

Sundray S910LTE Outdoor Access Point

Product Overview

SUNDRAY S910LTE outdoor wireless access point is an outdoor high-speed wireless access device independently developed by SUNDRAY that supports 802.11 ac wave2., S910LTE Build-in antenna, Support 4G LTE. It supports MU-MIMO technology and achieves higher transmission efficiency. The whole AP can reach up to 1267 Mbps. The device adopts Gigabit electrical/optical uplinks to ensure high-speed wireless transmission. PoE remote power supply makes network deployment easier.

S910LTE uses a shell design with the highest protection rating of IP 68. It supports waterproof, moisture-proof, dust-proof and fireproof, sun-protective, etc. Low-temperature intelligent heating technology can be used in extremely harsh outdoor environments (-40 °C-70 °C). Normal use can effectively prevent outdoor bad weather and environmental impacts. The S910LTE also supports point-to-point and point-to-multipoint relay bridge functions, which enhances the feasibility of outdoor networking solutions. It also provides the user with an unprecedented fast experience and more secure service access through the use of the controllers.



SUNDRAY S910LTE

Product Features

Ultra-strong outdoor adaptability

➤ High protection level to cope with severe environments

The shell of S910LTE is of the IP 68 protection level and boasts waterproof, damp proof, dustproof, fireproof, and sun protection features. The shell can protect S910LTE against severe weather and environments.

➤ Professional lightning protection design

AP S910LTE has building with the professional lightning protection design, adopting the antenna feeder lightning protection technology to protect S910LTE against lightning strikes. Lightning protection measures are also taken for the Ethernet port to protect the Switch port from lightning strikes.

➤ Wide operating temperature range

S910LTE can operate properly at a temperature ranging from -40°C to 70°C without compromising the stability and service life. It applies to severe environments in both cold, hot and damp areas.

Extreme wireless Internet experience

➤ High-speed LET uplink

SUNDRAY S910LTE Support 3G/4G, Well meet the application needs of the same device that carries many different private line businesses, Support for 4G/3G adaptive switching, In cases where 4G signals have not yet been fully covered, weak or even lost, the ability to automatically switch to 3G is supported.

With LTE terminal solutions, a single card currently supports atheoretical downlink rate of up to 150Mbps, Support TD-LTE、FDD-LTE and TD-SCDMA、WCDMA、CDMA2000,etc.

➤ 802.11ac wave 2

SUNDRAY S910LTECompliance with next-generation 802.11ac wave2 protocol standards, Internal antenna, 2.4G RF offers up to 400Mbps, 5G RF available up to 867Mbps, totally Up to 1267Mbps for the entire machine, Can effectively provide more high-performance wireless access services from coverage, access density, stable operation, etc.

➤ Gigabit uplink

In the case of wired network access, the uplink uses a gigabit port to ensure wireless high-speed transmission. At the same time, the AP can also be used to bring its own light port, through optical fiber transmission, to solve the AP deployment distance too far caused by the network line can not be transmitted.

➤ Link backup for higher reliability

S910LTE support stoic and 4G links back up each other, prioritize the cable broadband link, when the wired link out of failure, automatically switch to 4G exit link, providing uninterrupted Internet access.

➤ QoS

S910LTE support for rich service quality assurance (QoS), support seventy-not-so-snout resource

management based on application/SSID/STA, ensure the rational allocation of wireless bandwidth resources, and guarantee the priority transmission of data for important SSID and important applications. Support for 802.11e/WMM

Flexible network deployment

➤ **4G Wireless backhaul**

S910LTE can be deployed in scenic areas, wireless cities and other inconvenient wiring places, through 4G backhaul, plug-in, flexible deployment.

➤ **Flexible external antennas Option**

The maximum output power of S910LTE can reach 500 mW. It is specifically designed for wide wireless coverage outdoors. It can meet wireless coverage requirements in a wide range of outdoor scenarios by deploying omnidirectional or directional antenna. It applies to outdoor environments such as scenic spots, schools and parks, etc.

➤ **WDS wireless relay/bridge**

S910LTE supports WDS, wireless relay bridges, point-to-point, and point-to-multipoint to resolve inconvenience or difficult deployment problems. 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 both wired and wireless LAN coverage scope.

➤ **Bluetooth console port**

Bluetooth serial port management mode is supported. When the AP device fails, the administrator does not need to climb the pole, does not need to be removed, does not need to pull long and long network cables, and can enter the console debugging background through Bluetooth signals. A mobile phone realizes control and saves. Equipment deployment costs and later operation and maintenance costs.

➤ **PoE output**

When the AP is powered by a 60W PoE injector, the EHT2 port outputs 15W power (standard 802.af) to other PoE powered devices such as bridges and cameras.

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, Facebook, app and QR code authentication modes are provided with the support of SUNDRAY wireless controller to meet network deployment requirements in environments including scenic spots, schools and parks, etc.

➤ **All-round wireless security protection**

With the support of SUNDRAY wireless controllers, S910LTE provides a wide range of wireless security protection functions including WIDS/WIPS, illegitimate AP detection, ARP spoofing prevention, and DoS attack prevention, constructing a truly secure and reliable wireless network for users.

Marketing

➤ **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.

➤ **Marketing based on user behavior**

Based on the client’s behavior to make the policy of when to push the message. The policy support based on the application the client is using, and based on location, schedule, first access repeat access. The message support banner, SMS, wechat message and webpage.

➤ **APP and file cache**

The controller 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 SUNDRAY AP S910LTE	
Hardware specifications	
Item	Description
Model	S910LTE
Size	242mm*242mm*68mm
Business interface	2*N type of 4G RF 2* RJ-45 1G port 1*SFP port 1*SIM/USIM
Console	1 Micro-USB management port, Support for Bluetooth serial port
POE	802.3at
Transmit Power	≤27dBm
Adjustable power granularity	1dbm
Adjustable power range	3dbm~National regulations
Power	< 25W
Antenna	Built-in directional antenna
Operating/storage temperature	-40 ~70 °
Working/storage humidity	0% ~100%
Protection level	IP 68
MTBF	>250000H

Software specifications

Software specifications		
Item	Describe	
Model	S910LTE	
Radiofrequency	Number of spatial streams (streams)	2
	Maximum single-frequency transmission speed	2.4 G: 400 Mbps 5 G: 867 Mbps
	Working band	802.11ac/n/a : 5.725GHz-5.850GHz ; 5.15~5.35GHz 802.11b/g/n : 2.4GHz-2.483GHz
	Modulation technology	OFDM: BPSK@6/9Mbps 、 QPSK@12/18Mbps 、 16-QAM@24Mbps 、 64-QAM@48/54Mbps 、 256-QAM@48/54Mbps DSSS : DBPSK@1Mbps 、 DQPSK@2Mbps 、 CCK@5.5/11Mbps MIMO-OFDM : MCS 0-15 MIMO-OFDM (11ac) : MCS 0-9
	Modulation	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
	Supported channels	802.11a、 802.11n、 802.11ac (Compatible with 802.11a mode): 13 Channels 802.11b、 802.11g、 802.11n (compatible with 802.11b/g mode): 13 Channels
	Channel automatic, manual adjustment	Support
	Power auto-adjustment	Support
	Power manual adjustment	AP can be adjusted manually for 1dBm
	RF timing on or off	Supports timed rf on or off
Turn off MIMO	Support, single-stream output at RF port with optional rf port	
LTE	Support system	TD-LTE 38, 39, 40, 41 bands, and FDD-LTE 1, 3, 7 bands, TD-SCDMA, WCDMA, CDMA2000 mode, etc.

Software specifications		
	Support for bands	TD-LTE band38/39/40/41, FDD-LTE band1、3、7, TD-SCDMA band34/39、GSM、EDGE UL453.00~457.475,DL463.00~467.475 CDMA 450MHz A 段 UL452.00~456.475,DL462.00~466.475 CDMA 450MHz B 段 UL450.00~454.800,DL460.00~464.800 CDMA 450MHz C 段 UL451.310~455.730,DL461.310~465.730 CDMA 450MHz H 段 UL1926~1980,DL2110~2170 WCDMA UL880~890,DL925~935 EGSM WCDMA/HSDPA: 2100M (band I)、1900M (band II)、850M (band V)
	Up-down throughput (theoretical value)	TD-SCDMA (2.8Mbps Downlink\2.2Mbps Uplink) WCDMA (14.4Mbps Downlink\5.8Mbps Uplink) CDMA2000 (3.1 Mbps Downlink, 1.8Mbps Uplink) TD-LTE (100Mbps Downlink\50Mbps Uplink) FDD-LTE (150Mbps Downlink\50Mbps Uplink)
WLAN function	Maximum number of connected users	256 (maximum number of connected users of a single RF: 128)
	Connected user quantity restriction	Supported
	Virtual AP	32
	Chinese SSID	Supported
	SSID hiding	Supported
	Wireless relay/bridge	Point-to-point and point-to-multipoint supported
	User-, traffic-, and frequency band-based intelligent load balancing	Supported
	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	Supported
Data forwarding	Bridge Mode	Support with Sundray controller
	Tunnel Mode	Support with Sundray controller
	Partial central forwarding partial local forwarding	Support with SUNdray controller

Software specifications		
Security authentication	Authentication mode	Pre-shared key authentication, portal authentication, 802.1x authentication, CA certificate authentication, WeChat authentication, Facebook, SMS authentication, QR code authentication, temporary visitor authentication, WAPI personal and enterprise
	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.
	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.
	WeChat authentication	After access the wireless network, a user can scan the QR code of the shopping mall or enterprise and follow the public account to access the Internet. The one-key follow function can be easily deployed without any code development. In WeChat authentication, a user can access the network by clicking a text message network access link or clicking the menu bar to view advertisements, or access the network via WeChat authorization.
	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.

Software specifications		
	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.
	Data encryption	Data encryption via TKIP and AES (CCMP) is supported.
	Blacklist and whitelist	Static whitelist and blacklist are supported.
	User isolation	SSID-based isolation, automatic VLAN grouping, and user isolation of specified VLANs are supported.
	WIPS	Supported
	Illegitimate AP detection and workaround	Supported
	ACL	Account-, access location-, access terminal type- and SSID-based ACL policy assignment and management are supported.
	Radius protocol	Supported
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.
	High-density access scenario optimization	The response to broadcast probe requests is controlled for the purpose of optimizing high-density access scenarios.

Software specifications		
	ARP-unicast conversion	ARP broadcast packets are converted into unicast packets. This reduces the number of broadcast packets, thereby improving the transmission speed.
Hotspot analysis	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.
	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	Statistic analysis for the signal usage, noise, retransmit rate, BER, and BER change trends of each AP is supported.
AP Access	AC Discovery Mechanism	Layer 2 broadcast auto-discovery Configure static IP address three-tier discovery DHCP Option43 Method Discovery DNS Domain Discovery
	Deploy remote access points across WAN, NAT	Support
	webAgent	Supports dynamic search for controller IP addresses through webAgent technology to avoid offline loss of access points due to the non-fixed controller IP address
	Tunnel encryption	Support
Layer 3 Function	NAT	Support
	4G	Support
	Wired	Support PPPoE, DHCP, Static IP
	DHCP server	Support
	DNS proxy	Support
VPN	AP VPN	Support Sundray AP VPN
Wireless relay/bridge	Relay mode	Point-to-point and point-to-multipoint supported
	Relay frequency band	2.4/5.8 GHz
	Disable wireless network on relay frequency band	Supported
	Wireless backhaul service	Supported

Order Information

Model	Specifications	Remarks
SUNDRAY AP S910LTE series		
AP S910LTE	S910LTE access point, 802.11ac wave2 outdoor ap, Support 4G LTE, Compatible with 802.11a/b/g/n/ac. Support both 2.4G and 5G. Build-in directional antenna, Support Bluetooth configuration. Support POE power supply.	Essential
Optional parts		
HHX1000RJ45-1	Network lightning protection	
SI3200-08T-PWR-UN	8-port PoE switch that supports 802.3af/at	Optional
SI3200-24H-PWR	24-port PoE switch that supports 802.3af/at	Optional



SANGFOR
深信服科技



SUNDRAY
信锐技术

Sundray Technologies Co., Ltd.

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

Service hot line: +86-755-86725911

www.sangfor.com

www.sundray.com

E-mail: liaohaibo@sundray.com

Copyright © 2015 Shenzhen Sundray Technologies Company Ltd. All rights reserved.

Disclaimer: Sundray Technologies retains the rights of final explanation and modification of this document and this statement.