

INTRODUCTION	3
> Description and characteristics	3
> Webservice HUB Airzone Cloud Dual (AZX6WSPHUB)	3
> Aidoo Pro (AZAI6WSPxxx)	3
> System diagram	4
> Webservice HUB connection diagram with the HomeWorks QS processor	4
> Webservice HUB connection diagram with the HomeWorks QSX processor	5
> Aidoo Pro connection diagram with the Lutron Palladiom thermostat	5
> Specifications and elements	6
> Webservice HUB	6
> Aidoo Pro	6
INSTALLATION	7
> Assembly and Connection	7
> Webservice HUB	7
> Aidoo Pro	7
> System identification	8
CONFIGURATION OF AIRZONE SYSTEMS WITH HOMEWORKS QS	9
> Integration identifiers	9
> Identification of the HVAC zone	9
> Identification of the Lutron thermostat	9
> Configuration with Lutron Designer	9
> Configuration with Airzone Cloud	12
> Linking the Airzone system to HomeWorks QS	12
CONFIGURATION OF AIRZONE SYSTEMS WITH HOMEWORKS QSX	13
> Integration identifiers	13
> Identification of the HVAC zone	13
> Identification of the Lutron thermostat	13
> Configuration with Lutron Designer	13
> Configuration with Airzone Cloud	18
CONFIGURATION OF AIDOO PRO WITH THE LUTRON PALLADIOM THERMOSTAT	19
> Configuration from Lutron Palladiom	19
> Configuration with Airzone Cloud	20
TROUBLESHOOTING	21
> The Airzone system does not detect the Webservice HUB	21
> The Webservice HUB does not connect	21

Introduction

DESCRIPTION AND CHARACTERISTICS

Airzone systems allow integration with Lutron through two devices: the Webserver HUB and the Aidoo Pro. This integration can be carried out through the HomeWorks QS Processor or through the Lutron Palladiom thermostat.

Webserver HUB Airzone Cloud Dual (AZX6WSPHUB)

The Webserver HUB enables the integration of Lutron control systems into Airzone HVAC systems through the Lutron HomeWorks QS/QSX Processor.

The Webserver HUB is a Plug&Play device for Airzone systems that, using the Telnet protocol (in the case of a HomeWorks QS Processor) or through authentication/encryption using LAP and LEAP protocols (in the case of a HomeWorks QSX Processor), enables the following actions to be carried out:

- Control of up to 32 systems.
- Configuration and control of zone and system parameters through Cloud platform.
- Association with router via Bluetooth through the app.
- Multi-user and multi-session.
- Port for integration via Modbus or BACnet MS/TP protocol.
- Integration via Local API.
- Remote update of Webserver firmware and connected systems.
- Remote management and solution of system errors.

The system requires the connection of at least one Airzone Blueface or Blueface Zero thermostat. It enables the HVAC control of each connected zone via Lutron Keypads and the control of time schedules both through the HomeWorks QS/QSX Processor and the Lutron app.

Aidoo Pro (AZAI6WSPxxx)

The Aidoo Pro enables the integration of Lutron control systems into individual HVAC units through the RS-485 port of the Lutron Palladiom thermostat.

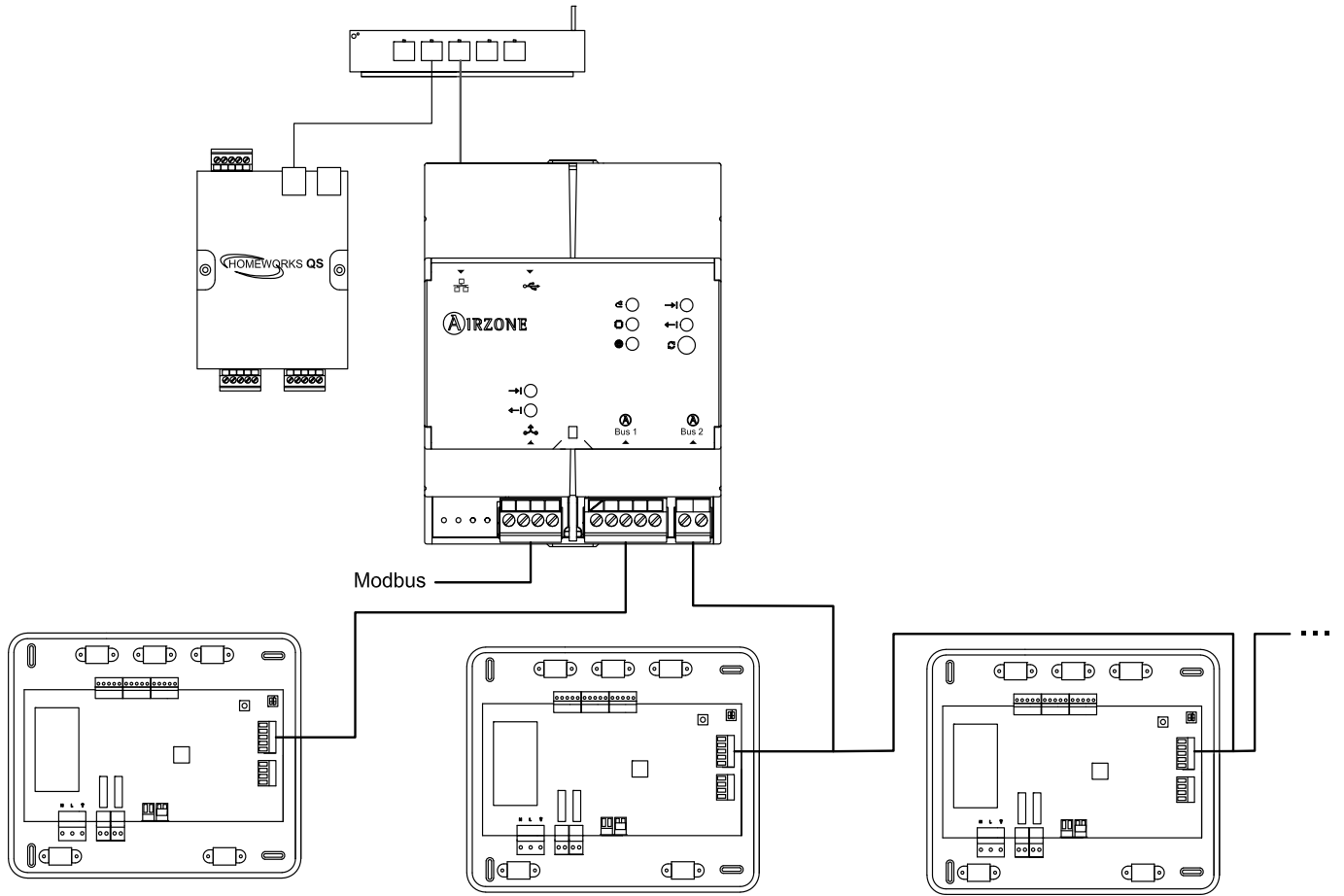
The Aidoo Pro is a Plug&Play device for the control of individual HVAC units, enabling the following actions to be carried out:

- Control of the different HVAC unit parameters:
 - ◇ Control of set point temperature
 - ◇ Control of the operation mode
 - ◇ Control of fan speed
 - ◇ Control of switching the HVAC unit on and off
- Communication via Wi-Fi Dual (2.4/5 GHz).
- Detection of errors during communication.
- Access to device parameter settings via Bluetooth.

SYSTEM DIAGRAM

The typical connection diagram with Lutron is shown below:

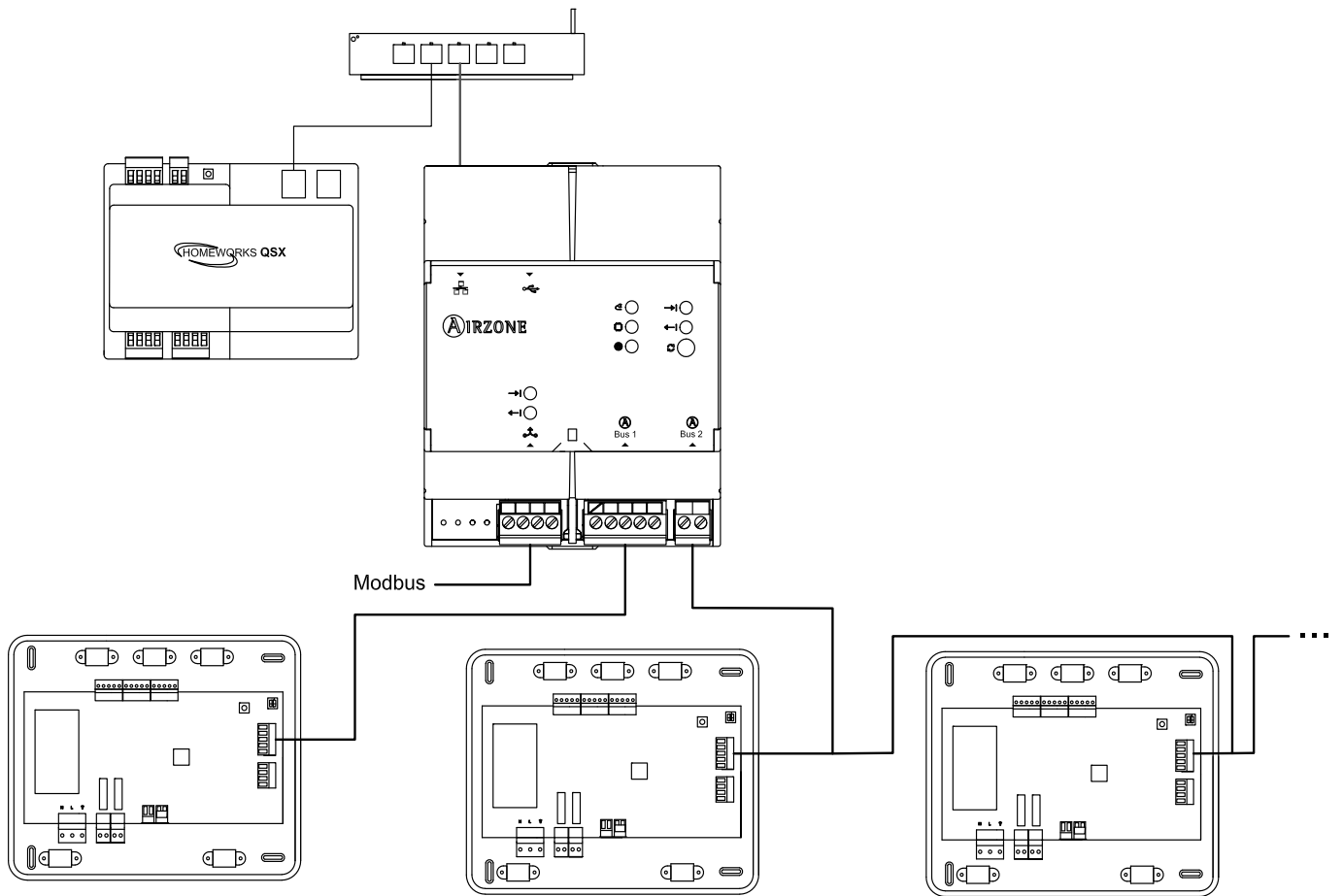
Webserver HUB connection diagram with the HomeWorks QS processor



Important: The Webserver HUB can control up to 32 systems simultaneously from a single Lutron HomeWorks QS system. Each system has an identifier that will be necessary to perform the configuration through Lutron Designer.

Note: The Webserver can be connected to the router via an Ethernet cable or Wi-Fi.

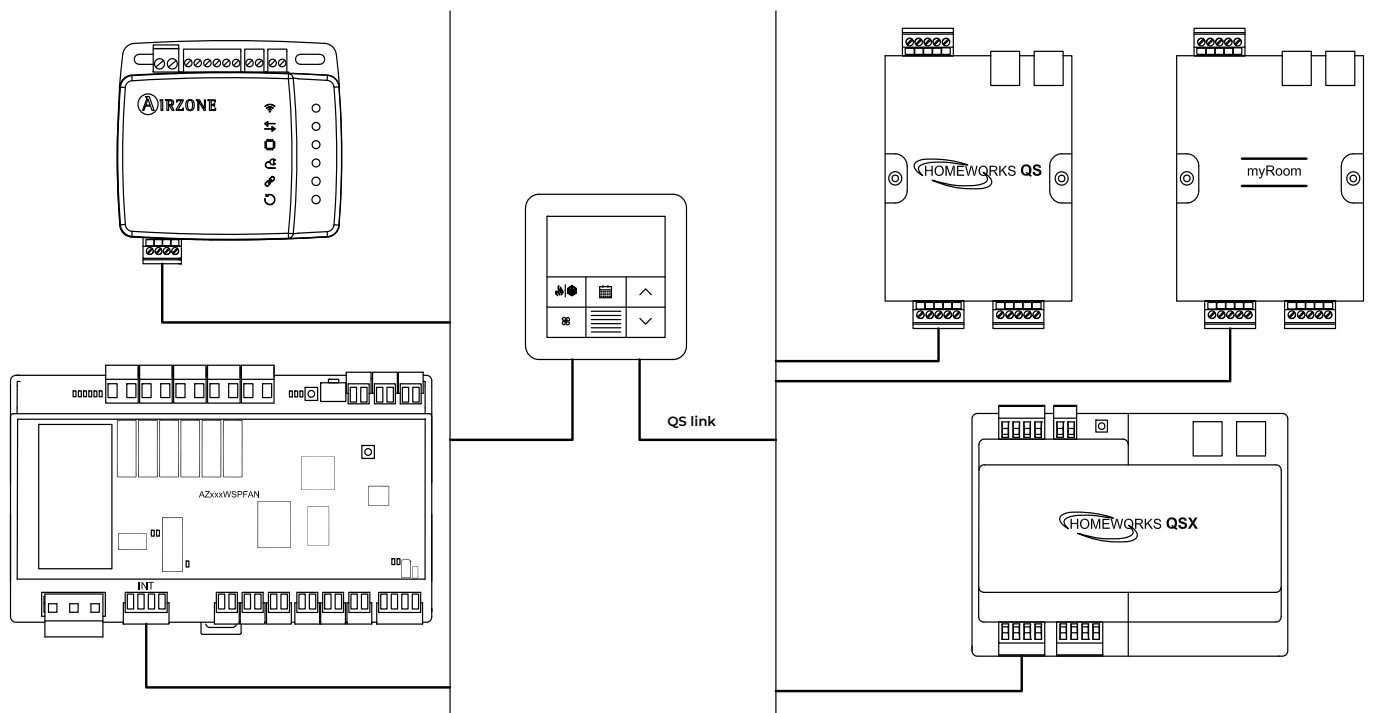
Webserver HUB connection diagram with the HomeWorks QSX processor



Important: The Webserver HUB can control up to 32 systems simultaneously from a single Lutron HomeWorks QSX system. Each system has an identifier that will be necessary to perform the configuration through Lutron Designer.

Note: The Webserver can be connected to the router via an Ethernet cable or Wi-Fi.

Aidoo Pro connection diagram with the Lutron Palladiom thermostat

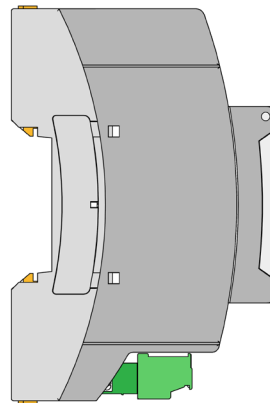


SPECIFICATIONS AND ELEMENTS

Webserver HUB

Power supply and consumption	
Type of power supply	Vac
Max. V	12 V (powered from the system main control board)
Max. I	1.1 mA
Standby consumption	1.3 W
Operating temperatures	
Storage	- 20 – 70 °C (- 4 – 158°F)
Operation	0 – 50 °C (32 – 113 °F)
Operating humidity range	5 – 90% (no condensation)

Ethernet	
Cable type	UTP cat. 5
Standard	100BASE-TX
Default IP addressing	DHCP
Wi-Fi	
Protocol	Wi-Fi CERTIFIED™ 802.11a/b/g/n/ac
Frequency	2.4 GHz (max. 150 Mbps) 5 GHz (max. 433 Mbps)
Maximum power:	19.5 dBm
Maximum distance	100 m (328 ft)
Default IP addressing	DHCP

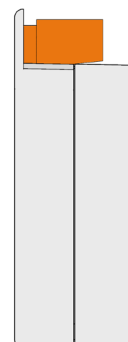
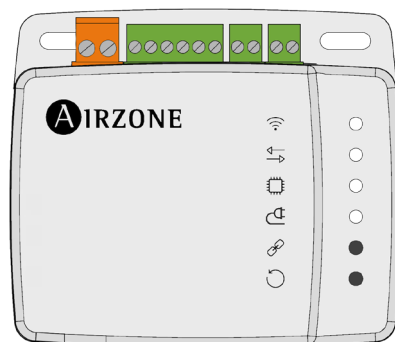


Note: For further information about the Webserver HUB, please refer to the [technical datasheet](#).

Aidoo Pro

Power supply and consumption	
Type of power supply	Vdc
Max. V	18 V
Max. I	2 mA
Consumption	1.85 W
Operating temperatures	
Storage	- 20 – 70 °C (- 4 – 158 °F)
Operation	0 – 45 °C (32 – 113 °F)
Operating humidity range	5 – 90% (no condensation)

RS485 port	
Twisted shielded cable	2x0.22 + 2 x 0.5 mm ² (2 x AWG 23 + 2 x AWG 20)
Communication protocol	RS-485 BACnet MS-TP Even – 19200 bps
Wi-Fi	
Protocol	Wi-Fi CERTIFIED™ 802.11a/b/g/n/ac
Frequency	2.4 GHz (max. 150 Mbps) 5 GHz (max. 433 Mbps)
Maximum power:	19.5 dBm
Sensitivity	- 82 dBm
Default IP addressing	DHCP



Note: For more information about the Aidoo Pro, please visit airzonecontrol.com.

Installation

The Webserver HUB acts as an interpreter using the services defined by the Lutron HomeWorks QS/QSX Processor to connect Airzone and Lutron systems through the Lutron integration protocol. In the case of using an Aidoo Pro to control an individual HVAC unit, the integration will be carried out through the RS-485 port of the Lutron Palladiom thermostat.

Note: The HomeWorks QS Processor and the Lutron Palladiom thermostat must use the Lutron Designer software version 13.0 or above. In the case of implementing the HomeWorks QS Processor, the Lutron Designer software must be version 23.0 or above.

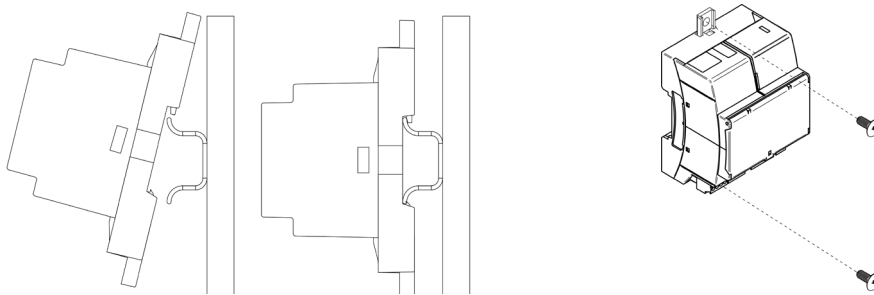
The Webserver HUB is a Plug&Play device that, when connected to the Airzone system main control board and to the HomeWorks QS/QSX Processor (via Ethernet or Wi-Fi), using the Lutron integration protocol, self-configures and configures the system main control board to work with the Lutron system.

Important: When working with the Webserver HUB, at least one Airzone Blueface or Blueface Zero thermostat must be connected at all times.

ASSEMBLY AND CONNECTION

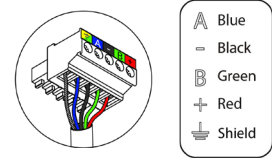
Webserver HUB

The module is DIN rail or surface mounted. The location and assembly of this module must comply with current electronic regulations.



Note: To remove the module on DIN rail, pull the tab downwards to release it.

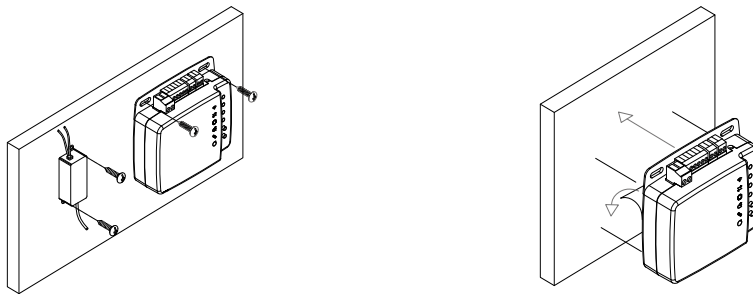
For connection to the first main control board, use the DM1 automation bus's 5-pin terminal to connect the Webserver HUB to the main control board's automation bus. Use the appropriate cable: 4-wire twisted shielded cable: 2 x 0.22 mm² + 2 x 0.5 mm² (2 x AWG 23 + 2 x AWG 20). Fix the cables with the screws on the terminal, following the color code.



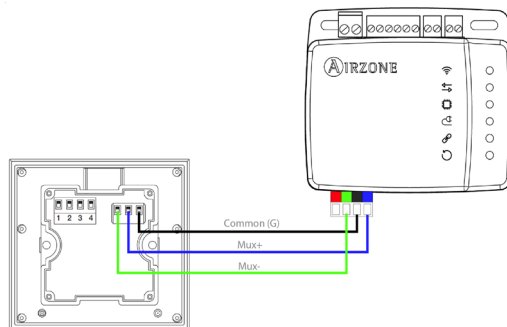
A connection must be established between the Webserver HUB and the Lutron system (either via Ethernet or Wi-Fi). Once the system main control board is connected to the Webserver, it will automatically detect its presence and will set the parameters to enable operation with the Lutron system.

Aidoo Pro

The Aidoo Pro is surface mounted (using screws or double-sided adhesive tape).

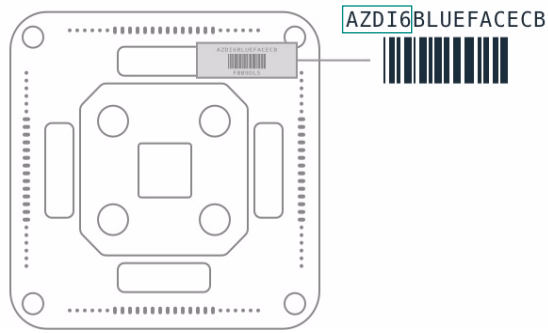


For connection with the Lutron Palladiom thermostat, fix the cables with the screws on the terminal, following the polarity.



SYSTEM IDENTIFICATION

To perform the configuration process, the system must first be identified; to do so, remove the Blueface thermostat from its base and check the code on the label located on the back of the thermostat.



Depending on the code printed on the label, the system will be configured differently. For more information, please refer to the documentation associated with each system:

Classification		Associated documentation	
AZCE6	Flexa 3.0 / Innobus Pro6 system	Quick Guide	Installation Manual
AZDI6	Acuazone / Innobus Pro32 system	Quick Guide	Installation Manual
AZRA6	RadianT365 system	Quick Guide	Installation Manual
AZVAF	VAF system	Quick Guide	Installation Manual
AZZBS	ZBS system	Quick Guide	Installation Manual
AZZS6	2-pipe / 2-wire system	Quick Guide	-

Note: This step is only necessary when the application has a Webserver HUB.

Configuration of Airzone systems with HomeWorks QS

INTEGRATION IDENTIFIERS

Depending on the presence or absence of the Airzone thermostat in the zones, two different configurations are possible.

Regardless of the thermostat used, the HomeWorks QS system will have full control of the zones from the keypads, timers and the Lutron app.

Identification of the HVAC zone

The Airzone system uses HVAC commands to control the set point temperature, operation mode and ventilation mode. The necessary format for this identifier (HVAC Integration ID) is: 1XXYY, where XX is the system number and YY the HVAC zone number.

XX → 01 for Airzone system 1; 02 for Airzone system 2; ... Up to 32 Airzone systems.

YY → 01 for Airzone zone 1; 02 for Airzone zone 2; ... Up to 32 Airzone zones per system (depending on the type of Airzone system).

Example: A HVAC Integration ID for Airzone system 1 and zone 2 will be 10102.

Identification of the Lutron thermostat

The DEVICE identifier is used to exchange the room temperature measured by the Lutron thermostat in the zone with the Airzone system. The necessary format for this identifier (Device Integration ID) is as follows: 2XXYY, where XX identifies the system number and YY the Airzone zone number.

XX → 01 for Airzone system 1; 02 for Airzone system 2; ... Up to 32 Airzone systems.

YY → 01 for Airzone zone 1; 02 for Airzone zone 2; ... Up to 32 Airzone zones per system (depending on the type of Airzone system).

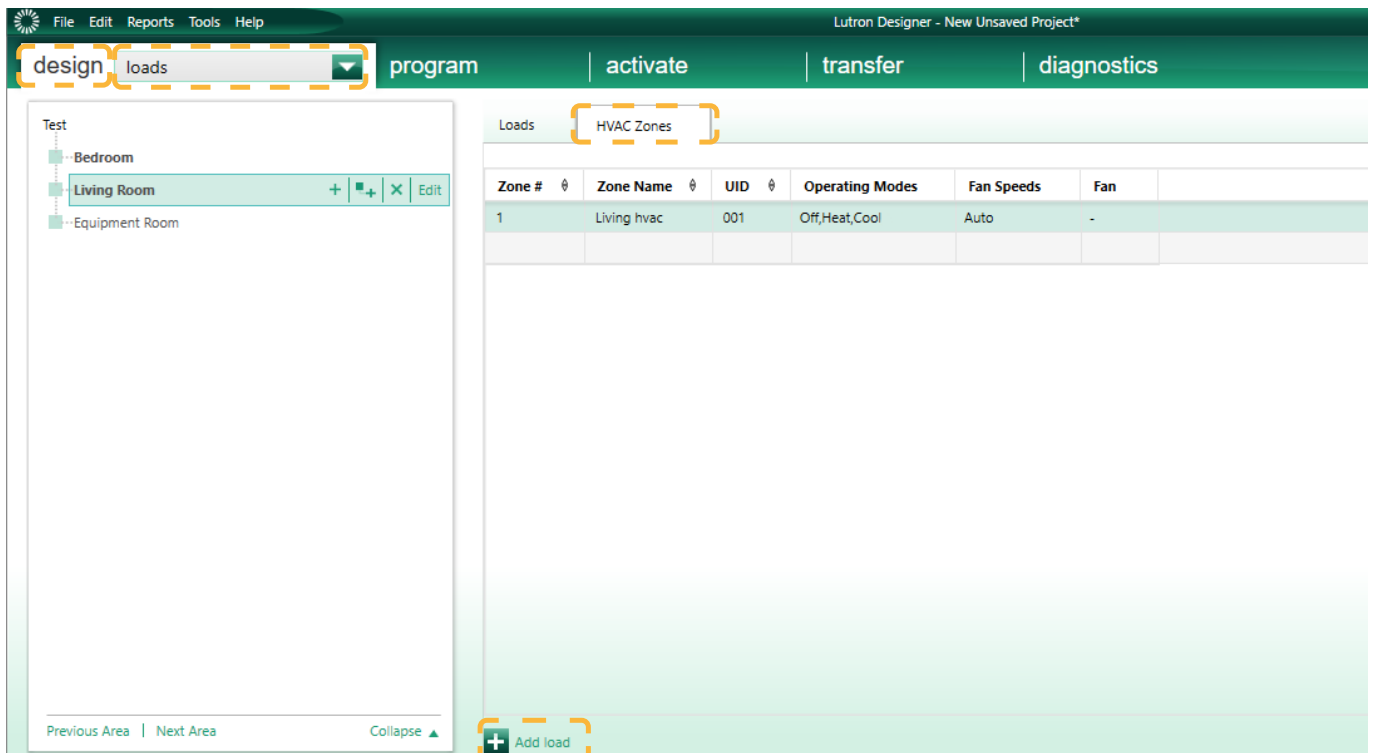
Example: A Palladiom thermostat DEVICE Integration ID for Airzone system 1 and zone 1 will be 20101.

CONFIGURATION WITH LUTRON DESIGNER

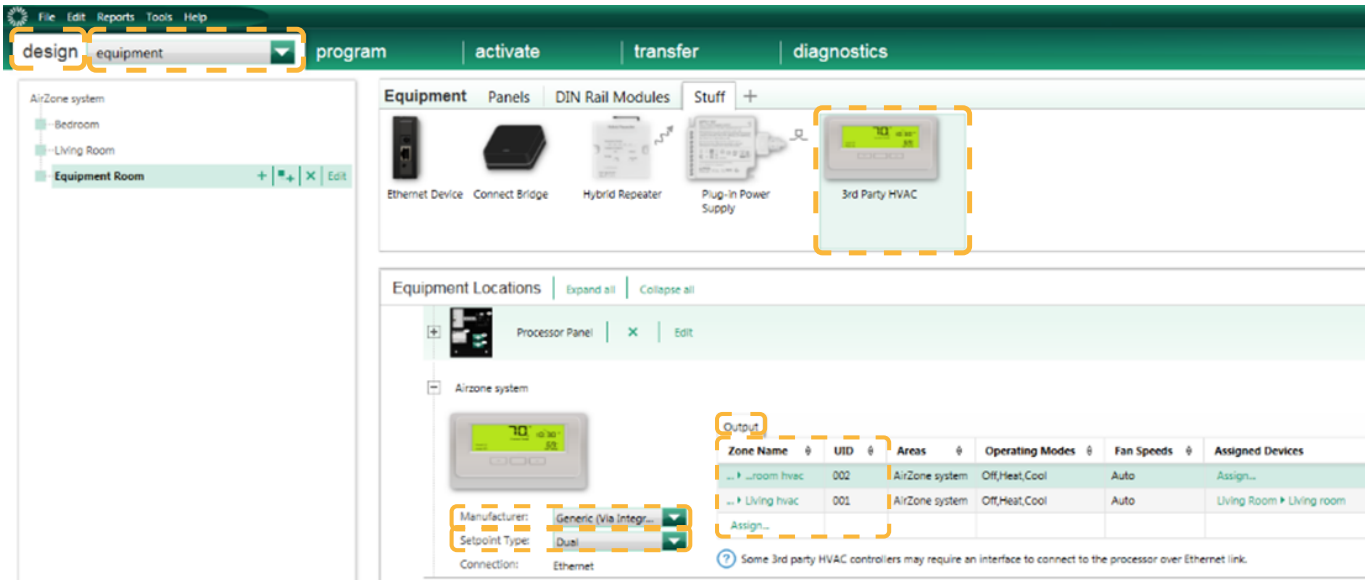
1. Define the HVAC zones in the Lutron Designer software from the *design - loads* menu in the "HVAC zones" tab (by clicking on "Add load") and configure their parameters.

Note: The UID (DEVICE/HVAC Integration ID) must be unique for each zone and will be assigned with the format 2XXYYY or 1XXYYY, depending on whether the zone has a Lutron Palladiom thermostat or not, as described in the "Integration identifiers" section.

Important: For zoned ducted units, Fan Speeds must be set to Auto. The Auto operation mode is only available for North America.



2. Define the Webserver HUB on the *design – equipment* screen. To do so, add a “3rd Party HVAC” device.



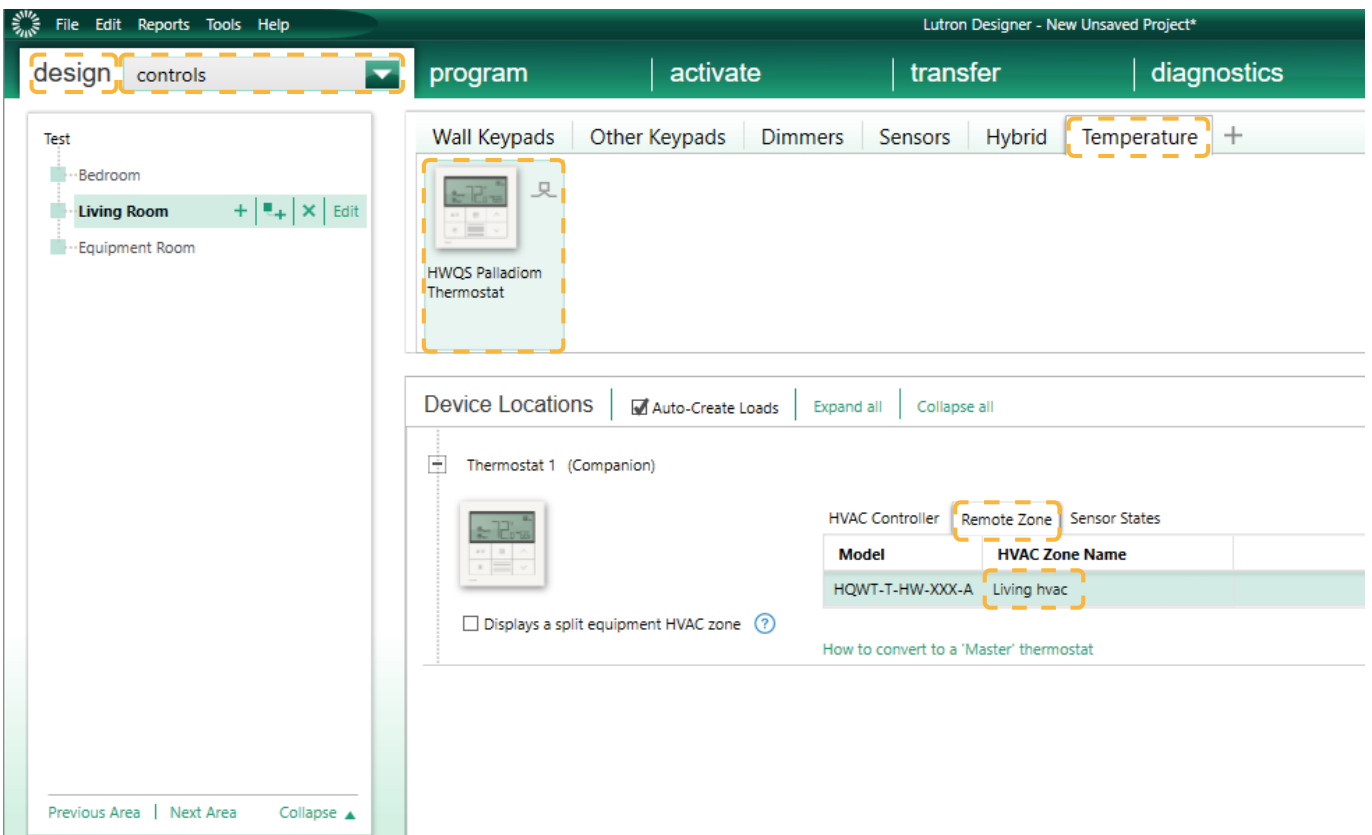
Once the device has been added, select “Generic (via integration)” in the *Manufacturer* drop-down menu and under *Setpoint type* select “Dual” for VAF/ZBS/ZS6 systems or “Single” for Flexa/Acuazone/RadianT systems.

Flexa/Acuazone/RadianT systems only use °C, while VAF/ZBS/ZS6 systems use both °C and °F, so the system must be configured with the same units used in the Lutron project.

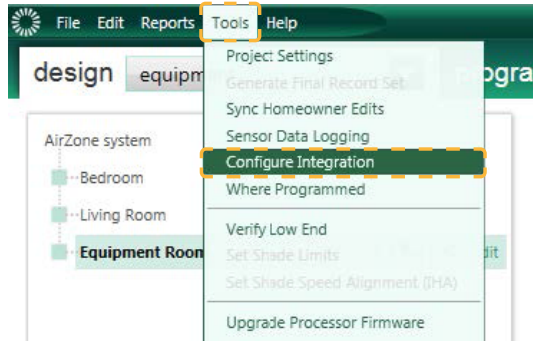
In the “Output” table, click on “Assign” and add all the HVAC zones created previously.

Set the minimum and maximum set point temperature to 19°C and 30°C (66°F and 86°F), respectively. In the case of “Set point Dual”, set the “Minimum Heat/Cool Set point Difference” value equal to that of the Lutron system.

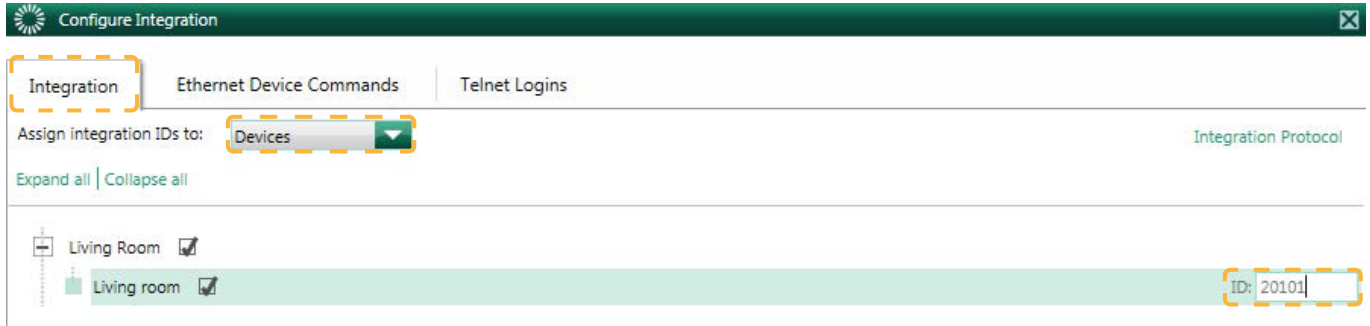
3. If Lutron Palladiom thermostats are used as zone thermostats, add the thermostat on the *design – controls* screen from the “Temperature” tab. The HVAC zone that will control this thermostat must be assigned in the *Remote Zone* parameter.



4. Click on *Tools* in the menu of the top toolbar and select *Configure Integration*.

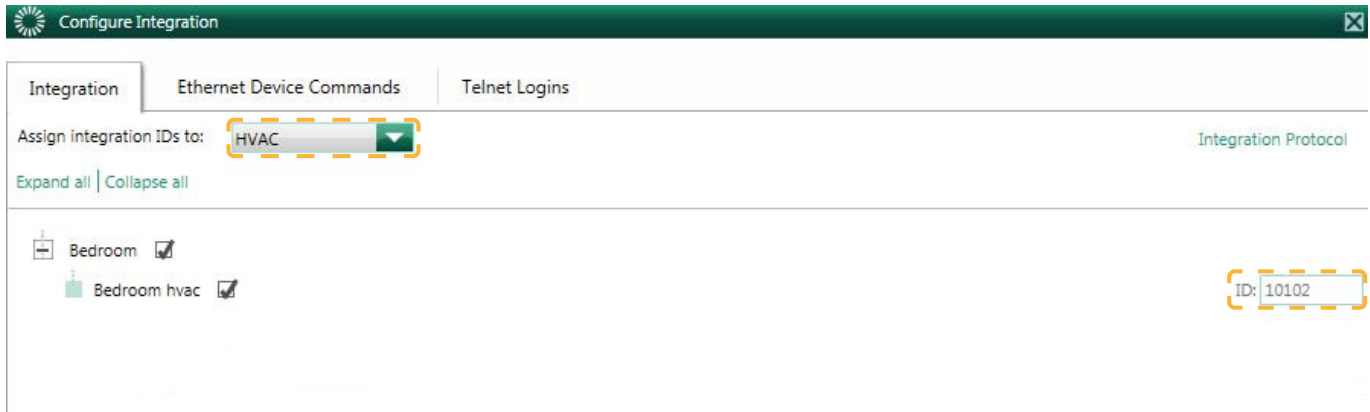


5. Select the *Integration* tab and, in the *Assign integration IDs* drop-down menu, click on "Devices". The *Integration IDs* of the Palladiom thermostats must now be assigned manually with the 2XXYY format as described on page 9.

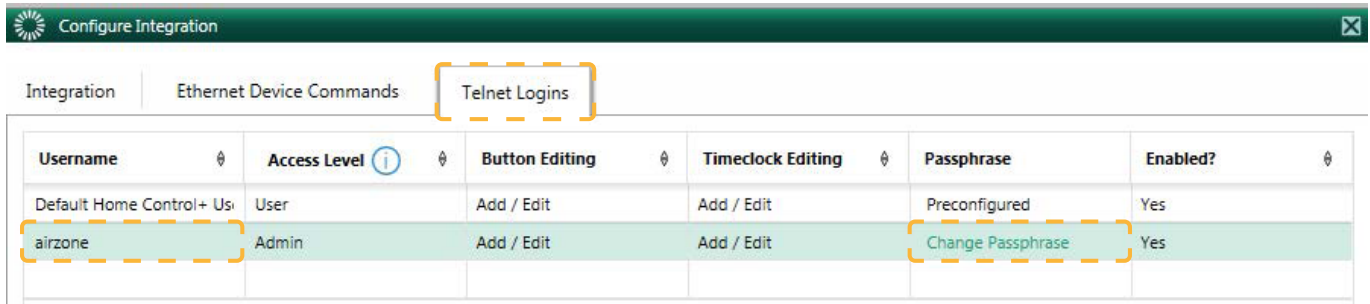


Next, select "HVAC" in the *Assign integration IDs* drop-down menu. The *Integration IDs* of the HVAC zones must now be assigned manually with the 1XXYY format as described on page 9.

Note: The Integration IDs must be unique for each zone.

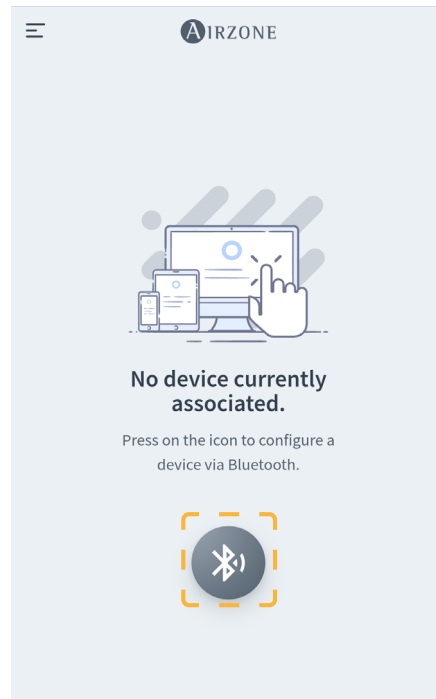
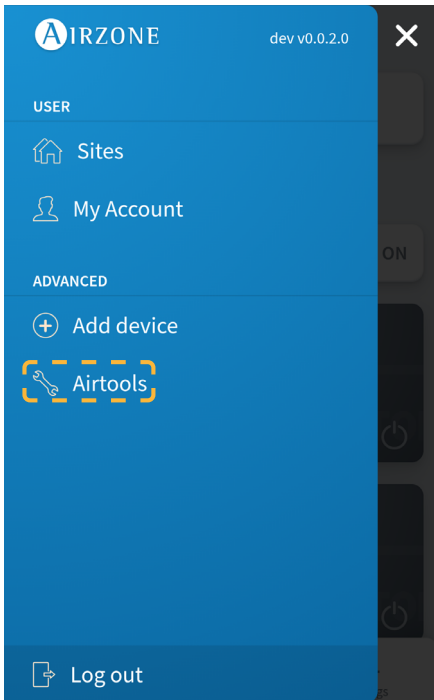


6. Click on the "Telnet Logins" tab on the *Configure Integration* screen. Enter the Username and Passphrase that will be used by the Webserver HUB to make the Telnet connection to the HomeWorks QS Processor.

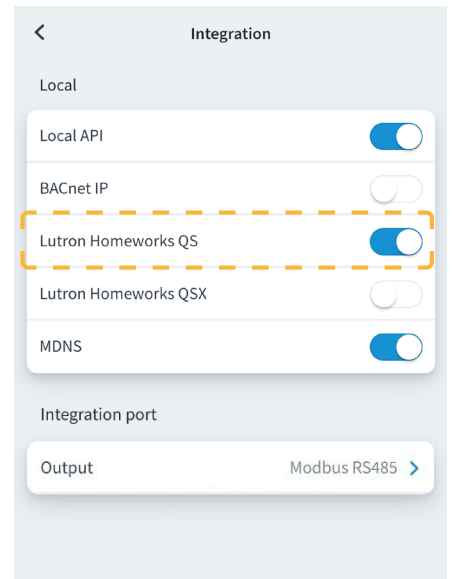
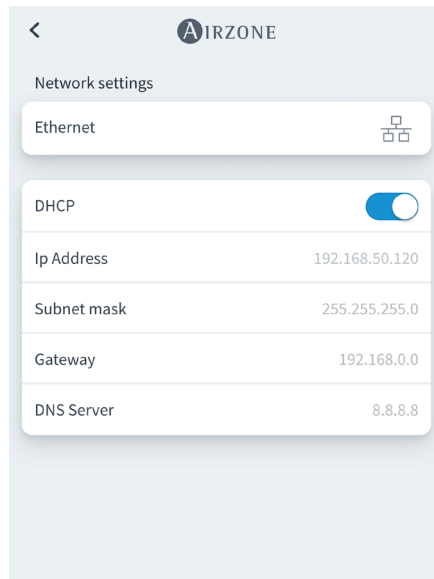
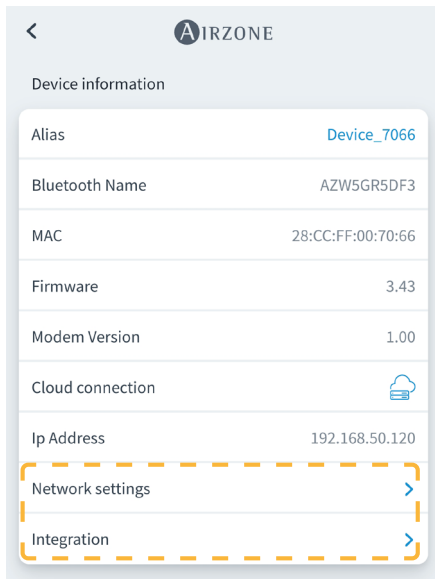


CONFIGURATION WITH AIRZONE CLOUD

Access the Airzone Cloud app and, in the side menu, click on “Airtools” to access the advanced settings. Click on the “Bluetooth” icon to search for devices and select the device that you want to configure.



You can see the *Network settings* in the “Device information” tab. By selecting the *Integration* submenu, you can also choose the type of integration of your system.



LINKING THE AIRZONE SYSTEM TO HOMEWORKS QS

Using a web browser, open the IP address set on the Airzone Blueface thermostat (see the *Configuration of Airzone systems* section), enter the Username “airzone” and the Passphrase “lutron” in the access request pop-up window. Once inside, enter the Username and Passphrase to match those created in the HWQS software in step 6, as described on page 11. In the “Lutron IP Gateway” field, enter the IP address of the Lutron HomeWorks QS Processor and click on “Set IP”.

Configuration of Airzone systems with HomeWorks QSX

INTEGRATION IDENTIFIERS

Depending on the presence or absence of the Airzone thermostat in the zones, two different configurations are possible.

Regardless of the thermostat used, the HomeWorks QSX system will have full control of the zones from the keypads, timers and the Lutron app.

Identification of the HVAC zone

The Airzone system uses *UID* to control the set point temperature, operation mode and ventilation mode. The necessary format for this identifier (*UID*) is: *IXXYY*, where *XX* is the system number and *YY* the HVAC zone number.

XX → 01 for Airzone system 1; 02 for Airzone system 2; ... Up to 32 Airzone systems.

YY → 01 for Airzone zone 1; 02 for Airzone zone 2; ... Up to 32 Airzone zones per system (depending on the type of Airzone system).

Example: A *UID* for Airzone system 1 and zone 2 will be 10102.

Identification of the Lutron thermostat

The *UID* identifier is used to exchange the room temperature measured by the Lutron thermostat in the zone with the Airzone system. The necessary format for this identifier (*UID*) is as follows: *2XXYY*, where *XX* identifies the system number and *YY* the Airzone zone number.

XX → 01 for Airzone system 1; 02 for Airzone system 2; ... Up to 32 Airzone systems.

YY → 01 for Airzone zone 1; 02 for Airzone zone 2; ... Up to 32 Airzone zones per system (depending on the type of Airzone system).

Example: A Palladiom thermostat *UID* for Airzone system 1 and zone 1 will be 20101.

CONFIGURATION WITH LUTRON DESIGNER

1. Define the HVAC zones in the Lutron Designer software from the *design - loads* menu in the "HVAC zones" tab (by clicking on "Add load") and configure their parameters.

Note: The ID must be unique for each zone and will be assigned with the format *2XXYYY* or *1XXYYY*, depending on whether the zone has a Lutron Palladiom thermostat or not, as described in the "Integration identifiers" section.

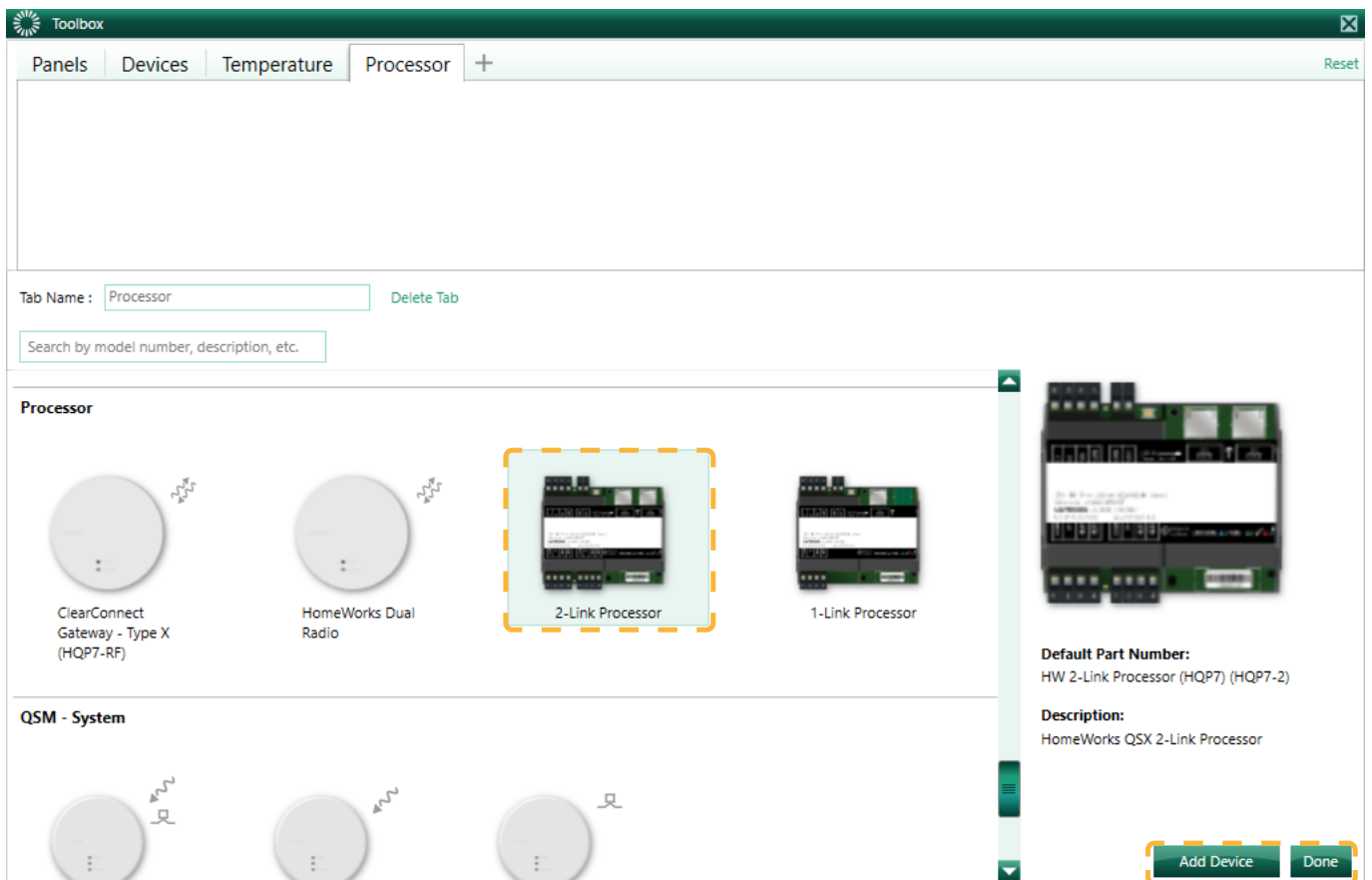
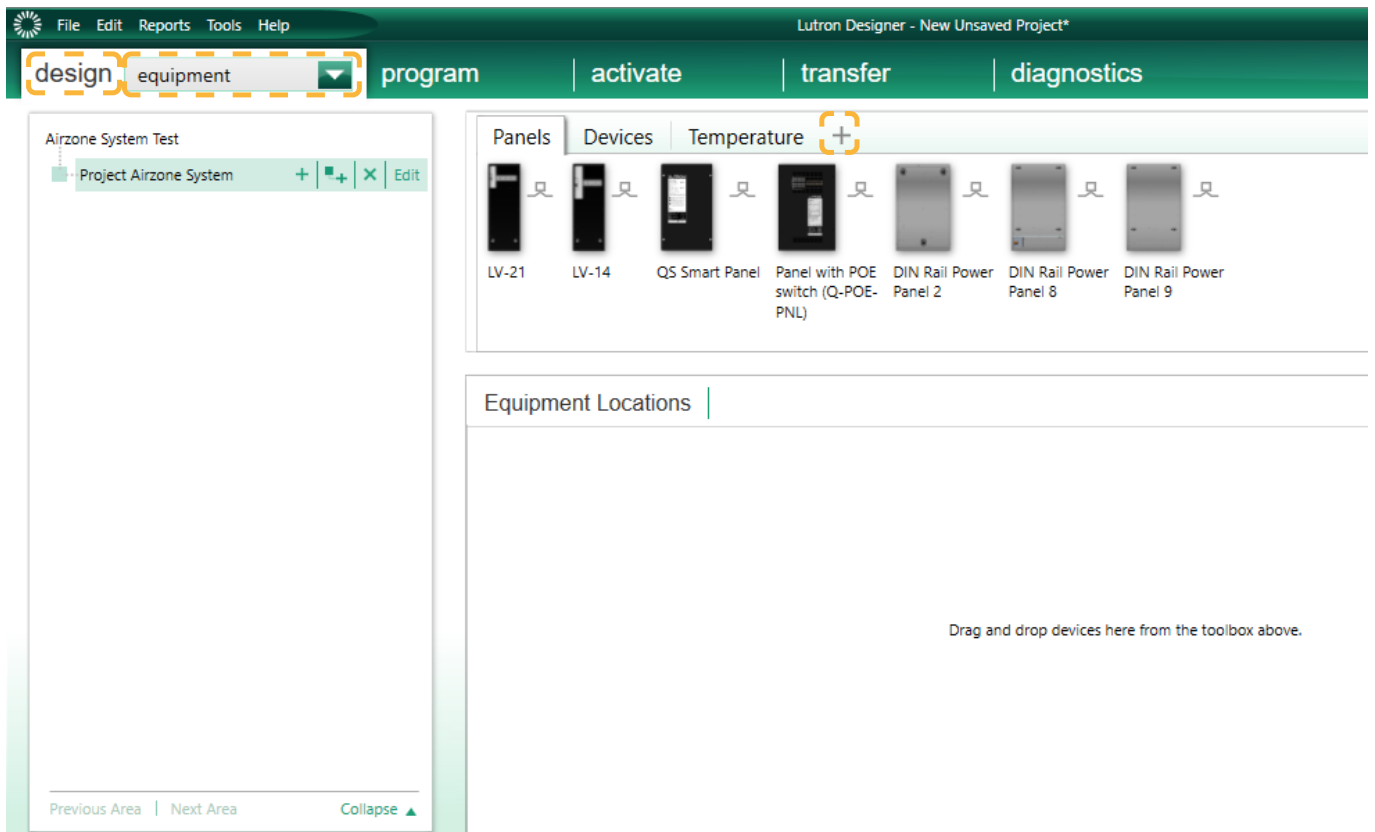
Important: For zoned ducted units, Fan Speeds must be set to Auto. The Auto operation mode is only available for North America.

The screenshot shows the Lutron Designer software interface. The top menu bar includes 'File', 'Edit', 'Reports', 'Tools', and 'Help'. The main window is titled 'Lutron Designer - New Unsaved Project*'. The 'design' tab is active, and the 'loads' dropdown menu is open, showing 'HVAC Zones' selected. The 'HVAC Zones' table is displayed with the following data:

Zone #	Zone Name	UID	Operating Modes	Fan Speeds	Fan
1	Room 1	10101	Off,Heat,Cool	Auto	-
2	Room 2	10102	Off,Heat,Cool	Auto	-
3	Room 3	20103	Off,Heat,Cool	Auto	-

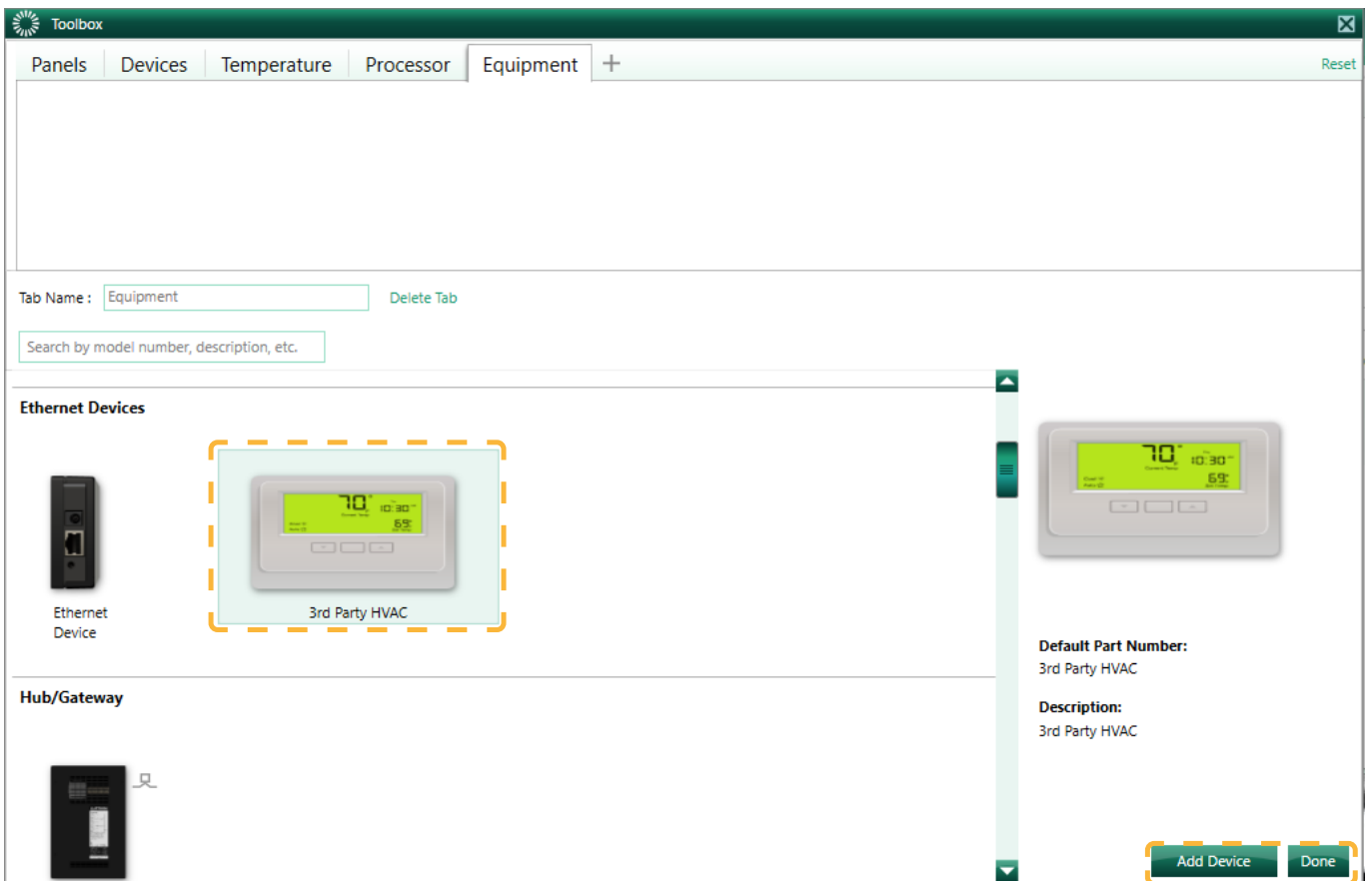
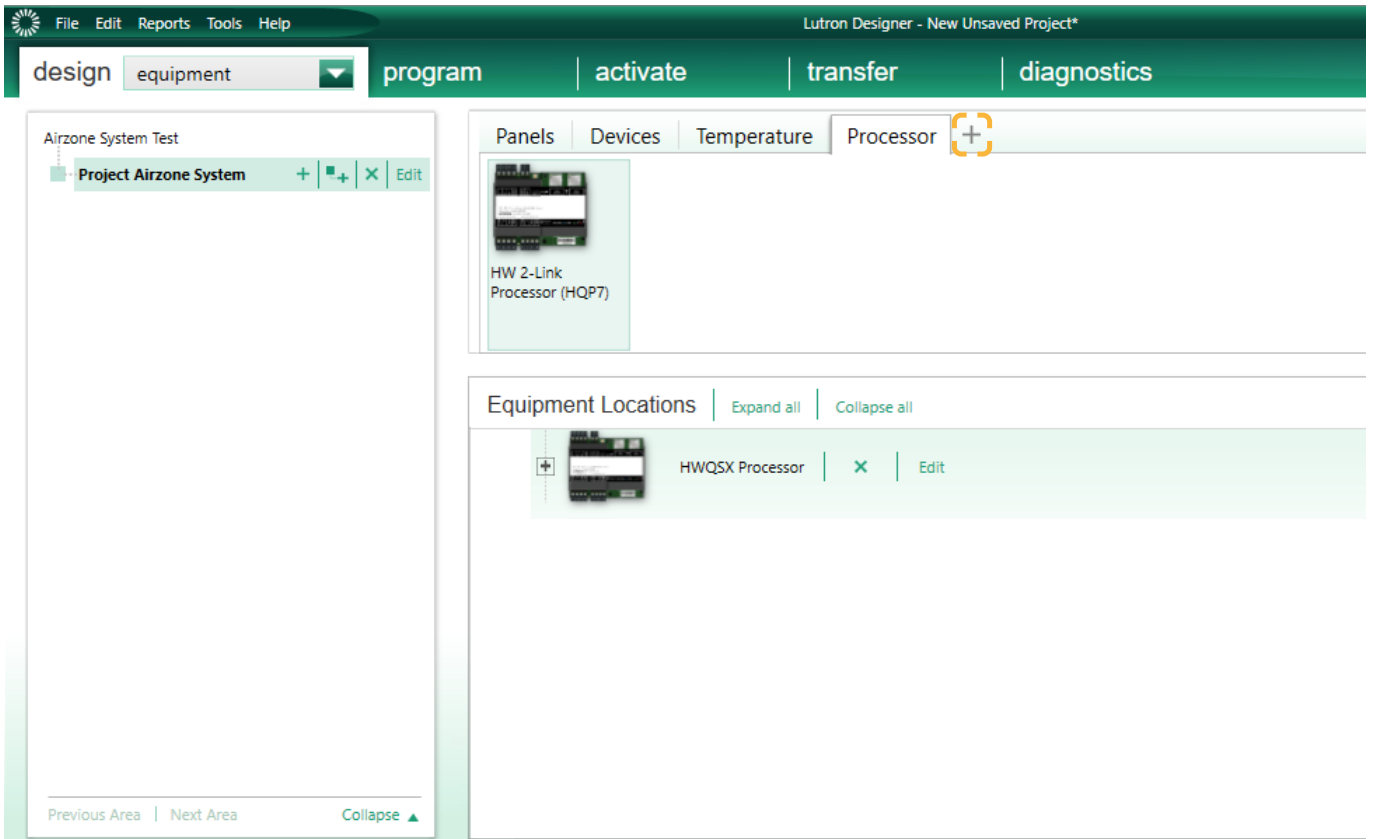
The 'Add load' button is visible at the bottom right of the interface.

2. Define the Webserver HUB on the *design – equipment* screen. To do so, first create a new group in the *Toolbox* and add the processor.



Note: This step is only necessary when installing for the first time.

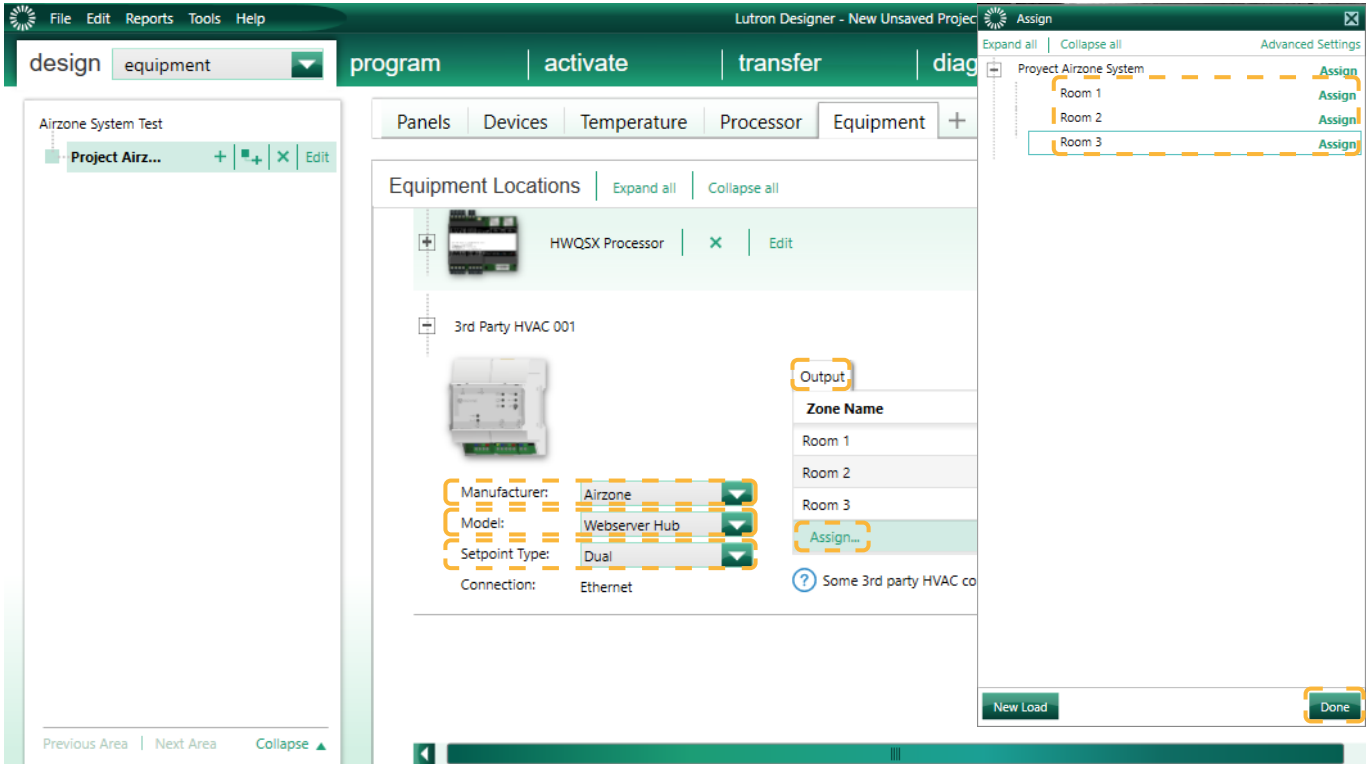
Then, create another group in the *Toolbox* and add a "3rd Party HVAC" device.



Once the device has been added, select "Airzone" in the *Manufacturer* drop-down menu, under *Model* select "Webserver HUB" and under *Setpoint type* select "Dual" for VAF/ZBS/ZS6 systems or "Single" for Flexa/Acuazone/RadianT systems.

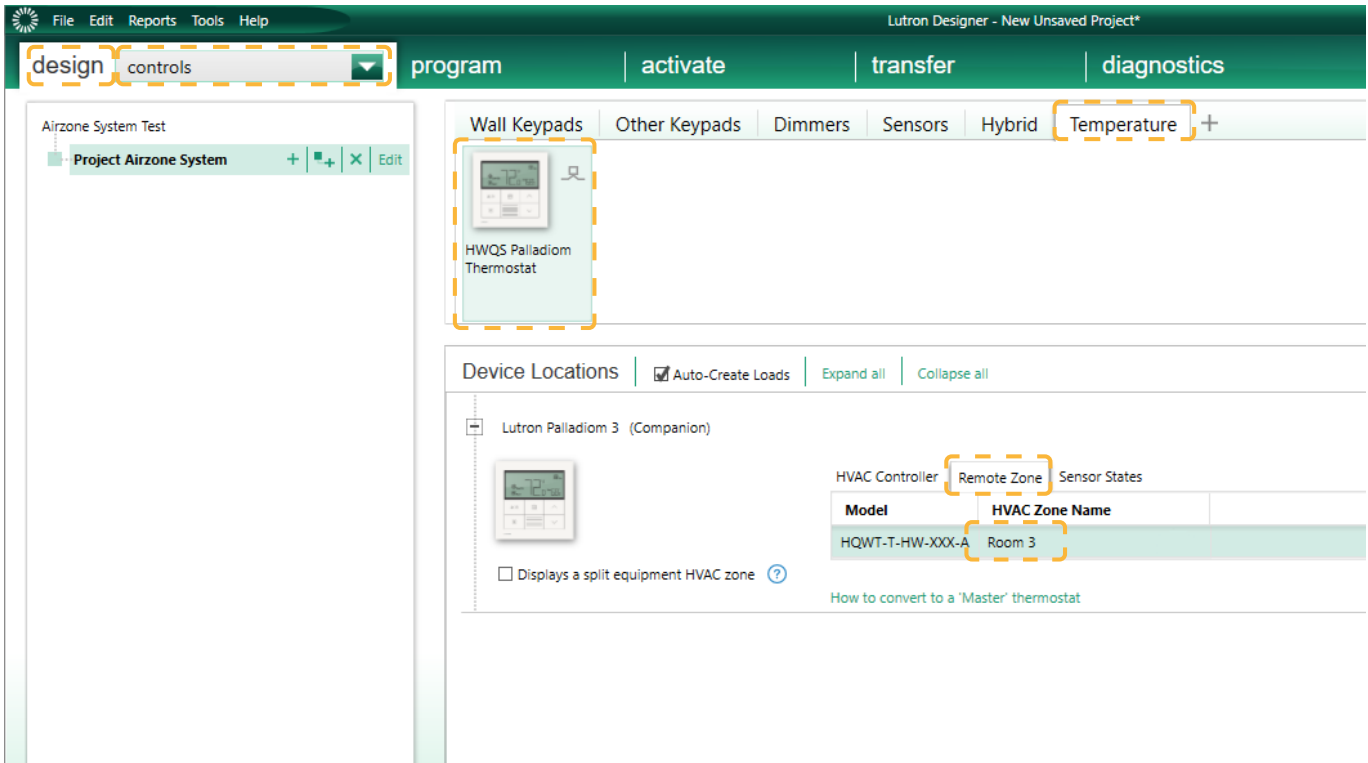
Flexa/Acuazone/RadianT systems only use °C, while VAF/ZBS/ZS6 systems use both °C and °F, so the system must be configured with the same units used in the Lutron project.

In the "Output" table, click on "Assign" and add all the HVAC zones created previously.



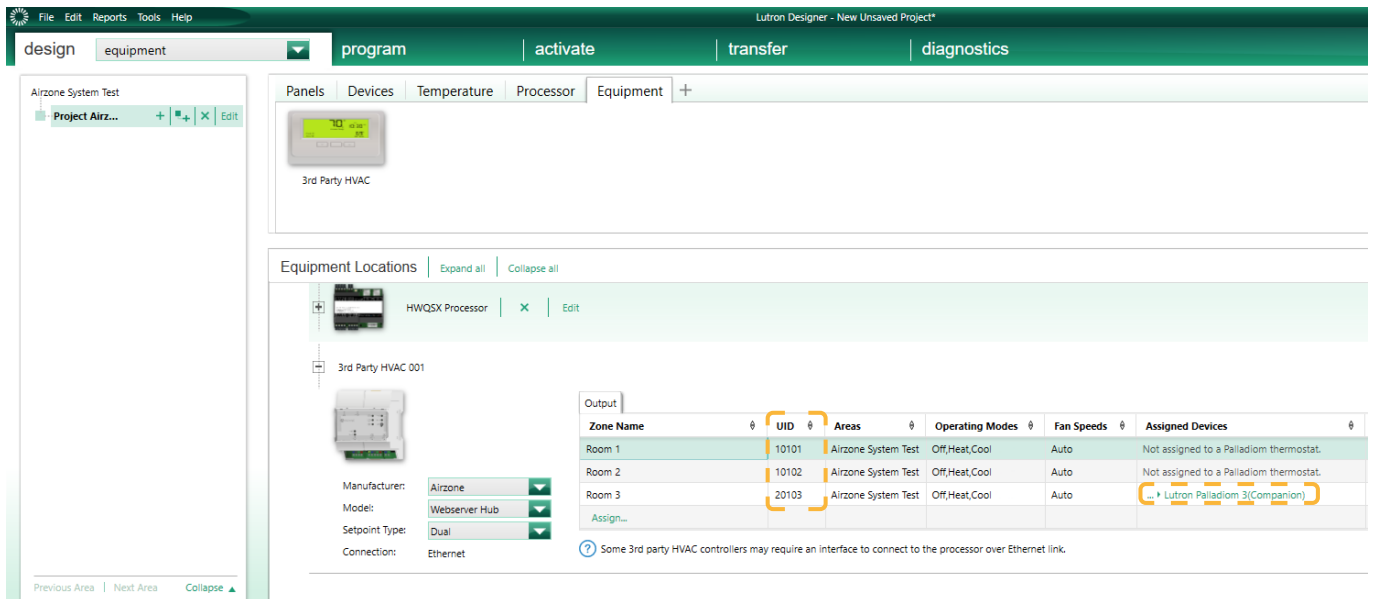
Set the minimum and maximum set point temperature to 19°C and 30°C (66°F and 86°F), respectively. In the case of "Set point Dual", set the "Minimum Heat/Cool Set point Difference" value equal to that of the Lutron system.

- If Lutron Palladiom thermostats are used as zone thermostats, add the thermostat on the *design – controls* screen from the "Temperature" tab. The HVAC zone that will control this thermostat must be assigned in the *Remote Zone* parameter.



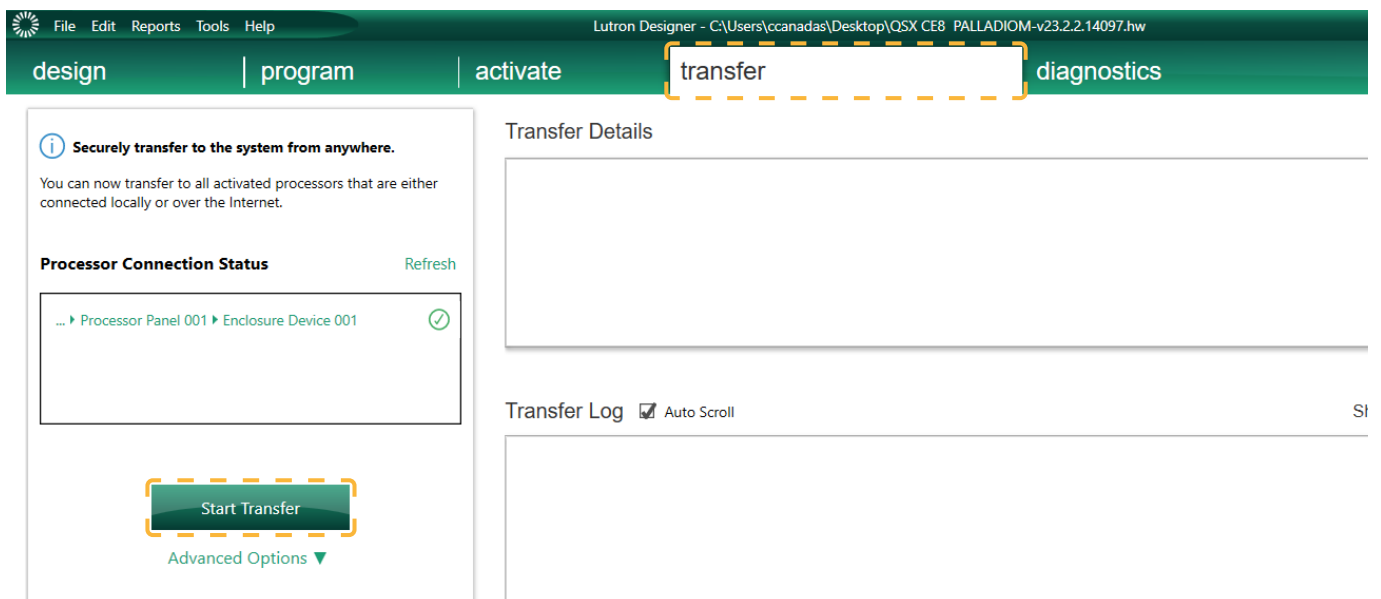
Note: This step is only necessary when installing for the first time.

4. Return to the *design – equipment* screen and check that the data have been updated correctly.



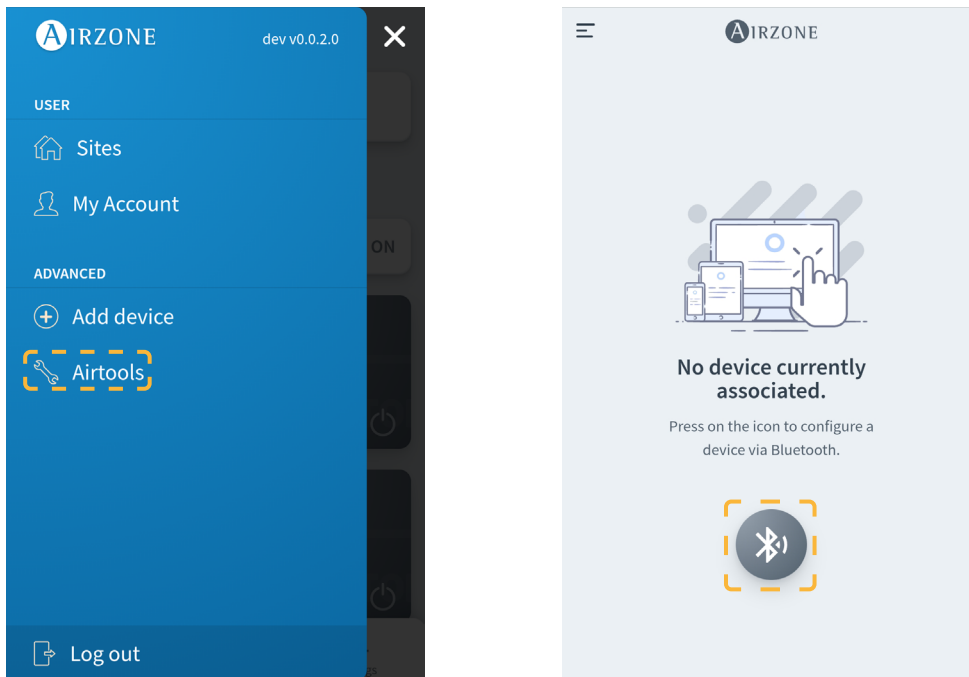
Note: The UID must be unique for each zone and will be assigned with the format 2XXYYY or 1XXYYY, depending on whether the zone has a Lutron Palladiom thermostat or not, as described on page 13.

5. Once all the zones are defined and associated, select the *transfer* screen and start transferring the configuration to the processor.



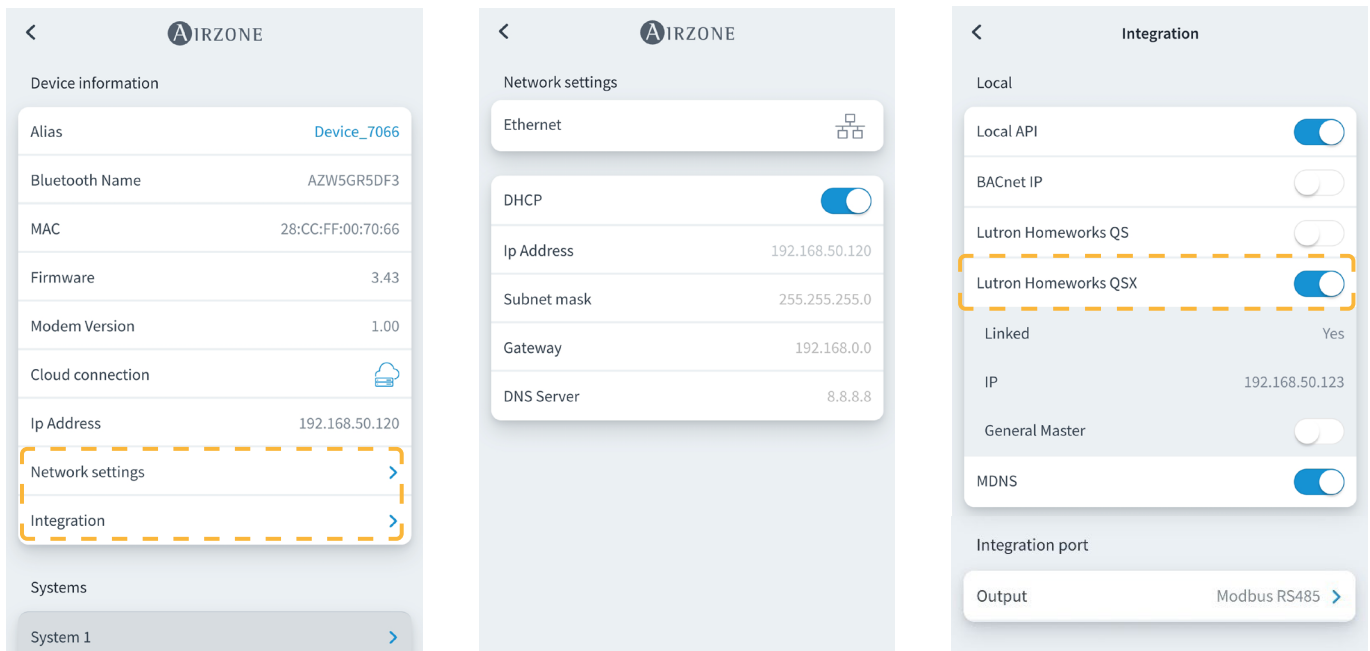
CONFIGURATION WITH AIRZONE CLOUD

Access the Airzone Cloud app and, in the side menu, click on “Airtools” to access the advanced settings. Click on the “Bluetooth” icon to search for devices and select the device that you want to configure.



You can see the *Network settings* in the “Device information” tab. By selecting the *Integration* submenu, you can also choose the type of integration of your system.

Note: The Lutron HomeWorks QSX Processor is available in the Webserver HUB from version 3.44.



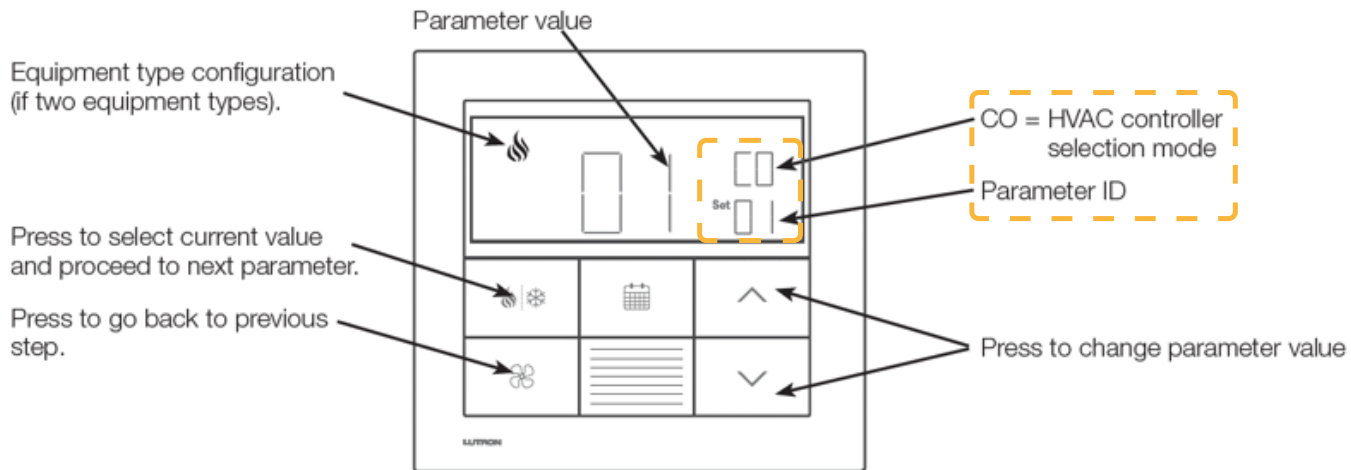
After enabling integration with the Lutron HomeWorks QSX Processor, 3 parameters appear:

- Linked.** This indicates whether Airzone has been linked to Lutron. Both systems must be on the same network (Wi-Fi or Ethernet) and the association process must have been enabled at least once on the Lutron HomeWorks QSX Processor (by pressing the button on the processor). To delete a previous link, a factory reset can be performed from the Webserver (by pressing for 10 seconds or longer) or from the Airzone Cloud app by following the **Airtools** → **Bluetooth** → **Factory reset** path. Once the parameter status is active, the Airzone system zones will be linked to the Lutron HVAC zones.
- IP.** This defines, on an informative basis, the association between the Lutron HomeWorks QSX Processor and the Webserver HUB. It is possible to control several Lutron processors with a single Webserver, provided they are on the same network. If it is necessary to divide the application with several processors and webserver, different IP ranges must be used to share the same physical interface with different configurations.
- General Master.** If this option is enabled, all Lutron HVAC zones will be able to change the operation mode of the Airzone system. However, if it is disabled, only the Lutron HVAC zone associated to the Airzone master zone will be able to change the mode, while the rest of the zones will work in the mode the master zone is in when they are on demand.

Configuration of Aidoo Pro with the Lutron Palladiom thermostat

CONFIGURATION FROM LUTRON PALLADIOM

When connecting the Lutron Palladiom thermostat to the Aidoo Pro for the first time, the following parameters must be configured:

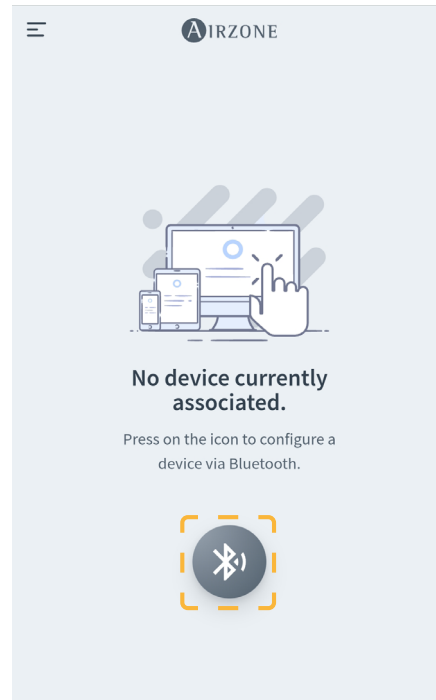
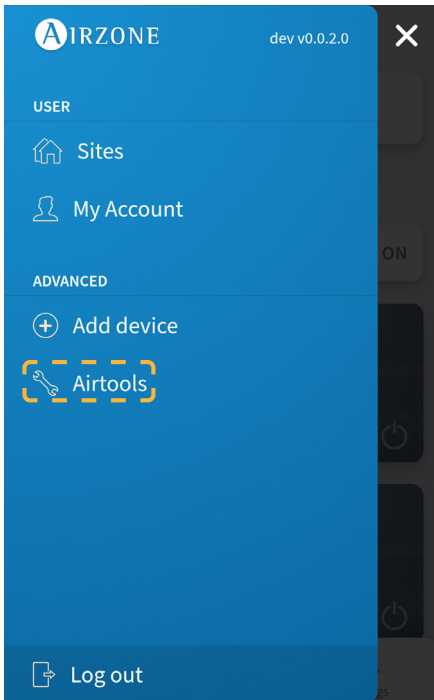


Parameter ID 01: HVAC controller option	03
Parameter ID 02: Modbus address	99*

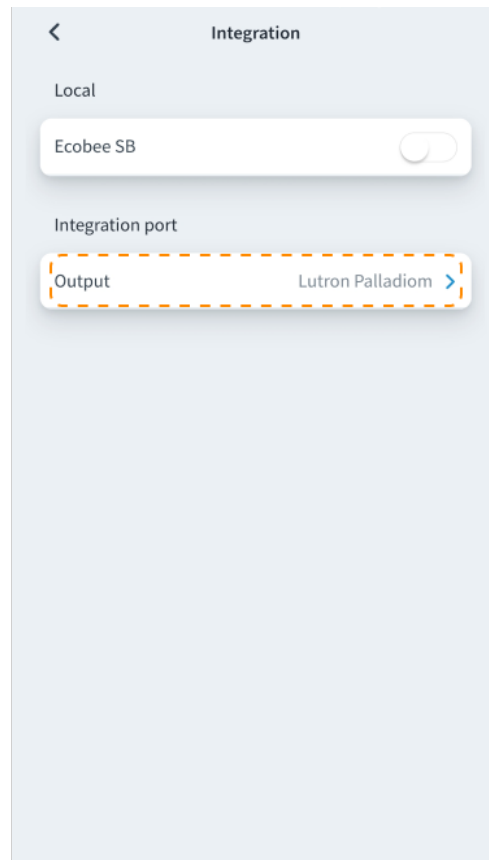
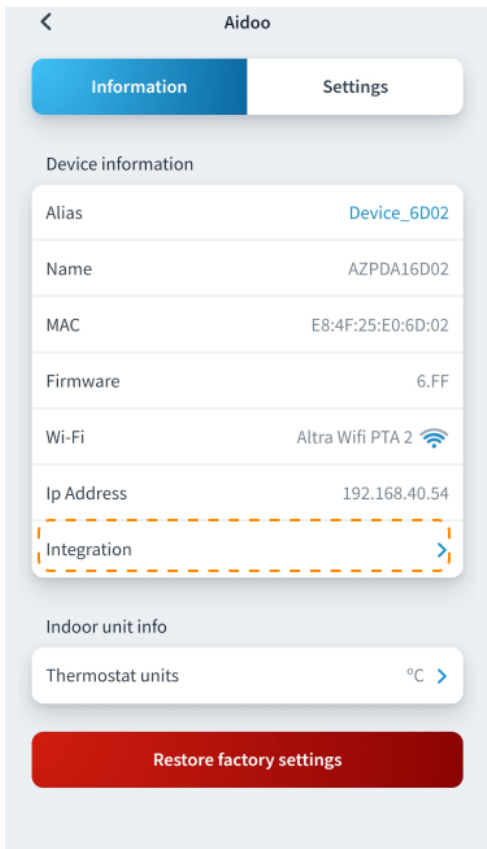
- HVAC controller selection mode.** The thermostat will automatically enter HVAC controller selection mode if no HVAC controller has been previously selected.
- Parameter ID "01": HVAC controller option.** This parameter indicates the HVAC controller connected to the Lutron Palladiom thermostat. In the case of Aidoo Pro, the value of this parameter must be "03".
- Parameter ID "02": Modbus address.** This parameter indicates the Modbus address of the device. In the case of Aidoo Pro, the value of this parameter must be "99".

CONFIGURATION WITH AIRZONE CLOUD

Access the Airzone Cloud app and, in the side menu, click on “Airtools” to access the advanced settings. Click on the “Bluetooth” icon to search for devices and select the device that you want to configure.






Selecting the Aidoo Pro device, click on the *Integration* submenu. Then select “Lutron Palladiom” as the output of the integration port.



Troubleshooting


THE AIRZONE SYSTEM DOES NOT DETECT THE WEBSERVER HUB

Check the following points:

1. The D9 LED  (microcontroller activity) is blinking.
2. The D7  and D8  LEDs are blinking alternately.
3. The connection between the Webserver HUB and the Airzone system main control board is correct.

THE WEBSERVER HUB DOES NOT CONNECT

Check the following points:

1. The LED , and the LEDs on the Ethernet cable connector are active or verify Wi-Fi connectivity.
2. The Ethernet cable is connected correctly.



www.lutron.com



airzonecontrol.com

Marie Curie, 21
29590 Málaga
Spain

v. 101

