

# How to Configure Modbus Master mode

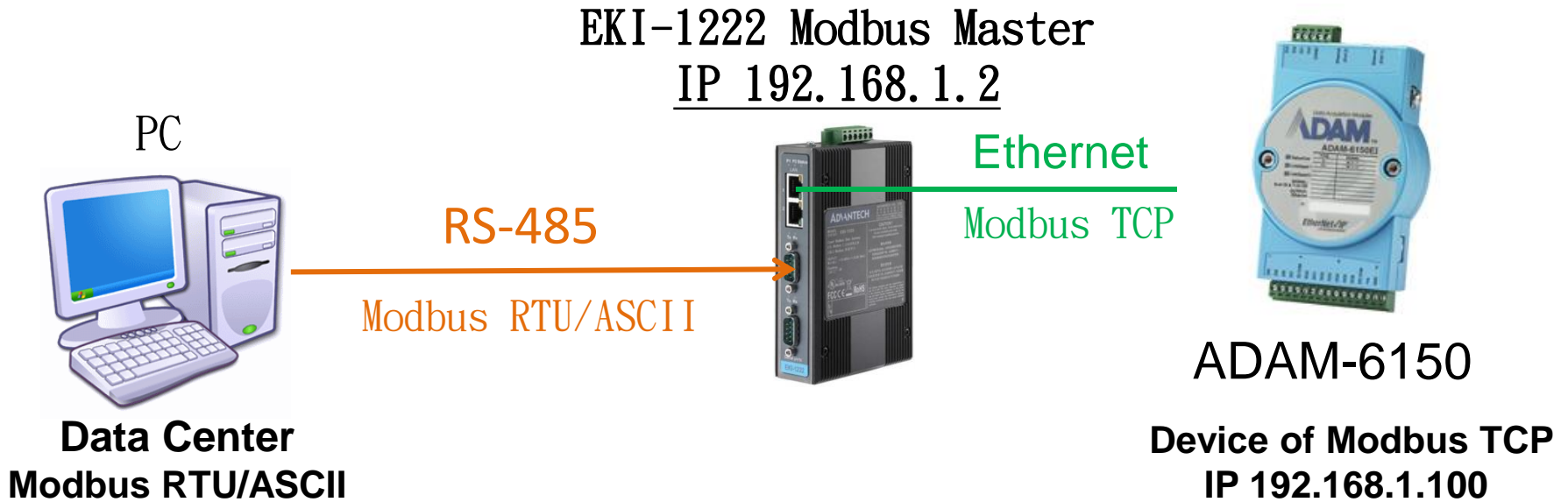
# Overview

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 Slave 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 Master 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 Master Mode



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

# Configure Modbus Master Mode (1/3)

- Use WebGUI connect to modbus GW with IP [192.168.1.2](#)

1<sup>st</sup>. To Configure the “Basic” part first, then “Save” it

The screenshot shows the ADVANTECH iCom WebGUI interface. On the left is a navigation tree with a red '1<sup>st</sup>' annotation next to the 'Port Configuration' folder. The 'Port 1' sub-item is highlighted. The main content area is titled 'Port 1 configuration' and contains a table with three tabs: 'Basic', 'Operation', and 'Advanced'. The 'Basic' tab is active, showing the following configuration parameters:

Basic	Operation	Advanced
Type		RS485
Baud Rate		9600
Parity		None
Data Bits		8
Stop Bits		1
Flow Control		None

Below the table is a 'Save' button, which is highlighted with an orange box.

# Configure Modbus Master Mode (2/3)

## 2 : Operation Page Setting

2<sup>nd</sup>. **Mode:** Modbus Master Mode; **Protocol:** select “RTU/ASCII” type;  
**Master Timeout:** wait for master device time interval;

3<sup>rd</sup>. **Peer for Receiving Data :** Add the query of TCP device **<Up to 16 >**  
**Peer IP:** IP address of TCP device & **Port:** TCP port for sending out data & **Mapping ID:** Range of Node ID

4<sup>th</sup>. **Save:** Save to change

The screenshot displays the 'Port 2 configuration' window with two tabs: 'Basic' and 'Operation'. The 'Operation' tab is active. The settings are as follows:

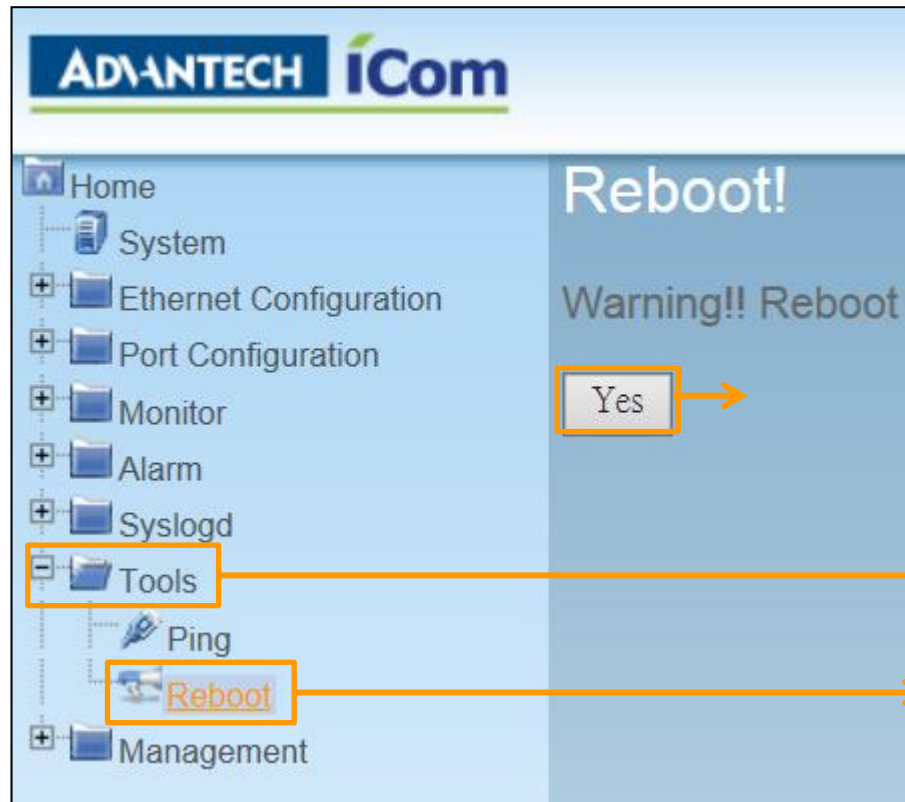
Basic		Operation				
Mode	Modbus Master Mode	Protocol	RTU			
Master Timeout(ms)	5000	Frame Break(ms)	10			
Peer for Receiving Data						
Peer Number	2					
1	IP 192.168.1.100	Port 5800	Mapping ID	From 1	To 10	Offset 0
2	IP 192.168.1.100	Port 5900	Mapping ID	From 30	To 40	Offset -10
Save						

Annotations in the image:

- 2<sup>nd</sup>.** points to the 'Ethernet Configuration' folder in the left sidebar.
- 3<sup>rd</sup>.** points to the 'Peer for Receiving Data' section of the configuration table.
- 4<sup>th</sup>.** points to the 'Save' button at the bottom.

# Configure Modbus Master Mode (3/3)

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

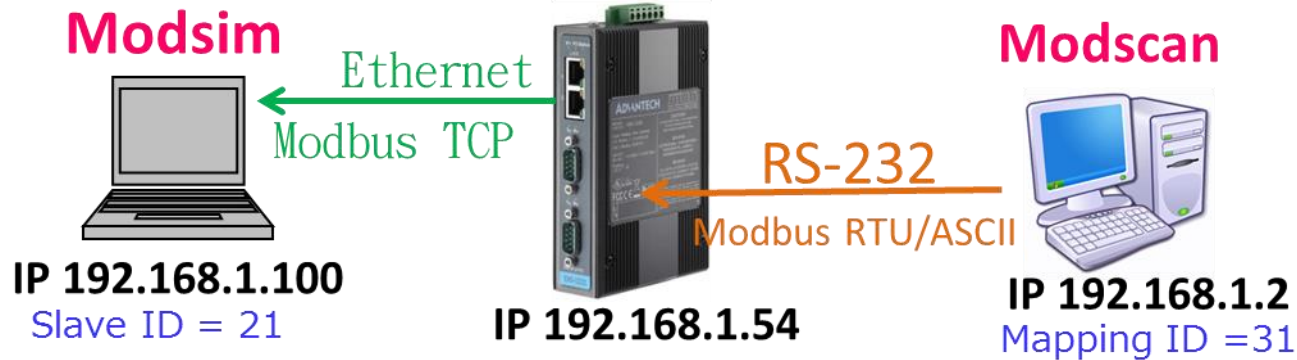


3. Click **"Yes"** to reboot

1. Click **"Tools"**

2. Click **"Reboot"**

# Modbus Master Mode



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

toolkits are available for both modbus master and slave applications.  
e-mail [wince@win-tech.com](mailto:wince@win-tech.com) for details.

## ModScan... Modbus Master Data Scanner

**Developer Kits**

- Modbus ActiveX
- Modbus Source Code

**Additional Info**




- Free Trial Demos
- User Manuals
- E-Mail Support

**Free Trial Demos**

**User Manuals**

**E-Mail Support**

**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>	
<a href="#">modscan32.zip</a>	<a href="#">ModScan32</a>	
<a href="#">modsim32.zip</a>	<a href="#">ModSim32</a>	
<a href="#">PocketPC Demos</a>	<a href="#">ModScanCE</a> <a href="#">ModSimCE</a>	

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





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