



H3C WA530X Outdoor Access Point

802.11ac Wave2 Access Point

Release Date: February, 2021



New H3C Technologies Co., Limited

H3C WA530X Outdoor 802.11ac Wave 2 WLAN Access Point

Overview



H3C WA530X-WW series AP is the latest-generation smart outdoor 802.11ac Wave 2 Access Point (AP) with large RF radiated power. It provides Gigabit Ethernet uplink which breaks the speed limit of Megabit and makes wireless multimedia application reality.

H3C WA530X-WW is integrated with smart RF optimizing technology. The maximum transmit power of single RF is 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.

Features

Smart cloud access and optimal WLAN TCO

WA530X series AP complies with 802.11ac Wave2 standard and features maximum two streams 867Mbps wireless transfer rate for 5GHz and total 1.267Gbps 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. WA530X series AP supports Gigabit SFP optical port and prevents from faulty of devices like optical modem.

Local forwarding

When WA530X 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. WA530X 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)

WA530X 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

WA530X 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.

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.

Real Time Spectrum Guard (RTSG)

Real Time Spectrum Guard (RTSG) is the innovative H3C professional state-monitoring program for the wireless spectrum. H3C 802.11ac 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.

RF Optimizing Engine (ROE)

WA530X 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.

Intelligent AP load balancing

WA530X 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.

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	WA530X-WW
Weight(excluding mounting accessories)	1.8kg
Dimensions (excluding mounting accessories)	250 x 250 x 79.5mm
Fixed port	Two 10/100/1000M Ethernet ports /support LACP(support between both network ports for redundancy and increased capacity) One 1000M SFP port One Console port
Antenna	Built-in, directional antenna Radio 1 : 8.6dBi antenna gain @ 5G Radio 2 : 10.1dBi antenna gain @ 2.4G
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 transmit power	2.4GHz: 18dBm 5GHz: 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+ PoE Adapter(Optional)
Power consumption	≤25.5W
Protection degree	IP67
Operating temperature/storage temperature	-40 °C~65 °C; -30 °C~55°C(recommended) /-40°C~85°C

Operating humidity/storage humidity	0% to 100% (non-condensing)
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

Software specifications

Features		WA530X-WW
Positioning		Outdoor 802.11ac Wave2 dual band AP
11ac Supported	Streams	2
	Operating frequency	5GHz
	80MHz mode	✓
	MU-MIMO	2x2:2
	867Mbps(PHY)	✓
	A-MPDU	✓
	A-MSDU	✓
	Maximum likelihood demodulation (MLD)	✓
	Maximal ratio combining (MRC)	✓
	Spatial-Time block coding (STBC)	✓
	Low-density parity check (LDPC)	✓
	CDD/CSD	Supported
	DFS	Supported
	11n	Streams
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(5 recommended for each radio in real-world applications)	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	✓
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,PPSK (May need to work with H3C Access Controller depending on application)
	User Isolation	Supported: Layer 2 forwarding restriction Virtual AP (multiple SSIDs) isolation
	Forwarding security	Packet filtering, MAC address isolation
	SSID and VLAN binding	✓
	Wireless Intelligent Application Aware (wIAA)	✓
	WIPS	✓
	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-WA530X-WW-FIT	H3C WA530X Internal Antennas 4 Streams Dual Radio 802.11ac/n Wave 2 Outdoor Access Point, FIT, WW
ADP060-55V-PoE-GL	H3C 55V 60W PoE Adapter Power Supply (optional)



The Leader in Digital Solutions

New H3C Technologies Co., Limited

Beijing Headquarters

Tower 1, LSH Center, 8 Guangshun South Street, Chaoyang

District, Beijing, China

Zip: 100102

Hangzhou Headquarters

No.466 Changhe Road, Binjiang District, Hangzhou, Zhejiang,

China

Zip: 310052

Tel: +86-571-86760000

Copyright ©2021 New H3C Technologies Co., Limited Reserves all rights

Disclaimer: Though H3C strives to provide accurate information in this document, we cannot guarantee that details do not contain any technical error or printing error. Therefore, H3C cannot accept responsibility for any inaccuracy in this document.

H3C reserves the right for the modification of the contents herein without prior notification

<http://www.h3c.com>