

WIFI Conference Tranceiver

802.11 AX, Triple-band, AI Powered

Product Overview

WIFI Conference Tranceiver is a new-generation 802.11ax Turbo Sense AI AP., it adopts triple-band smart antenna, support MU-MIMO, OFDMA and 1024QAM modulation and demodulation algorithm, it's wireless transmission speed can be up to 1.901Gbps, a higher wireless access rate and wider wireless coverage are provided. WIFI Conference Tranceiver can easily meet all kinds of wireless services, such as video, voice and other multimedia services, and provide intelligent radio frequency, service quality assurance, seamless roaming and so on.

WIFI Conference Tranceiver supports innovative AI RF chips. The independent AI RF can actively sense the wireless network's service quality, environment quality, and security, in cooperation with the NAC series controllers, WIFI Conference Tranceiver brings an intelligent and better users experience.

WIFI Conference Tranceiver adopts the GE port for uplink, ensuring high-speed wireless transmission. can be powered via POE or local power adapter, the AP is aesthetically designed and can be conveniently mounted on the ceiling, wall, or placed on the desk.



WIFI Conference Tranceiver

Product Features

Built-in independent AI RF chip

➤ AI RF sense service quality

The AI chip can automatically switch to terminal mode, simulate the way the terminal accesses the wireless network, check network services, actively detect network problems in user services, and notify the network administrator when a link failure occurs. At the same time, it provides troubleshooting suggestions, so that users can save worry and effort.

➤ AI RF sense environment

The AI chip supports all-round detection of wireless network channel utilization and interference conditions near APs, and supports one-key channel optimization, effectively solving wireless network optimization pain points.

➤ AI RF sense security and provide the defense

The AI chip supports wireless countermeasures. Compared with traditional APs, the AI radio frequency module of Turbo Sense AI series APs can provide full-time radio frequency defense, without affecting the normal network usage of users, and at the same time users no longer need to deploy counter APs separately, which reduces the overall network cost.

Top-speed wireless network access

➤ Wi-Fi 6 high-speed access

AP WIFI Conference Transceiver(series products comply with the new-generation 802.11ax standard and are embedded with an intelligent antenna matrix, it adopts three radio frequency design, supports MU-MIMO, allows AP to receive data sent by multiple terminals at the same time, the maximum transmission rate of the whole machine can reach 2.642Gbps, which can effectively provide higher coverage, access density, traffic throughput, etc.

➤ GE uplink

A 10/100/1000Base-T Ethernet port is used as the uplink port and a GE port is used for uplink, breaking the restriction of traditional 100M transmission rate. The wired port is no longer the bottleneck of the wireless access rate.

➤ QoS guarantee

WIFI Conference Transceiver(supports different QoS levels. It supports air interface resource management based on applications, SSIDs or STAs to ensure that air interfaces are appropriately allocated and that the data of important SSIDs and applications is transmitted in preference. Transmission priorities can be defined for different service data through 802.11e/WMM. This ensures differentiated QoS levels.

➤ Seamless roaming for L2 and L3

WIFI Conference Transceiver(works with wireless controller to implement seamless roaming for L2 and L3. When a wireless user roams, the IP address and authentication status remain unchanged. The terminal viscosity prevention function is provided to intelligently guide an STA to the optimal AP, increasing the roaming speed.

➤ Terminal dragging prevention to ensure high-speed network access for all users on the entire network

Terminal dragging prevention involves enabling terminals with different negotiated rates to occupy the identical wireless channel time by using the time fairness algorithm. This avoids problems of low wireless access speed, high delay and low network performance caused by low access rates of some terminals.

➤ Intelligent load balancing

In the case of high-density wireless users, AP WIFI Conference Transceiver(works with wireless controller to implement intelligent load balancing based on the user quantity, traffic, and frequency band for the purpose of improving the bandwidth usage, thereby ensuring high wireless access speed for users. Frequency band-based load balancing enables 2.4/5 GHz dual-frequency terminals to access the 5 GHz frequency band in preference.

➤ Intelligent RF to reduce wireless interference in an all-round way

The work channel and transmit power of the wireless access point are adjusted automatically and interference from the

surrounding environment is detected in real time to reduce radio interference in an all-round way and to improve the overall service quality of the wireless network.

All-round security protection

➤ Multiple easy-to-use and secure authentication modes

Multiple flexible, easy-to-use and secure user authentication modes are available. 802.1x, portal, SMS, WeChat, and QR code authentication modes are provided with the support of wireless controller to meet network deployment requirements in environments including enterprises, schools, shopping malls, hotels, and financial organizations.

➤ AP VPN remote access

AP can build a VPN tunnel to the controller side, in this way the clients can access the resources in the HQ, at the same time, the internet access will go directly to the internet without being tunneled back. In small branches there is no need to deploy a VPN device, help to reduce the investment for the customer.

➤ All-round wireless security protection

With the support of wireless controller, AP WIFI Conference Tranceiver provides a wide range of wireless security protection functions including WIDS/WIPS, illegitimate AP detection and workaround, ARP spoofing prevention, and DoS attack prevention, constructing a truly secure and reliable wireless network for users.

➤ Timed turning off of RF for network security and environment protection

RF can be turned off and on based on time periods. The wireless network can be automatically turned off at nights and weekends to prevent malicious users from intruding the network and to reduce energy consumption of the equipment.

Flexible network deployment

➤ Gateway function to implement remote deployment across the public network

WIFI Conference Tranceiver supports the NAT gateway function and provides the functionality of the DHCP server and DNS proxy. When remotely deploying the wireless network for a branch or outlet, the PPPoE dial-up function provided by AP WIFI Conference Tranceiver(can be used to directly access the Internet, lowering the network construction costs.

➤ Thin and Fat mode

Based on the requirement, AP WIFI Conference Tranceiver can easily change the working mode between thin AP and standalone AP. In the early stage of the network deployment, the AP can be used as standalone mode, with the development of the network, the AP can be changed to FAT mode to be managed by the controller.

➤ WDS wireless relay/bridge

AP WIFI Conference Tranceiver supports WDS and wireless relays/bridges in point-to-point or point-to-multipoint mode to resolve deployment problems like deployment inconvenience. The WDS function is used to relay and amplify signals for the purpose of extending the wireless coverage scope. The Ethernet port of a wireless relay AP can be connected to a wired switch to extend the wireless coverage scope and wired LAN.

➤ Bridge mode forwarding

With the bridge mode forwarding technology, WIFI Conference Tranceiver can directly forward data that features high real-time transmission requirements, delay sensitivity, and large amount over the wired network without passing the wireless controller. This alleviates the traffic load of the wireless controller significantly and breaks the traffic restrictions of the wireless controller.

➤ Virtual AP technology

A maximum of 32 ESSIDs can be provided by using the virtual AP technology. Different SSIDs use different authentication modes and have different network access permission. The SSIDs are isolated from each other. L2 isolation can be implemented for terminals that use the same SSID on a subnet or VLAN to ensure user data security.

➤ SSID

An SSID with a maximum of 31 characters can be specified. An SSID can also contain both Chinese and English characters.

Individualized SSIDs are available for shopping malls or enterprises to improve discrimination.

Bid data analysis

➤ **Access analysis**

Build-in access analysis system, support report the device appear time, MAC address, and report the data differently in the first access and repeat access, passerby and total number coming and not coming in. Also, will show the duration of stay. Based on the statistics, will have a better understanding of the clients in the network and offer information for the operators to make decision.

➤ **User profiling**

User profiling based on the statistics and summary of information such as the status and attributes of individual and group user. For industry users, it can be customized for the content that industry users are concerned about. By setting concern information and related prompt information, it can effectively help industry users analyzing the behaviors of users in the region, such as: for users in the education industry, can effectively analyze and provide a basis for risk assessment and judgment to prevent students from skipping classes, leaving school, campus loans and other behaviors. Cooperate with 's next-generation network controller to collect and analyze customer visit preferences, rush hours, frequency of occurrence, stay time, Wi-Fi usage time, terminal type, user tags and other information, and can query the users of a single user The portrait and the activity trajectory of a single user (activity time axis) can help decision-makers make targeted decision-making adjustments.

➤ **APP and file cache**

The controller and the USB drive on the AP can cache the application for iOS and android devices. It will help to accelerate the network. Also, it will help to accelerate the app authentication.

Technical Specifications

Hardware specifications

Product Specifications of WIFI Conference Tranceiver	
Hardware specifications	
Item	Description
Model	WIFI Conference Tranceiver
Weight	0.5Kg
Dimensions (excluding antenna interfaces and accessories)	195 x 195 x 43 mm
Ethernet port	1*10/100/1000 Mbps port
PoE	802.3 at/bt
Local power supply	12 V/2A
Transmit power	≤20dBm
Power adjustment granularity	1 dBm
Power range	1 dBm to the value specified by national regulations
Power consumption	< 13.5 W
Antenna	Omnidirectional antenna
Reset/restore factory settings	Support
Status indicator	1*Status, 1* POE status, 1*speed
Operating/storage temperature	- 10°C to 45°C /-40°C to 70°C
Operating/storage humidity	5%-95% (non-condensing)
Protection level	IP 41
MTBF	> 250000 H

Software specifications

Software specifications		
Item	Description	
Model	WIFI Conference Tranceiver	
RF	Special Stream	6
	Maximum transmission speed of a single frequency	Radio1: 2.4G: 2*2 MIMO Radio2: 5G: 2*2 MIMO Radio3: 2.4G/5G: 2*2 MIMO
	Wireless Speed	1.901Gbps (2.4G: 400Mbps, 5G:1201Mbps, Sense RF:300Mbps*)
	Operating frequency band	802. 11ac/n/a: 5.725-5.850 GHz, 5.15-5.35 GHz (China) 802. 11b/g/n: 2.4-2.483GHz (China)

Software specifications		
	Modulation technology	OFDM: BPSK@6/9 Mbps, QPSK@12/18 Mbps, 16-QAM@24 Mbps, 64-QAM@48/54 Mbps DSSS: DBPSK@1 Mbps, DQPSK@2 Mbps, CCK@5.5/11 Mbps MIMO-OFDM: MCS 0- 15 MIMO-OFDM (11ac): MCS 0-9 MIMO-OFDMA (11ax): MCS 0- 11
	Modulation methods	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-OFDMA: BPSK, QPSK,16QAM,64QAM,256QAM, 1024QAM
	Channel quantity	802. 11a, 802. 11n, 802. 11ac,802. 11ax (compatible with 802. 11a): 13 channels 802. 11b, 802. 11g, 802. 11n, 802. 11ax, (compatible with 802. 11b/g mode): 13 channels
	Manual and automatic channel adjustment	Support
	Automatic power adjustment	Support
	Manual power adjustment	The AP supports manual power adjustment with an adjustment granularity of 1 dBm. The power scope is from 1 dBm to the value specified by national regulations.
	Timed turning on or off of RF	RF can be turned on or off based on the specified time period.
	Coverage black hole detection and compensation	Support
WLAN function	Recommend connected users	40
	Connected user quantity restriction	Support
	Virtual AP	36
	Chinese SSID	Support
	SSID hiding	Support
	User-, traffic-, and frequency band-based intelligent load balancing	Support
	Bandwidth restriction	STA, SSID, or AP-based rate limiting is supported.
	STA function	Abnormal STA disconnection detection, STA aging detection, and STA statistic and status query are supported.
	Environment sense	Support
	Security sense	Support

Software specifications		
	Service sense	Support
Security authentication	Authentication mode	Pre-shared key authentication, portal authentication, 802. 1x authentication, CA certificate authentication, WeChat authentication, SMS authentication, QR code authentication, temporary visitor authentication, and authentication exemption are supported.
	Pre-shared key	WPA-PSK, WPA2-PSK, WPA-PSK/WPA2-PSK, WPA3
	Portal authentication	Intelligent terminal type identification is supported. A page matching the terminal size is pushed to terminals. The page logo and displayed information can be customized. In addition, the verification, authentication interval, and reconnection authentication time thresholds can be set.
	802. 1x authentication	802. 1x one-key configuration and 802. 1x perception-free authentication are supported. You only need to download the one-key automatic configuration tool at initial access and finish wireless network configuration quickly. This simplified network deployment significantly.
	CA certificate authentication	High-security certificate authentication can be implemented by using the CA certificate issuance center embedded into the controller, without the need to constructing a certificate server. Authentication by using a certificate imported from an external certificate server is also supported.
	SMS authentication	SMS authentication takes effect forever. That is, a user can directly access the network without authentication after being authenticated via SMS at initial access. This reduces the SMS costs and improves user experience.
	QR code authentication	After a visitor terminal accesses the wireless network, the terminal will automatically display a QR page. The approver scans the QR code of the visitor terminal via a cell phone and then the visitor can access the Internet. The visitor information is recorded in three dimensions: approver, remarks, and MAC address of the visitor terminal. This ensures user traceability and network security.
	MAC + portal authentication	The device in the MAC address list do not need authentication, the other device still need authentication
	Temporary visitor authentication	A temporary user information management system is embedded. A temporary user can log in within the validity period and cannot after the validity period elapses. A secondary permission system for temporary account management is embedded and temporary accounts can be created and managed in this system. The QR code of a temporary visitor can be printed and the temporary visitor can scan the QR code to access the network. Temporary visitors can be grouped.
	Authentication exemption	Only a portal advertisement page is displayed. A user needs to click the login button to access the network without entering any account password or performing other authentication.
	Self- registration	Clients can register the account via portal, and Retrieve password via SMS
	Email binding	Support binding account with email, and Retrieve password via email
	Data encryption	Data encryption via TKIP and AES (CCMP) is supported.
Blacklist and whitelist	Static whitelist and blacklist and dynamic blacklist are supported.	

Software specifications		
	User isolation	SSID-based isolation, automatic VLAN grouping, and user isolation of specified VLANs are supported.
	WIDS/WIPS	Support
	Anti-phishing	Support
	East-west traffic security	Support
	ACL	Account-, access location-, access terminal type- and SSID-based ACL policy assignment and management are supported.
	Radius protocol	Support
	Disaster Recovery	When the wireless controller is down, The AP still can broadcast SSID and provide authentication and connection service.
Wireless optimization	E-schoolbag scenario optimization	The transmission speed of multicast packets is increased, improving the effects of the E-schoolbag scenario in an all-round way.
	Intelligent broadcast acceleration	The transmission speed of broadcast packets is automatically increased based on the actual environment, thereby improving the transmission efficiency of broadcast packets.
	Terminal dragging prevention	This function aims to prevent the decrease of the entire network speed caused by low-speed terminals based on the time fairness algorithm.
	Terminal viscosity prevention	This function involves detecting STAs connected to APs and intelligently guiding the STAs to the optimal AP.
	Prohibited access of low-speed terminals	The speed of access terminals is limited. Weak-signal terminals with a speed lower than the specified value are prohibited from accessing the network. This improves the entire network speed.
	High-density access scenario optimization	The response to broadcast probe requests is controlled for the purpose of optimizing high-density access scenarios.
	ARP-unicast conversion	ARP broadcast packets are converted into unicast packets. This reduces the number of broadcast packets, thereby improving the transmission speed.
	Prohibited DHCP requests destined for wireless terminals	After this function is enabled, DHCP broadcast requests will be forwarded only to the wired network, instead of another wireless network. This improves the network throughput and performance of the wireless network.
	AP-based access user quantity statistics	The number of connected users and change trends of each AP in the recent one day, one week, and one month can be measured.
Hotspot analysis	AP-based network access traffic statistics	The network access traffic and change trends of each AP in the recent one day, one week, and one month can be measured.
	AP-based signal quality analysis	Statistical analysis for the signal usage, noise, retransmit rate, BER, and BER change trends of each AP is supported.

Software specifications		
	AC discovery mechanism	L2 broadcast automatic discovery L3 discovery based on configured static IP addresses DHCP Option43 discovery DNS domain name discovery
AP access mode	Cross-WAN and cross-NAT remote AP deployment	Support
	webAgent	Controller IP addresses can be dynamically discovered by using the webAgent technology. This avoids AP disconnection caused by unfixed controller IP addresses.
	Tunnel encryption	Support
	NAT	Support
L3 function	Network access mode	PPPoE dial-up and static IP address
	DHCP server	Support
	DNS proxy	Support
VPN	AP VPN	Build the VPN tunnel between the controller and AP, access the application in HQ via tunnel, but other traffic will go direct to the internet
Management	Fit mode	Via controller, SSH, telnet, http/https
	Fat mode	SSH, telnet, http/https

Order Information

Model	Specifications	Remarks
WIFI Conference Tranceiver		
WIFI Conference Tranceiver	Turbo Sense AI series Wi-Fi 6 high-performance wireless access point, support 802.11ax protocol, built-in independent AI sensing radio frequency, the maximum access rate of the whole machine is 1.901Gbps, 1 Gigabit Ethernet port.	Essential
GO545-PSE1000	802.3at 30W gigabit PoE injector, suitable for all AP that support POE except S900plus.	Optional
RS3320-28M-PWR-LI	The V-Sec Switch, provides 28 ports (24 10/100/1000Base-T POE ports, 4 SFP optical ports). Support IEEE 802.3af/at power supply standard, single port maximum output PoE power 30W, the whole machine maximum output PoE power 370W, switching capacity 336Gbps/3.36Tbps, Forwarding rate 108Mpps/126Mpps. The Switch can be used in fit or fat mode (standalone mode) flexibly. In fit mode, it can be managed by NAC controller to provide a unified wired and wireless network. All the features can be configured by NAC controller such as VLAN, STP, Static Routing/RIP/OSPF, M-LAG, East-West traffic security, Smart Network Topology, Visualized DHCP server, Terminal Identification, 802.1X/Portal authentication, IPv6, POE supply schedule. etc., to make the network simpler, more secure, and valuable.	Optional