Living Perfection VANTAGE

VANTAGECONTROLS.COM   EQUINOX INTEGRATION GUIDE
1061 South 800 East · Orem, Utah 84097 · Telephone 801 229 2800 · Fax 801 224 0355   Document Updated April 01, 2015

Manufacturer:	Legrand	Widgets:	Lighting, Scene, Climate, Shade, and Security
Model Number:	My Home OWN IP	Aliases:	N/A
Driver Version:	v. 76 or higher	Driver Category:	Lighting, Shades, Climate, Security, Scene, Energy Management
DC Version:	v 3.3 or higher	Connection Type:	Ethernet

I. Overview

As part of its Premier Partner Program, Vantage Equinox products support the Legrand My Home OWN IP Ethernet gateway in order to control devices connected to My Home Legrand/BTicino SCS System. After setting up the My Home objects in Design Center, the Equinox lighting, shade, climate, scene and security widget user interface automatically appears on the EQ41 and EQ73 in-wall touch screens and on mobile devices installed with the Equinox App (available for iPhones, iPads, iPods, and Android products).

Communication between BTicino MyHome SCS and the Vantage systems must be established via Ethernet connection through a MyHome Webserver, using the MyHome OpenWebNet Language (please refer to the protocol link in **IV. Links** section).

II. Features Supported / Not Supported

Feature	EQ40	EQ41, EQ73 & EQApp
LOAD		
Full Load Control Ramp, Toggle, and Cycle	✅	✅
Load Feedback See the current level of each load and make adjustments	✅	✅
Preset Scenes Use scenes designed in Design Center	🟧	✅
Select Favorites Set a list of easily controllable favorites	❌	✅
Custom Scenes In the scene widget build custom scenes	❌	✅
SHADE		
Full Shade Control Up, Stop, Down	✅	✅
Shade Feedback See the current level of each shade and make adjustments	✅	✅
Preset Scenes Use scenes designed in Design Center	🟧	✅
Select Favorites Set a list of easily controllable favorites	❌	✅
Custom Scenes In the scene widget build custom scenes	❌	✅
Group Management In the shade widget, automation may be grouped	❌	✅

CLIMATE		
Current Temperature Numeric Value (Celsius or Fahrenheit); ½ degree increments for Celsius	✅	✅
Current Mode Setpoint Numeric Value (Celsius or Fahrenheit); ½ degree increments for Celsius	✅	✅
Set Operation Mode Cool, Heat, Off	🟧	✅
Graphical Feedback Grey = Off; Blue = Cool Mode; Red = Heat Mode	✅	✅
Heat Setpoint Increment, Decrement, Set; ½ degree increments for Celsius	✅	✅
Cool Setpoint Increment, Decrement, Set; ½ degree increments for Celsius	✅	✅
Humidity Setpoint Increment, Decrement, Set	❌	❌
Fan Mode Auto, On	🟧	✅
Scheduling 4 different schedules (customizable) with 4 times in a day per schedule	❌	✅
Schedule Override Temporary override (up to 4 hours); then schedule will resume	❌	✅
System Status Heating, Cooling, Idle	🟧	✅
SECURITY		
Partitions Current State Armed, Disarmed, Alarmed	🟧	✅
Partitions Operations Arm, Disarm	❌	❌
Partitions Events Associate task to Armed / Disarmed / Alarmed events	🟧	🟧
Zones Current State Intrusion, ready	❌	❌
Numeric Keypad Operations Manage user codes, Menu Navigation	❌	❌

✅ **Supported**   🟧 **Task Only Support**   ❌ **Not Supported**

III. Notes

As you can see in the above table, Security has limited integration capabilities. This is due to "Security" policy rules of the BTicino Burglar Alarm system, as the OpenWebNet Language does not support any events or operations regarding the Alarm system. Through the Equinox 41/73 the only permitted feature is to check the current "arm/disarm" state of each one of the 8 partitions.

IV. Links

Please refer to the following link to correctly setup a standard MyHome SCS System and configure all components:
http://www.homesystems-legrandgroup.com/BtHomeSystems/home.action?lang=EN
To get a proper documentation concerning the MyHome OpenWebNet Language, please refer to:
http://www.myopen-legrandgroup.com/resources/own_protocol/default.aspx

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V. Installation Steps

Use the link above to find instructions on how to properly install the My Home devices. Once the MyHome system has been set up successfully, follow the steps below to integrate the My Home devices in Design Center and set up the Equinox products. Each kind of MyHome system's component must be added inside a specific container: Relays, Dimmers, CENs, Automations, etc.
As mentioned above, all communications between MyHome and the Vantage system must be realized via Ethernet connection through a MyHome Webserver (e.g. BTicino F454), using the standard TCP/IP port 20000. Through this port, 2 different TCP/IP sockets will automatically be opened (one for command and one for monitoring, both completely transparent to the programmer). Communication will be established using the MyHome OpenWebNet Language (please refer to the protocol link in **IV. Links** section).

Please note (important):

1) This communication may be established only if the Vantage Infusion Controller and the MyHome Webserver F454 belong to the same sub-network (the F454's default IP address is *"192.168.1.35"*; it may be changed via web-pages as in Figure 1).
2) As the OpenWebNet communication might be "password-protected", the IP address of the Infusion controller should be included in the range of the devices authenticated without a password, i.e. "without open authentication" as in Figure 2 – "IP Range" definition).
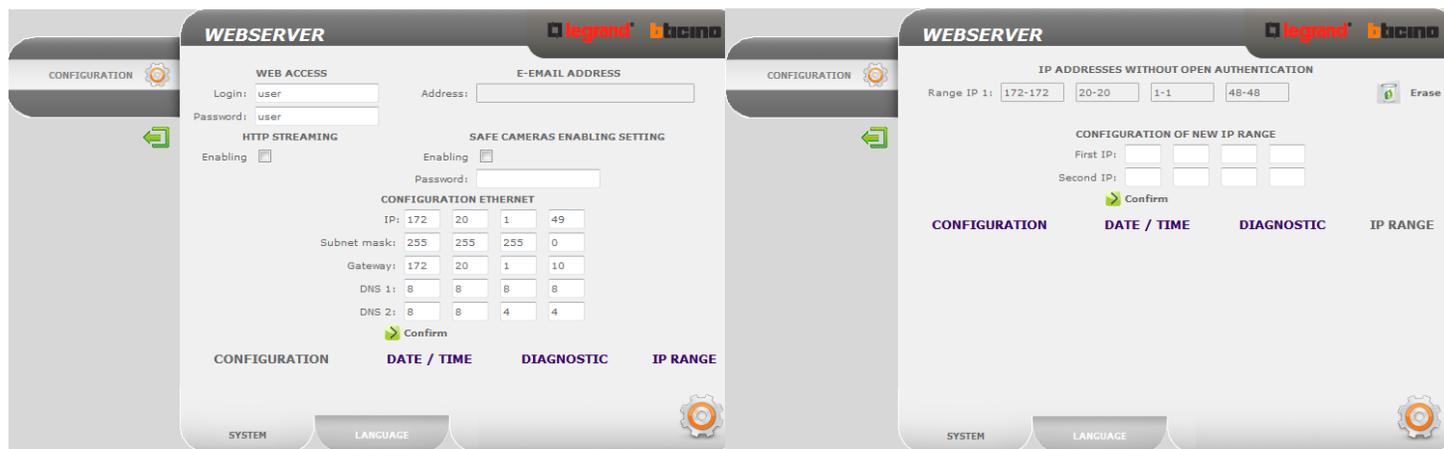
Figure 1 – F454 IP Configuration

Figure 2 – IP Range without user authentication

In the above example, MyHome F454 has the IP address *"172.20.1.49"*, and the Infusion Controller must have the *"172.20.1.48"* IP address, as stated in the *Range IP field*.
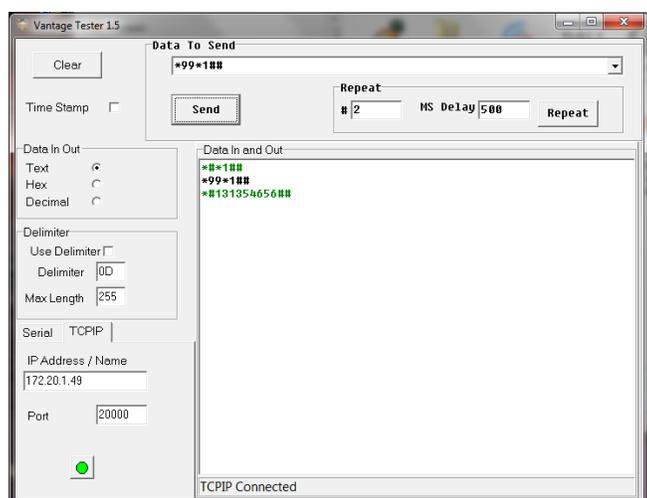
Free communication tools like Windows HyperTerminal, PuTTY, or VantageTester might be used to check out if this communication may be established without "Open" authentication, prior to testing driver functionalities. Please refer to the *OpenWebNet Language paper* (see **IV. Links** section) to determine how to initialize a "Monitor" TCP/IP socket or a "Command" one.

Nevertheless, a fast communication test may be accomplished using VantageTester tool:
- temporarily assign to your PC the same IP address you will assign to the Infusion Controller
- open the TCP socket with the webserver IP Address and port 20000, click on the Red Circle (it becomes Green)

- deselect "Use Delimiter", as OWN protocol doesn't need CR char as string terminator
- write "*99*1##" in the "Data to send" box (without "), and click "Send" button

If you get "*#*1##" as a response, the IP address of your PC is inside the authenticated IP Range without password, and you may proceed to set up driver communication through the Infusion Controller; if you receive a 9 digits number (just as in the figure), it means that you need to know the OWN password, and Infusion Controller will not manage this matter.

VI. Design Center Setup

Follow these instructions to add the MyHome OWN IP driver to your Design Center project and configure its settings appropriately:

1. **Project Settings** – Click on *Settings | Project Information| Owner* (tab). Fill out the *Equinox Mobile Passcode:* (alpha/numeric) and the *Equinox Admin PIN:* (numeric).
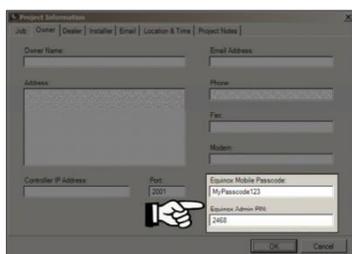
2. **Add the Legrand My Home OWN IP**– In the *Object Explorer*, select *Drivers* and double click or drag the Legrand My Home OWN IP to add it to the appropriate *Area.* A special *Area* called "Drivers" is suggested to allocate all drivers of the project.
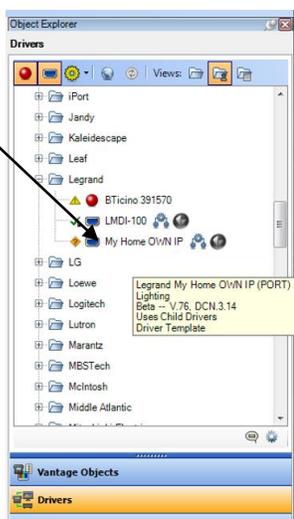
   TIP: An object or driver is added to the room currently selected when double clicking.

3. **Name the My Home OWN IP** – In the *Object Editor*, give the My Home OWN a user-friendly *Name*. If an alternative or shorter *Display Name* is desired, assign that as well.

4. **Add Port –** Add a TCP *client Port*, setting the IP address to be that of t*he BTicino F*454 webserver (e.g. "192.168.1.35"). Leave the TCP port's "port number" as the default (20000).

5. **Containers –** Once the driver has been imported in the project, you will see several predefined containers: CENs, Relays, Dimmers, etc. Each container will collect the

specific kind of objects that can be added with the "Add…" button at the bottom of the *Object Editor.*

TIP: The *Name (*or the *Display Name,* if given) of each object within each container will appear in **i**ts corresponding widget.

6. **Objects definition: Relays** – To define all relay outputs, just click "Add Relay" button as many time as the number of actuators you want to control (up to 250 items). For each one, assign the correct property values as shown below: For each automation:
   a. Choose a *Name* (and/or a *Display Name*) to appear in the Equinox lighting widget.
   b. Select an appropriate *Area* for the load (corresponding to physical location where the light point is installed). Note that this will make the load easier to find when creating tasks.
   c. Assign the correct value to the properties B – A – PL ; they will be the three parameters to uniquely identify this relay actuator on the MyHome SCS system: Bus – Ambient – LightPoint (B = 0..10, A = 0 .. 10, PL = 0 .. 15)

7. **Objects definition: Dimmers** – To define all dimmer outputs, select the "Dimmers" container and click "Add Dimmer" button as many time as the number of actuators you want to control (up to 250 items), and assign all properties with same criteria of previous Relay section.

8. **Objects definition: Automation** – All shades, curtains, and motors in the MyHome system are defined as "Automations." Select the "Automation" container, click the *Add Automation* button as many times as the

number of the automations in the project. For each automation:

a. Choose a *Name* (and/or a *Display Name*) to appear in the Equinox shade widget.

b. Select an appropriate *Area*.

c. Assign the proper *Orientation* and *Type*. These values determine how the shade graphic will appear in the Equinox shade widget.

d. Assigning *Closing* and *Opening* times (in seconds) will override the default values of the MyHome actuator.

Important Note: In order for the shade widget to appear on Equinox devices, you must create a Vantage Shade Group and add any automations you wish to go in it.

9. **Objects definition: CEN/CEN+ commands** – In order to trigger events on the Vantage system from a MyHome
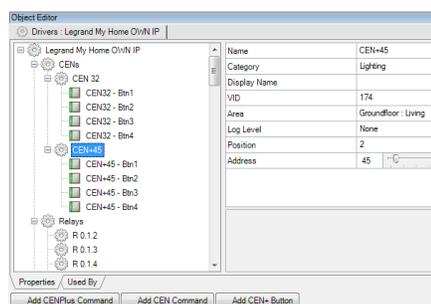
device (such as a Whice or Nighter BTicino glass keypad), CENs commands must be defined in the MyHome

system. They are commands sent on the SCS bus in broadcast, even if a device with that address is not really present on the SCS bus, and the F454 webserver can forward them to other systems (e.g. like Vantage Infusion Controller).

Through the MyHome driver, the Infusion Controller can catch them and associate a task with each CEN command button that will be launched with the proper trigger type (Press, Hold, Release). There are 2 different types of CEN commands: CEN and CEN+ (pronounced CEN Plus).

Note: Only use CEN commands if a BTicino MH200N scenario programmer is present in the system, as only this device is able to manage CEN commands. If an MH200N is not present, only use CEN+ Commands.

For each CEN/CEN+ command:

a. Choose a *Name* (and/or a *Display Name*).

b. Select an appropriate *Area*.

c. Assign the appropriate address. CEN commands are addressed through the B-A-PL parameters, while CEN+ command are addressed for the whole system, from 1 to 2047.

d. Click the "Add CEN button" or "Add CEN+ button" as many times as necessary to have the desired number of push buttons (e.g. for the Whice/Nighter glass keypad with 8 buttons, add 8 CEN/CEN+ command buttons). Up to 31 buttons can be added for each command.

e. For each button, assign an appropriate *Name* as well as the desired *Task* to be triggered by the button. Please note that the button icons are the same as that of a standard Vantage keypad button. Thus the usual triggers (Press/Hold/Release) launch the associated Design Center task. Note that procedures like *MultiPress* or *DoublePress* might not behave correctly if used with a CEN+ command; they do work properly if used with a CEN command.

Note that CEN/CEN+ command button tasks can be triggered from Vantage to MyHome using the "Set Number" procedure. Define a task with this procedure, with the specific CEN/CEN+ Command as
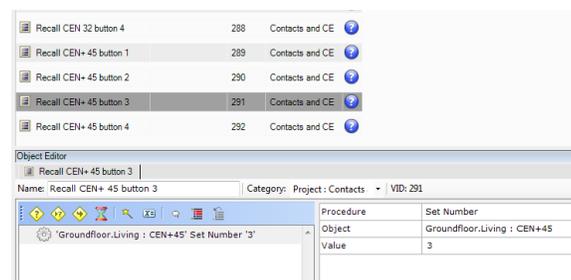
the object. Assign an integer value corresponding to the CEN/CEN+ button to be called. Please pay attention to not create a possible recursive loop; it can be avoided if no Task property will be assigned to the button that has to be recalled with the "Set Number" procedure.

10. **Objects definition: Special** – In this container, you can define Relay, Dimmer, and Automation group items in order to manage several actuators with a
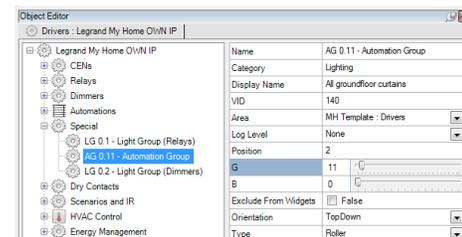
single grouped object. The objects within each group need to have been assigned the appropriate "group" parameter through the MyHome Suite software. In this example the group no. 11 has been assigned to all the ground floor curtain automation actuators. Once a Relay, Dimmer, or Automation group has been added, it may be treated just like a single actuator in any task or scene.

For each actuator group:

a.   Choose a *Name* (and/or a *Display Name*).
b.   Select an appropriate *Area*.
c.   Assign the appropriate address.
d.   Be sure to properly specify the *Orientation* and *Type* properties so that the correct graphics appear in the Equinox Shade Widget.

11.   **Objects definition: Dry Contacts** – Another way to launch Vantage events (tasks) through BTicino components is by using Dry Contacts. Three kinds of contacts may be added to the container by clicking on their respective *Add* buttons:

i. *Dry Contact*: a binary input (Close/Open) contact connected to a BTicino 3477 or F428 device, addressed from 11 to 99 (in physical mode) or from 1 to 201 (in virtual mode). Simply click on "Add Dry Contact" button to add this item, to get just a standard Vantage contact input, with the same parameters: *Area*, *Task*, *Polarity*, *Hold On Time*. (Note that unlike buttons, contacts do not have a "Hold" trigger and so cannot support multi-trigger functions such as Dim procedures.
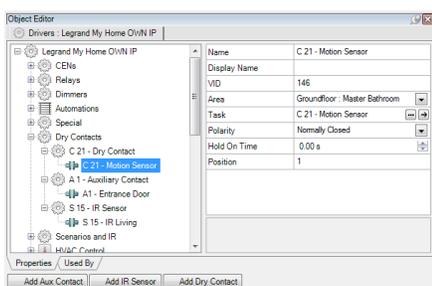
ii. *Auxiliary Contact*: addressed from 1 to 9, these special contacts belong to the BTicino burglar alarm system. Otherwise they have the same features and behavior as the Dry Contacts.
iii. *IR Sensor*: corresponds to an infrared remote receiver code, addressed from 11 to 99, each one may contain up to 20 buttons, that when received from the sensor may launch the assigned *Task* procedure.

For each contact or sensor object:

a.   Choose a *Name* (and/or a *Display Name*).
b.   Select an appropriate *Area*.
c.   Assign the appropriate address.
d.   Assign a desired *Task* to be executed.

12.   **Objects definition: Scene Modules** – in the bottom side area click "Add Scene Module" to create an object corresponding to a BTicino F420 scene module. Each module can have up to 16 defined scenarios that can be triggered by two different methods:

a. *From MyHome to Vantage*: when the scenario is executed from the MyHome system, the corresponding *Task* of the scene number will be launched on the Vantage system.

b. *From Vantage to MyHome*: create a task with the "Set Number" procedure (select the desired *Scene Module* as the object and set the *Value* to the *Scenario Number* of the scene to recall) to execute the
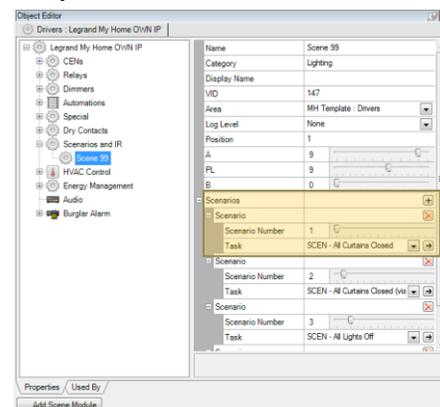
corresponding scene number in MyHome system. Same recommendation of the previous CEN/CEN+ commands section: the 2 above methods should be mutually exclusive: please do not assign a Task property to a button that has to be recalled by a "Set Number" procedure, otherwise a potential loop might be triggered.

For each Scene Module:

a.   Choose a *Name* (and/or a *Display Name*).
b.   Select an appropriate *Area*.
c.   Assign the appropriate address (via the B-A-PL parameters, just like for an actuator).
d.   Click on the "+" Scenarios button to add as many scenarios as are defined in the F420 module.
e.   For each Scenario within a Scene Module:
   i.   Assign a *Number* (from 1 to 16).
   ii.   Assign a *Task* property (the action to take when this scenario/number has been executed in MyHome system).

iii.   In order to create a task to launch the MyHome scene module, use the "Set Number" procedure as shown and assign to the *Value* parameter the number of the scene to recall
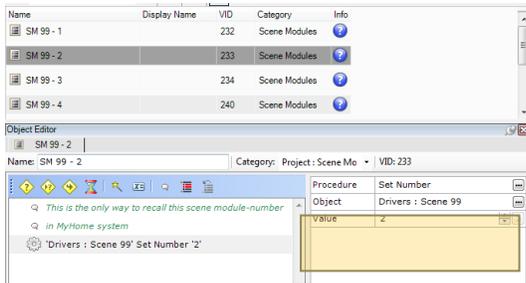
13. **Objects definition: HVAC** – This container holds different kinds of central units and thermostats. Please refer to the MyHome HVAC guidelines to correctly setup a Heating/Cooling system. (For example a configuration may consist of a 3550 central unit, probes, and F430/2 -/4 actuators for valves and pumps.) Once MyHome has been set up correctly, click on the appropriate *Add* buttons to set up a corresponding object in Design Center:
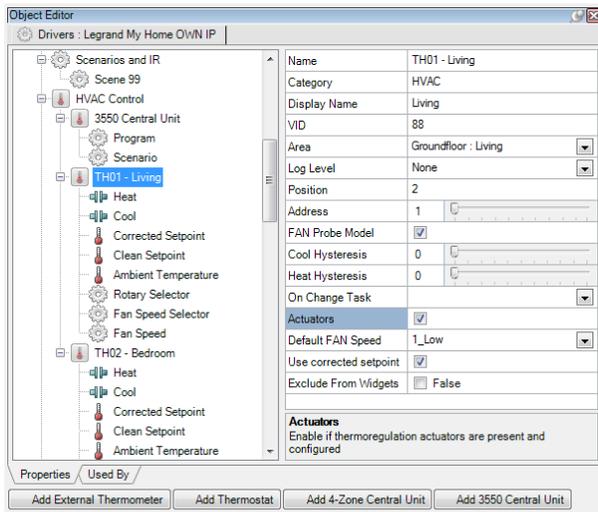
i. **3550 Central Unit** (maximum of one per driver): A 99-zone central unit in which some global parameters, such as upper and lower temperature limits and changeover modes, may be configured.

ii. **4-Zone Central Unit**: This unit manages up to four thermostats (similar to the following item). Note that the number of this unit is the first number of the four thermostats it manages, and the following three addresses cannot be used to address other single

thermostats. For example, if the 4-zones unit has the address 13, the addresses 14, 15, 16 cannot be used for other thermostats.

iii. **Thermostat**: This item can control all BTicino MyHome probes (4692, 4692FAN, 4691, 4685, etc.) It is similar to a standard Vantage thermostat (for instance it has heat and cool contacts), but has additional child objects that allow it to control a BTicino MyHome probe, such as the Ambient, Corrected, and Clean Setpoint. Additionally, the Rotary and Fan Speed Selector properties have been implemented to manage the Corrected Setpoint and Fan Speed ventilation.

iii. **External Thermometer**: a weatherproof sensor installed outside to measure the current outdoor temperature. Its value may be displayed with the regular "Status String" object in a TouchPoint Designer.

For each object and/or sub-object, as applicable:
a.   Choose a *Name* (and/or a *Display Name*).
b.   Select an appropriate *Area*.
c.   Assign the appropriate address.
d.   For thermostats, assign a desired On Change *Task*.

14. **Objects definition: Energy Management** – The readings of special measurement devices like the F520/F521 and F522 may be accessed on the driver to monitor power/gas/water consumption in a house. The *Energy Probe*, *Energy Meter* and *Energy Counter* correspond to different measurement devices in the BTicino MyHome catalogue. The *Meter* and *Counter* show measurements for the *Current Day*, *Current Month* and *Global* value.
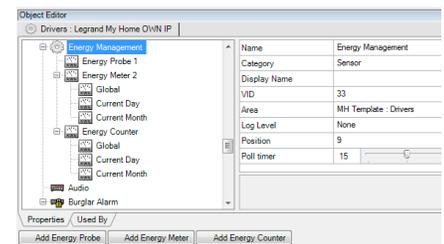
For each *Probe*, *Meter*, or *Counter*:
a.   Choose a *Name* (and/or a *Display Name*).
b.   Select an appropriate *Area*.
c.   Assign the appropriate address.
d.   For the *Probe*, select the correct model.
e.   For the *Meter* and *Counter*, assign a desired On Change *Task*

15. **Objects definition: Burglar Alarm** – The burglar alarm system consists of Partitions and Zones. Partitions are a group of zones (e.g. all the PIR sensors of the ground-floor) that can be managed independently of other zones. A task may be assigned to launch upon the execution of each partition operation. In the image above, the "All Lights
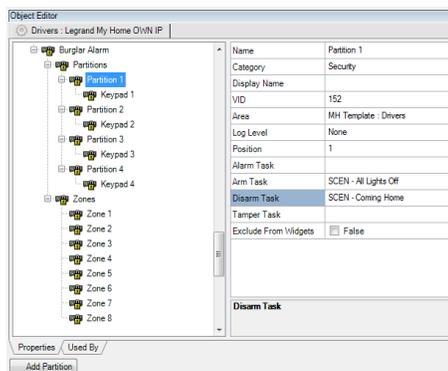
Off" task will be launched when the driver detects that Partition 1 is armed, while the "Coming Home" task will be launched when the same partition is disarmed. Note that arm/disarm operations cannot be executed from Vantage, neither from Equinox security widget.

Add the appropriate partitions and zones, corresponding to the numbering of the actual security elements.

For each child object of Burglar Alarm:
a. Choose a *Name* (and/or a *Display Name*).
b. Select an appropriate *Area*.
c. For each partition, select a task to launch on each operation, as desired.

VII. Equinox 40 Setup

The Equinox 40 has no native widget support for use with the MyHome OWN IP driver, except for the climate mini-widget. However, EQ40 (and keypad button) control may be accomplished through Design Center tasks. See Design Center Procedure Table in section X.

To use a MyHome HVAC Thermostat with the climate mini-widget in the Equinox 40, follow these additional instructions:

16. **Add the EQ40 Station** – If it's not already added, in the *Object Explorer, s*elect the *Vantage Objects | Stations, WireLink | Equinox 40 Station* and double click or drag it to the appropriate *Area*.

17. **Name the EQ40** – In the *Object Editor*, give the EQ40 a user-friendly *Name* (and *Display Name*, if desired).

18. **Select *Header Type*** – In the *Object Editor*, select the *Header Type* "Thermostat" and for the *Header Data*

select the HVAC zone that the EQ40 will control (e.g. "TH01 – Living")
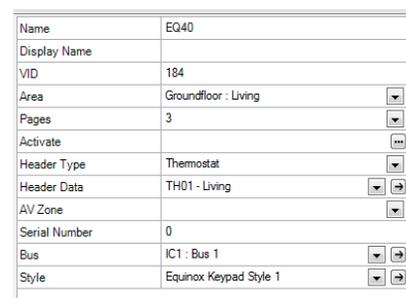
After the MyHome OWN IP driver and EQ40 are configured and a *Program* or *Update* is done from Design Center to the InFusion Controller, you should see something like the following display on the EQ40:

Equinox 40 – Climate Mini-Widget for the MyHome OWN IP driver
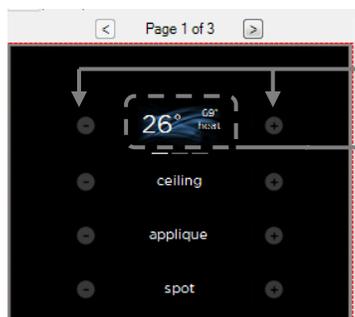
Adjust current set point

The current ambient temperature, target temperature*, and mode (red = heat, blue = cool, red/blue = auto)

*the target (or setpoint) temperature is that set on the BTicino central unit (3550); the probe's rotary selector can change this value.

Add Additional Equinox Devices and Program Controller

To use the MyHome OWN IP with the Equinox lighting, scene, shade, climate, and security widgets, simply add and name any EQ73 or EQ41 (from *Vantage Objects | Touchscreens* in the *Object Explorer* pane) in their respective areas in your Design Center project (for the Equinox mobile app, no object needs to be added). No additional Design Center setup is required.

Connect to the InFusion Controller. Configure the devices. After the devices are configured, do an *Update* or *Program*. The devices should now be operational.

NOTE: When doing a *Program* or *Update* on larger systems, the InFusion Controller and MyHome OWN IP driver may take a few minutes to poll, establish communication, and initialize the several devices on the system. In order to get all loads, contacts and thermostats' information, it should need to wait at least one minute after an *Update* or *Program* to have the current state of each object.

VIII. Equinox Widget Navigation

Once a MyHome OWN IP driver is added to the project, the lighting, scene, shade, climate, and security widgets will normally appear on the EQ73, EQ41, and Equinox Apps. If a widget is not visible, go to Profile Settings and select the widget to make it visible. Note that if the requested widget is already on the Equinox device, but the MyHome device is not visible on that widget, go to the widget *Edit Mode* (see below) to toggle the MyHome device to make it visible.

Equinox App Licensing Note

Install the Equinox App (search for Vantage Equinox) on your iOS or Android devices. A valid license is needed for each Equinox device connected to a Vantage System. Licenses are available via Controller SD cards for up to 5 (EQ-APP-5), 10 (EQ-APP-10), or unlimited (EQ-APP-X) quantities of Equinox devices. Also, each EQ73 station adds one more license (EQ73TB-T1). Ensure Step 1 of the *Design Center Setup* was completed, as the Equinox App will not run without the Equinox Mobile Passcode. Launch the App, and follow the on-screen prompts in the Setup Wizard.

The following screen shots, taken from a typical EQ73 device, show the basic navigation for full Equinox widgets on the EQ41, EQ73, and Equinox App, among the three widget views: Dashboard, Full Screen, and Edit Mode. Refer to the "Equinox Apps Widget Install" document on Vantage's website for more detailed information.

Dashboard View of the Light/Climate Widgets

The central Lights Widget displays the favorite lights (MyHome dimmers and relays actuators) just like Vantage loads, and in Edit mode you can navigate through different floors and rooms to locate the needed lights.

The right-side Climate Widget displays the current ambient temperature measured from the BTicino probe (central value) and in the bottom side area the "Corrected" current setpoint is changeable (by 0.5 degree steps) with the + / - buttons.

Dashboard View of the Shade Widget

The central shade widget shows the buttons to open, stop and close a group of automation (entering in the second level layout you'll find the details of each automation included in this shade group). As already noted above, in order for the shade widget to populate, a shade group must be defined, even for a single automation.
Press the open, stop and close icon to move the shade.
Even if a "preset" might be displayed in the bottom side area, this feature is not available in this driver's version.
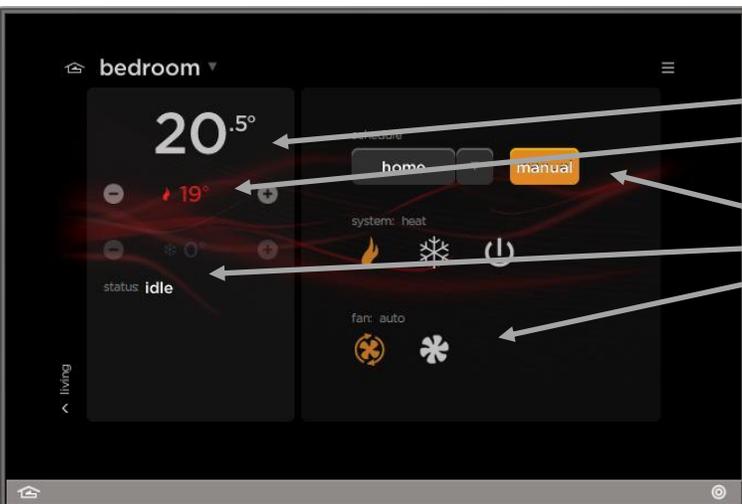
Full Views of the Climate Widget

The second level layer of the Climate widget shows all details of the thermostat probe located in the bedroom:
 - Ambient Temperature (precision 0.1 degree)
 - Corrected setpoint (precision 0.5 degree), with + / - buttons to increase / decrease (by 0.5 steps)
 - Current Operation Mode and Active Schedules
 - Current Active Status
 - Fan Mode
For scheduled temperatures and scenarios, please refer to "Equinox Apps Widget" document on Vantage's website for more detailed information

Press to rename   Toggle all schedules for day   Save and exit   Don't save and exit

home

| | mon | | tues | | wed | | thurs | | fri | | sat | | sun |

Press to edit

Toggle scheduled climate

Toggle scheduled climate off

Arrow indicates schedule carry over

Edit Mode View for Climate Widget

thermostats

second floor

main floor

master bedroom

master bathroom

living room
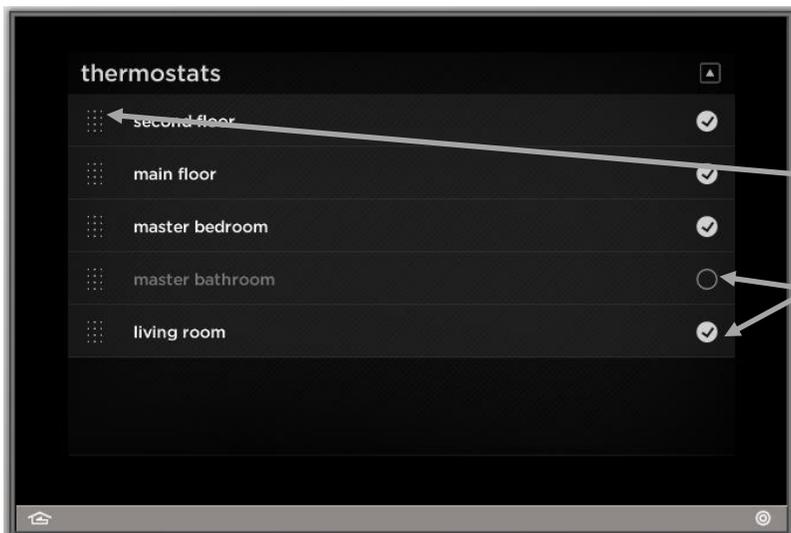
Hold and drag up/down to change the order

Toggle checkmark to show/hide items

Full Screen View in the Shade Widget

group

south   west   north

east
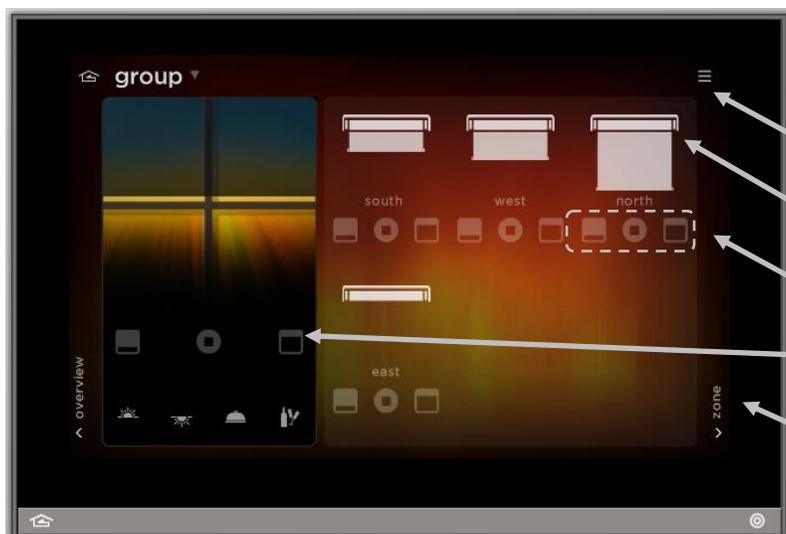
Enter Edit Mode view

See individual shade positions

Control individual shades

Group controls (same as dashboard view)

Swipe or press to switch between groups

Edit Mode View for Shade Widget

Toggle Inclusion/exclusion in widget

Hold and drag up/down to change the order
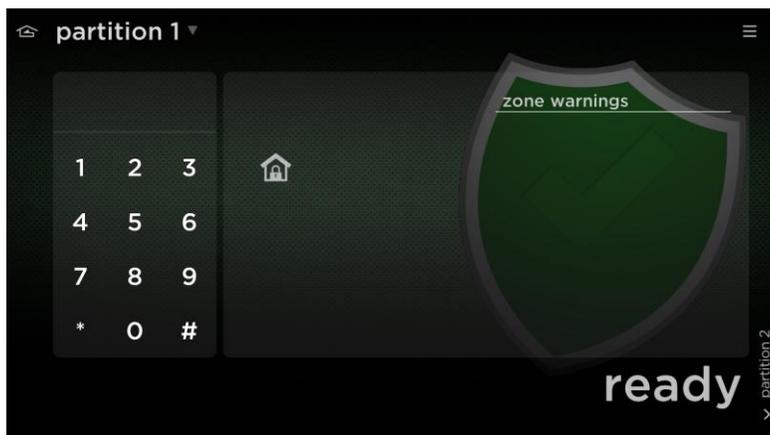
Full Mode View for Security Widget

Numpad keypad and "Lock" icon have no effects on the BTicino Burglar Alarm system

"Zone warning" area will collect all the zones that have currently state "open"

"Ready" (or "Armed") is the current state of the selected partition

IX.Tech Notes

Known issues:

❖ In the Equinox 40, the MyHome Relay Loads have erroneously been treated as dimmers, with +/- buttons. This should be corrected in the next Design Center release.

❖ In the shade widget on the Equinox 41 / 73, the opening animation works fine, while the closing animation changes its state instantly.

X. Design Center Task Procedure Table

The following table shows the most common procedures that are available for programming Design Center tasks with MyHome OWN IP driver. Tasks can be assigned to keypad buttons and Equinox scenes.

Category	Folder	Procedure
Lights	Toggling	Toggle
		On
		Off
		Momentary
Advanced	LCD Touch Screen	Set Load to Slider
HVAC	Modes	Set Operation Mode
		Set Hold Mode
	Setpoint	Increment Setpoint
		Decrement Setpoint
		Set Heat Setpoint
		Set Cool Setpoint
Generic Value	Number Value	Set Number (for CEN/CEN+, Scene Module and Fan Speed)
	Boolean Value	Set Boolean (for Auxiliary Contacts)
Shades/Motors	Shades	Close Blind
		Open Blind
		Stop Blind