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SP+ Thermal Map i2C Splitter Box & CCM Manual

(THMS-V2 & CTHMS-V2) & (CCM)

Table of Contents

Introduction

The Thermal Map Sensors (TMS) are in the AKCP group of sensors called Smart Sensors, which can be used with our new sensorProbe+ family products. These sensors will help you locate hot spots in your datacenter.

Important Note: The Thermal Map sensors, i2C Splitter Box and CCM (Contectless Current Meter) are only compatible with SP+ & SP-WTS base units & are not supported on our sensorProbe, (SP2/SP4/SP8), or our securityProbe & DCU base units.

The TMS sensors have 2 versions: The THMS-V23 (product code) which includes the Temperature and Humidity Map Sensor String of 3x Temperature and 1x Humidity sensor, pre wired for easy installation.

And the Cabinet Temperature and Humidity Map Sensor CTHMS-V2, 2x strings of 3x Temperature and 1x Humidity sensors for both the front and rear of your cabinet. 1x Sensor Splitter adapter box, the i2C that allows you to connect both strings to 1 sensor port on the SP+.

Important Note: The CTHMS-V2 & i2C splitter box requires the SP+ H7 type unit and will not work if connected to the F4 or F7 type SP+ AKCP base units. Please download and check the SP+ Introduction manuals for easily checking your unit type.

With these sensors & the i2C Splitter box, you can save space and sensor ports on the unit as it's using a single sensor port. You can freely position the middle Temperature/Humidity sensor and the 2 additional Temperature Sensors for better monitoring, as they have a long cable.

Important Note: The i2C Splitter Box ONLY supports the two types of Thermal Map sensors noted above and the CCM (Contactless Current Meter). You **cannot** connect any other AKCP sensors to the i2C.

In this manual we're going to show you how to configure the sensor, with the SP+ Web UI options and with APS (AKCess Pro Server).

We will use only the TMS sensor variant which has the Temperature/Humidity Sensor, but the configurations are the same for the other variants.

You can also view our Thermal Map Sensor video on our YouTube channel, which covers the setup: https://www.youtube.com/watch?v=nNsCxge85PI

Connecting the Thermal Map Sensors

Please note the picture below showing the i2C box. The white coloured RJ45 port will connect the i2C directly to the SP+ or SP-WTS units sensor port. This extension cables maximum run length is 100 feet or 30 meters.

Important Note: Our sensors cannot be extended using any type of RJ45 patch panels, or RJ45 couplers. These must be straight through connections.

Front Cabinet

Refering to the pictures above, first connect the 3 sensors string to the sensor port on the right of the white colored extension port on the i2C unit labeled as “Cabinet Front”. These 3 sensors need to installed in the front of your server cabinet.

Rear Cabinet

Refering to the picture above, next connect the remaining 3 sensors string to the oposite sensor port on the i2C unit labeled as “Cabinet Rear.” Then these 3 sensors need to installed in the rear of your server cabinet.

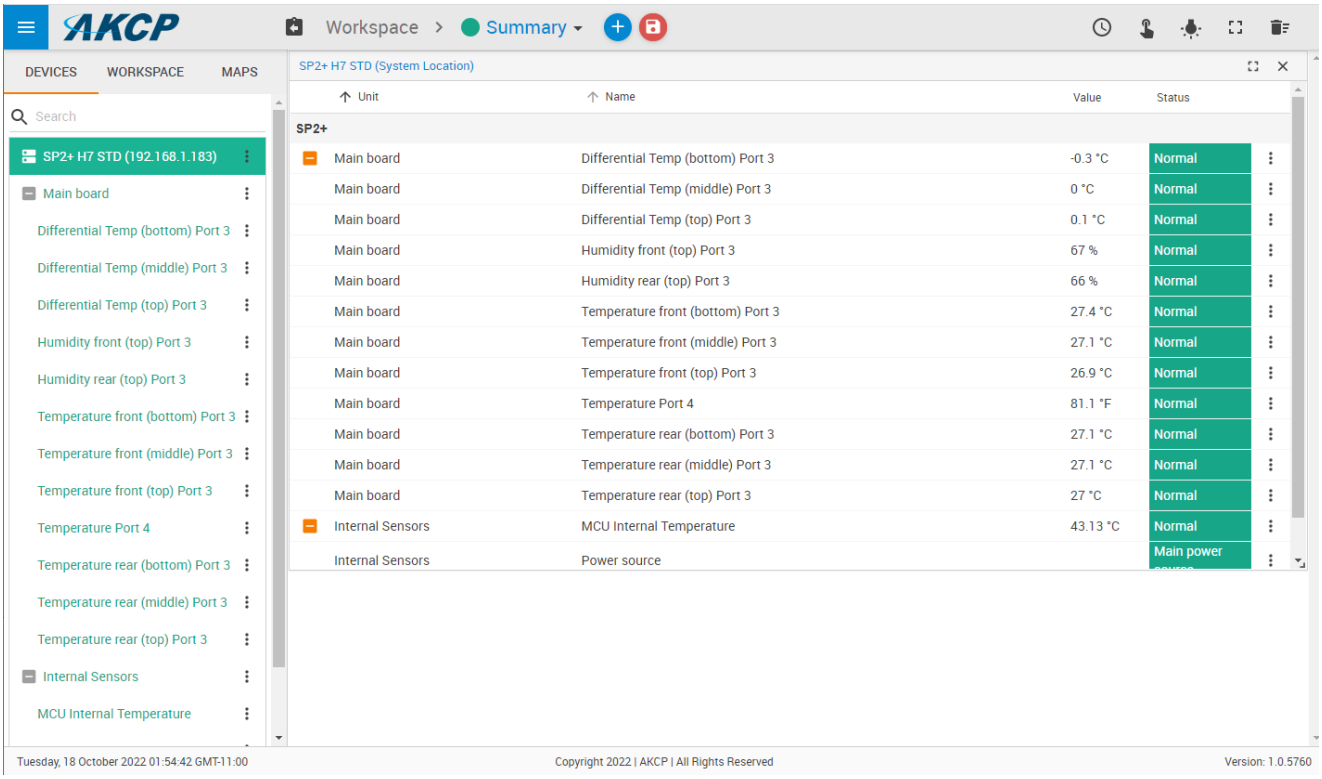
Contactless Current Meter

The Contactless Current Meter or CCM connects to the port located left of the Cabinet Rear port on the Splitter Box as shown above.

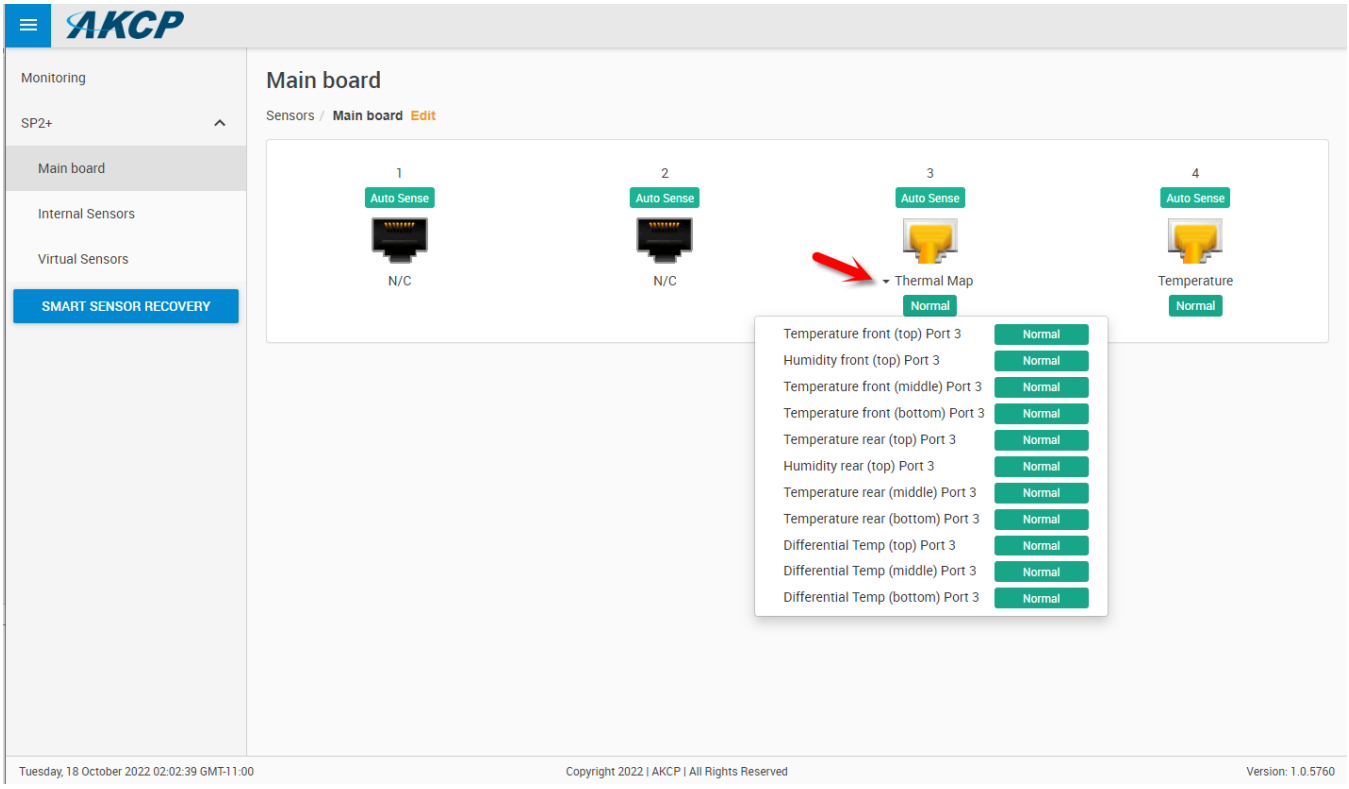
Please refer to the YouTube video here on how to install & setup the CCM:

https://www.youtube.com/watch?v=Ns59yh9Q1SY

Web UI configuration Thermal Map Sensors (THMS-V2 & CTHMS-V2)

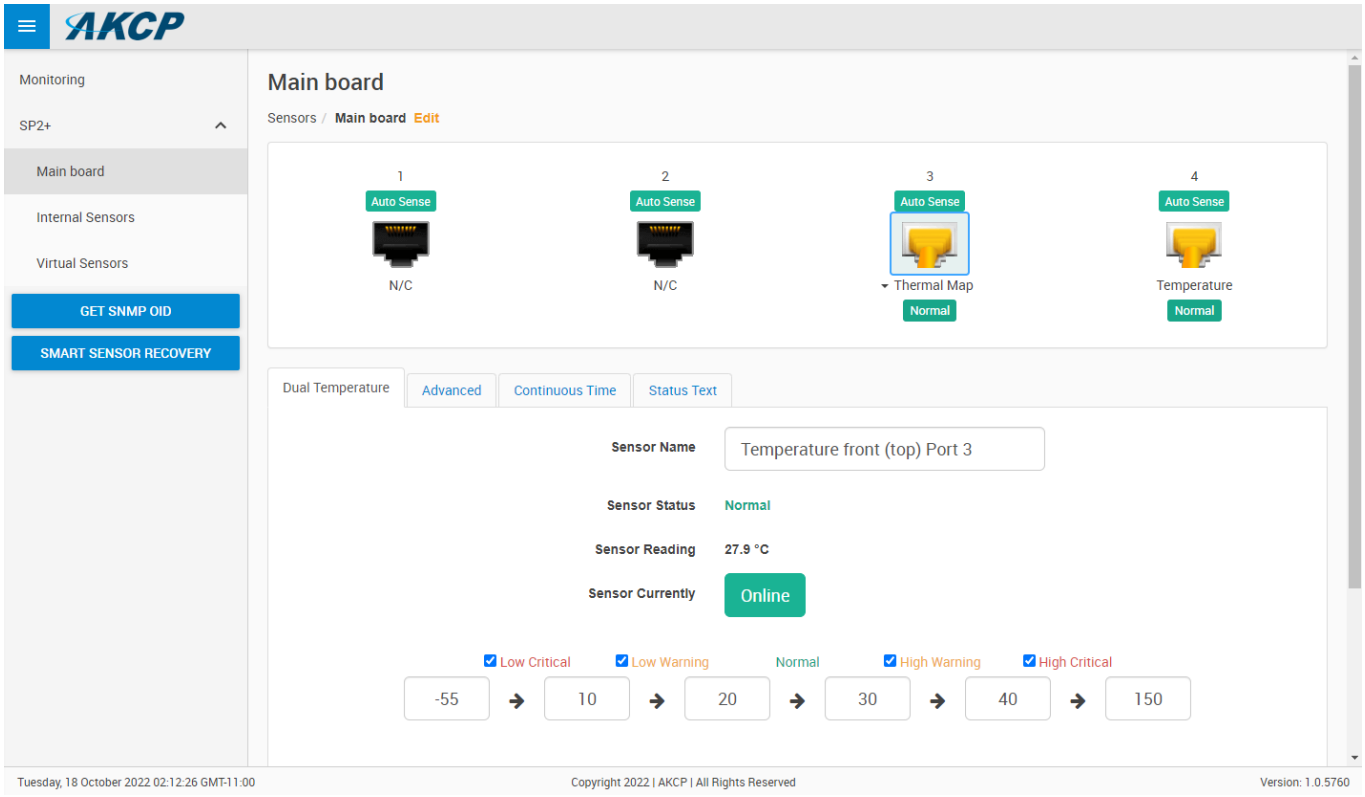


On the **Summary page** you can see the connected Thermal Map as multiple sensors.
For example from the Temperature/Humidity sensor you can easily identify which port it is plugged in to on the unit (you can also freely rename the sensors afterwards).



On the **Sensors page**, you'll see the **Thermal Map** as a single sensor.

To manage a sensor in the Thermal Map, click on the image for the list of all sensors and click on one that you wish to configure.



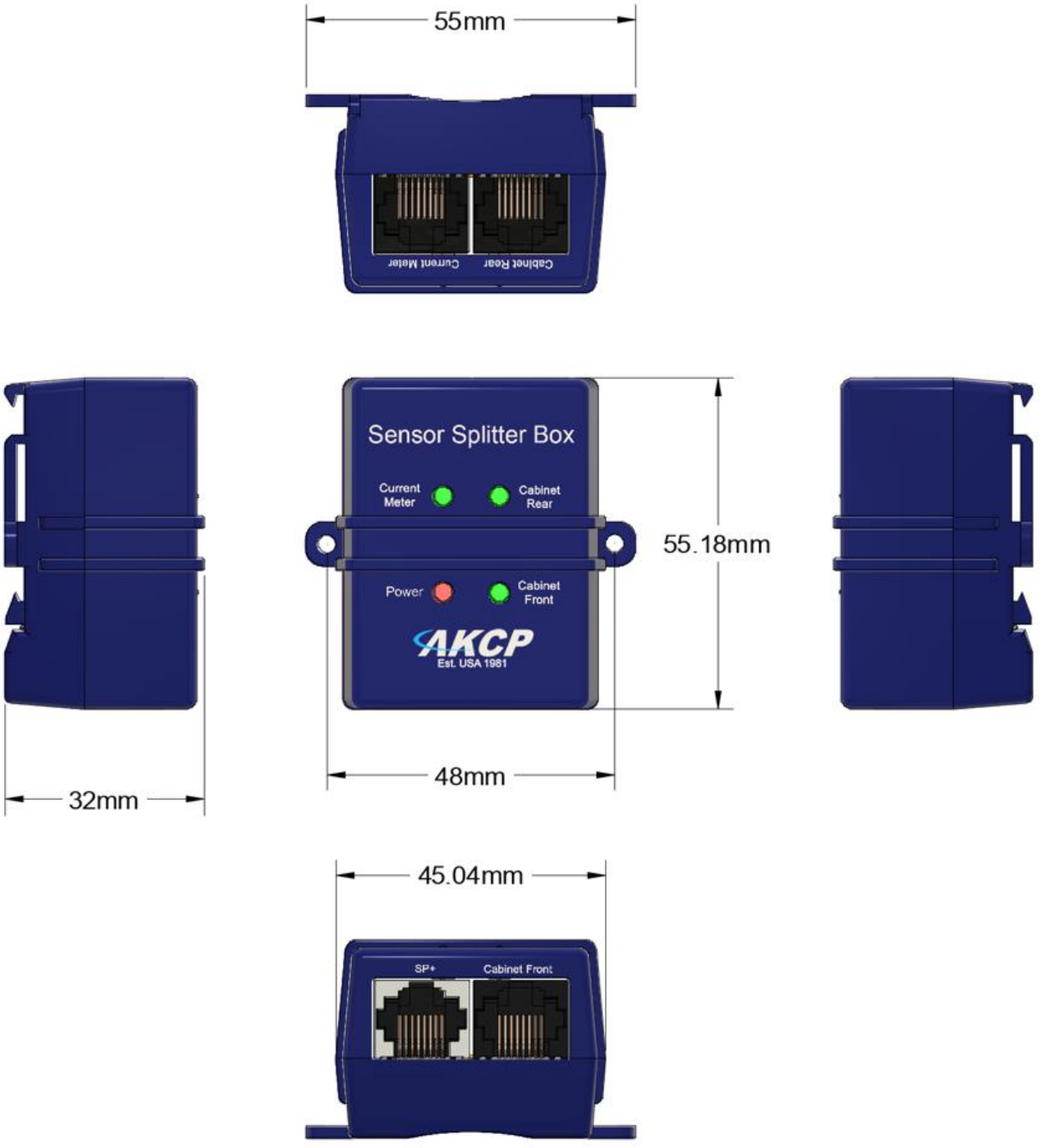
The configuration and options for the Thermal Map's sensors are the same as with standalone sensors.
Please refer to the **SP+ Introduction Manuals** for detailed configuration of the Temperature/Humidity sensors.

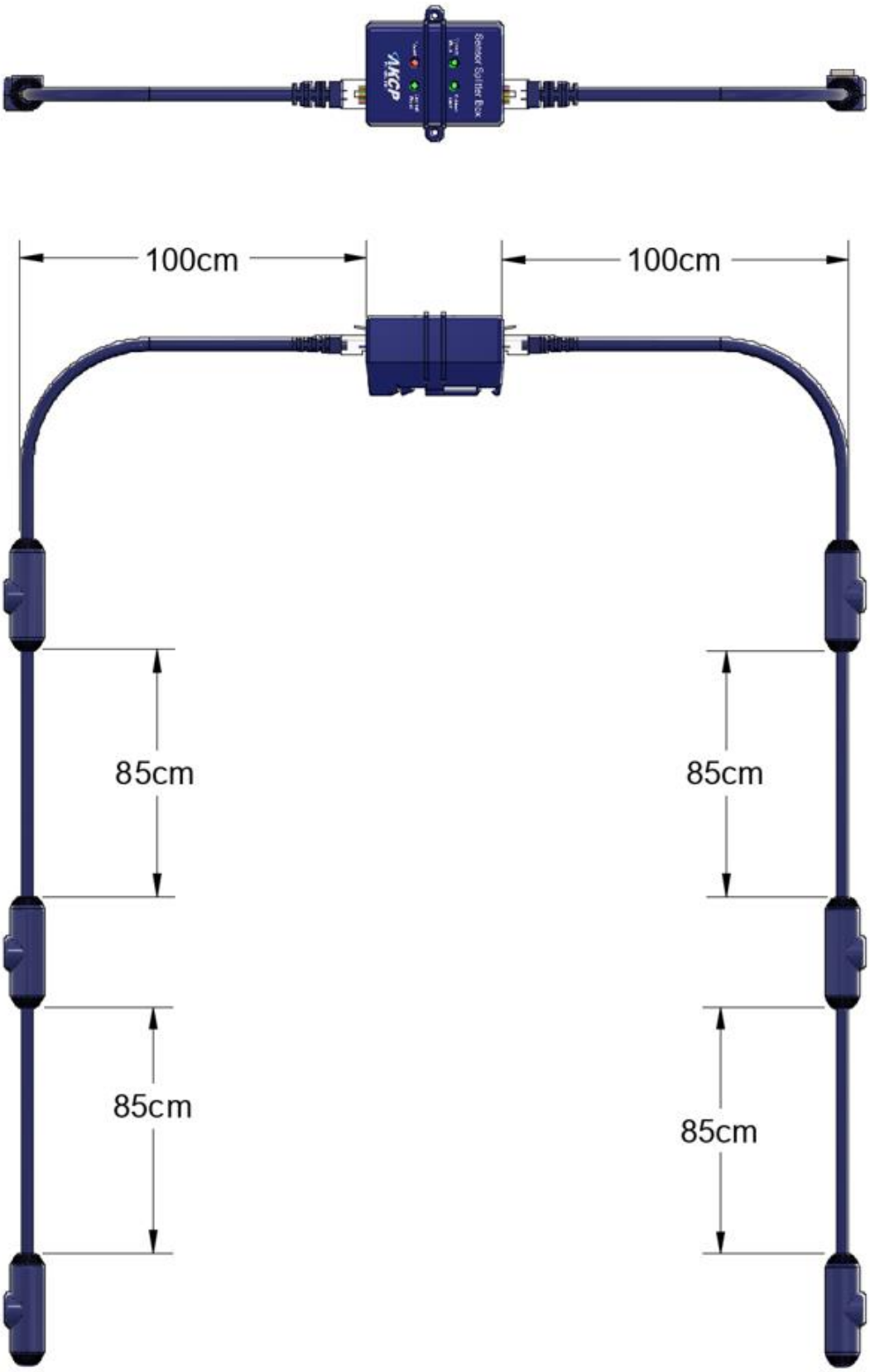
Note: the *Temperature Search* option is not available for the Thermal Map sensor; it is used by the Daisy-Chain Temperature Sensor (DCT).

Please see below in the next section for setting up the rack maps on the AKCPro Server software.

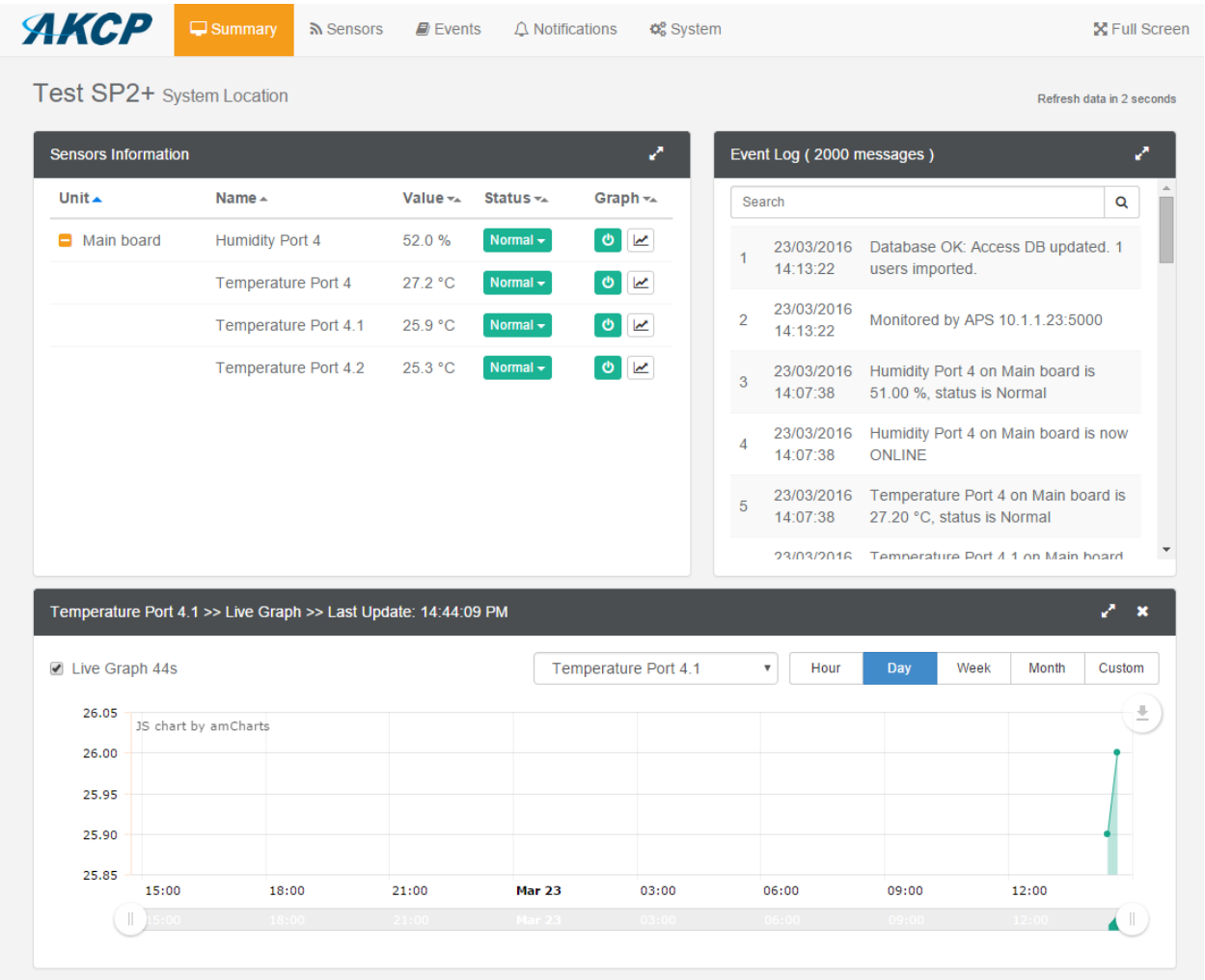
You can also follow the directions in this video as well:
https://www.youtube.com/watch?v=zDr3TwydBWU

Dimentions (THMS-V2 & CTHMS-V2)

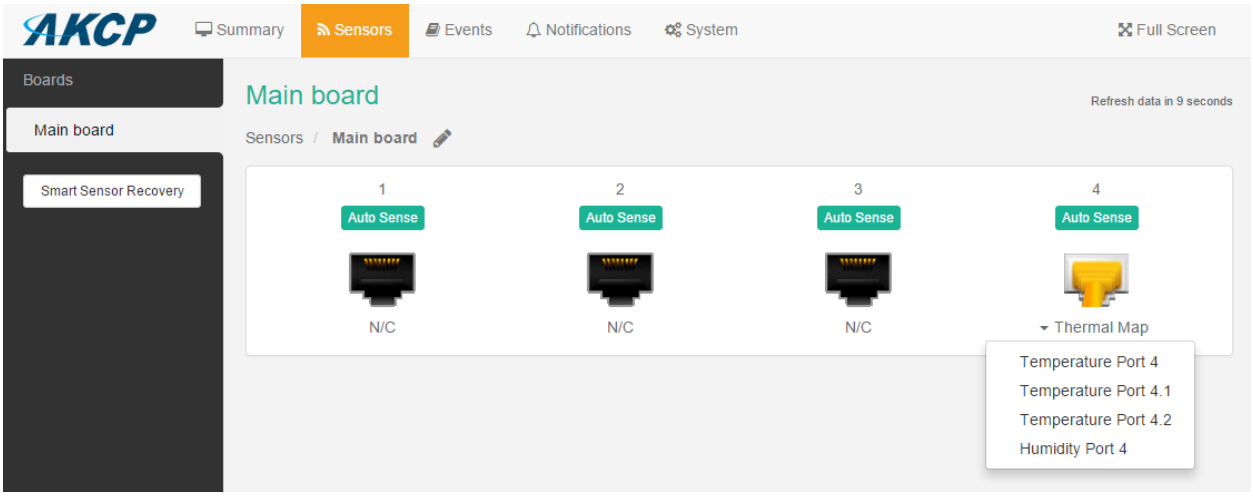



100cm
100cm
85cm
85cm
85cm
85cm

Web UI configuration Thermal Map Sensors (Previous Version & APS Rack Map Setup)



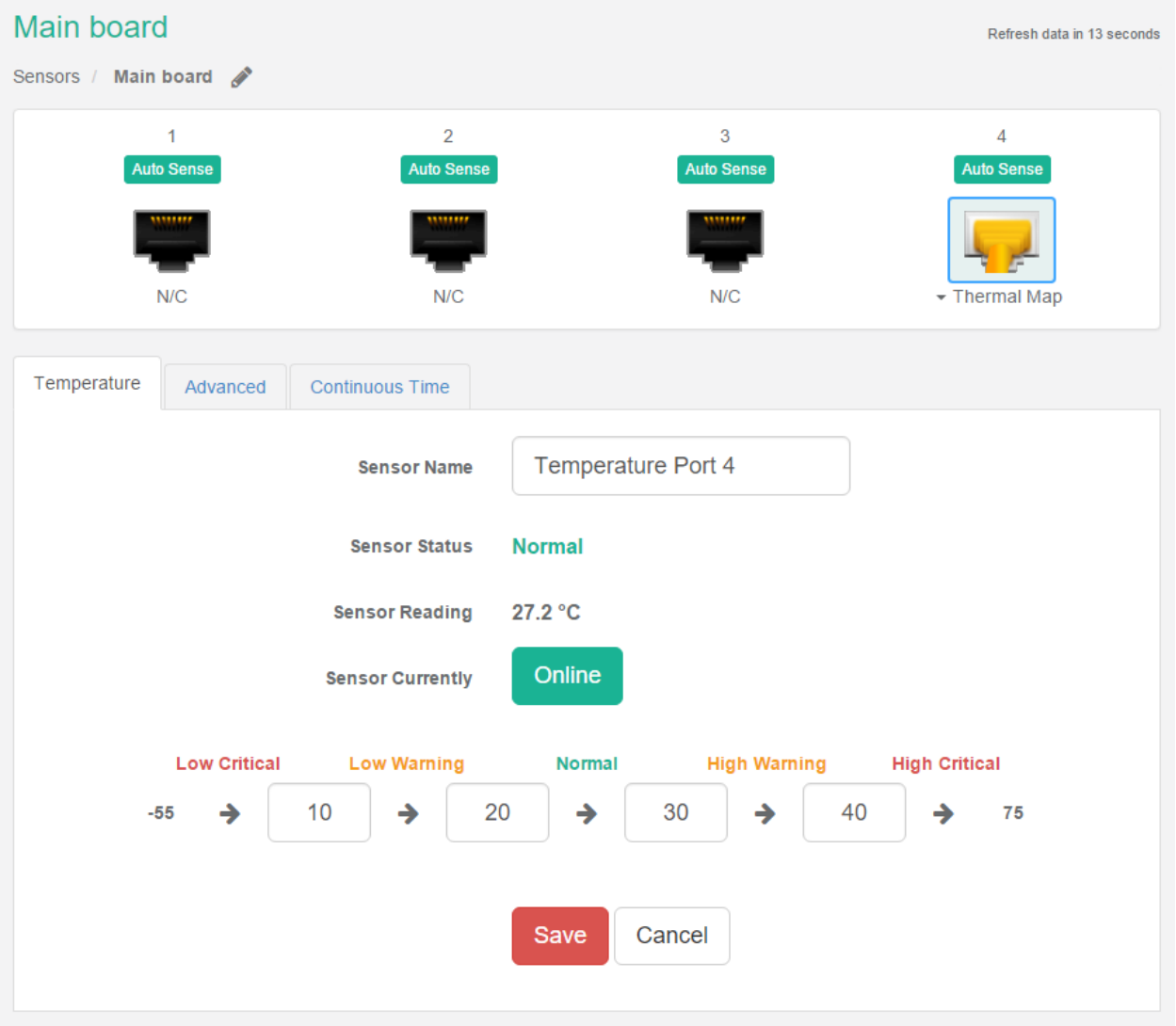
On the **Summary page** you can see the connected Thermal Map as multiple sensors.
For example from the Temperature/Humidity sensor you can easily identify which port it is plugged in to on the unit (you can also freely rename the sensors afterwards).



On the **Sensors page**, you'll see the **Thermal Map** as a single sensor.

To manage a sensor in the Thermal Map, click on the image for the list of all sensors and click on one that you wish to configure.

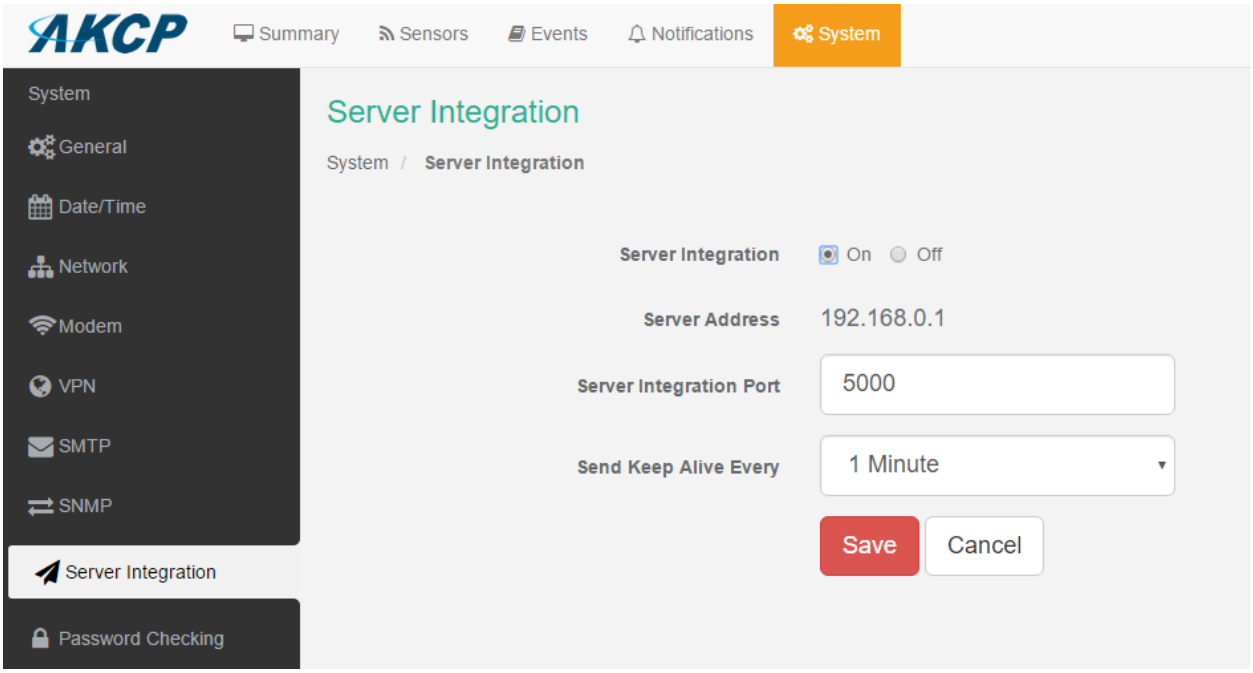
Please note the **maximum supported cable length to use with Thermal Map Sensors**:
Maximum extension cable length from the SP2+ sensor port to the TMS using CAT5 = 28 Feet
Maximum extension cable length from the SP2+ sensor port to the TMS using CAT5e & CAT6 = 60 Feet



The configuration and options for the Thermal Map's sensors are the same as with standalone sensors.
Please refer to the **SP2+ Introduction Manual** for detailed configuration of the Temperature/Humidity sensors.

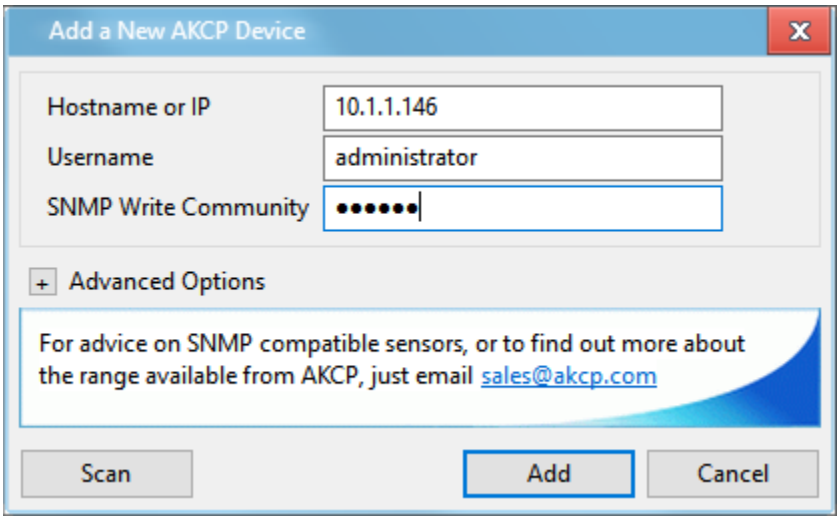
Note: the *Temperature Search* option is not available for the Thermal Map sensor; it is used by the Daisy-Chain Temperature Sensor (DCT).

AKCess Pro Server configuration

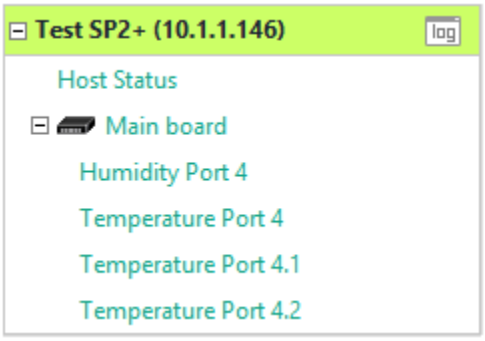


Before adding the unit to the APS console, ensure that the **Server Integration** option is **enabled** in the Web UI's **System page**.

If you don't enable this option, the unit cannot be added to APS.

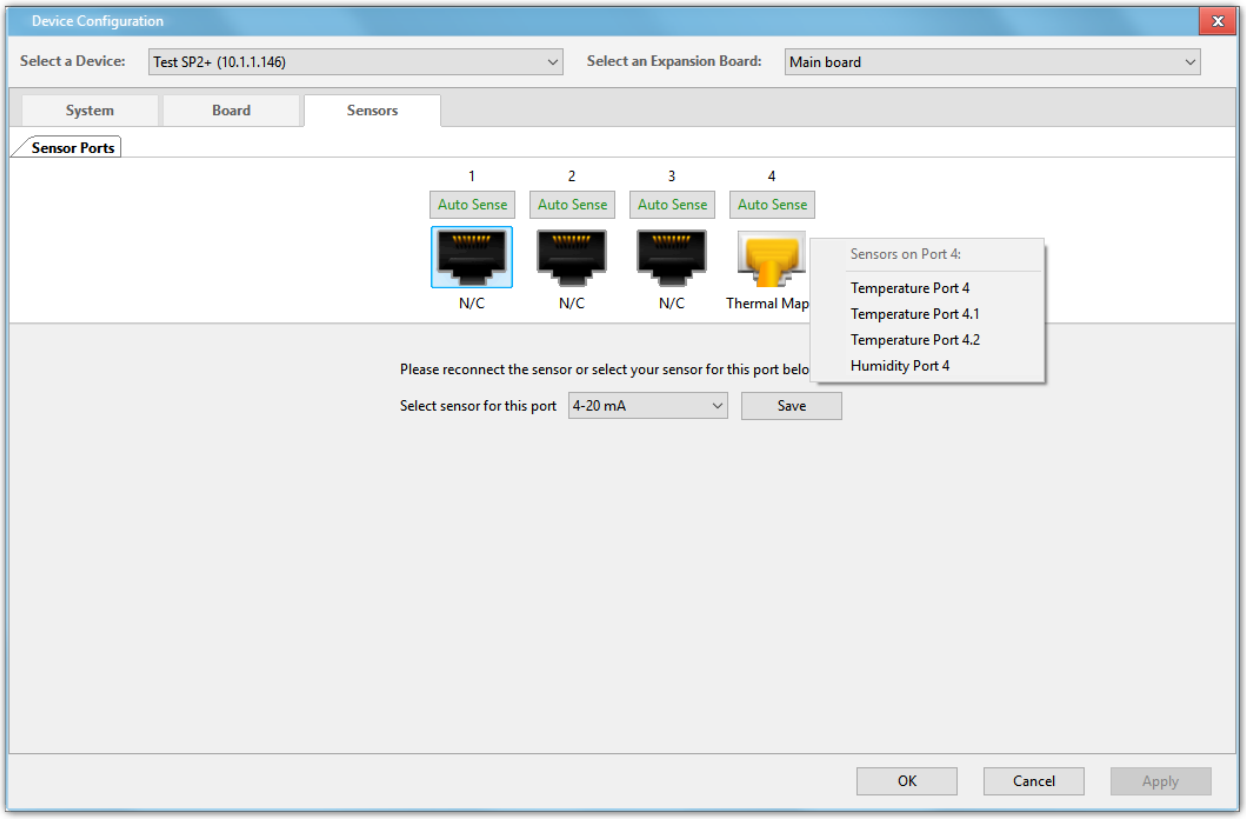


Add the unit to the APS console like any other AKCP unit:
- Type in the unit's IP or host name
- User name: administrator
- SNMP Write Community: if you haven't changed it in the Web UI, the default is "public".



After the initialization has finished, you can see the connected Thermal Map sensor as multiple sensors, similar to the view of the unit's Summary page on the Web UI.

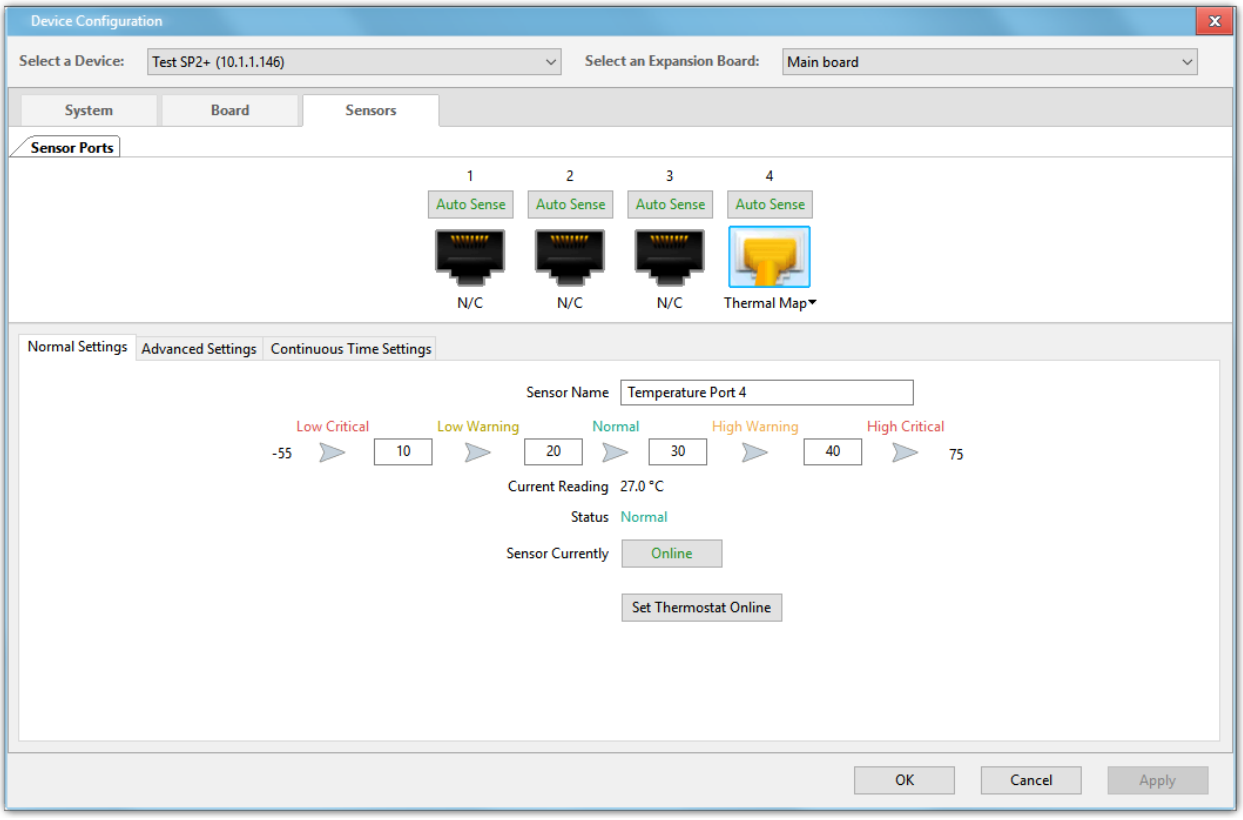
Right click on the unit and select **Configure** for the sensor options.



In the **Device Configuration** window, you'll see the **Thermal Map** as a single sensor.

To manage a sensor in the Thermal Map, click on the image for the list of all sensors and click on one that you wish to configure.

Please note the following **maximum supported cable length to use with Thermal Map Sensors**:
Maximum extension cable length from the SP2+ sensor port to the TMS using CAT5 = 28 Feet
Maximum extension cable length from the SP2+ sensor port to the TMS using CAT5e & CAT6 = 60 Feet

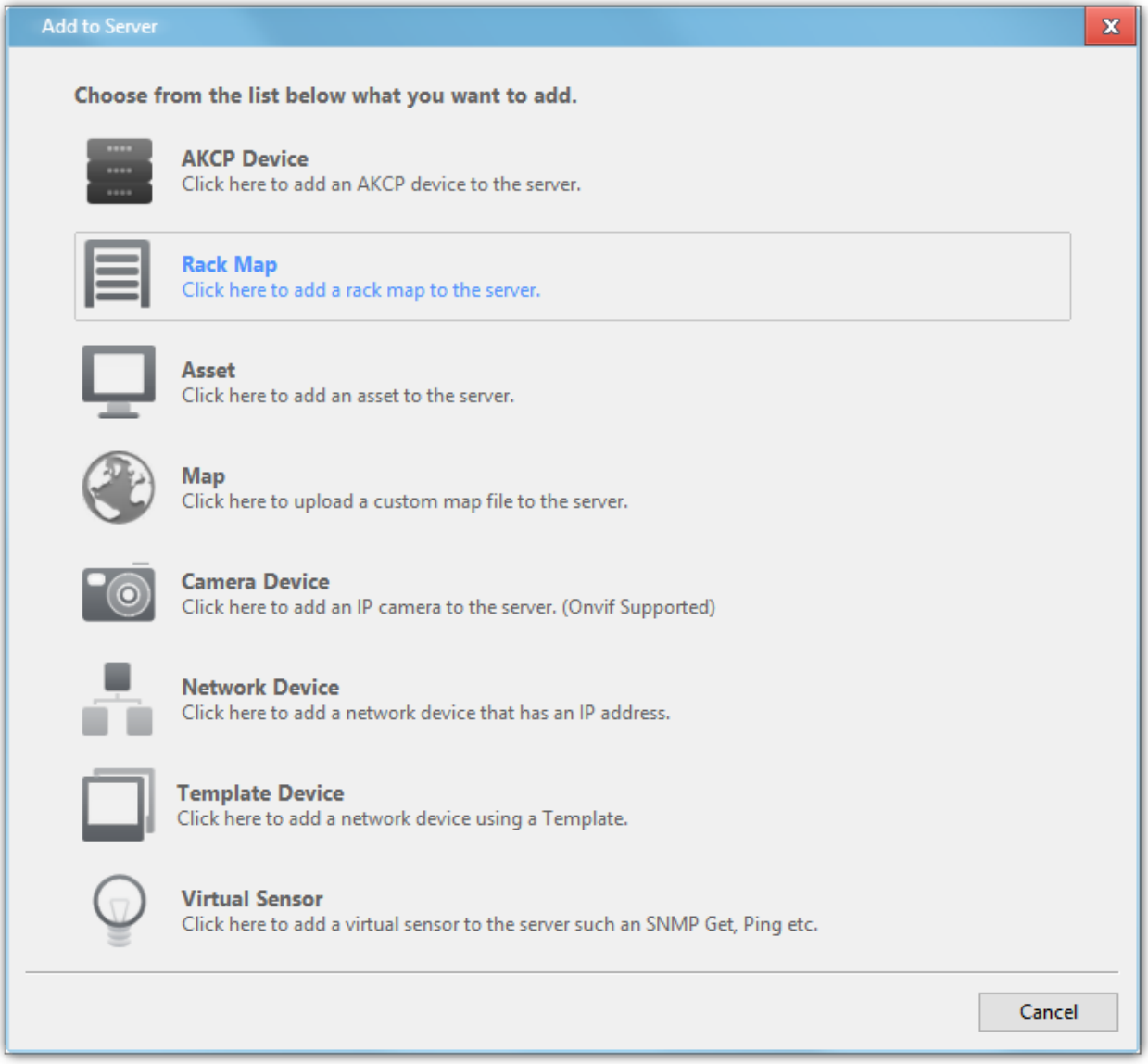


The configuration and options for the Thermal Map's sensors are the same as with standalone sensors.

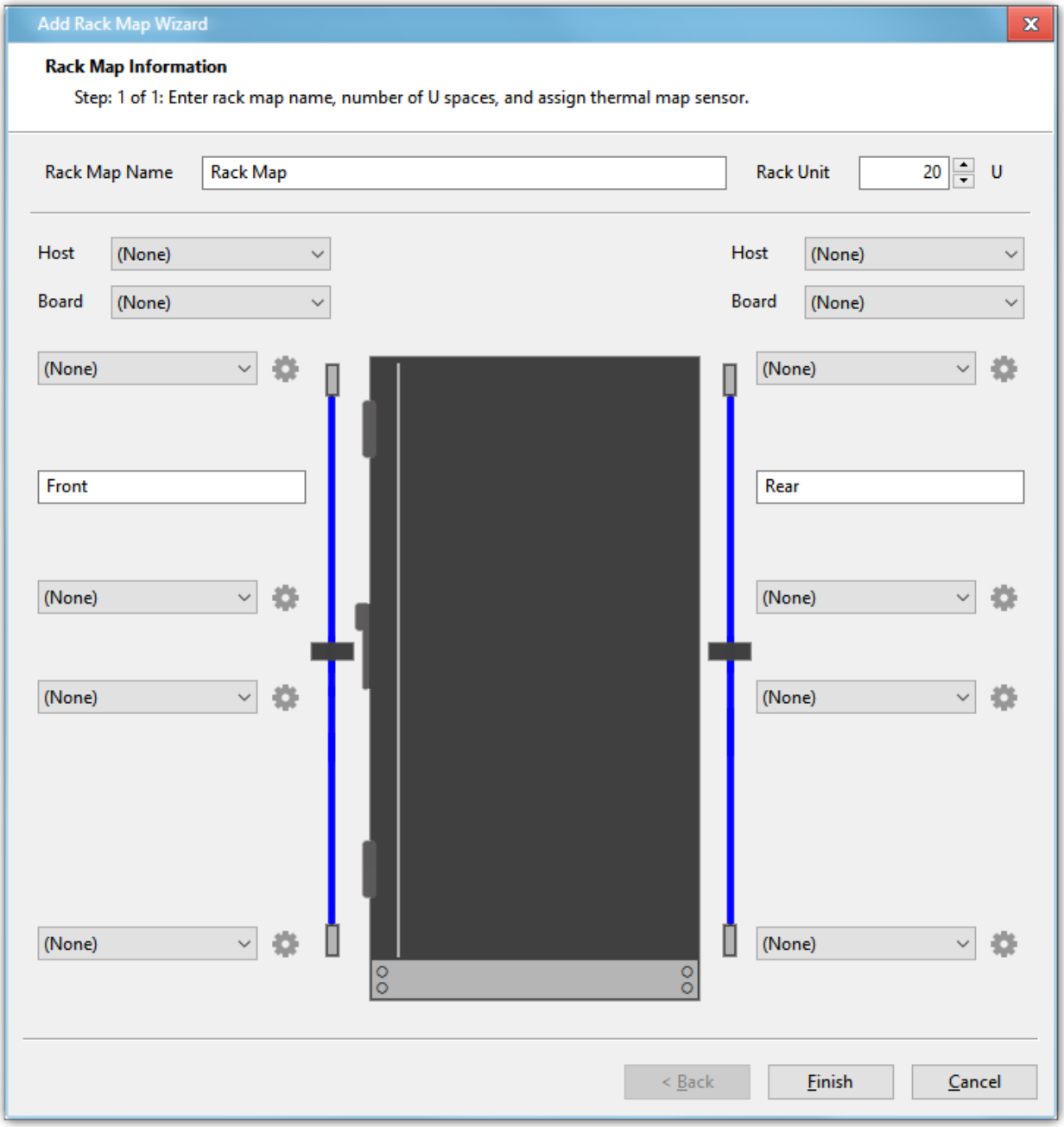
Please refer to the **AKCess Pro Server Manuals** for detailed configuration of the Temperature/Humidity sensors (the available options match with the Web UI options).

Rack Map

You can create a Rack Map in APS when using the Thermal Map sensor.



Click on the **Add** menu and select **Rack Map**.

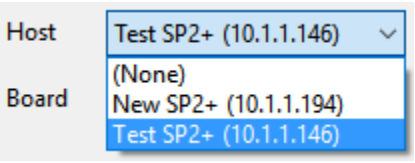


You can configure your server rack's height in the Rack Unit, and customize the names of the rack and front/rear view.

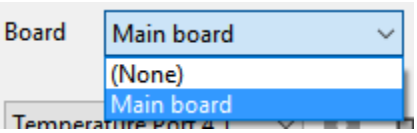
To add your Thermal Map sensor to the Rack Map, do the following:

1: Choose where you'd like to configure the Thermal Map - Front or Rear view of the Rack Map. One TMS sensor can only be used in either front or rear of the rack.

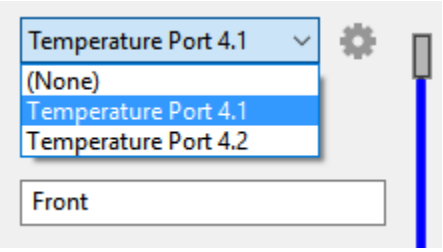
2: Choose an SP2+ unit from the Host drop-down menu which has a Thermal Map sensor attached - on our picture it's named Test SP2+



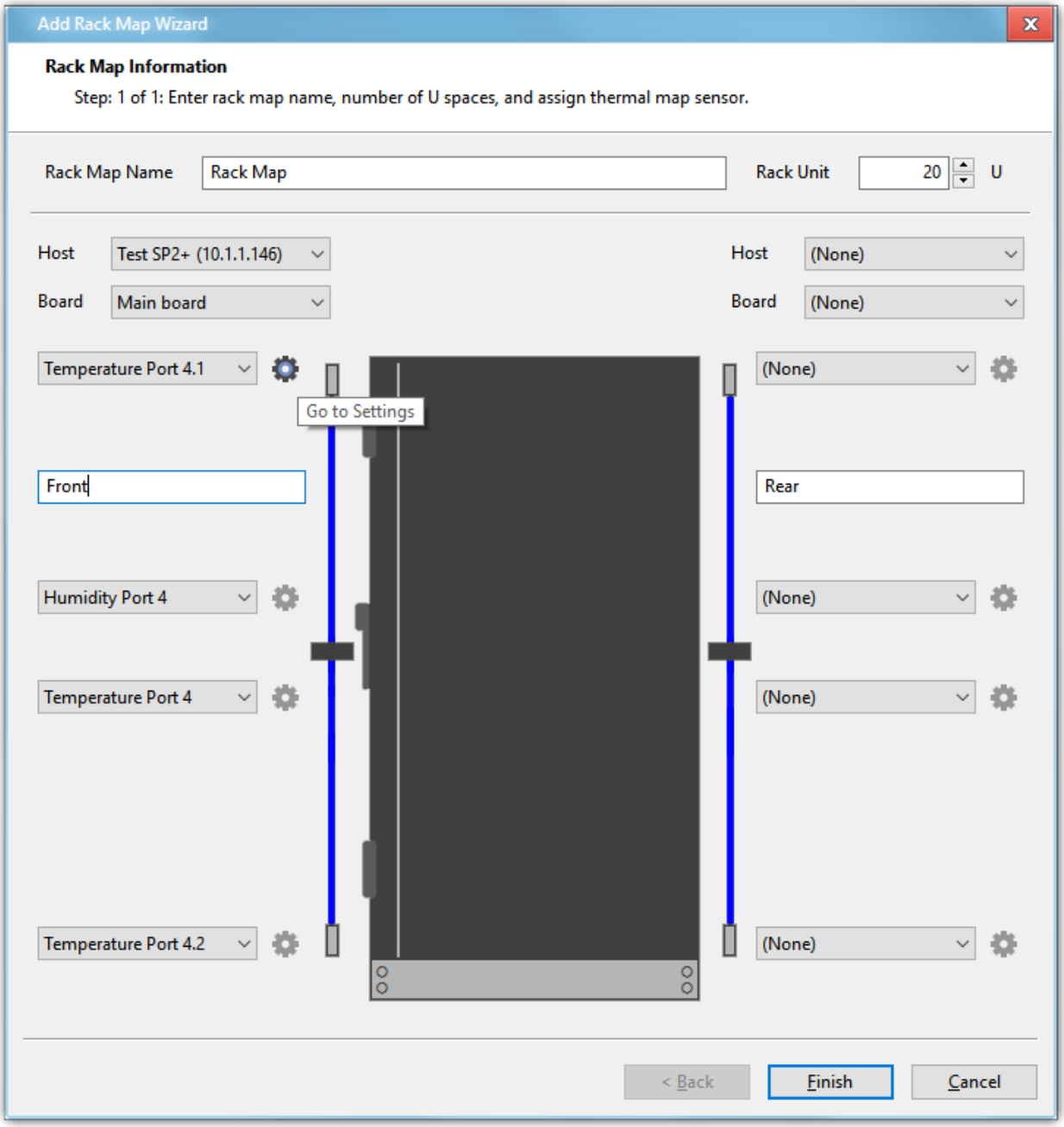
3: Choose the SP2+ unit's board - without expansion boards, it will be the Main board.
If you have expansion boards, you can choose from multiple boards.



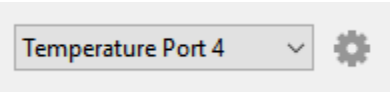
4: Choose the first Temperature Sensor from the Thermal Map - on our picture it's named Temperature Port 4.1



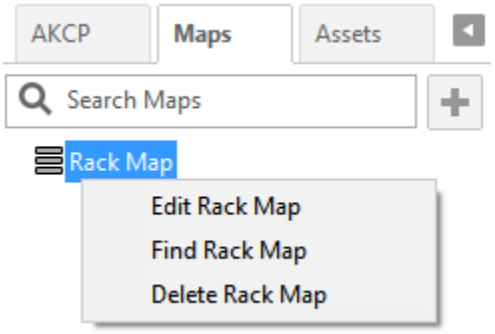
By choosing the first sensor, APS will determine the position of the rest of the sensors automatically. You can change the sensor position as needed.



When completed, the Rack Map will look similar to this.



You'll have a direct link for accessing the sensor configuration options in the Thermal Map.
Click on the gear icon next to a sensor's name and the configuration window will open (on our picture it's visible as the text Go to Settings).

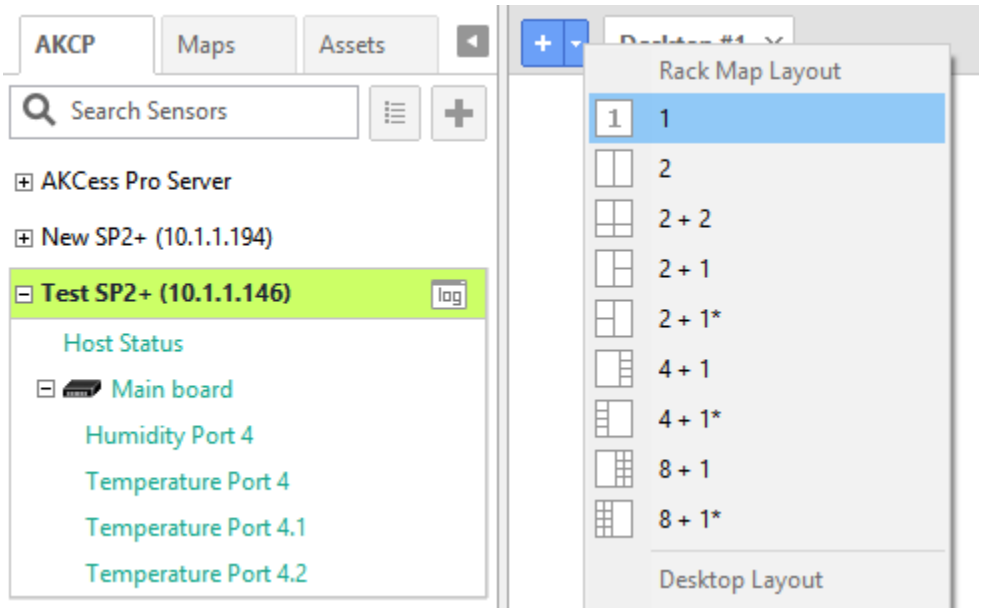


After you've finished adding a Rack Map, it will become visible under the Maps tab.

Right clicking on the Rack Map will give you options to edit/delete or find Rack Map.
The find option will flash the window of an existing Rack Map, if you've created a Rack Map Workspace (see below).

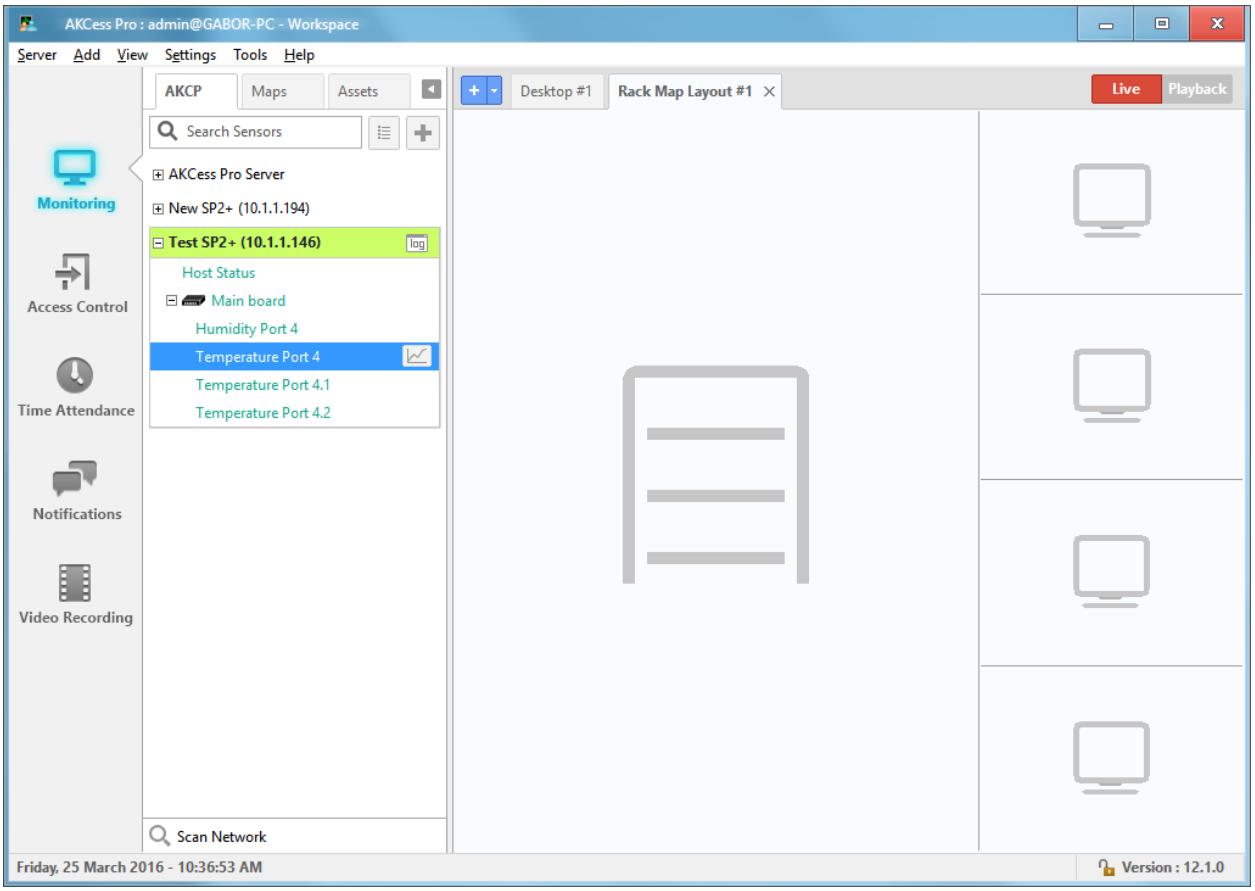
Rack Map Workspace

You can add a Rack Map Workspace where you can display the Rack Map and chosen sensors.

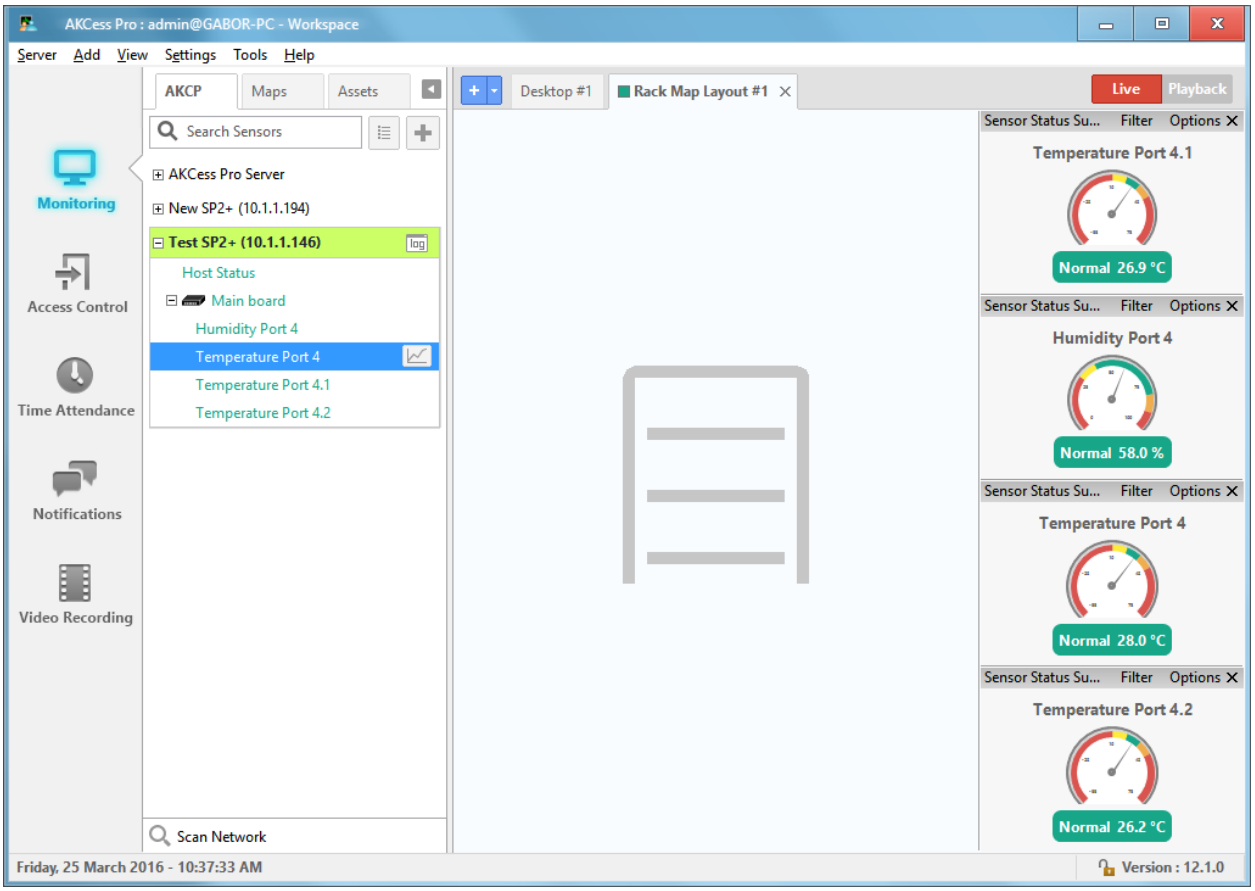


Click on the blue + icon and choose a layout from the Rack Map list.

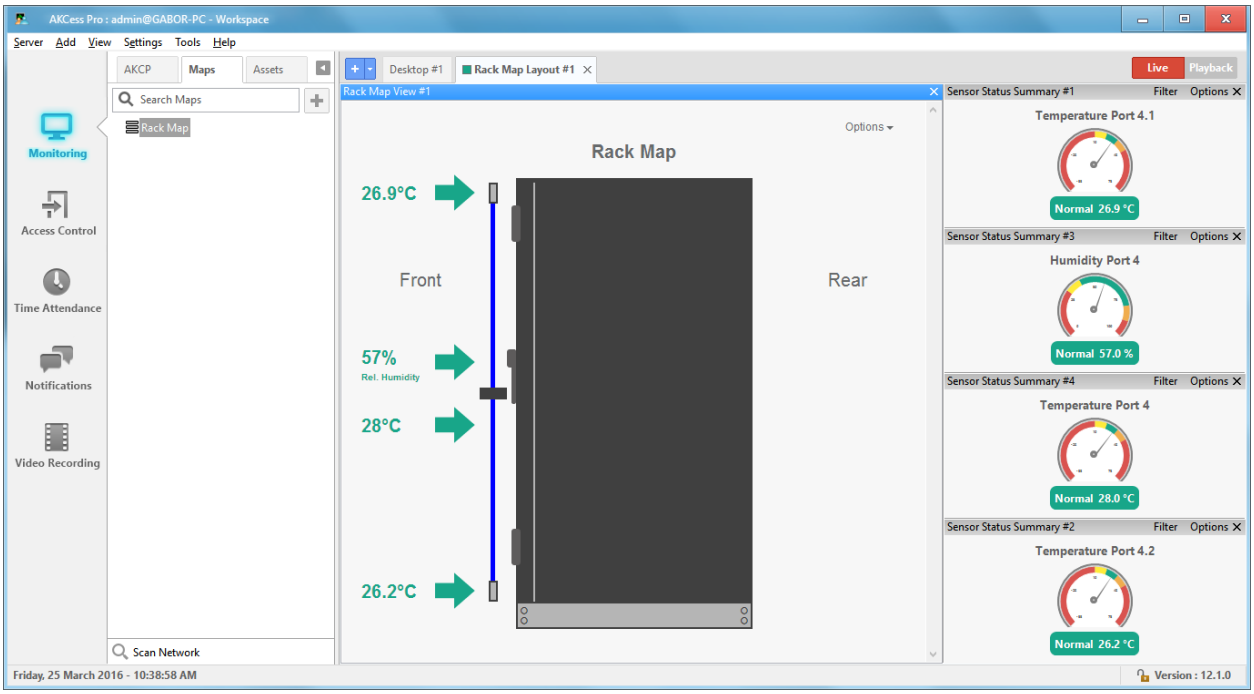
We'll choose the 4+1 layout, it allows us to show selected sensors as gauges.



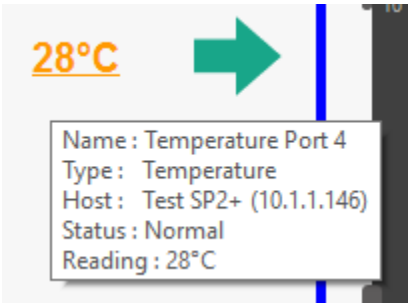
After you've added the Rack Map Layout it will be empty.



Drag-and-drop the sensors from the SP2+ unit to the right.



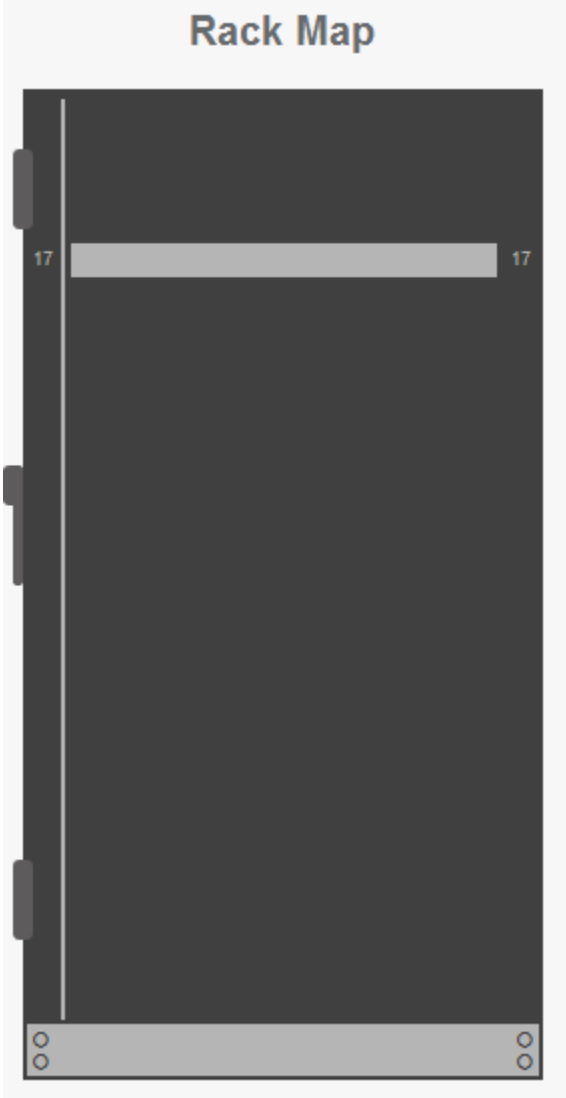
Finally, drag-and-drop the previously created Rack Map to the workspace.
This will visually show all current sensor readings according to the Rack Map setup.



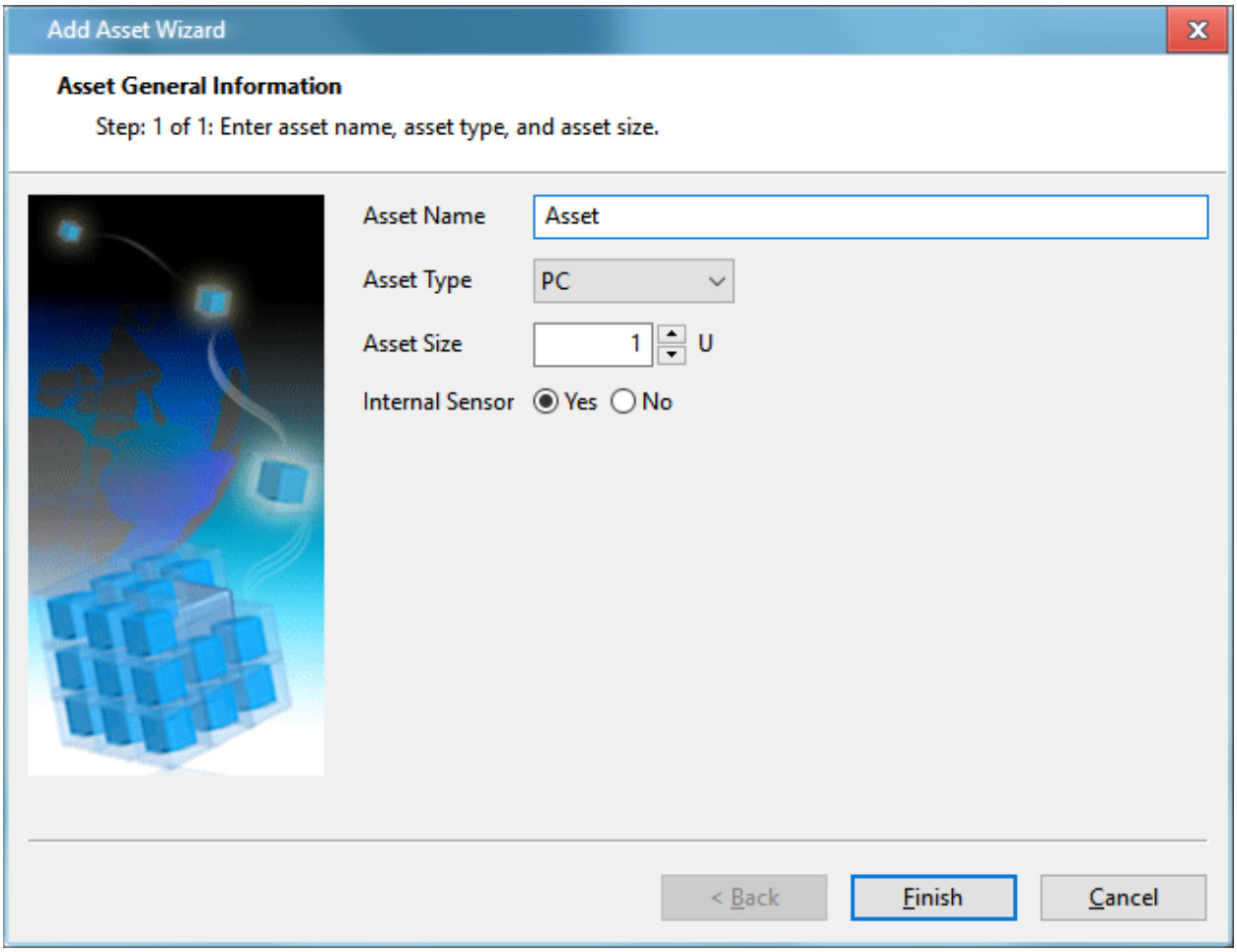
You can view details of a sensor by hovering the mouse cursor over it.
If you click on the reading, it will take you to the sensor's configuration window.

Adding an Asset to the Rack Map

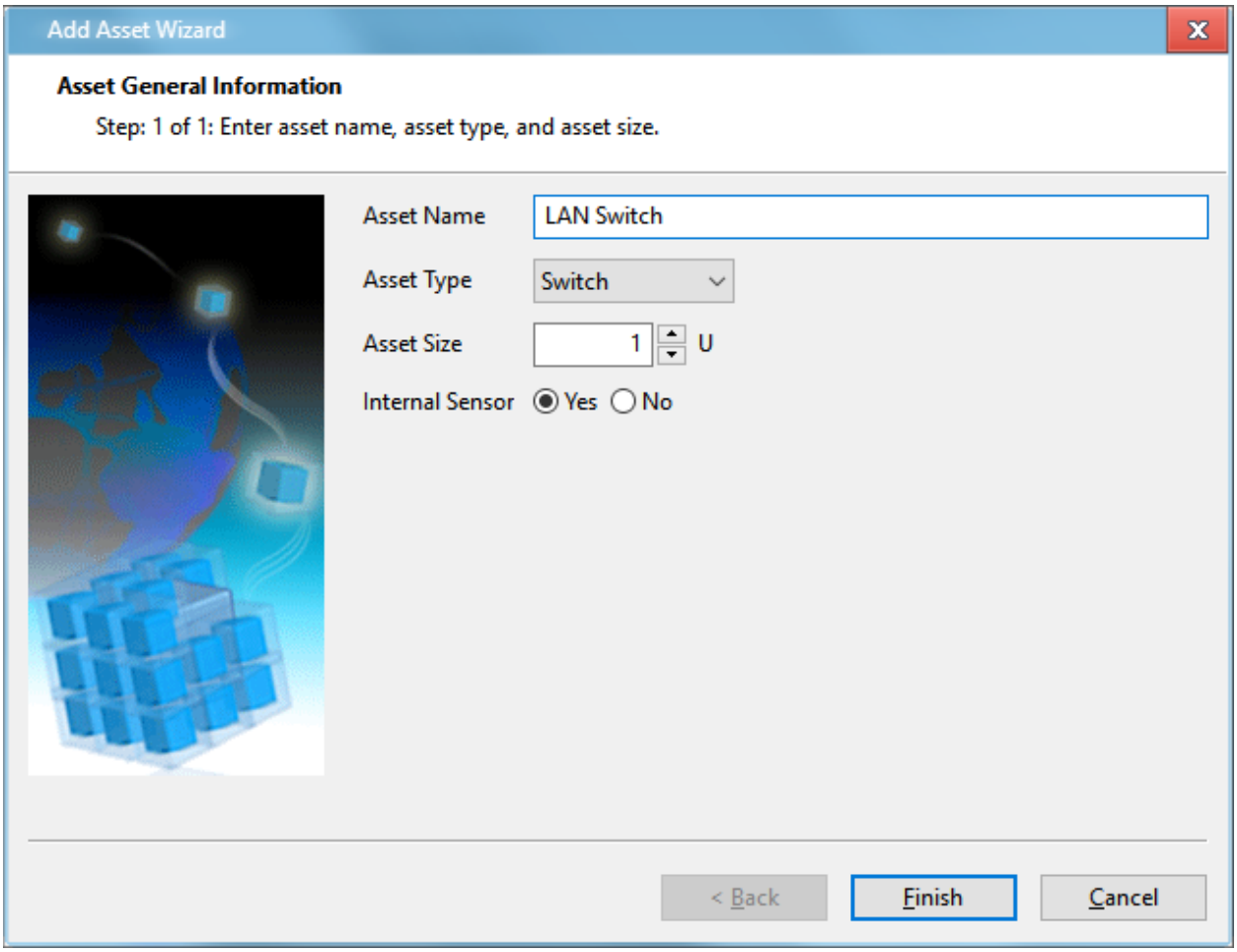
Assets are representing the units you have in your server rack.
They are freely configurable and allows you to attach virtual sensors to a device - for example ping - if it supports it.



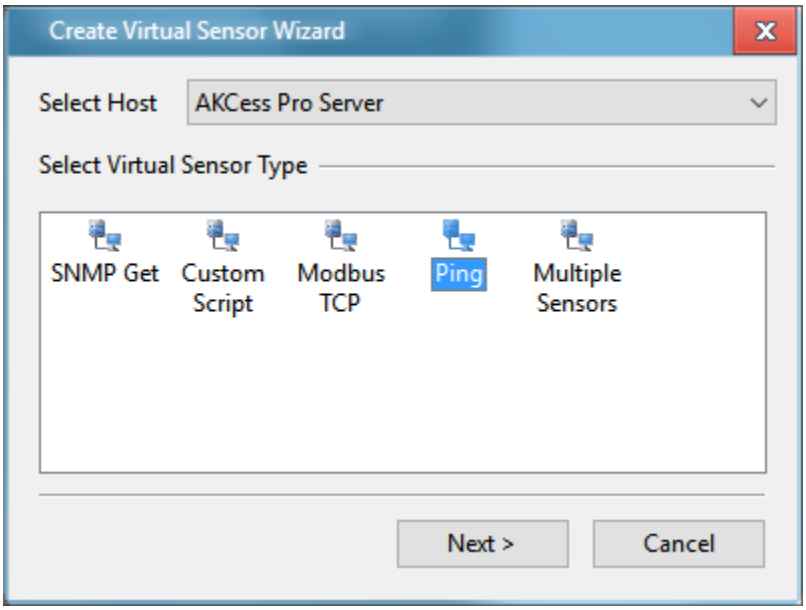
Click on a free space in the Rack Map. This will start the Asset wizard.
You can also start the wizard from the Assets tab.



Choose a name for your asset and set its type and size.
If your device supports monitoring via a sensor, choose Internal Sensor: yes.

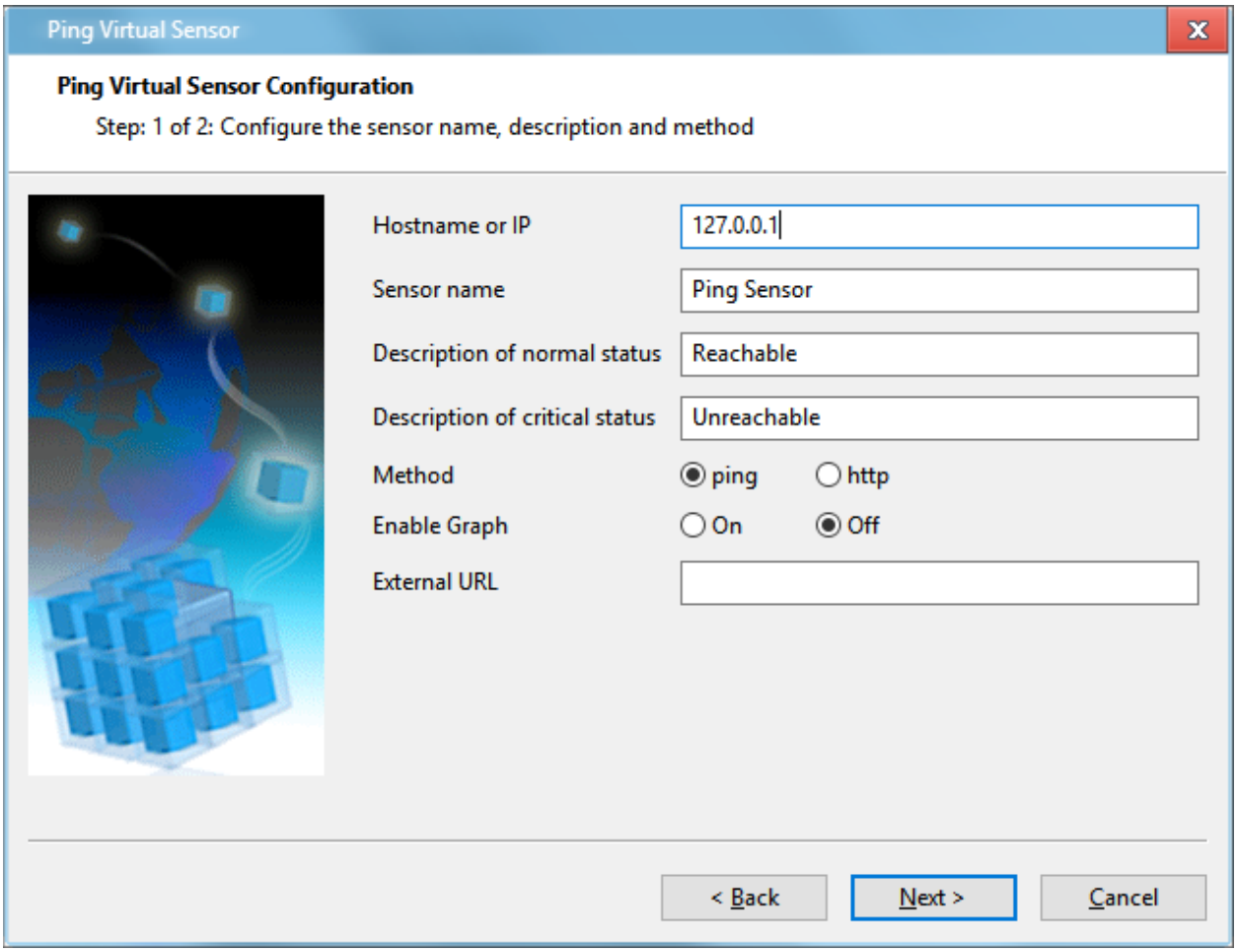


In our example we'll set up a LAN Switch device, 1U height, and monitoring via ping virtual sensor.

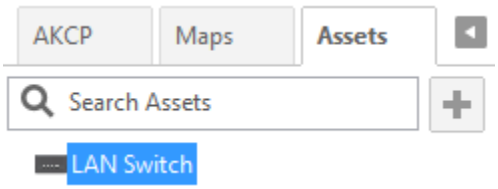


If you've chosen that the asset has Internal Sensor, choose the type of the monitoring.

You can find more help using Virtual Sensors in APS manuals.

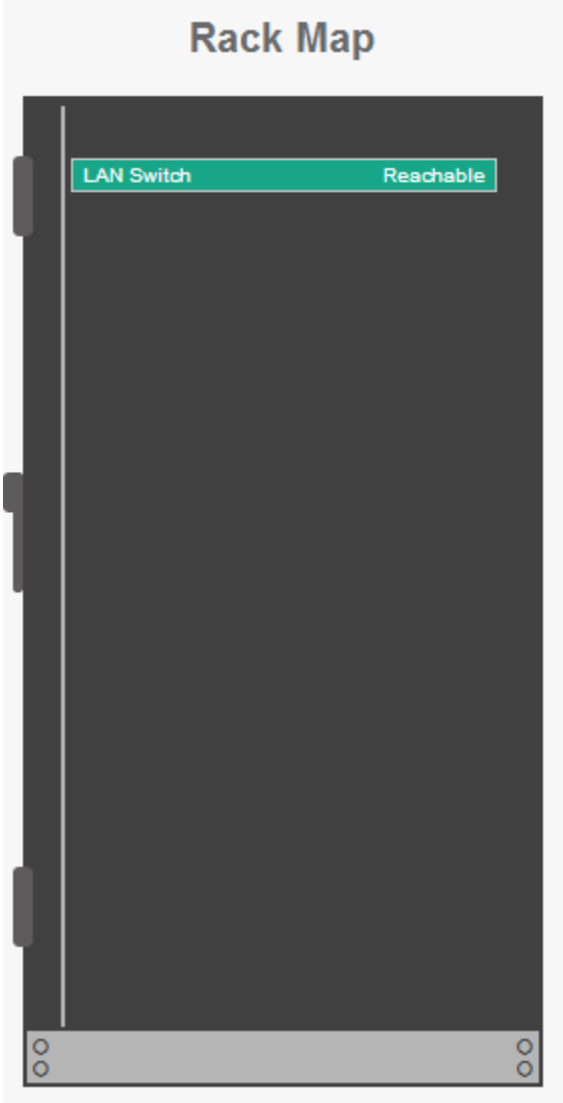


Configure the Virtual Sensor - in our example it's a Ping Sensor.

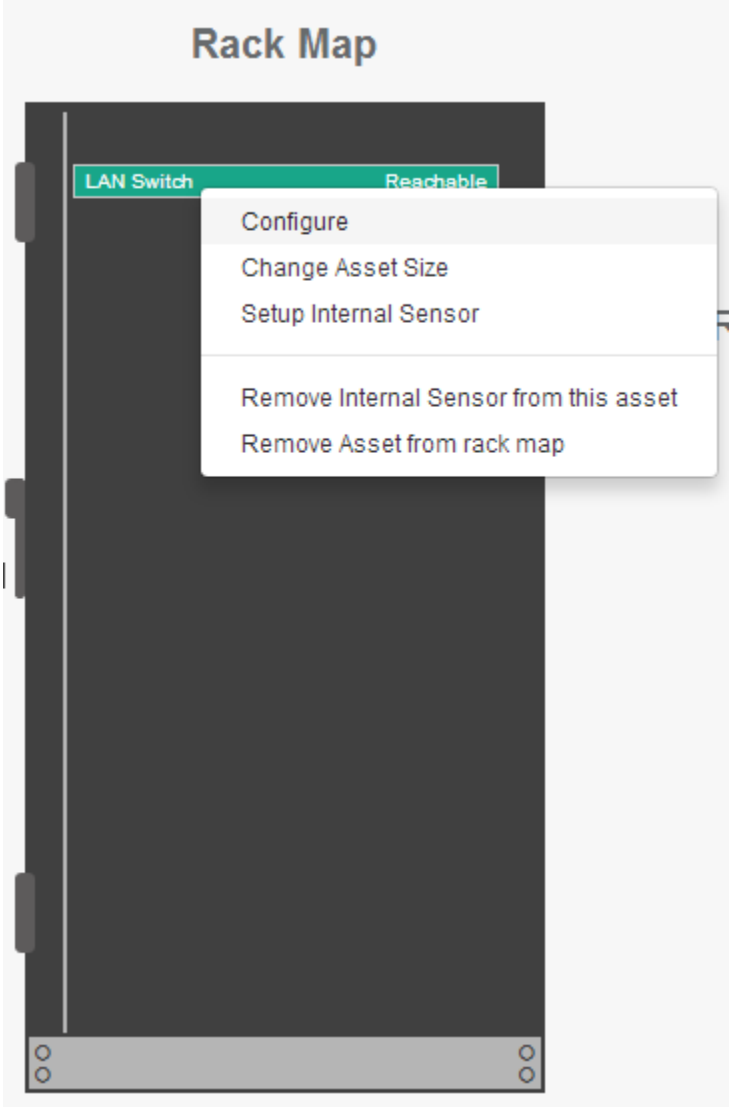


After the wizard has run, the asset will be added to the Assets tab.

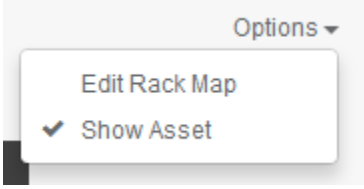
If you've added the new asset from this tab, then drag-and-drop it to the Rack Map.



The asset will be shown on your Rack Map with its name and status.

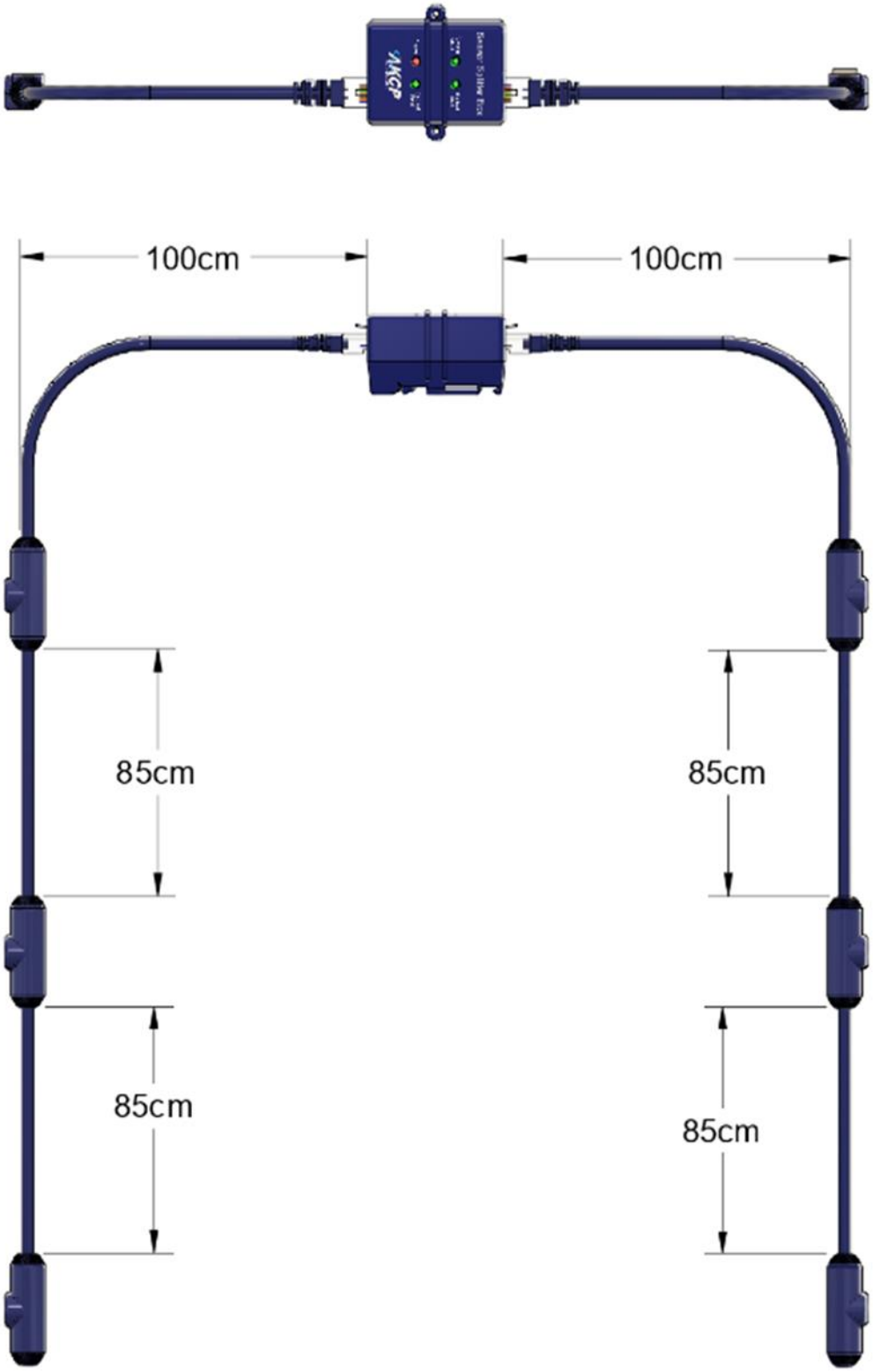


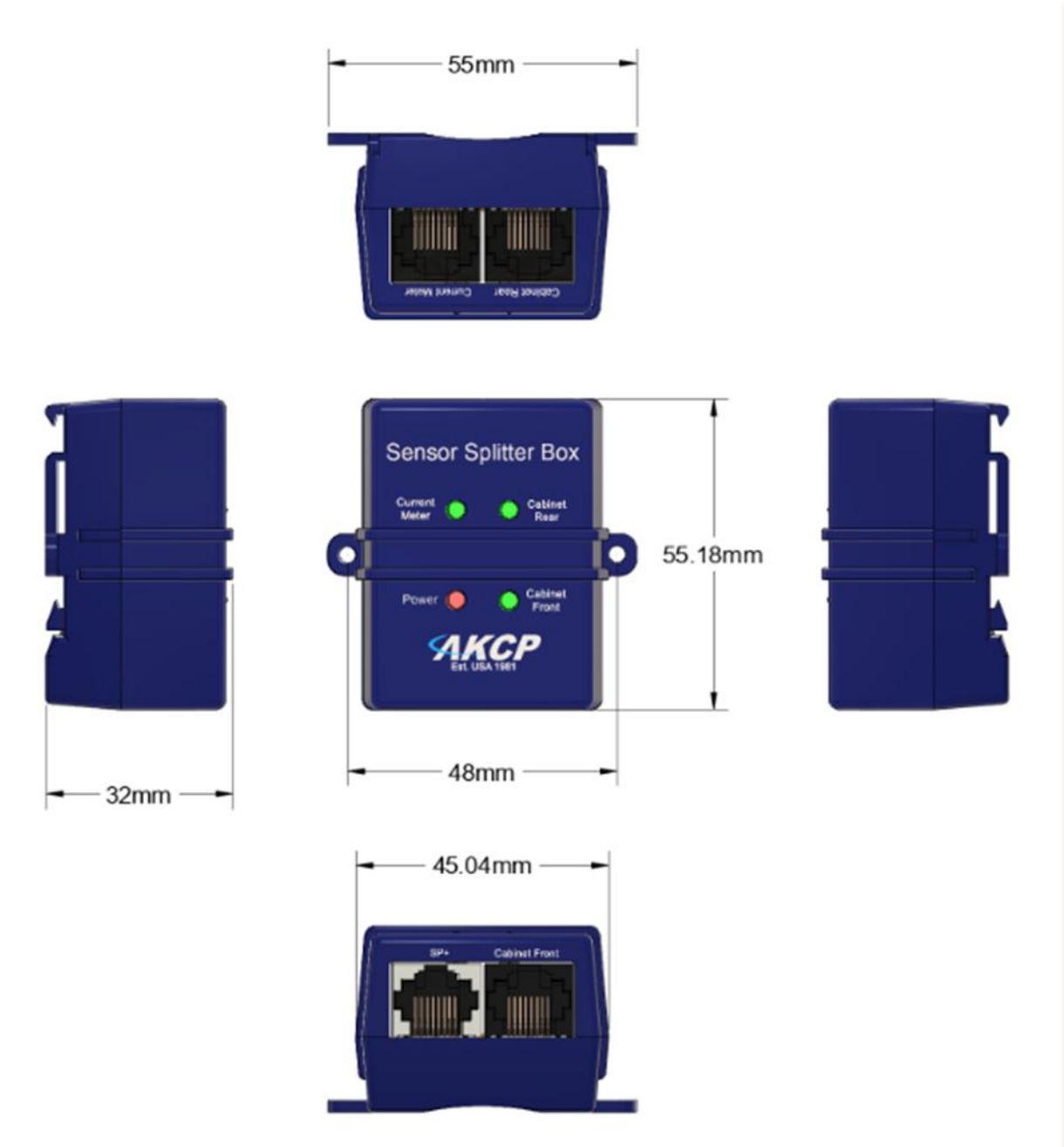
Right-clicking on the asset will allow you to reconfigure the setup (using the Asset wizard), directly change its size, set up an Internal Sensor for it, or remove it.



In the Rack Map's options, you'll have the option to show or hide the configured assets, and edit the map.

Thermal Map Dimensions





Please contact support@akcp.com if you have any further technical questions or problems.

Thanks for Choosing AKCP!