

How to Configure Modbus Client mode

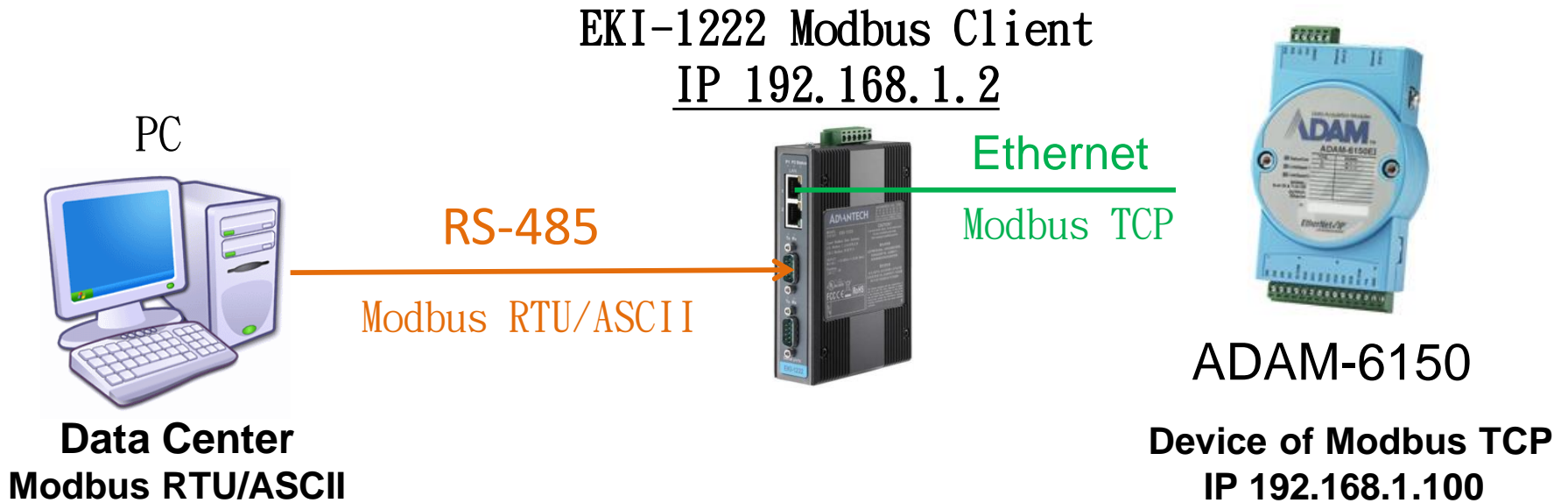
Overview

Modbus protocol is common industrial protocol. When we talk about how to communicate with Modbus serial data to Ethernet, the Modbus gateway is good solution to solve this problem. In Modbus gateway, there are two operation mode.

First, we called Modbus Server mode, is most popular way to use this gateway. SCADA send out Modbus TCP command via gateway to get end terminal Modbus serial device status/data.

Another one we called Modbus Client mode. the polling way is opposite. SCADA send out Modbus RTU/ASCII command via gateway to get end terminal Modbus TCP device status/data.

Topology of Modbus Client Mode



The behavior of Modbus gateway which translates the data format of Modbus from RTU/ASCII to TCP, that we call "Client Mode"

Configure Modbus Client Mode (1/3)

- Use WebGUI to connect to the Modbus GW. In this example it is with IP 192.168.1.2.

1st. To Configure the “Basic” part first, then “Save” it

The screenshot shows the web interface for configuring a Modbus Client. On the left is a sidebar menu with options: Ethernet Configuration, Port Configuration (highlighted with an orange box), Port 1, Port 2, Port 3, Port 4, Monitor, Syslogd, Tools, and Management. The main area has two tabs: 'Basic' (selected) and 'Operation'. Below the tabs is a section titled 'Port 1 configuration' with a gear icon. A red '1st.' is placed to the left of the configuration fields. These fields are enclosed in an orange box and include: Type (RS485), Baud Rate (9600), Parity (None), Data Bits (8), Stop Bits (1), and Flow Control (None). At the bottom right of this section is a 'Save' button, also highlighted with an orange box.

Configure Modbus Client Mode (2/3)

- **Operation** Page Setting

2nd. **Mode:** Modbus Client Mode;
Protocol: “RTU/ASCII” type;
Client Timeout: time interval waiting for end device to response.

3rd. **Peer for Receiving Data:**
Number of TCP device to query. **<Up to 16 >**
Peer IP:
IP of target TCP device.
Port: Target TCP port.
Mapping ID:
Range of Server ID.

4th. **Save:** Save the changes.

Basic Operation

Port 1 configuration

2nd.

Mode: Modbus Client Mode

Protocol: RTU

Client Timeout(ms): 1000

Frame Break(ms): 10

Peer for Receiving Data

3rd.

Peer Number: 2

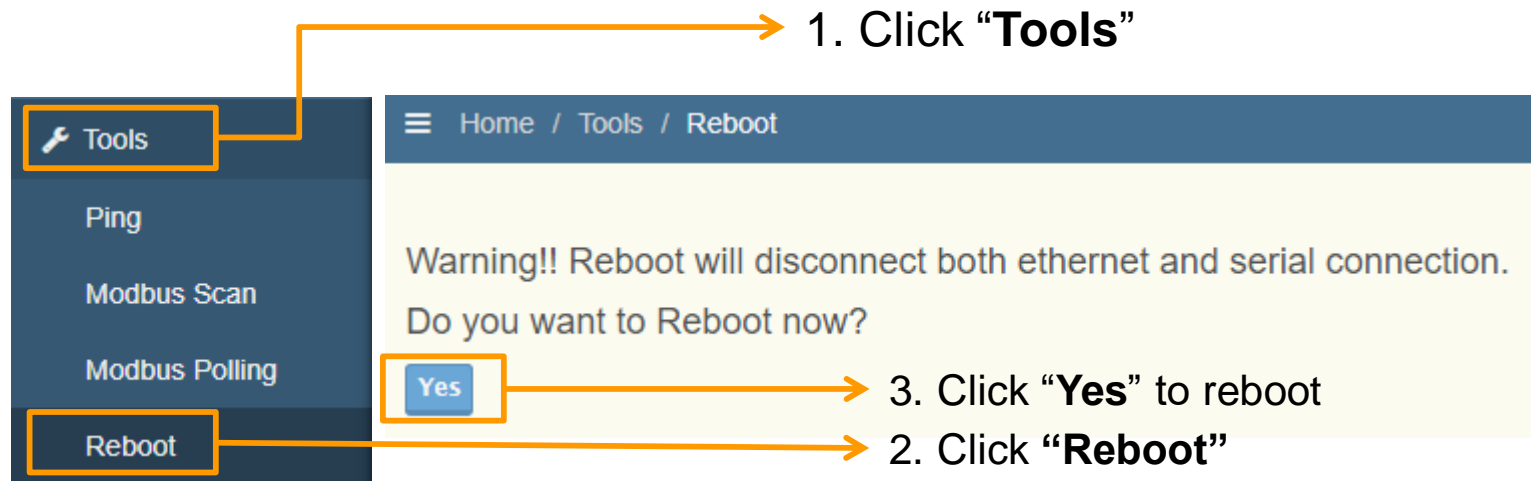
#	IP	Port	Mapped ID		
			From	To	Offset
1	192.168.1.100	5800	1	10	0
2	192.168.1.100	5900	30	40	-10

4th. Save

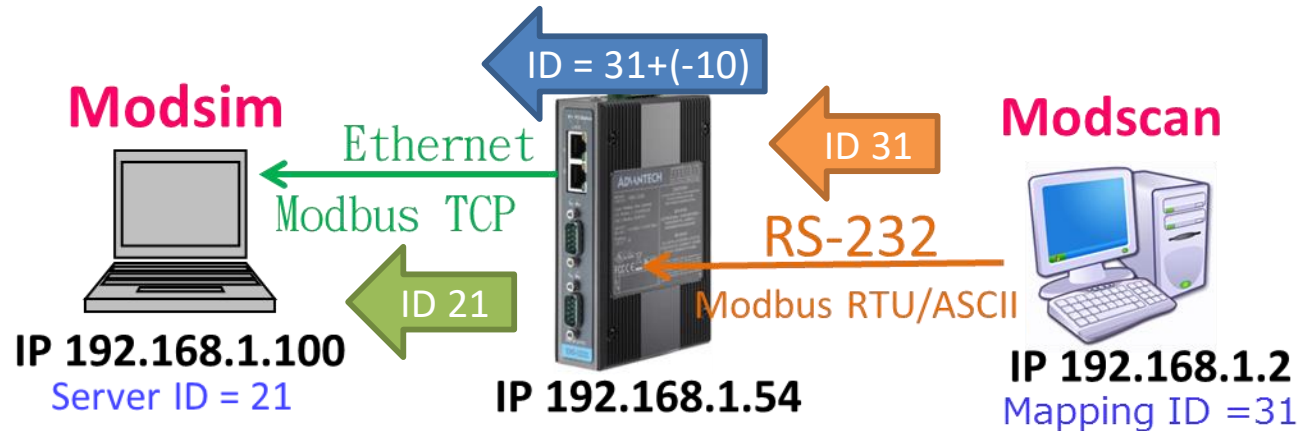
From N to M: The ID number here are the aspect from the Serial Controller side.
Actual ID after translated to Modbus/TCP will be added with the Offset.

Configure Modbus Client Mode (3/3)

3. After modified the configuration, EKI need to reboot and run the new setting



Modbus Client Mode



Client on Serial side thinks it is asking Server ID 31.
Adding the offset -10, the Server ID it is asking after translated to Modbus/TCP will be 21.

Peer Number		2 ▼				
1	IP	192.168.1.100	Port	5800	Mapping ID	From 1 To 10 Offset 0
2	IP	192.168.1.100	Port	5900	Mapping ID	From 30 To 40 Offset -10

ModSim32 - ModSim2

File Connection Display Window Help

ModSim1

Address: 0001

Length: 1

Device Id: 21

MODBUS Point Type

03: HOLDING REGISTER

40001: <01234>

ModScan32 - ModSca2

File Connection Setup View Window Help

ModSca1

Address: 0001

Length: 1

Device Id: 31

MODBUS Point Type

03: HOLDING REGISTER

40001: <01234>

Reference: Modscan/modsim tool

Developer Kits

Modbus
ActiveX

Modbus
Source Code

Additional Info

Free
Trial Demos

User
Manuals

E-Mail
Support

toolkits are available for both modbus master and slave applications.
e-mail wince@win-tech.com for details.

ModScan...

Modbus Master Data Scanner

ModScan is a Windows application which operates as a modbus master. It allows you to access and change data points in a connected slave device using either the RTU or ASCII Transmission mode. ModScan is ideally suited for quick and easy compliance testing of the modbus protocol and its built-in display of serial traffic allows effective troubleshooting of field connections. The CE version of ModScan operates on any PocketPC running Windows CE 3.00, such as the ComPAQ iPAQ, ComPAQ Aero, HP Jornada, and Casio E-115. ModScan32 is an expanded Win32 version of the application for desktop PC's that allows you to open multiple documents to scan different sets of data points simultaneously. ModScan32 supports direct serial, modem and network connections which conform to the modbus/TCP communications standard as defined by Modicon. Access to modbus data through third-party applications such as Visual Basic or ExCel is provided via built-in Win32 OLE Automation and Database support. A simple-to-use scripting feature enables efficient production testing of modbus slave devices by performing repetitive loops of query/response verification.

<u>Download Demo</u>	<u>Additional Information</u>	
modscan32.zip	ModScan32	Order On-Line
modsim32.zip	ModSim32	Order On-Line
PocketPC Demos	ModScanCE ModSimCE	Order On-Line

<http://www.win-tech.com/html/modbus1.htm>



Enabling an Intelligent Planet

Enabling an Intelligent Planet

ADVANTECH