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Thermal Map & Rack Map Manual

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Introduction

The Thermal Map Sensor (TMS) is our sensor designed for our SmartRack system. This sensor can be used with our new sensorProbe+ & securityProbe+ family of products. It will help you locate hot spots in your datacenter's server cabinets.

The TMS sensor includes 6 Temperature Sensors and optional 2 Humidity sensors that our mounted within your server cabinets. Both in the front and rear of the cabinet.

With this sensor you can save space and sensor ports on the unit as it's using a single sensor port.

Pre wired to be easily installed in your cabinet, they are placed at the top, middle and bottom – front and rear of the cabinet. This configuration of sensors monitors the air intake and exhaust temperatures of your cabinet, as well as the temperature differential from the front to the rear. Use Thermal Map sensors to identify cabinet hot spots and problem areas.

In this manual we're going to show you how to install and configure the sensor, with Web UI options.

We'll use only the TMS sensor variant which has the 6 Temperature Sensors, but the configuration is the same for the other variant.

You can also view our Thermal Map Sensor video on our YouTube channel using this link: https://www.youtube.com/watch?v=kJ3OV2WJKYc

Very Important note: The Thermal Map sensors are only compatible with the SP+ (SP2+ and SPX+), SEC+ base units and will not work on the securityProbe, DCU, CCU or sensorProbe family of base units. They also will not work on the version of the AKCP Pro Server prior to version v13.0

Thermal Map Installation

Thermal Maps are easy to install, come pre wired and ready to mount with magnetic, cable ties or ultra high bond adhesive tape to hold them in position in your cabinet.
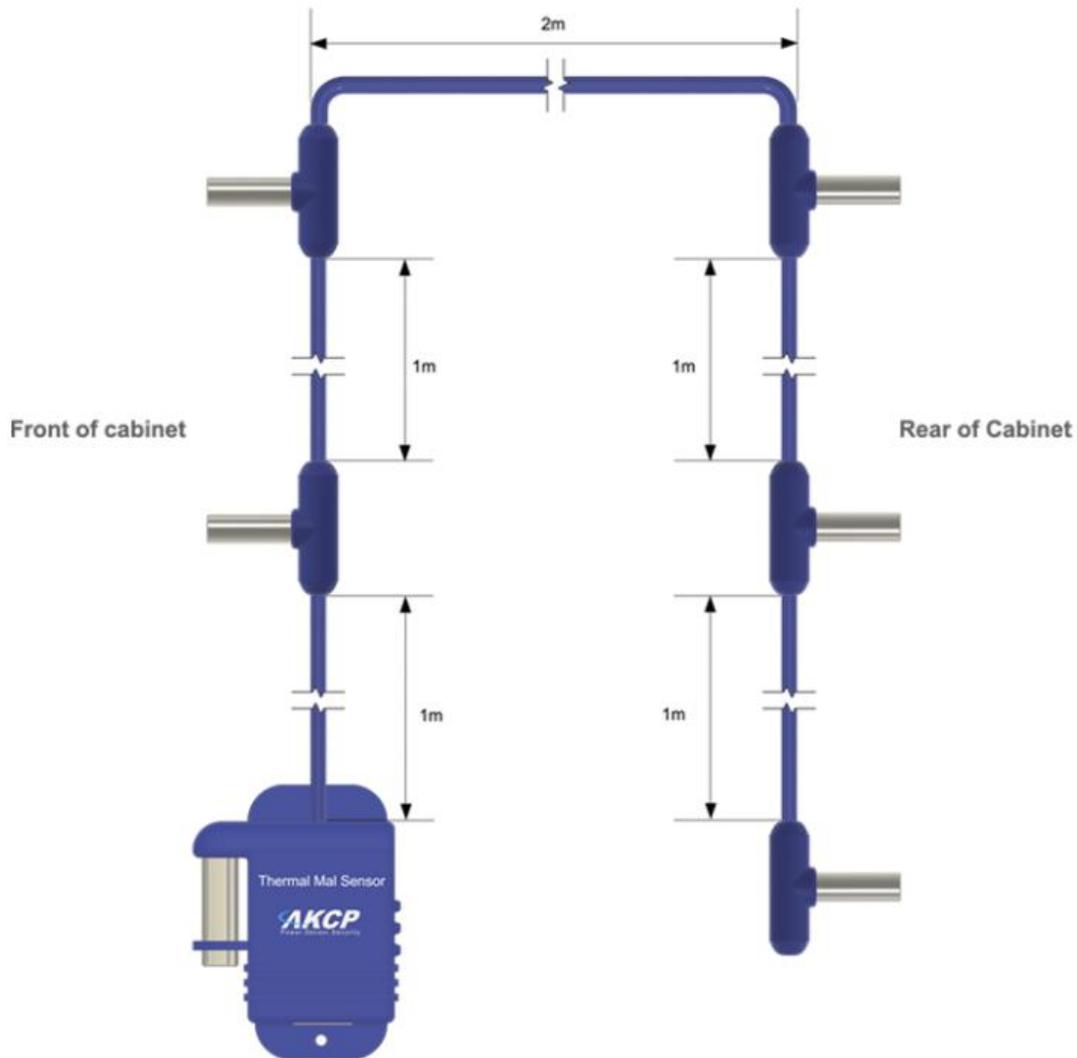
As shown in the diagram above, mount each sensor on the front and rear doors of your perforated cabinet so they are exposed directly to the airflow in and out of the rack. Please see pictures below on installing the sensor.

On sealed cabinets, they can still be mounted on the inside and give the same monitoring of the temperature differential between front and rear, and ensure that airflow is distributed across the cabinet.

Installation Example (front & rear of cabinet)

Extendable up to a maximum of 18 meters of cable run length, you can monitor multiple cabinets from a single IP address. Up to 12 thermal maps can be connected to a single SPX+.

Technical Drawing
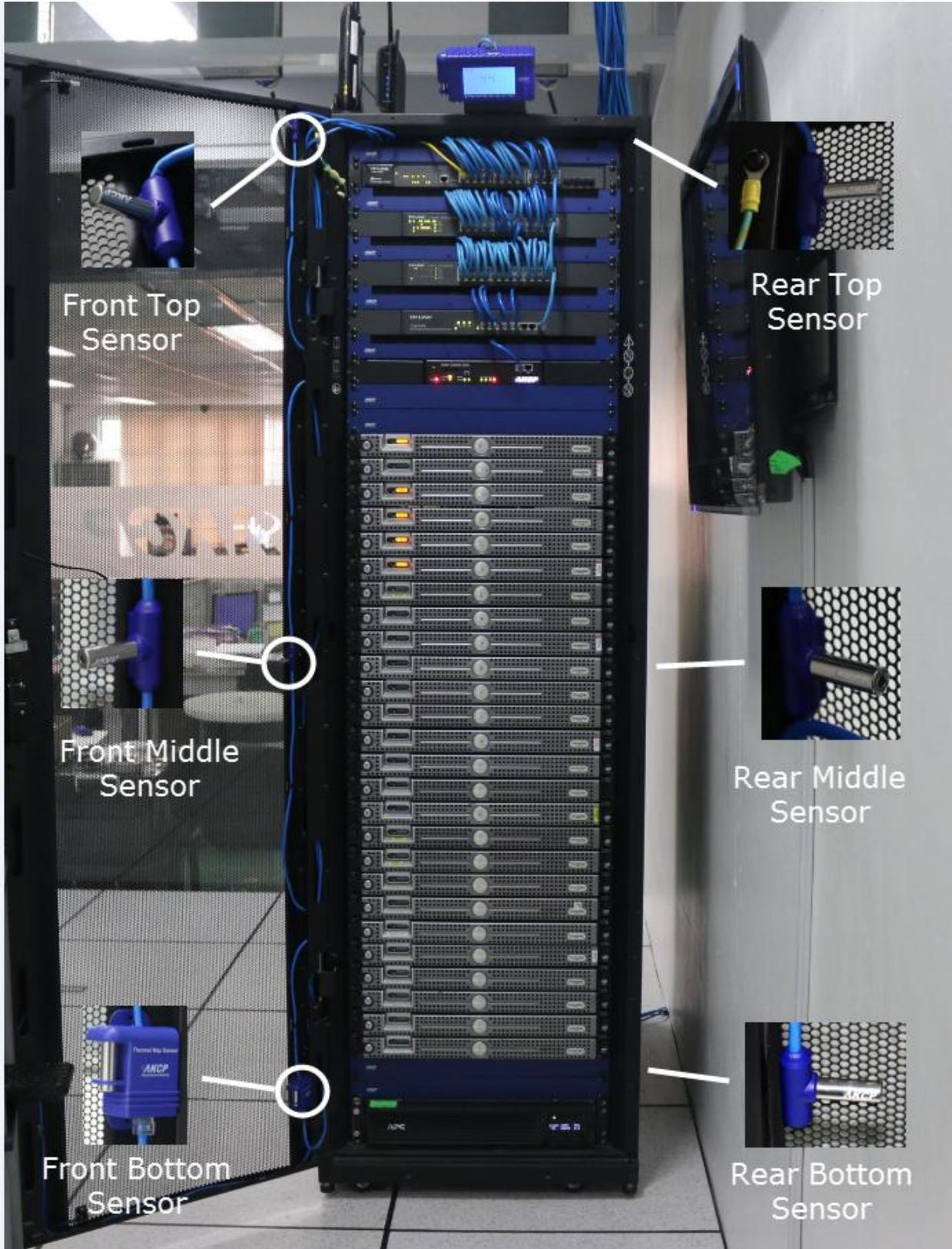
Web UI configuration & Rack Map Setup
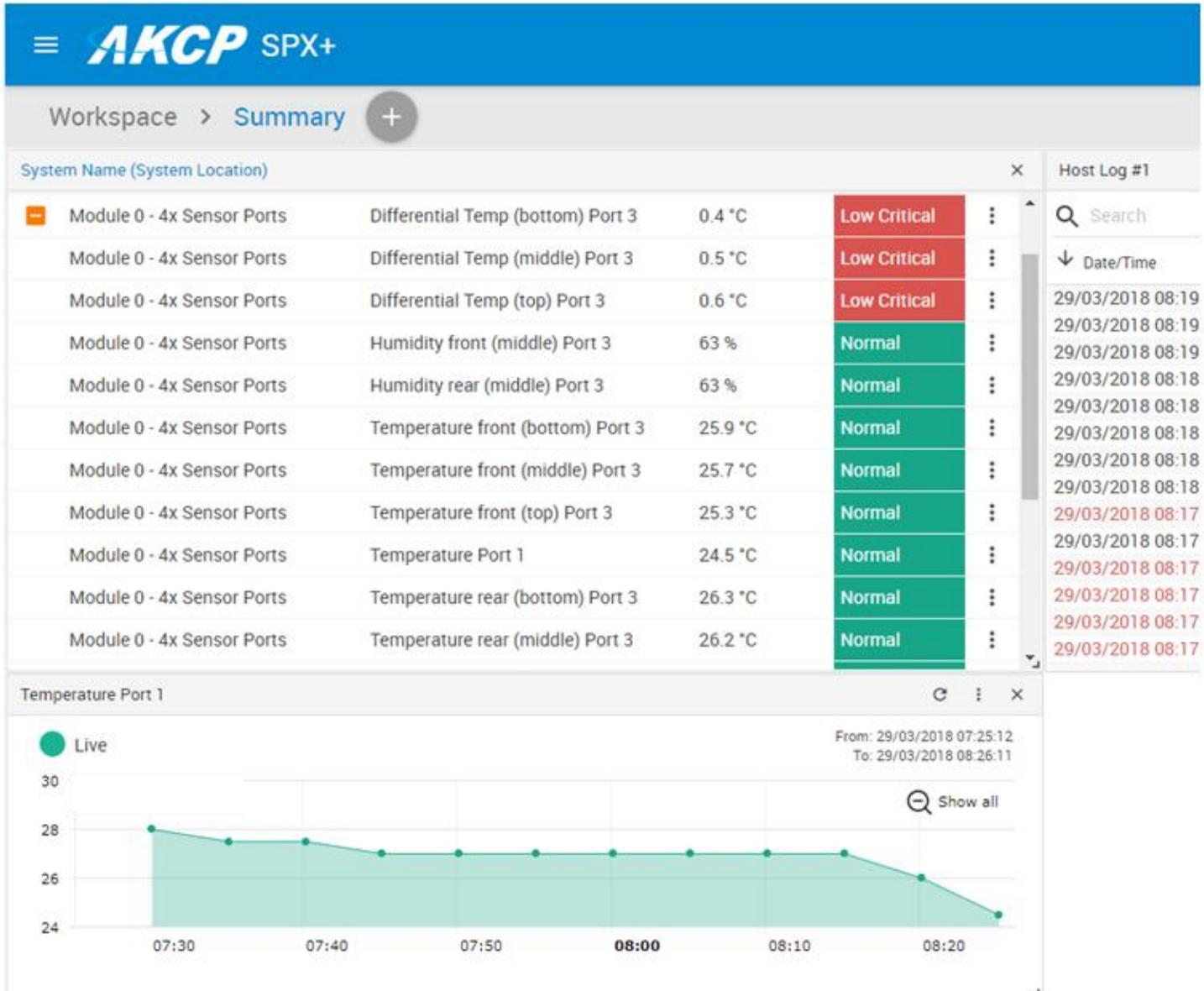
In this example above we are using the SPX+. This will appear the same on the SP2+ and SEC+.

On the **Summary / Monitoring 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).
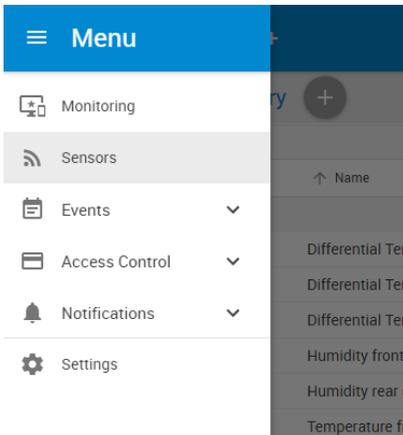
From the main menu click on the Sensors link.
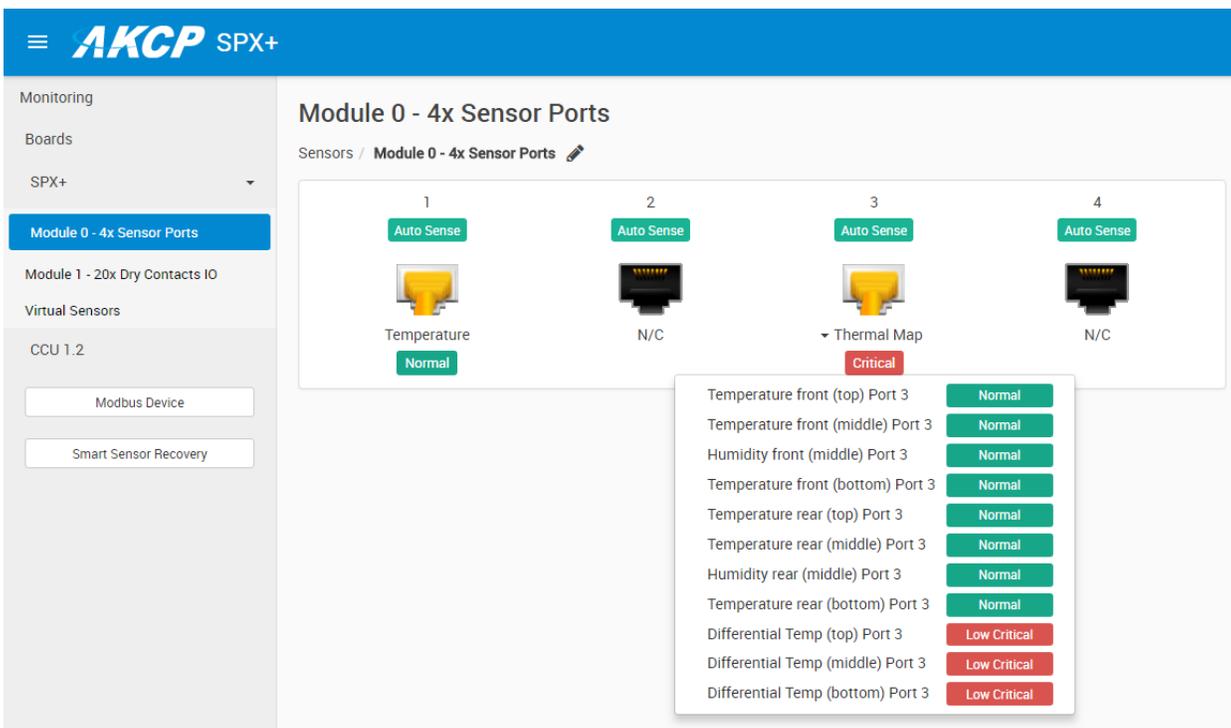
On the **Sensors page**, you'll see the **Thermal Map** as a single sensor. You will notice this sensor includes the optional two humidity sensors. There are the 6 temperature sensors, 3 for the front of the cabinet and 3 for the rear. The Differential Temp sensors monitor & display the measurements of the front to rear temperature differential. More will be explained below on this.

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 base units sensor port to the TMS using CAT5 = 18 Meters

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).

Rack Map View and Temperature Differential

The sensorProbe+ and AKCP Pro Server display the thermal maps inagraphical "RackMap" view. This shows the status and value of each sensor and its position on the cabinet, as well as animated arrows denoting the front to rear temeprature differential and its status.

Important Note: This Thermal Map sensor is not compatible with the sensorProbe, securityProbe or AKCP Pro Server software prior to v13.0. It is only compatible with the SP+, SEC+ and AKCP Pro Server software v13.0 and above.

Rack Map Setup

As shown in the screen shot below navigate back to the Monitoring page in the SP+ units web UI.
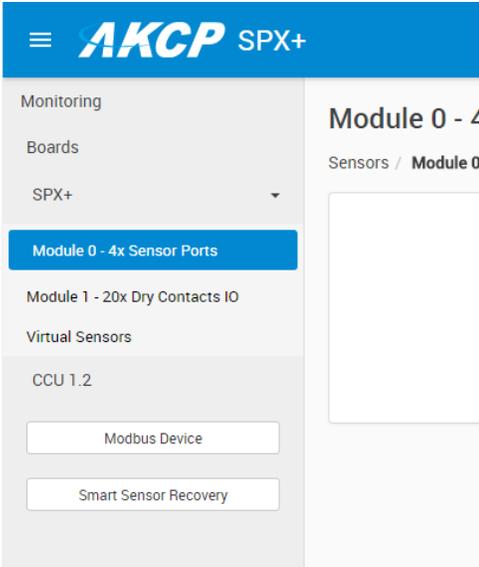
Then click on the "Workspace" link shown in the screen shot above.
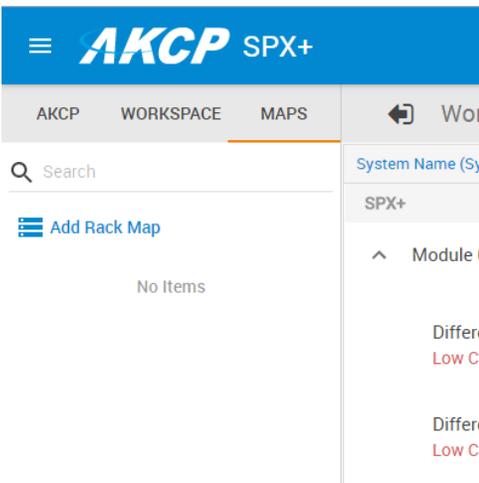
As you can now see in the screen shot above there is the AKCP, WORKSPACE & MAPS options.

After clicking on the MAPS option you will see the "Add Rack Map" button. Click on this to add your new Rack Map.

After clicking on the "Add Rack Map" you can then label or name your new Rack Map as shown in the screen shot above.

After naming your new Rack Map and clicking the "Add" button you will then see the new Rack Map in the MAPS column as shown in the screen shot above. In this example we have named the new Rack Map "Steve's RackMap."

Also note that if you want to edit or delete the new Rack Map you can do so by clicking in the menu button to the right of the Rack Map. You can also add the new Rack Map to your Workspace by choosing the "View Rack Map."
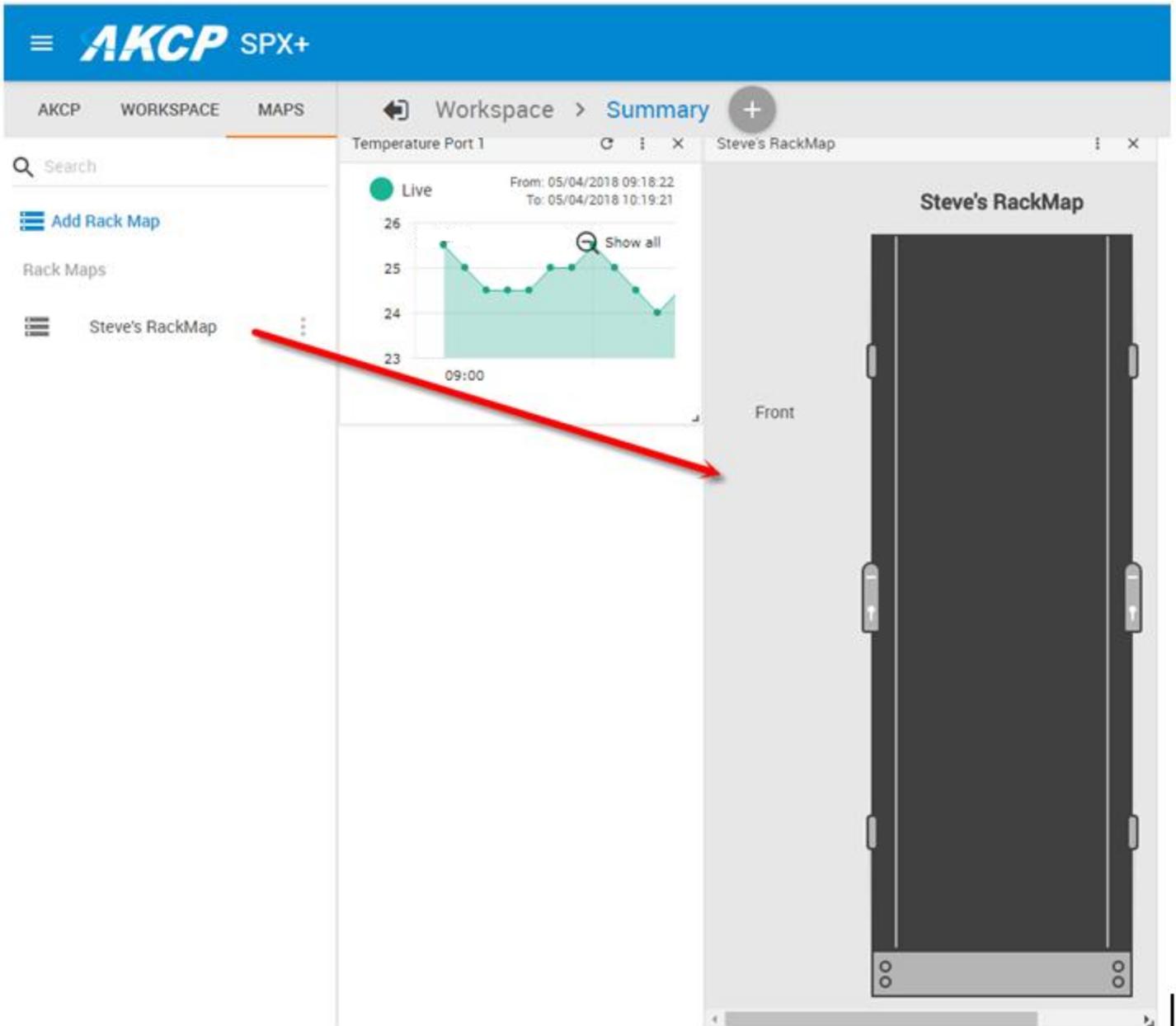
You can also simply drag and drop your new Rack Map to your Workspace as well as shown in the screen shot above.
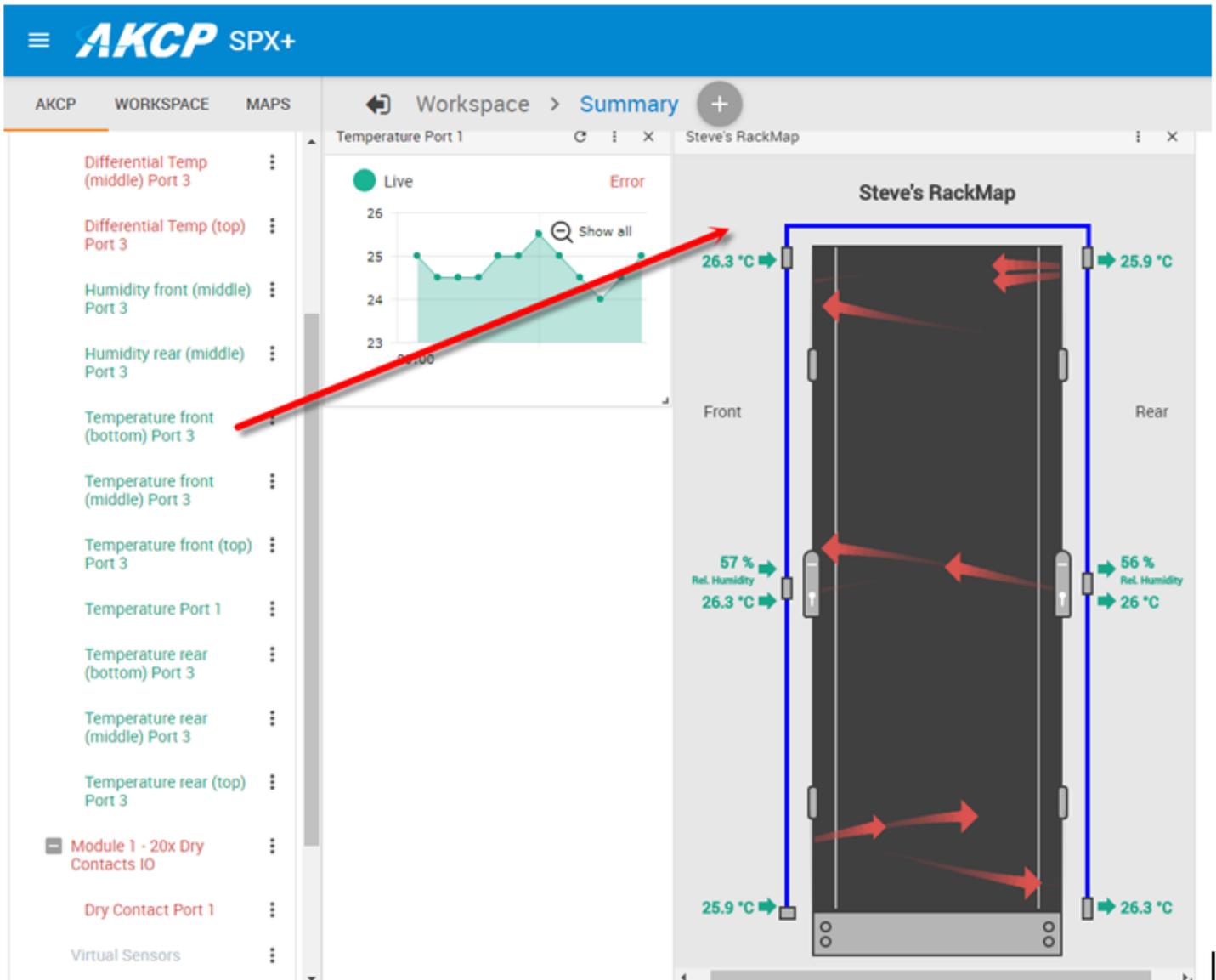
Now to add the Thermal Map sensors to your new Rack Map. First click on the AKCP column which will display the Thermal Map that is connected to the SP+ unit and then simply drag and drop one of the Thermal Map sensors onto the new Rack Map. In a few seconds the temperatures and graphics will be displayed as shown in the screen shot above.
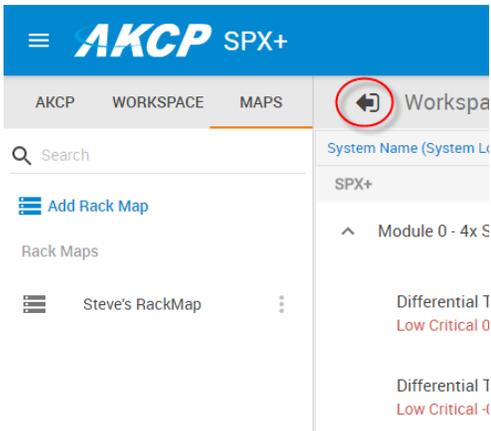
To navagate back to the main Summery page you can click on the back arrow button shown in the screen shot above.

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

Thanks for Choosing AKCP!