

Application Note

GenIP 20i

Setting a connection TCP ModBus ModBus RTU Via LAN Gateway

Reference : EG_GenIP20i_1010_AN067_000_UK

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Document History

Revision	Modifications	Author	Date
000	CREATION	Loïc GODINEAU	14/01/10

The main modifications in this document compared to its previous version are easily identifiable on a screen by the blue color of the text.

1 PRESENTATION..... 3

2 SETTING 4

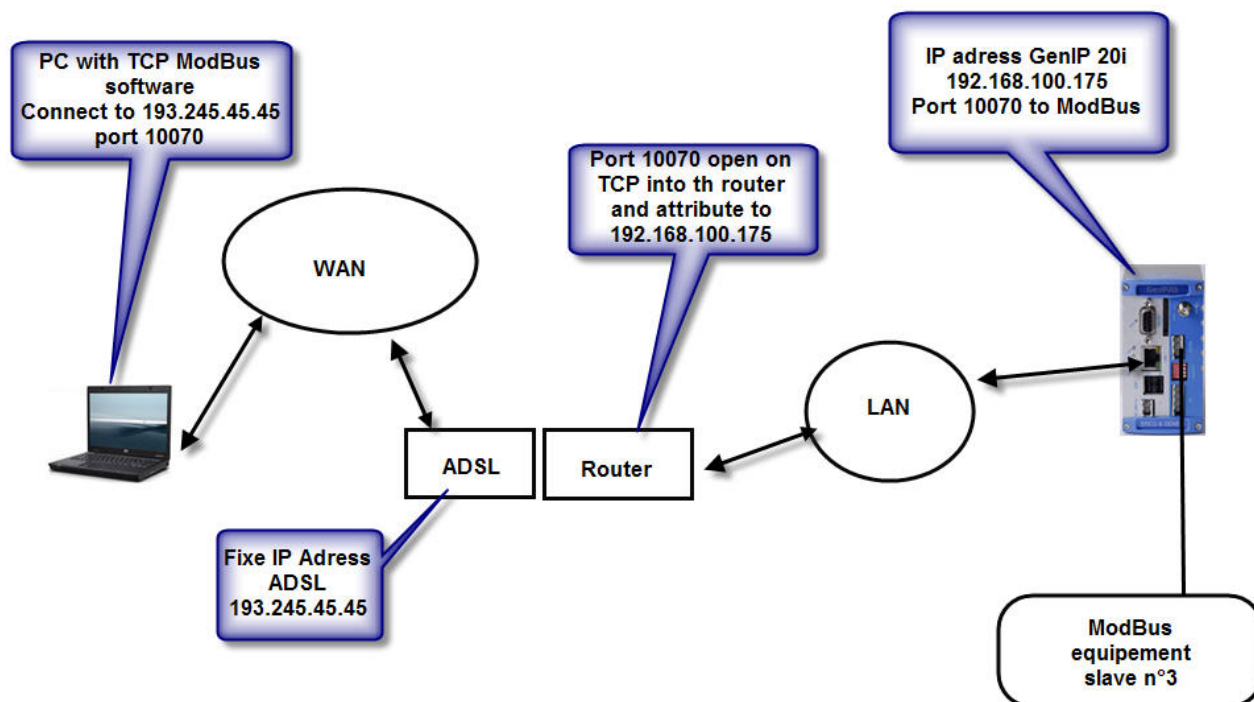
 2.1 SETTING THE CONNECTION VIA THE LAN GATEWAY4

 2.2 PARAMETERS OF THE MODBUS FUNCTION OF THE GENIP 20I..... 5

 2.3 EXAMPLE OF PARAMETERS OF SOFTWARE TCP MODBUS 6

 2.4 EXAMPLE OF TCP MODBUS FRAME ON PC SIDE..... 7

1 Presentation



The aim is to make a ModBus supervision from a PC equipped with TCP ModBus software towards ModBus RTU equipment via the LAN gateway and through the GenIP 20i for the conversion TCP Modbus into Modbus RTU.

For this test we have used:

- An equipment with an embedded ModBus RTU protocol
- A TCP ModBus supervision software

2 Setting

The parameters of the GenIP 20i will be set via its Web interface. For more precision, consult the user guide.

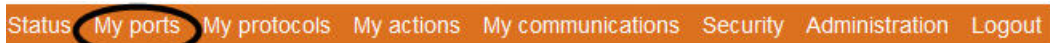
In the Administration menu, you can select your language.

You will find enclosed a configuration file which may be directly loaded in the GenIP 20i.

Only the parameters of your LAN may change.

To load the configuration, select the menu Administration, then Configuration, and then Send another configuration.

2.1 Setting the connection via the LAN gateway



Ethernet (local network)

Network settings

Local domain name	<input type="text"/>	✓
Hostname	<input type="text" value="genip"/>	✓
Addresses configuration	Static configuration ▼	✓
Router IP address	192.168.100.175	✓
Subnet IP mask	<input type="text" value="255.255.255.0"/>	✓
Network gateway IP address	192.168.100.254	✓
Network name server 1	<input type="text"/>	✓
Network name server 2	<input type="text"/>	✓
Network name server 3	<input type="text"/>	✓
Router MAC address	<input type="text" value="2C:34:27:09:00:17"/>	✓
Action to do on event network down	<input style="width: 100%;" type="text"/> ▼	✓
Action to do on event network up	<input style="width: 100%;" type="text"/> ▼	✓
Network event filtering time (s)	<input type="text" value="5"/>	✓

Apply

2.2 Parameters of the ModBus function of the GenIP 20i

Status My ports **My protocols** My actions My communications Security Administration Logout

Modbus

Modbus

Enabled ✓

RS-232

RS-232 port is reserved for Modbus ✓

RS-485

RS-485 port is reserved for Modbus ✓

Baudrate (bits / s) 9600 ✓

Data bits 8 ✓

Stop bits 1 ✓

Parity none ✓

Mode RTU ✓

Ethernet (local network)

TCP port 10070 ✓

Apply

Modbus network

Filter : Device name Apply filter Cancel filter

Device name	Type	Modbus address	Link	To remove **
Esclave_3	Slave	3	RS-485	<input type="checkbox"/>

Apply changes

Add a new Modbus device

Device name ✗

Link Ethernet (local network) ✓

Type Slave ✓

Modbus address 1 ✓

IP address ✗

TCP port ✗

Comment ✓

Apply

2.3 Example of parameters of software TCP ModBus

Read/Write Definition

Slave ID:

Function:

Address:

Quantity:

Scan Rate: ms

Read/Write Enabled

View

Rows: 10 20 50 100

Display:

Hide Alias Columns

Address in Cell

PLC Addresses (Base 1)

Connection Setup

Connection:

Port 1:

Mode: RTU ASCII

Response Timeout: [ms]

Delay Between Polls: [ms]

Remote Server

IP Address: Port: Connect Timeout: [ms]

2.4 Example of TCP ModBus frame on PC side

The screenshot shows a window titled "Communication Traffic" with a list of 10 frames. Each frame is represented by a line of hexadecimal values. The first 6 bytes of each frame are circled in blue, and the last 4 bytes are circled in red. Below the list, the text "Trame TCP ModBus" is displayed.

Direction	Hex Data
Tx	00 1C 00 00 00 06 03 02 00 00 00 04
Rx	00 1C 00 00 00 04 03 02 01 00
Tx	00 1D 00 00 00 06 04 02 00 00 00 04
Rx	00 1D 00 00 00 04 04 02 01 00
Tx	00 1E 00 00 00 06 03 02 00 00 00 04
Rx	00 1E 00 00 00 04 03 02 01 00
Tx	00 1F 00 00 00 06 04 02 00 00 00 04
Rx	00 1F 00 00 00 04 04 02 01 00
Tx	00 20 00 00 00 06 03 02 00 00 00 04
Rx	00 20 00 00 00 04 03 02 01 00

Segment TCP (blue circle) Segment RTU (red circle)

Trame TCP ModBus