Aqara Thermostat Hub W200
User Manual EN

1. Product Introduction

1.1 Compatibility

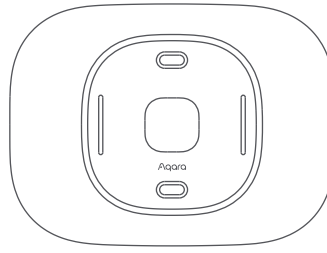
System:
Furnaces, Air Conditions (2H/2C), Heat Pumps (2H/2C + 2 stage AUX), Boilers, PTACs.
Networking: Wi-Fi IEEE 802.11 a/b/g/n/ac 2.4 GHz/5 GHz.

1.2 Terminal Description

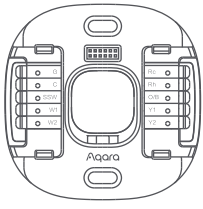
Rc	Cool transformer
Rh	Heat transformer
Y1, Y2	Conventional A/C stages, heat pump compressor
G	Fan
C	24VAC common
W1, W2	Conventional heat stages, auxiliary heat stages with heat pump
O/B	Heat pump reversing valve
SSW	Shared signal wire(for C-wire adapter)

1.3 What's in the Box

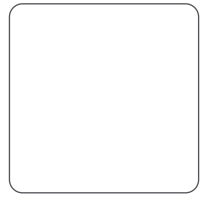
Display



Trim Plate



Base Plate



Labels

Screws & Drywall Plugs

1.4 Product Specifications

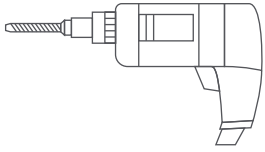
Brand	Aqara
Sensor	Temperature, Humidity, Radar.
Screen	480 × 480 pixels 4 inch diameter
Operating voltage	24VAC~
Current	Maximm 2.5A total Maximum 1.0A single output
Wireless	Wi-Fi IEEE 802.11 a/b/g/n/ac 2.4 GHz/5 GHz, Zigbee, Thread, Bluetooth.
Dimensions	3.94 × 3.94 × 0.98 in. (100 x 100 x 25 mm)
Temperature Sensitivity	±1°F (±0.5°C)
Humidity Sensitivity	±1%

2. Installation

2.1 Preparation

Tools Preparation

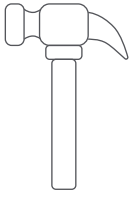
(1) Essential Tools:



Drill

Phillips screwdriver

(2) Optional Tools:



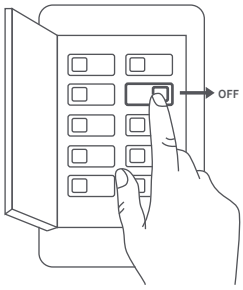
Hammer

Pencil

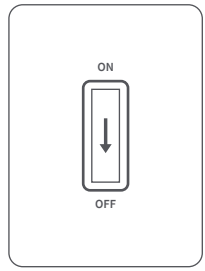
Wire stripper

1. Power Off Your HVAC System

Use the master switch or circuit breaker to turn off your HVAC system.



Breaker box

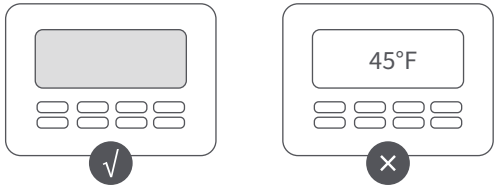


Switch

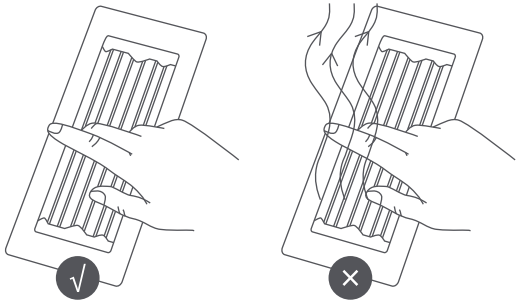
Note: The thermostat switch doesn't cut power.

2. Confirm the System is Off

For a smart thermostat, ensure the screen is off.

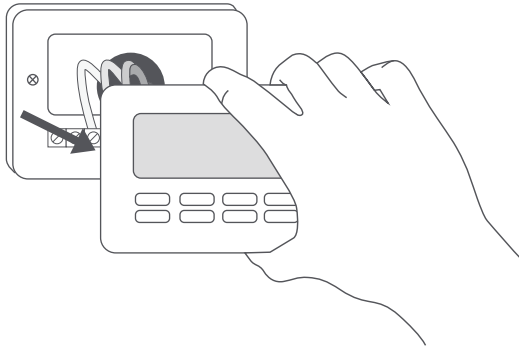


For a traditional thermostat, adjust the temperature and wait 5 minutes to confirm that the system is not running.



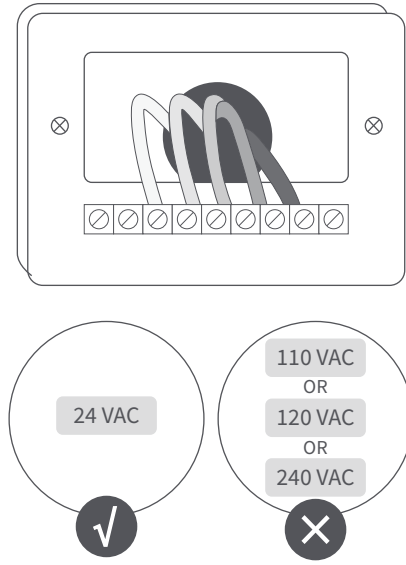
3. Remove the Existing Thermostat Cover

Take off the cover without disconnecting any wires.



4. Check the Existing Base Plate

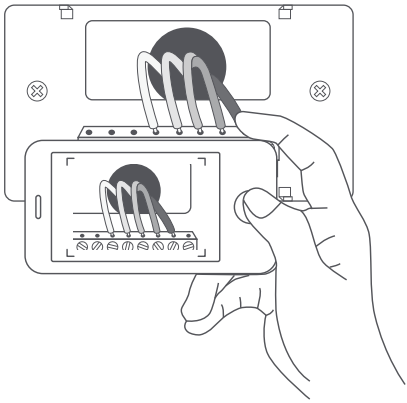
Ensure there are no following incompatible indicators.



Note： high voltage system

5. Photograph the Wiring

Capture a clear image of the wiring connections.



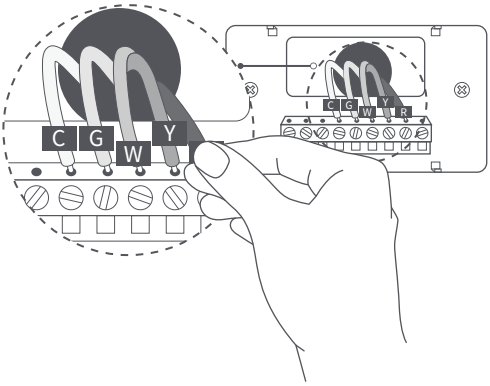
2.2 Installation

Before Installation:

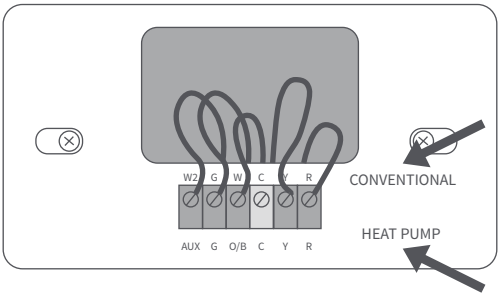
A. The Aqara Thermostat Hub W200 is for 24VAC systems only, with a maximum of 2.5A.
B. Make sure your existing thermostat has a C terminal. If it does not, you need a C-wire adapter. Jump to C-Wire Adapter Installation

1. Label the Wires

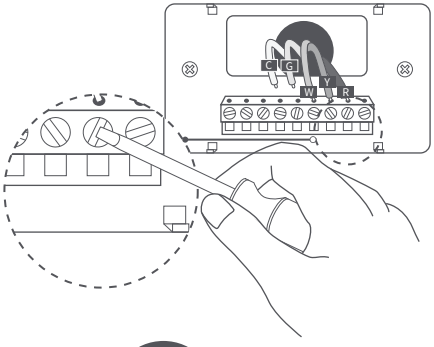
If you need help with labeling, check the Wiring Diagram section (Pages 09-13).

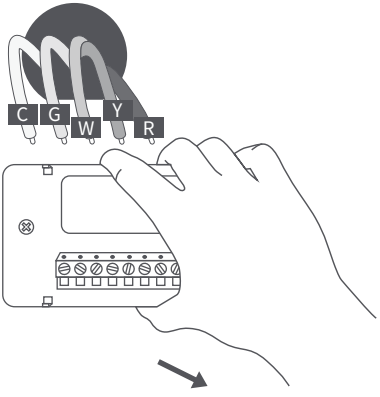


Refer to the device handbook if you have both heat pump and conventional labels.



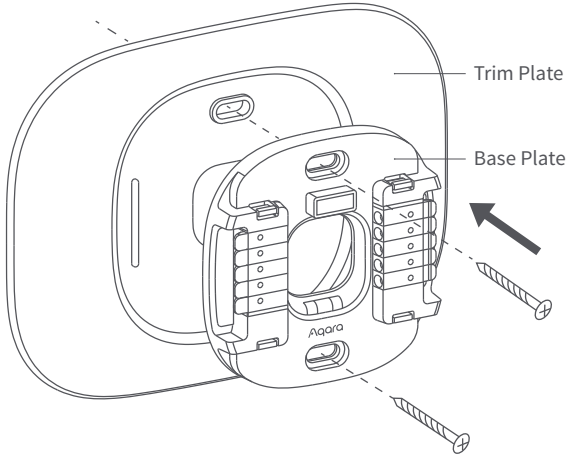
2. Disconnect Wires and Remove the Old Base Plate





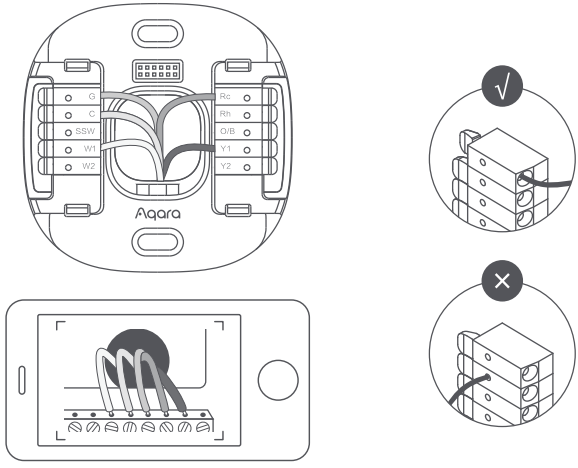
3. Install the New Base Plate and Trim Plate

Decide if you want to use the trim plate to cover marks or holes from your existing thermostat. If so, align and press the trim plate and backplate into place together.



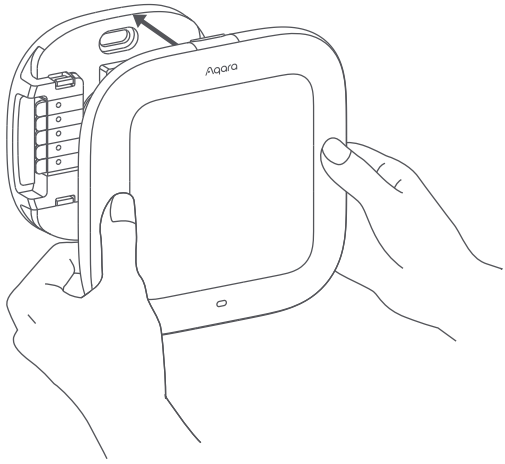
4. Insert the Wires

Press the terminal block levers and insert the wires. The lever will lower when the wire is connected correctly.



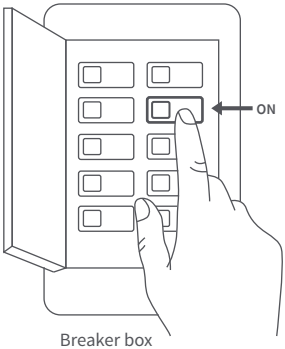
5. Install the Screen

Press the screen into the base plate until it clicks into place.

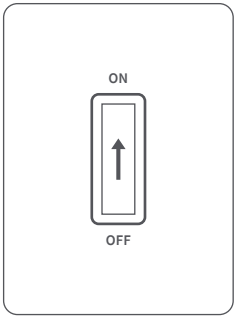


6. Power On Your HVAC System

Use the master switch or circuit breaker to turn on your HVAC system.



Breaker box



Switch

3. Wiring Diagram

3.1 Wiring Guidance

1. Standard Thermostat Terminals

Conventional Cooling and Heating System

Terminals	Role
C *	Common Wire
R	24 VAC Power
Rc	24 VAC Power from cooling transformer
Rh	24 VAC Power from heating transformer
W1	Stage 1 Heating
W2	Stage 2 Heating
Y1	Stage 1 Cooling
Y2	Stage 2 Cooling
G	Fan

* C is sometimes labeled as B in older models.

Heat Pump System

Terminals	Role
C *	Common Wire
R	24 VAC Power
Rc	24 VAC Power from cooling transformer
Rh	24 VAC Power from heating transformer
O/B	Reversing valve relay
E, W2, Aux, Aux1, X *	Stage 1 Auxiliary heat
Aux2 *	Stage 2 Auxiliary heat
Y1	Stage 1 Compressor
Y2	Stage 2 Compressor
G	Fan

* C is sometimes labeled as B in older models.

* Auxiliary heating for the heat pump in cold weather, may include electric resistance or another heating source.

2. Unused Thermostat Terminals

Terminals	Role	Note
S, S1, or S2	Sensor	Not Needed
L	Indicator Light	Not Needed
Rc	24 VAC Power from cooling transformer	24 VAC Power from cooling transformer
G2, G3, GL, GM, GH, FAN1, FAN2, FAN3	Fan Speed	Available via future OTA updates
O and B*	Separate O and B	Not Compatible
W3	Stage 3 Heating	Not Compatible
Y3	Stage 3 Cooling	Not Compatible

* B: A separate blue B wire might be the C Common Wire terminal.

3. Incompatible Thermostat Terminals

The Aqara Thermostat Hub W200 is not compatible if your system has any of the following terminals:

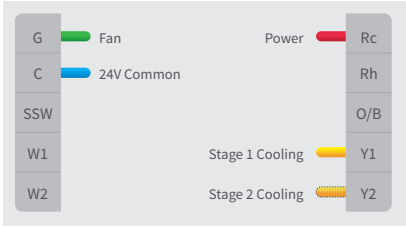
Terminals	Note
1, 2, 3, 4	Not Compatible
A, B, C, D	Not Compatible
Water or H2O	Not Compatible
L1, L2, 110, 120, 240 Volts	Not Compatible

3.2 Wiring Diagram

1. Conventional Heating/Cooling Systems

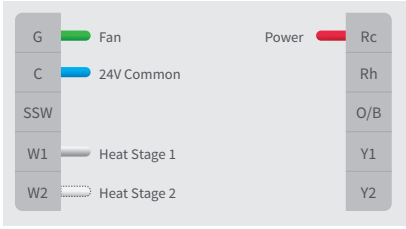
Conventional 1/2 Stage Cooling

Rc	Power
Rh	Heating Power
Y1	Stage 1 Cooling Relay
Y2	Stage 2 Cooling Relay
G	24 VAC
C	24VAC Common Wire
W1	Stage 1 Heating Relay
W2	Stage 2 Heating Relay
O/B	Reversing Valve
SSW	Shared Signal Wire (For C-Wire Adapter)



Conventional 1/2 Stage Heating

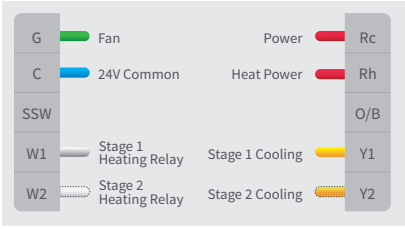
Rc*	Power
Rh	Heating Power
Y1	Stage 1 Cooling Relay
Y2	Stage 2 Cooling Relay
G*	Fan Relay
C	24 VAC Common Wire
W1	Stage 1 Heating Relay
W2	Stage 2 Heating Relay
O/B	Reversing Valve
SSW	Shared Signal Wire (For C-Wire Adapter)



* Rc: Connect Rc, Rh, or R to Rc if only one wire is present.
* G: Leave unconnected if no fan is present.

Conventional 1/2 Stage Cooling, 1/2 Stage Heating

Rc	Power
Rh*	Heating Power
Y1	Stage 1 Cooling Relay
Y2	Stage 2 Cooling Relay
G*	Fan Relay
C	24 VAC Common Wire
W1	Stage 1 Heating Relay
W2	Stage 2 Heating Relay
O/B	Reversing Valve
SSW	Shared Signal Wire (For C-Wire Adapter)

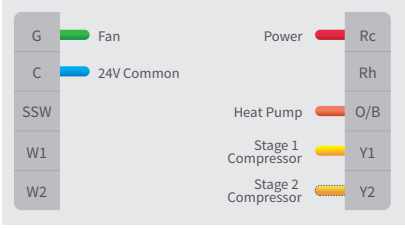


* Rh: For wires labeld Rc, Rh, R, connect to Rc if only a single wire is present. If there are two wires, connect them to Rc and Rh respectively.

2. Heat Pump Systems

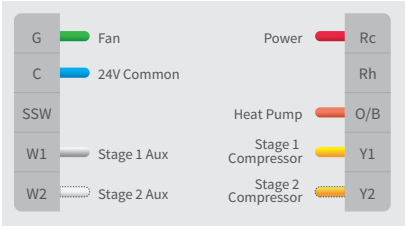
1/2 Stage Heat Pump

Rc	Power
Rh	Heating Power
Y1	Stage 1 Compressor Relay
Y2	Stage 2 Compressor Relay
G	Fan Relay
C	24VAC Common Wire
W1	Stage 1 Auxiliary Heat Relay
W2	Stage 2 Auxiliary Heat Relay
O/B	Reversing Valve
SSW	Shared Signal Wire (For C-Wire Adapter)



1/2 Stage Heat Pump with Aux Heat

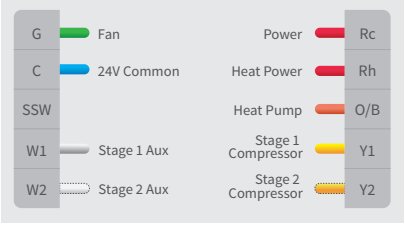
Rc	Power
Rh	Heating Power
Y1	Stage 1 Compressor Relay
Y2	Stage 2 Compressor Relay
G	Fan Relay
C	24 VAC Common Wire
W1*	Stage 1 Auxiliary Heat Relay
W2	Stage 2 Auxiliary Heat Relay
O/B	Reversing Valve
SSW	Shared Signal Wire (For C-Wire Adapter)



For wires labeled E, AUX, AUX1, W2, or W1, connect a single wire to W1. If there are two wires, connect AUX2 to W2.

Dual Fuel: 1/2 Stage Heat Pump, 1/2 Stage Heating

Rc	Power
Rh*	Heating Power
Y1	Stage 1 Compressor Relay
Y2	Stage 2 Compressor Relay
G	Fan Relay
C	24 VAC Common Wire
W1	Stage 1 Auxiliary Heat Relay
W2	Stage 2 Auxiliary Heat Relay
O/B	Reversing Valve
SSW	Shared Signal Wire (For C-Wire Adapter)



* Rh: For wires labeld Rc, Rh, R, connect to Rc if only a single wire is present. If there are two wires, connect them to Rc and Rh respectively.

4. Device Binding and Initialization

4.1 Download the Aqara Home app

Before using this product, you need to download the Aqara Home app and register an account.

QR code for installation video

QR code for user manual

4.2 Device Setup

Pair the device by scanning the QR code with the Aqara Home app or using Matter. Select "Skip" to bypass network setup.

1. Aqara Home
Follow the app instructions for setup.

2. Matter

Configure the device locally according to the instructions.

3. Skip

Configure the device locally according to the instructions.

5. Screen Configuration

Verify wiring with the photo shot before installation. Proceed with the setup if correct. If not, check and secure the wires, then adjust connections.

5.1 Heat Pump System

1. Select Heat Pump Type

Air-Source Heat Pump:
Choose Air-Source Heat Pump if you have an outdoor compressor.
Ground-Source Heat Pump:
Choose Ground-Source Heat Pump if you have pipes connecting your system to the ground or through walls.

2. Set Reversing Valve Mode

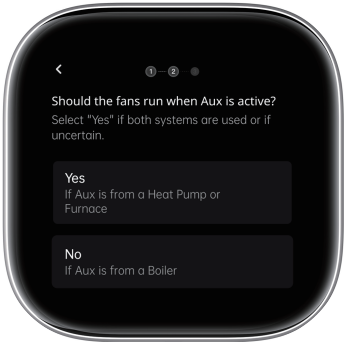
Select "On Cool" or "On Heat" based on your heat pump user manual. If unsure, start with "On Cool." Switch to "On Heat" if cooling occurs during heating in Settings.
Note: This adjustment is safe for your equipment.

3. Heat Pump & Aux Heating Setup

Select "Yes" or "No" based on your auxiliary heat source. Choose "Yes" if your auxiliary heating uses electricity; "No" if it uses oil, natural gas, or propane.
Warning: For simultaneous operation, the heat pump condenser must be installed before the auxiliary heat source to prevent device damage. If this is not the case, select "No."

4. Fan Operation Setup

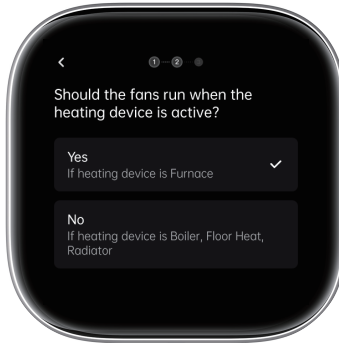
Enable fans to run simultaneously if Aux is from a Heat Pump or Furnace. Do not enable if Aux is from a Boiler. Choose "Yes" if both systems are used or if uncertain.



5. Set Outdoor Compressor Temperature

An air-to-air heat pump loses efficiency as outdoor temperatures drop. Set the minimum temperature at which the heat pump will switch off and use auxiliary heat. For optimal settings, refer to your HVAC manual.

5.2 Conventional Heating/Cooling System

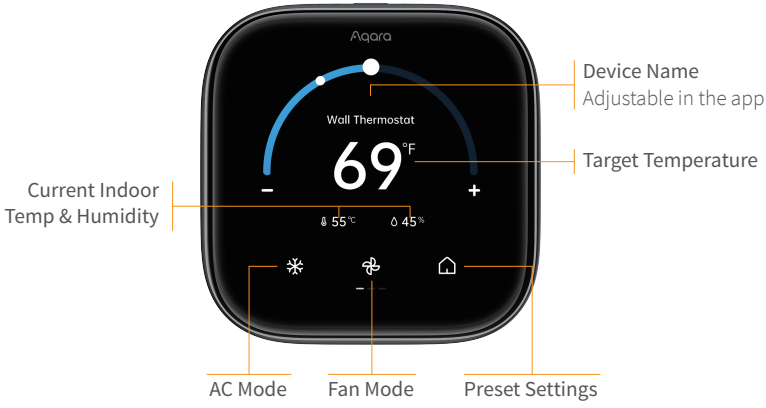


Once confirmed, setup is complete.

6. Screen Features

6.1 Main Menu

Swipe down to access Settings



1. AC Mode

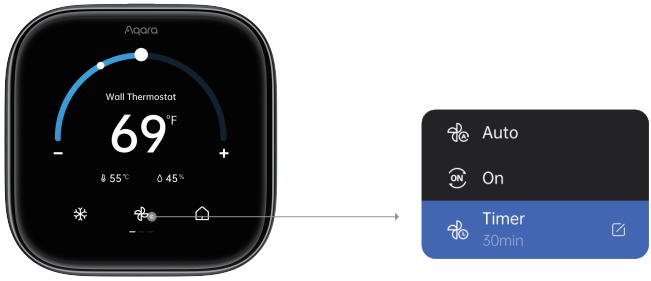
(1) Select the mode to see the dropdown list

Cool	Adjust Cooling
Heat	Adjust Heating
Aux	For auxiliary or emergency heating (heat pump systems only)
Auto	Adjust Cooling and Heating
OFF	Default standby mode

2. Fan Mode

(1) Select the mode to see the dropdown list

Auto	Default setting. Fan operates with the compressor
On	Fan runs continuously, regardless of the compressor
Timer	Fan runs for a set time, then switches to Auto



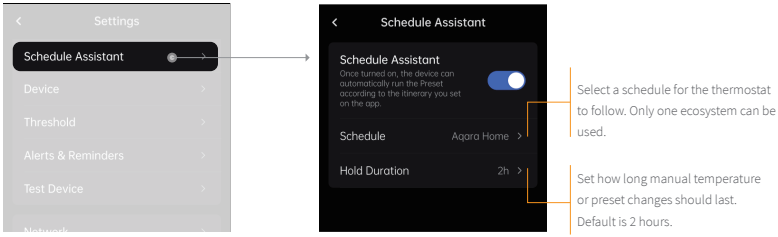
3. Preset Settings:

(1) Select the mode to see the dropdown list
(2) Manual temperature or preset changes hold for 2 hours before the schedule resumes. Adjust hold time in the Schedule Assistant.

Routine	Follows schedules and settings. Icon is a schedule
Home	Applies the Home preset (e.g., cool 80°F, heat 70°F)
Away	Applies the Away preset (e.g., cool 80°F, heat 70°F)
Go to Sleep	Applies the Go to Sleep preset (e.g., cool 80°F)
Sleep	Applies the Sleep preset (e.g., cool 80°F, heat 70°F)
Vacation	Applies the Vacation preset (e.g., cool 80°F, heat 70°F)

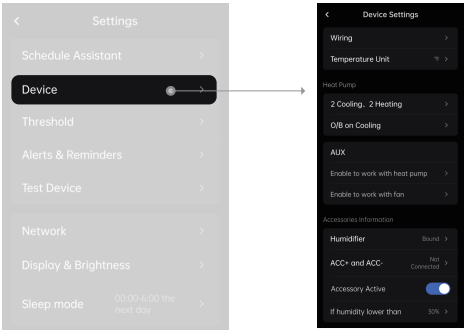
6.2 Schedule Assistant

Create smart schedules for the thermostat to follow. If disabled, the thermostat will only respond to manual controls.



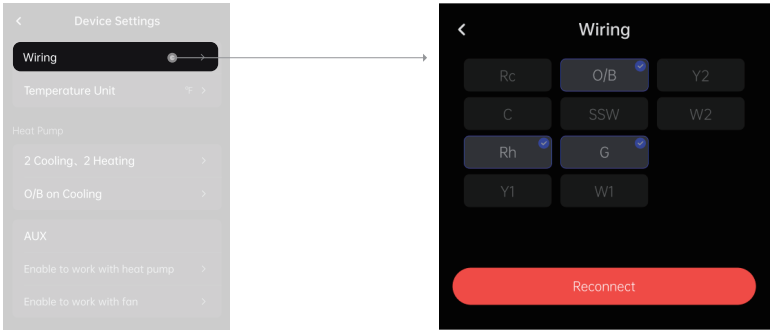
6.3 Device Settings

View and adjust device configurations



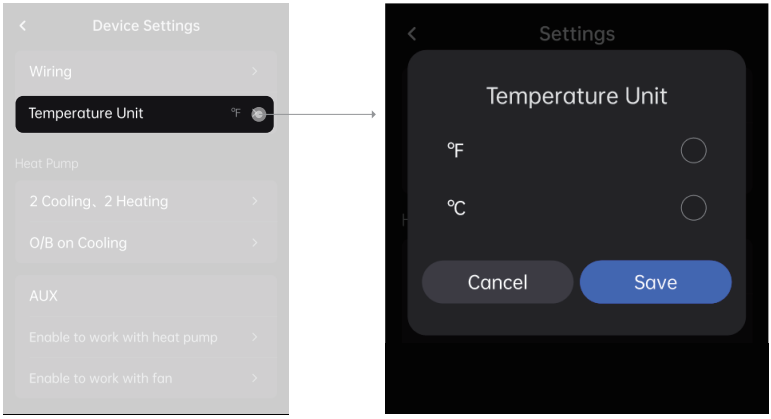
1. Wiring:

Adjust the device wiring. Rewiring clears all previous settings. If using Matter, all ecosystem settings will also be cleared.



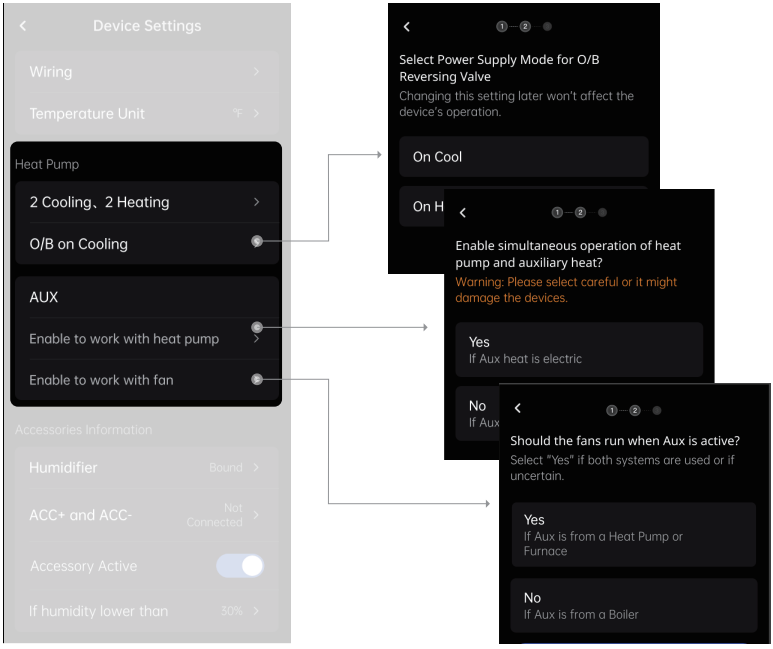
2. Temperature Unit:

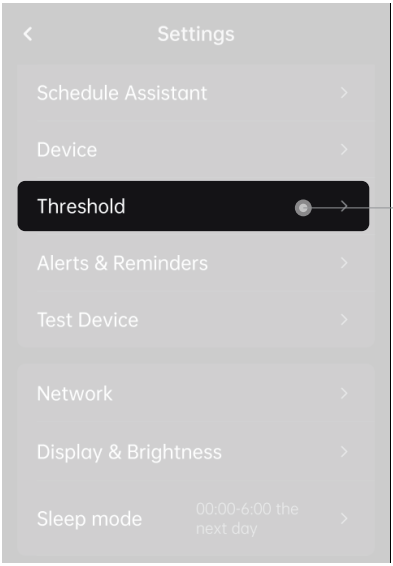
Adjust the thermostat to display temperature in Fahrenheit or Celsius.

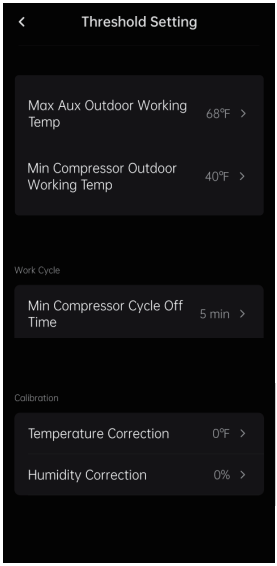


3. Device Info:

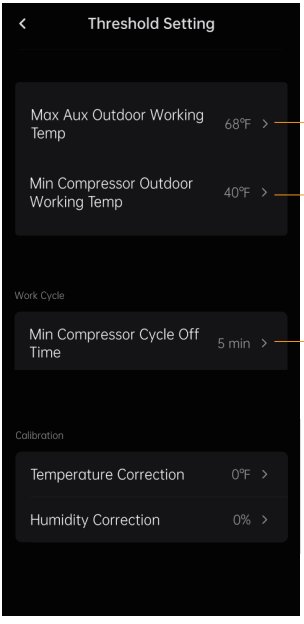
Correct or change any setup errors.







1. Temperature Settings

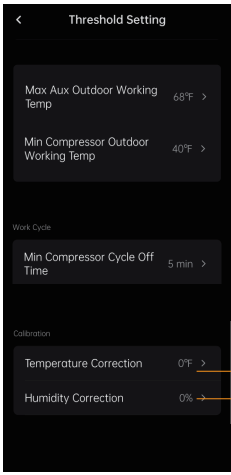


If set to 68°F (20°C), auxiliary heat won't run above this temperature; only the heat pump will be used.

If set to 35°F (1.7°C), the heat pump won't run below this temperature; only auxiliary heat will be used.

The compressor stays off for a minimum of 5 minutes between cycles. This prevents short cycling and potential damage. We recommend keeping this setting at 5 minutes.

3. Calibration Settings



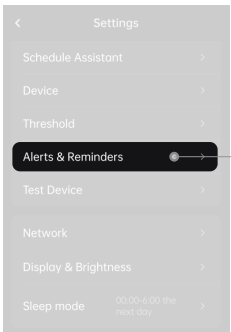
You can adjust for more percision if the thermostat temperature sensor seems inaccurate.

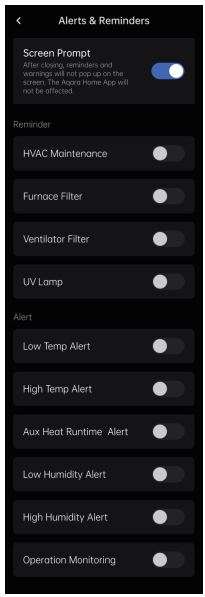
You can adjust for more percision if the thermostat humidity sensor seems inaccurate.

6.4 Alerts & Reminders

Reminders:
Notifies you of system service needs and periodic maintenance.

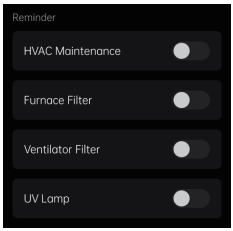
Alerts:
Triggered by extreme indoor temperatures or system inefficiencies .
Bind to your Aqara account, receive the alerts and reminders in the app.

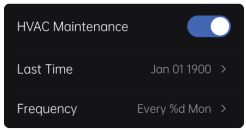




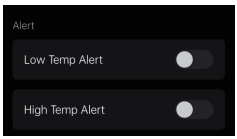
1. Reminder

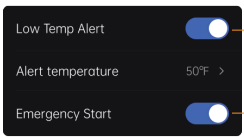
Enabling this feature creates a maintenance reminder for your HVAC filter, furnace filter, ventilator filter, or UV lamp.





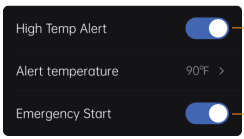
2. Temperature Alerts





Low Temp Alert: Set to prevent home damage from freezing.

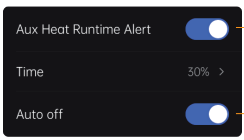
Emergency Heat: Enables emergency heating when the system is off.



High Temp Alert: Set to prevent home damage from high temperature.

Emergency Cool: Enables emergency cooling when the system is off.

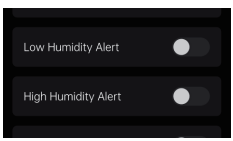
3. Aux Heat Runtime Alert

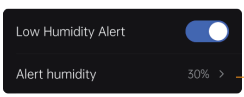


Triggers if aux heat runs too long.

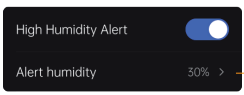
Automatically switches from aux heat to heat pump after extended use.

4. Humidity Alerts





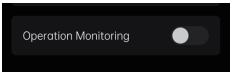
Triggers an alert when indoor humidity falls below the set value.



Triggers an alert when indoor humidity exceeds the set value.

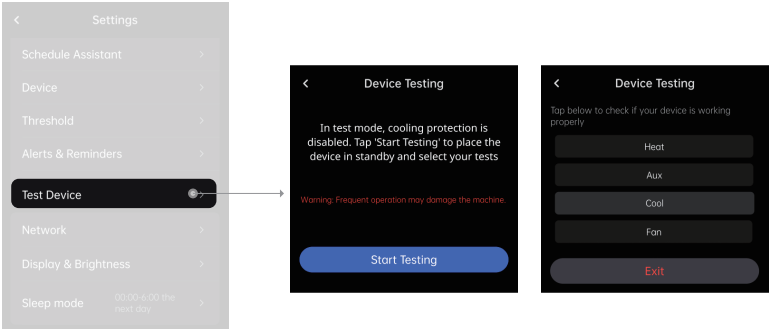
5. Operation Monitoring

When enabled, the thermostat monitors the AC and sends alerts for issues. Bound Aqara sensors will alert you if doors or windows are open while the AC is running.



6.5 Device Testing

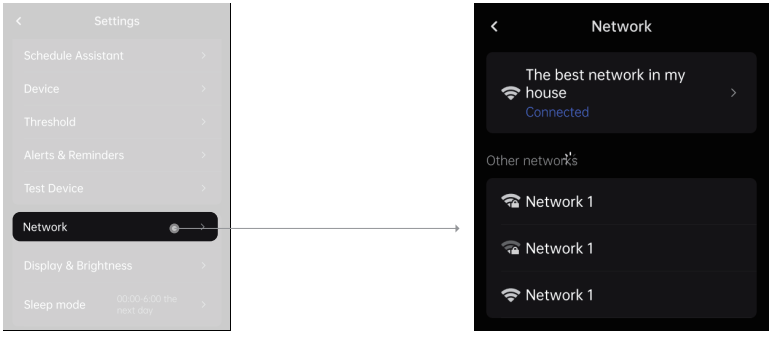
In test mode, emergency cool/heat is off. Avoid frequent use. Select a test item and check if heating, cooling, and the fan work properly.



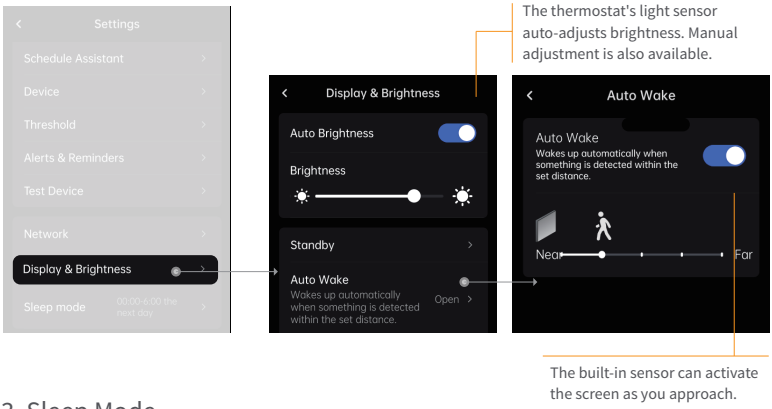
6.6 Additional Settings

1. WLAN

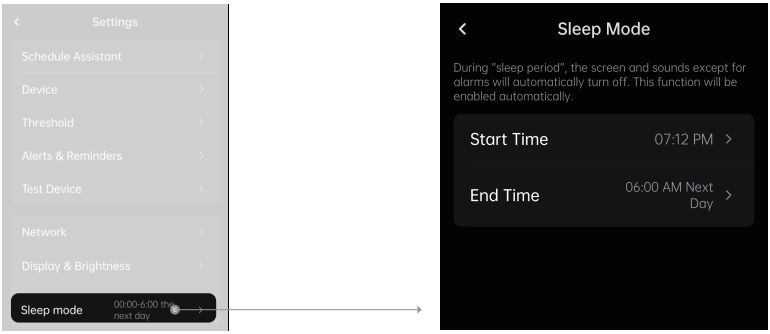
Check network status; connect via phone



2. Display & Brightness

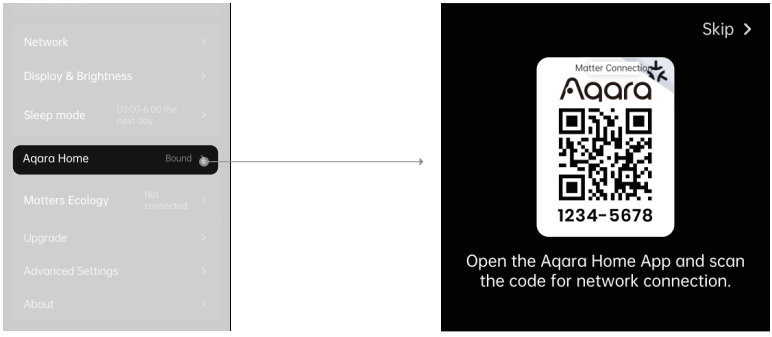


3. Sleep Mode



6.7 General Settings

1. Aqara Home
Scan the QR code to bind to Aqara Home.
Note: Unbinding Aqara may disable features like schedules, presets, and security modes.

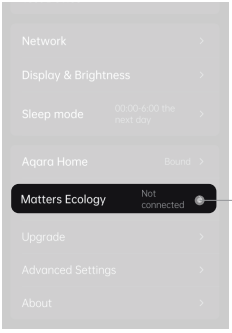


2. Matter

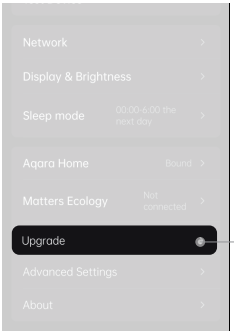
Scan the QR code to bind.

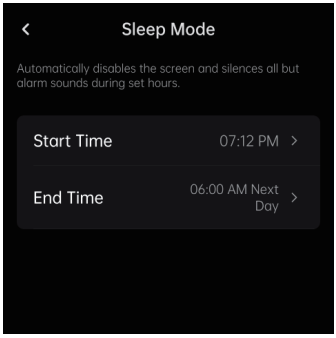
After binding to one Matter ecosystem, get a QR code from the bound ecosystem to add another.

Note: Unbinding a Matter ecosystem may disable schedules and other features.

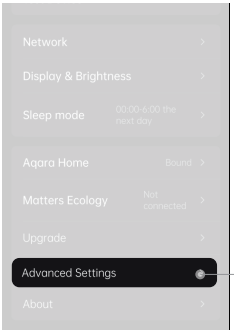


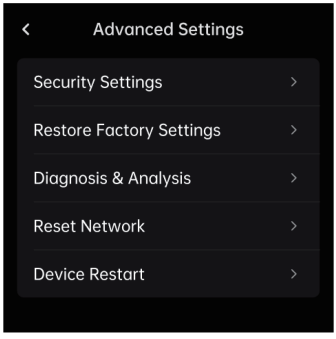
3. Firmware Updates





4. Advanced Settings





7. More product introductions about Thermostat Hub W200

1.To control this accessory, the latest version of iOS or iPadOS is recommended. Clean Energy Guidance requires an iPhone or iPad running software version 26 or later and Adaptive Temperature requires all members of the Home app must be using an iPhone or Apple Watch running software version 26 or later. A home hub, such as Apple TV or HomePod, running software version 26 or later is required to enable Adaptive Temperature. Location services must be enabled for the Home app and Home system services. Clean Energy Guidance is only available within the contiguous United States.

2.Use of the Works with Apple Home badge means that an accessory has been designed to work specifically with the technology identified in the badge and has been certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards.

3.Adaptive Temperature: Adaptive Temperature sets your Thermostat Hub W200 to automatically adjust the temperature when you're on your way home, when you go to sleep, or when you're away for an extended period of time. Your iPhone uses on-device intelligence to predict when you're on your way home and adjusts the temperature so it's just right by the time you get there, as well as to save energy when you're far away from home. Using the Apple Home app on your iPhone, iPad, or Mac, you can enable Adaptive Temperature on Thermostat Hub W200 to set the temperature using on-device intelligence.

4.Clean Energy Guidance: Clean Energy Guidance from Apple provides a grid forecast to help people choose when to use electricity. This forecast is personalized for each person's Home location and based on various environmental and grid inputs, and identifies the times when there's relatively cleaner electricity on the grid. A person's electricity rate plan information is also incorporated when they have connected to their utility account in the Apple Home app.