| | EoGRE Tunnel | Supported |
| | Multicast | IGMP Snooping/MLD Snooping |
| | 802.11e | Wi-Fi Multimedia (WMM) |
| QoS | Priority | 802.1p priority and marking on Ethernet ports |
| | | Priority mapping for wired and wireless packets |
| | QoS policy mapping | SSID/VLAN and QoS policy mapping |
| | Layer 2 to Layer 4 packet filtering and traffic classification | Supported |
| | CAR | Supported |
| | Client bandwidth management | Station-based bandwidth allocation SSID-based bandwidth allocation |
| | Load balancing | Traffic-based load balancing Session-based load balancing Frequency-based load balancing (supports dual-band) |
| | Band navigation(5G priority) | Supported |
| | Multicast optimization (IPv4/IPv6) | Supported |
| | Call Admission Control (CAC) | Session-based CAC Channel usage-based CAC |
| | Airtime optimization | Supported |
| | Airtime fairness | Supported |
| Layer 4-7 application identification | Coupled with H3C WLAN ACs, the APs can identify variety of applications and policy control can be implemented including priority adjustment, scheduling, blocking, and rate limiting on users | |



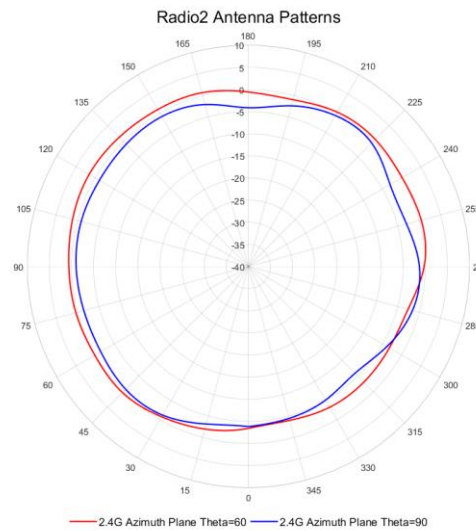
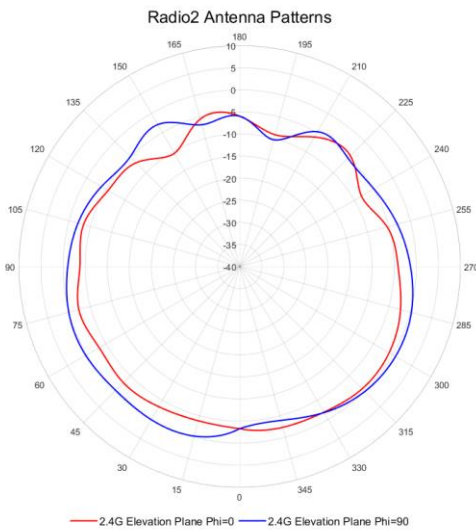
| Item | | WA6320 |
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| | SVP Phone | Supported |
| Power saving | PPC | Supported |
| | Green AP mode | Supported |
| | Dynamic MIMO power saving | Supported |
| | E-APSD | Supported |
| | WMM Power Save | Supported |
| Management and maintenance | Network management | Trap, HTTP(S), SSH, Telnet, FTP/TFTP, SNMP V1/V2/V3 only applicable in Cloud/Fat mode |
| | Management SSID | Supported |
| | Syslog | Supported |
| | AP Working Mode | Fit/Cloud/Fat |
| | Remote probing and analysis | Supported |
| Wi-Fi Certified | IEEE 802.11a/b/g/n/ac/ax, WMM, WPA, WPA2 and WPA3 – Enterprise, Personal (SAE), Enhanced Open (OWE), Wi-Fi Alliance | |

Antenna Patterns

Radio1: 5GHz (AP front facing down)



Radio1: 2.4GHz (AP front facing down)



Ordering information

| Product ID | Product Description |
|----------------|---|
| EWP-WA6320-FIT | H3C WA6320 Internal Antennas 4 Streams Dual Radio 802.11ax/ac/n Access Point, FIT |



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|---------------|--|
| ADP040-54V-GL | H3C 54V 40W High Power Adapter Power Supply (optional) |
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