Sending Codec12 commands using Hercules

[General Technical Questions](#) > **Sending Codec12 commands using Hercules**
☐

Contents

Description

Hercules SETUP utility is useful serial port terminal (RS-485 or RS-232 terminal), UDP/IP terminal and TCP/IP Client Server terminal.It was created for HW group internal use only, but today it's includes many functions in one utility and it's Freeware! With our original devices (Serial/Ethernet Converter, RS-232/Ethernet Buffer or I/O Controller) it can be used for the UDP Config.

Setting up for connection with Hercules Software

1. Press **GPRS** tab
• *GPRS Context* field requires you to enter your SIM providers' APN settings. Make sure to fill this in based on the SIM provider you are using with your Teltonika device.
More information about *GPRS* panel and it's parameters for each device can be found here:
[TST100](#) | [TFT100](#) | [GH5200](#) | [TMT250](#)

2. In **GPRS**->**Server settings** -> **Domain** field, **External IP** of your **PC** must be entered. There are several ways to find out your machine's external IP address:
• Visit the link provided to find out external IP address via website: pingEU
• If you do not want to use a website you can find your IP through **Windows Command Prompt**.
• **Open Start** Click the Windows logo in the bottom-left corner of the screen, or press the ⊞ Win key. You can search for Command Prompt on all supported versions of Windows.
• In the **Command Prompt** enter the following: `nslookup myip.opendns.com resolver1.opendns.com`
Example window:

• Copy **Non-Authoritative answer Address**
• Paste **Non-Authoritative answer Address** in *Teltonika Configurator* **Server settings** -> **Domain** field
• In **Port** field, enter an open port.
If it is unknown if the port is open, to check if the port is open click pingEU and enter **external IP address** and **port** and click **Go** button.


Example window:

• Save settings to the device

Hercules Software

1. Click `TCP Server`
2. Enter **Port** and click `Listen`

- When device connects to Hercules, device *IMEI* is sent and is displayed in *Received data* window

4. Tick **HEX** box
5. Enter **Codec 12** command `000000000000000F0C010500000007676574696E666F0100004312` *getinfo (in example below)*
6. Click `Send` button
Note: To make device connect to Hercules faster, click any button, that has an event configured. In the example below, a button was pressed to send an SMS message.
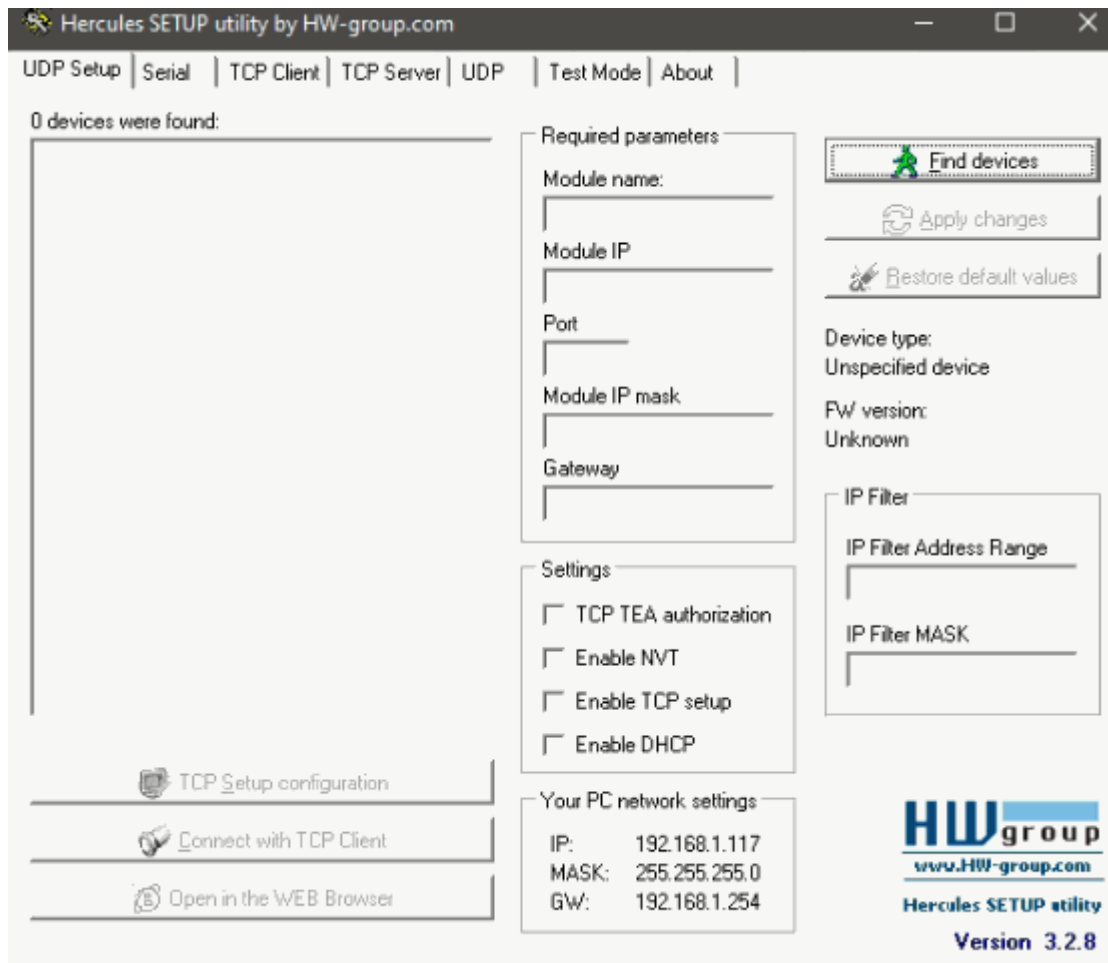
How to create a HEX command

getinfo command `000000000000000F0C01050000007676574696E666F0100004312`

- Data size is calculated by the sum of bytes from **Codec ID** to **Command Quantity 2**. In this case it is 15 (**DEC**) or F (**HEX**)bytes.
- CRC-16 is calculated also by the sum of bytes from **Codec ID** to **Command Quantity 2**.
- To find out CRC-16 go to [CRC-16 calculator](#) page
- In HEX field enter the following `0C01050000007676574696E666F01` **getinfo** *All bytes in HEX from Codec ID to Command Quantity 2*
- Find **CRC-16-IBM** table
- `Reversed 0xA001` **Little Endian (DCBA)** shows **CRC-16**, which is 43 12

CRC-16-IBM

(Bisync, Modbus, USB, ANSI X3.28, many others; also known as CRC-16 and CRC-16-ANSI)

Generator Type	Big Endian (ABCD)	Little Endian (DCBA)
Normal 0x8005	FE 8D	8D FE
Reversed 0xA001	12 43	**43 12**
Reversed Reciprocal 0xC002	64 22	22 64

Hexadecimal stream of GPRS command and answer in these examples are given in hexadecimal form. The different fields of messages are separate into different table columns for better readability and some of them are converted to ASCII values for better understanding.

Example: Sending *[getinfo](#)* SMS command via GPRS Codec12

Server request in hexadecimal stream:
000000000000000F0C010500000007676574696E666F0100004312

Parsed:

Server Command

Server Command Part	HEX Code Part
Zero Bytes	00 00 00 00
Data Size	00 00 00 0F
Codec ID	0C
Command Quantity 1	01
Command Type	05
Command Size	00 00 00 07
Command	67 65 74 69 6E 66 6F
Command Quantity 2	01
CRC-16	00 00 43 12

Note: that Server Command converted from HEX to ASCII means *[getinfo](#)*

Example:

When creating `getstatus` Codec 12 command:

- **Codec 12** in HEX is `0C` *1 byte*
- **Command Quantity 1** is `01` *1 byte*
- **Command Type** is `05` *1 byte*
- **Command Size** is `00 00 00 09`, because `getstatus` converted in HEX is 9 bytes. *4 bytes*
- **Command** `getstatus` converted to HEX format is `67 65 74 73 74 61 74 75 73` *9 bytes*
- **Command Quantity 2** is `01` *1 byte*
- **CRC-16** converted from `0C0105000000096765747374617475730` is `00 00 8C D7` is *4 bytes*

Server Command

Server Command Part	HEX Code Part
Zero Bytes	00 00 00 00
Data Size	00 00 00 11
Codec ID	0C
Command Quantity 1	01
Command Type	05
Command Size	00 00 00 09
Command	67 65 74 73 74 61 74 75 73
Command Quantity 2	01
CRC-16	00 00 8C D7