GW Serial Example Setup

The GATEWAY Module for serial network uses a script for data exchange to a partner Gateway. This article shows how to put this device into operation with an example setup.

GATEWAY Module for serial network
Articlenumber: 100068

https://www.kunbus.com/serial-rx-gateway-module.html

GATEWAY Module for Modbus TCP
Articlenumber: 100088

https://www.kunbus.com/serial-rx-gateway-module.html

USB-PiBridge Plug

Articlenumber: 100101

https://revolution.kunbus.de/shop/en/usb-plug-pibridge

ScriptExample_64Registers.pbs

Instructions

1. Download and install the following software
   a. KUNBUS Scripter: https://www.kunbus.de/downloads.html
   b. PuTTY: https://www.putty.org/
   c. QModMaster: https://sourceforge.net/projects/qmodmaster/
2. Connect the Gateway Modules using the PiBridge Plug
3. Power the two modules with 24V, the both power leds should light green
4. Connect the PiBridge Plug via USB to your PC
5. Open the Scripter and load the script "ScriptExample_64Registers.pbs"
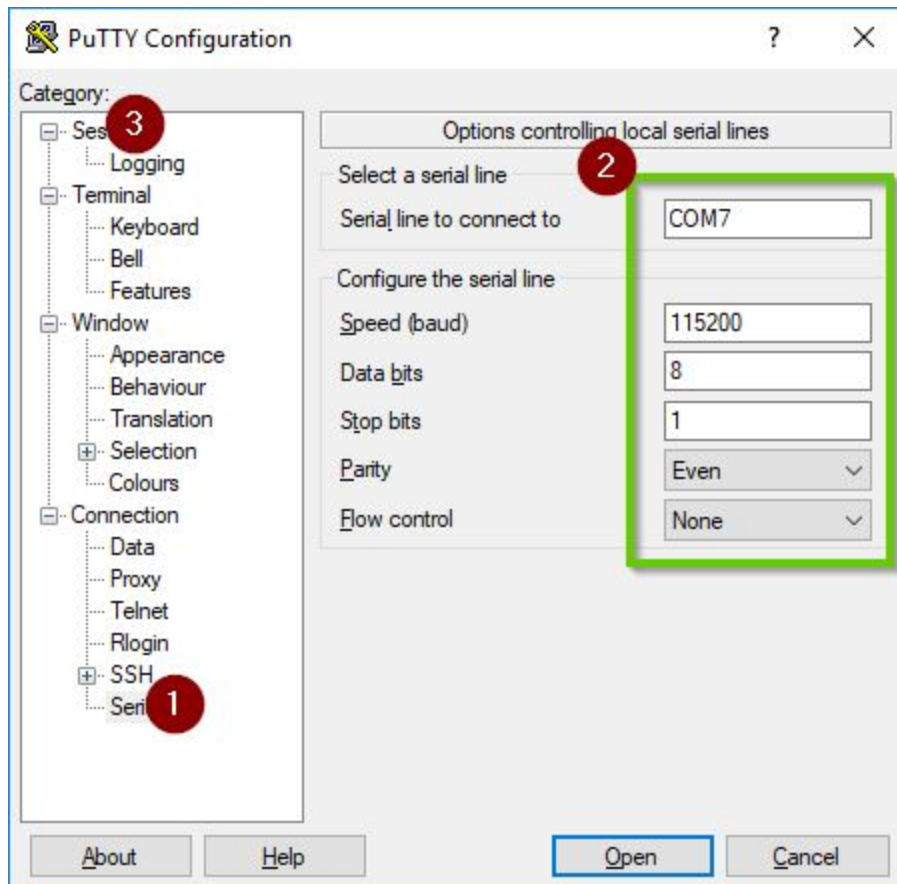6. Go to File Settings and enter the serial connection details
   a.

Settings

Connection | Commands

Select Connection

☑ Serial Port communication

Module Type: Modular Gateway Left **(1)**

Serial Port Settings

Port Name: COM5 **(2)**

Baud Rate: 115200

Data Bits: 8

Parity: Even

Stop Bits: 1 | Apply **(3)**

COM port COM5 is connected. **(4)**

☐ TCP/IP Communication

Close **(5)**

7. Klick on the green button to download the script to the device
   a.

KUNBUS-Script Editor

File Edit Build Debug Trace Help

(1)

ScriptExample_64Registers.pbs

```
1  //
2  //  KUNBUS GmbH
3  //  07.08.2019
4  //  Example Script for a Gateway Serial Rx Module.
5  //
6  //  This script demonstrates how to receive and transfer
7  //  a variable amount of up to 64 Registers (2Bytes) to a partner
8  //  Gateway Module.
9  //
10 //  We define a serial protocol as follows
11 //
12 //  Byte | 1         | 2      | 3      | ... | 129       |
13 //  -----+-----------+--------+--------+-----+-----------+
14 //  Desc | Registers | Byte 1 | Byte 2 | ... | Byte 128  |
15 //
16 //  On the Partner Gateway Modbus-RTU the data is mapped as follows
17 //
18 //  Reg. | 1025   | 1026      | 1027   | ... | 1091      |
19 //  -----+--------+-----------+--------+-----+-----------+
20 //  Desc | Status | Registers | Word 1 | ... | Word 64   |
21 //
22 //  Attention: Command "setMBReg(address, parameter);" writes
23 //  the value in parameter in the register address. The parameter
24 //  can be a constant, variable or an array. If the parameter an array is,
25 //  must be the number of occupied bytes a multiple of 2.
26
27
28 SECTION_CONFIG;
29     configPort(115200, even, 1, 8);        // Configrue the serial interface
30                                            // Baudrate, parity, StopBits, DataBits
31     setBigEndian();                        // One register consists of two bytes big endian
32     decl(cRegisterCount, 1);               // 1-byte variable as register counter
33     decl(cRxCnt, 1);                       // 1-byte variable as byte counter
34     declArray(aRxBuf, 128);                // An array may consist of up to 128 bytes
35     decl(cStatus, 1);                      // 1-byte variable as cStatus
36                                            // '10' : no error
37                                            // '20' : the value of 'cRxCnt' is > 128
38                                            // '30' : an error occured and the execution jum
39                                            // '40' : a fatal error occured and the executio
40 SECTION_INIT;
41     if cStatus==0 then                     // After the section FATAL script jumps in SECTI
```

Trace Monitor   ☐ Valid   ☐ Error

ℹ Messages | Clear All

```
08.08.2019 12:48:16 Info:    Compiling script file ScriptExample_64Registers.pbs started...
08.08.2019 12:48:16 Info:    Build succeeded! Binary file created.
08.08.2019 12:48:16 Info:    Apply communication data....
08.08.2019 12:48:17 Info:    Downloading binary file to device...
08.08.2019 12:48:20 Info:    Debugging started successfully!
08.08.2019 12:48:20 Info:    Device connected successfully to device!
08.08.2019 12:48:20 Info:    Receiving data from device...Select Single      or Continuous tracing      to get the trace data.   (2)
```

COM5 ● Modular Gateway Left, 115200, Even, | Row 1 Col 1 Section
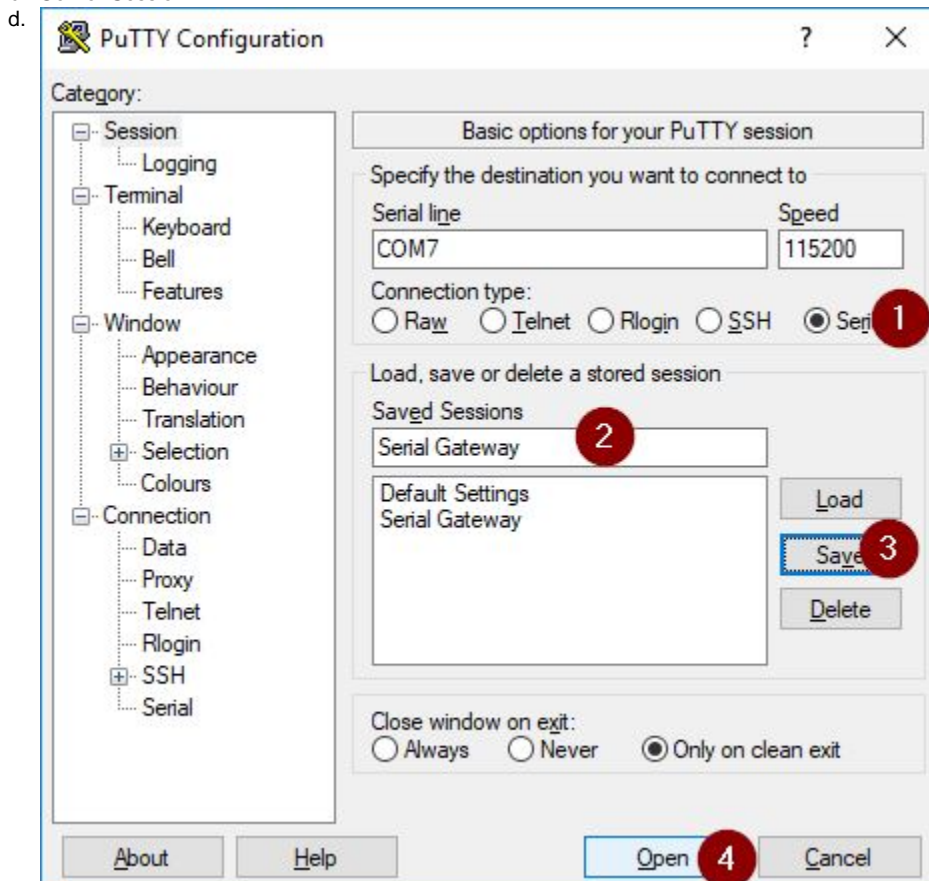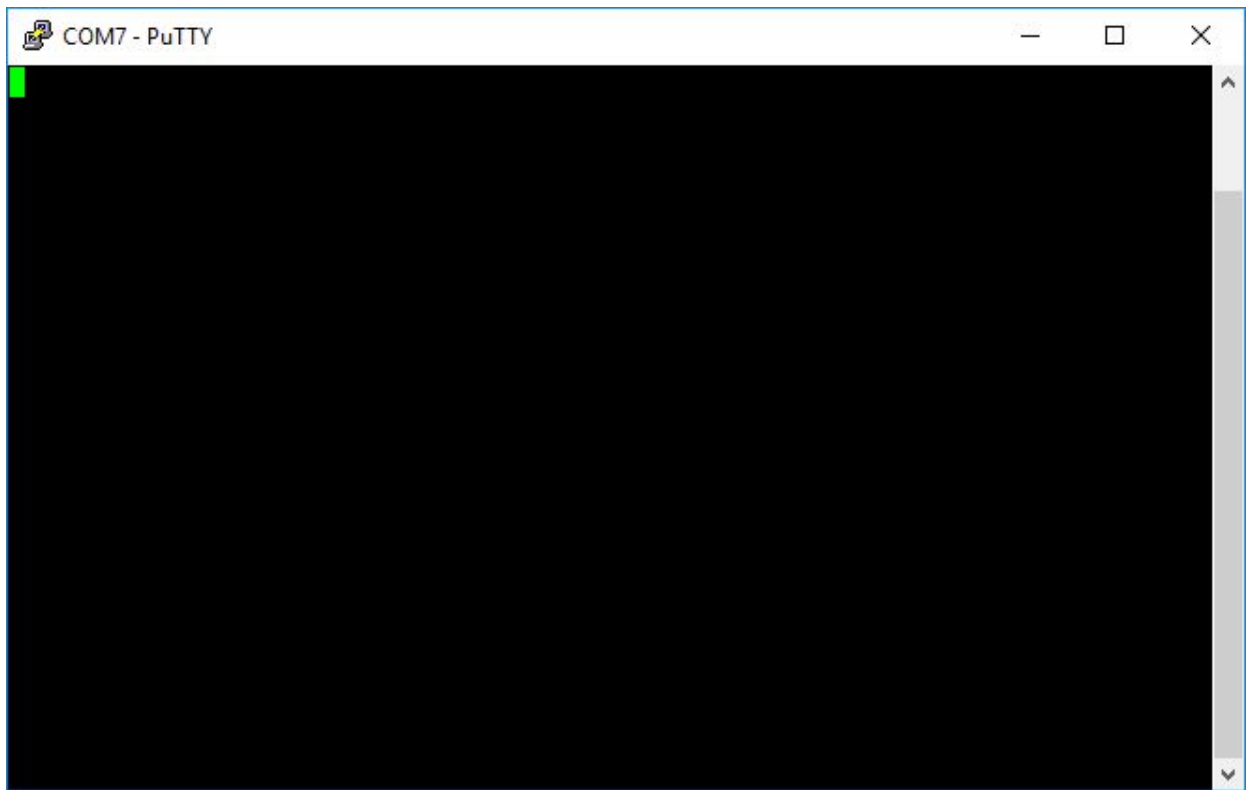
8. Open PuTTy
   a. Enter the serial connection details
   b.
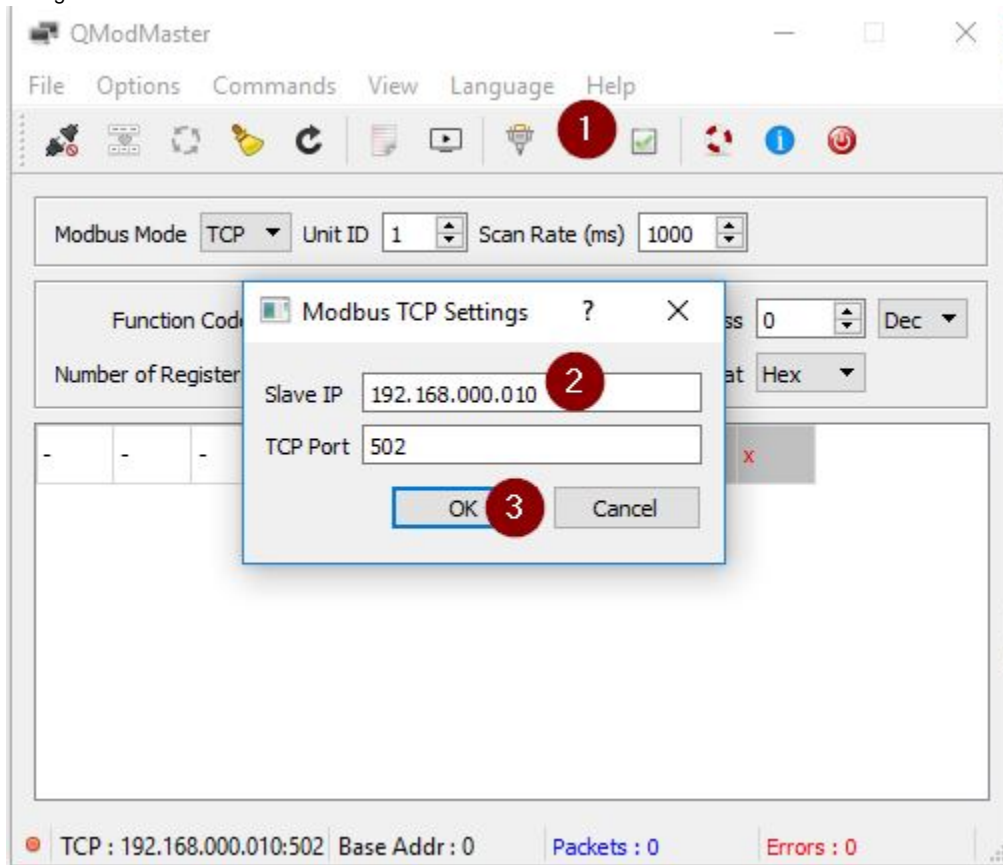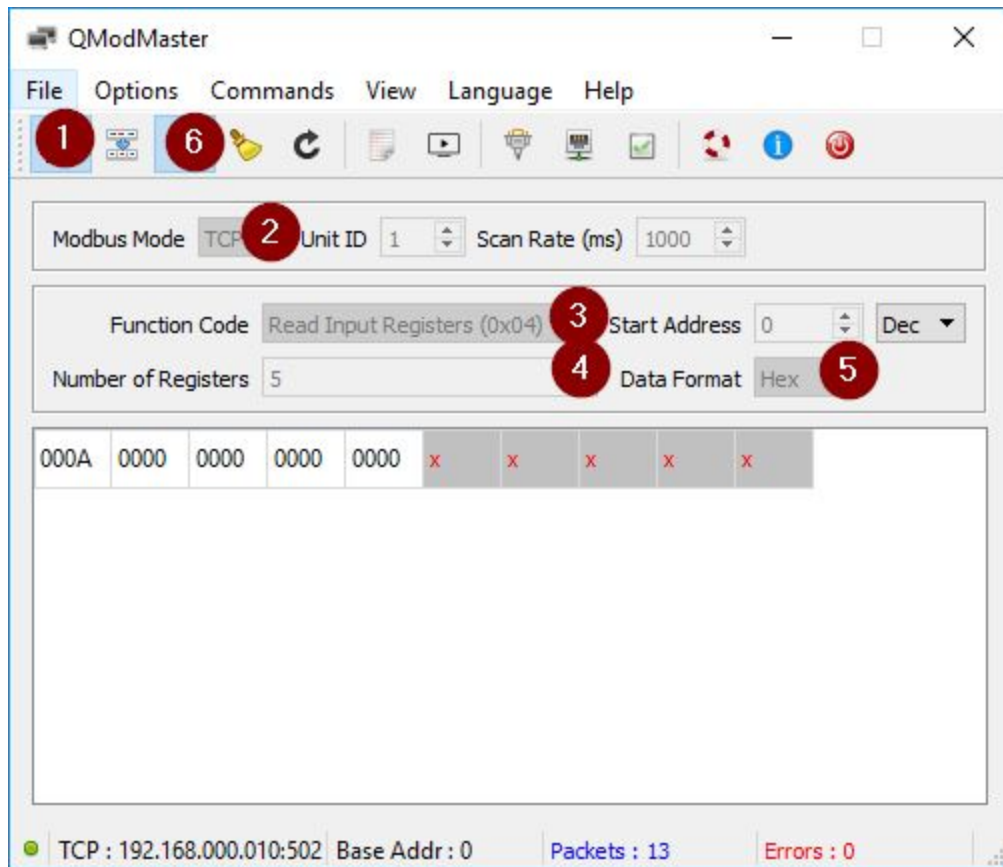
c. Go To "Session"

e. Open The Connection

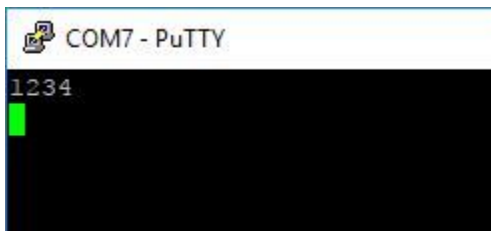9. Open QModmaster
   a. Configure the TCP Connection
   b.

   c. Configure cyclic data exchange

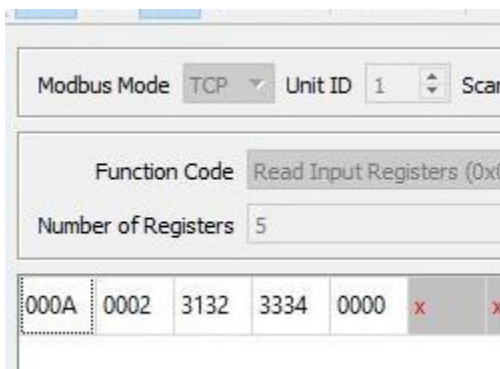d. You should see status "000A" on the first register which equals 10 decimal

Data Transfer

Open PuTTy

1. Enter [Alt] + [Num Pad 2] into the PuTTy Terminal window (not the "2" key next to the "w" key!)
2. You do not see an output but this means we want to transfer 2 registers, i.e. 4 bytes
3. Now enter "1234"
4. You should see the output "1234" after you have typed the last character

Open QModMaster

You should see the same output:

1. "000A" Status 10 decimal - no error
2. "0002" Two registers have been transferred which means 4 bytes
3. "3132" ASCII "12"
4. "3334" ASCII "34"