

H3C WA3600 Series Indoor Access Points Installation Guide

Hangzhou H3C Technologies Co., Ltd. http://www.h3c.com

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Preface

The H3C WA3600 Series Indoor Access Points Installation Guide describes the hardware specifications, preparations before installation, installation procedure, cabling and grounding, and login procedure for the new generation WA3600 802.11 n indoor APs.

This preface includes:

- Audience
- Conventions
- Obtaining documentation
- Technical support
- Documentation feedback

Audience

This documentation is intended for:

- Network planners
- Field technical support and servicing engineers
- Network administrators working with the WA3600 Series Indoor Access Points

Conventions

This section describes the conventions used in this documentation set.

GUI conventions

Convention	Description
Boldface	Window names, button names, field names, and menu items are in Boldface. For example, the New User window appears; click OK .
>	Multi-level menus are separated by angle brackets. For example, File > Create > Folder .

Symbols

Convention	Description
	An alert that calls attention to important information that if not understood or followed can result in personal injury.
	An alert that calls attention to important information that if not understood or followed can result in data loss, data corruption, or damage to hardware or software.
	An alert that calls attention to essential information.
NOTE	An alert that contains additional or supplementary information.

Obtaining documentation

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Product overview

The H3C WA3600 Series Indoor Access Points (referred to as the WA3600 series hereinafter) includes the WA3610i-GN, WA3620i-AGN, and WA3628i-AGN. All of them have integrated antennas, and the WA3628i-AGN also supports external antennas. The WA3600 series can serve as fit APs to cooperate with wireless switches or access controllers to provide wireless access for WLAN users. All configuration tasks are configured on the wireless switches or access controllers. The WA3600 series can also operate as fat APs to provide wireless access for WLAN users.



Figure 1 Deployment of the AP on hotspots (fit AP)

Figure 2 Deployment of the AP on hotspots (fat AP)



Table 1 Basic configuration

Model	Protocol	Antenna	Power consumption
WA3610i-GN	 IEEE802.11b/g/n Single-radio 	Integrated antennas: 2.4G, 6dBi gain	7.0 W to 11.0 W
WA3620i-AGN	 IEEE802.11 a/b/g/n Dual-radio 	 Integrated antennas: 2.4G, 6dBi gain 5G,6.3dBi gain 	7.5 W to 12.95 W
WA3628i-AGN	 IEEE802.11 a/b/g/n Dual-radio, dual-Ethernet port 	 Integrated antennas: 2.4G, 6dBi gain 5G, 6.3dBi gain Supports external antennas 	7.5 W to 12.95 W

NOTE:

External antennas are user supplied.

Table 2 shows the dimensions and weights for the WA3600 series.

Table 2 Dimensions and weight

Model	Dimensions (H × W × D)	Weight
WA3610i-GN	58 × 245 × 245 mm (2.28 × 9.65 × 9.65 in)	1.4 kg (3.09 lb)
WA3620i-AGN	58 × 245 × 245 mm (2.28 × 9.65 × 9.65 in)	1.4 kg (3.09 lb)
WA3628i-AGN	58 × 245 × 245 mm (2.28 × 9.65 × 9.65 in)	1.4 kg (3.09 lb)

Preparing for installation

Safety recommendations

WARNING!

Only qualified personnel can install and remove a WA3600 series and its accessories. You must read all safety instructions supplied with the access points before installation and operation.

To avoid possible bodily injury and equipment damage, read the following safety recommendations before you install a WA3600 series. Note that the recommendations do not cover every possible hazardous condition.

- Take adequate safety measures to avoid injury and access point damage.
- Make sure that the ground is dry and flat and anti-slip measures are in place.
- Keep the chassis clean and dust-free.
- Do not place the access point in a moist area and avoid liquid surrounding the access point.
- Keep the chassis and installation tools away from walkways.

Examining the installation site

Before installation, examine the installation site to keep the AP under a good operational environment. You can examine the installation site from the following aspects:

Temperature and humidity requirements

Table 3 Environment specifications

Specification	Range
Operating temperature (indoor)	–10°C to +55°C (14°F to 131°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating humidity (noncondensing)	5% to 95%

Accessories provided with the AP

 The following accessories are provided with the AP:

 Image: Constraint of the second second

3



User-supplied installation tools and equipment

÷0) RJ-45 crimping Level Marker Knife Wire stripper tool Percussion drill with Phillips Rubber hammer Ladder matching drills screwdriver

When you install a WA3600 access point, you may need the following tools:

Installing the AP

\bigwedge CAUTION:

The WA3600 series is usually installed on a high position, such as a wall or ceiling, so the maintenance personnel cannot log in from the console port to maintain and debug the AP. H3C recommends that you log in to the AP through the console port to perform remote login (Telnet or web login) configuration, or log in through Telnet or web by using the default login information before you install the AP. For more information about logging in to the AP, see "Logging in to the fat AP."

Figure 3 Installation flowchart



Check before installation

Before you install an AP, check the following:

- Connect the power cord and connect the AP to the network. Check the LED status to make sure that the AP can operate properly. For more information about AP LEDs, see "Appendix LEDs and ports."
- Check that cabling has been completed.
- The WA3600 series supports 802.3af-compliant PoE. To achieve the best performance, H3C recommends that you adopt GE connection to the power device.

• Record the MAC address and serial number of the AP (marked on the rear of the AP) for future use.

Determining the installation position

Determine the installation position by observing the following principles:

- Leave as few obstacles (such as wall) as possible between APs and clients.
- Install APs away from electronic devices (such as microwave ovens) that may generate radio frequency (RF) noise.
- Install APs in a place where they will not hinder people's daily work and life.
- Do not install APs in a place where water seeping, water soaking, and condensing occur. Prevent water or moisture from entering the APs.

\bigwedge CAUTION:

If part of the power line is routed outdoors, use a power strip with lightning protection (user supplied) to connect the power cord of the AP to the power line to protect the AP from being damaged by lightning strikes.

Installing the AP

NOTE:

- The WA3610i-GN, WA3620i-AGN, and WA3628i-AGN are installed in the same way. The following uses a WA3628i-AGN as an example.
- The WA3600 series can only be used indoors.

Mounting the AP on a wall (I)

To mount the AP on a wall, you need a wall-mounting bracket and wall anchor kit.

Figure 4 Screw hole locations and sizes (in mm)



\bigwedge CAUTION:

Connect the AP to the network by using an Ethernet cable, and then install the AP to the wall-mounting bracket when you mount the AP on a wall.

To mount the AP on a wall:

- Fix the wall-mounting bracket to the wall: 1.
 - a. Use the wall-mounting bracket as a template to mark the locations of the mounting holes on the bracket. Drill three 5 mm (0.2 in) diameter holes at the mounting hole locations you marked.
 - b. Insert a wall anchor into each mounting hole, and tap the wall anchor with a rubber hammer until it is all flush with the wall surface.
 - Align the holes in the wall-mounting bracket with the anchors and insert screws through the с. installation holes into the wall anchors.
 - d. Adjust the position of the wall-mounting bracket and tighten the screws.

Figure 5 Install the wall-mounting bracket



(1) Wall anchor	(2) Wall-mounting bracket	(3) Hook
(4) Clip	(5) Screw	

- Connect the AP to the network by using an Ethernet cable. 2.
- Align the mounting keyhole on the rear of the AP over the hook on the wall-mounting bracket. 3. See Figure 6.

Figure 6 Mounting keyholes



(1) Hook	(2) Clip
(3) Tab	(4) Mounting keyhole

- 4. Mount the AP on the hook on the wall-mounting bracket. See callout 1 in Figure 7.
- 5. Pull down the AP with force until it clicks into place. See callout 2 in Figure 7.

Figure 7 Fix the AP onto the wall-mounting bracket



Mounting the AP on a wall or ceiling (II)

NOTE:

- The wall or ceiling tiles must be less than 18 mm (0.71 in) thick, and the wall or the ceiling can bear a weight of at least 5 kg (11.02 lb).
- Do not use this method to mount the AP to a location made of low-intensity materials such as a plaster ceiling. If this installation method is required in such an environment, put a high-intensity plate beneath the ceiling to secure the installation.

The two bolt holes shown in Figure 8 are needed for mounting the AP on a wall.

Figure 8 Bolt holes on the wall-mounting bracket (in mm)



To install the AP on a wall:

- 1. Drill two 6.2 mm (0.24 in) diameter holes in the wall or ceiling where you want to mount the AP. The distance between the two holes must be the same as the distance between the two bolt holes on the mounting bracket.
- 2. Insert the hex-head bolts into the bolt holes on the mounting bracket and the holes in the wall or ceiling. From the other side of the wall or from above the ceiling, fasten the hex nuts to the hex-head bolts to fix the mounting bracket to the wall or ceiling.
- 3. Connect the AP to the network by using an Ethernet cable.
- 4. Fix the AP to the mounting bracket. For more information, see "Mounting the AP on a wall (I)."

Figure 9 Mount the AP on a wall



(1) Nut	(2) Hex-head bolt
(3) Wall-mounting bracket	(4) Hook

\bigwedge CAUTION:

Check that the AP is secured to the mounting bracket to avoid falloff.

Mounting the AP to a T-rail

NOTE:

- The width of the T-rail must be in the range of 14 mm to 24 mm (0.55 in to 0.94 in).
- This installation method applies only to T-rails.

The two 5 mm (0.20 in) diameter holes on the mounting bracket are needed when you mount the AP to a T-rail. For the wall-mounting bracket appearance, see Figure 4.

Figure 10 T-rail holder



(1) T-rail clip	(2) M4 \times 8 screw nut	(3) Clip holder
(4) T-rail holder	(5) M3 × 6 screw nut	(6) M4 × 8 screw
(7) M3 × 6 screw	(8) Mounting hook	

To mount the AP to a ceiling T-rail:

- Loosen the two M3 × 6 screws on each clip holder just enough (do not remove the screws or they may get lost).
- 2. Adjust the T-rail clips to make the T-rail holder wider than the T-rail. See callout 1 in Figure 11. Then lock the T-rail with the T-rail holder according to the arrow indicated in callout 2 in Figure 11.

Figure 11 Fix the T-rail holder to the T-rail



- 3. Tighten the four $M3 \times 6$ screws on the two clip holders until the screw heads touch the T-rail, and then fix the screws.
- 4. Check whether the T-rail holder is fixed to the T-rail.
- 5. Hook the mounting clip (see callout 5 in Figure 12) of the wall-mounting bracket to the mounting hook (see callout 4 in Figure 12) of the T-rail holder.
- 6. Insert the two M4 \times 8 screws (see callout 1 in Figure 12) through the two 5 mm (0.20 in) diameter holes on the wall-mounting bracket according to the dashed line shown in Figure 12 and fix the screws to the T-rail holder.
- 7. Check whether the wall-mounting bracket is fixed to the T-rail.
- 8. Connect the AP to the network by using an Ethernet cable.

9. Install the AP to the wall-mounting bracket. For more information, see "Mounting the AP on a wall (1)."





(1) M4 × 8 screw	(2) M3 × 6 screw	(3) Hook
(4) Mounting hook	(5) Mounting clip	

Securing the AP

NOTE:

The security lock is user supplied.

You can secure the AP by installing a security lock into the security slot on the AP.

To install the security lock:

- 1. Loop the security cable around a nearby immovable object.
- 2. Insert the key into the security lock.
- 3. Insert the security lock latch into the security slot on the access point.
- 4. Rotate the key right or left to secure the security lock to the access point.
- 5. Remove the key from the security lock.

Figure 13 Secure the AP



Connecting the power supply

The WA3600 series can be powered by the local power or through 802.3af-compliant PoE. You can select one as needed.

Check before power-on

Check the following items before you power on the AP:

- The power supply is well grounded when the AP adopts local power supply.
- The PoE power supply is well grounded when the AP adopts PoE power supply.

PoE power supply

If the uplink device of the AP is a PoE switch, use an Ethernet cable to directly connect the Ethernet interface of the AP to the PoE device.

Figure 14 PoE connection

(1) Ethernet Port	(2) Ethernet Cable	(3) PoE switch	

Local power supply

NOTE:

No power adapter and power cable are shipped with the AP.

Table 4 Power adapter specifications

ltem	Description
Input	100 VAC to 240 VAC
Output	+48V ==== at 0.52 A ⊖-€-€

The WA3600 series supports both AC and DC power adapters. You can connect the power port of the AP to the power source through a power adapter to supply power to the AP.

Figure 15 Local power supply connection



Check after power-on

After powering on the AP, check the AP status LED. For more information about AP LEDs, see "Appendix LEDs and ports."

Connecting the AP to the network

APs can access the Internet or metropolitan area network (MAN) through the Ethernet uplink interface. To implement Internet or MAN access, connect the Ethernet port of the AP to an Ethernet port of an Ethernet switch.

Checking the network connection for the fit AP

When the AP operates as a fit AP, all of its settings are configured on the AC. You can use the **display** wlan ap all command to check the AP status on the AC. When the AP status is R/M, the AP has been successfully connected to the AC (on a WA3628i-AGN for example).

```
<AC> display wlan ap all
Total Number of APs configured
                             : 1
Total Number of configured APs connected : 1
Total Number of auto APs connected
                             : 0
                        AP Profiles
State : I = Idle, J = Join, JA = JoinAck,
                                 IL = ImageLoad
      C = Config, R = Run, KU = KeyUpdate, KC = KeyCfm
  _____
AP Name
                        State Model
                                         Serial-ID
_____
                        R/M WA3628i-AGN
                                         210235A0T6B117000435
ap1
```

Checking the network connection for the fat AP

When the AP operates as a fat AP, use the **ping** command to ping the uplink network. If the network can be pinged successfully, the AP is successfully connected to the network.

Logging in to the fat AP

NOTE:

The WA3600 series is usually installed on a high position. H3C recommends that you log in to the AP to configure related settings before you install the AP.

When the WA3600 series operates as a fat AP, you can log in to the AP through the console port, or through Telnet or web to configure the AP, but you must obtain the IP address of the AP first.

- Logging in through the console port—Logging in through the console port is the most fundamental login method. To log in through other methods, you must log in through the console port and perform the required configurations.
- Logging in through Telnet—You can telnet to the device to remotely manage and maintain it.
- Logging in through web—You can log in to the web interface of the device to remotely manage and maintain it.

Logging in through the console port

Prepare the following before you log in through the console port:

- An 8-core shielded console cable, with a crimped RJ-45 connector at one end, and a DB-9 female connector at the other end.
- A configuration terminal—A laptop or PC with a serial port.

Setting up the configuration environment

NOTE:

The serial ports on PCs do not support hot swapping. If the AP has been powered on, connect the console cable to the PC before connecting to the AP, and when you disconnect the cable, first disconnect from the AP.

To connect the console cable:

- 1. Plug the DB-9 female connector to the serial port of the PC.
- 2. Connect the RJ-45 connector to the console port of the AP.

Figure 16 Connect the console cable



Power on the AP.
 The AP's startup information will be displayed.

Setting terminal parameters

To set terminal parameters, for example, on a Windows XP HyperTerminal:

- Select Start > All Programs > Accessories > Communications > HyperTerminal. The Connection Description dialog box appears.
- 2. Enter the name of the new connection in the **Name** field and click **OK**.

Figure 17 Connection description

Connection Description	?×
New Connection	
Enter a name and choose an icon for the connection:	
Name:	
Test	
lcon:	
S S S S S S	2
OK Ca	ncel

3. Select the serial port to be used from the **Connect using** list, and click **OK**.

Figure 18 Set the serial port used by the HyperTerminal connection

Connect To	? 🛛
🦓 Test	
Enter details for	the phone number that you want to dial:
<u>C</u> ountry/region:	China (86) 🛛 🗸
Ar <u>e</u> a code:	86
<u>P</u> hone number:	
Co <u>n</u> nect using:	СОМ1 💌
	OK Cancel

4. Set **Bits per second** to **9600**, **Data bits** to **8**, **Parity** to **None**, **Stop bits** to **1**, and **Flow control** to **None**, and click **OK**.

Figure 19 Set the serial port parameters

COM1 Properties	? 🛛
Port Settings	
<u>B</u> its per second:	9600
<u>D</u> ata bits:	8
<u>P</u> arity:	None
<u>S</u> top bits:	1 🗸
Elow control:	None
	Restore Defaults
0	K Cancel Apply

NOTE:

To restore the default settings, click **Restore Defaults**.

The HyperTerminal window appears.

Figure 20 HyperTerminal window

🌯 Test - HyperTerminal	×
<u>File E</u> dit <u>V</u> iew <u>C</u> all <u>T</u> ransfer <u>H</u> elp	
🗅 🚔 🍘 🌋 🗈 🎦 😭	
	×
Connected 0:00:53 VT100 Auto detect SCROI	L.;;

Logging in through the console port

Power on the AP, and you can see the following information: System is starting... Booting Normal Extend BootWare. ... System application is starting... Startup configuration file does not exist. User interface con0 is available.

Press ENTER to get started.

Logging in through Telnet or web

By default, the Telnet and web functions are enabled. You can use the following default settings to log in to the web interface:

- Username—admin
- Password—h3capadmin
- Management IP address of VLAN-interface 1 of the AP-192.168.0.50, with the subnet mask 255.255.255.0.

If the default IP address is changed, contact the administrator to get the new IP address, or use the **display vlan 1** command to view the IP address after logging in to the AP from the console port.

NOTE:

For more information about Telnet or web login configuration, see H3C WA Series Access Points Configuration Guides.

Appendix LEDs and ports

LEDs

Table 5 describes the LEDs provided by the WA3600 series.

Table 5 LED description

Mark	Color	Status	Description
	Green	Elashina at 1 Hz	The AP is booting.
			NOTE:
			When the AP operates as a fit AP, it is always in this state before it is registered to an AC.
		Breathing	A client is connected to the 2.4G port.
			The AP has been booted, and is in standby state (no client is connected to the AP).
		Flashing at 0.25 Hz	NOTE:
			When the AP operates as a fit AP, this state indicates the AP has been registered to an AC.
	Blue	Flashing at 4 Hz	The AP is updating its system software image (only available when the AP operates as a fit AP).
		Breathing	A client is connected to the 5G port.
			NOTE:
			Not available on the WA3610i-GN.
	Red	Steady on	An initialization exception has occurred to the AP.
		Flashing at 1 Hz	The AP cannot detect any radio interface.
		Flashing at 8 Hz	An Ethernet port or radio interface is operating abnormally.
	Alternating green and blue		Blinking mode.
			NOTE:
		Alternating flashing at 1 Hz	When the fit AP associated with the AC receives the blinking command sent by the AC, it flashes green and blue to show the fit AP has been associated with the AC.
		Breathing green and blue twice	Clients are connected to both the 2.4G and 5G radio interfaces.
			NOTE:
			Not available on the WA3610i-GN.

NOTE:

For more information about the blinking mode, see WX Series Access Controllers Configuration Guides.

Ports

The WA3610i-GN and WA3620i-AGN provide the following external ports:

- A console port
- A 10/100/1000 Mbps copper Ethernet port
- A power supply port

The WA3628i-AGN provides the following external ports:

- Three 2.4 GHz antenna ports, and three 5 GHz antenna ports
- A console port
- Two 10/100/1000 Mbps copper Ethernet ports
- A power supply port

NOTE:

The WA3600 series also provides a reset button and a security slot with the dimension of 7×3 mm (0.28 \times 0.12 in).

Figure 21 Ports on the WA3610i-GN and WA3620i-AGN



(1) Local power port	(2) 10/100/1000 Mbps copper Ethernet port
(3) Reset button	(4) Console port

(5) Security slot

Table 6 WA3610i-GN and WA3620i-AGN port description

Port	Standards and protocols	Description
ETH1	 IEEE802.3 IEEE802.3u IEEE802.3af 	10/100/1000 Mbps copper Ethernet port. The Ethernet port can serve as an uplink interface to access the Internet or MAN, and as an 802.3af-compliant PoE port at the same time.
DC 48V	• N/A	The local power port is used for +48 VDC power supply to the device.

Port	Standards and protocols	Description
Console port	RS/EIA-232	The console port is used for configuration and management (for debugging when the AP operates as a fit AP).

Figure 22 WA3628i-AGN ports



(1) through (3) 5G antenna ports 1/2/3	(4) Local power port
(5) 10/100/1000 Mbps copper Ethernet port 1	(6) 10/100/1000 Mbps copper Ethernet port 2
(7) Reset button	(8) Console port
(9) Security slot	(10) through (12) 2.4G antenna ports 1/2/3

Table 7 WA3628i-AGN port description

Port	Standards and protocols	Description
2.4G-1/2/3	 IEEE802.11b IEEE802.11g IEEE802.11n 	The antenna ports are provided for 2.4 GHz single-RF antennas
5G-1/2/3	IEEE802.11 aIEEE802.11 n	The antenna ports are provided for 5 GHz single-RF antennas
Local power port	• N/A	The local power port is used for +48 VDC power supply to the device.
ETH1 and ETH2	IEEE802.3IEEE802.3uIEEE802.3af	10/100/1000 Mbps copper Ethernet port .The Ethernet port can serve as an uplink interface to access the Internet or MAN, and as an 802.3af-compliant PoE port at the same time.
Console port	RS/EIA-232	The console port is used for configuration and management (for debugging when the AP operates as a fit AP).

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Compliance and Safety Manual

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Safety Information Sicherheits informationen 安全信息

Overview Überblick 概述

🔥 Warning

Installation and removal of the unit and its accessories must be carried out by qualified personnel. You must read all of the Safety Instructions supplied with your equipment before installation and operation.



Installation und Ausbau der Anlage und ihrer Zubehörteile müssen von qualifiziertem Personal realisiert werden. Sie müssen vor der Installation oder Bedienung allen beiliegenden Sicherheitshinweise lesen.

▲ 警告

负责安装和日常维护本设备的人员必须具备安全操作基本技能。在操作本设备前,请务必认真阅读 和执行产品手册规定的安全规范。

🕑 Note

Before any operation is performed, please read the operation instructions and precautions carefully to minimize the possibility of accidents. The Note, Caution, Warning and Danger items in other manuals do not cover all safety precautions that should be followed. They are only the supplements to the safety precautions for operations as a whole. Therefore, the personnel in charge of the installation and maintenance of the products are required to understand these basics of safety operation.

In performing various operations, please follow the local safety regulations. The safety precautions introduced in the product manuals are supplementary and subject to the local safety regulations.

When various operations are executed on the products, the precautions and special safety instructions provided with the products must be followed to the full.

The personnel in charge of the installation and maintenance of the products must be trained as professionals to master the proper operating methods and all safety precautions. Only the trained and qualified personnel can perform operations such as equipment installation and maintenance.

Anmerkung

Lesen Sie bitte alle Bedienungsanweisungen und Sicherheitvorschriften sorgfältig durch, bevor Sie das Gerät in Betrieb nehmen. Nur durch Beachtung dieser Hinweise lässt sich das Unfallrisiko minimieren. Die in anderen Handbüchern aufgeführten Anmerkungen, Achtungen, Warnungen und Gefahren beinhalten nicht alle zu beachtenden Sicherheitvorschriften. Sie dienen lediglich als Ergänzung. Deshalb muss sich das für die Installation und Instandhaltung der Ausrüstung verantwortliche Personal mit allen Sicherheitshinweisen vertraut machen.

Bei verschiedenen Bedienungen müssen außerdem die örtlichen Sicherheitsvorschriften beachtet werden. Die in den Handbüchern der einzelnen Produkte aufgeführten Sicherheitshinweise sind Ergänzungen und unterliegen den nationalen Sicherheitsvorschriften.

Bei verschiedenen Bedienungen mit den Produkten sind deshalb grundsätzlich alle Sicherheitsvorschriften und spezifischen Sicherheitshinweise genau zu beachten.

Das für die Installation und Instandhaltung der Produkte verantwortliche Personal muss geschult werden, damit sie alle Sicherheitsvorschriften kennen und die Produkten richtig bedienen zu können. Nur geschultes und qualifiziertes Personal kann die Installation und Instandhaltung in korrekter Weise durchführen.

📝 说明

为了避免可能发生的事故,请在进行任何操作前,仔细阅读设备操作手册和本章节的安全规范。手 册中 出现的说明、注意、警告、危险,不能涵盖所有的安全预防,仅仅是在整个操作过程中的安全 提示和补充。因此,负责安装和日常维护本设备的人员必须具备安全操作基本技能。

操作人员要按照当地的安全规范进行操作。出现在产品手册中的安全预防措施仅仅是当地安全规范的补充。

在操作本设备时,请认真执行产品手册规定的安全规范。

设备安装、维护人员必须通过专业培训,并且掌握足够的操作技能和安规预防意识。只有专业人员 才能担任本设备的安装和维护工作。

Conventions Used Symbole Erläuterung der Symbole 应 用惯例

The symbols in this manual are shown in the following table. They are used to remind the reader of the safety precautions during equipment installation and maintenance.

Die in diesem Handbuch verwendeten Symbole sind in der folgenden Tabelle dargestellt. Diese Symbole sollen das Personal während der Installation und Instandhaltung der Ausrüstung an die Wichtigkeit der im Handbuch aufgeführten Sicherheitsvorschriften erinnern.

以下表格中的安全标识,是用来提示读者在进行设备安装和维护时的安全预防要求。



Table 1 Safety symbol and description/Sicherheitssymbole und Beschreibung/安全标识和描述

Safety Symbol	Description
Symbole 安全标识	描述
	Generic alarm symbol: To suggest a general safety concern. Alarm: Hinweis auf ein generelles Sicherheitsproblem. 一般注意标识:用于一般安全提示。
A	ESD protection symbol: To suggest electrostatic-sensitive equipment. ESD-Schutz: Hinweis auf ESD-gefährdete Bauteile. 防静电标识:用于表示静电敏感的设备。
	Electric shock symbol: To suggest a danger of high voltage. Elektrischer Schlag: Hinweis auf Gefährdung durch Hochspannung. 电击防护标识:用于表示高压危险。

Important Safety Information/Wichtige Sicherheitshinweise/重要安全信息

	Caution: You must read all of the installation instructions in the Installation Guide supplied with your equipment and the following safety instructions before installation or operation.
	Achtung: Sie müssen vor der Installation oder Bedienung das mit Ihrer Anlage mitgelieferten Installationshandbuch und die folgende Sicherheitshinweise lesen. 注意:在安装和操作本设备时,务必阅读设备安装手册的内容,以及下文的所有安全说明。
	Warning: Installation and removal of the unit and its accessories must be carried out by qualified personnel.
	Warnung:: Installation und Ausbau der Anlage und ihrer Zubehörteile müssen von qualifiziertem Personal realisiert werden.
	警告: 必须由专业人员来安装和移动设备以及附件。
A	Warning: For SELV DC input: the DC power source shall comply with the Safety Extra-Low Voltage (SELV) requirements of IEC 60950-1.
	Warnung: Mit Gleichstrom betriebenes Modell: Das Gerät arbeitet mit Gleichstrom, wobei die Anforderungen der Norm (IEC60950-1) für Schutzkleinspannung eingehalten werden müssen.
	警告: SELV DC电源输入:设备使用满足IEC60950-1安规标准的安全超低电压(SELV)电源。
A	Warning: Before the power cable is installed or removed, the power must be turned off.
	Warnung: Das System muss stets abgeschaltet werden, bevor die Zuleitung angebracht oder entfernt wird.
	警告: 在安装、移动线缆之前,请切断电源。
A	Warning: Before the power cable is connected, it must be confirmed that the power cord complies with the requirements of the actual installation (see power cord table.)
	Warnung: Überprüfen Sie vor dem Anbringen der Zuleitung immer, ob das von Ihnen verwendete Kabel den Anforderungen entspricht(siehe Netzkabel-Tabelle).

警告: 在进行线缆连接前,请确认线缆和线缆的标识与实际安装要求是一致的(参考电源线 表格)。

Caution: To ensure the equipment is mounted on the wall firmly, please use a screw at least 4.2 mm diameter and the screw head at least 8.0 mm diameter.



Achtung: Um das Gerät an der Wand zu befestigen, benutzen Sie Nagel mit einem Mindestdurchmesser von 4.2 mm. Der Durchmesser der Nagelkappe muss mindestens 8.0 mm betragen.

注意:为确保设备紧固的安装在墙上,请用直径最小是4.2mm钉子,并且钉子帽的直径要大于8.0mm。

Electricity Safety Elektrische Sicherheit 用电安全

- Conducting articles, such as a watch, hand chain, bracelet or ring should be removed during the installation.
- Es ist nicht erlaubt während dieser Arbeiten leitende Gegenstände wie Uhren, Armbänder, Armreifen und Ringe am Körper zu tragen.
- 在操作中不能穿戴导电性的物品,如:手表,手琏,手镯和项链等。
- If water is found in the rack, or the rack is damp, immediately switch off the power supply.
- Sollte sich Wasser im Baugruppenträger befinden oder der Baugruppenträger feucht sein, ist die Energiezufuhr sofort zu unterbrechen und das System abzuschalten.
- 如果有液体进入机架或机架有损坏时,立即切断电源。

Regulatory Compliance Information

Regulatory compliance standards

Table 2 Regulatory compliance standards

Discipline	Standards				
	FCC Part 15 (CFR 47) CLASS B				
	ICES-003 CLASS B				
	CISPR 22 CLASS B				
	EN 55022 CLASS B				
	AS/NZS CISPR22 CLASS B				
EMC	CISPR 24				
EMC	EN 55024				
	EN 61000-3-2				
	EN 61000-3-3				
	EN60601-1-2				
	EN 301 489-1				
	EN 301 489-17				
	UL 60950-1				
	CAN/CSA C22.2 No 60950-1				
Safety	IEC 60950-1				
	EN 60950-1				
	AS/NZS 60950-1				
	FCC Bulletin OET-65C				
	FCC part15 subpart C				
DE	RSS-210				
KF	RSS-GEN				
	EN 300 328				
	EN 50385				

European Directives compliance

Wireless CE Marking

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Table 3 Equipment may be operated in the following country:

AI BE CY CZ DK EE H FR	AT BE	Ξ C	CY C	CZ [DK E	EE I	FI	FR
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AT	BE	CY	CZ	DK	EE	FI	FR
DE	GR	HU	IE	IT	LV	LT	LU
MT	NL	PL	PT	SK	SI	ES	SE
GB	IS	LI	NO	СН	BG	RO	TR

- 1. Select the country in which the product is installed to ensure product operation is in compliance with local regulations. For information on how to select the country, refer to the "H3C A-Series Access Controllers WLAN Command Reference".
- 2. Intended use: IEEE 802.11 b/g/n radio LAN device.
- 3. This product must maintain a minimum body to antenna distance of 20cm.Under these conditions this product will meet the Basic Restriction limits of 1999/519/EC (Council Recommendation of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields (0Hz-300GHz)).

R&TTE declaration statements:

Česky [Czech]	H3C Company tímto prohlašuje, že tento Zařízení je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.
Dansk [Danish]	Undertegnede H3C Company erklærer herved, at følgende udstyr zařízení overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
Deutsch [German]	Hiermit erklärt H3C Company, dass sich das Gerät Ausrüstung in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.
Eesti [Estonian]	Käesolevaga kinnitab H3C Company seadmed vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
English	Hereby, H3C Company, declares that this Equipment is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
Español [Spanish]	Por medio de la presente H3C Company declara que el equipo cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.
Ελληνική [Greek]	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ Η3C Company ΔΗΛΩΝΕΙ ΟΤΙ εξοπλισμός ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.
Français [French]	Par la présente H3C Company déclare que l'appareil équipement est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.
Italiano [Italian]	Con la presente H3C Company dichiara che questo attrezzatura è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
Latviski [Latvian]	Ar šo H3C Company deklarē, ka iekārta atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
Lietuvių [Lithuanian]	Šiuo H3C Company deklaruoja, kad šis įranga atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.
Nederlands [Dutch]	Hierbij verklaart H3C Company dat het toestel uitrusting in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.
Malti [Maltese]	Hawnhekk, H3C Company, jiddikjara li dan tagħmir jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Dirrettiva 1999/5/EC.
Magyar	Alulírott, H3C Company nyilatkozom, hogy a aprīkojums megfelel a vonatkozó

[Hungarian]	alapvető követelményeknek és az 1999/5/EC irányelv egyéb előírásainak.
Polski [Polish]	Niniejszym H3C Company oświadcza, że urządzenie jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.
Português [Portuguese]	H3C Company declara que este equipamento está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
Slovensko [Slovenian]	H3C Company izjavlja, da je ta oprema v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.
Slovensky [Slovak]	H3C Company týmto vyhlasuje, že zariadenie spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.
Suomi [Finnish]	H3C Company vakuuttaa täten että laitteet tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
Svenska [Swedish]	Härmed intygar H3C Company att denna utrustning står I överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.
Íslenska [Icelandic]	Hér með lýsir H3C Company yfir því að búnaður er í samræmi við grunnkröfur og aðrar kröfur, sem gerðar eru í tilskipun 1999/5/EC.
Norsk [Norwegian]	H3C Company erklærer herved at utstyret utstyr er i samsvar med de grunnleggende krav og øvrige relevante krav i direktiv 1999/5/EF.

The most up to date copy of the signed EU Declaration of Conformity can be downloaded from:

http://www.h3c.com/portal/Technical Documents

EU Country Restriction in 2.4GHz band

These products may be used indoors or outdoors in all countries of the European Community using the 2.4GHz band: Channel 1-13, except where noted below.

- 1. In Belgium outdoor operation is only permitted using the 2.46-2.4835GHz band: Channel 13.
- 2. In France outdoor operation is only permitted using the 2.4-2.454GHz band: Channels 1-7.
- 3. In Italy the end-user must apply for a license from the national spectrum authority to operate this device outdoors.

WEEE Directive-2002/96/EC



The products this manual refers to are covered by the Waste Electrical & Electronic Equipment (WEEE) Directive and must be disposed of in a responsible manner.

USA regulatory compliance

FCC Part 15

US Federal Communications Commission (FCC) EMC Compliance

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.

These products comply 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.

If the customer modifies the equipment without the authorization of H3C, which directly or indirectly contribute to the equipment incompliance with FCC requirements for Class B digital devices, H3C is not liable for such interference problem and the expenses incurred there from shall be covered by the customers.

RF Requirements

1. RF exposure Hazard Warning

This device generates and radiates radio-frequency energy. To ensure compliance with the requirements of FCC radio-frequency exposure, a minimum body to antenna distance of 20cm (8 inch) must be maintained when the device is installed and operated.

2. RF Frequency Requirements

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter.

Antennas

Only use the supplied antenna. Unauthorized antennas, modifications or change to the antennas could violate FCC regulations and void the user's authority to operate the equipment.

Canada regulatory compliance

ICES-003

This Class B digital apparatus complies with Canadian Standard ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

RF Compliance

This device complies with RSS-210 of Industry Canada.

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of this device.

L 'utilisation de ce dispositif est autorisée seulement aux conditions suivantes: (1) il ne doit pas produire de brouillage et (2) l'utilisateur du dispositif doit étre prêt à accepter tout brouillage radioélectrique reçu, même si ce brouillage est susceptible de compromettre le fonctionnement du dispositif.

The term "IC" before the equipment certification number only signifies that the Industry Canada technical specifications were met.

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (EIRP) is not more than that required for successful communication. To prevent radio interference to the licensed service, this device is intended to be operated indoors and away from windows to provide maximum shielding. Equipment (or its transmit antenna) that is installed outdoors is subject to licensing.

Pour empecher que cet appareil cause du brouillage au service faisant l'objet d'une licence, il doit etre utilize a l'interieur et devrait etre place loin des fenetres afin de Fournier un ecram de blindage maximal. Si le matriel (ou son antenne d'emission) est installe a l'exterieur, il doit faire l'objet d'une licence.

This device must not be co-located or operated in conjunction with any other unauthorized antenna or transmitter.

EN55022, AS/NZS CISPR 22, CISPR22 compliance

These products comply with the requirements of EN55022,AS/NZS CISPR 22, CISPR22 for Class B Information Technology Equipment (ITE).