www.hongdian.com



# **Application Guide**

# **Modbus Configuration**



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#### **Revision History**

Updates between document versions are cumulative. Therefore, the latest document version contains all updates made to previous versions.

Doc Version	Product	Release Data	Details
V1.0	Hongdian Router	2017.08.23	First Release
V2.0	Hongdian Router	2020.09.03	

## **1** Overview

Modbus is a serial communication protocol, which was published by Modicon company (now Schneider Electric) in 1979 for the use of programmable logic controller (PLC) communication. Modbus has become an industry standard (De facto) for communication protocols in the industrial field, and is now a common connection method between industrial electronic devices.

Here we describe the router Modbus function list and operation of Hongdian Router for you.

## **2** Description

#### 2.1 Topology



## 2.2 Hongdian Setup(Modbus - master)

 Let the PC connect to the router and browse into the router's configuration web page. Enter "Application->DTU/MODBUS" page to configure the Modbus function. choose Connection type "modbus", and modbus workmode choose "modbus\_rtu\_master" or "modbus\_acsii\_master", the server ip set the remote modbus slave ip and port(PC2), the "Serial setting" according to the actual situation, while others can follow the writing in the figure below.

Network	IPv6	Applications	VPN	Forward	Securit	y System	n Stat	us
CMP Check	DDNS	DTU/MODBUS	5 SNMP	SMS	Radius	Tacacs+	VRRP	SIM Selec
DTU Serv	ice		Enable Di	sahle				
510 501				54510				
Connectio	n Type		modbus 🔻					
odbus Mode								
modbus v	vorkmode		modbus_rt	tu_master	•			
Received	Timeout		500		* ms			
Serial Dat	a Timeout		1000		* ms			
odhus Master	Setting							
	occurry	1						
Server1 I	P		220.231.13	4.116	* Nax	length is 64		
Server1 P	ort	[	60720		* 1-65	535		
Server2 I	P				Max le	ngth is 64		
Server2 P	ort				1-6553	35		
Server3 I	P				Max le	ngth is 64		
Server3 P	ort				1-6553	35		
Server4 I	P				Max le	ngth is 64		
Server4 P	ort				1-6553	35		
Server5 I	P .				Max le	ngth is 64		
Server5 P	ort				1-6553	35		
Server6 I					Max le	ngth is 64		
Server6 P	ort				1-6553	55 		
Server7 I					Max le	ngth is 64		
	ort				1-6553	55 nath is 64		
Server7 P	n .				Max le	ngin is 64		
Server7 P Server8 II	р							

Pata	9600 -	
Nale	9000 .	
Parity	none 🔻	
Databits	8 🔻	
Stopbits	1 🔻	

Save Refresh
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#### Application Guide -Hongdian- Modbus Feature

2. Turn to the "Modbus Poll" on the PC1, and click the "connection", set the "Connection Setup" option same as the router "Serial setting", after that click "Connection" to connect to the router.

	Edit Connectio	n <u>S</u> etup F <u>u</u> nction:	is <u>D</u> isplay <u>V</u> iew <u>W</u> indow <u>H</u> elp 5 06 15 16 22 23   101   <b>? №</b>
Tx No	Mbpoll1 = 0: Err = 0: ID = Connection	: 1: F = 03: SR = 1	Connection Setup
C 1 2 3 4 5	Alias	00000 0 0 0 0 0 0 0	© Serial Port © TCP/IP Port 13 ▼ Mode © RTU © ASCII 3600 Baud ▼ Response Timeout 8 Data bits ▼ 3000 [ms] None Parity ▼ Delay Between Polls 1 Stop Bit ▼ 1000 [ms] ▲dvanced
		0	Hemote Server       IP Address     Port       192.168.0.72     60720       3000     [ms]

3. Turn to the "Modbus Slave" on the PC2, set the "Connection Setup" option port same as the router "Server1 port", after that click "Connection" to listen TCP/IP port.

Modbus Slave - Mbslav	v1	
<u>File Edit</u> Connection	<u>S</u> etup <u>D</u> isplay <u>V</u> iew <u>W</u> indow <u>H</u> elp	
D 🗳 🖬 🎒 🛅 🖳	i ? №?	
Mbslav1	Connection Setup	
ID = 1: F = 03 No connection	Connection Serial Port <u>TCP/IP</u> UDP/IP	
Alias 0	Port 13 View Cancel	
1 2	57600 Baud     Flow Control       8 Data bits     DSR     CTS	
3	None Parity  TUP/IP	
	1 Stop Bit - Port 60/20 Ignore Unit ID	
For Help, press F1.	т	CP/IP Connection: 6

## 2.3 Hongdian Setup(Modbus - master)

1. Let the PC connect to the router and browse into the router's configuration web page. Enter "Application->DTU/MODBUS" page to configure the Modbus function. choose Connection type "modbus" ,and modbus workmode choose "modbus\_rtu\_slave" or "modbus\_acsii\_slave",the "Serial setting" according to the actual situation,while others can follow the writing in the figure below.

Network	IPv6	Applications	VPN	Forward	Security	System	Stat	tus
ICMP Check	DDNS	DTU/MODBUS	SNM	SMS	Radius	Tacacs+	VRRP	SIM Select
DTU Se	rvice		Enable	Disable				
Connect	tion Type		modbus	•				
Modbus Mode								
modbus	workmode	[	modbus	_rtu_slave	•			
Receive	d Timeout		500		* ms			
Serial D	ata Timeou	t	1000		* ms			
Slave Setting								
Local Po	ort		60001		* 1-655	35		
Serial Setting								
Rate		[	300	•				
Parity			none 🔻	] .				
Databits	5		8 •					
Stopbits	5	L	1 🔻					

Save Refresh

2. Turn to the "Modbus Slave" on the PC1, and click the "connection", set the "Connection Setup" option same as the router "Serial setting", after that click connection to connect to the router.

as Iviodous Slave - Ivioslav1	
<u>File Edit</u> Connection Setu	p <u>D</u> isplay <u>V</u> iew <u>W</u> indow <u>H</u> elp
0 📽 🖬 🎒 🛅 🗏 🚊	8 K2
Mbslav1	Connection Setup
ID = 1: F = 03 No connection	Connection © Serial Port © TCP/IP © UDP/IP
Alias	Cancel
0	Port 13    Mode
1	300 Baud  Flow Control
2	8 Data bits V DSR CTS
3	RTS Toggle 1 [ms] RTS disable delay
4	None Parity  TCP/IP
-	1 Stop Bit   Port 60720 Ignore Unit ID
For Help, press F1.	TCP/IP Connection: 6(
ror neip, press FI.	TCP/IP Connection: 0

#### Application Guide -Hongdian- Modbus Feature

3. Turn to the "Modbus Poll" on the PC2, and click the "connection", set the "Connection Setup" option IP Address as the router internet "IP Address", "Port" as the router "Local Port", after that click connection to connect to the router.

웹 Modbus Poll - Mbpoll1	
<u>File Edit Connection</u>	Setup Functions Display View Window Help
<u>□ ≌ ⊟ ⊜   ×   □</u>	🖳 🚊   Л. 05 06 15 16 22 23   101   💡 🕅
Mbpoll1	Connection Setup
Tx = 0: Err = 0: ID = 1 No Connection	Connection OK OK
O Alias	Port 13 Mode © RTU ASCII
2	8 Data bits     Image: Strate St
4	None Parity  Delay Between Polls  1 Stop Bit  (ms)
5	Remote Server         Port         Connect Timeout           IP Address         Port         Connect Timeout           10.145.23,16         60001         3000         [ms]
For Help, press F1.	Port 13: 57600-8-N-1





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