AROYA® HARDWARE

METER

SUPPORT

Have a question or problem? Our support team can help.

We manufacture, test, calibrate, and repair every instrument in house. Our scientists and technicians use the instruments every day in our product testing lab. No matter what your question is, we have someone who can help you answer it.

Email: support.aroya@metergroup.com
Phone: +1.509.332.5844

AROYA HARDWARE

Introduction

The AROYA system works in a wireless mesh network. A wireless mesh network allows data and files to be transferred from one device to another through wireless transmission. The AROYA system components are FCC approved (Class A) and can communicate wirelessly between each other. The Gateway, Repeater, and Climate Station all use Power over Ethernet (PoE) that is compliant with IEEE 802.3af PoE standards.

Gateway (H210)—sends and receives data transmitted by the Repeater or Sensor Nose and provides the system with an active connection to the cloud server where all data is processed and presented to the user.

Repeater (H110)—functions as a range extender, receiving data from the Sensor Nose and transmitting data wirelessly to the Gateway.

Climate Station (H111)—includes a Repeater and an ATMOS 14 temperature and relative humidity (RH) sensor. The ATMOS 14 supports SDI-12 sensor communication to capture microclimate sensor data. Data collected by the sensor is transmitted wirelessly to the Gateway.

Sensor Nose (H321)—has communication components and an antenna to transmit data to the Repeater or directly to the Gateway if the Sensor Nose is close enough. The Sensor Nose connects to variety of sensors.

Preparation

The following tools are included with the AROYA hardware shipment:

- PoE injectors
- Ethernet cables
- Climate Station ratchet hangers
- Alignment tool

The supplies listed below are also recommended.
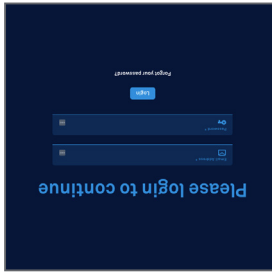
- Zip ties
- Screw gun (optional)

Cleanliness

To ensure best practices, please inspect and verify that the equipment is clean and free of contaminants prior to installation.

AROVA Software Interface

The AROVA software, located at app.aroya.io, is the primary interface to the AROVA hardware system. The software allows constant monitoring of data as well as staff and device management. A lightweight version of the interface is available as a mobile app from the Apple® App Store® or Google Play store. For more information about the system features and functionality, please read the full AROVA manual or visit aroya.io.

1. Log In to AROVA Software

After the facility introduction and dashboard creation meeting, listed facility administrators will receive an email to set up a username and password at app.aroya.io.

Administrators should now be able to log into the AROVA software.

Manage Roles

Click on the **Manage roles** link on the **Setup** page. Then select either **Add Role, Edit Role,** or **Delete Role** link or button.

2. Add Facility Members

Administrators select the **Setup** menu item.

Click on the **Staff** tab at the top of the screen. Click on the **Add staff member** button.

Enter the new member's name, email, and user role; click on the **Save account** button.

An email explaining how to create a username and password will be sent to the new user.

Reset Password

Use the **Forgot your password?** link on the login screen.

Enter the user's email address and click on the **Reset your password** button.

An email containing a link that directs the user to set a new password will be sent.
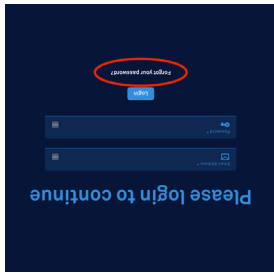
AROYA Gateway Installation

The AROYA Gateway (H210) is powered over a PoE-enabled device that is compliant with IEEE 802.3af PoE standards. The Gateway manages data to and from other AROYA devices and provides the system with an active connection to the cloud server where all data is processed and presented to the user.
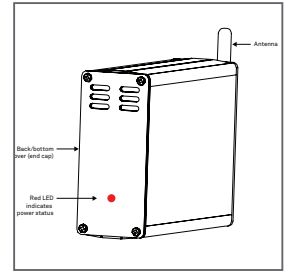
1. Connect to Network

Plug the Gateway into the existing customer network with Ethernet access. Use a PoE injector if no PoE is present.
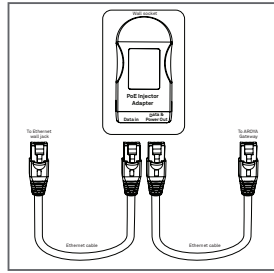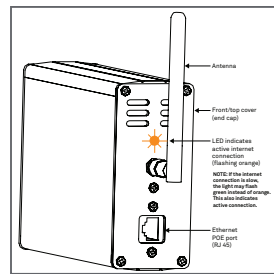

2. Verify Power to Gateway

The red indicator light on the back, bottom side of the Gateway should be on when power is reaching the Gateway.

3. Verify Network Connection

When the light flashes orange or green, it indicates there is an active network connection.
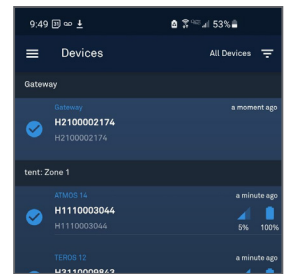

4. Verify Internet Connection

Log into the AROYA software or mobile app.

Go to the **Devices** page.

Select Gateway under **All Devices**.

A check mark icon indicates the Gateway is connected to the internet.

AROYA Sensor Nose and Sensor Installation

The AROYA Sensor Nose (H321) relays data from the connected sensor. AROYA substrate sensors are solar powered and shipped in deep sleep mode to conserve the batteries. Wake up the sensors before assigning or installing so they can communicate with the AROYA Gateway. Tap the button on the front of the nose 2–3 times until the LED STATUS light flashes green.

NOTE: The status LED flashes when the button is pushed, but it will not remain lit. To perform a hard reset, press and hold the button for 5 s.

1. Turn Sensor On

Wake up the sensors before assigning or installing so they can communicate with the AROYA Gateway.

Tap the button on the front of the nose until the LED STATUS light flashes green and stop.

NOTE: The status LED flashes when the button is pushed, but it will not remain lit.
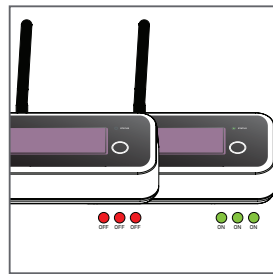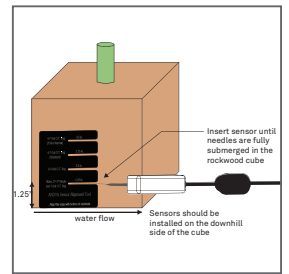

2. Install Sensor

Install sensor according to the sensor quick start or user manual.

Ensure the cable from sensor is securely connected to Sensor Nose.

Use the AROYA sensor alignment tool to ensure sensor is correctly and consistently installed.

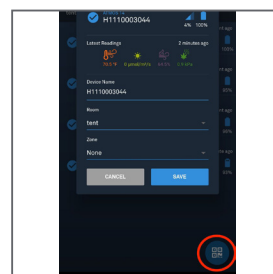The TEROS 12 sensor is shown here as an example.

3. Assign to Room

If using the mobile app, tap on the Scan code icon in the lower right and scan the QR code on the Sensor Nose front panel.

Select the room where the device is located and assign it to the appropriate room and zone.
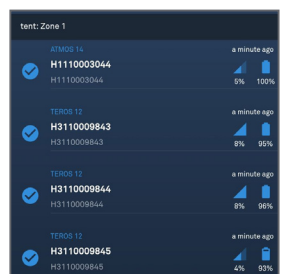
New sensor data is automatically uploaded every 3 min.

4. Verify Sensor Is Online

In the AROYA software or mobile app go to the **Devices** page and select Sensor Nose under **All Devices**.

Check the software dashboard to determine if the device is online. When the device is online, it will display a check mark inside a blue dot. (If there is a yellow **zzz**, the device is still sleeping.)
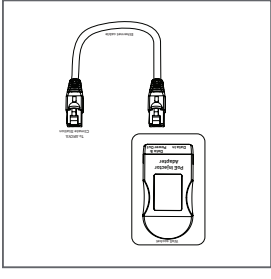
AROVA Repeater Installation

The AROVA Repeater (H110) is powered over Ethernet cable and wirelessly boosts the signal. The Repeater receives data from the sensor devices and transmits data to the AROVA Gateway (H210).

1. Install the Repeater

METER recommends installing the Repeater in the hallways about shoulder height to enhance transmission of data from sensors throughout the facility back to the Gateway.

2. Connect to Power
PoE Injector

Plug Ethernet connector into the PoE side of the injector. Plug the other end of the Ethernet cable into the Repeater (H110).

3. Verify Device Power

Check to make sure the blue light located on the serial number side of the Repeater has turned on.

4. Verify Sensor Is Online

Log into the AROVA software or mobile app.

Go to the Devices page.

Select Climate Station under All Devices.

A check mark icon indicates the Repeater is online.

AROVA Climate Station Installation

The AROVA Climate Station (H111) acts as a signal repeater in addition to reporting air temperature, relative humidity, above-canopy light indicator, and vapor pressure deficit.
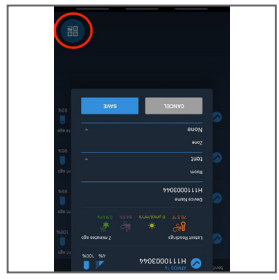
1. Install Climate Station

METER recommends installing the Climate Station in the center of the room just over the canopy using the light hanger pulley provided.

NOTE: Route Ethernet cable through mounting plate to keep the climate station level.
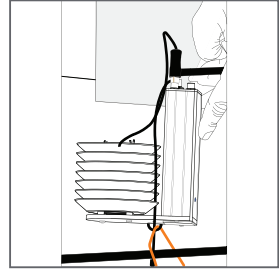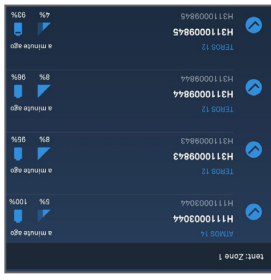

2. Connect Sensor to Power

Plug the supplied Ethernet cable into the PoE side of the power adapter.

Plug the opposing end of the Ethernet cable into the Climate Station near the antenna.

Check to make sure the blue light located on the serial number side of the Climate Station is on.

3. Assign to Room

If using the mobile app, tap on the Scan code icon in the lower right and scan the QR code on the Climate Station's serial number label.

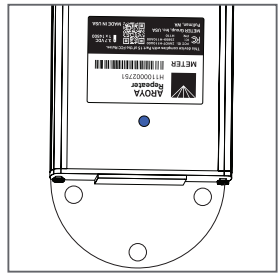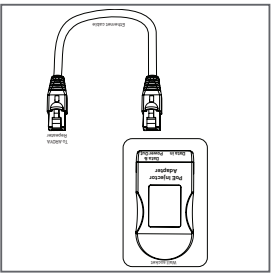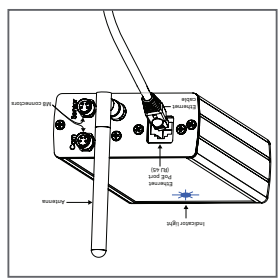Select the room where the device is located and assign it to that room.

4. Verify Sensor Is Online

Log into the AROVA software or mobile app.

Go to the Devices page.

Select Climate Station under All Devices.

A check mark icon indicates the Climate Station is online.

Internet

Existing Customer Network

Modem
Port 8883, Port 8443

Switch

Misc other equipment
(e.g., Wi-Fi® router)

*PoE injector (if needed)

LAN   PoE

AROYA Gateway

AROYA
Repeater

AROYA
Repeater

AROYA
Climate

AROYA
Repeater

AROYA
Climate

AROYA
Climate

Wireless
Sensor

Wireless
Sensor

AROYA
Climate

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