

<http://www.skspruce.com/>



San Jose

1885 Lundy Ave., Suite 270,
San Jose, CA 95131, USA

Tel: +1 (408) 449-5604

WIA3300-20 Indoor Access Point User Manual

Hong Kong

15K International Industrial
Centre, 2-8 Kwei Tei Street,
Shatin, Hong Kong

Tel: +852 26983874

Revision: 01

Issued on 2017-06-24

Chengdu

A1, Tianfu Software Park, 1129
Century City Road, High-tech
Zone, Chengdu, Sichuan, P.R.
China

Tel: +86 28 85231119

No part of this documentation may be reproduced in any form or by any means or used to make any derivative work (such as translation, transformation, or adaptation) without prior, express and written permission from our company, Inc.

Our company reserves the right to revise this documentation and to make changes in content from time to time without obligation on the part of our company to provide notification of such revision or changes.

Our company provides this documentation without warranty of any kind, implied or expressed, including but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Our company may make improvements or changes in the product(s) and/or the program(s) described in this documentation at any time.

1. Product Introduction

SKSpruce WIA3300-20 is a high performance, dual-band indoor wireless access point designed to meet rapidly rising demand for high capacity and bandwidth in indoor applications. Compliant with IEEE 802.11a/b/g/n/ac standards and supporting 2x2 MIMO. The WIA3300-20 has a compact design and includes options for ceiling and wall mount, as well as integrated high performance antennas and support for power-over-Ethernet (PoE+), making installation easy. The WIA3300-20 delivers outstanding performance in dense indoor urban settings, such as transit centers, malls, corporate campuses, and stadiums.



2. Product Characteristic

High performance Wi-Fi access point

Compliant with IEEE 802.11a/b/g/n/ac standards and 802.11ac wave2
High performance dual-band (2.4 GHz and 5 GHz) solution
2x2 MIMO 300 Mbps in the 2.4 GHz band; 867 Mbps in 5 GHz band)
Supports up to 256 connections

Robust security

802.1x and Web-based authentication mechanisms
Support for up to 32 SSIDs
SSID/AP/VLAN based user isolation

Smart Link connectivity management

Actively monitors link state and connectivity to the controller or gateway
Intelligently responds to connectivity interruptions by maintaining user sessions and establishing new sessions without interruption

Easy to deploy, simple to manage

PoE+ support and built-in high performance antennas

Ceiling or wall mounting options

Feature-rich AP with centralized optimization and management

Supports innovative AP functions, such as

PPPoE, Network Address Translation, and

DHCP server/client, wireless SSID and encryption settings

Zero-touch join and configuration

Physical Specifications

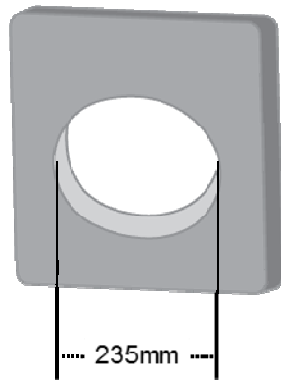
| | |
|------------------------------------|---|
| Power input | 802.3 at power over Ethernet (PoE) Supports local power input (DC12V/2A) |
| Overall power consumption | <25 W (USB power not included) Supports power-down of unused radios |
| Dimensions (W x D x H) | (200 mm x 200 mm x 45 mm) |
| Weight | 1.76 lbs (0.80 kg) |
| Ethernet ports | 2 x 10/100/1000Base-T |
| Console port | 1 USB 2.0 |
| Reset | 1 Reset button |
| Indicators | 1 Power/status 1 5G WLAN 2.4G WLAN Ethernet port |
| Operating temperature | +14°F to +131°F (−10°C to +55°C) |
| Storage temperature | −40°F to +158°F (−40°C to +70°C) |
| Relative humidity | 5%–95% noncondensing |
| | |
| WLAN Specifications Antenna | PCB antenna, 3 dBi gain |
| Operating frequency | 802.11a/n/ac: 5.15–5.85 GHz 802.11b/g/n: 2.4–2.4835 GHz |
| Spatial streams | 2x2 MIMO |

3. Installation

3.1 Ceiling-mount Installation

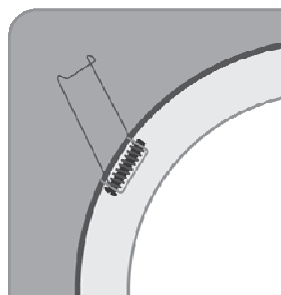
Operation Steps :

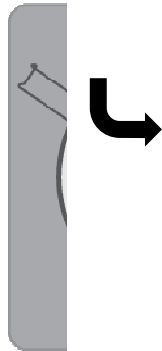
Step 1 Cut an opening of 235 mm in diameter in the ceiling.



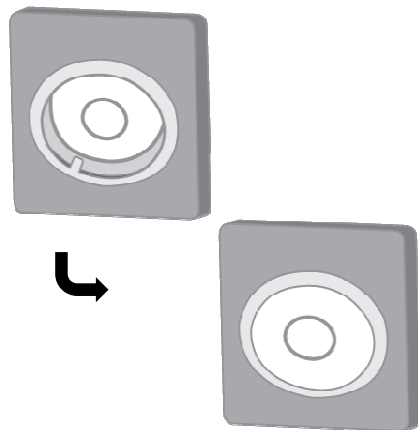
Step 2 Put the AP inside the ceiling near the opening and complete the networking connection.

Step 3 Attach one of the mounting springs inside the opening, and then place the other two in the opening at roughly the same distance apart (see figure below).





Step 4 Put the equipment onto the holder to complete the installation.



3.2 Wall-mount Installation

Two slots on the bed of this equipment are used for installation on the wall. If you need to install this product on the wall, you will need two 5 mm diameter screws.

Operation steps:

Step 1 To determine the mounting point, choose a central position far away from interference sources (such as microwave ovens and cordless phones).

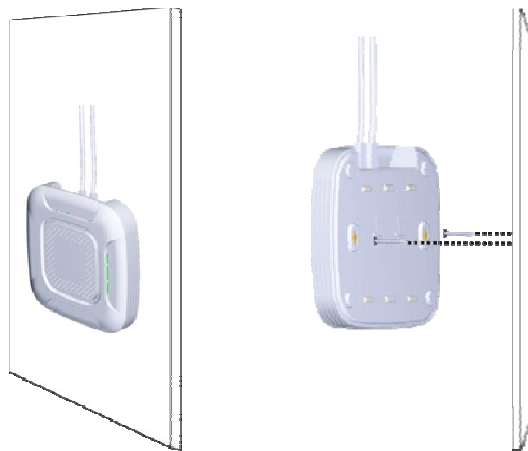
Step 2 Drill two holes 128mm apart on the selected wall. These two holes are used for installing screws.

Step 3 Screw one bolt in each hole. Ensure at least 5 mm screw head exposed outside the hole.

Step 4 Aim the wall mounting slots to the two screws.

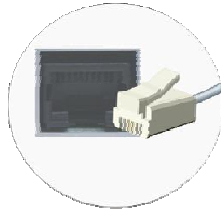
Step 5 Slide the equipment down until the screw tightly clipped into the wall mounting slots.

Note: When this equipment is installed on the wall, confirm that the installation point is in the range of the power outlet or other power supply connection point.



3.3 Device Connection

Step 1 Insert one end of the Ethernet cable to a LAN port. Then insert the other end to your PC or other Ethernet front-end ports of Ethernet network devices.



Step 2 (Optional) Insert one end of the power adapter (smaller one) on the back of the power switch, and insert the bigger end into power socket.



Step 3 Set up wireless data link: on Windows desktop, select *Start*→*Control panel*→*Network and Internet*→*View network status and tasks*→*Connect to the network*. View optional wireless networks. Select the name of your device from the list, and click connect button to start using the wireless network.



4. Tune up procedure

4.1 Network Configuration

Connect the Ethernet cable to WIA3300-20 ETH2 Port (LAN Port) , the default IP address is 192.168.18.1.

Telnet Login

telnet 192.168.18.1

```
OpenWrt login: admin
Password:

BusyBox v1.23.2 <2017-05-26 10:08:04 CST> built-in shell (ash)

      MM          NM          MMMMMMMM          M          M
    $MMMMM      MMMMM      MMMMMMMMMMMM      MMM      MMM
  MMMMMMMMM      MM MMMMM.      MMMMM      MMMMM      MMMMM      MMMMM
MMMM = MMMMM      MM      MMMM      MMMMM      MMMM      MMMMM      MMMMM'
MMMM = MMMMM      MMMM      MM      MMMMM      MMMM      MMMM      MMMMMNMMMMM
MMMM = MMMM      MMMMM      MMMMM      MMMMM      MMMM      MMMM      MMMMMMMMM
MMMM = MMMM      MMMMM      MMMMM      MMMMM      MMMM      MMMM      MMMMMMMMMMM
MMMM = MMMM      MMMMM.      NMMMMMMMMM      MMMM      MMMM      MMMMMMMMMMMMM
MMMM = MMMM      MMMMM      MMMMMMMMM      MMMM      MMMM      MMMM      MMMMM
MMMM = MMMM      MM      MMMM      MMMM      MMMM      MMMM      MMMM      MMMM
MMMM$ ,MMMM      MMMMM      MMMM      MMM      MMMM      MMMMM      MMMM      MMMM
  MMMMMMMM:      MMMMMMM      M      MMMMMMMMMMMMM      MMMMMMM      MMMMMMM
  MMMMMMM      MMMMM      M      MMMMMMMMMMM      MMMM      MMMM
    MMMM          M          MMMMMMM      M          M
      M

-----
  For those about to rock... <Chaos Calmer, unknown>
-----

root@OpenWrt:~#
```

User Name: admin

Password:5upS%k!

Connection Equipment Default SSID(skspruce-xxxx)

“skspruce-XXXX”(XXXX represent the latter 4 characters of MAC address. SSID default is WPA2-PSK encryption, password:12345678

4.2 Configuration (2.4G)

Working Setting

Open RF

```
uci set wireless.wifi0.disabled=0
```

```
uci commit2 wireless
```

```
wifi
```

The command is still valid after reboot.

Close RF

```
uci set wireless.wifi0.disabled=1
```

```
uci commit2 wireless
```

```
wifi
```

The command is still valid after reboot.

Set Channels

Set channel 6, the command below,

```
uci set wireless.wifi0.channel=6
```

```
uci commit2 wireless
```

```
wifi
```

if Set other channels, change '6' to other value, for example '3'.

The command is still valid after reboot.

Set Bandwidth

Set bandwidth HT20, the command below,

```
uci set wireless.wifi0.htmode='HT20'
```

```
uci commit2 wireless
```

```
wifi
```

if set other values, directly change HT20 above-mentioned, the value range: HT20、HT40

The command is still valid after reboot.

4.3 Configuration (5G)

5G Working Setting

Open RF

```
uci set wireless.wifi1.disabled=0
uci set wireless.@wifi-iface[2].set11NRates=0x80808080
uci set wireless.@wifi-iface[3].set11NRates=0x80808080
uci commit2 wireless
wifi
```

The command is still valid after reboot.

Close RF

```
uci set wireless.wifi1.disabled=1
uci commit2 wireless
wifi
```

The command is still valid after reboot.

Set Channels

Set Channel 60, the command below,

```
uci set wireless.wifi1.channel=60
uci set wireless.@wifi-iface[2].set11NRates=0x80808080
uci set wireless.@wifi-iface[3].set11NRates=0x80808080
uci commit2 wireless
wifi
```

if set other channels, change '60' to other values, for example '36'.

The command is still valid after reboot.

Set bandwidth

If set bandwidth HT20, the command below

```
uci set wireless.wifi1.htmode='HT20'
uci commit2 wireless
wifi
```

if set other values, directly change HT20 above-mentioned, the value range: HT20、HT40、ac80

The command is still valid after reboot.

FCC Warning

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. . This device and its antenna(s) must not be collocated or operating in conjunction with any other antenna or transmitter.

FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body