Manuals+ — User Manuals Simplified.

vantiva ✹ OWM7111IOT IoT Gateway

vantiva OWM7111IOT IoT Gateway User Guide

Contents

vantiva ✹

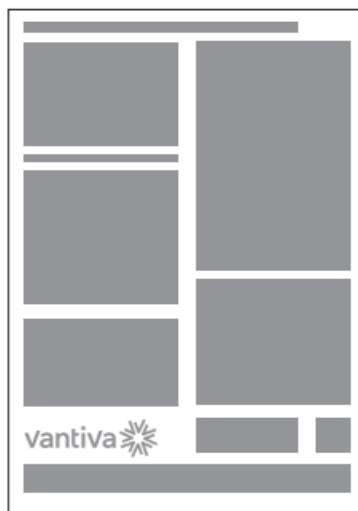**vantiva OWM7111IOT IoT Gateway**

Before you start

- Carefully read the Safety Instructions and Regulatory Notices document included in your package before continuing with the installation of your OWM7111.
- Do not make any connections until instructed to do so!
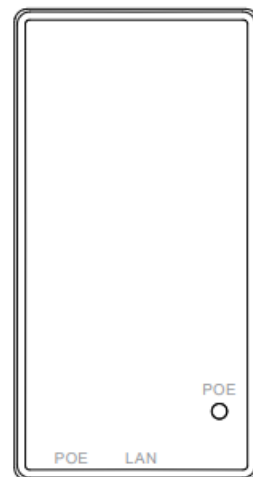
Check the content of your box

- Your package contains the following items:

Item	Description
A	One OWM7111.
B	User Documentation (this Quick Setup Guide and Safety Instructions & Regulatory Notices). Other additional documents may be included.
C	One power supply adapter.
D	One Wall Mount.

About the OWM7111
Wi-Fi
Wi-Fi general The OWM7111 is equipped with:

- One 6 GHz Wi-Fi 6E (IEEE802.11ax) interface that provides superior transfer rates and is less sensitive to interference. When the OWM7111 is used in a Wi-Fi EasyMesh configuration, this interface is primarily used for backhaul connections to the Gateway or to another OWM7111.
- One 5 GHz Wi-Fi 6E (IEEE802.11ax) interface which allows you to connect Wi-Fi devices.
- One 2.4 GHz Wi-Fi 6 (IEEE802.11b) interface which allows you to connect Wi-Fi devices.
- One Wi-Fi HaLow (IEEE802.11ah) interface which allows you to connect Wi-FI HaLow devices.

IoT

- Three IoT radio interfaces which allows you to connect zigbee, Bluetooth, and thread devices simultaneously.
- One LoRA gateway which allows you to connect LoRA sensors.
- One LoRA client that can accept LoRAWAN messages.

One Wi-Fi 6E

- Enabled with the latest Wi-Fi 6E technology, the OWM7111 offers ultimate wireless networking by improving latency, providing faster throughputs, better performance and optimal link stability in your local network.

EasyMesh

- The OWM7111 supports EasyMesh (as an EasyMesh Agent or controller) that allows you to experience the ultimate in Wi-Fi experience by creating a unified intelligent Wi-Fi environment throughout the space using multiple EasyMesh-enabled access points.

Bottom panel
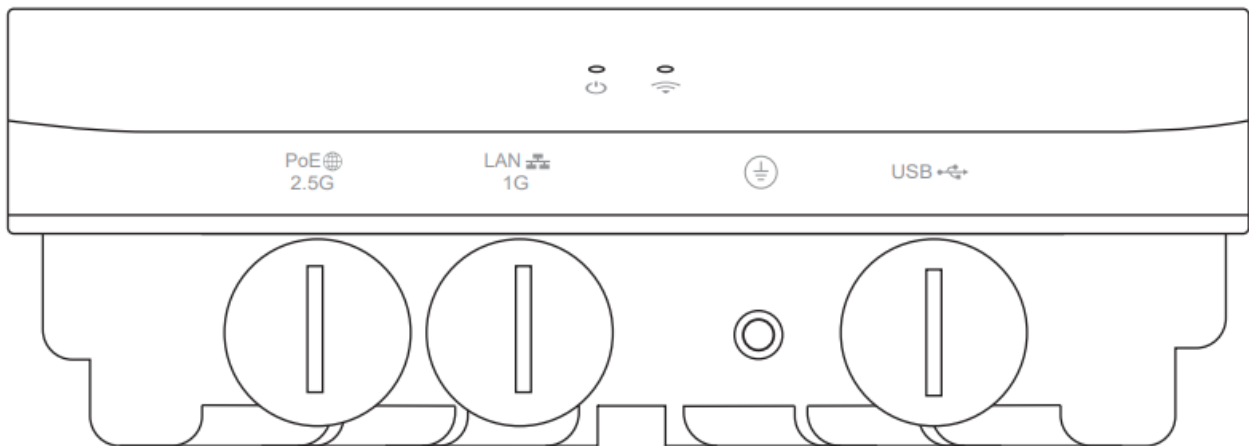
PoE and WAN port
The OWM7111 is powered by PoE only. The OWM7111 RJ45 PoE port is simultaneously the WAN data port. This PoE/WAN port must be connected to the PoE port of the supplied power brick. The LAN port of the supplied power brick should be connected to the network's gateway/router.

LAN port
The OWM7111's LAN port can be used to connect a wired LAN client.

Ground
The OWM7111's back panel is made of metal and should be grounded.

**USB port**
The OWM7111 is equipped with a usb port.
LEDs
The OWM7111 is equipped with two LEDs. One is a general status LED and the other is a WiFi status LED.

General Status	
Device Off (Not powered)	Off
Booting up/Reseting	Blinking Blue
Connection to paired GTW (Extender only – Installation done before)	
Factory reset (Press pinhole for 5 seconds)	Blinking Red
Boot failure (Not hitting U-boot)	Solid Red
OK no issues (Everything working as expected)	Off

Firmware update in progress	Blinking Green/ dimmed down
WAN Link Down (WAN cable unplugged/Ethernet link down)	Solid Red
DHCP Discover Failed	Solid Red
Wi-Fi	
OK no issues (Everything working as expected)	Solid Green then Off
Wi-Fi crash + Any radio down + Any Wireless Problem	Solid Red
Wi-Fi turned off by user	Solid Yellow

**Side panel**
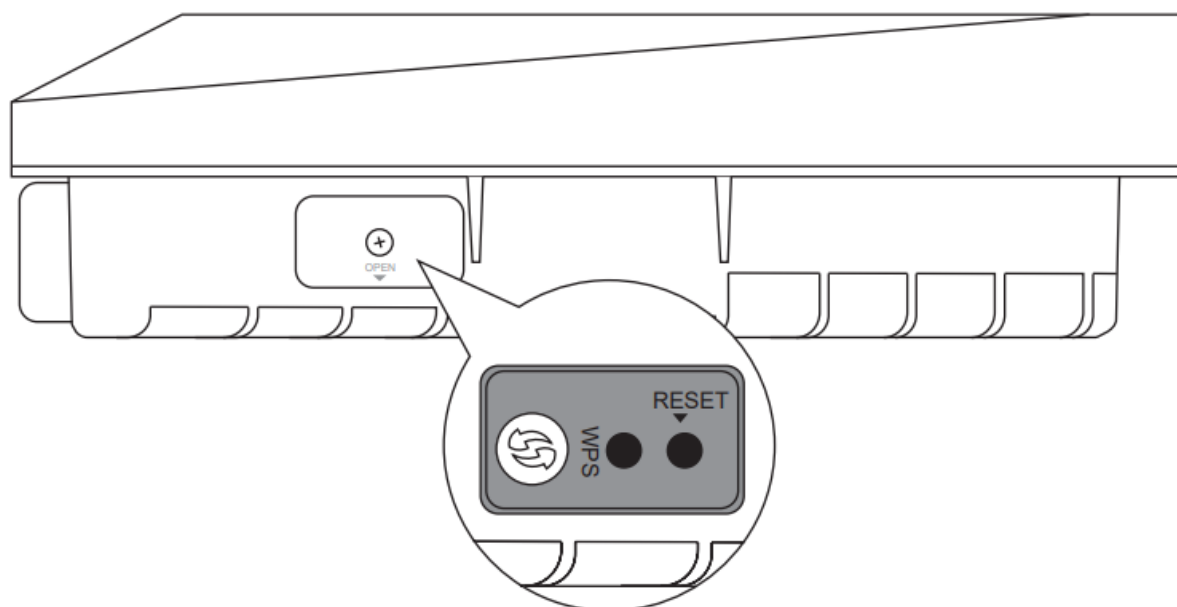
WPS button and Reset pin

The WPS button and reset pin hole is hidden under the side cover of your OWM7111. The WPS button is used to pair the OWM7111 with other Wi-Fi devices.

Set up

The OWM7111 can be used:

- As a wired Wi-Fi 6E network enabler.
- You will use this scenario in case your Internet gateway and/or network has no WiFi, or Wi-Fi capabilities without Wi-Fi 6.
- For this scenario, see "4.1. Wired Wi-Fi 6E network enabler".
- As a wireless Wi-Fi 6 network enabler.
- You will use this scenario in case your Internet gateway and/or network has Wi-Fi, but no Wi-Fi 6 and/or EasyMesh.
- For this scenario, see "4.2. Wireless Wi-Fi 6E network enabler".
- As an EasyMesh network extender.
- You will use this scenario in case you want to extend your existing EasyMesh WiFi network with additional coverage using the OWM7111. In such an envi-ronment your Internet gateway or another Wi-Fi device is already operating as the Wi-Fi EasyMesh controller.
- For this scenario, see "4.3. EasyMesh network extender".
- To join an existing EasyMesh network, you must first enable EasyMesh on your OWM7111 via its GUI or ayla networks cloud interface. For more infor-mation, see "5.7. Configure your OWM7111 to your needs".
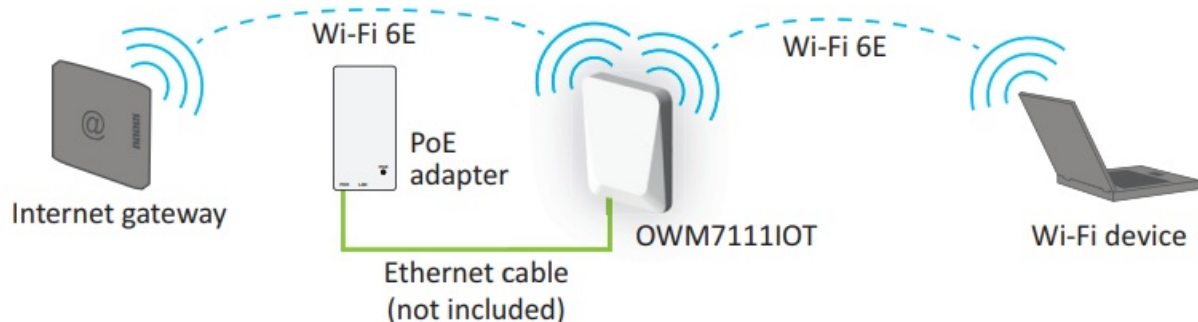
Wired Wi-Fi 6E network enabler
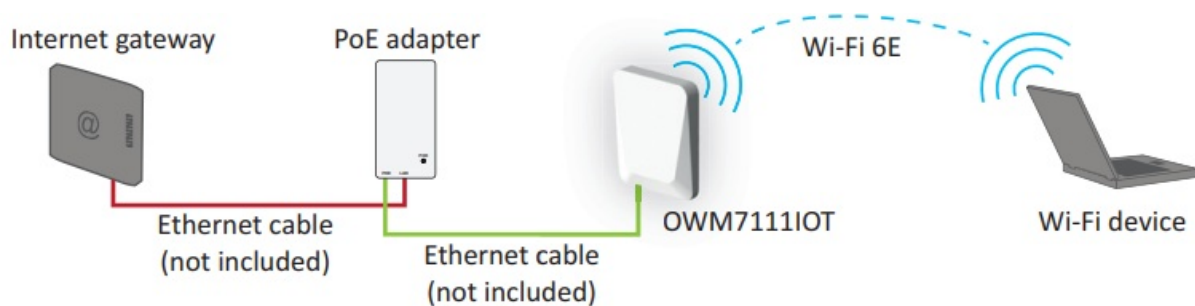
You will connect the OWM7111's WAN port to the PoE port on the PoE adapter:

- Connect the internet gateway to the LAN port on the PoE adapter.

Wireless Wi-Fi 6E network enabler
This scenario allows you to add (extra) Wi-Fi 6 coverage using the OWM7111.

Step 1: Set up the OWM7111

- Position your OWM7111 half-way between your Internet gateway (or extender) and your Wi-Fi devices.

- Plug the PoE adapter into an electrical socket.
- Use an ethernet cable to connect the adapter's PoE port to the OWM7111's WAN port. This provides power to the OWM7111.
- Wait until the Power LED is white and the WiFi LED is solid green
- Pair the OWM7111 with your Internet gateway (or extender) using WPS. For detailed instructions, see "5.2. Pairing the OWM7111 with your Internet gateway".

Step 2: Connect your Wi-Fi devices

- If your Wi-Fi device: Supports WPS, use WPS to pair it with the OWM7111. For more information, see "5.4. Pairing Wi-Fi devices to your OWM7111"
- Does not support WPS, configure it with the Wi-Fi network name (SSID) and wireless key retrieved from the OWM7111 QR code present on the label.

Step 3: Connect an Ethernet device (optional)

- You can use the OWM7111's Ethernet LAN port to connect Ethernet devices (for example, a Set-Top Box, a NAS drive or computer) to your network.

EasyMesh network extender

- This scenario allows you to extend Wi-Fi coverage in your space by retransmitting Wi-Fi messages from your existing Wi-Fi EasyMesh network
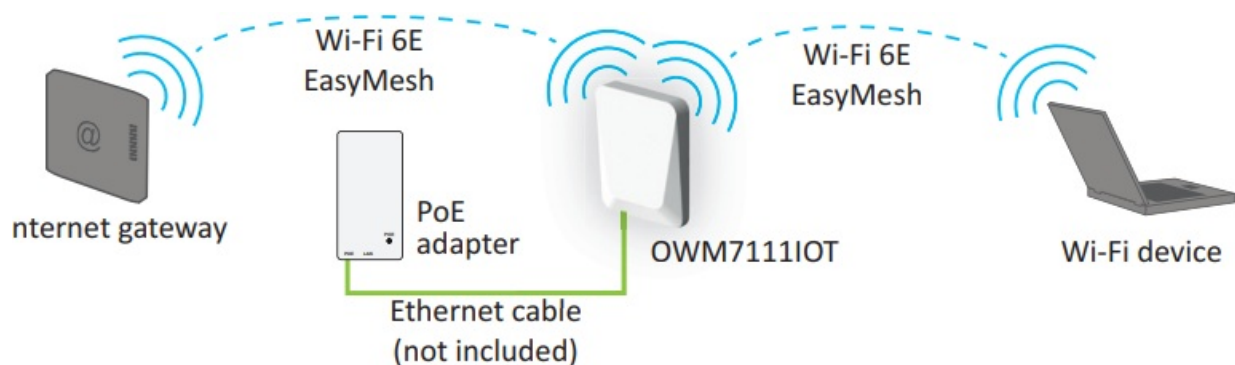
Requirements
Your Internet gateway or another EasyMesh-capable Wi-Fi device must be enabled and configured as the EasyMesh controller.

Step 1: Set up the repeater and onboard to the EasyMesh network

1. Position your OWM7111 half-way between your Internet gateway (or extender) and your Wi-Fi devices.
2. Plug the PoE adapter into an electrical socket. Use an ethernet cable to connect the adapter's PoE port to the OWM7111's
3. WAN port. This provides power to the OWM7111.
4. Wait until the Power LED is white and the WiFi LED is solid green (turns off after 3 minutes).
5. Enable EasyMesh on your OWM7111 if not done yet. For more information, see "5.7. Configure your

OWM7111 to your needs".

6. Onboard the OWM7111 to the EasyMesh network using WPS. For detailed instructions, see "5.3. Joining your OWM7111 with an existing EasyMesh network".

Step 2: Connect your Wi-Fi devices
Because the OWM7111 now uses the same Wi-Fi settings as the EasyMesh network, Wi-Fi devices that were already connected to the network will also be able to connect to the OWM7111, and vice versa.

Step 3: Connect your Ethernet devices (optional)
You can use the OWM7111's Ethernet LAN port to connect Ethernet devices (for example, a Set-Top Box, a NAS drive or computer) to your network.

IoT Functions

-   The OWM7111 has three IoT radios that support several protocols such as Zigbee, Bluetooth (BLE), and Thread.
-   The three IoT radios are used to connect sensors and actuators dictated by the applications you plan to use.
-   Download the application to your mobile device from the applicable app store (Apple, Google, etc.) or use your favorite Web Browser (Microsoft Edge,
-   Google Chrome, Apple Safari, etc.) to access the Web App for the application you will use. Each application will work with specific sensors to support the functions of the App.
-   At first the OWM7111 must be connected to the home or office Wi-Fi
-   network as outlined in the preceding sections either as a stand-alone Access Point or as part of an EasyMesh network.
-   After that, your IoT application will start to communicate with the OWM7111 and the integrated IoT radios to connect sensors and actuators.
-   Once the sensors and actuators are connected, they will appear in your App and the corresponding functions of the App will begin to work.

Tips and tricks
Making a wired connection between the OWM7111 and your Internet gateway

1. Connect one end of an Ethernet cable (not included) to the blue Ethernet WAN port on the bottom of your OWM7111.
2. Connect the other end of the Ethernet cable to the PoE port of the PoE adapter.
3. Connect a second Ethernet cable (not included) to the LAN port of the PoE adapter.
4. Connect the other end of the Ethernet cable to an Ethernet LAN port of your Internet gateway.

Pairing the OWM7111 with your Internet gateway

Requirements
Make sure your OWM7111 isn't onboarded already to an existing EasyMesh network, or paired with another Internet gateway.

Procedure

-   Briefly press the WPS button on the OWM7111. The Wi-Fi LED on the OWM7111 starts blinking green.

Step 1: Set up the Wi-Fi extender

- Connect one end of an Ethernet cable (not included) to the blue Ethernet WAN port on the bottom of your OWM7111.
- Connect the other end of the Ethernet cable to the PoE port of the PoE adapter.
- Connect a second Ethernet cable (not included) to the LAN port of the PoE adapter.
- Connect the other end of the Ethernet cable to an Ethernet LAN port of your Internet gateway.

Step 2: Connect your Wi-Fi devices

- If your Wi-Fi device: Supports WPS, use WPS to pair it with the OWM7111. For more information, see "5.4. Pairing Wi-Fi devices to your OWM7111".
- Does not support WPS, configure it with the Wi-Fi network name (SSID) and wireless key that you retrieve via the QR code printed on the product label of the OWM7111.

Step 3: Step 3: Connect an Ethernet device (optional)

- You can use the OWM7111's Ethernet LAN port to connect an Ethernet device (for example, a Set-Top Box, a NAS drive or computer) to your network.

Joining your OWM7111 with an existing EasyMesh network

Requirements
Make sure your OWM7111 isn't joined already to an existing EasyMesh network.

Procedure

1. Briefly press the WPS button on the OWM7111. The WiFi LED on the OWM7111 starts blinking green.
2. Within two minutes, briefly press the WPS button on your Internet gateway or any Wi-Fi extender in the EasyMesh network. Note: On some Internet gateways you may have to press and hold the WPS button for a few seconds or until its WPS LED starts blinking.
3. During EasyMesh onboarding the Status LED on the OWM7111 goes through (one or more of) the following states:
    - Flashing green & yellow (1 second each): EasyMesh onboarding started and ongoing.
    - Flashing green (3 seconds) & yellow (1 seconds): EasyMesh network was found but upstream onboarding ongoing or failing.
    - Flashing green (1 second) & yellow (3 seconds): No EasyMesh network was found.
    - Once the Wi-Fi connection is successfully established it will turn solid green, yellow or red.
    - Note: If the Status LED is blinking red, go to "5.5. What to do when the Status LED is blinking red?" for further instructions.

Pairing Wi-Fi devices to your OWM7111
Connecting your Wi-Fi devices using WPS

1. Briefly press the WPS button on the OWM7111. The WiFi LED on the OWM7111 starts blinking green

2. Within two minutes, start WPS on your Wi-Fi device. If your Wi-Fi device is:

    - Another Wi-Fi extender, briefly press its WPS button.

    - Another type of device, consult the documentation of your device.

3. After some time the WiFi LED on the OWM7111 turns back to its previous solid state (green, yellow or red).

    The Wi-Fi connection is now successfully established.

    - Note: If the WiFi LED is blinking red, go to "5.5. What to do when the Status

    - LED is blinking red?" for further instructions.
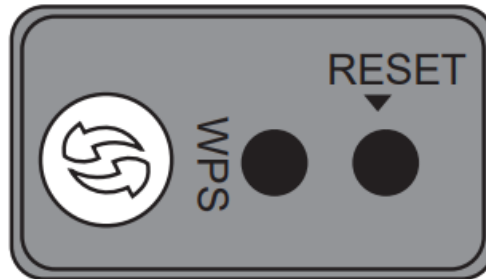
What to do when the Status LED is blinking red?
This indicates that the OWM7111 could not establish a Wi-Fi connection through WPS.

Do the following:

1. Wait until the red blinking LED goes out, then try using WPS again.

2. Turn your OWM7111 slightly and then try again.

3. Obstructions may deteriorate the signal strength. Try to minimize the number of walls between the two devices
   and then try again.

4. Move the devices closer to each other and then try again. If the WiFi LED of your OWM7111 is flashing green,
    your OWM7111 is updating its software. In this case, wait until the LED becomes slowly blinking yellow, or
    solid green, yellow or red. This can take several minutes! Do no power off your gateway or unplug any cables!

Optimizing the link quality
Tips
To achieve optimal link quality:

- Always try to reduce the number of obstacles (especially walls) between your Wi-Fi devices to a minimum.

- Do not place your Wi-Fi devices in the neighbourhood of devices that cause interfence (microwave ovens,
  cordless phones, baby monitors, etc.).

- Use Wi-Fi devices that support and use (multiple) 5 GHz Wi-Fi.

Status LED
If the OWM7111 has a Wi-Fi connection to an Internet gateway, extender or repeater (with or without EasyMesh),
the Status LED will provide information about the quality of the link between them.

If the Status LED is:

- Solid green: then the link quality is optimal. No further actions are needed.

- Solid yellow: then the link quality is fair, but not optimal. Change the position of the OWM7111 until the LED

turns green.

- Solid red: then the link quality is bad. Change the position of the OWM7111 until the LED turns green or at least orange.

Repositioning the OWM7111 for better link quality
First try to improve the link quality without unplugging the power supply:

- Reposition the OWM7111 to avoid obstacles, like walls, furniture and TV screens, between the OWM7111 and your access point.
- Wait 15 seconds to allow the OWM7111 to re-evaluate the link quality. If the link quality did not improve:
- Unplug the power supply and move the OWM7111 closer to your access point, or to a place with less obstacles between the OWM7111 and your access point.
- Plug in the power supply and wait two minutes to allow the OWM7111 to start up all services and evaluate the link quality.

Configure your OWM7111 to your needs
Accessing the OWM7111 web interface

The OWM7111 web interface allows you to configure your OWM7111 using your web browser. To access the OWM7111 web user interface:

1. Check the IP address of your OWM7111. If your OWM7111: Is connected to your network (either wired or via Wi-Fi), browse to the web interface of your gateway to check the IP address of the OWM7111. Not connected to your network, the default IP address of the OWM7111 is 192.168.1.2.
2. Browse to the OWM7111's IP address found (or **http://192.168.1.2)** on a computer or device that is currently connected to your OWM7111 (either wired or over Wi-Fi)
3. The OWM7111 web interface appears. By default, you are logged in as guest.
   This means that some items are hidden. To view all items, click Sign In and enter admin as user name and the ACCESS KEY printed on the label of your OWM7111 as password.
   Note: If this is the first time that you sign in, the OWM7111 may offer you to\ change your password.
4. The OWM7111 web interface appears with all settings available.

Configuring Easy Mesh
To use EasyMesh you must first enable it on your OWM7111. To enable EasyMesh:

1. Browse to the OWM7111 web user interface and login as the user admin (for more information, see "Accessing the OWM7111 web interface" on page 14.
2. To open the EasyMesh page, click the EasyMesh card header.
3. On the EasyMesh page, you can see whether EasyMesh is enabled on your OWM7111 or not. If the switch is set to:

   - then the EasyMesh agent is enabled. Clicking the switch will disable EasyMesh on your OWM7111.

   - then the EasyMesh agent is disabled. Clicking the switch will enable your broadband interface.

How to repair an unresponsive OWM7111

If at some point your OWM7111 becomes unresponsive you can:

- Force it to restart: After restarting the OWM7111 will return to normal operation with its last known working condition and configuration.
- Reset it to factory defaults: The OWM7111 restarts with the factory default configuration. None of the Wi-Fi and EasyMesh settings, nor other configuration changes you made to the OWM7111 are preserved. Proceed as follows:
- Make sure that your OWM7111 is turned on.
- Use a pen or an unfolded paperclip to push the recessed Reset button on your OWM7111:
  - shortly (less than 5 seconds) and then release it to force it to restart.
  - for at least 10 seconds and then release it to rest it to factory defaults.
- Your OWM7111 restarts

OWM7111IOT Mounting instructions

Notes:

- Any accessories, like screws, mounting holders should not be replaced by the end user.
- The installer should be well trained and well understanding the FCC related rules.
- The installer will not make any change which may break the FCC rules.

Wall/ceiling mounting in Postion A

Ceiling mount
Position A
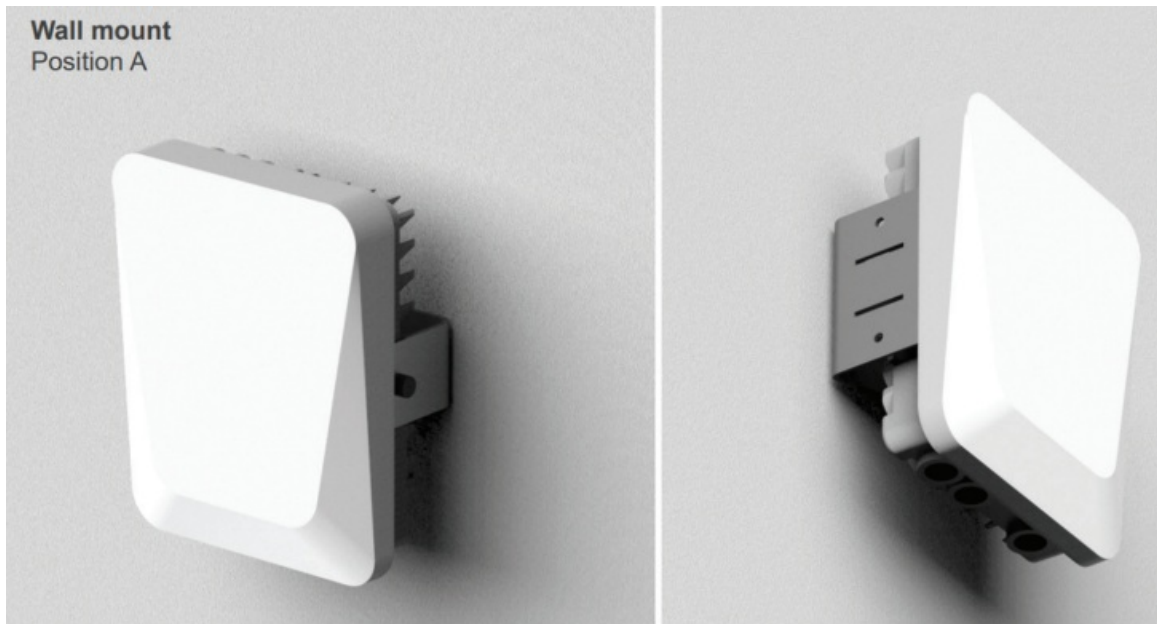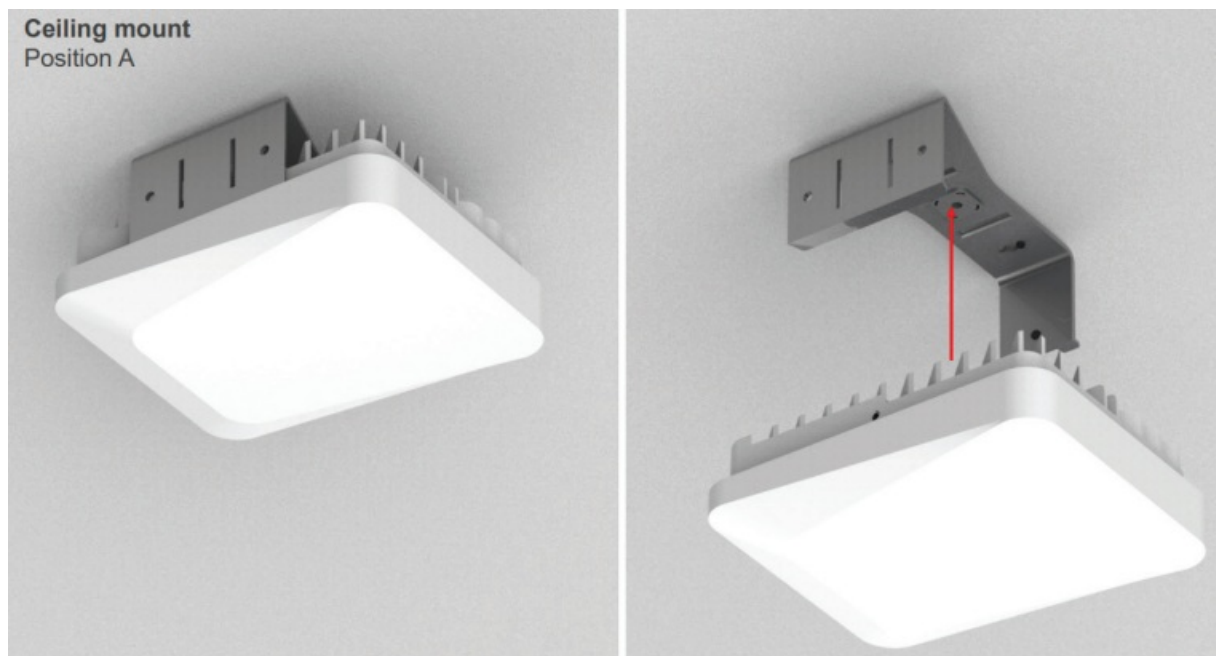
Wall/Ceiling mounted – Position A
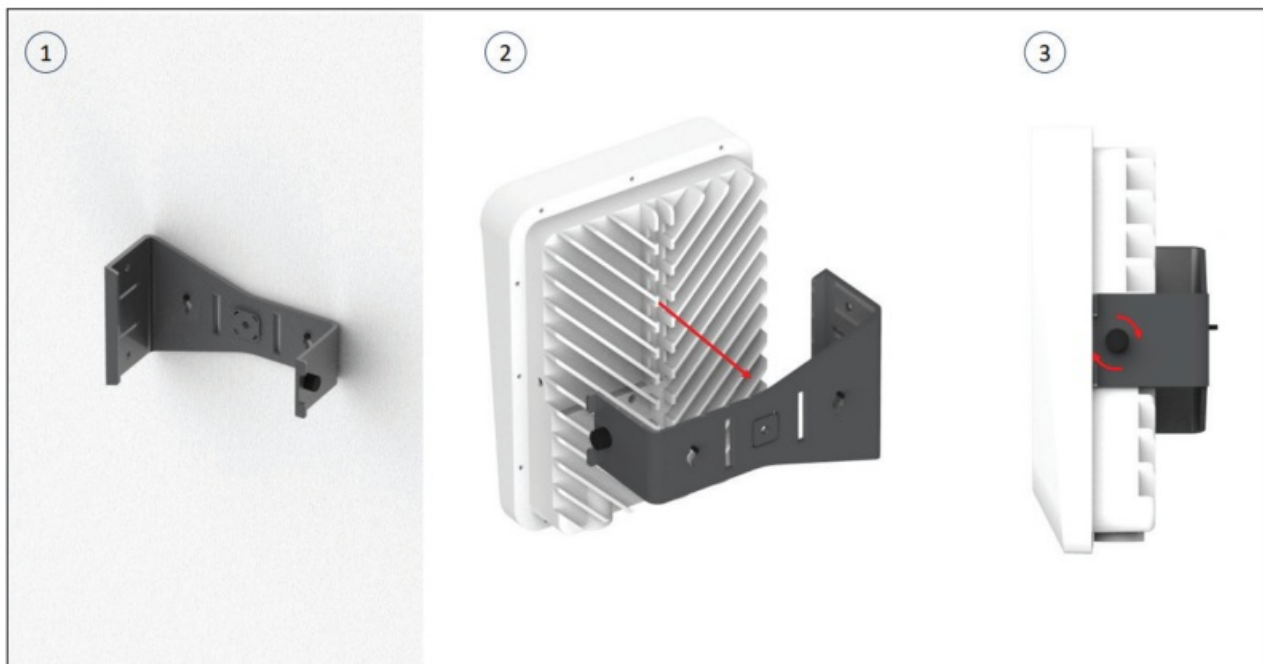
Assemble bracket on wall by screws, using:

- 2Pcs screw: M5x40mm
- 2pcs plastic anchors
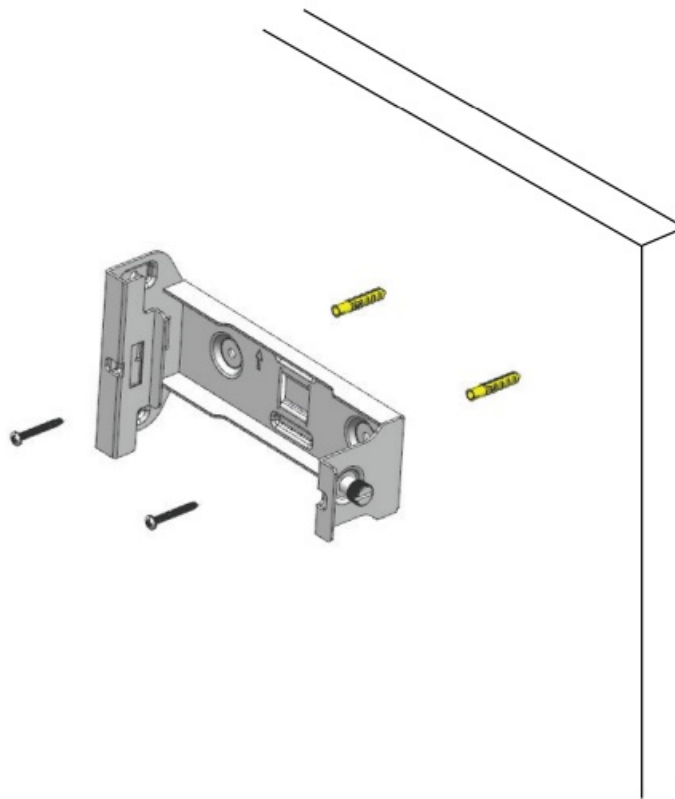
Assemble product on bracket.
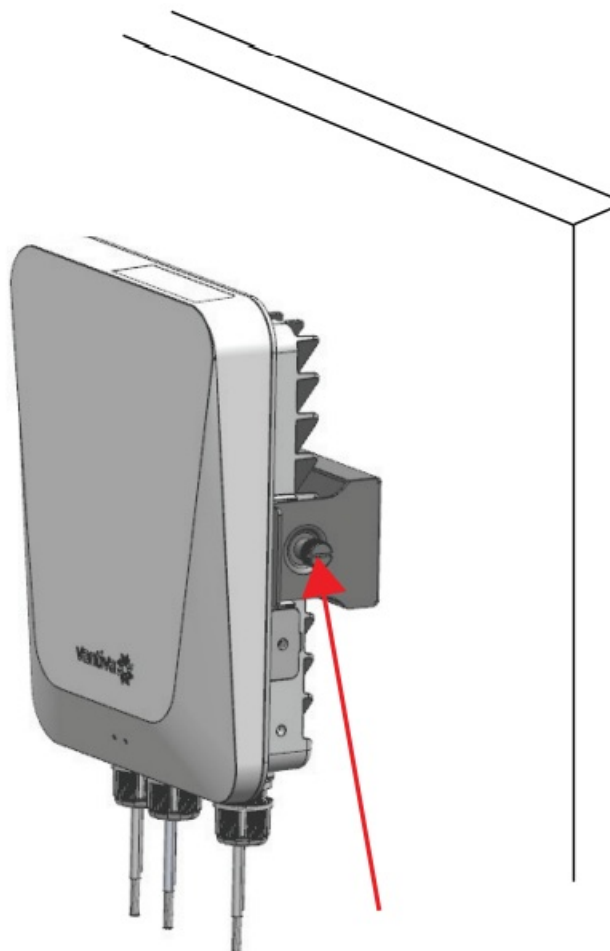
Fasten the side screw

Wall/ceiling mounting in Postion B

Wall mount
Position B
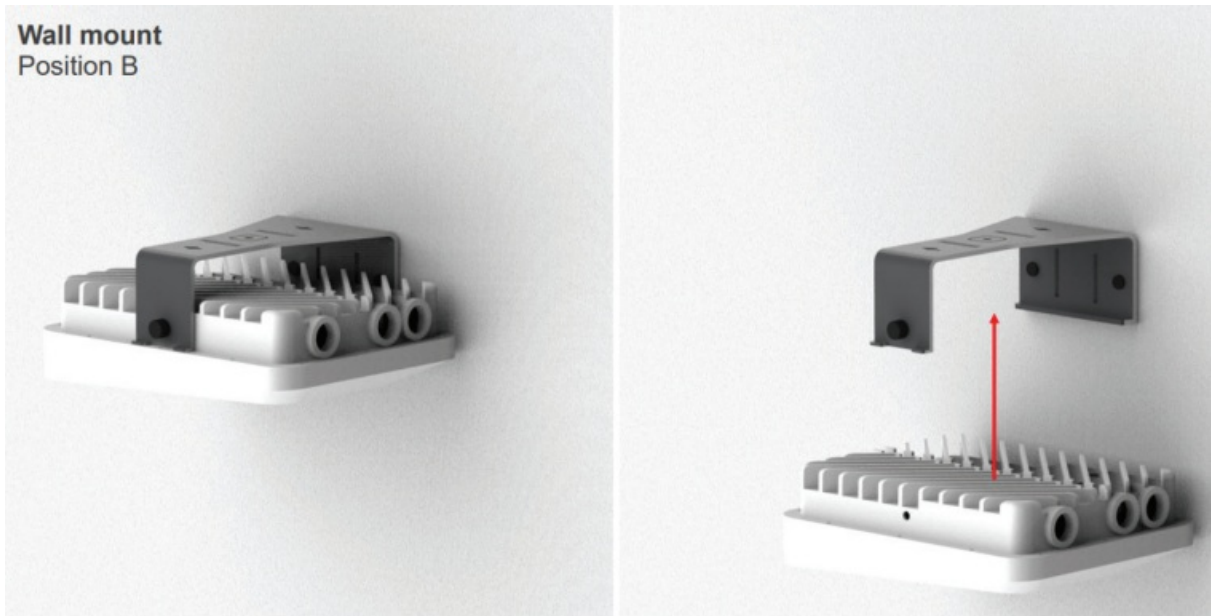
Ceiling mount
Position B
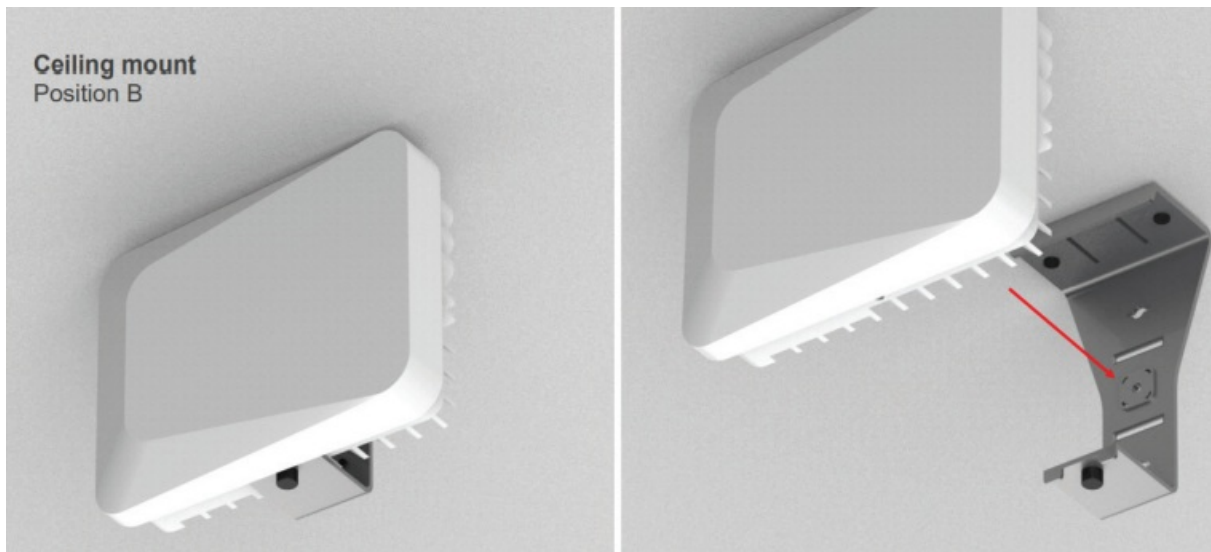
Wall/Ceiling mounted – Position B
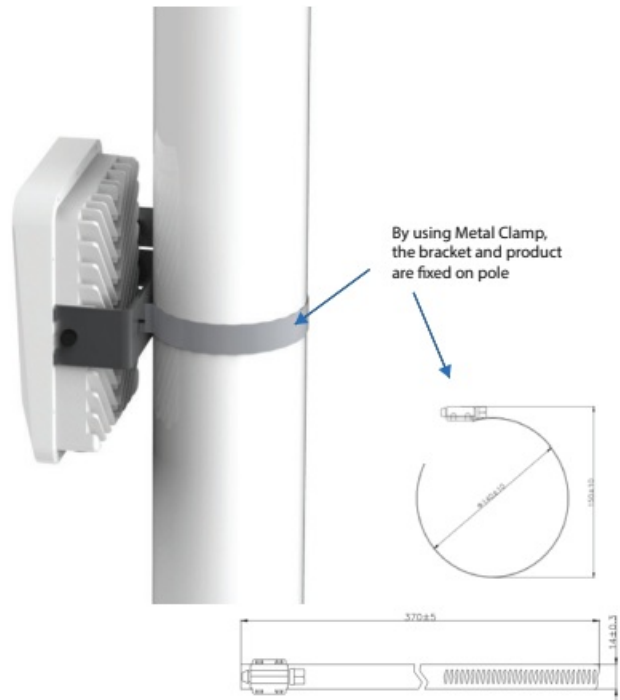Assemble bracket on wall by screws, using:

- 2Pcs screw: M5x40mm
- 2pcs plastic anchors
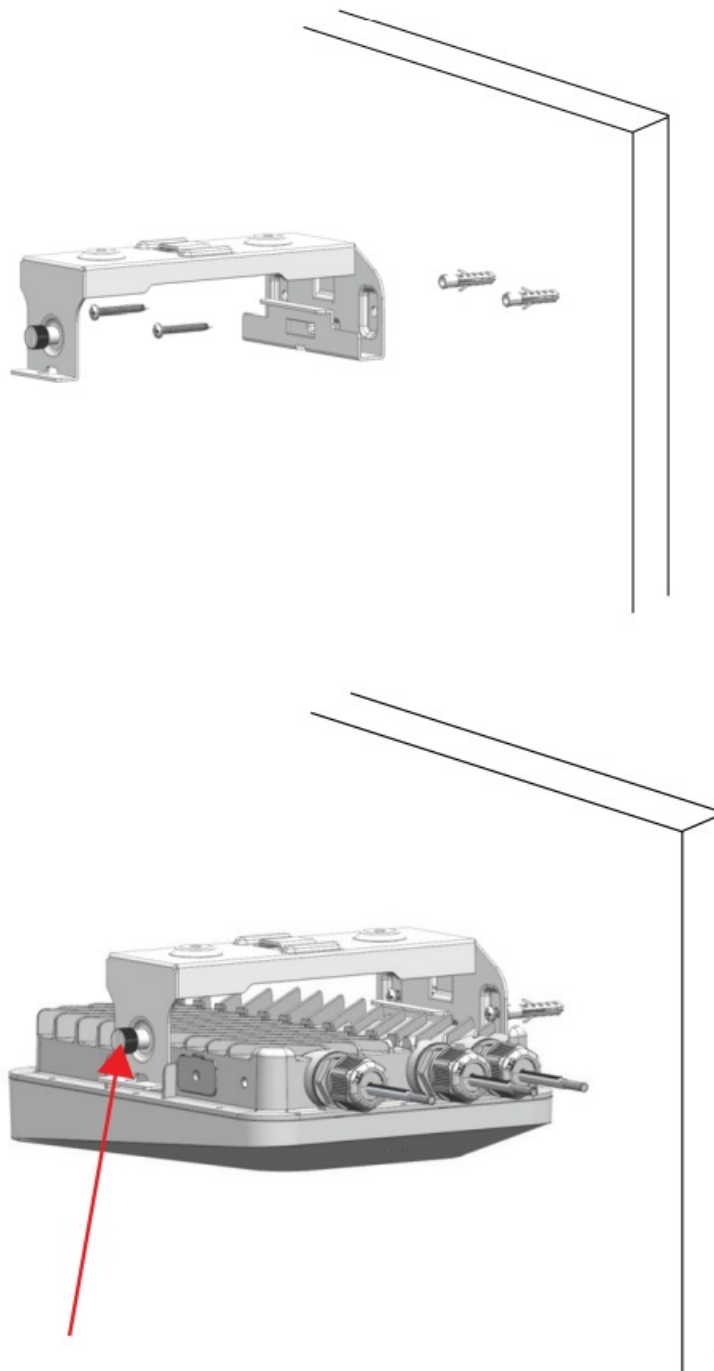
Fasten the side screw

OWM7111IOT Pole Mount instruction Poll mounted – Position A

Pole mount
Position A

By using Metal Clamp,
the bracket and product
are fixed on pole

1. Fix bracket on pole by metal clamp.

2. Assemble product on bracket.

3. Fasten side screw.

Poll mounted – Position B

Pole mount
Position B
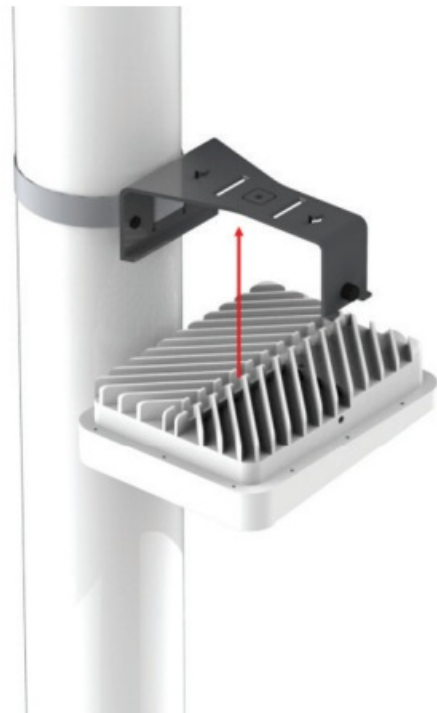
1. Fix bracket on pole by metal clamp.

2. Assemble product on bracket.
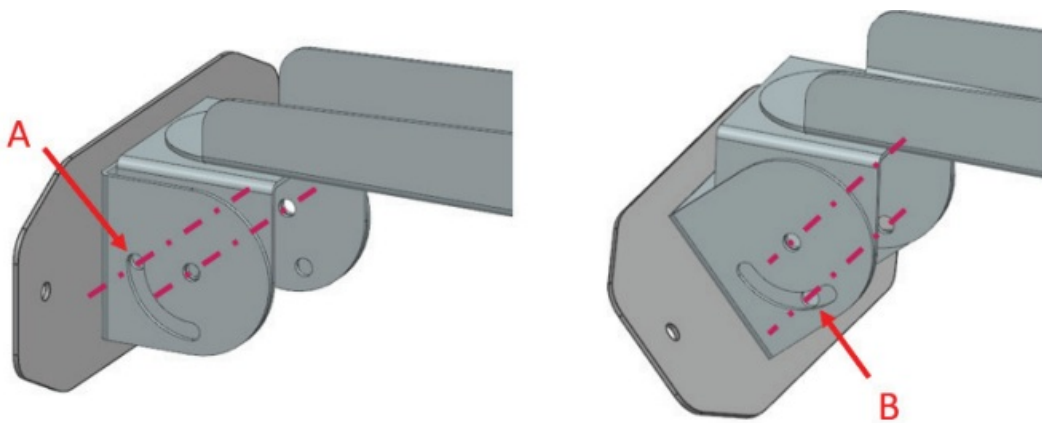
3. Fasten side screw.

OWM7111IOT Long-arm mount
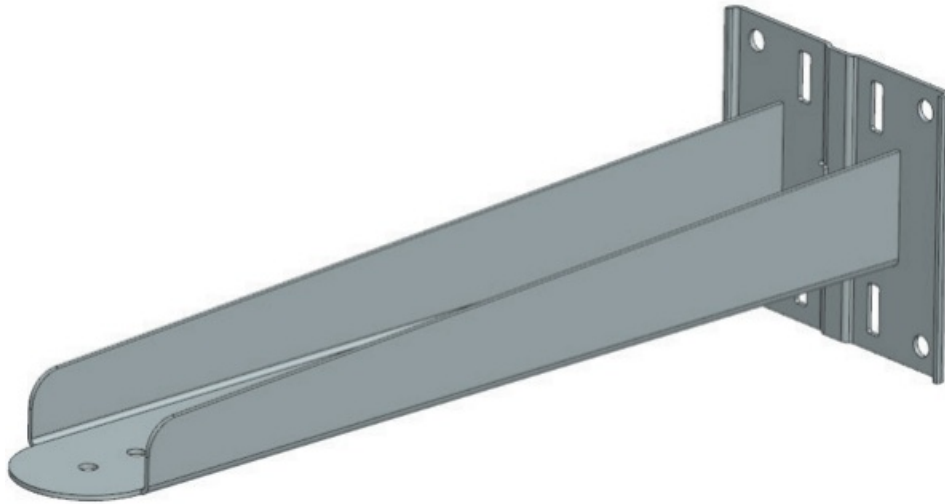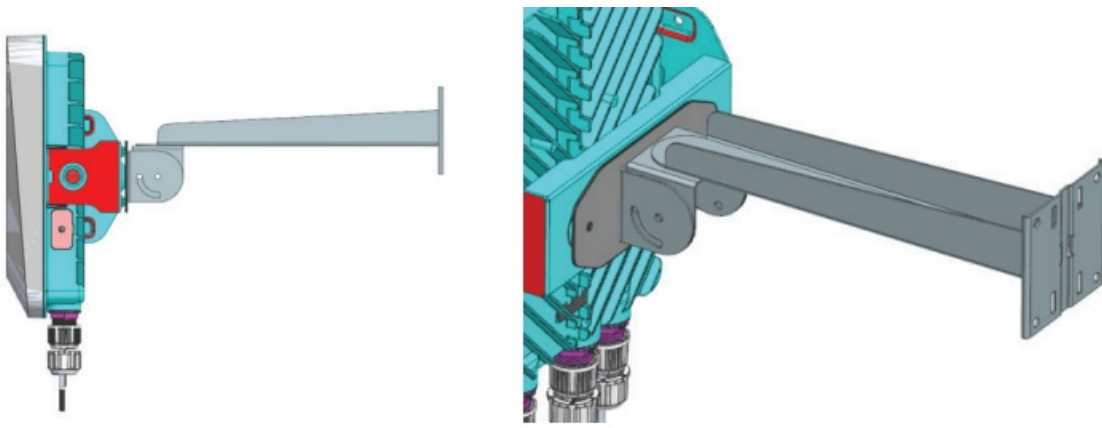
- Material: SUS 304 1/2H, T1.5mm.
- 2 parts fixed by welding.
- Mounting onto wall by 3 bolts, or onto pole by 2 metal zip belts.
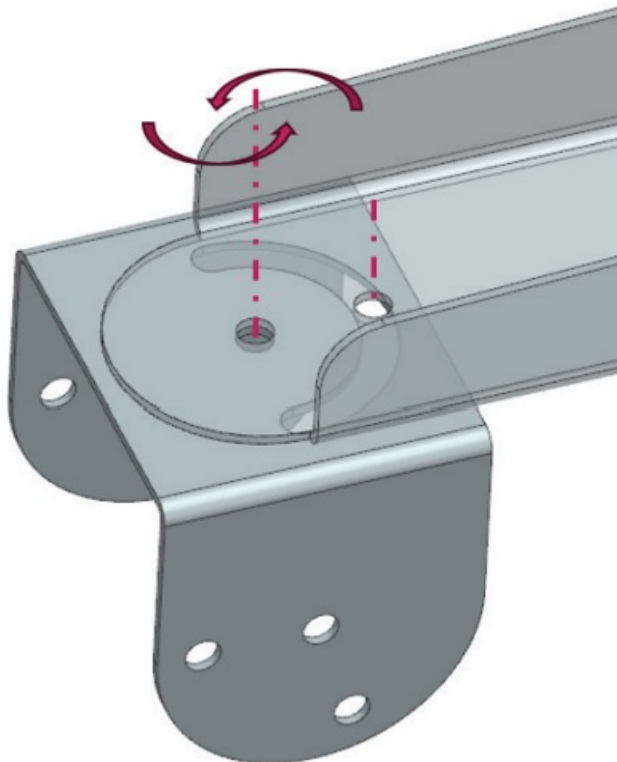
- Material: SUS 304 1/2H, T1.5mm.
- Assembled by 2 bolts.
- Rotating range is +/-90° in horizontal direction.
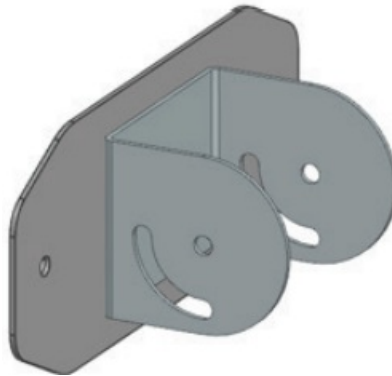
- Material: SUS 304 1/2H, T1.5mm.
- 2 parts fixed by welding.

- Assembled by 2 bolts.
- Rotating range is 0/-90° in vertical direction.
- Hole A is for 0 ° only. Bolt will also work as an insert pin to fix orientation.
- Hole B for the other angle.
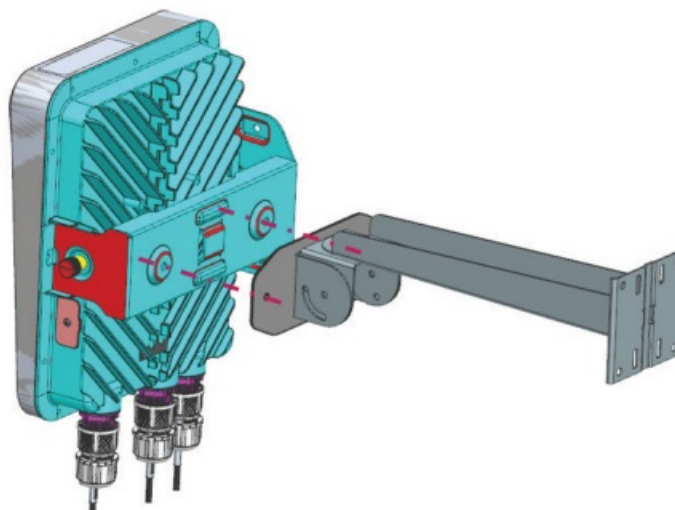
- Assembled by 2 bolts with current bracket.

VANTIVA USA LLC 4855 Peachtree Industrial Blvd., Suite 200, Norcross, GA 30092 USA **www.vantiva.com**

Documents / Resources

<table>
<tr>
<td>vantiva 🌟

OWM7111IOT
User Guide</td>
<td>vantiva OWM7111IOT IoT Gateway [pdf] User Guide
OWM7111, G95OWM7111, OWM7111IOT IoT Gateway, OWM7111IOT, IoT Gateway, Gateway</td>
</tr>
</table>

References

- 🌟 **Vantiva - Pushing The Edge Of What's Possible**
- **User Manual**