Honeywell | THE FUTURE IS WHAT WE MAKE IT

SaMBa Deploy System

SETUP GUIDE

TABLE OF CONTENT

Related Documents

Device	Document Name & Number

Introduction to SaMBa System

Designed specially for Small and Medium Building Portfolios. Small and medium multi-site businesses drive smarter operations, increase occupant comfort, ensure a healthy building environment and reduce energy usage with Honeywell SaMBa. It's an affordable, cloud based solution packed with features and scalable to an enterprise level and offers:

- Anytime, Anywhere Control: Stay connected to all of your building locations from anywhere. Receive alerts and updates on your PC or mobile device to make quick adjustments to the system if needed.
- Optimize Operational Efficiencies: SaMBa is easy to install and maintain. Simple, pictorial dashboards show you alerts and trends. You'll optimize operational efficiencies and business continuity while enjoying more time to focus on your business opportunities.
- Actionable Insights Drive Operational Efficiency: Get alerts whenever parameters vary outside set limits. You'll never need to worry about a refrigerator door being left open, pipes bursting from cold, thermostats being tampered with or other common issues.

The main intension of this deploy app is to configure and commission the devices like Gateway, Smart IO, Thermostat, and Wireless LoRAWAN sensor.

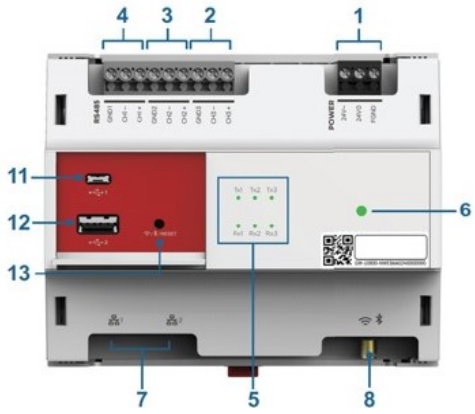
SaMBa System Components

1. **Honeywell Connect Mobile (HCM)** is a mobile application for configuring a site with SaMBa devices and performs the following functions
   a. Configure and Register the gateway
   b. Configure Devices likeThermostat, Smart I/O, Hub and Sensor.
   c. Download configurations to devices.
   d. Upload configurations to Honeywell SaMBa Supervisor.
2. **Honeywell SaMBa Cloud Supervisor** is hosted on Honeywell Forge Cloud Platform. SaMBa Cloud Supervisor monitors and controls SaMBa devices in a building. This provides customers with a way to remotely monitor control and configure their buildings.
3. **SaMBa Gateway**: The gateway performs two way communication it acts as a central command device for all the field devices using local network and also communicates with cloud.
4. **Smart IO** is an input/output device performing the functions of the expansion IO to connect with sensors, VRF, and lighting devices. Smart IO is connected to the gateway through Wireless network (wifi) and Bluetooth. The smart IO can support basic level control logics such as schedule, PID , and so on. This makes the smart IO act independently when the communication has interfered with the gateway.
5. **Thermostat** is a temperature control device that monitors and controls the temperature automatically. It has an HMI for users to view and configure settings in the thermostat. T he Thermostat is connected to RTU through a wired network. RTU is a microprocessor- controlled device which performs the functions of AHU, chiller, and boiler.
6. A variety of **Field Wireless sensors** are supported in SaMBa system. The sensors are lighting level sensor, PIR sensor, VOC sensor, Temperature humidity sensor, and CO2 sensor. These sensors are directly feed the readings to the gateway.

Site Survey & WI-FI signal range

Purpose: To survey the site and determine the best placement of devices prior to installation, use the following steps for best results:

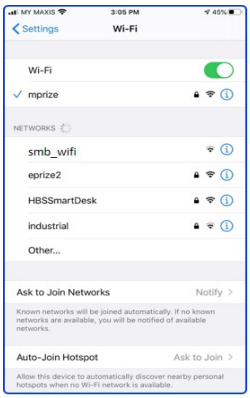
1. Identify the target location to install your SaMBa Wi-Fi devices (Smart IO and Thermostat).
2. Install and power up your Gateway at the decided location.
   a. Connect Gateway to power supply in (**1**). Refer the figure shown below. For more information, refer to the data sheet for the wiring guide and power supply.
   b. Fix the antenna provided to (**8**). Refer the figure shown below.



NOTE:

** For Wi-fi signal range testing, connectivity to a router/ internet is not required.*

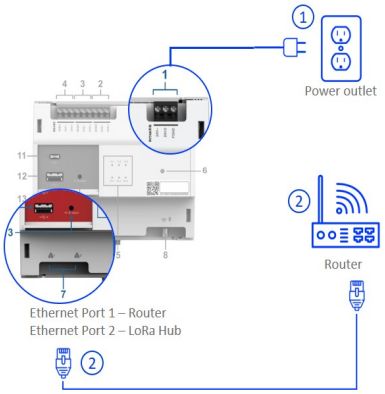
3. Check wi-fi signal strength at target location. The procedure to check wi-fi signal is as follows:
   a. Go to the target location for device installation.
   b. In smart-phone, In your smart-phone, go to Wi Fi settings. Scan for Gateway's SSID "smb_wifi". There is no need to connect for this test. It is recommended to have at least 2 bars and above at that location.



Setting up the Gateway

The procedure to setup the gateway is as follows:

1. Install and power up your Gateway. Follow the procedure as given below:
   a. (**1**) Connect the Gateway to a power supply. Refer the figure shown below.
   b. (**2**) Connect the Ethernet 1 outlet directly to your Router that has Internet connection. Connect Ethernet 2 port to LORA Hub (if being used) with ethernet cable. Refer the figure shown below.



2. Set up range extender for gateway.
3. Add Wi-fi extender.

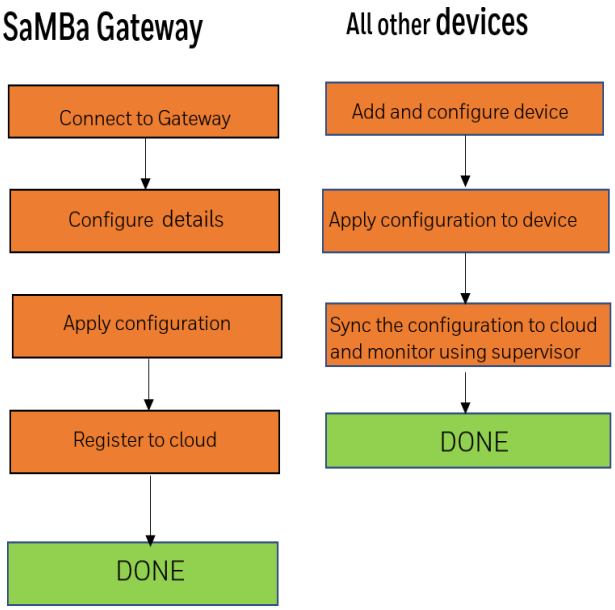
Getting Started With Honeywell Connect Mobile

New users can get access to Honeywell Connect Mobile app through the OnBoarding portal. Contact your administrator to receive an invitation to access Honeywell Connect Mobile. The procedure to start the Honeywell Connect Mobile is as follows:

1. Download and install Honeywell Connect Mobile (HCM) app. from Google Play store for android app. or App store for IOS.
2. Open the application and Login with the credentials provided in the invite mail.

Device Configuration

The purpose of Honeywell Connect Mobile app (HCM) is to configure all the devices available in a particular site. The work-flow for device configuration is as shown below.



Configuring the Gateway

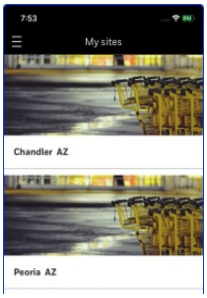
Gateway works as default WiFi access point for the app. The configuration of various devices is downloaded through gateway. The Gateway can also be put in Station Mode. This mode is used when the customer want to use there own Wi-Fi network to connect devices.

NOTE

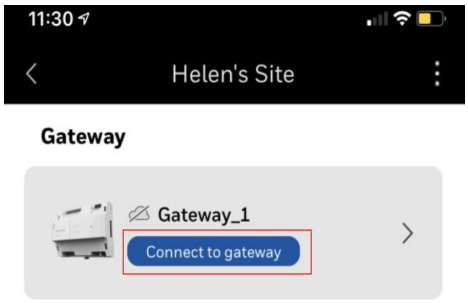
Gateway needs network connectivity to send data to SaMBa Supervisor for monitoring.

The procedure to configure the gateway is as follows:

1. Select the site to be configure from site list. Refer the screen shot shown below.



1. Connect to the Gateway. The procedure to connect to gateway is as follows:
   a. Tap **Connect to gateway** in the Gateway section.

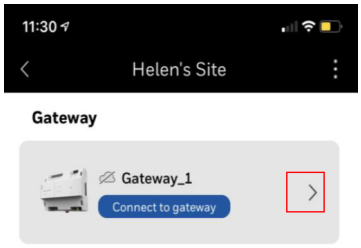


b. Tap **join** to proceed, in the Alert window. Refer screen shown below.

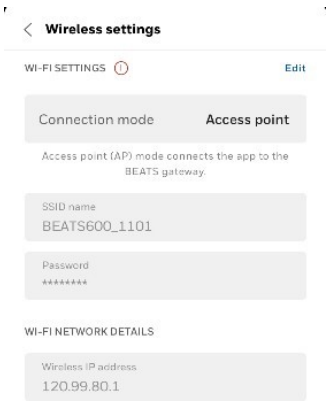
NOTE:

This switches your wi fi connection from internet to the Gateway's network.

c. Tap **>** button to configure the Gateway. Refer the screen shot shown below.



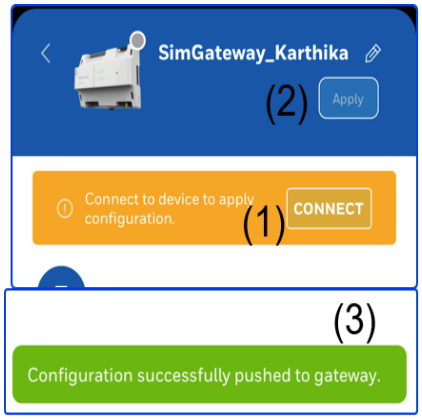
d. Tap **Wireless Settings** in Advance configuration section, to view or edit the weirless settings. Wireless Settings screen appears as shown below.



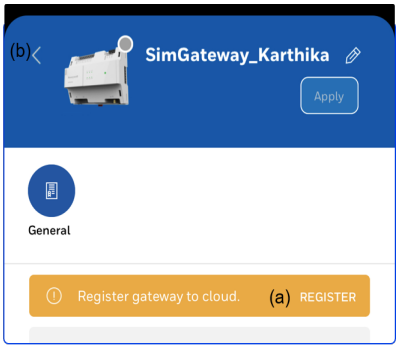
Note

The Gateway has default SSID name and Password to connect with Wi-Fi net- work. Once configuration is completed, it is recommended to change SSID name and password. Refer "Changing SSID for Gateway" Section.

2. Connect and apply configuration to gateway. The procedure to apply configuration is as follows:
   a. In gateway configuration tap **Connect (1)** and then tap **Apply (2),** to connect and Apply configuration to gateway. A confirmation banner appears on the screen **(3) after** successful application of configuration. Refer the screen shot shown below.

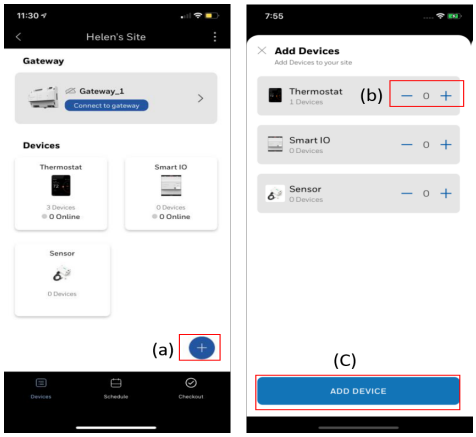


3. Register the gateway to the cloud. The registration procedure is as follows:
   a. Tap **REGISTER** in the banner to register the Gateway to cloud. Refer screen shot shown below.
   b. Tap **<** in the header to navigate back to the site home screen and continue configuration. Refer screen shot shown below.

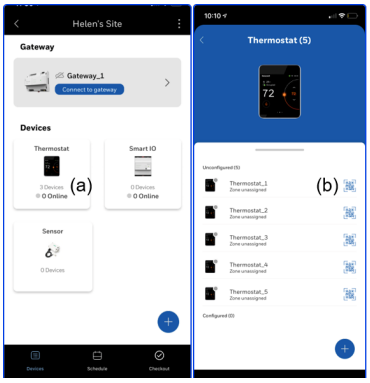


Adding and Connecting Devices

1. Add devices to selected site. The procedure to add devices is as follows.
   a. Tap **+** at the bottom to add devices to the site.
   b. Tap **+/-** next to each device type to adjust no. of devices.
   c. Tap **Add devices** to save the device list.



2. Scan and assign devices. Follow the below procedure.
   a. Tap on the device tile to navigate to device list.
   b. Tap scan icon next to each device in the list to, scan QR code located on all the installed devices.The UUID/ Mac Address/ Serial number is automatically identified and recorded in app database. Refer the screen shot shown below.

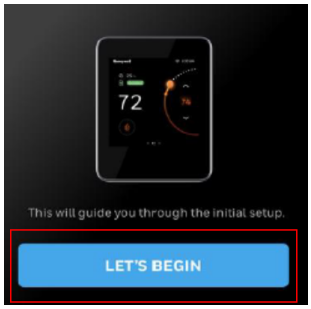


3. Install and power up the devices. Refer the following document:

- Thermostat – Quick start guide
- Smart IO – Documentation
- Sensor - Documentation
- Sensor Hub - Documentation

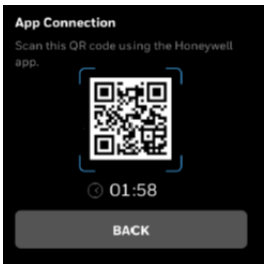
Setting up the Thermostat (HMI)

1. Power on the thermostat to, Connect the Gateway.
2. Tap **LET'S BEGIN** on the first screen to proceed with configuration.



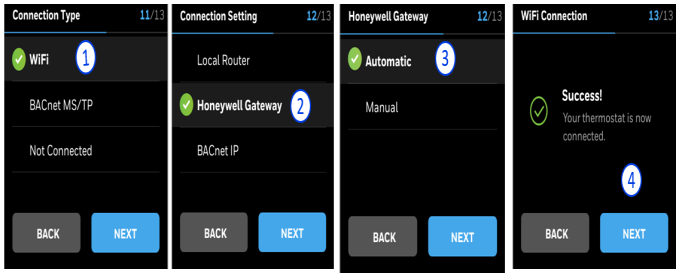
3. Tap **Mobile App**, to configure the thermostat using Mobile App.

4. Scan QR code using Honeywell Connect Mobile App, to add and configure thermostat using App.



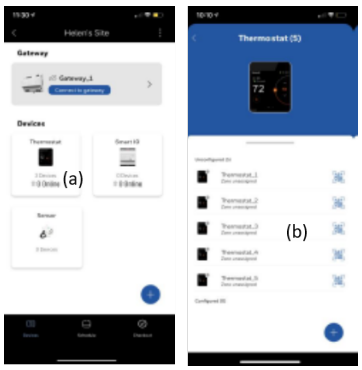
Connecting Thermostat to Gateway

1. Select 'WiFi' as the connection type and tap '**NEXT**'
2. In Connection Setting, select to connect via **Honeywell Gateway** and tap **NEXT**.
3. Select **Automatic** for Honeywell Gateway's connection, then tap '**NEXT**'
4. Once connection is established the scusseful connection screen appears, tap **Next** to exit. Refer the screen shown below.



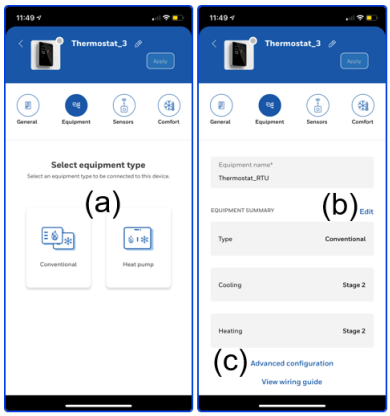
Configuring the thermostat

1. Select thermostat to configure. The procedure is as follows:
   a. Tap on the device tile to navigate to the list of thermostats.
   b. Select the Thermostat from the list to begin configuration.
   c. Tap on the QR icon, then scan the QR code on the thermostat display.

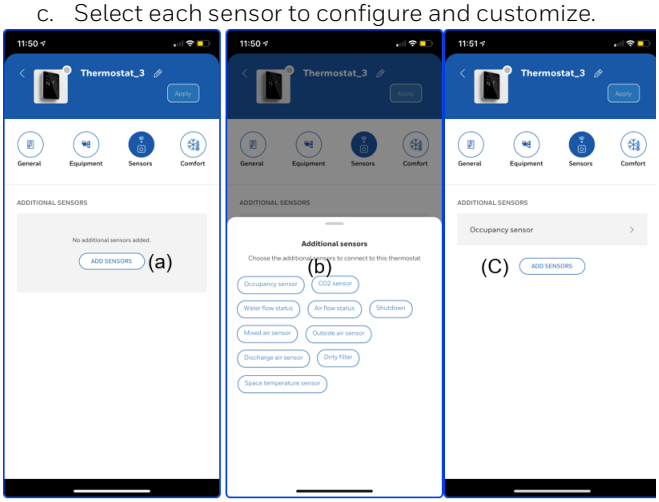


2. Add general details to thermostat and then Tap **Connect** in the banner, to connect device to gateway. Refer the screen shot shown below.

3. Configure equipment connected to thermostat. The procedure to configure is as follows.
   a. Navigate to equipment tab and choose equipment type.
   b. Tap Edit to edit equipment configuration if required.
   c. Tap Advanced Configuration, to customize the thermostat function.



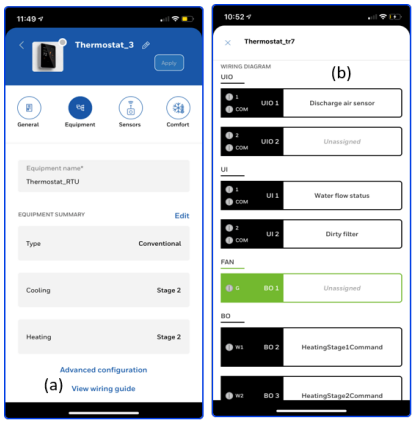
4. Add and Configure sensor. Follow the below procedure.
   a. Navigate to the sensors tab and tap **Add sensors**.
   b. Select the sensors to control the thermostat.
   c. Select each sensor to configure and customize.



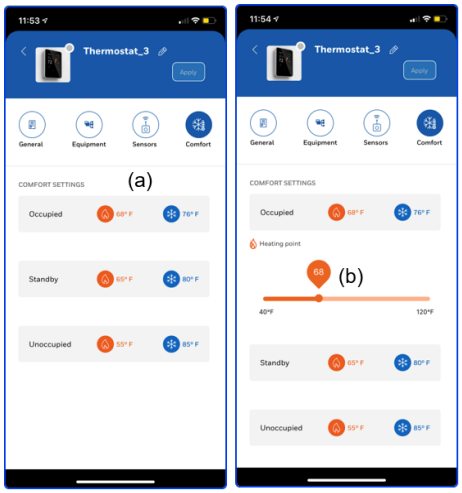
5. Check the wiring guide. The procedure is as follows.
   d. Navigate to the equipment tab and tap on view wiring guide.
   e. Verify that the thermostat and sensor wiring has been done as per the wiring guide.If not correct the wiring and proceed.

NOTE:

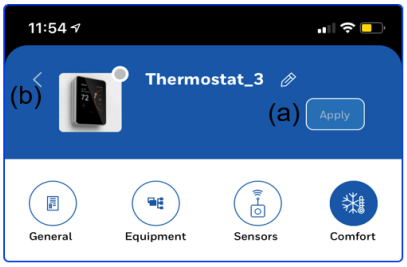
Terminal assignment is done automatically by the app and manual terminal assignment can also be done.



6. Configure the set points. The procedure is as follows.
   a. Navigate to the comfort tab.
   b. Tap on the set point to be adjusted and slide the temperature picker to set the desired set point value.



7. Tap **Apply (a) ,** to apply configuration to thermostat and then tap **< (b)** to navigate back to the device list.



NOTE

The Thermostat comes with factory set SSID name and Password to connect with Wi- Fi network. It is highly recommend to change the SSID name and password after the configuration is done For more details refer "Changing SSID for Thermostat" Section.

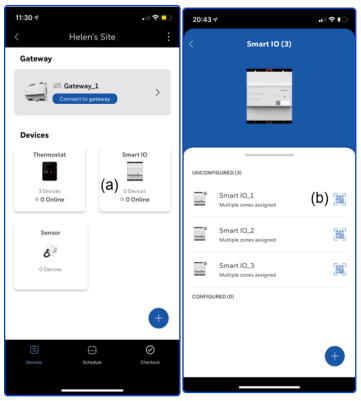
Connecting the Smart IO

1. Scan and assign devices (if not done earlier). Follow the below procedure.
   a. Tap on the device tile to navigate to device list.

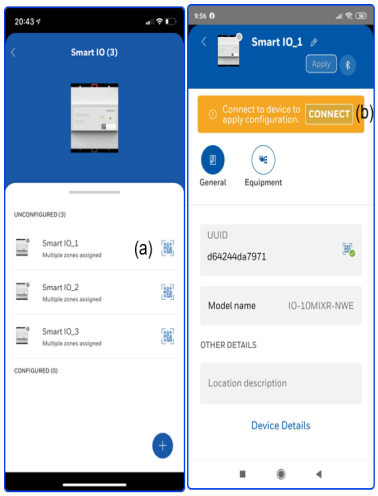
b. Tap QR code icon next to each device in the list to scan and add the UUID/ Mac Address/ Serial number.

NOTE

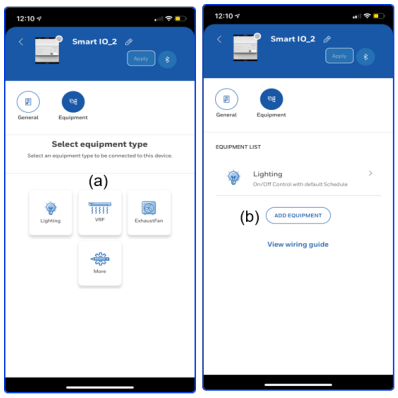
Scan the QR code on all devices to be installed in this step.



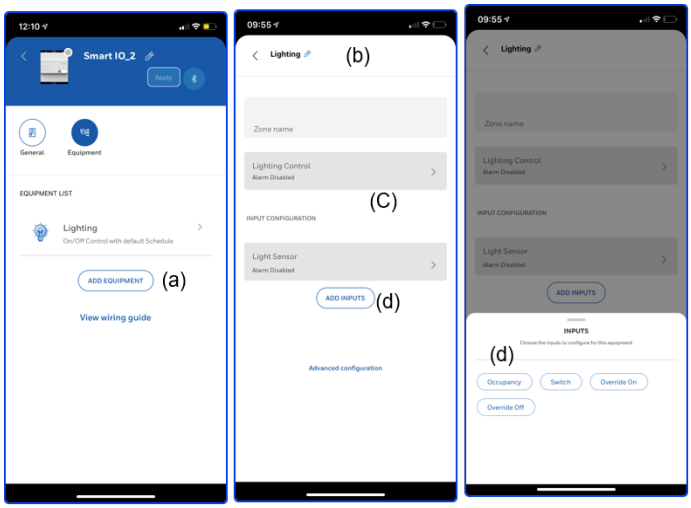
2. Connect the Smart IO to gateway. Follow the below procedure.
   a. Select the Smart IO from the list to begin configuration.
   b. Tap **Connect** in the banner to connect the device to the gateway.



3. Connect equipment to Smart IO.
   a. (a) Navigate to the equipment tab and choose the first equipment to be connected (b).
   b. Tap **ADD EQUIPMENT** (c) to add and connect more equipment.



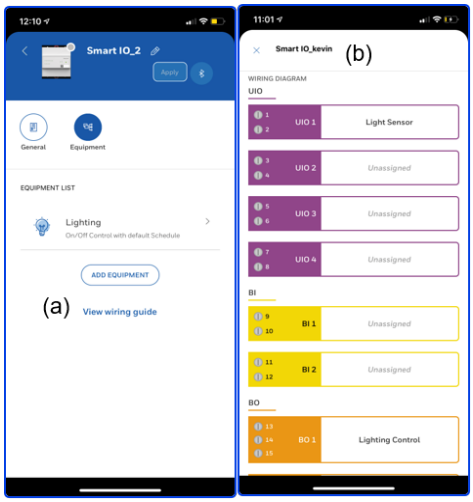
4. Configure equipment. Follow the below procedure.
   a. Select the equipment to configure.
   b. Tap edit icon to change auto generated equipment name.
   c. Select the output parameter (Eg.Lighting control) to configure.
   d. Tap **add inputs** to add inputs as required.



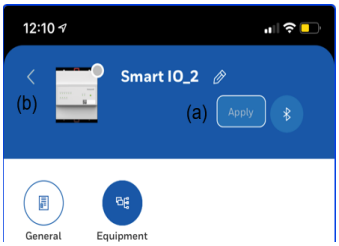
5. Check wiring guide. Follow the below procedure.
   a. Navigate to the equipment tab and tap on view wiring guide.
   b. Verify that the IO and sensor wiring has been done as per the wiring guide. If not correct the wiring and proceed.

NOTE

Terminal assignment is done automatically by the app and manual terminal assignment can also be done.



6. Apply configuration to device. Follow the below procedure.
   a. Tap Apply in the smart IO header, to apply configuration.
   b. Tap on the < in the header to navigate back to the device list.

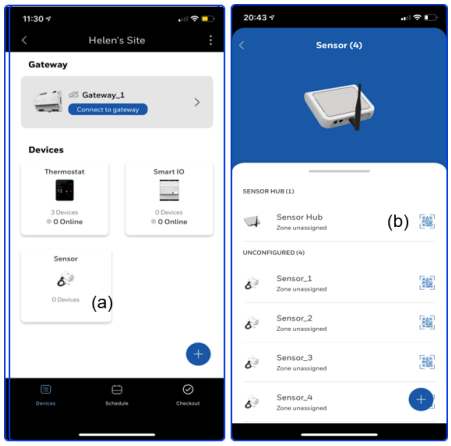


NOTE

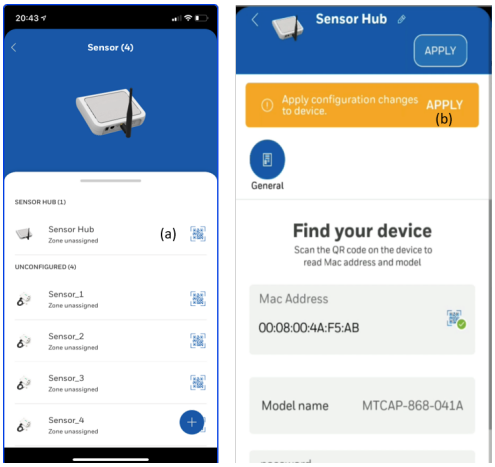
The Smart IO has factory set SSID name and Password to connect with Wi-Fi network. It is recommend to change the SSID name and password after the configuration of Smart IO.

Configuring Sensors Hub

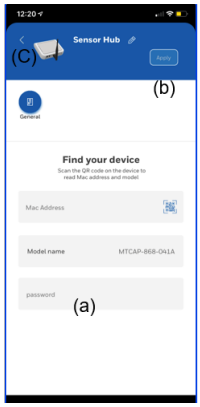
1. Scan and assign device. Follow the below procedure.
   a. Tap on the device tile to navigate to device list.
   b. Tap QR code icon next to each device in the list to scan and add the UUID/ Mac Address/ Serial number.



2. Connect the Sensor hub to gateway
   a. Tap on the sensor hub from the list to begin configuration.
   b. Tap **Apply** in the banner to connect the device to the gateway.

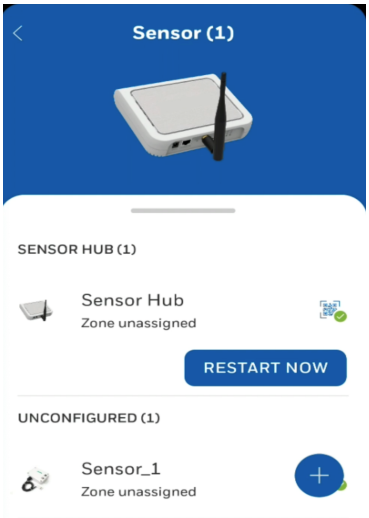


3. Configure and apply. Follow the below procedure.
   c. The password should be automatically read from the QR code. In case this has not appeared, rescan the QR code.
   d. Tap **Apply** in sensor hub header to apply configuration to the sensor hub.
   e. Tap **<** in the header to navigate back to the device list.

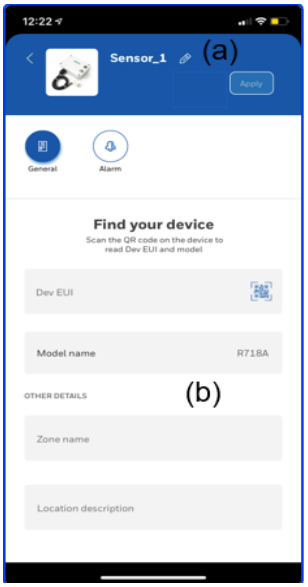


Configuring Sensors

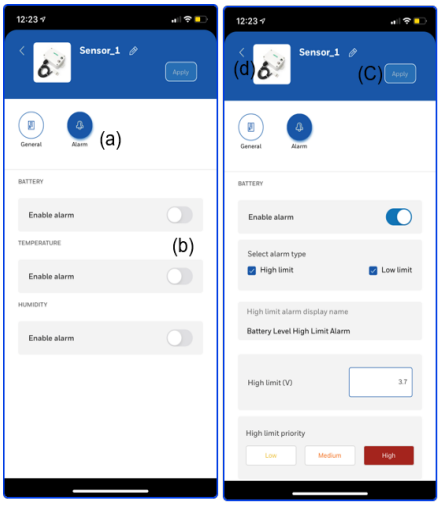
1. Select the device to configure. Follow the below procedure.
   a. Navigate to sensor and sensor hub list.
   b. Select a sensor from the list to begin configuration.



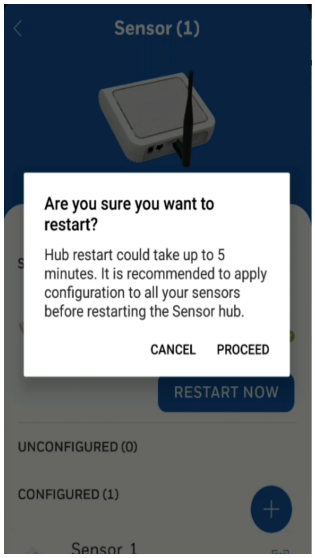
2. Configure the sensor. Follow the below procedure.
   a. Tap edit icon, to edit the auto generated equipment name.This name appears on the supervisor for you to monitor/ control,
   b. Add the other details.



3. Configure alarms and apply. Follow the below procedure.
   a. Tap **Alarm** tab to set up alarms for the sensor.
   b. Enable and configure alarms as needed.
   a. Tap **Apply**, to apply configuration to device.
   b. Tap **<** to navigate back to device list.



4. Restart the sensor hub. After configuring all the sensor and hub, navigate to the deivce list and tap on changes to take effect. This can take up to 6 minutes.



Syncing Data to cloud

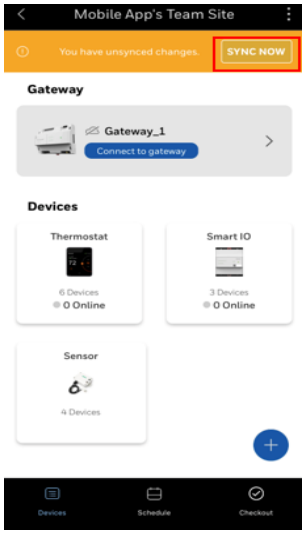
Once all the devices are connected and configured, data is synced to cloud in order to start displaying on the Supervisor. Post this, the site can be monitored and managed through the supervisor.

The procedure to sync data to cloud is as follow:

1. To sync data to cloud, disconnect from the Gateway's network either by switching to a different wi-fi with internet, or using mobile 3G/4G/5G.
2. Navigate to site device list and tap on sync now in banner to upload data to cloud and view on supervisor.

Note

Look out for a notification confirming that sync was successfully completed. Refer the screen shot shown below.

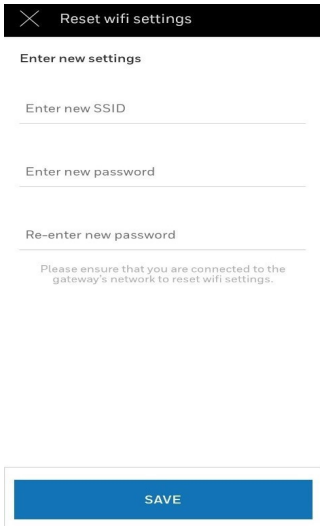


3. View site on supervisor. Log in to the supervisor and navigate to the equipment list. Verify that all the equipment configured in deploy appears correctly on supervisor.

Changing SSID for Gateway

After completion of initial configuration process uers are recommended to change SSID and password, of the gateway. T he procedure to change SSID and password is as follows:

1. Tap Configure on the Site page.
2. Gateway configuration page appears on the screen.
3. Tap Wi-Fi settings under Advanced Configuration section.
4. Tap Reset under Wi-Fi settings section, to change SSID and Password.
5. Reset wifi settings page appears on the screen as shown below.



NOTE

Once the SSID and password is changed, then the SSID and password for Thermostat and Smart IO get updated automatically. If not, then the user has to change SSID and password. For procedure refer "Changing SSID for Thermostat" and "Changing SSID for Smart IO using BLE"

Hard restarting the gateway?

For Hard Resetting the gateway to the default setting, press and hold Reset button on the gateway for about 20 sec. The LED color changes back to orange, this indicates the gateway has reset with default SSID and password.

Changing SSID for Thermostat

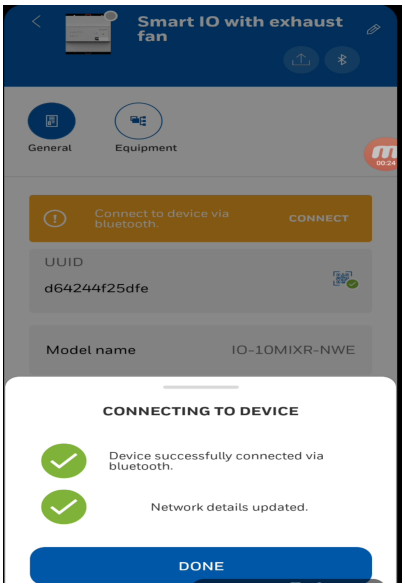
The procedure to change SSID is as follows:

1. Tap **config menu** > **Basic** >**Equipment** and then **Wi-Fi**.
2. Tap **Next** and select the gateway,
3. Tap **Next** to select connection mode.
4. If manual connection mode is selected then enter updated SSID and password. In Automatic mode scan QR code.
5. Tap **Join.**

Changing SSID for Smart IO using BLE

When Smart IO is powered off during the updating of SSID and password. In this scenario follow the below procedure.

1. Connect to Gateway. Add a Smart IO, push config and Sync to cloud are successful..
2. Power OFF the Smart IO.
3. Navigate to Wi-Fi settings in Gateway Advanced configuration screen.
4. Update the SSID. once the SSID is updated Snack bar is displayed on the screen.
5. Navigate to Gateway landing screen and tap **Connect**.
6. Power ON the Smart IO.
7. Navigate to Smart IO General details screen and tap BLE icon displayed next to Apply button in the header.
8. Tap on the Smart IO having UUID in the displayed list of devices. A dialog box appears on the screen stating the “Network details updated” . Refer the screen shot shown below.



9. Tap **DONE** button, to bring the Smart IO ONLINE.

Troubleshooting Chart

Device	Problem	Possible Reason	Solution
	How can I configure my organization and Sites?		• This task can be done in Onboard portal only.
Gateway	Mobile app is not connecting to Gateway's wi-fi network	Wi-Fi range may not be avaliable.	• Ensure that Wi-Fi is enabled on your mobile device • Check whether gateway Wi-Fi LED is ____ green, orange and red. • Check and ensure that you are within the range of the Gateway Wi-Fi. • Navigate to the available Wi-Fi networks in your mobile device's settings and check if 'smb_wifi' is available and selected
	Unable to register the gateway to cloud	Gateway Wi-Fi and internet issue.	• Ensure that you are connected to the Gateway's Wi-Fi and check if the Gateway is connected to the internet. • To determine this, ensure that the LAN cable is plugged into Ethernet 1 and the Gateway's wi-fi LED indicator is 'breathing' green. • If the above steps do not fix the issue, Hard Restart the Gateway and retry.
	Gateway Internet is not showing as green (connected to Internet) in the mobile app	LAN cable is not pugged in properly.	• Ensure that the LAN cable is plugged in and the Gateway's wi-fi LED indicator is 'breathing' green. • If the above steps do not fix the issue, reboot the gateway and retry.
	Push configuration to Gateway failed	Gateway Wi-Fi network issue.	• Ensure that you are connected to the Gateway's wi-fi network and retry. • If the above steps do not fix the issue, reboot the gateway and retry.
	After connecting to gateway network, the connection status and internet shows as grey.	Gateway's wi-fi network issue	• Ensure that you are connected to the Gateway's wi-fi network and retry.
Thermostat	Online status of the thermostat is not updated in site screen.		• In Main page, swipe down to refresh device online status and retry. • If this does not fix the issues, verify if thermostat is connected to smb_wifi. Go to Wireless Settings > WiFi > select Honeywell Gateway • If the above steps do not fix the issue, reboot the thermostat and retry.
	Push configuration to thermostat failed.		• Navigate to device list screen and swipe down to refresh and check the Online status of the thermostat. The thermostat should appear Online if connected. • Refer to the Online status issue in case it is not connected.
	Push button appears as disabled		• Check and ensure that you have scanned the device QR code and updated the device UUID and model in the general configuration tab. Once these details are input, the push button should be enabled.(To be updated further)

Device	Problem	Possible Reason	Solution
Smart IO	Online status of Smart IO is not updated in site screen.		• Swipe down to refresh device online status and retry. • If this does not fix the issue, check and ensure that the Wi-Fi LED indicator on the Smart IO is solid green. • Restart the Smart IO and retry. • If all else fails, cross check that the UUID read by QR code scan with any 3rd party BACnet client tool like Yabe.In case they match, check if the IO is connected to the Gateway using the same 3rd party BACnet client tool .
	Push configuration to IO failed.		• Navigate to device list screen and swipe down to refresh and check the online status of the Smart IO device. The Smart IO should appear online if connected. • Refer to the online status issue in case it is not connected.
	Push button appears as disabled		• Check and ensure that you have scanned the device QR code and updated the device UUID and model in the general configuration tab.(To be updated further).
Common	Sync to cloud from mobile app failed		• In order to sync data to cloud, you must be disconnected from the gateway's wi-fi network and connected to the internet, either through a wi-fi router or 4G network. • Wait for a few moments and retry.
	Site data is not getting displayed in Supervisor.		• Check and ensure that the site data is synced with the cloud. • Check that the gateway is connected to internet and retry.