

Connecting Vision and Samba to



Step by step guide

Setting up a Unitronics UCR Router for UniCloud

Before you can integrate Unitronics Vision, Samba, and Jazz controllers into UniCloud, you first need to set up a Unitronics UCR Router.

To begin:

1. Open your browser and navigate to the router's web page using its default IP address: IP 192.168.1.1.
2. Login using the router's default credentials
Username: **Admin**
Password: **admin**
3. The router will request that you change the default and set a new administrator password; you must do so in order to continue.

http://192.168.1.1/cgi-bin/luci/admin/system/password

UNITRONICS

Authorization Required

Please enter your username and password.

Username:

Password:

UNITRONICS Status Network Services

You haven't changed the default password for this router.

Change password

You must change password to leave this page! Password requirements: Minimum 8 characters, at least one uppercase letter, one lowercase letter and one number.

Administrator Password

New password:

Confirm new password:

4. Follow the router's startup guide: configure any relevant settings for Time Zone, Mobile, LAN, and Wireless for WiFi.

UNITRONICS Status Network Services

Profile in use: default

Step 1 - General Step 2 - Mobile Step 3 - LAN Step 4 - WiFi

Step - General

Please select your timezone.

Time Zone Settings

Current system time: 2020-12-22 21:42:23

Sync with GPS Sync with Internet

Time zone: UTC

UNITRONICS Status Network Services

Profile in use: default

Step 1 - General Step 2 - Mobile Step 3 - LAN Step 4 - WiFi

Mobile Configuration

Let's configure your mobile settings so you can start using internet right away.

Mobile Configuration (SIM1)

Auto APN: ☒

Connection is or will be established without using APN

MTL:

PNL number:

MTL:

Service mode: Automatic

Show mobile info at login page: ☐

UNITRONICS Status Network Services

Profile in use: default

Step 1 - General Step 2 - Mobile Step 3 - LAN Step 4 - WiFi

Step - LAN

Here we will setup the basic settings of a typical LAN configuration. The wizard will cover 2 basic configurations: static IP address LAN and DHCP client.

General configuration

IP address:

Netmask:

Enable DHCP: ☒

Start:

Limit:

Lease time: Hours

Start IP address: 192.168.1.100

End IP address: 192.168.1.250

UNITRONICS Status Network Services

Profile in use: default

Step 1 - General Step 2 - Mobile Step 3 - LAN Step 4 - WiFi

Step - Wireless

Now let's configure your wireless radio. (Note: if you are currently connecting via wireless and you change parameters like SSID, encryption etc, your connection will be dropped and you will have to reconnect with a new set of parameters.)

WiFi Configuration

Enable wireless: ☒

SSID:

Mode: 802.11g/n

Channel: Auto

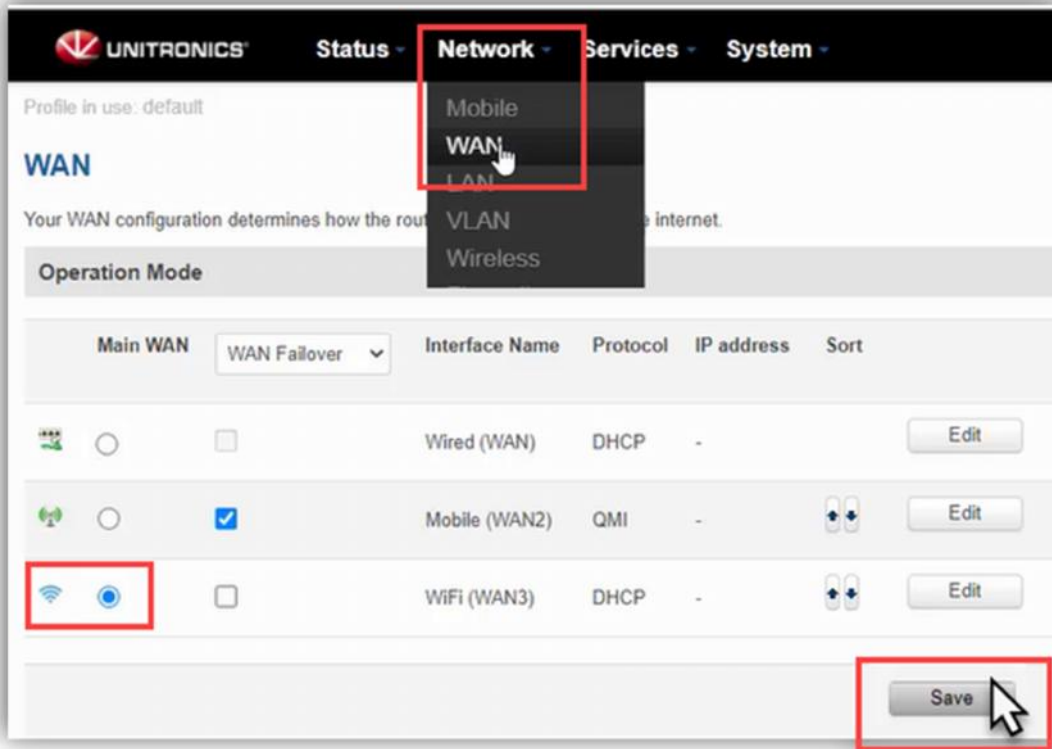
Encryption: WPA2+TKIP

Cipher: TKIP and CCMP (AES)

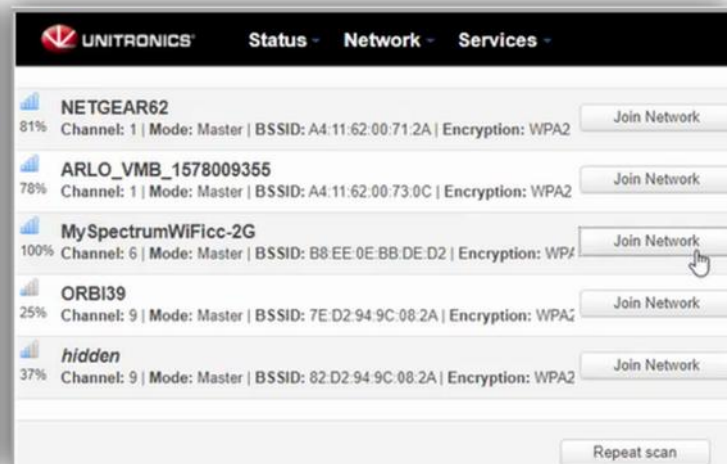
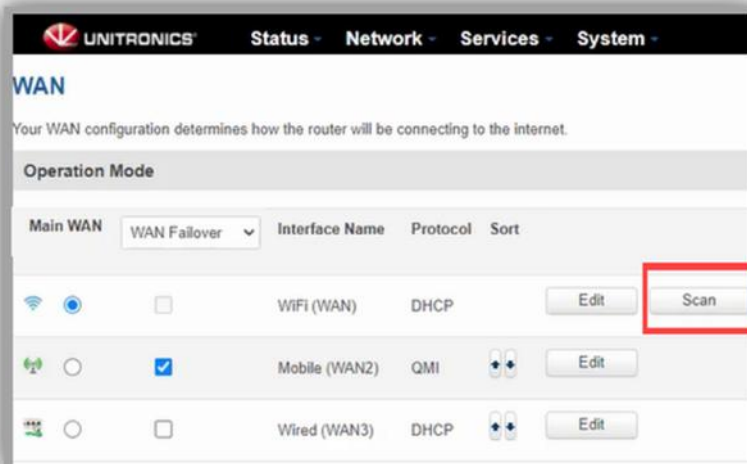
Key:

Country Code: 00 - World

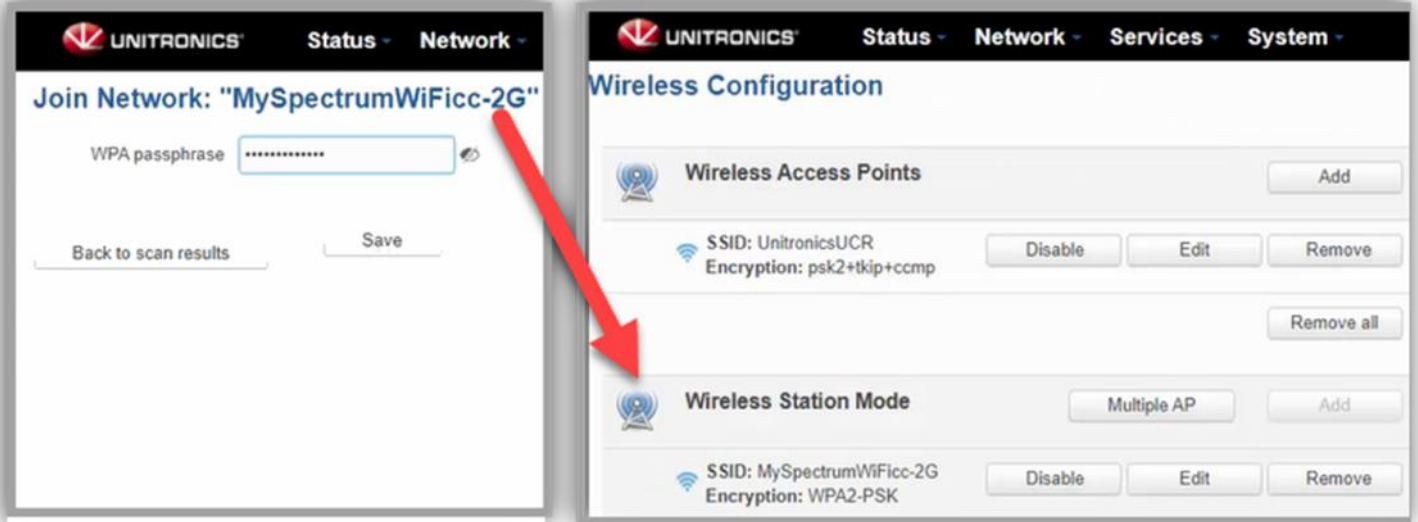
5. Navigate to **Network > WAN**.
The WAN setting is how the router will access the Internet.
There are three options including wired, mobile and Wifi.
6. This example uses the Wifi of an office network to connect to the Internet.
Select Wifi and Save.



7. Select Scan; join the relevant network.

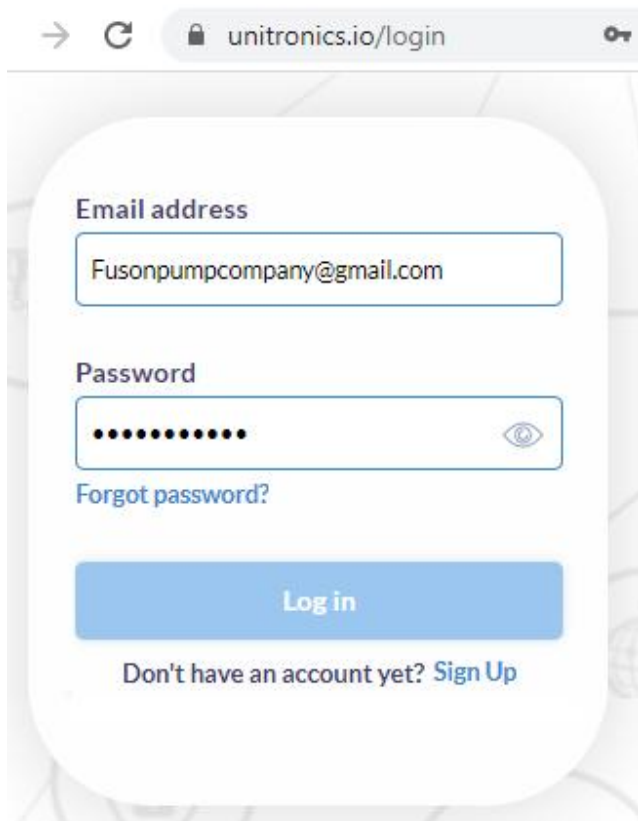


8. Enter and save the Wifi Password.
The router bell now has access to the Internet using the office network.
9. Any Unitronics devices connecting to the router, such as Vision or Samba controllers, can connect to the LAN ports of the router and will have compatible IP addresses with the router's LAN network.

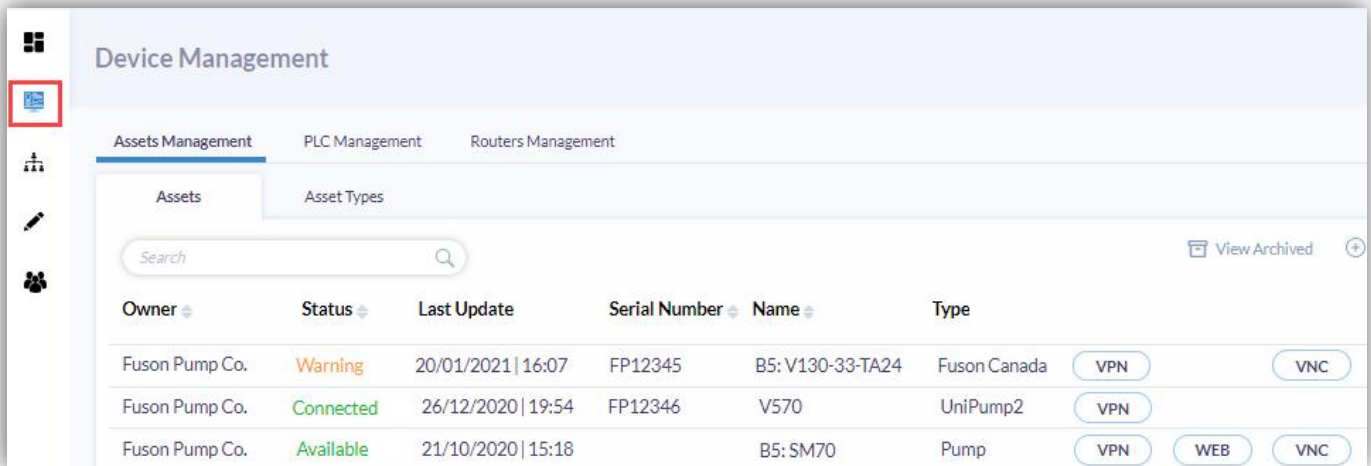


How to connect a Vision or Samba controller to UniCloud via UCR

1. Navigate to <https://www.unitronics.io/> and log in to your UniCloud account.

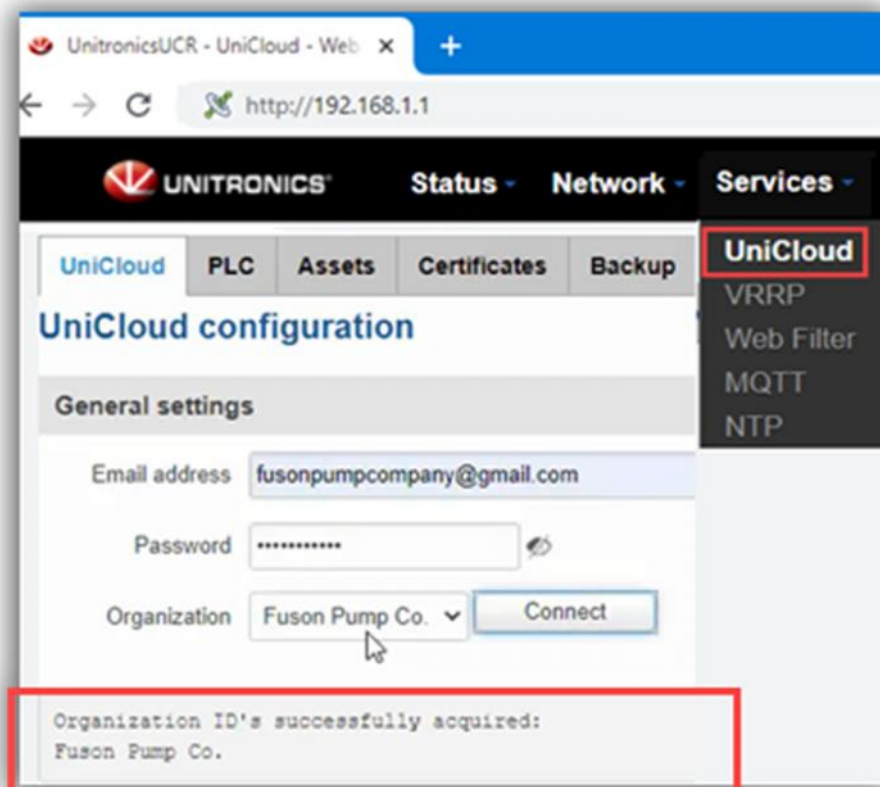


2. Navigate to Device Management.



Open a new browser window and log into the router's web page, default IP 192.168.1.1 (in this example, the router has been preconfigured for UniCloud)

1. To connect to UniCloud, navigate to **Services>UniCloud**, and log in to your organization by providing the Cloud credentials enter the email address and password, then click connect. When connection is successful, the Organization is updated at the bottom of the window.



2. Select the PLC tab. Under New PLC, enter the PLC name, and click Add.

UNITRONICS® Status Network Services System

Profile in use: default

UniCloud **PLC** Assets Certificates Backup

PLC configuration

Configured PLC's

Name	Model	Serial	Timeout	Enabled
------	-------	--------	---------	---------

New PLC

Name

V570

Add

3. Enter the PLC's Properties including serial number, PLC Model, and IP Address, and click Save; the PLC is added to the list of Configured PLCs.
*Note that the port you define here must be the port that is accessible in the PLC.

UniCloud **PLC** Assets Certificates

Advanced PLC settings

Enabled ☒

Name V570

Serial number P7E45A00294

PLC model V570

Timeout 1

Communication method TCP/IP

IP address 10.0.0.200

Port 20256

Enable external requests ☒

External port 20257

Back to Overview Save

UNITRONICS® Status Network Services System

UniCloud **PLC** Assets Certificates Backup

PLC configuration

Configured PLC's

Name	Model	Serial	Timeout	Enabled	
V570	V570	P7E45A00294	1	<input checked="" type="checkbox"/>	Details Delete

New PLC

Name

New PLC's name

1. Select Assets, to create a new Asset Type.
2. Enter the Asset Type Name and click Add.

UNITRONICS® Status Network Services

UniCloud PLC **Assets** Certificates Backup

UniCloud asset configuration

Configured assets

Name	Description	Asset status
No assets's added yet		

Create new asset type

Name

Vision Pump

Add

3. Add tags: select Add new Tag.
4. Enter the tag Name, an Alias and Description if desired., and select the operand Data Type and enter the Address.

UNITRONICS® Status Network Services System

UniCloud PLC **Assets** Certificates Backup

Advanced asset type settings

Asset type name: Vision Pump

Asset type description:

PLC name: V570

Asset type status: draft

Tags configuration

Name	Alias	Description	Data type	Address	Permissions	
Status	<input type="text"/>	<input type="text"/>	MB	1000	RO	Delete

Add new tag Alarms Sync & Save UniCloud

- When you are done adding tags, click Sync and Save UniCloud.

Advanced asset type settings

Asset type name: Vision Pump

Asset type description:

PLC name: V570

Asset type status: draft

Tags configuration

Name	Alias	Description	Data type	Address	Permissions	
Status			MB	1000	RO	Delete
PressureIn			MF	0	RO	Delete
PressureOut			MF	10	RO	Delete
Temperature			MF	3	RO	Delete
Speed			MF	13	RO	Delete
IsDisabled			MB	1006	RO	Delete

Buttons: Add new tag, Alarms, Sync & Save UniCloud, Save

Asset type updated successfully

- Return to UniCloud, and under Device Management, select Add a new Asset.
- Under Asset Type, click the drop-down arrow to choose an Asset Type, enter a PLC Serial number and click Validate.

Device Management

Assets Management | PLC Management | Routers Management

Assets | Asset Types

Search

Owner: Fuson Pumps Canada | Status: Connected

Owner: Fuson Pumps Canada | Status: Warning

NEW ASSET

Asset Type: Vision Pump

Model: Pumping Station

PLC type: Vision/Samba/Jazz

PLC Serial: P7E45A00294

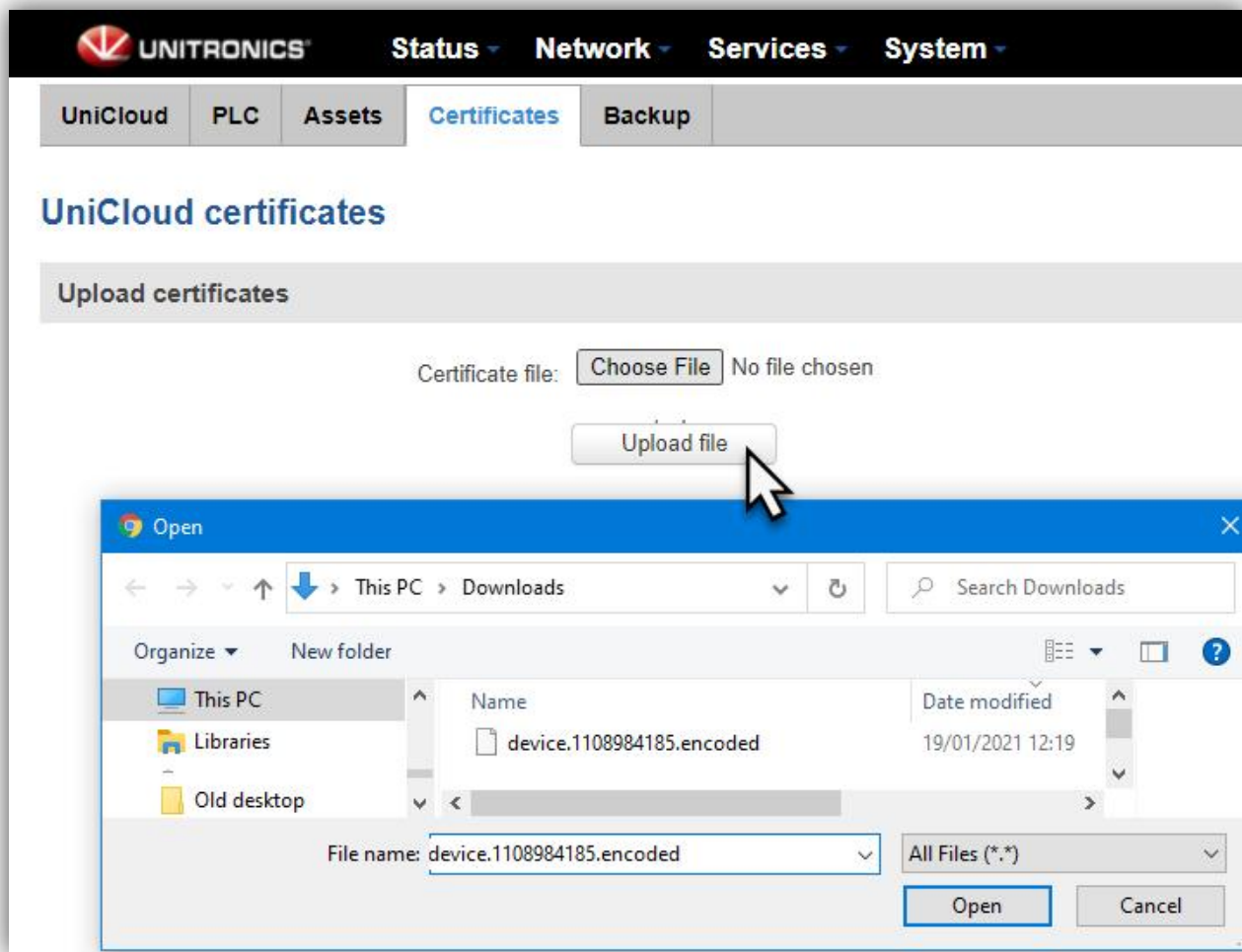
Buttons: Validate, Cancel, Save

View Assets

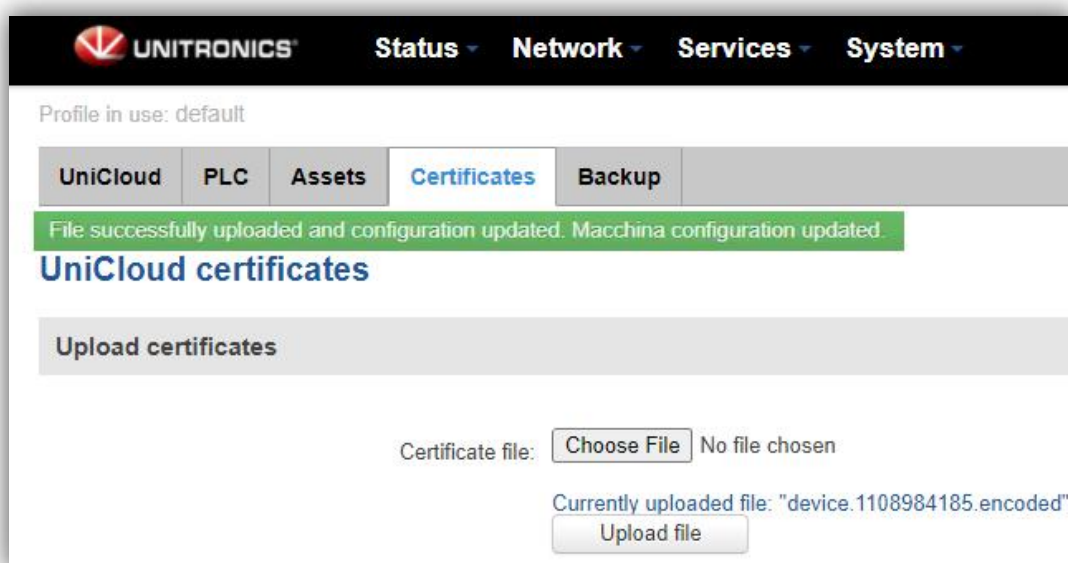
3. The New Asset window opens; enter the Asset Name and, if desired, the Asset Serial Number. Note that Asset Serial Number is not mandatory; it is intended to allow you to enter a serial number for your machine.
4. Enter the router serial number.
5. Click Validate, then click Save; the Download Certificate window opens. Click to download the certificate.

The image shows two overlapping software windows. The 'NEW ASSET' window on the left has a blue header and contains several input fields: 'Asset Type' (dropdown menu showing 'Vision Pump'), 'PLC type' (text field showing 'Vision/Samba/Jazz'), 'PLC Serial' (text field showing 'P7E45A00294'), 'Catalog number' (text field showing 'V570-57-T208'), 'Asset Name' (text field showing 'V130-33-TA24'), 'Asset Serial Number' (text field showing 'V570'), 'Comments' (empty text area), and 'Router Serial' (text field showing '1108551162'). At the bottom of this window are three buttons: 'Validate', 'Cancel', and 'Save'. The 'Save' button is highlighted with a red rectangle and a mouse cursor. The 'DOWNLOAD CERTIFICATE' window on the right also has a blue header and contains the text 'Download the asset's certificate here:'. At the bottom of this window are two buttons: 'Cancel' and 'Download'. The 'Download' button is highlighted with a red rectangle and a mouse cursor.

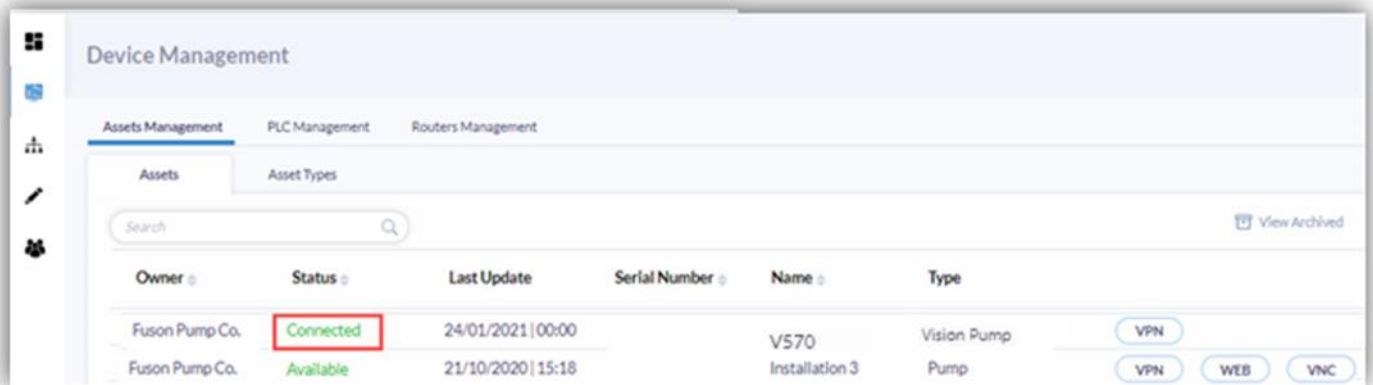
- Return to the router web page and upload the certificate you have just downloaded.



The router notifies you if the upload is successful.



In Device Management, the Asset status shows 'Connected', and the Asset is ready to be used in a Dashboard.



Device Management

Assets Management | PLC Management | Routers Management

Assets | Asset Types

Search View Archived

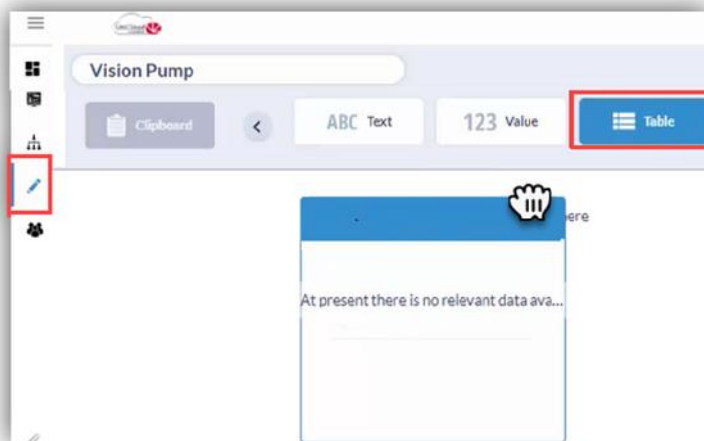
Owner	Status	Last Update	Serial Number	Name	Type
Fuson Pump Co.	Connected	24/01/2021 00:00		V570	Vision Pump
Fuson Pump Co.	Available	21/10/2020 15:18		Installation 3	Pump

VPN WEB VNC

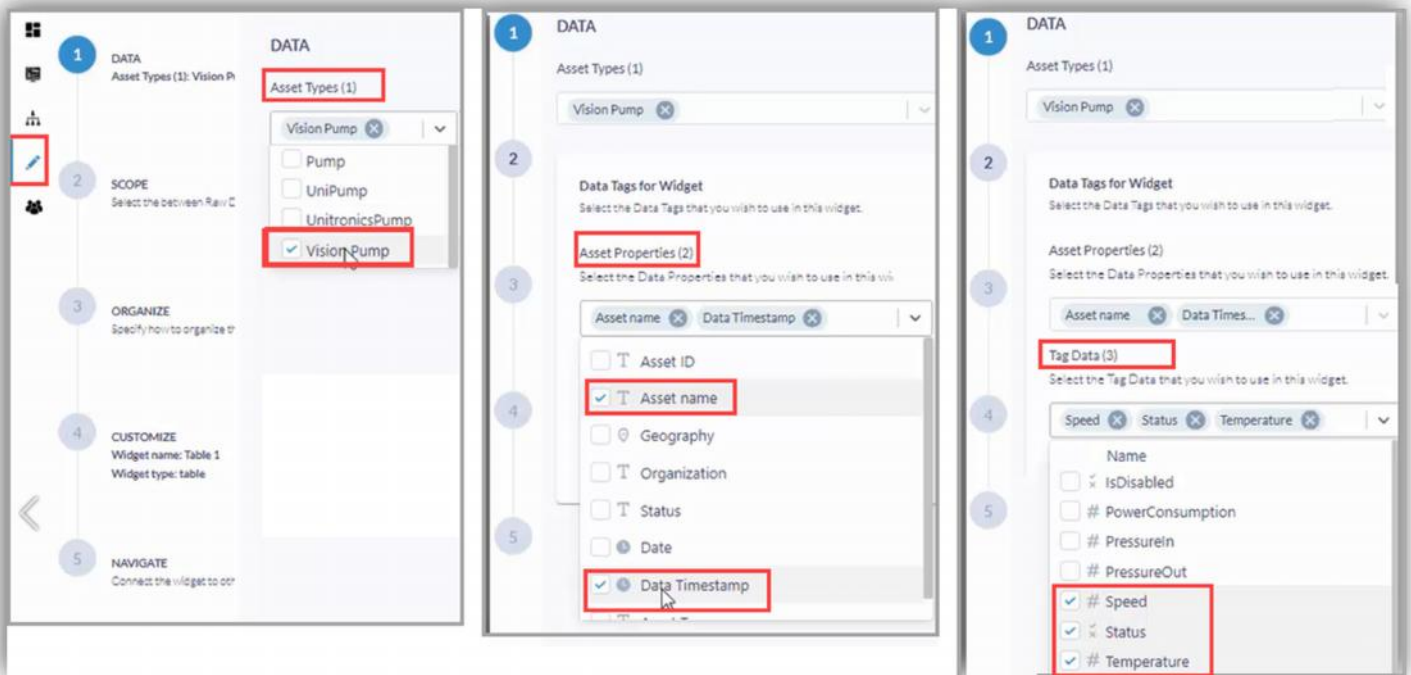
Create a Dashboard

Navigate to the Dashboard Editor and use the Widgets at the top to build a Dashboard, using a widget to display tag data in a table format.

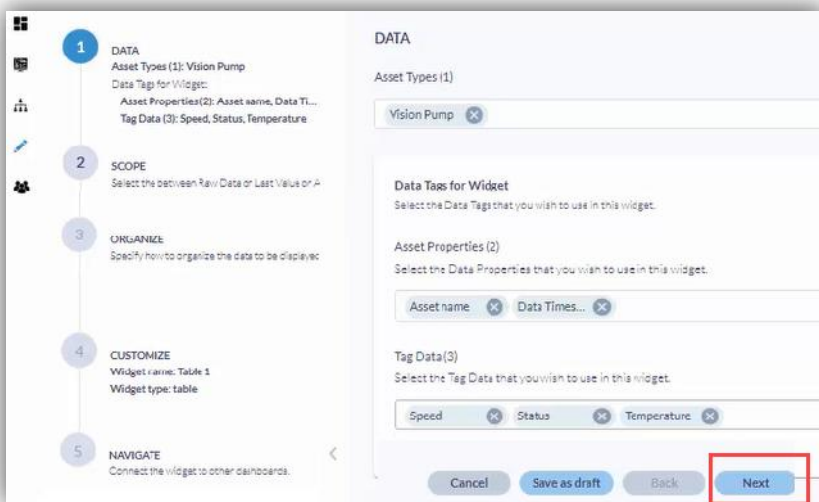
1. Select a Table Widget.



2. When you place the widget on the Dashboard, the widget Wizard opens, Select the:
- Asset Type, Vision Pump.
 - Asset Properties, Asset Name and Data Timestamp
 - Tag Data: Speed, Status, Temperature



3. When you are done, click Next.



4. Under Scope, select Last Value, click **Next** to continue.

SCOPE

☐ Aggregated Data
Group and perform calculations on your data
Select this option when you want to perform calculations and groupings on aggregated data collected from more than one data tag.

☒ Last Value
View the latest value of the selected data
Select this option when you want the widget to display either the last value of the selected data or perform calculations on it.

☐ Raw Data
View sequential data
Select this option when you want to view raw data received from the data source.

Cancel Save as draft Back Next

5. Under Organize, build the Table Structure:

6. Drag the following properties to Data and Metrics:

- Asset Type, Vision Pump.
- Asset Properties, Asset Name and Data Timestamp
- Tag Data: Speed, Status, Temperature

Note that the properties provide the Column Headers in the table

ORGANIZE

Grouping & Measures

Available Data

Group By

Data and Metrics

PREVIEW

Table 1

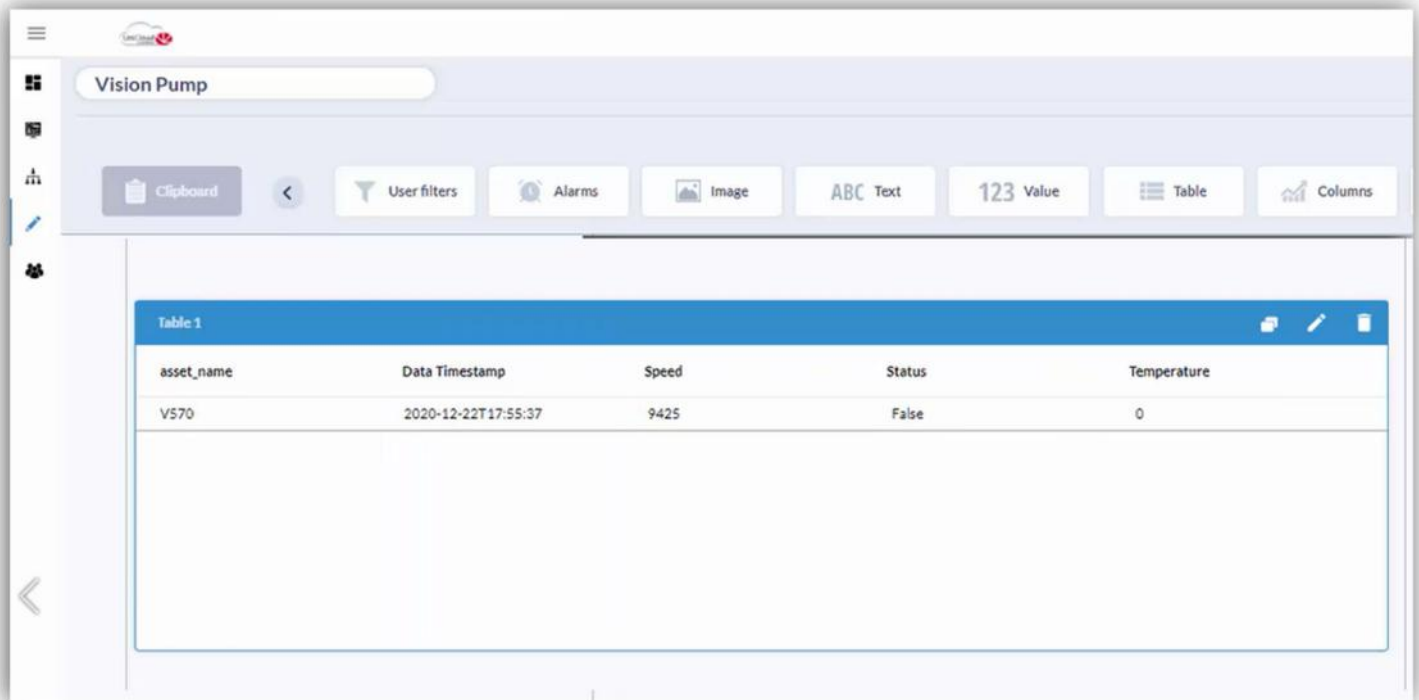
asset_name	Data Timestamp	Speed	Status
V570	2020-12-22T17:55:37	9425	False

DATA PREVIEW

asset_name	Data Timestamp	Speed	Status
V570	2020-12-22 22:55:37.02...	9425	False

The next two Wizard Steps, Customize and Navigate, are not mandatory and may be skipped by clicking Next. You can return to edit any stage.

Once complete, the table shows the current B570 data on the Dashboard.

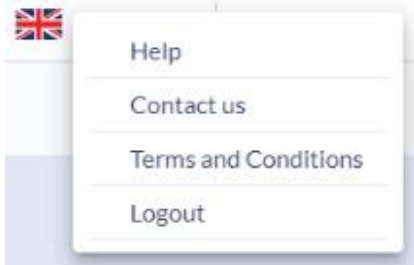


The screenshot shows a web dashboard titled "Vision Pump". At the top, there is a navigation bar with several widgets: "Clipboard", "User filters", "Alarms", "Image", "ABC Text", "123 Value", "Table", and "Columns". Below the navigation bar, a table titled "Table 1" is displayed. The table has five columns: "asset_name", "Data Timestamp", "Speed", "Status", and "Temperature". The first row of data shows "V570" for asset_name, "2020-12-22T17:55:37" for Data Timestamp, "9425" for Speed, "False" for Status, and "0" for Temperature.

asset_name	Data Timestamp	Speed	Status	Temperature
V570	2020-12-22T17:55:37	9425	False	0

What next?

To learn more about UniCloud and how to continue building your dashboard open the drop-down menu with your name at the top right and select the Help option for further information.



For additional help you may always contact unicloud@unitronics.com