

HAN Access Point AP451

Installation Guide

Rev. A

Summary of Installation Steps

- WLAN Planning. Usually, a comprehensive site survey is required before installation, such as installation location, brackets, cables, power source, etc.
- Unpack the AP box and check all contents
- Install the AP bracket on ceiling or wall
- Installing the AP
- Connecting required cables
- Power connection
- Verifying post-installation connectivity
- AP provisioning

Access points are radio transmission devices and are subject to governmental regulation. Network administrators who are responsible for the configuration and operation of access points must comply with local broadcast regulations. Specifically, an access point must use channel assignments appropriate to the location where the access point will be deployed.

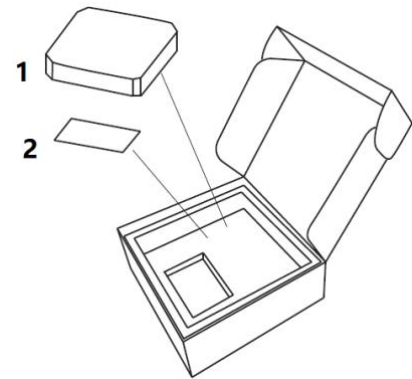
Package Contents

Item	Name	Qty	Unit
1	Access Point	1	Pcs
2	Quick Start Guide	1	Pcs
	Installation Guide	1	Pcs
	Regulatory Compliance and Safety Information	1	Pcs
	User Guide Info Card	1	Pcs

- ◆ **Optional Accessories (To be ordered separately)**
Warning: OAW-AP-MNT-B and OAW-AP-MNT-C are **NOT** compatible with AP451. OAW-AP-MNT-W can **NOT** be used for ceiling installation.

Item	Name	Description
1	AP-MNT-IN-BE	Mounting kit, (Type BE1 9/16” and BE2 15/16”) for T shaped spare ceiling rail mounting.
2	AP-MNT-IN-CE	Mounting kit, Type CE1 (Open Silhouette) and CE2 (Flanged Interlude), for other shaped ceiling rail mounting.
3	OAW-AP-MNT-W	Indoor mounting kit, Type W wall mounting with screws.

Figure1: Product Packing

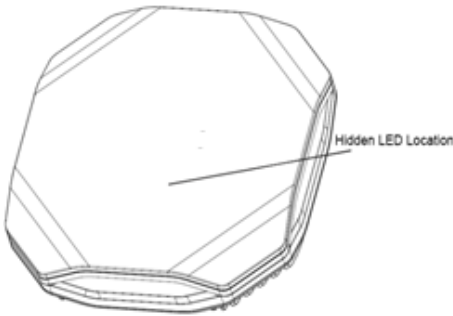


Inform your HAN sales representative of incorrect, missing, or damaged parts. If possible, retain the carton, including the original packing materials. Use these materials to repack and return the unit to the supplier if needed. Additional mounting kits for use with the OmniAccess Stellar access points are sold separately. Contact your sales representative for details.

Hardware Overview

The following sections outline the hardware components of the OAW-AP451 access point.

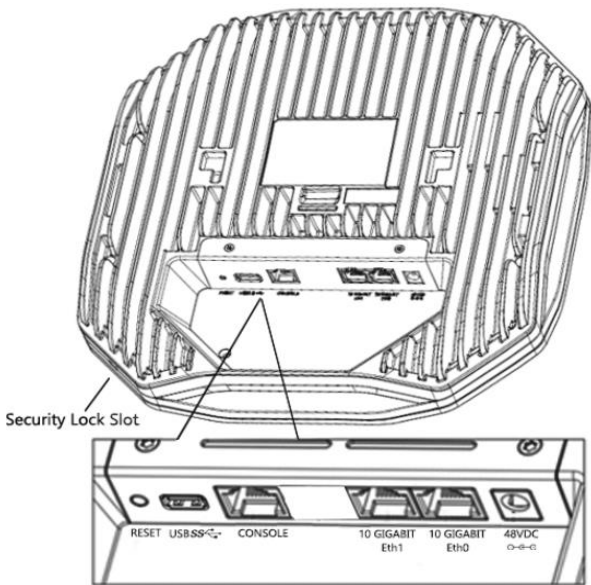
Figure 2: AP451 Front View



LED

The AP451 access point is equipped with hidden LED display that indicates different status with different color. For the details of the LED status, please refer to the Quick Start Guide.

Figure 3: AP451 Back View



◆ AP451 External Interfaces

Table 1

Interface	Specifications
10 Gigabit Eth0	10GBASE-T/5GBASE-T/2.5GBASE-T/1000BASE-T/100BASE-TX (RJ-45) port, Power over Ethernet (PoE) 802.3bt/at compliant. In case of only one WAN link, Eth0 would be more preferred.
10 Gigabit Eht1	10GBASE-T/5GBASE-T/2.5GBASE-T/1000BASE-T/100BASE-TX (RJ-45) port, Power over Ethernet (PoE) 802.3bt/at compliant.
Console	RJ-45 connector, RS-232 Console for Service & Support only.
USB	USB 3.0 host interface (Type A, output current 0.5A)
DC Power Socket	DC 48V power jack, support powering AP through a designated AC-DC power adapter.
Reset	Factory reset. Press reset button for 5s, AP LEDs will quickly flash for 3s, then AP will restart and restore factory configurations.
Security Lock Slot	The AP is equipped with a security lock slot for additional security.

Table 2
Ethernet Port Pinout

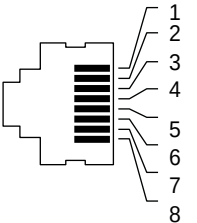
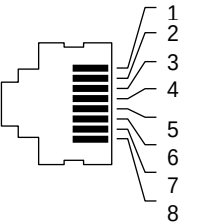
Connector	Pin	Signal Name	PoE
	1	RJ45_DA+	PoE-
	2	RJ45_DA-	PoE-
	3	RJ45_DB+	PoE+
	4	RJ45_DC+	PoE+
	5	RJ45_DC-	PoE+
	6	RJ45_DB-	PoE+
	7	RJ45_DD+	PoE-
	8	RJ45_DD-	PoE-

Table 3
Console Port Pinout

Connector	Pin	Signal Name	Function
	3	TXD	Transmit
	4	GND	Ground
	5	GND	Ground
	6	RXD	Receive
	Pins not listed must not be connected.		

Power

The AP451 access point supports direct DC power adapter (48V DC nominal, sold separately) and Power over Ethernet (PoE). The DC power connector port is located on the back of the device, as shown in Figure 3.

The PoE allows the Ethernet port to draw power from an IEEE 802.3bt compliant source with full functionality.

Maximum (worst case) power consumption:

- 45W (input IEEE 802.3bt POE), unrestricted functionality
- 42W (input dual IEEE 802.3at POE), the USB port is disabled
- 24W (input IEEE 802.3at POE), the USB port is disabled, Eth1 port is disabled, tri radio downgrade to 2*2

Before You Begin

Refer to the sections below before beginning the installation process.

Pre-installation Checklist

Before installing your AP451 Stellar access point, be sure that you have the following items:

- 8-conductor, CAT6A or better UTP cable of required length.
 - CAT6A support 10GE up to 100meters
 - CAT6 support 10GE up to 55meters, 5GE up to 100meters.
 - CAT5E support 5GE up to 55meters in a high Alien noise environment, 5GE up to 100meters in a low Alien noise environment, 2.5GE up to 100meters.
- One of the following power sources:
 - IEEE 802.3bt compliant Power over Ethernet (PoE) source (PoE switch or PoE injector), with full functions.
 - IEEE 802.3at compliant Power over Ethernet (PoE) source (PoE switch or PoE injector), with limited functions.
 - AC-DC adapter (sold separately), output voltage DC 48V,

- output current $\geq 1.04\text{A}$
- A terminal or a notebook

Identifying Specific Installation Locations

You can mount the AP on a ceiling rail or on a wall. You should first determine the location of the installation. The installation position is located at the center of the required coverage area and should be free from obstructions or obvious sources of interference.

- Minimize the number of obstructions (such as walls) between the AP and user terminals.
- Electronic equipment or devices (such as microwave ovens) which may produce radio frequency noise should be away from the installation position of the AP.

It is strictly prohibited to install around stagnant water, water seepage, leakage or condensation. Avoid cable condensation or water seepage along the cables connecting to the AP.

AP Installation

Refer to mounting kits installation Guide.

Verifying Post-Installation Connectivity

The LED on the AP can be used to verify that the AP is receiving power and initializing successfully.

Product Specifications

AP451 Dimensions/Weight

Unboxed AP451:

- Net Weight: 5.23lbs / 2.37kg
- Dimensions (HxWxD): 10.23 inches x 10.23 inches x 2.36 inches (26 cm x 26cm x 6cm)

Environmental

- Operating:
 - Temperature: 0°C to +45°C (+32°F to +113°F)
 - Humidity: 10% to 90% non-condensing
- Storage and transportation:
 - Temperature: -40°C to +70°C (-40°F to +158°F)

For additional specifications on this product, please refer to the Datasheet.

HAN Access Point
AP451 Regulatory Compliance and
Safety Information

090825-10 Rev. A

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■ Introduction

This document contains domestic and international regulatory compliance information for the access point AP451. To ensure that this device complies with the regulatory standards for your region, please refer to the content below.

FCC Part 15:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generate, 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 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.

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, and (2) this device must accept any interference received, including interference that may cause undesired operation.
FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

- FCC regulations restrict the operation of this device to indoor use only.
- The operation of this device is prohibited on oil platforms, cars, trains, boats, and aircraft, except that operation of this device is permitted in large aircraft while flying above 10,000 feet.
- Operation of transmitters in the 5.925-7.125 GHz band is prohibited for control of or communications with unmanned aircraft systems.

RF exposure warning
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.
This product may not be collocated or operated in conjunction with any other antenna or transmitter
This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 30 cm from all persons and must not be collocated or operating in conjunction with any other antenna or transmitter.

For EU

HAN NETWORKS CO., hereby declares that these models are compliant with the essential requirements and other provisions of Directive 2014/53/EU. For the complete CE DoC, please access the website below to get more information:
<https://myportal.al-enterprise.com/>

Waste Electrical and Electronic Equipment (WEEE) Statement



HAN products are subject to separate collection and treatment in the EU Member States, Norway, and Switzerland when they are at end of life, and therefore are marked with the symbol shown. The treatment applied to these products in these countries shall be compliant with the applicable national laws which are under the implementing of Directive 2012/19/EU on Waste of Electrical and Electronic Equipment (WEEE).

European Union RoHS

HAN products are compliant with the EU Restriction of Hazardous Substances Directive 2011/65/EU (RoHS). EU RoHS restricts the use of specific hazardous materials in the manufacture of electrical and electronic equipment. The restricted materials under the Directive are Lead (including Solder used in printed circuit assemblies), Cadmium, Mercury, equivalent Chromium, and Bromine.

■ Global RF health information:

RF Radiation Exposure Statement: This equipment complies with FCC and CE RF radiation exposure limits. This equipment should be installed and operated with a minimum distance of 20 cm between the equipment and a human's body for 2.4 GHz, 5 GHz and 6GHz operations. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The device is restricted to indoor use only when operating in the 5150 to 5350 MHz and 5945 to 6425 MHz frequency range.



[REMAINING SECTIONS INTENTIONALLY LEFT BLANK]