

Teltonika RUT230/RUT240 Modbus TCP to MQTT

Modbus TCP

Under Services → Modbus → Modbus TCP Master, click “Add”. Fill out similar to below, adjusted for your situation. The IP-address and port of the Modbus TCP Slave you are reading may be different. It is necessary that the Modbus TCP Slave has a fixed IP address. This can either be set in the device itself, or in the DHCP settings pages of the router of the device is set to use DHCP.

In this example, input registers 1 to 2 and registers 4 to 6 of the Modbus TCP Slave are read out with the “Read input registers” function of the Modbus protocol.

Profile in use: default

FW ver.: RUT2XX_R_00.01.13.1

Modbus TCP slave
Modbus TCP Master
Modbus Data to Server
MQTT gateway

Advanced device settings

Here you can add and configure request parameters and alarms for this TCP slave device

Slave device configuration

Enabled ☒

Name
RevPi Test 1

Slave ID
1

IP address
192.168.0.244

Port
502

Period
5

Timeout
5

Requests configuration

Name	Data type	Function	First register	Register count / Values	Enabled	
Output_1	16bit INT, high byte first	Read input registers (4)	1	2	<input checked="" type="checkbox"/>	Test Delete
Output_4	16bit INT, high byte first	Read input registers (4)	4	3	<input checked="" type="checkbox"/>	Test Delete

Add

Back to Overview

Save

MQTT to Eniris servers

Under Services → Modbus → Modbus Data to Server, click “Add”. Fill out similar to the image below. Request the user name & password and topic for the MQTT connection of the router to Eniris. Click save when finished.

Profile in use: default
FW ver.: RUT2XX_R_00.01.13.1

Modbus TCP slave
Modbus TCP Master
Modbus Data to Server
MQTT gateway

Advanced sender settings

Here you can configure advanced settings for the data sender

Data sender configuration

Enabled ☒

Name

Protocol

JSON format

Modbus slave ID - %i
Modbus slave IP - %p
Date (Linux timestamp) - %t
Date (Day/Month/Year Hour:Minute:Second) - %d
Start register - %s
Register data - %a

Segment count

Send as object ☐

URL / Host / Connection string

Port

Keepalive

Topic

Period

Data filtering

Retry on fail ☒

Use TLS ☐

Use credentials ☒

Username

Password

Back to Overview
Save

Using an MQTT application such as MQTT Explorer you can check from your pc that messages get delivered to the broker by subscribing to the same topic with your personal user name & password (request to Eniris – this is different than the router user name & password). The server domain name is thingsboard.eniris.be, and the MQTT port 1883.

For the example above, the output will be similar to:

Search...

DISCONNECT

Topic

Value

<>

```
[
  {
    "T": "1615821349",
    "S": "4",
    "D": "[0,0,0]"
  }
]
```

▼ History

15-03-2021 16:15:53

[{"T": "1615821349", "S": "4", "D": "[0,0,0]"}]

15-03-2021 16:15:53(-0 seconds)

[{"T": "1615821349", "S": "1", "D": "[0,0]"}]

In this case, the meaning of these two messages is: At Unix epoch timestamp 1615821349, the three input registers starting at register number four had values 0, 0 and 0, and the two input registers starting at register number 1 had values 0 and 0.

With the input register table known, these json-strings can be parsed to return meaningful messages to the end user or store data for plotting in a dashboard.