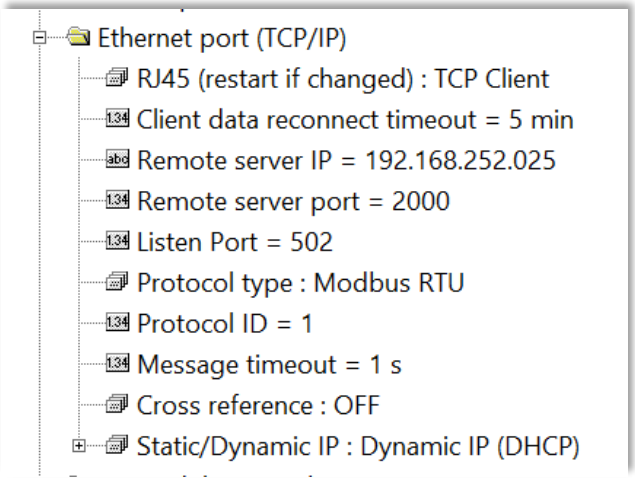
Connecting BlueLinQ Pro and EC531 to AquaWeb with TRB246 gateway over TCP

This guide will explain how:

- Insert the SIM-card and power up the gateway
- Setup TRB246 with the ”**aquaweb.tele2.com**” as APN
- Instruction how to set the apn in the TRB246 (Same settings for the 5G Teltonika; TRB500) will follow on the pages below.
- The Sim should be inserted according to instruction with the Teltonika (slot 1 -closest to circuit board).
- Connect the TRB246 to the controller with an ethernet cable when settings are done.
- Set Ethernet RJ45 port to ”**TCP Client**”.
- Set Protocol type to ”**Modbus RTU**”
- **IP 192.168.252.025** address and port **2000** to AquaWeb server.
- Restart unit to secure that that TCP Server is disabled and only TCP Client is active

Below are the settings that must be set in the controller (EC531 or BlueLinQ Pro) communication settings



Firmware *1.38 EC531* and *1.07 BlueLinQ pro* must be used. In AquaProg Ver 7.30 *EC531V112* and *BlueLinQ_Pro_V102* should be used.

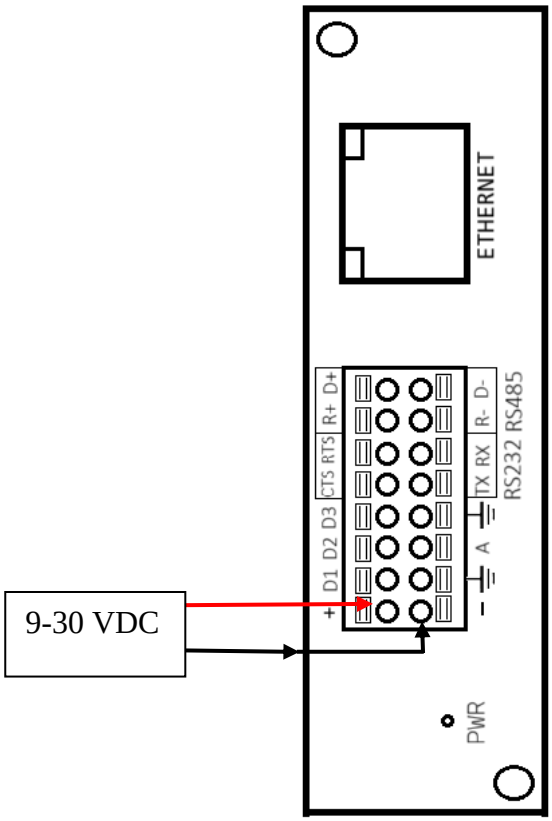
- Section1 is how to install the SIM-card
- Section 2 is how to setup the communication to Aquaweb server via 3/4/5G
- Section 3 is only required if you need to setup communication via RS232 to older controllers which do not have TCP

1 Insert SIM

- Open the end (see picture to the right) with two allen screws
- Insert the SIM in the slot closest to the circuit board, with the contacts of the SIM faced to the circuit board.
- Screw the front back on.

Power up the unit

Connect TBR246 to power supply 9-30 VDC. The device takes some time to start so wait until the LEDs stop flashing.



2 Setup gateway for ethernet port communication

We have used a Teltonika TRB246 (https://teltonika-networks.com/products/gateways/TRB246/) which have a WEB UI.

With an ***ethernet cable***, do as below.

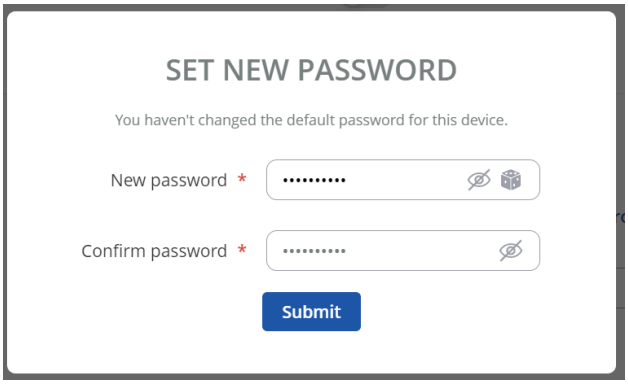
Connect the ethernet cable between Teltonika and a computer.

IP address to the Teltonika can be found on the unit, normally 192.168.**1**.1

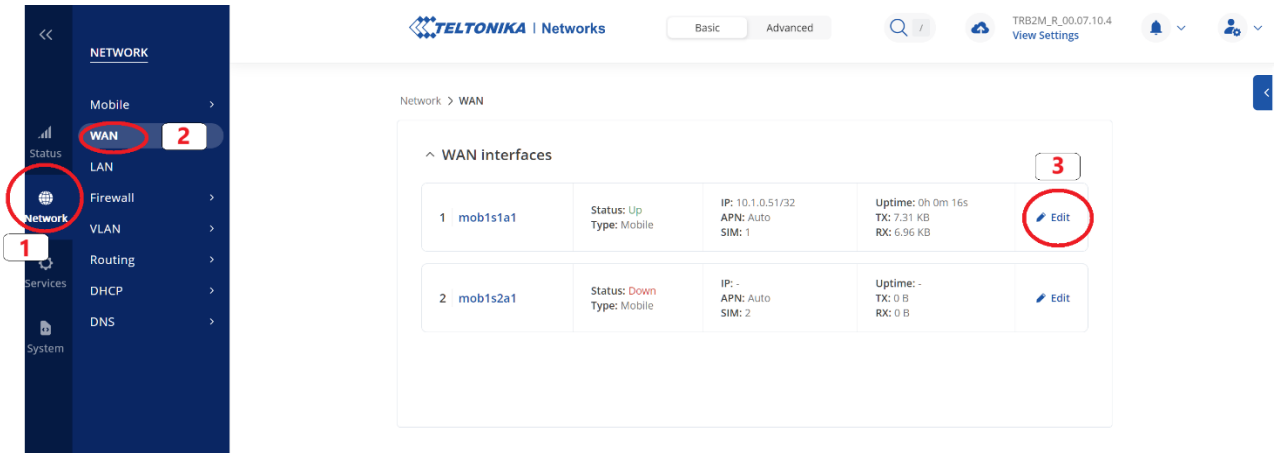
Open a web browser and type in 192.168.1.1 (**login credentials are typed on the Teltonika hardware**)

The username is ***admin*** and the password given on the backside of device.

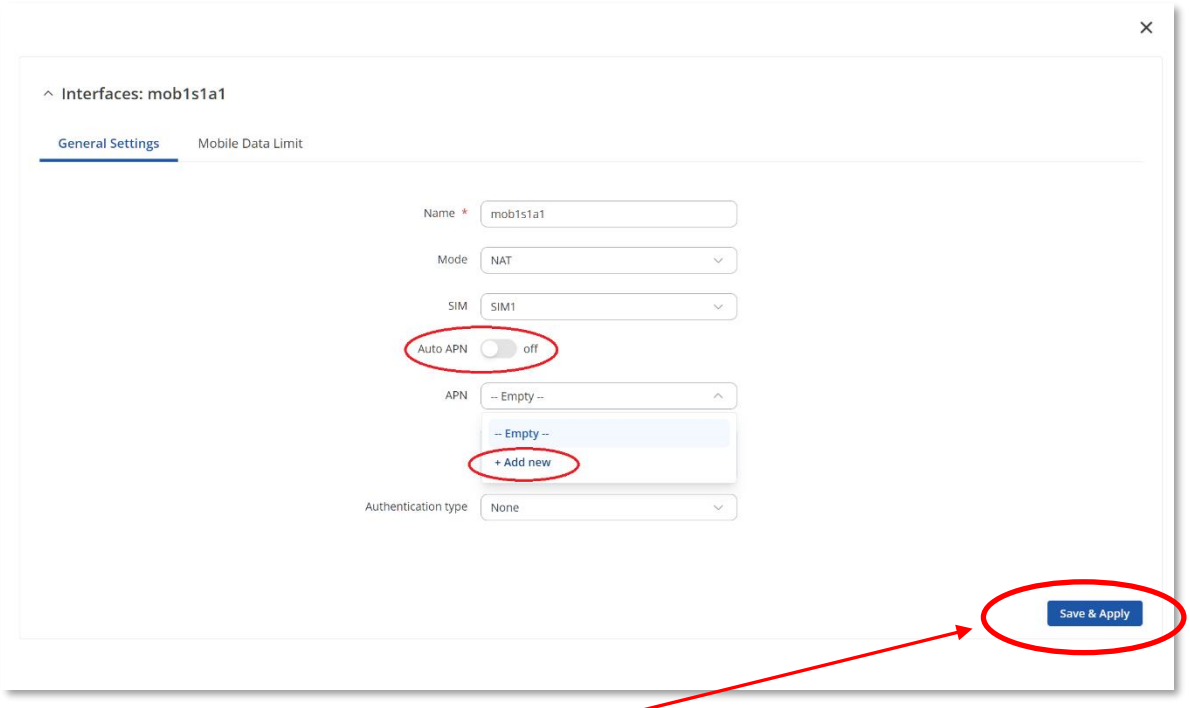
First time when login, the password must be exchange from the default password. Follow the instructions on the screen.



After login and entered the new password; Choose *Network(1) -> WAN(2)* on *SIM 1* (the slot where the AquaWeb sim is inserted) and chose *Edit(3)*:



Set "Auto APN" to OFF, and add new APN to ***aquaweb.tele2.com*** from *General Settings*, *scroll down* to apn settings and set the apn:



Don't forget to ***Save and Apply***

Now the Teltonika and the controller can connect to AquaWeb via the ethernet cable between the controller and the Teltonika. **Stop here if you are using EC 531 or BlueLinQ Pro and the ethernet port communication**, **the settings and the procedure are the same for the 5G Teltonika; TRB500**, otherwise continue to the RS232 setup in section 3.

3 Setup gateway for RS232 port communication

To make the TRB246 work over RS232, a few settings must be performed via the web-interface.
Steps 1 (SIM) and step 2 (APN setup) needs to be performed before step 3 can be conducted.

Crucial parameters which must be set

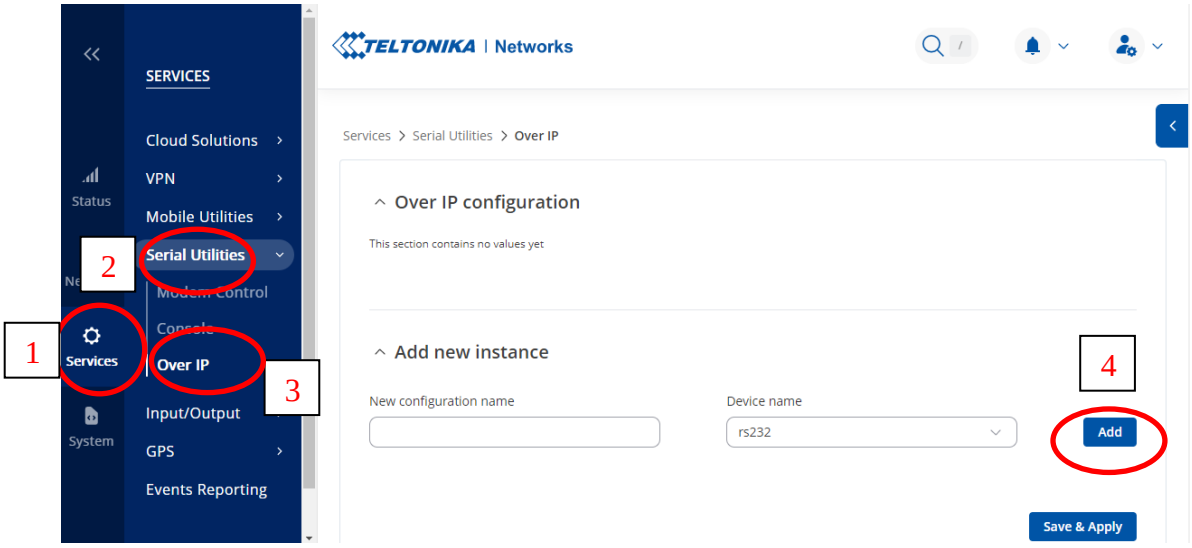
- RS232 Client to in gateway
- Settings in the controller
- RS232 wiring between controller – TRB

Login to the Teltonika the same way as described earlier (step 2).

RS232 Client setup in gateway

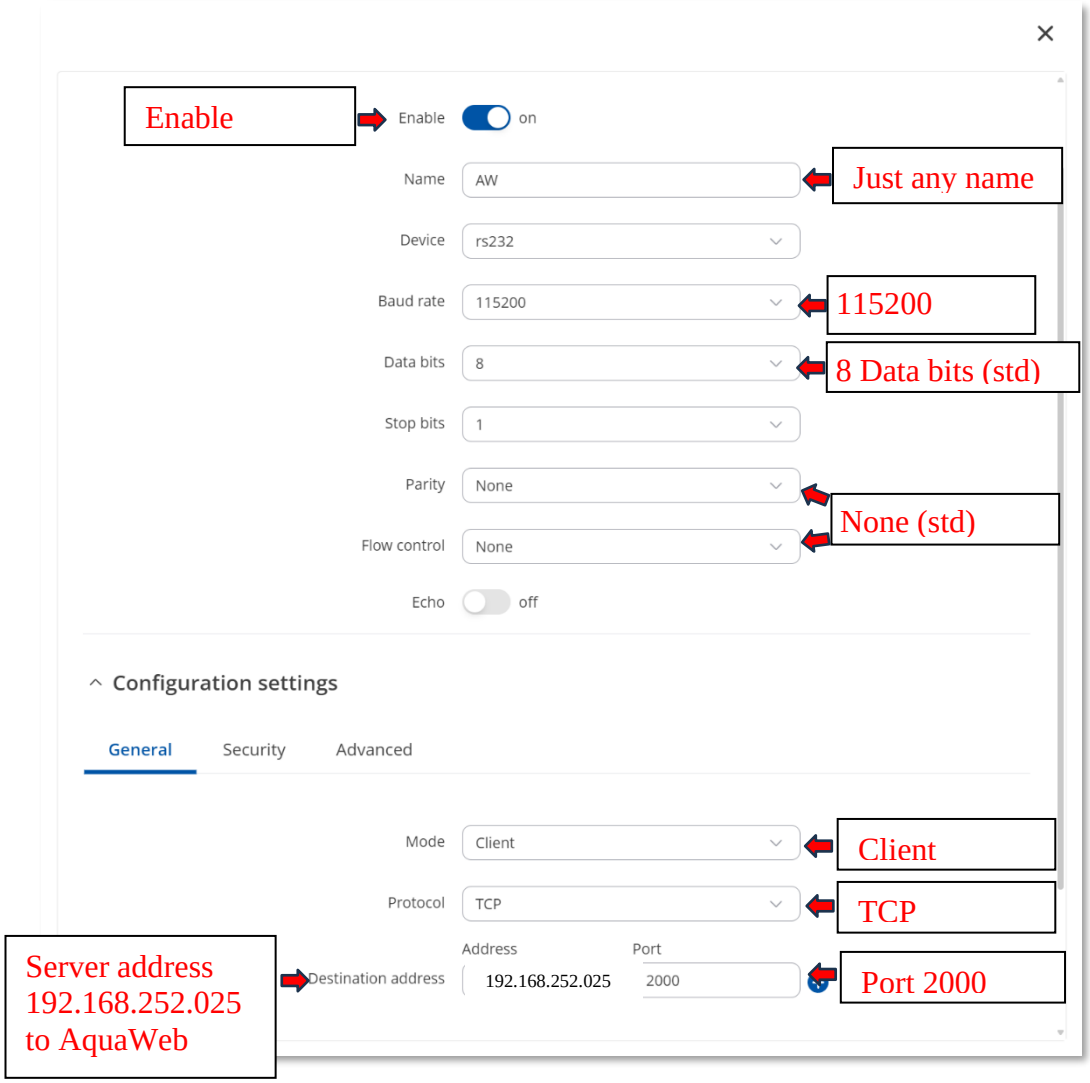
After each step, remember the Save & Apply button Save & Apply

After succeed login, the screen should appear as below. Here is an overview over the settings. We shall now create a "client" between RS232 and ***Over IP*** to Internet.



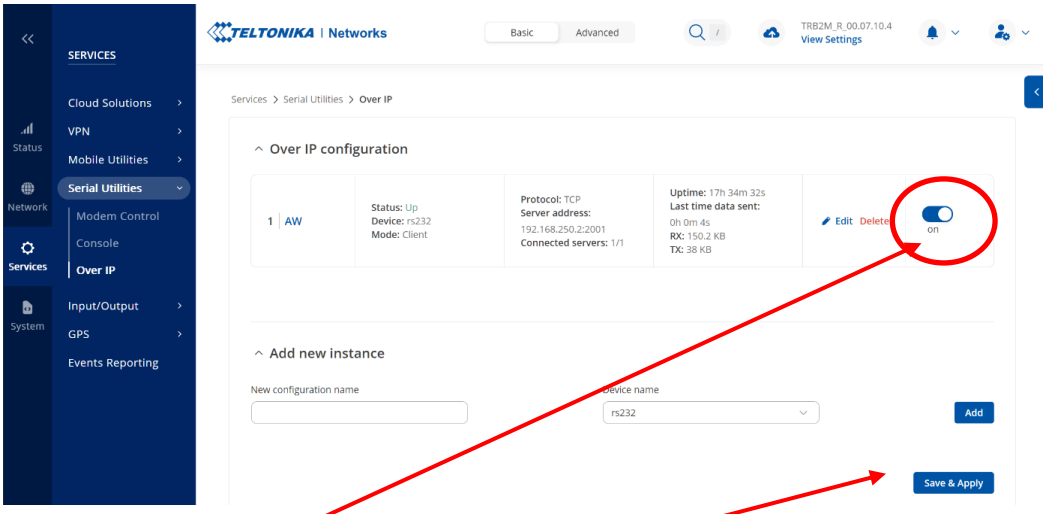
On left side, click on Create a new client by pressing "1. Services" -> "2. Serial utilities" -> "3. Over IP" in that order. To set the communication parameters as below, press "4. Add"

A new window appears, and parameters in the example below, are typical parameters for AquaWeb. Type in following parameters:



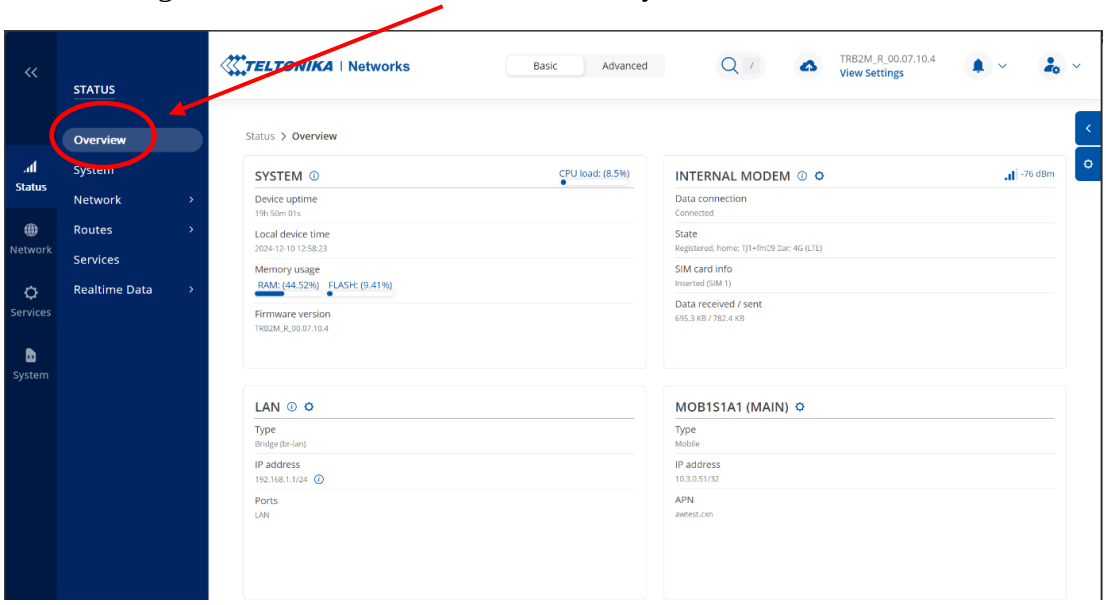
After the parameters are set, click on Save & Apply

When RS232 settings is completed, the TRB246 <u>can only</u> communicate with the controller via the RS232-port (To use as TCP with BLP or EC531, set Enable to OFF)



Activate the client to ON. And Save & Apply.

After this, go to the “Overview” window. There you can see the status of the connection.



That’s all in the Teltronika.

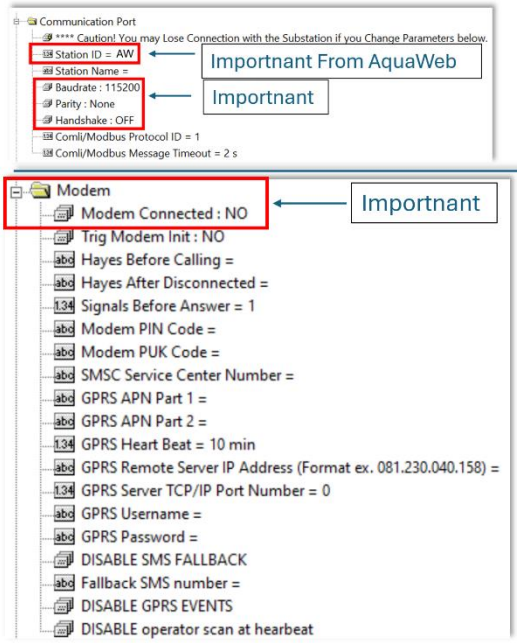
4 Settings in the controller

To use the Teltronika TBR246 with Sulzer's controller, the modem functions in the controller must be NO.

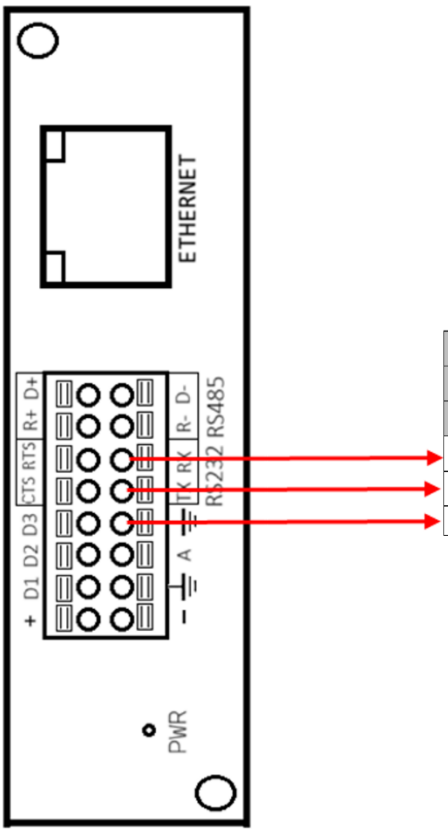
Do following settings in the controller

- Turn "Modem connected" to NO (All other parameters are then ignored).
- Baud rate = 115200
- Parity = None
- Handshake = OFF

The ***Station ID*** must be set correctly according to AquaWeb



4.1 Cable drawing TRBxxx using RS232 – Sulzer controller



Teltronika	Type of controller					
TRB246	CP116/216	PCx	PC 242	PC441	EC 531*	BlueLinQ*
Pin	Communication port, terminal number					
Rx	2	47	23	51	23	19
Tx	3	48	24	50	24	20
GND	1	46	22	52	22	18

** In EC 531 & BlueLinQ, use the TCP-port*