H3C WA5530X Outdoor Access Point

802.11ac Wave2 Access Point

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New H3C Technologies Co., Limited

H3C WA5530X Outdoor 802.11ac Wave 2 WLAN Access Point

Overview

Figure 1: WA5530X

H3C WA5530X series AP is the latest-generation smart outdoor 802.11ac Wave 2 Access Point (AP) with triple-band, 8 streams and large RF radiated power. It provides Gigabit Ethernet uplink which breaks the speed limit of Megabit and makes wireless multimedia application reality.

H3C WA5530X is integrated with smart RF optimizing technology. Maximum transmit power of single RF up to 500mW. It can address outdoor WLAN coverage problems and enhance accuracy and stability. Professional uni-body design and wide-temperature-range resistance make it convenient for outdoor installation and debugging. It's widely deployed for professional smart coverage in outdoor scenarios such as wireless city and scenic spot. With enhanced IoT interface, H3C WA5530X can be combined with H3C IoT solution and deployed for smart city and other IoT applications.

Features

Smart cloud access and optimal WLAN TCO

WA5530X series AP complies with 802.11ac Wave2 standard and features maximum 1733Mbps wireless transfer rate for 5GHz and total 3Gbps speed of combining 2.4GHz and 5GHz. With the advanced antenna array technology, it can increase the scope of coverage, improve access density and operation stability and provide a better mobile cloud access and wireless network total cost of ownership (TCO).

Gigabit SFP optical port

Sometimes, 100-meter-long cable is not enough to connect a remote outdoor AP. WA5530X series AP supports Gigabit SFP optical port and prevents from faulty of devices like optical modem.

Local forwarding

When WA5530X series AP runs in Fit mode and forwards packets through a wide area network (WAN), they are usually deployed as data access devices in branch offices, while wireless Access Controllers (ACs) are deployed in headquarter. All user data is sent from APs to AC, and centrally forwarded by the AC. WA5530X series AP can convert wireless packets to wired packets avoiding data packets sent through AC but forwarded locally, which significantly saves the WAN link bandwidth.

Dual IPv4/IPv6 protocol stacks (Native IPv6)

WA5530X series AP is fully compliant with IPv6 and implements a dual IPv4/IPv6 protocol stacks. Existing IPv4 and IPv6 wired networks can run in parallel and work seamlessly to register WLAN with WX series ACs, so that it never runs as an information silo.

End user Admission Domination (EAD)

End user Admission Domination (EAD) integrates network access and endpoint security products, which ensure only complied wireless clients with mandated enterprise security policies to access the network, reducing threat levels from infected wireless clients and raising the bar and improving the overall security of the wireless network. When working with a security policy server, it can remind users, isolate and boot them off the network when their systems are infected or not patched properly.

Remote probing and analysis

WA5530X series AP can work as a remote probing and analysis sensor device. It can intercept WiFi packets nearby and save to a local device in real-time for troubleshooting and optimization analysis. Remote probing can conduct a non-convergent image for operating channels, or a polling of all channels to satisfy wireless network monitoring and maintenance requirements.

RF Optimizing Engine (ROE)

WA5530X series AP supports RF Optimizing Engine (ROE), which effectively increases the number of concurrent sessions in middle to high-density access, accomplishes streaming media application acceleration and QoS through character and protocol based RF optimization. Features include multi-user fairness, mixed

access fairness, interference filtering, speed optimization, spectrum guide, IPv4/IPv6 multicast signal boost, per-packet power control and intelligent bandwidth guarantee.

Anchor AC mode

Anchor AC mode is designed for networks of all sizes, including SMB. In Anchor AC mode, AP will serve as a virtual controller for the entire network.

Intelligent AP load balancing

WA5530X series AP comes with intelligent load balancing, which spreads the workload according to the number of concurrent users and traffic. If a new incoming user breaks the preset loading limit, AP will check the location of the wireless client in real-time, determine if nearby APs with smaller workload can provide access, and deny the user access only when such AP exists. What sets H3C intelligent load balancing apart from existing load balancing schemes is that it kicks in only if the user is located in an area with overlapping AP coverage, and prevents loss of access when the workload limit is reached but no backup AP exists. This maximizes wireless network capacity while preventing any erratic behavior in load balancing.

IoT era for the future

The existing Internet of Things (IoT) business is becoming diversified. H3C WA5530X can be combined with H3C T300 modules to support different IoT protocols, including RFID, ZigBee, BLE, etc.

Unified management of wired and wireless networks

Wireless Service Manager (WSM) of iMC provides unified management of wired and wireless networks, adding network management functions into existing wired network management systems. All WSM based wireless products can be managed through the open management protocol.

WSM is SOA complied, modular based, fully expandable and evolving with the growing needs of network management. It offers a web-based management system and a simple and user-friendly management platform for wireless network administrators. When working in iMC and coupled with other modules, it also implements panel management wireless management, troubleshooting, performance monitoring, software version control, deployment configuration management and user access management.

Hardware specifications

Features	WA5530X-WW
Weight(excluding	1.85kg

mounting accessories)	
Dimensions (excluding mounting accessories)	250 x 250 x 79.5mm
Fixed port	Two 10/100/1000M Ethernet ports (GE2 support IoT) support LACP(support between both network ports for redundancy and increased capacity) One 1000M SFP port One Console port
Antenna	Internal Directional Antenna: 7dBi antenna gain @2.4GHz 7dBi antenna gain @5GHz
Operating frequencies	802.11ac/n/a : 5.725GHz-5.850GHz; 5.47∼5.725GHz; 5.15~5.35GHz 802.11b/g/n : 2.4GHz-2.483GHz
Modulation	OFDM: BPSK@6/9Mbps, QPSK@12/18Mbps, 16-QAM@24Mbps, 64-QAM@48/54Mbps DSSS: DBPSK@1Mbps, DQPSK@2Mbps, CCK@5.5/11Mbps MIMO-OFDM (11n): MCS 0-15 MIMO-OFDM (11ac): MCS 0-9
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
Maximum radio power	2.4G:12dbm 5G:22dbm (Transmit power is multi-chain combined power, no antenna gain is included. The actual transmit power depends on local laws and regulations)
Adjustable power	1dBm
Power Source	802.3at PoE+ +55V DC Adapter(Optional)
Power consumption	≤25.5W
Operating temperature/storage temperature	-40 ºC～65 ºC;-30ºC～55ºC(Recommended) /-40ºC～85ºC
Operating humidity/storage	0% to 100% (non-condensing)

humidity	
Safety compliance	IEC 60950-1, EN 60950-1, IEC 60950-22, EN 60950-22
EMC	EN 301489-1, EN 301489-17, EN 55032, EN 55024, EN 60601-1-2
Radio frequency certification	EN 300 328, EN 301 893
Health	EN 50385
Protection degree	IP67
MTBF	>250000 hours

Software specifications

Features		WA5530X-WW
Positioning		Outdoor 802.11ac Wave2 triple-band AP
11ac Supported	Streams	4+2
	Operating frequency	5GHz
	80MHz mode	✓
	MU-MIMO	4x4:4
	Speed	1733Mbps+867Mbps
	A-MPDU	✓
	A-MSDU	✓
	Maximum likelihood demodulation (MLD)	✓
	Maximum-ratio combining (MRC)	✓
	Spatial-Time block coding (STBC)	✓
	Low-density parity check (LDPC)	✓
	CDD/CSD	Supported
	DFS	Supported
11n	Streams	2
	Operating frequencies	5GHz+2.4G
	40MHz	✓(Not recommended in 2.4GHz environments)
	400Mbps(PHY)	✓
	A-MPDU	✓
	Maximum likelihood demodulation (MLD)	✓
	Transmit Beamforming (TxBF)	✓
	Maximal ratio combining (MRC)	✓
	Spatial-Time block coding (STBC)	✓
	Low-density parity check (LDPC)	✓

WLAN basics	Maximum users per radio	256
	Virtual APs	32
	open system/shared key authentication	✓
	Broadcast Probe acknowledge control	✓
	Mixed connection for WPA, WPA2 and Pre-RSNA users	✓
	RTS/CTS	✓
	CTS-to-self	✓
	Concealed SSID	✓
	STA related	STA offline anomaly check, STA aging, statistics and status query
	Hotspot 2.0	✓
WLAN extended	Limit user number	✓
	Link integrity check	✓
	Repeater mode	Supported
Security	Encryption	WEP-64/128/152bit, dynamic WEP, TKIP, CCMP, WPA3
		Multiple encryption key triggered dynamic unicast/multicast key update
	802.11i	✓
	Authentication	802.1X, MAC address authentication, PSK authentication, Portal (May need to work with H3C Access Controller depending on application)
	User Isolation	Supported: 1. Layer 2 forwarding restriction 2. Virtual AP (multiple SSIDs) isolation
	Forwarding security	Packet filtering, MAC address isolation
	SSID and VLAN binding	✓
	Wireless Intelligent Application Aware (WIAA)	✓
	WIPS/WIDS	✓
	802.11w	✓
AAA	Radius Client	✓
	Multiple-domain authentication server	✓
	Backup authentication server	✓
Layer 2 and layer 3 features	IP address configuration	DHCP assigned IP(option 60)
	Native IPv6	✓
	IPv6 Portal	✓

	IPv6 SAVI	✓
	ACL	IPv4/IPv6
	Local forwarding	Local forwarding based on SSID+VLAN
	Multicast enhancement	IGMP Snooping/MLD Snooping
QoS	802.11e	Wi-Fi Multimedia (WMM)
	Priority	Ethernet port based 802.1p identification and marking priority
		Priority mapping for wired and wireless connection
	Strategic QoS mapping	Distinctive QoS strategies based on individual SSID/VLAN
	Layer 2 to Layer 4 packet filtering and traffic classification	✓
	CAR	✓
	User bandwidth management	Bandwidth allocation per STA, or all STAs sharing bandwidth with a common SSID
	Load balancing	User/traffic/radio (dual frequencies) based
	Spectrum Guide	✓
	Multicast enhancement	Multicast to Unicast (IPv4, IPv6)
	CAC(Call Admission Control)	User number/bandwidth based
	SVP Phone	Bandwidth allocation per STA, or all STAs sharing bandwidth with a common SSID
	Per-packet power control (PPC)	✓
Green features	Green AP mode	✓
	Dynamic MIMO power saving	✓
	Enhanced automatic power save delivery (E-APSD)	✓
	WMM Power Save	✓
Management and maintenance	Managed SSID	✓
	Network management	Trap, HTTP(S), SSH, Telnet, FTP/TFTP, SNMP V1/V2/V3 only applicable in Cloud/Fat mode
	Log function	SYSLOG
	Remote probe analysis	✓
Wi-Fi Certified	IEEE 802.11a/b/g/n/ac, WMM, WPA, WPA2 and WPA3 – Enterprise, Personal (SAE), Enhanced Open (OWE)	

Ordering Information

Product ID	Product Description
EWP-WA5530X-FIT	H3C WA5530X Internal Antennas 8 Streams Triple Radio 802.11ac/n Wave 2 Outdoor Access Point, FIT
ADP060-55V-PoE-GL	H3C 55V 60W PoE Adapter Power Supply (optional)