X-LINK SERIES

XAP-5520-E
Datasheet

http://www.sundray.com

SUNDRAY

SUNDRAY XAP-5520-E is a new-generation 802.11ac wave2 high-performance wireless access point developed by SUNDRAY. XAP-5520-E is embedded with 2*2 Mu-MIMO intelligent antenna matrix. It supports dual frequencies of 802.11ac/a/n and 802.11b/g/n and the maximum transmission rate can reach up to 1267 Mbps.

XAP-5520-E adopts the Gigabit port for uplink. Both local power supply and PoE remote power supply are supported. In cooperation with the SUNDRAY XMG series controllers, XAP-5520-E brings unrivaled quick and secure access experience to users.

SUNDRAY XAP-5520-E

2 Product Features

◆ Top-speed Wireless Experience

802.11ac high-speed access

SUNDRAY XAP-5520-E series products comply with the new-generation 802.11ac wave standard and are embedded with an intelligent antenna matrix. The 2.4 GHz RF provides a transmission rate high up to 400 Mbps, the 5 GHz RF provides a transmission rate high up to 867 Mbps, and the system transmission rate can reach 1267 Mbps, thereby providing high-performance wireless access services in terms of coverage scope, access density and operation stability.

Gigabit uplink

2 10/100/1000Base-T Ethernet ports are used as the uplink port and a Gigabit 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

SUNDRAY XAP-5520-E 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

SUNDRAY XAP-5520-E works with SUNDRAY 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.

Airtime fairness

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, SUNDRAY XAP-5520-E works with SUNDRAY 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.

Flexible Network Deployment

Zero Touch Provisioning

The AP can be automatically discovered and approved by Sundray XMG gateway, the XMG gateway can be managed and configured via SundrayCloud APP remotely.

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 32 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.

Hardware Specifications

Product Specifications of SUNDRAY XAP-5520-E	
Item	Description
Model	XAP-5520-E
Weight	0.5kg
Dimensions (excluding antenna interfaces and accessories)	195 mm x 195 mm x 43 mm
Ethernet port	2*10 / 100 / 1000 Mbps ports
PoE	802.3af / 802.3at power supply supported
Local power supply	12 V / 1.5 A
Transmit power	≤ 20 dBm
Power consumption	< 12.95 W
Antenna	Embedded FPCB antenna
Reset / restore factory settings	Support
Status indicator	1 status indicator
Operating/storage temperature	-10ºC to + 45ºC or - 40ºC to + 70ºC
Operating/storage humidity	5% - 95% (non - condensing)
Protection level	IP 41
MTBF	> 250000 H

Technical Specifications

Software Specifications

Item		Description
Model		XAP-5520-E
RF	MIMO	2*2:2
	Maximum transmission speed of a single frequency	2.4 G: 400 Mbps 5 G: 867 Mbps
	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)
	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
	Channel rate	802.11b: 1, 2, 5.5, 11 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54 802.11n: 6.5 to 300 (MCS0 to MCS15) 802.11n high throughput support: MCS 0-7 HT 20/40 802.11ac: MCS 0-9, 20 / 40 / 80
	Channel quantity	802.11a, 802.11n, 802.11ac (compatible with 802.11a): 13 channels 802.11b, 802.11g, 802.11n (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

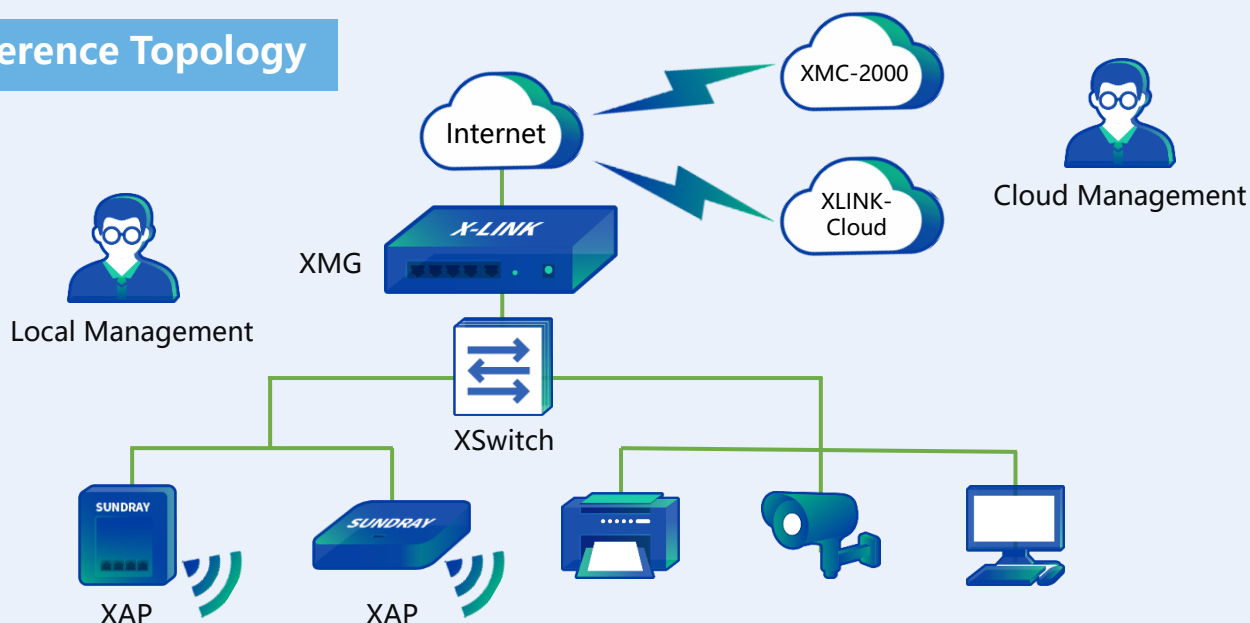| Item		Description
WLAN function	Maximum number of connected users	256
	Connected user quantity restriction	Support
	Virtual AP	32
	Chinese SSID	Support
	SSID hiding	Support
	User-, traffic-, and frequency band-based intelligent load balancing	Support
	Bandwidth restriction	STA-, SSID-, or AP-based rate limiting is supported.
	STA function	Abnormal STA disconnection detection, STA aging detection, and STA statistic and status query are supported.
	Link integrity detection	Support
Security authentication	Authentication methods	Combined with XMG gateways, support all the authentication methods that XMG gateway has.
Wireless optimization	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.
	Fair airtime	Support

Technical Specifications

SUNDRAY

Item		Description
Wireless optimization	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 access mode	AC discovery mechanism	L2 broadcast automatic discovery L3 discovery based on configured static IP addresses DHCP Option43 discovery DNS domain name discovery
Layer3 function	Internet connection	Static IP or DHCP

4 Order Information

Model	Specifications	Remarks
SUNDRAY XAP-5520-E series		
XAP-5520-E	Indoor ceiling AP, 802.11ac wave 2, support MU-MIMO, 2.4Ghz&5Ghz, 1267Mbps,smart antenna embedded, 2 gigabit ports for uplink, power supply: PoE or power adapter.	Essential

Reference Topology