Alcatel-Lucent Enterprise OmniAccess Stellar AP1362 Installation Guide

033490-00 Rev. A

1. Introduction

The rugged OAW-AP1362 Wi-Fi 6 AP are designed to accommodate diverse growing capacity needs of next generation Mobility & IoT enabled networks. The access points are IP67 rated for harsh outdoor environments, such as exposure to high and low temperatures, persistent moisture and precipitation, and industrial strength surge protection. The AP1362 models support maximum aggregate data rate – 3Gbps (2.4Gbps in 5 GHz and 573Mbps in 2.4 GHz), and to support this higher capacity the access point is powered by 2.5Gbps Ethernet uplink. The AP1362 models can be connected to the network via SFP for long distance backhaul, provides an additional downlink Ethernet interface for wired IoT device endpoint connection, catering to varied deployment options in today's demanding outdoor environments.

1.1. Package Contents

Table 1

Item	Name	Qty	Unit
A	Outdoor Access Point	1	Pcs
B	Cable Gland	2	pcs
C	Quick Start Guide	1	Pcs
	Installation Guide	1	Pcs
	Regulatory Compliance and Safety Information	1	Pcs
	User Guide Info Card	1	Pcs

Figure 1: Product Packing
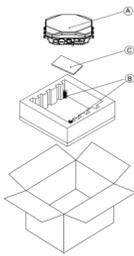
NOTES :

● The weatherproof caps for Ethernet and SFP and USB are connected to the AP, not loose in the package.

● Do not open or remove the Protective vents.

● Inform your supplier if there are any incorrect, missing, or damaged parts. If possible, retain the carton, including the original packing material. Use these materials to repack and return the unit to the supplier if needed.

1.2. Hardware Overview

Figure 2: OAW-AP1362 Front View
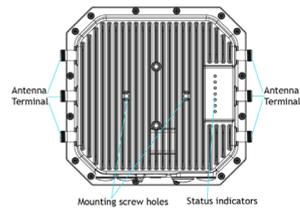

Figure 3: OAW-AP1362 Rear View
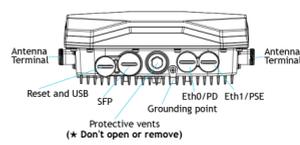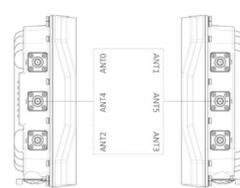

Figure 4: OAW-AP1362 Bottom View

Figure 5: OAW-AP1362 Side View

1.3. Pre-Installation Checklist

Before installing your OAW-AP1362, be sure that you have the materials and tools listed below:

● AP-MNT-OUT mounting kit(To be ordered separately. It contains some parts. Please refer to the mounting kit packing list for details).

● IEEE 802.3bt/at compliant PoE source. If needs to support PSE function on Eth1, it requires IE EE 802.3bt POE source.

● CAT5e or better UTP cable of required length and RJ45 connector.

● Optional: SFP module and fiber-optic cable,with additional cable gland(To be ordered separately) are needed in case of SFP uplink.

● Grounding wire #8AWG of required length.

● External antennas (To be ordered separately)

● Tools:

  ■ Ratchet wrench
  ■ Hexagon sockets
  ■ Screw driver
  ■ Rotary hammer
  ■ Percussion bit Φ8
  ■ Ratchet Crimping Plier for non-insulated terminal
  ■ Crimping Tool for RJ45 Modular Plug
  ■ Ethernet cable tester.
  ■ Heat shrinkable tube
  ■ Heat gun
  ■ Fiber melt machine(Optional)

1.4. Deployment Process Overview

The deployment of an Access Point typically consists of the following stages:

● WLAN Planning—The administrator determines how many APs will be needed for their wireless network strategy and where they will be deployed.

● AP Installation—Each AP can be physically installed at proper location. Each location should be as close as possible to the center of the intended coverage area and should be free from obstructions or obvious sources of interference.

● AP Configuration—The administrator defines the operational behavior for each AP, such as RF characteristics and security features.

NOTES:

● Installing the Outdoor Access Point requires professional training. The AP must be professionally installed by a qualified engineer familiar with WLAN system.

● For AP configuration information, please refer to the User Guide.

2. Installing the AP

2.1. Using the AP-MNT-OUT Mounting Kits

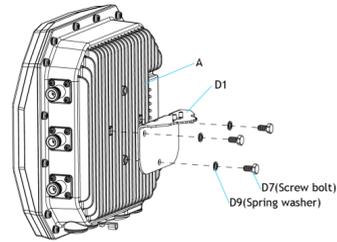#### 2.1.1. Assembling *Access Point(A)* with *Mounting bracket(D1)*, to get *Subassembly (E1)*
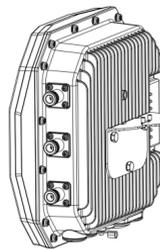
2.1.1.1. Materials Preparation

Table 2

Item	Description	Graphics	Qty
A	Access Point OAW-AP1362		1
D1	Mounting bracket (D1)		1
D7	Screw bolt M6 x 12		3
D9	Spring washer Φ6		3

2.1.1.2. Assembly Processes

Step-1. Connecting the *AP(A)* with *Mounting bracket(D1)*

Step-1

Step-2. Get *Subassembly (E1)*

Step-2

Note :

● Must use a proper Ratchet wrench to tighten the *Screw bolt(D7)*

2.1.2. Assembling *Mounting bracket(D2)* with *Bracket(D3)*, to get *Subassembly(E2)*
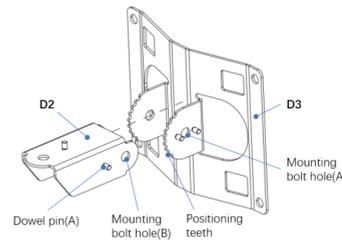
2.1.2.1. Materials Preparation

Table 3

| Item	Description	Graphics	Qty
D2	Mounting bracket (D2)		1
D3	Mounting bracket (D3)		1
D4	Spacing tube		1
D5	Screw bolt M8 x 65		1
D8	Spring washer Φ8		1
D10	Screw nut M8		1
D11	Locknut M8		1

2.1.2.2. Assembly Processes

Step-3. Insert the *Mounting bracket (D2)* into *bracket (D3)*, and align Mounting bolt hole(A) with Mounting bolt hole(B).
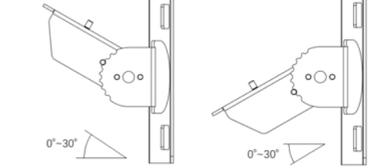

Step-3

Step-4. To get a required installation angle of pitch, adjusting the *Dowel pin(A)* on *Bracket(D2)* to match up with the *Positioning teeth* of *Mounting bracket(D3)*
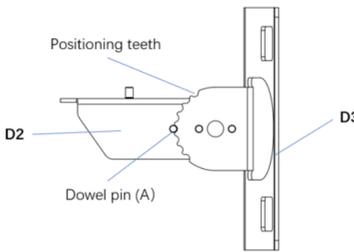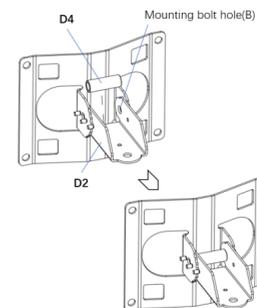

Step-4

Step-5. Insert the *Spacing tube (D4)* into *bracket (D2)*, align the hole of the *Tube (D4)* with the Mounting bolt hole (B) of *Bracket (D2)*.


Step-5

Step-6. From the side of *Bracket (D3)*, where *Dowel pin (B)* stands, put the *Screw bolt (D5)* through the *Mounting bolt hole(A)* and stick out at the other side. Make sure the Screw bolt goes through *Mounting bracket(D3)*, *Bracket(D2)* and *Spacing tube(D4)* in sequence. Then put a *Spring washer (D8)* and a *Screw nut (D10)* on it in sequence. Finally, tighten the *Screw nut (D10)* with ratchet wrench.
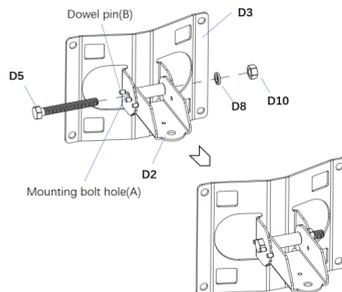
Step-6

Step-7. To prevent the screw nut from loosening and for better reliability, put a *Locknut(D11)* on the end of the *Screw bolt(D5)*. Then tighten it up with ratchet wrench.
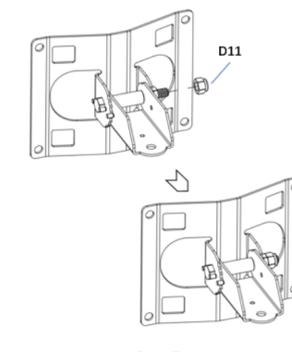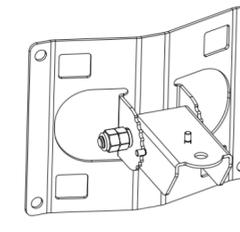

Step-7

Note :

● Must use a proper Ratchet wrench to tighten the *Screw nut(D10)* and the *Locknut(D11)*

Step-8. Get *Subassembly (E2)*

Step-8

#### 2.1.3. Assembling *Subassembly(E1)* with *Subassembly(E2)*, to get *Final-Assembly (F)*

2.1.3.1. Materials Preparation

Table 4

| Item	Description	Graphics	Qty
E1	Subassembly (E1)		1
E2	Subassembly (E2)		1
D6	Screw bolt M8 x 25		1
D8	Spring washer Φ8		1
D10	Screw nut M8		1
D11	Locknut M8		1

2.1.3.2. Assembly Processes

Step-9. Overlap *Subassembly (E1)* to *Subassembly (E2)*, align the Mounting bolt hole(C) with Mounting bolt hole(D).
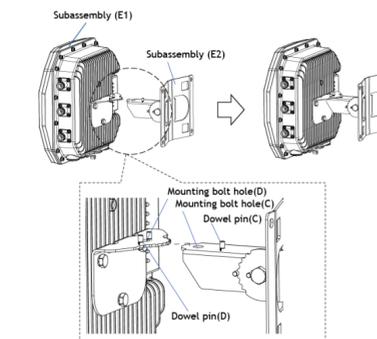

Step-9

Step-10. To get a required horizontal angle, adjusting the *Dowel pin(C)* on *Bracket(D2)* to match up with *the Positioning teeth* of *Bracket (D1)*.
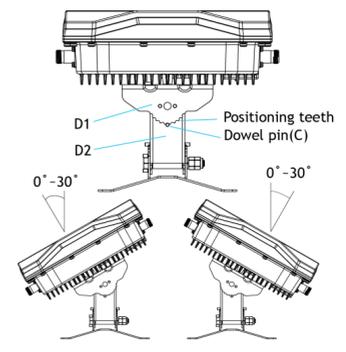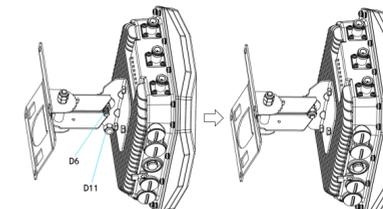

Step-10

Step-11. From the side of *Bracket (D1)*, where *Dowel pin (D)* stands, put the *Screw bolt (D6)* through the *Mounting bolt hole(D)* and stick out at the other side. Make sure the Screw bolt goes through *Mounting bracket(D1)* and *bracket(D2)*. Then put a *Spring washer (D8)* and a *Screw nut (D10)* on it in sequence. Finally, tighten the *Screw nut (D10)* with ratchet wrench.
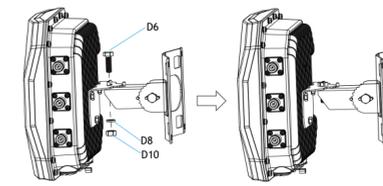
Step-11

Step-12. To prevent the screw nut from loosening and for better reliability, put a *Locknut (D11)* on the end of the *Screw bolt(D6)*. Then tighten it up with ratchet wrench
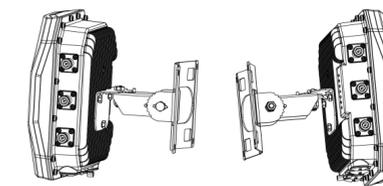

Step-12

Note :

● Must use a proper Ratchet wrench to tighten the *Screw nut(D10)* and the *Locknut(D11)*

Step-13. *Final assembly (F)*

Step-13

2.2. Mounting the AP to a Pole or a Wall

The OmniAccess Stellar AP1362 is for outdoor deployment, it can be mounted to a pole or a wall by using the accessories in the mounting kit package.
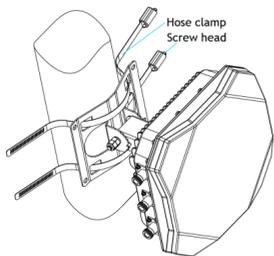
2.2.1. Pole Mounting

2.2.1.1. Materials Preparation

Table 5

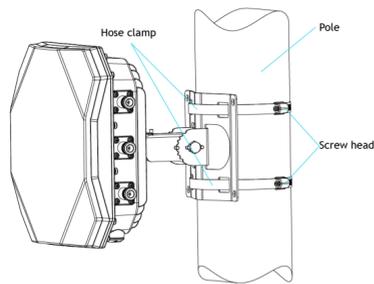| Item	Description	Graphics	Qty
F	Final assembly (F)		1
D12	Hose clamp		2

2.2.1.2. Mounting Processes

Step-14. Threading the *Hose clamps(D12)* through the *square mounting holes* in *Bracket (D3)* separately. Considering your handedness, the direction of the *screw head* on the *Hose clamp* should be determined before you thread.
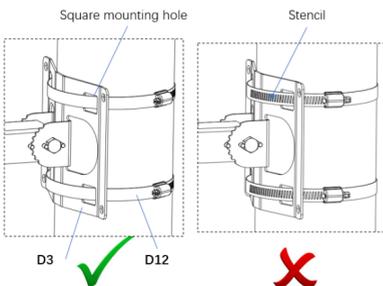

Step-14

Step-15. Mounting to a pole

Step-15

Caution :

- Use caution to prevent hand injury!
- For safety, the *stencil area* in steel belt of the *Hose clamps(D12)* should avoid overlapping the edge of square mounting holes on *Bracket (D3)*.
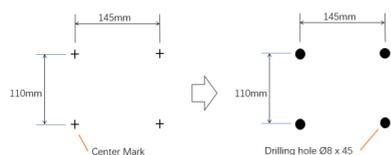

2.2.2. Wall Mounting

2.2.2.1. Materials Preparation

Table 6

| Item	Description	Graphics	Qty
F	Final assembly (F)		1
D13	Expansion bolt M6 x 60		4

2.2.2.2. Mounting Processes

Step-16. Draw four center marks on the wall where is planned to mount the outdoor AP. And then drill four Φ8×45 mm holes on the wall for expansion bolts.
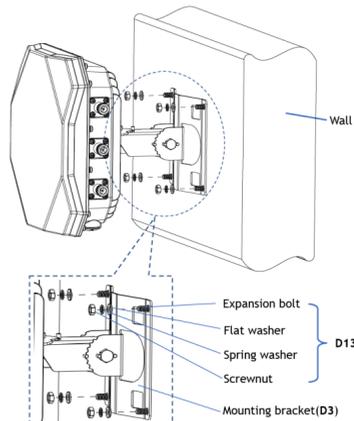

Step-16

Step-17. Insert 4 *Expansion bolts(D13)* into the holes on the wall separately. Make sure that the end of the *expansion tube* should be coplanar to wall surface.
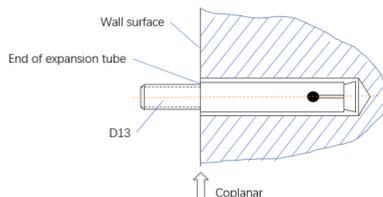
Step-17

Step-18. Put the 4 *expansion bolts* through the 4 mounting holes in *Bracket(D3)*. Then put a *flat washer*, a *spring washer* and a *screw nut* on each expansion bolt in sequence. Finally, tighten the 4 screw nuts with ratchet wrench.
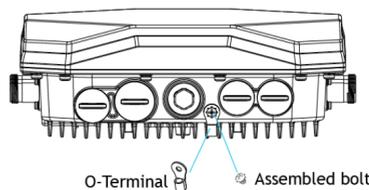

Step-18

2.3. Grounding the AP

Never forget to protect the AP by installing grounding wire. The grounding must be completed before powering up the AP.
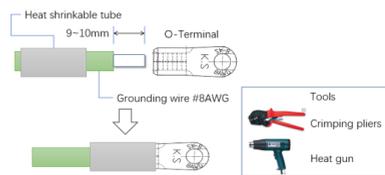
2.3.1. Grounding Preparation

Step-19. Screw off the *O-Terminal* from the AP and keep it with the *Assembled bolt*.

Step-19

2.3.2. Crimping the Grounding wire

Step-20. Peel the cover of one end of the grounding wire and place the bare grounding wire into the *O-Terminal*, and press firmly with the crimping pliers. A heat shrinkable tube is suggested to put on.
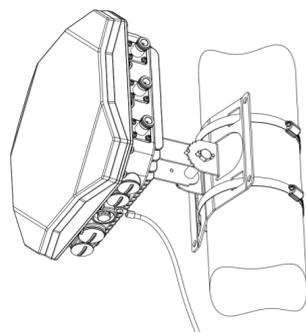

Step-20

2.3.3. Connecting the Grounding Wire

Step-21. Fasten the *O-Terminal* to the grounding hole on the AP with the *Assembled bolt*, take pole mounting circumstances for example as shown in figure (Step-21).
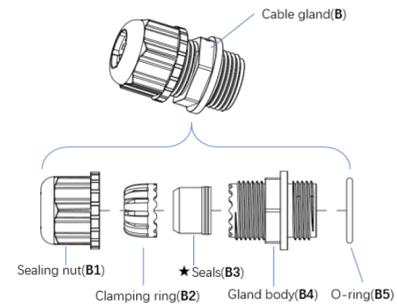

Step-21

2.4. Connecting the Ethernet Cable or the fiber-optic cable

2.4.1. Connecting the Ethernet cable

To connect the Ethernet cable to the AP, perform the following steps using the *Cable glands(B)* that ships with your AP
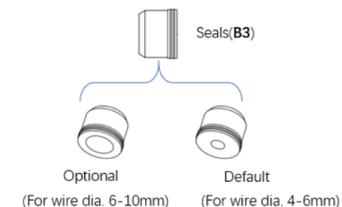
2.4.1.1. The Cable Gland(B)

The *Cable gland(B)* is composed of 5 elements, which are *Sealing nut(B1)*, *Clamping ring(B2)*, *Seals(B3)*, *Gland body(B4)* and *O-ring(B5)*


Cable gland(B) composition

- The *Seals(B3)* inside the *Cable gland(B)* by factory default is applicable for cables with 4-6mm diameter. In the cable gland kit, another seals is provided for use with cable with 6-10mm diameter.

Optional (For wire dia. 6-10mm)   Default (For wire dia. 4-6mm)

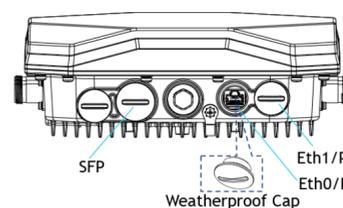#### 2.4.1.2. Crimping the Ethernet cable

Step-22. The following figure shows the process of crimping Ethernet cable.

Step-22
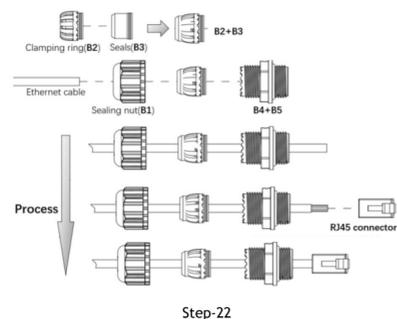
Caution :

- Do Not peel the cover of the Ethernet cable or attach the RJ45 connector to the cable before sliding the *Cable gland(B)* over the cable.
- Failure to use the included Ethernet cable glands can lead to product issues.

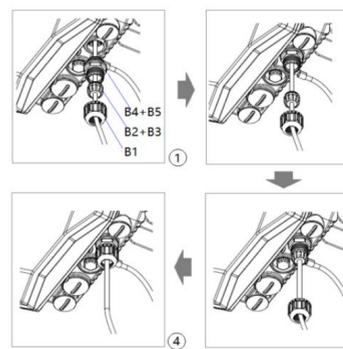#### 2.4.1.3. Remove the Weatherproof Cap

Note :

- Keep the weatherproof caps on the AP tightly while you don't plan to use the related ports.

2.4.1.4. Connecting the cable

Step-23. Connect the Ethernet cable, which was crimped in Step-22, to either Ethernet Port-0 or Ethernet Port-1. And then, screw the *Gland body(B4+B5)* onto the Ethernet port with proper wrench.

Step-24. Connect the *Seals* with *Clamping ring(B2+B3)* to the *Gland body(B4)*, and then screw the *Sealing nut(B1)* onto the *Gland body(B4)* and tighten it firmly.

Step-23 & Step-24

Caution :

- Do not screw the *Sealing nut(B1)* onto the *Gland body(B4)* before connecting the RJ45 connector to the Ethernet port.
- Must use a proper wrench to tighten the Gland body.

2.4.2. Connecting the Fiber-optic Cable

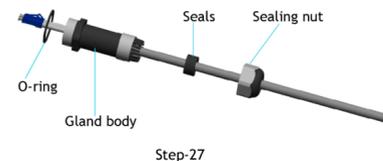To connect the fiber-optic cable to the AP, perform the following steps

Step-25. Remove the *Weatherproof Cap* from the SFP port.

Note :

- Keep the weatherproof cap on the AP tightly while you don't plan to use the port.

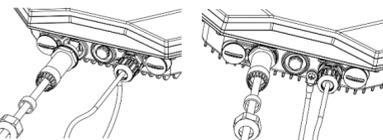**Step-26.** Insert the *SFP module* into the SFP port, and ensure it in place.

Step-27. Slide the *Sealing nut, Seals ,Gland body* and *O-ring* over the cable.

Step-27

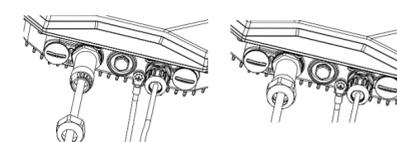**Step-28.** Insert the *Optic fiber connector* of the cable into the *SFP module*.

Step-29. Assembling the *O-ring* on the *Gland body*,then screw the *Gland body* onto the SFP port with proper wrench.

Step-30. Move the *Seals* towards the *Gland body* until it locates in the clip of the *Gland body*.

Step-31. Screw the *Sealing nut* onto the *Gland body*.

Step-30 & Step-31

2.5. Install the external antennas

Step-32. The OAW-AP1362 need to install the external antennas(To be ordered separately)for use. It is equipped with six external antenna connectors. The connectors are labeled ANT0, ANT1,ANT2, ANT3, ANT4, and ANT5. An example in the following figure shows the way to install the external antennas.
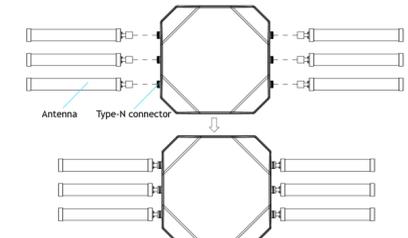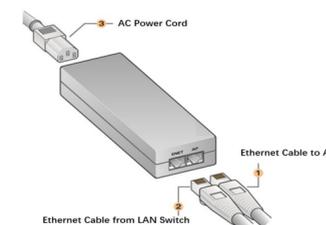

Step-32

Note :

- The antenna connectors of OAW-AP1362 are covered by an aesthetic cover. The aesthetic cover can be removed when necessary.

2.6. Powering up the AP by PoE Source

Step-33. The OAW-AP1362 supports IEEE 802.3bt/at Compliant PoE source, accepting 48V DC(Nominal). A PoE injector as example is shown in the following figure.

Step-33

3. Product Specifications

3.1. Dimensions/weight

- Single AP excluding packing box and accessories:
 243mm (W) ×243mm (D) ×85mm(H) / 2684g.

3.2. Interfaces

3.2.1. Ports List

Table 7

Item Name	Description
Eth0/PD	1x 10/100/1000/2500 Mbps IEEE 802.3 compliant auto-sensing (RJ-45) uplink port,Power over Ethernet (PoE) 802.3at/bt compliant
Eth1/PSE	1x 10/100/1000 Mbps IEEE 802.3 compliant auto-sensing (RJ-45) downlink port, PSE can support maximum 802.3at PoE output,depends on the power drawing from the Eth0/PD.
SFP Port	1x SFP
★USB	1x USB 2.0 Type C (5V, 1A)
★Reset Button	Factory reset, for more information, refer to datasheet.
ANT0-ANT5	6x Type-N connector, ANT0-3 is for 5GHz and ANT4-5 for 2.4GHz.

★ Screw off the smaller weatherproof cap on the left side in Bottom View of AP, you can see the Micro-USB console port and the reset button as shown in the following figure.

Step-30 & Step-31
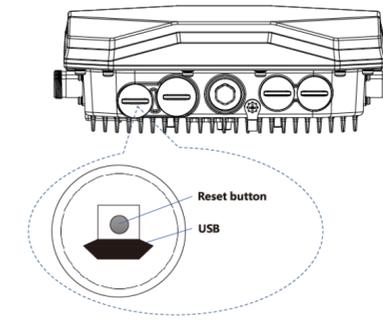
3.2.2. Ethernet Port Pin-outs

The Ethernet Ports of OAW-AP1362 have RJ-45 female connectors with pin-outs shown in table 8.

Table 8

Ethernet Port / RJ45 Female	Pin	Signal Name	Function
	1	BI_DA+	Bi-directional pair +A, PoE Negative
	2	BI_DA-	Bi-directional pair -A, PoE Negative
	3	BI_DB+	Bi-directional pair +B, PoE Positive
	4	BI_DC+	Bi-directional pair +C, PoE Positive
	5	BI_DC-	Bi-directional pair -C, PoE Positive
	6	BI_DB-	Bi-directional pair -B, PoE Positive
	7	BI_DD+	Bi-directional pair +D, PoE Negative
	8	BI_DD-	Bi-directional pair -D, PoE Negative

3.3. Power

Maximum (worst case) power consumption:

- 64W (802.3bt Type4 PoE in) with Eth1 802.3at PSE enabled.
- 46W (802.3bt Type3 PoE in) with Eth1 802.3af PSE enabled.
- 24W (802.3at PoE in) with disabled Eth1 PSE, USB.

3.4. Environmental

- Protective level of enclosure: IP67
- Operating
  Temperature: -40˚C to 65˚C(-40˚F to +149˚F)
  Humidity: 5% to 95% non-condensing
- Storage and transportation
  Temperature: -40˚C to 85˚C(-40˚F to +185˚F)

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

Contacting Alcatel-Lucent Enterprise

Website Support	
Main Site	https://www.al-enterprise.com/
Support Site	https:// businessportal2.alcatel-lucent.com
Support Email	ebg_global_supportcenter@al-enterprise.com
Telephone Support	
North America	1-800-995-2696
Latin America	1-877-919-9526
Europe	+800 00200100 (Toll Free) or +1(650)385-2193
Asia Pacific	+65 6240 8484
Other Region	1-818-878-4507