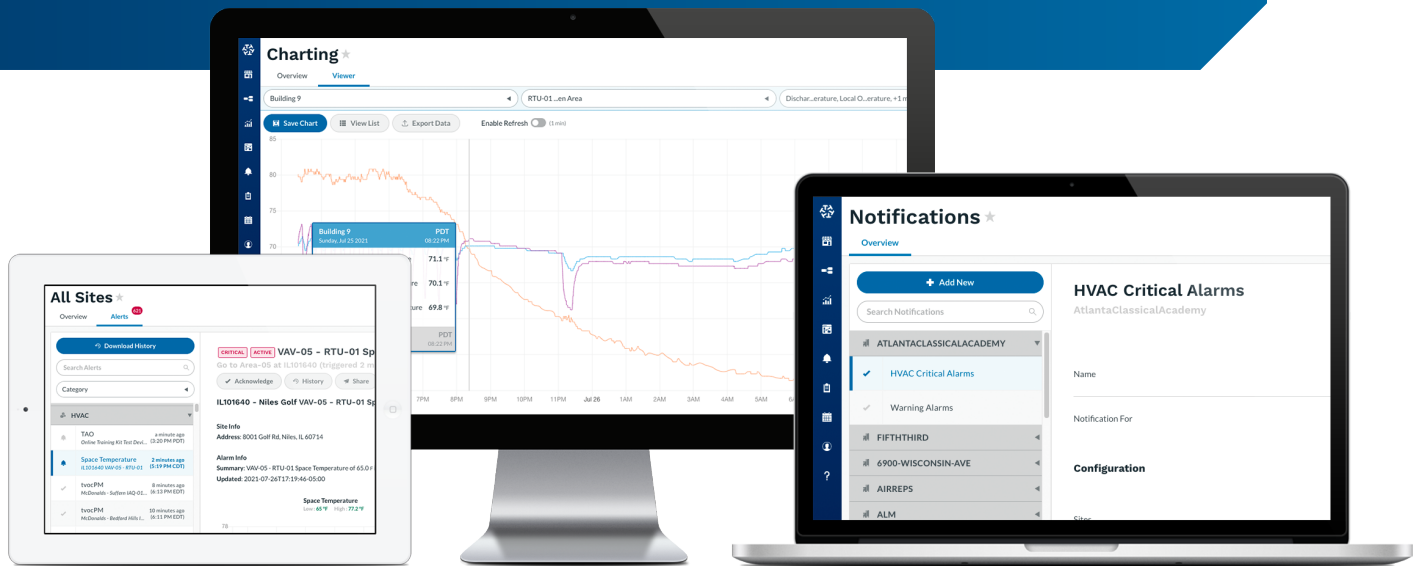


## USER GUIDE

# Turrtide Tagging Guide

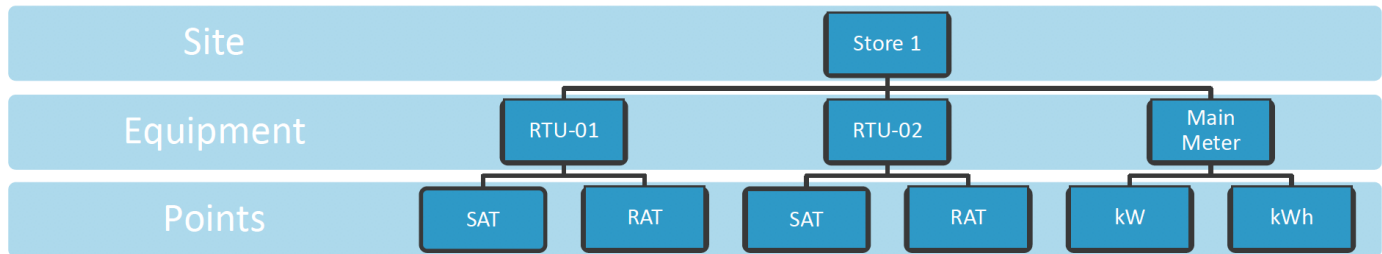


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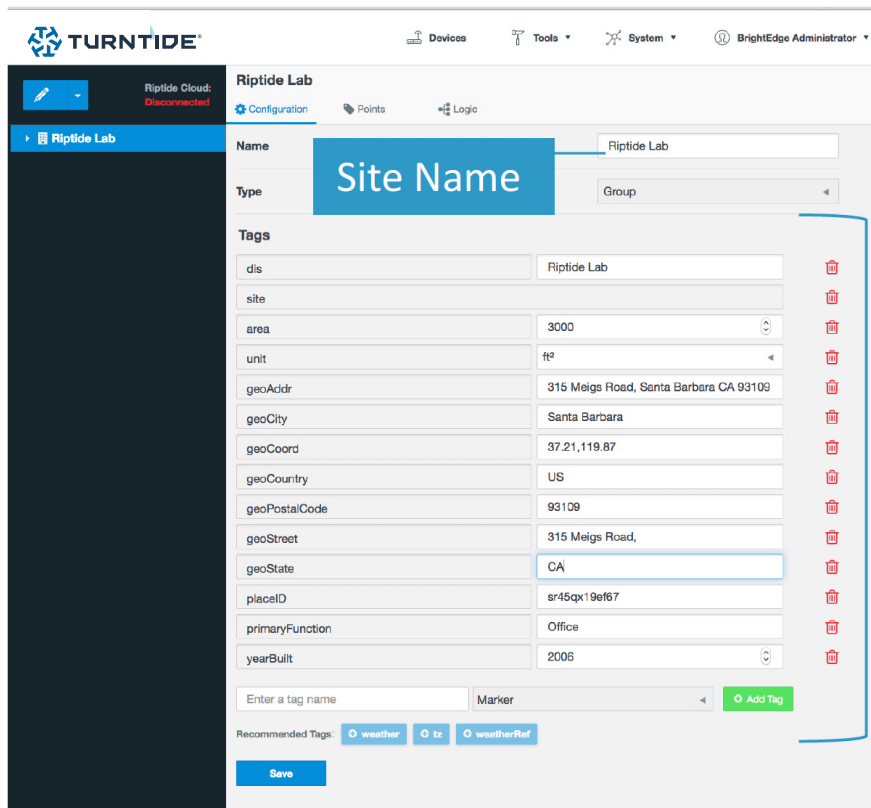
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# System Tagging

Bacnet-Centric Abstraction Layered With Haystack Tags



## Site Tags



**TURNTIDE®** Riptide Cloud: Disconnected

**Riptide Lab**

**Name:** Riptide Lab

**Type:** Site Name

**Tags:**

dis	Riptide Lab
site	
area	3000
unit	ft²
geoAddr	315 Meigs Road, Santa Barbara CA 93109
geoCity	Santa Barbara
geoCoord	37.21, 119.87
geoCountry	US
geoPostalCode	93109
geoStreet	315 Meigs Road,
geoState	CA
placeID	sr45qx19ef67
primaryFunction	Office
yearBuilt	2006

Enter a tag name: Marker ➤ Add Tag

Recommended Tags: weather, tr, weatherRef

Save

### Core Required Tags

**dis:** Is appended to the Site Name (optional)

**geoAddr:** Street Address, City, State, Zip code

**geoCoord:** Geo-coordinates of the Site  
(Can be found by right click in google maps on the address, which then displays the geo-coordinates)

**placeID:** Adds available locational info such as, opening hours and phone number.

Can be found using <https://developers.google.com/places/place-id>

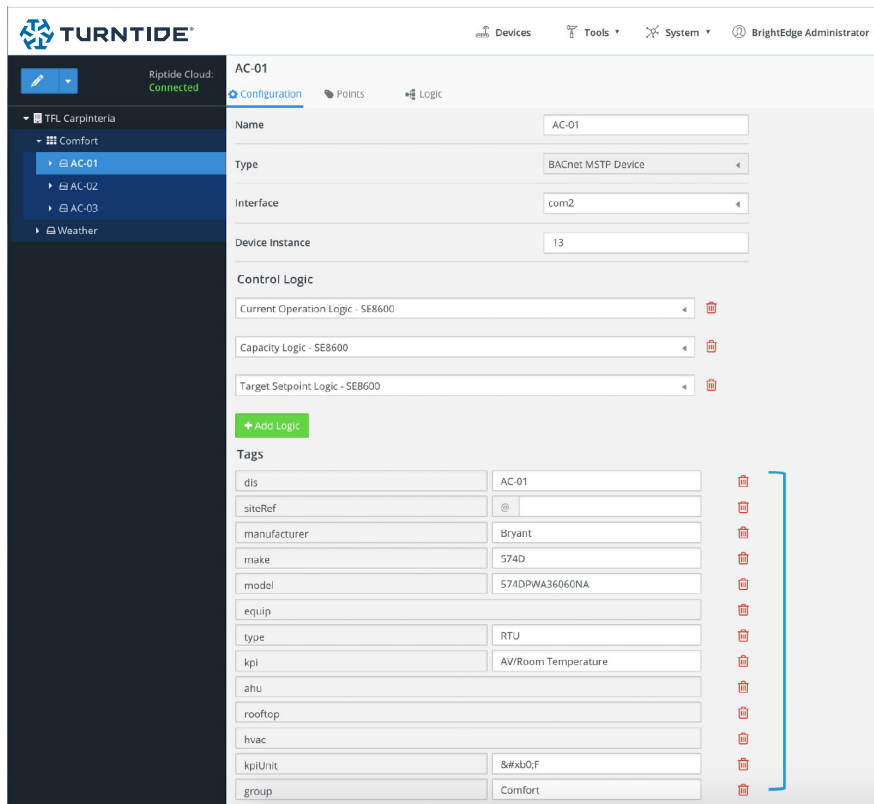
**geoCity:** City the site is in

**geoState:** State the site is in

### Tips:

- Any **Str** tag added can be used to filter sites in the Web Application
- Allowing browser Location Services will attempt to auto populate fields (check for final location accuracy!)
- Add a Weather device for correct display of the weather conditions

## Device Tags



**AC-01**

**Configuration** | Points | Logic

Name: AC-01

Type: BACnet MSTP Device

Interface: com2

Device Instance: 13

**Control Logic**

Current Operation Logic - SE8600

Capacity Logic - SE8600

Target Setpoint Logic - SE8600

**Tags**

dis	AC-01
siteRef	@
manufacturer	Bryant
make	574D
model	S74DPWA3606ONA
equip	
type	RTU
kpi	AV/Room Temperature
ahu	
rooftop	
hvac	
kpiUnit	&#xB0;F
group	Comfort

### Auto Added Tags

**dis:** Display Name

**siteRef:** Site the point is in

### Core Required Tags

**Equip:** Denotes it as a piece of equipment

**group:** Where the device is group on the Equipment View in the UI

**locationServed:** Name of area served

**type:** Type of equipment, this drives how the auto graphics will be displayed (see graphics tagging for more information)

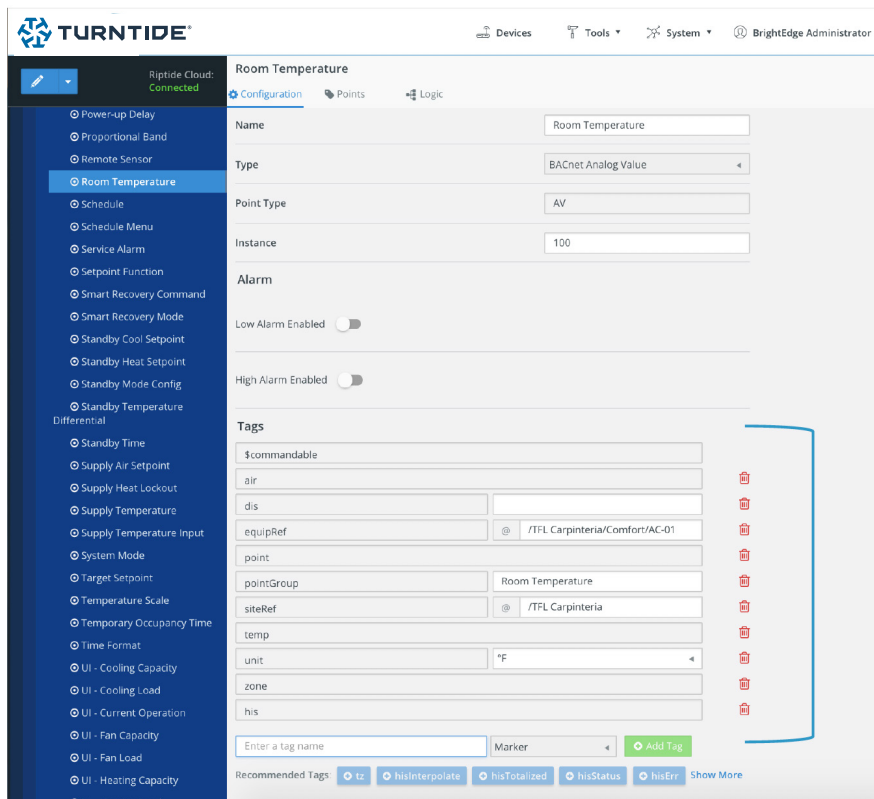
**kpi:** Value displayed in the site summary page and Equipment View Chart

**kpiUnit:** Unit of the kpi point

### Tips:

- SecondaryKpi and TertiaryKpi can be added for multiple point display on Equipment
- View charts

## Point Tags



**Room Temperature**

**Configuration** | Points | Logic

Name: Room Temperature

Type: BACnet Analog Value

Point Type: AV

Instance: 100

**Alarm**

Low Alarm Enabled: ☐

High Alarm Enabled: ☐

**Tags**

\$commandable	
air	
dis	
equipRef	@ /TFL Carpinteria/Comfort/AC-01
point	
pointGroup	Room Temperature
siteRef	@ /TFL Carpinteria
temp	
unit	°F
zone	
his	

Enter a tag name:  Marker

Recommended Tags:

### Auto Added Tags

**equipRef:** Equipment the point is connected to

**siteRef:** Site the point is in

**his:** Point data is being stored

**\$commandable:** Point value can be changed

**dis:**

### Core Required Tags

**point:** Denotes it as a point

**pointGroup:** Point Group for display in the UI Advanced Equipment view

**unit:** Unit of measure

A unit deriving point type must be added for all unit points (see Unit Deriving Tags)

Point specific tags as per Project Haystack Standard

### Tips:

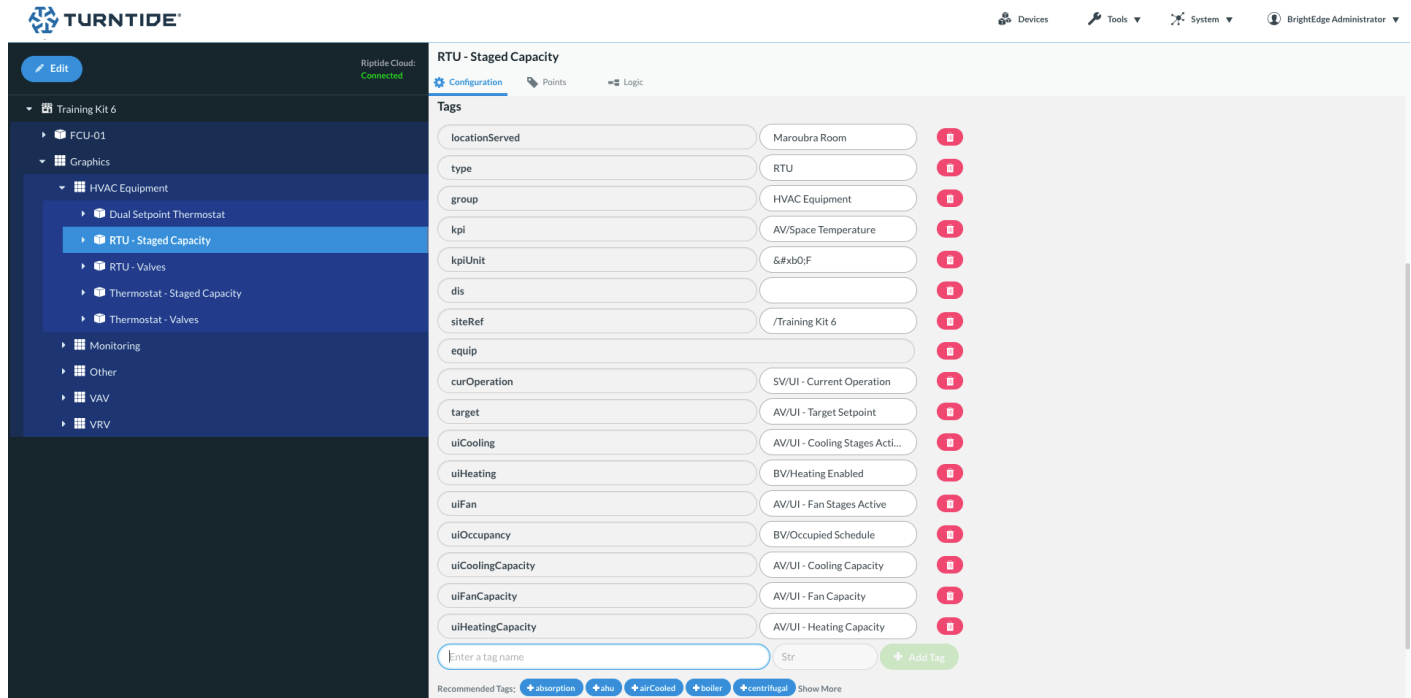
- Check the Recommended Tags at the bottom to quickly add relevant tags

## Unit Deriving Tags

TAG	UNITS	APPLICATION
angle	<i>deg</i>	Angle
area	<i>ft<sup>2</sup>   m<sup>2</sup></i>	Area
barometric	<i>inHg   mbar</i>	Barometric Pressure
cloudage	<i>%</i>	Cloud Cover
co	<i>ppm</i>	Carbon Monoxide
co2	<i>ppm</i>	Carbon Dioxide
coolingCapacity	<i>BTU/h   kW   tonref</i>	Ability of a chiller to remove heat
damper	<i>%</i>	Damper Position
dew	<i>C   F</i>	Dew Point Temperature
direction	<i>deg</i>	Compass Direction
ductArea	<i>ft<sup>2</sup>   m<sup>2</sup></i>	Area of a duct
efficiency	<i>%   COP   kW/ton</i>	Chiller Efficiency
energy	<i>BTU   MWh   kWh   m<sup>3</sup>   tonrefh</i>	Energy Consumption
filter	<i>Pa   inH2O   kPa   psi</i>	differential pressure across a filter
flow	<i>ACH   L/s   cfm   fpm   gph   gpm   lph lpm   m/s</i>	Liquid / Gas flow
humidity	<i>%RH</i>	Air humidity
irradiance	<i>W/m<sup>2</sup></i>	Energy arriving at the earth surface
level	<i>%</i>	Fill level of a tank
lightLevel	<i>lumen   lux</i>	Light Level
load	<i>%</i>	Chiller load
pf	<i>pf</i>	Power Factor
precipitation	<i>in   mm</i>	Amount of rain
pressure	<i>Pa   inH2O   kPa   psi</i>	Pressure
reactive	<i>kVAR   var</i>	reactive power or imaginary power
speed	<i>%   km/h   mph   rpm</i>	Speed
temp	<i>C   K   F</i>	Temperature
thd	<i>%</i>	Total Harmonic Distortion
visibility	<i>ft   km   miles</i>	Distance of visibility
volt	<i>V</i>	Electrical Voltage
volume	<i>ft<sup>3</sup>   gal   m<sup>3</sup></i>	Volume
wetBulb	<i>C   F   K</i>	Wet Bulb Temperature

## QuickView Graphics

This user guide outlines how to setup and configure the Turntide QuickViews. Each QuickView type has a table that lists all the tags that are applicable to the view Type with a description of each tag. The description denotes the device point types that will work with the tag (A = Analog | B = Binary | M = Multi-State | S = String) a labeled example graphics.



The screenshot shows the Turntide Hub interface. On the left, a sidebar lists the device hierarchy: Training Kit 6, FCU-01, Graphics, HVAC Equipment, Dual Setpoint Thermostat, RTU - Staged Capacity (selected), RTU - Valves, Thermostat - Staged Capacity, Thermostat - Valves, Monitoring, Other, VAV, and VRV. The main panel displays the configuration for 'RTU - Staged Capacity'. It includes tabs for Configuration, Points, and Logic. Below the tabs is a table of tags with their values and point types. The 'type' tag is highlighted with a red circle. The 'Add Tag' button is highlighted with a blue circle.

Tag	Value	Point Type
locationServed	Maroubra Room	Str
type	RTU	Str
group	HVAC Equipment	Str
kpi	AV/Space Temperature	Str
kpiUnit	6#x0°F	Str
dis		Str
siteRef	/Training Kit 6	Str
equip		Str
curOperation	SV/UI - Current Operation	Str
target	AV/UI - Target Setpoint	Str
uiCooling	AV/UI - Cooling Stages Acti...	Str
uiHeating	BV/Heating Enabled	Str
uiFan	AV/UI - Fan Stages Active	Str
uiOccupancy	BV/Occupied Schedule	Str
uiCoolingCapacity	AV/UI - Cooling Capacity	Str
uiFanCapacity	AV/UI - Fan Capacity	Str
uiHeatingCapacity	AV/UI - Heating Capacity	Str

Recommended Tags: [absorption](#) [ahu](#) [airCooled](#) [boiler](#) [centrifugal](#) Show More

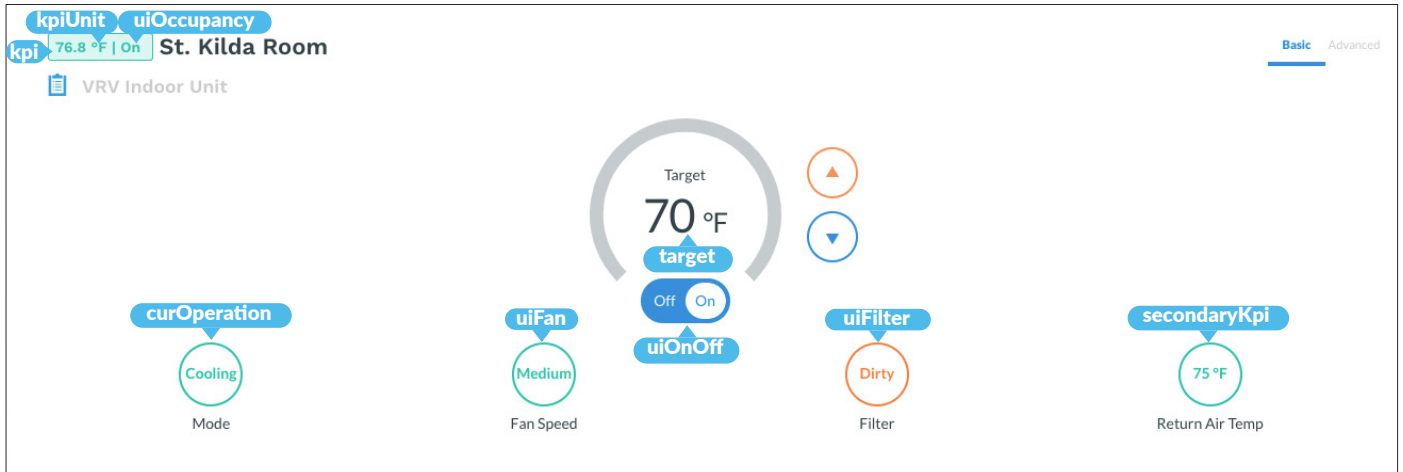
QuickViews are set in the Turntide Hub in the Device Configuration page. First add the tag **type** to the device and set the tag value to the QuickView graphic desired for that device (red circle). Each device can only render a single QuickView. Add the appropriate tags for the QuickView type as shown in this guide by using the **Add Tag** button (blue circle), these tags should be Str tags.

Once the relevant tags have been created (green circles), device points are assigned to each tag's value. Device points are added in the format of **point\_type/point\_name**. The points added must be on the device being configured.

Point Types	
AI	Analog Input
AV	Analog Value
AO	Analog Output
BI	Binary Input
BV	Binary Value
BO	Binary Output
MV	Multi-State Value
SV	String Value

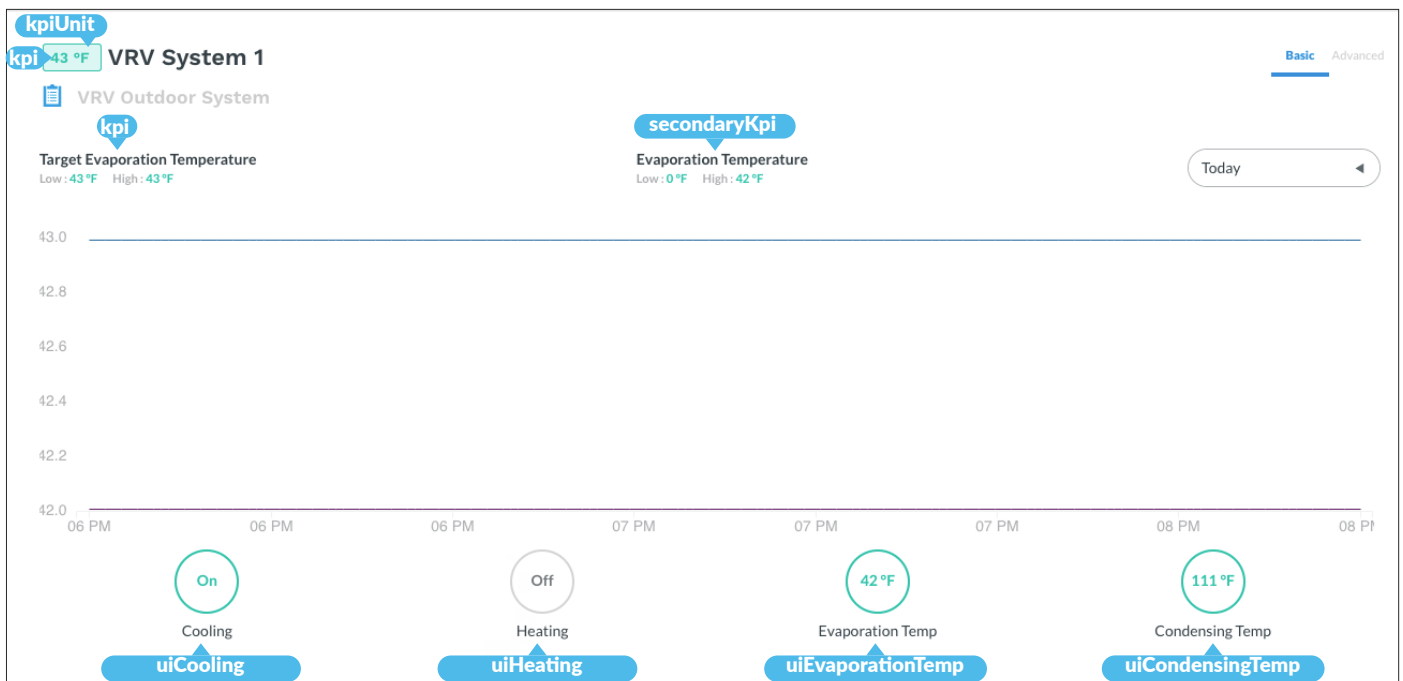
## VRV Indoor Unit \*

kpi	kpiUnit	target	uiFan	uiFilter	uiOnOff	secondaryKpi	uiOccupancy	curOperation
room temp (A)	°F = &#xb0;F °C = &#xb0;C	space setpoint (A)	Current Fan Operation a. fan speed (A or M) b. fan status (B)	Filter Status a. clean/dirty filter status (B) b. filter dP (A)	fan on-off (B)	return air temp (A)	occupancy (B)	Mode (A or S)



## VRV Outdoor System \*

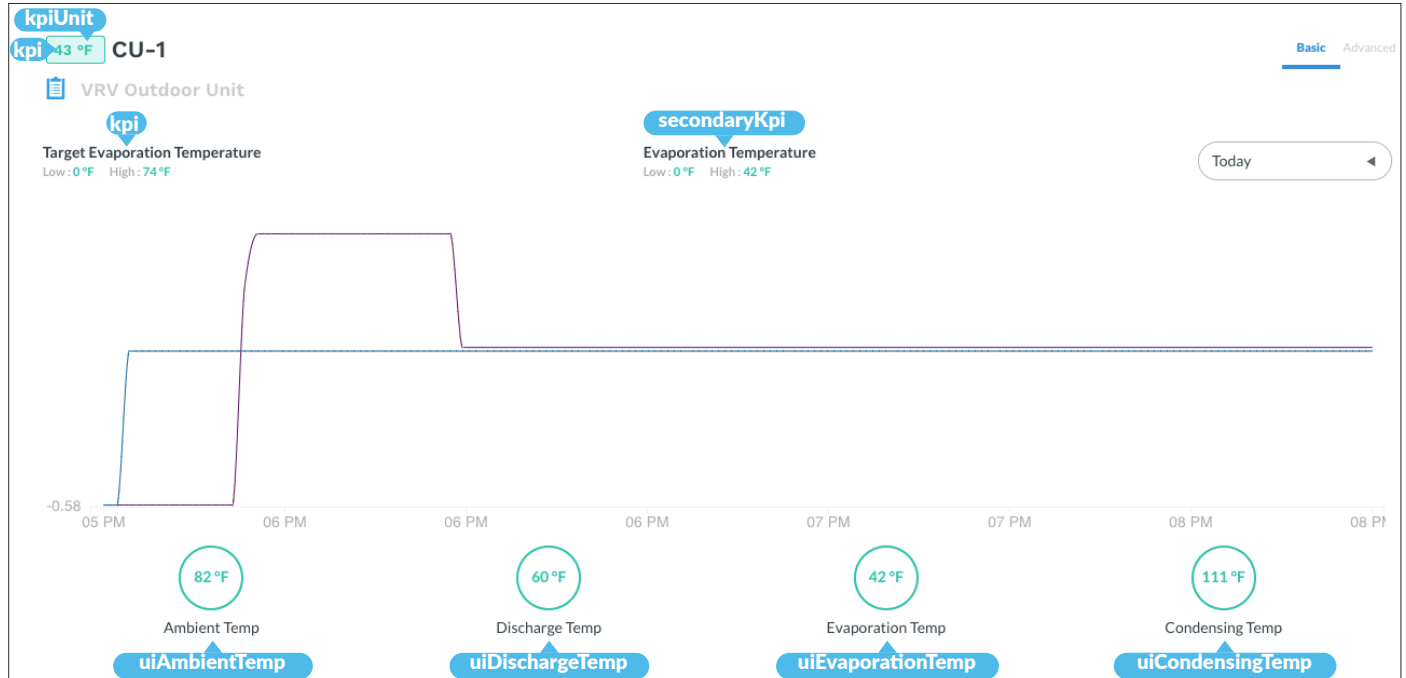
kpi	kpiUnit	uiCondensingTemp	uiEvaporationTemp	uiCooling	uiHeating	secondaryKpi
target evaporation temp (A)	°F = &#xb0;F °C = &#xb0;C	condensing temp (A)	evaporation temp (A)	cooling status on/off (A or B)	heating status on/off (A or B)	optional additional graph point (A)



\* Auto generated when using Turntide's VRV auto-discovery

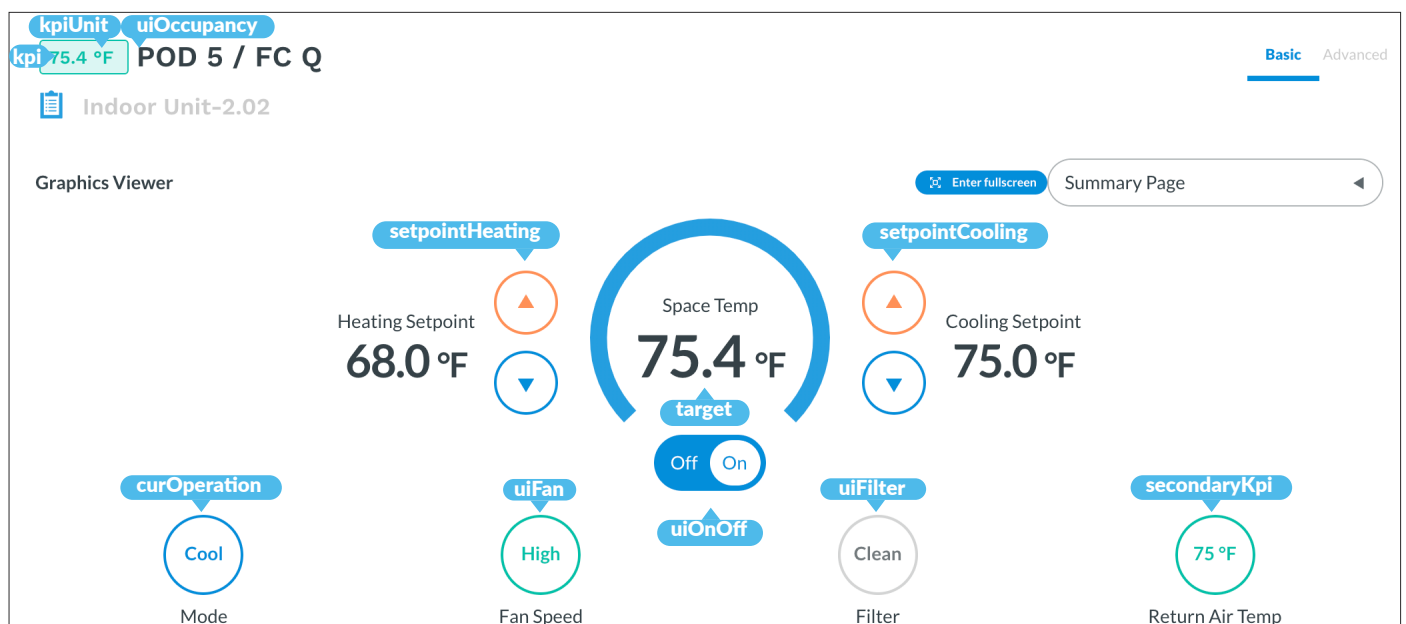
## VRV Outdoor Unit

kpi	kpiUnit	uiCondensingTemp	uiEvaporationTemp	uiDischargeTemp	uiAmbientTemp	secondaryKpi
target evaporation temp (A)	°F = &#x00;F °C = &#x00;C	condensing temp (A)	evaporation temp (A)	discharge temp (A)	ambient temp (A)	optional additional graph point (A)



## Dual Setpoint VRV Indoor Unit

kpi	kpiUnit	target	uiFan	uiFilter	uiOnOff	secondaryKpi	uiOccupancy	curOperation
room temp (A)	°F = &#x00;F °C = &#x00;C	space setpoint (A)	Current Fan Operation a. fan speed (A or M) b. fan status (B)	Filter Status a. clean/dirty filter status (B) b. filter dP (A)	fan on-off (B)	return air temp (A)	occupancy (B)	Mode (A or S)

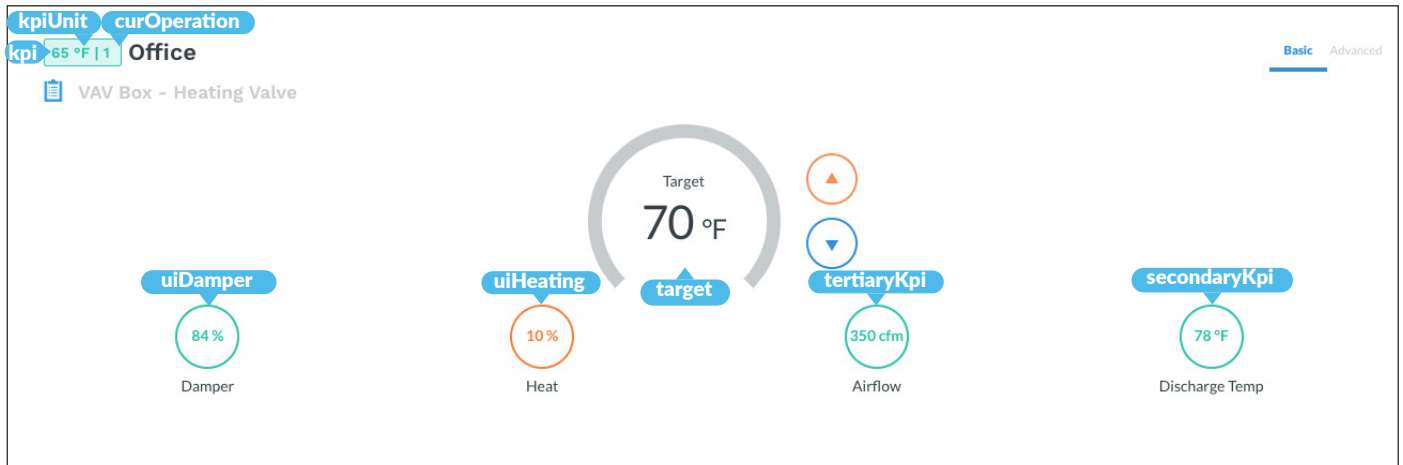




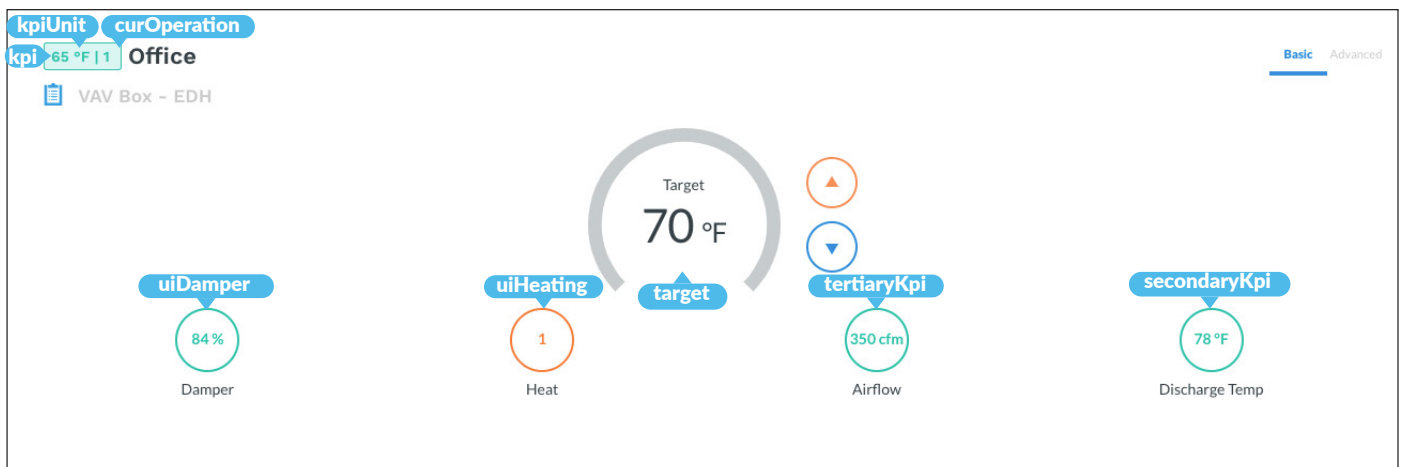
## VAV Box

kpi	kpiUnit	target	secondaryKpi	tertiaryKpi	uiHeating	curOperation	uiDamper
space temp (A)	°F = &#xb0;F °C = &#xb0;C	space setpoint (A)	discharge air temp (A)	air flow (A)	Current Heating Load a. number of active heating stages (A) b. for single stage heating, (B, on/off)	occupancy/ operating mode (S) occupancy (B)	damper position (A)

### VAV Box (ex. unit with heating valve)



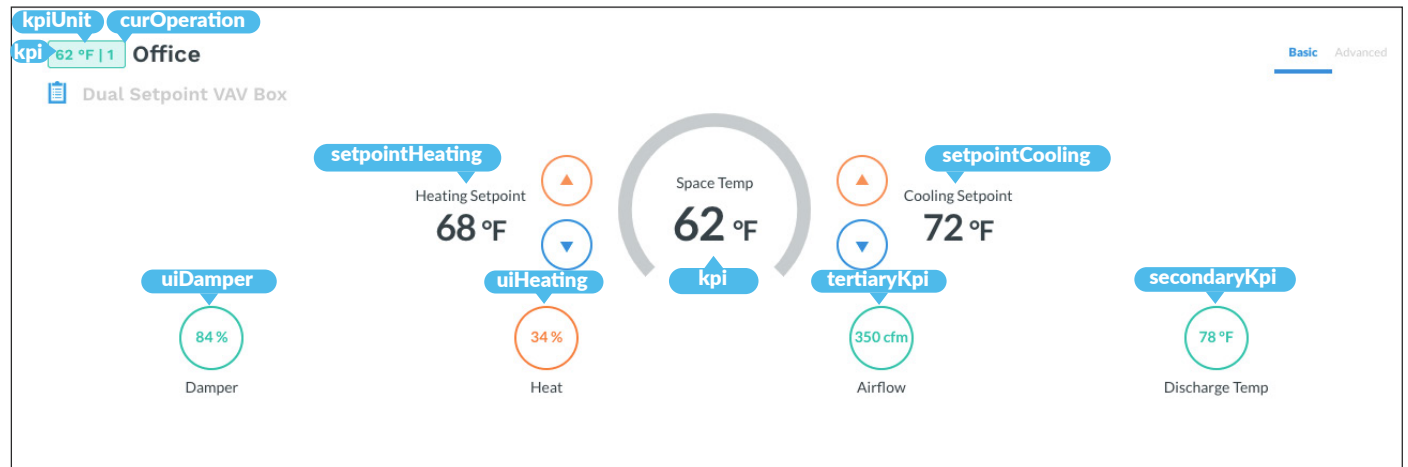
### VAV Box (ex. unit with EDH)



## Dual Setpoint VAV Box

kpi	kpiUnit	secondaryKpi	tertiaryKpi	uiHeating
space temp (A)	°F = &#xb0;F °C = &#xb0;C	discharge air temp (A)	air flow (A)	Current Heating Load a. number of active heating stages (A) b. for single stage heating, (B, on/off) c. valve position (A, 0-100)

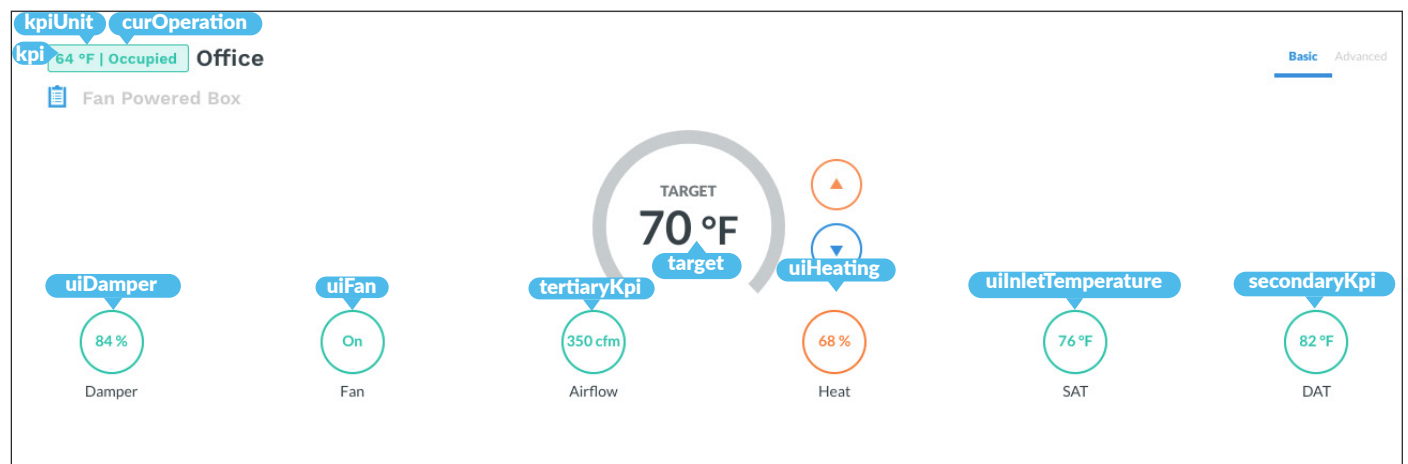
curOperation	uiDamper	setpointCooling	setpointHeating
occupancy/operating mode (S or A) occupancy (B)	damper position (A)	cooling setpoint (A)	heating setpoint (A)



## Fan Powered Box

kpi	kpiUnit	target	secondaryKpi	tertiaryKpi
space temp (A)	°F = &#xb0;F °C = &#xb0;C	space setpoint (A)	discharge air temp (A)	air flow (A)

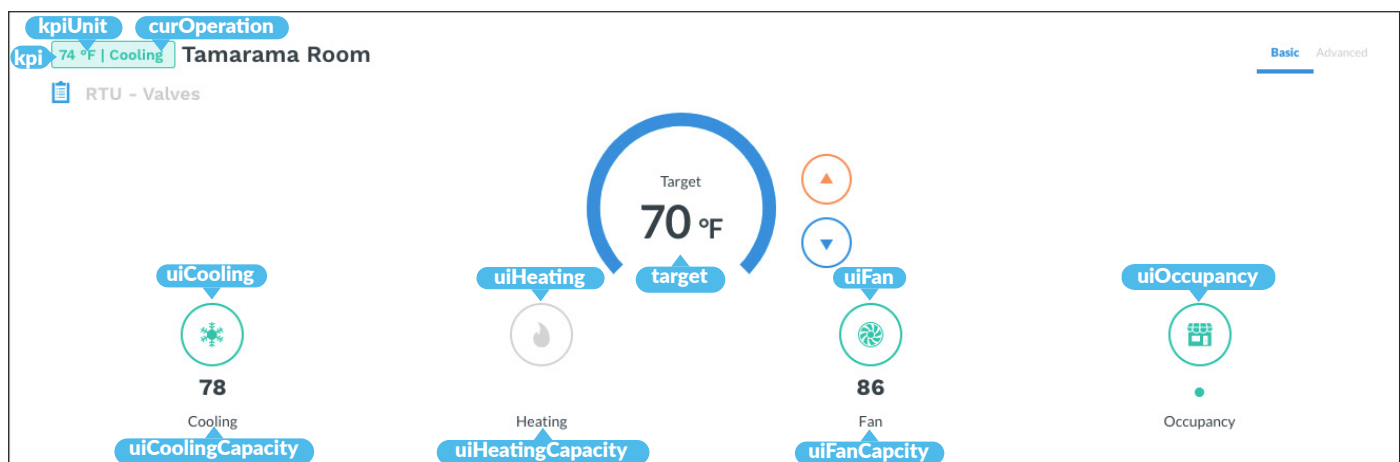
uiHeating	uiOccupancy	uiDamper	uiFan	uiInletTemperature
Current Heating Load a. number of active heating stages (A) b. for single stage heating, (B, on/off) c. valve position (A, 0-100)	occupancy (B)	damper position (A)	Current Fan Load a. fan on/off (B) b. fan speed (A)	supply air temperature (A)



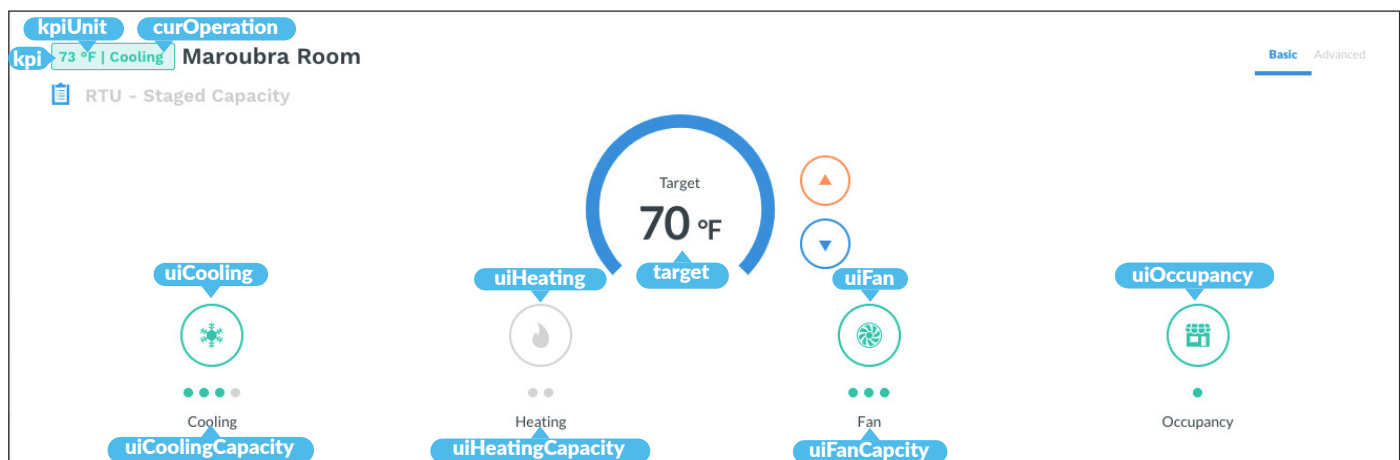
## RTU

kpi	kpiUnit	target	uiCooling	uiCoolingCapacity	uiHeating
space temp (A)	°F = &#xb0;F °C = &#xb0;C	space setpoint (A)	Current Cooling Load a. number of active cooling stages (A, 0-4) b. for single stage cooling (B, on/off) c. valve position (A, 0-100)	Maximum Cooling Available a. number of cooling stages available (A, 0-4) b. omitted for valves and single stage cooling	Current Heating Load a. number of active heating stages (A, 0-4) b. for single stage heating (B, on/off) c. valve position (A, 0-100)
uiHeatingCapacity		uiFan	uiFanCapacity	uiOccupancy	curOperation
Maximum Heating Available a. number of heating stages available (A, 0-4) b. omitted for valves and single stage heating		Current Fan Load a. number of active fan stages (A, 0-4) b. for single stage fan (B, on/off) c. fan speed (A, 0-100)	Maximum Fan Stages Available a. number of fan stages available (A, 0-4) b. omitted for vfd controlled and single speed fans	occupancy (B)	operating mode (S)

### RTU (ex. unit with 0-10v control)



### RTU (ex. unit with staged control)

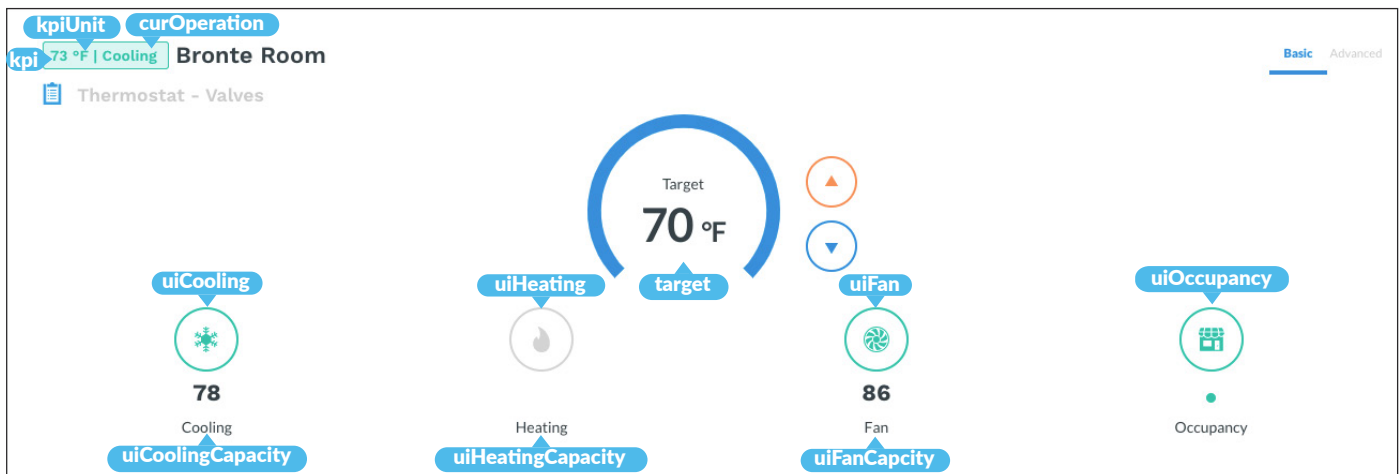


## Thermostat

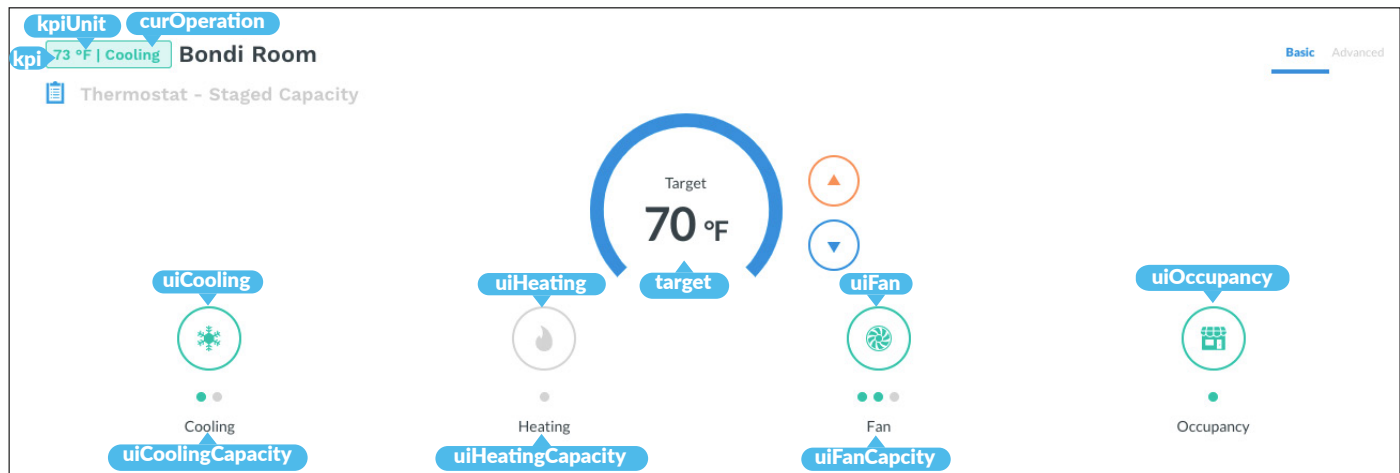
kpi	kpiUnit	target	uiCooling	uiCoolingCapacity	uiHeating
space temp (A)	°F = &#xb0;F °C = &#xb0;C	space setpoint (A)	Current Cooling Load a. number of active cooling stages (A, 0-4) b. for single stage cooling (B, on/off) c. valve position (A, 0-100)	Maximum Cooling Available a. number of cooling stages available (A, 0-4) b. omitted for valves and single stage cooling	Current Heating Load a. number of active heating stages (A, 0-4) b. for single stage heating (B, on/off) c. valve position (A, 0-100)

uiHeatingCapacity	uiFan	uiFanCapacity	uiOccupancy	curOperation
Maximum Heating Available a. number of heating stages available (A, 0-4) b. omitted for valves and single stage heating	Current Fan Load a. number of active fan stages (A, 0-4) b. for single stage fan (B, on/off) c. fan speed (A, 0-100)	Maximum Fan Stages Available a. number of fan stages available (A, 0-4) b. omitted for vfd controlled and single speed fans	occupancy (B)	operating mode (S)

### Thermostat (ex. unit with 0-10v control)



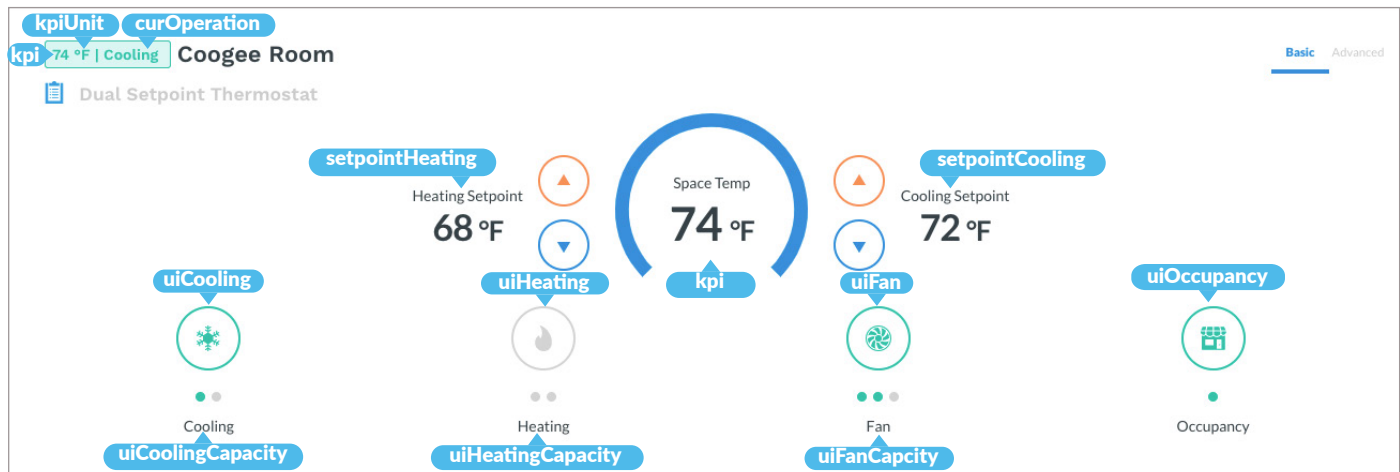
### Thermostat (ex. unit with staged control)



## Dual Setpoint Thermostat

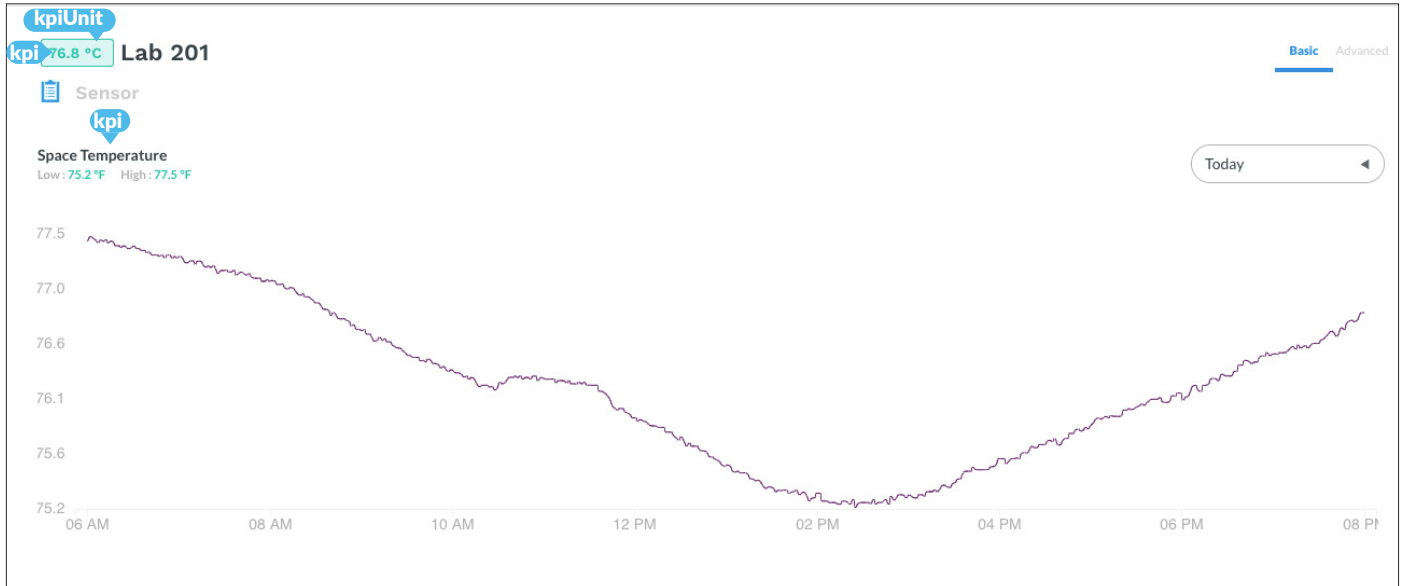
kpi	kpiUnit	uiCooling	uiCoolingCapacity	uiHeating	uiHeatingCapacity
space temp (A)	°F = &#xb0;F °C = &#xb0;C	Current Cooling Load a. number of active cooling stages (A, 0-4) b. for single stage cooling (B, on/off) c. valve position (A, 0-100)	Maximum Cooling Available a. number of cooling stages available (A, 0-4) b. omitted for valves and single stage cooling	Current Heating Load a. number of active heating stages (A, 0-4) b. for single stage heating (B, on/off) c. valve position (A, 0-100)	Maximum Heating Available a. number of heating stages available (A, 0-4) b. omitted for valves and single stage heating

uiFan	uiFanCapacity	uiOccupancy	curOperation	setpointCooling	setpointHeating
Current Fan Load a. number of active fan stages (A, 0-4) b. for single stage fan (B, on/off) c. fan speed (A, 0-100)	Maximum Fan Stages Available a. number of fan stages available (A, 0-4) b. omitted for vfd controlled and single speed fans	occupancy (B)	operating mode (S)	cooling setpoint (A)	heating setpoint (A)



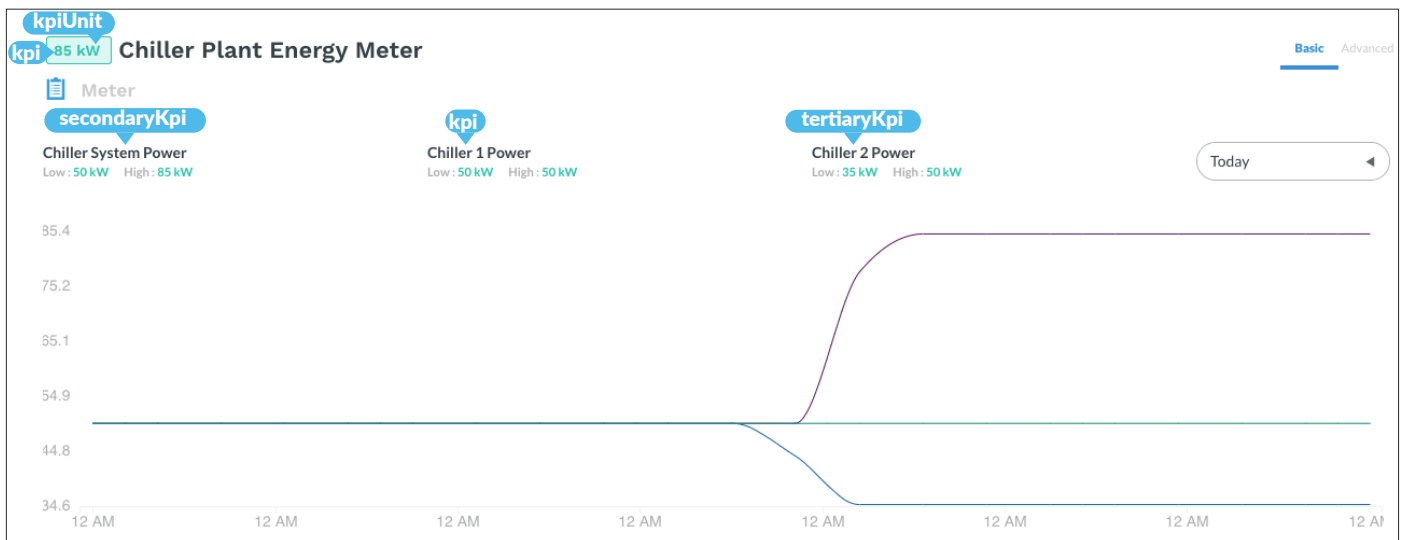
## Sensor

kpi	kpiUnit	secondaryKpi	tertiaryKpi
primary data point (A)	primary data point's unit	optional additional graph point (A)	optional additional graph point (A)



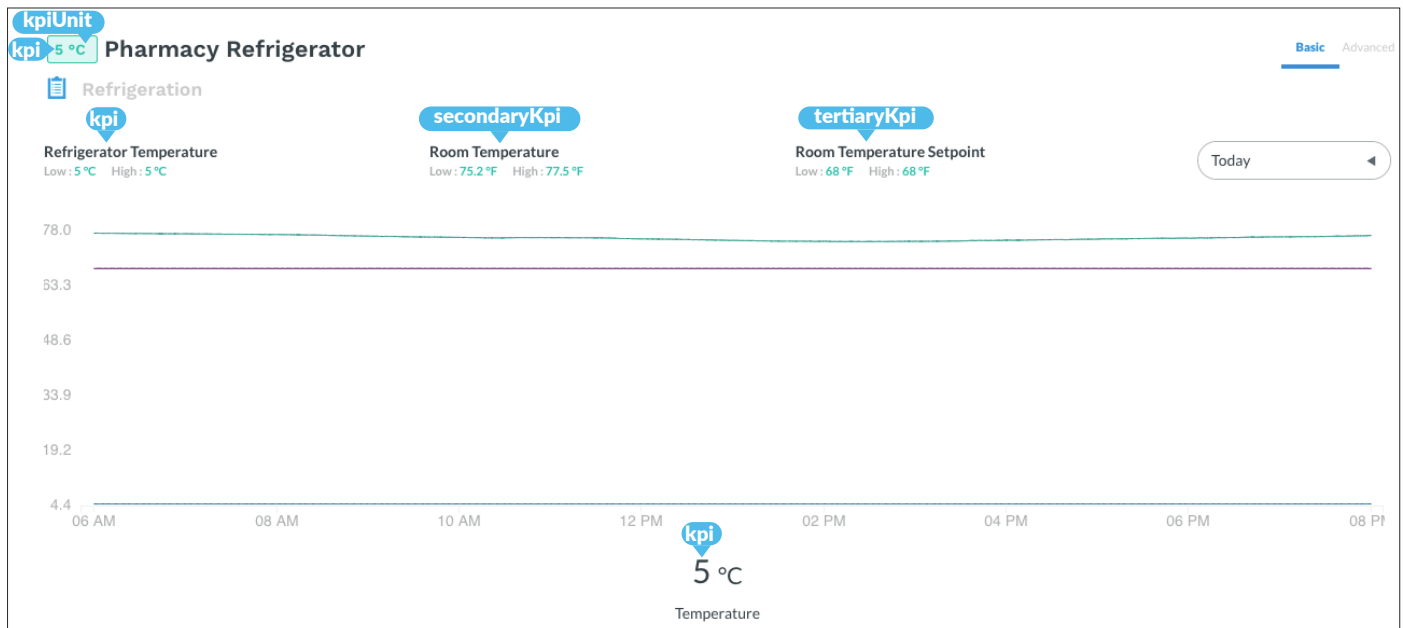
## Meter

kpi	kpiUnit	secondaryKpi	tertiaryKpi
primary data point (A)	primary data point's unit	optional additional graph point (A)	optional additional graph point (A)



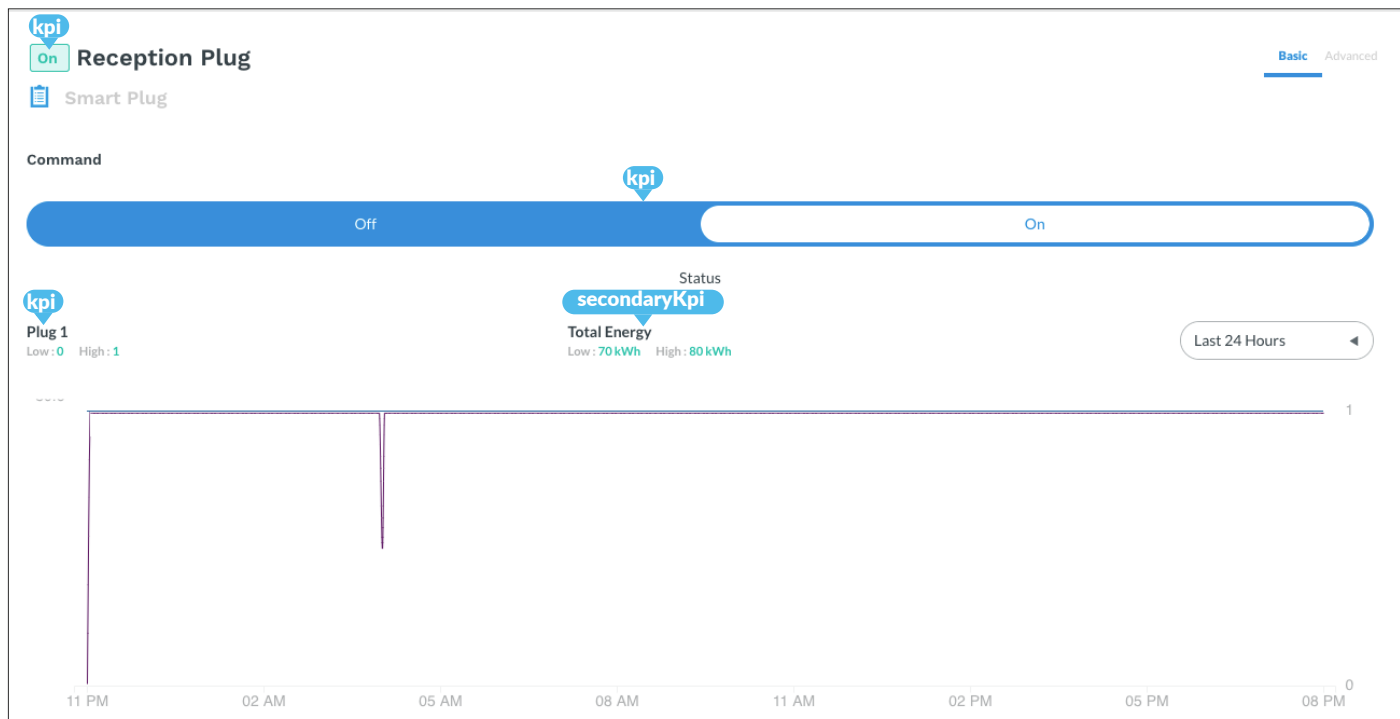
## Refrigeration

kpi	kpiUnit	secondaryKpi	tertiaryKpi
temperature point (A)	°F = &#xb0;F °C = &#xb0;C	optional additional graph point (A)	optional additional graph point (A)



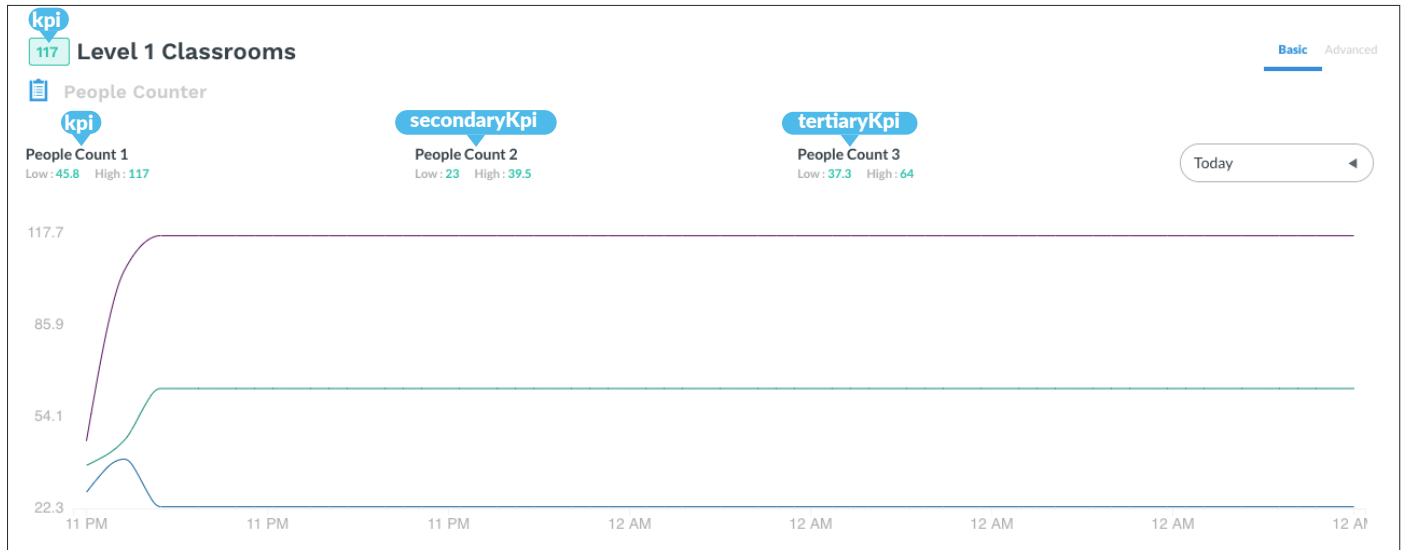
## Smart Plug

kpi	secondaryKpi	tertiaryKpi
plug on/off (B)	optional additional graph point (A)	optional additional graph point (A)



## People Counter

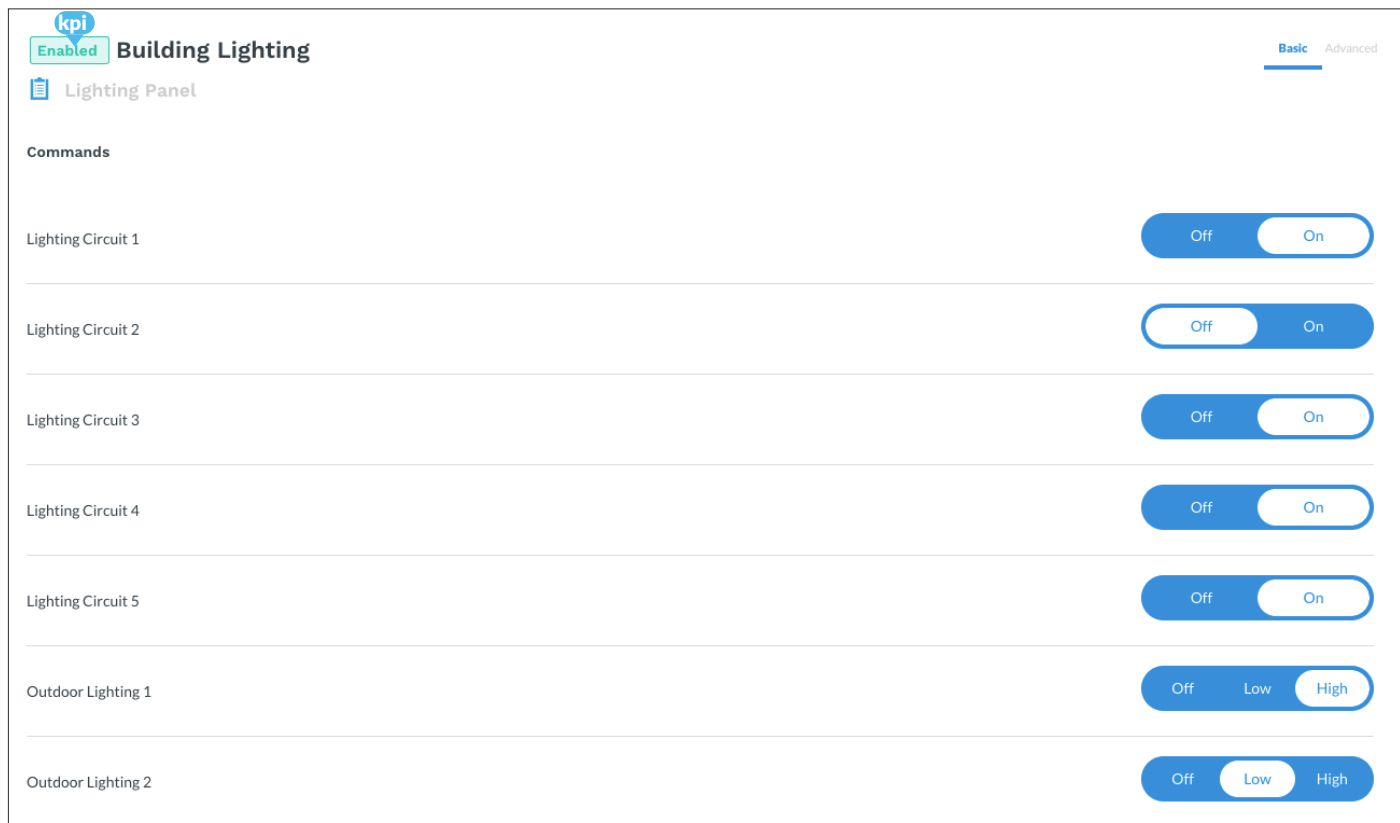
kpi	secondaryKpi	tertiaryKpi
people count value (A)	optional additional graph point (A)	optional additional graph point (A)



## Lighting Panel

kpi
primary lighting circuit (B)

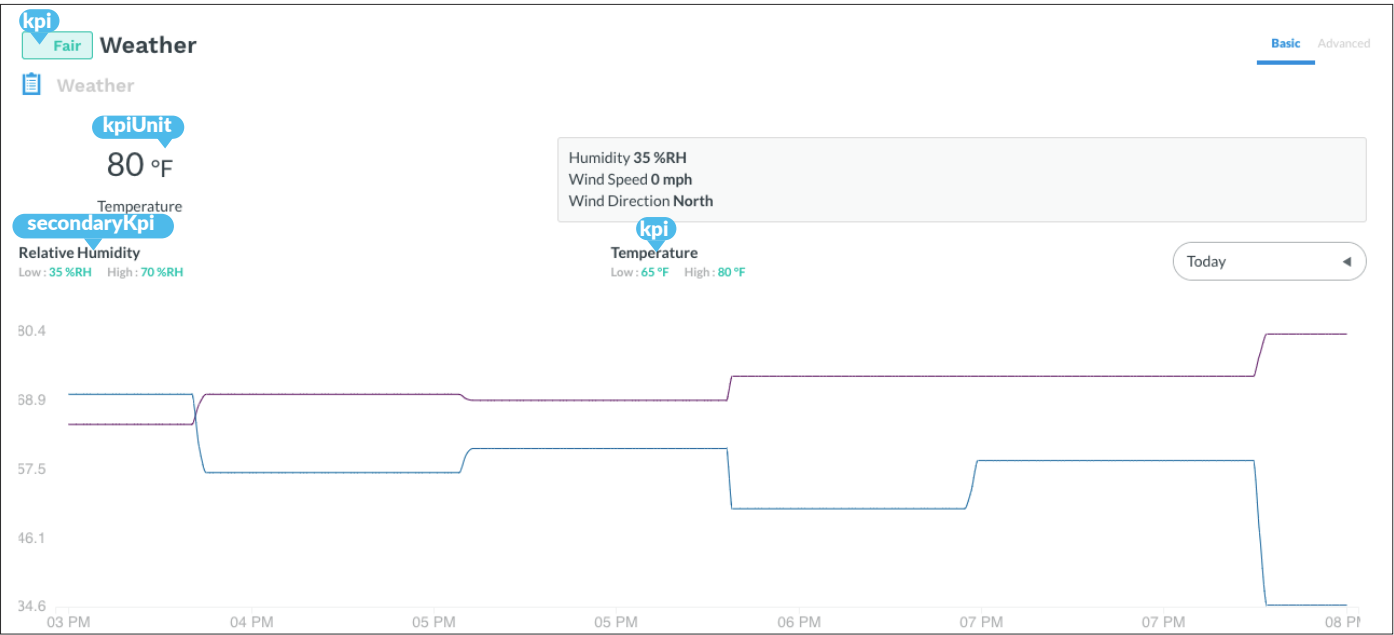
This graphic works by displaying any Binary, Multi-State or Analog points in the device that have the tag cmd on the point. Multi-State and Analog points are limited to a maximum of 3 values.





# Weather

kpi	kpiUnit	secondaryKpi
people count value (A)	°F = &#xb0;F °C = &#xb0;C	optional additional graph point (A)



## TURNTIDE TECHNOLOGY FOR SUSTAINABLE OPERATIONS

Our breakthrough technologies accelerate electrification and sustainable operations for energy-intensive industries.