X-LINK SERIES

XAP-6210-S Datasheet

SUNDRAY XAP-6210-S is a new-generation 802.11ax high-performance wireless access point developed by SUNDRAY. XAP-6210-S is embedded with 2*2 MU-MIMO intelligent antenna matrix. It supports dual frequencies of 802.11ax/ac/a/n and 802.11b/g/n/ ax, and the maximum transmission rate can reach up to 1.488 Mbps.

XAP-6210-S 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-6210-S brings unrivaled quick and secure access experience to users.

SUNDRAY XAP-6210-S

◆ Top-speed Wireless Experience

802.11ax high-speed access

SUNDRAY XAP-6210-S series products comply with the new-generation 802.11ax standard and are embedded with an intelligent antenna matrix. The 2.4 GHz RF provides a transmission rate high up to 287 Mbps, the 5 GHz RF provides a transmission rate high up to 1201 Mbps, and the system transmission rate can reach 1488 Mbps, thereby providing high-performance wireless access services in terms of coverage scope, access density and operation stability.

Gigabit uplink

Two 10/100/1000Base-T Ethernet port can be used as the uplink ports, 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-6210-S 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-6210-S 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-6210-S 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.

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 SUNDRAY wireless controller to meet network deployment requirements in environments including enterprises, schools, shopping malls, hotels, and financial organizations.

All-round wireless security protection

With the support of SUNDRAY wireless controller, XAP-6210-S 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

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-6210-S	
Item	Description
Model	XAP-6210-S
Weight	0.5kg
Dimensions (excluding antenna interfaces and accessories)	195 mm x 195 mm x 43 mm
Ethernet port	2*10/100/1000M Ethernet port
PoE	802.3af / 802.3at power supply supported
Local power supply	12 V / 2 A
Transmit power	≤ 20 dBm
Power adjustment granularity	1 dBm
Power range	1 dBm to the value specified by national regulations
Power consumption	< 12.95 W
Antenna	Embedded intelligent antenna matrix
Reset / restore factory settings	Support
Status indicator	1 status indicator
Operating/storage temperature	-10ºC to + 55ºC or - 40ºC to + 70ºC
Operating/storage humidity	5% - 95% (non-condensing)
Protection level	IP 41
MTBF	> 250000 H

3 Technical Specifications

SUNDRAY

Software Specifications

Item		Description
Model		XAP-6210-S
RF	Special streams	1+2
	Maximum transmission speed of a single frequency	2.4 G: 287 Mbps 5 G: 1201 Mbps
	Operating frequency band	802.11ax/ac /n/a: 5.725-5.850 GHz, 5.15-5.35 GHz (China) 802.11b/g/n/ax: 2.4-2.483GHz (China)
	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 MIMO-OFDM : MCS 0-15 MIMO-OFDM (11ac): MCS 0-9 MIMO-OFDMA (11ax):MCS 0-11
	Channel rate	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): 5 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

Item		Description
WLAN function	Maximum number of connected users	256 (maximum number of connected users of a single RF: 128)
	Connected user quantity restriction	Support
	Virtual AP	32
	Chinese SSID	Support
	SSID hiding	Support
	Wireless relay/bridge	Point-to-point and point-to-multipoint supported
	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 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 hybrid authentication
	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.

Item		Description
Security authentication	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.
	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.

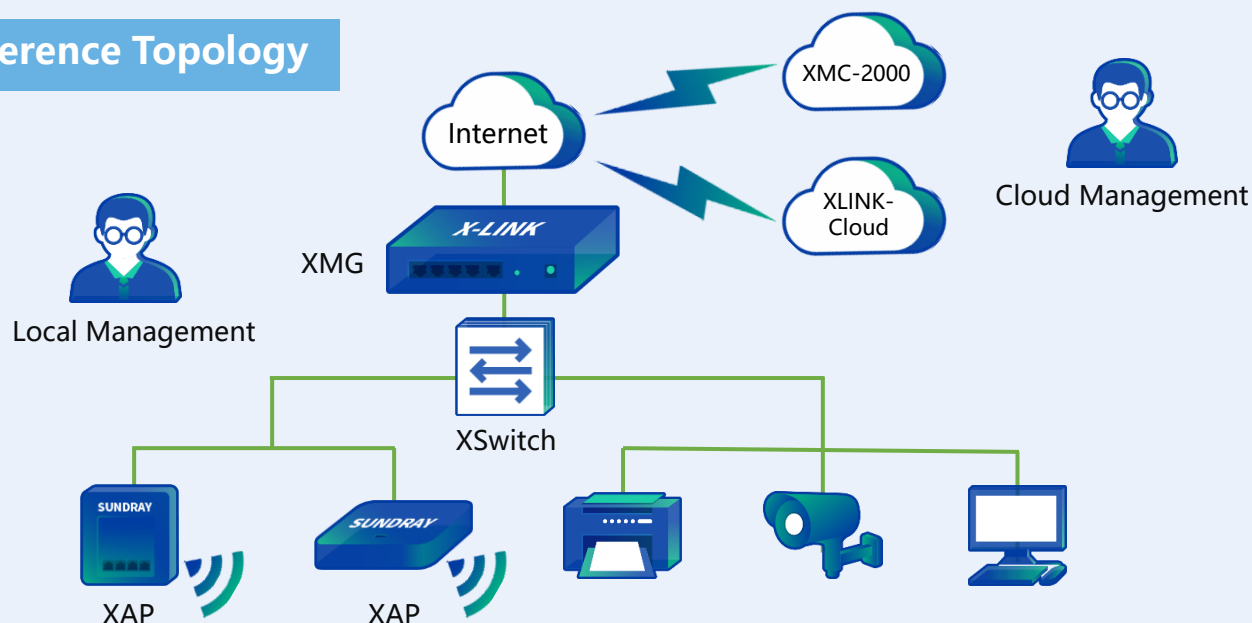| Item		Description
Security authentication	Data encryption	Data encryption via TKIP and AES (CCMP) is supported.
	Blacklist and whitelist	Static whitelist and blacklist and dynamic blacklist are supported.
	User isolation	SSID-based isolation, automatic VLAN grouping, and user isolation of specified VLANs are supported.
	WIDS/WIPS	Support
	Illegitimate AP detection and workaround	Support
	ACL	Account-, access location-, access terminal type- and SSID-based ACL policy assignment and management are supported.
	East-west traffic security	Support
	Radius protocol	Support
Wireless optimization	Application layer acceleration	Acceleration can be performed for the application layer. The acceleration service application can help increase the transmission speed by 1.5 to 4 times.
	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.

3 Technical Specifications

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	Network access mode	DHCP and static IP address

4 Order Information

Model	Specifications	Remarks
SUNDRAY XAP-6210-S series		
XAP-6210-S	Wi-Fi 6 Ceiling AP, dual frequencies of 2.4 GHz and 5 GHz, two streams, a maximum access rate of 1488 Mbps, 2 Gigabit uplink ports, supports PoE power supply and local power supply (the PoE injector and local power adapter need to be independently purchased).	Essential

Reference Topology

Internet

XMC-2000

XLINK-Cloud

Cloud Management

X-LINK

XMG

Local Management

XSwitch

XAP

XAP

SANGFOR   **SUNDRAY**

Sundray Technologies Co., Ltd.

Add: Building A1, Nanshan i Park, No.1001 Xueyuan Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China Post | Post Code: 518055

Service hot line:

Philippine Service Center Tel / Viber: +63 9171102171

Indonesia Service Center Tel / WhatsApp: +62 8111988110

Shen Zhen, China HQ service Center (Hotline in Chinese):

0086 - 75586953231   0086 - 75586957873

Web: www.sundray.com   www.sangfor.com

E-mail: sales@sundray.com   tech.support@sundray.com

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