

# Teltonika FMx 640 With TCP Link Mode

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## Introduction: Understanding what is FMB640 RS232/RS485 TCP Link mode:

In this mode link with external device (for example PC) using text messages can be established. FMx has to be connected to the external device through RS 232 on COM1/COM2 port of FMx. Any string of data coming to COM port will be routed to server (if link is currently active). Messages that are exchanged between FMx device and server, have to be packed in Codec.12 format. Here for TCP link establishment, we will use Hercules. For sending messages from FMx to server Terminal will be used.

## Step 1. Connect the FMx640 to the RS232 on COM1:



## Step 2. FMx640 Configuration:

The FMx configurator you have to set parameters for COM1 or COM2 (depends on which COM port you are using) in global parameters window. You have to modify the server settings to your PC IP and your TCP port.

Teltonika.Configurator 1.7.40.B.FM64\_R.58

TELTONIKA

Load from device Save to device Update firmware Reset configuration Reboot device

Load from file Save to file

IMEI 867648043451507  
FW 01.02.22 Rev:04  
Configuration 4.37.17.0

Status Security System **GPRS** Data Acquisition SMS \ Call Settings SMS Events GSM Operators Features Accelerometer Features Auto Geofence Manual Geofence Settings Trip \ Odometer Bluetooth 4.0 Beacon List Authorization ID List I/O LVCAN FMS IO Manual CAN IO Tachograph Data

**GPRS Limits**

GPRS Limits

Disable Enable

Home Limit (MB) 100

Roaming Limit (MB) 10

**Server #1 Settings**

Domain 192.168.12.171

Port

Protocol TCP UDP

**SIM1 GPRS Settings**

GPRS Context

Disable Enable

APN

APN Username

APN Password

**Server #2 Settings**

Backup Server Mode

Disable Backup

Duplicate EGTS

Backup Server Protocol

TCP UDP

Backup Server Domain

Backup Server Port 0

**SIM2 GPRS Settings**

GPRS Context

Disable Enable

APN

APN Username

APN Password

**FOTA WEB Settings**

Status

Disable Enable

Domain fm.teltonika.lt

Port 5000

Period (min) 720

Teltonika.Configurator 1.7.40.B.FM64\_R.58

TELTONIKA

Load from device Save to device Update firmware Reset configuration Reboot device

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IMEI 867648043451507  
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Data Acquisition SMS \ Call Settings SMS Events GSM Operators Features Accelerometer Features Auto Geofence Manual Geofence Settings Trip \ Odometer Bluetooth 4.0 Beacon List Authorization ID List I/O LVCAN FMS IO Manual CAN IO Tachograph Data **RS232 \ RS485** CAN \ Tachograph ContiPressureCheck

**Garmin Settings**

Garmin Features

Ping Filter Unicode filter

**RS485 Settings**

Mode Disabled

Baudrate Default

**RS232 Settings**

**COM1 settings**

Mode TCP/UDP Ascii

Baudrate 115200

Message Timestamp

Disable Enable

Device IMEI

Disable Enable

CMD ID 6

**COM2 settings**

Mode Satellite backup

Baudrate 19200

- Modify the Mode from silent to TCP/UDP Ascii mode.
- Make sure that the Baud rate is matching with the baud rate in the terminal, in our example it is the sensor

**Note:** Try to make sure that your TCP Port is open by checking it with any port checker websites.

### **Message Timestamp**

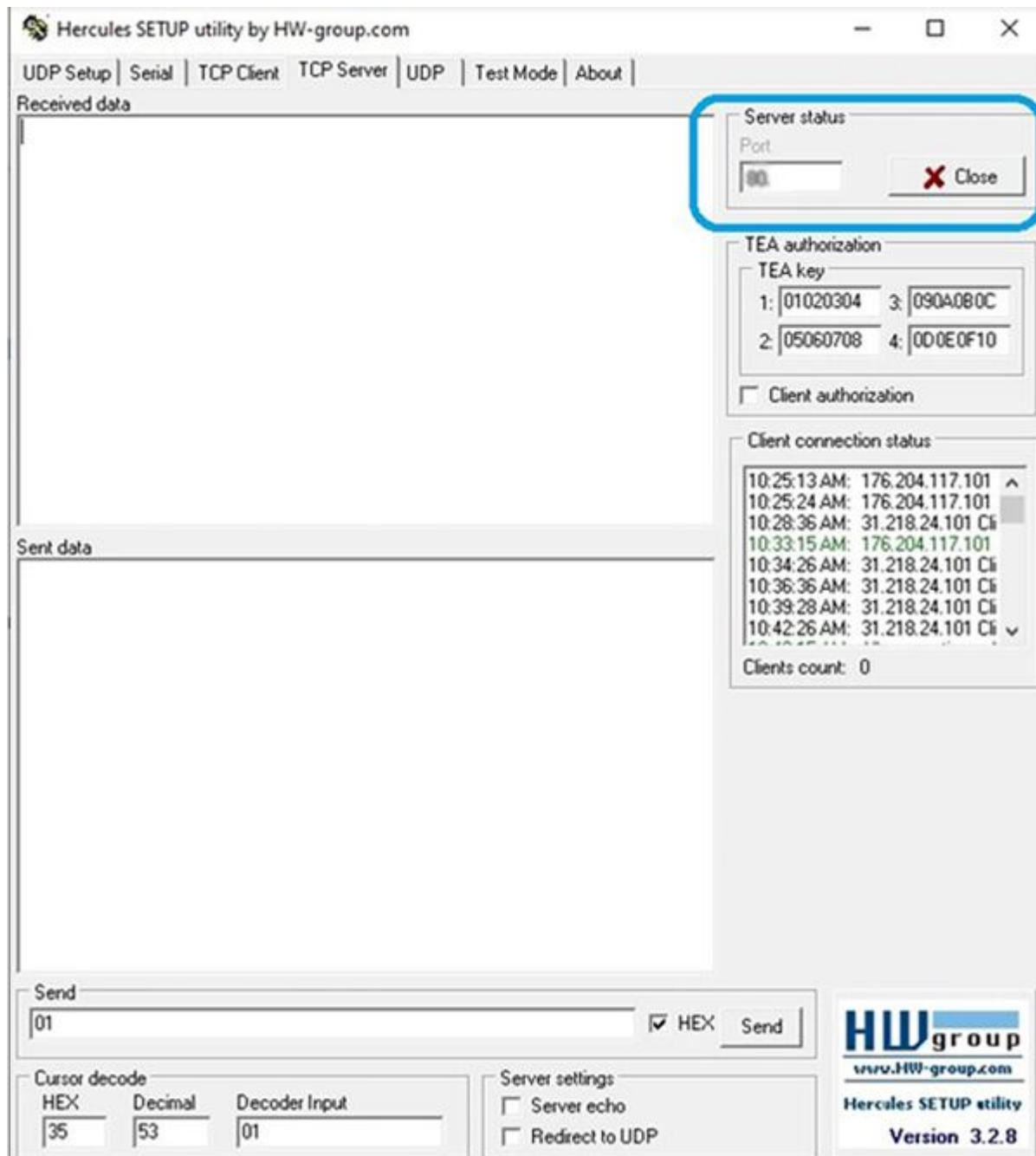
Message Timestamp parameter is used to determine if it is necessary to include a timestamp in the RS232 TCP packet when sending it to the server. If the parameter is Enabled, then Codec 13 is used for data sending. Otherwise, Codec 12 is used.

You can also use RS485 which is also suitable for Ascii TCP Link mode. In order to make a link between FMx640 device and server, Domain and Target Server Port have to be set in the working device profile, GPRS data sending Settings section. When the right parameters are set, you can save the configuration to the FMx640 device.

### **Step 3. Establishing FMx test link with server through Hercules and sending messages with Hercule:**

In this case we have a PC that is considered to be a server and an external device at the same time. When FMx is configured and connected to the external device, next that we have to do is to start Hercules which is in server side and will be used for sending and receiving messages.

Here you have to send acknowledgement after receiving the IMEI from the device. then You have to send 01 as a server response.



Sending messages with Hercules

You have to choose TCP Server section from the upper menu. In the marked fields.

#### Step 4. Receiving messages with Hercules:

In this step we need to use the terminal log. When you want to send a message from FMx 640 to the server, write it in Terminal but change your com port and select port which is assigned for COM1/COM2.

Disconnect ReScan Help About.. Quit	COM Port COM1 COMs	Baud rate <input type="radio"/> 600 <input type="radio"/> 14400 <input type="radio"/> 57600 <input type="radio"/> 1200 <input type="radio"/> 19200 <input checked="" type="radio"/> 115200 <input type="radio"/> 2400 <input type="radio"/> 28800 <input type="radio"/> 128000 <input type="radio"/> 4800 <input type="radio"/> 38400 <input type="radio"/> 256000 <input type="radio"/> 9600 <input type="radio"/> 56000 <input type="radio"/> custom	Data bits <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input checked="" type="radio"/> 8	Parity <input checked="" type="radio"/> none <input type="radio"/> odd <input type="radio"/> even <input type="radio"/> mark <input type="radio"/> space	Stop bits <input checked="" type="radio"/> 1 <input type="radio"/> 1.5 <input type="radio"/> 2	Handshaking <input checked="" type="radio"/> none <input type="radio"/> RTS/CTS <input type="radio"/> XON/XOFF <input type="radio"/> RTS/CTS+XON/XOFF <input type="radio"/> RTS on TX <input type="checkbox"/> invert
---	--------------------------	---	--	---	---	--

Settings

 
 ☐ Auto Dis/Connect  
 ☐ Time  
 ☐ Stream log  
 custom BR  
 Rx Clear  
 ASCII table  
 Scripting  
☐ AutoStart Script  
☐ CR=LF  
☐ Stay on Top  
 9600  
 -1  
 Graph  
 Remote

Receive

 
☒ AutoScroll  
  
 13  
 Cnt = 0  
☐ HEX  
☒ ASCII  
  
  
  
☐ Dec   ☐ Bin  
☐ Hex

TCP Port Mode On

Transmit

 
  
 0  
☐ CR=CR+LF  

Macros

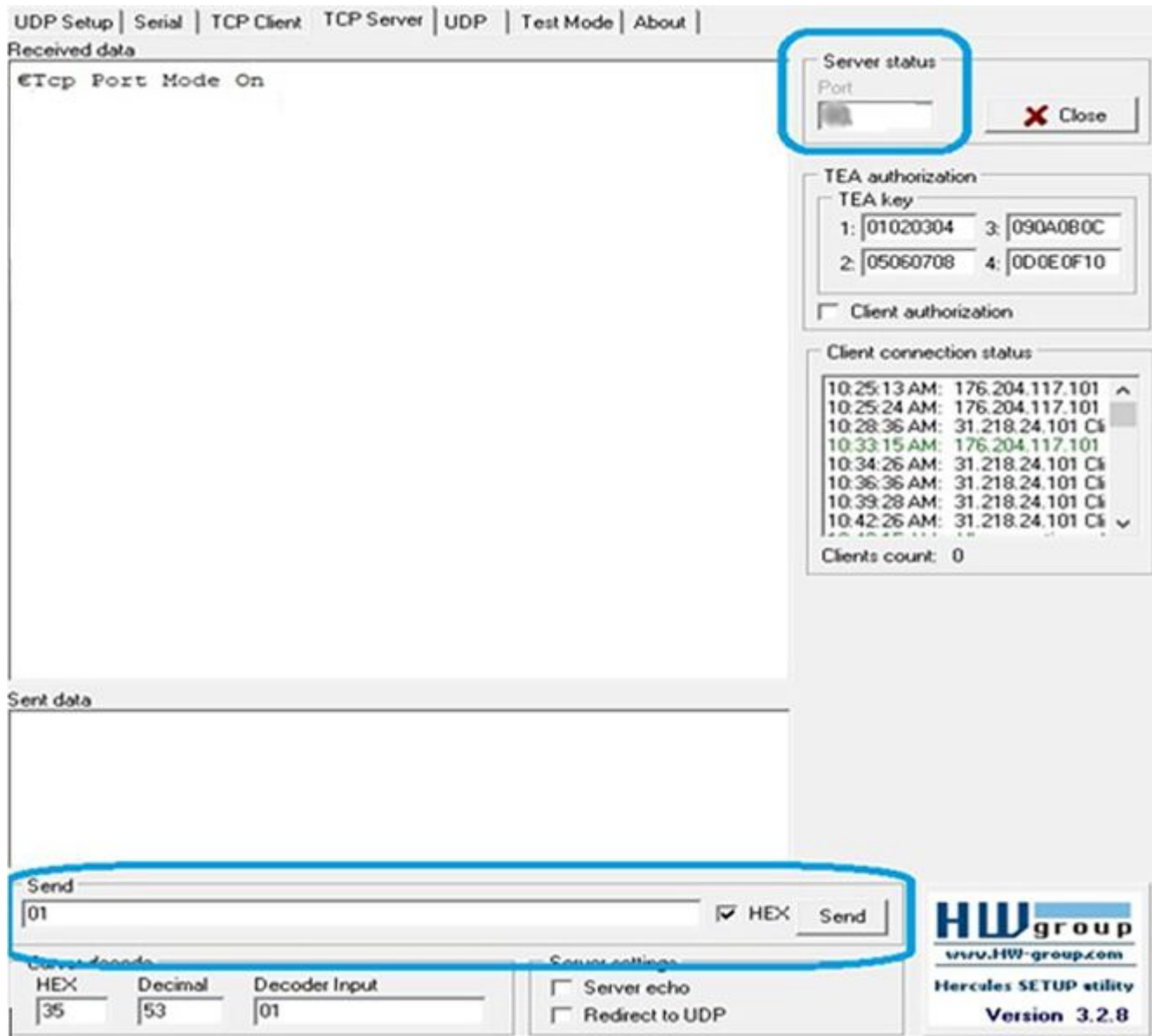
Set Macros	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24

TCP Port Mode On

TCP Port Mode On

## Terminal Log Sending Text

After doing the mentioned configuration you can type your message in the marked field, check +CR and press Send button. If sent successfully, you will see it in Hercules Received data field.



Receiving Text from The Terminal to Server Hercules

## The Conclusion:

In this mode link with an external device for example PC using text messages can be established. We can apply this scenario on FMx640 or FMx125 which have to be connected to the external device through RS232 or RS485. Any string of data coming to device via RS232 or RS485 will be routed to the server (*if the link is currently active*). Messages that are exchanged between FMx device and server, have to be packed in Codec.12 format and will receive to the Hercules receiver successfully.

## Links for download

1. [Hercules SETUP utility](#)
2. [Terminal download](#)