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

Revised

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

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## 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.



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### 2 Setup gateway for ethernet port communication

We have used a Teltonika TRB246 (<u>https://teltonika-networks.com/products/gateways/TRB246/</u>) 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.

SET NEW PASSWORD					
You haven't changed the default password for this device.					
•••••	Ø <b>†</b>				
******	ø				
Submit					
	W PASSW the default passwork				

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

<<	NETWORK	4	TELTONIKA   Netw	orks Ba	sic Advanced	Q 7 🔥	TRB2M_R_00.07.10.4 View Settings	• •	20 ~
	Mobile >	Net	work > WAN						<
.11 Status	LAN 2		^ WAN interfaces				3		
Network	Firewall > VLAN >		1 mob1s1a1	Status: Up Type: Mobile	IP: 10.1.0.51/32 APN: Auto SIM: 1	Uptime: 0h 0m 16s TX: 7.31 KB RX: 6.96 KB	Edit		
Services	Routing > DHCP >		2 mob1s2a1	Status: Down	IP: - APN: Auto	Uptime: - TX: 0 B	Edit		
<b>D</b> System	DNS >		2 110013281	Type: Mobile	SIM: 2	RX: 0 B			

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:

General Settings Mobile	e Data Limit			
	Name *	mohisial		
	Mode	NAT	×	
	SIM	SIM1	~	
	Auto APN	off		
	APN	- Empty	^	
		Empty		
	C	+ Add new		
	Authentication type	None	~	
				Save & Ap

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.

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### 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 <u>before</u> 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

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.

Save & Apply

	~~	SERVICES	TELTONIKA   Networks	Q / 🖡 v 👗 v
		Cloud Solutions >	Services > Serial Utilities > Over IP	<
	. h.	VPN >		
	Status	Mobile Utilities >	<ul> <li>Over IP configuration</li> </ul>	
	Ne 2	Serial Utilities ~ Modern control	This section contains no values yet	
1	لي Services	Console Over IP	^ Add new instance	4
		Input/Output 3	New configuration name Device name	
	System	GPS >	rs232	( Add )
		Events Reporting		Save & Apply

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"

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

Enable Enable	on		
Name	AW	-	Just any name
Device	rs232	~	
Baud rate	115200	~	115200
Data bits	8		8 Data bits (std
Stop bits	1	~	
Parity	None	~ <b>~</b>	
Flow control	None	~	None (std)
Echo	off		
<ul> <li>Configuration settings</li> <li>General Security Advanced</li> </ul>			
Mode	Client	~ (	Client
	ТСР	~ (+	ТСР
Protocol	Address Port		

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)

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~~	SERVICES	CTELTONIKA   Netwo	orks	Basic Advanced	Q /	TRB2M_R_00.07.10.4 View Settings	<b>ب</b> ~	<b>2</b> 0 ~
	Cloud Solutions >	Services > Serial Utilities > C	Over IP					<
. <b>11</b> Status	VPN > Mobile Utilities >	^ Over IP configu	uration					
Metwork	Serial Utilities v		Status: Up	Protocol: TCP	Uptime: 17h 34m 32s Last time data sent:	1		
o	Modem Control Console	1 AW	Device: rs232 Mode: Client	192.168.250.2:2001 Connected servers: 1/1	0h 0m 4s RX: 150.2 KB TX: 38 KB	🖍 Edit Delete	on	
Services	Over IP							
D System	Input/Output >							
-,	GPS >	^ Add new insta	nce					
		New configuration name		Sevice nam	e			
			]	rs232		<u> </u>	Add	
							Save & Apply	
		· /						
Acti	ivate the cli	ient to ON. A	nd Save	& Apply.				

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

~~	STATUS	TELTONIKA   Networks Basic Advance	d Q / 🚓 TRB2M_R_00.07.10.4 🌲 V 歳 V
	Overview	Status > Overview	
h.	System	SYSTEM () CPU load: (8.5%)	INTERNAL MODEM () 🗘
status	Network	> Device uptime 19h 50m 01s	Data connection Connected
Network	Routes	Local device time 2024/12/10/1258/23	State Resistared, home: Ti11+fm29 Dar: 4G (LTE)
Hethork	Services	Memory usage	SIM card info
C Services	Realtime Data	Firmware version TRB2ML, P. 007.10.4	Data received / sent 695.3 KB / 782.4 KB
System			
		LAN O O	MOB1S1A1 (MAIN) 🜣
		Type Bridge (br-lan)	Type Mobile
		IP address 192.168.1.1/24 ①	IP address 10.3.0.51/32
		Ports L/N	APN awtest.con

That's all in the Teltronika.

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## 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

Garcommunication Port     Garcommunication Port     Garcommunication Port					
Station ID = AW					
Buddete: 11520     Buddete: 11520     Parity: None     Buddetake: 0FF     Gront/Modbus: 0FF     Gront Control Dire 1     Gront Control Dire 1					
Modem  Modem Connected : NO  Importnant					
Trig Modem Init : NO					
The Haves After Disconnected -					
Hayes After Disconnected =					
- Lag Signals before Answer = 1 - abig Modem PIN Code = - abig Modem PUK Code = - abig SMSC Service Center Number = - abig GPRS APN Part 1 = - abig GPRS APN Part 2 =					
					134 GPRS Heart Beat = 10 min
					Bog GPRS Remote Server IP Address (Format ex. 081.230.040.158) =
					134 GPRS Server TCP/IP Port Number = 0
					abo GPRS Username =
abg GPRS Password =					
DISABLE SMS FALLBACK					
abd Fallback SMS number =					
DISABLE GPRS EVENTS					
DISABLE operator scan at hearbeat					

## 4.1 Cable drawing TRBxxx using RS232 – Sulzer controller

