UT-6102 Serial Device Server User Manual

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1. UT-6102 Serial Device Server Overview

1.1 Product Introduction

The UT-6102 is a serial communication device with one fiber optic ports and 2 electrical ports, which allows some RS232/422/485 terminal devices to transfer data in both directions via Ethernet.

Product features: supports dynamic IP (DHCP) and static IP, gateway and proxy server, and can transfer data via the Internet. Provides transparent bi-directional data transmission, realize serial to TCP/IP function, users do not need to make any modification to the original system. Internally integrate of ARP, IP, TCP, HTTP, ICMP, SOCKET, UDP, SNMP, MQTT, MODBUS and other protocols.

1.2 Main feature

Hardware Features

- With serial port, it can connect to various serial devices such as terminal, Modem, barcode machine, cash register, ISDN, terminal adapter, serial printer and PC, and can realize remote control function.
- With Reset key to restore the factory default state.
- With one SC head single-mode fiber optic interface (fiber optic 20km, 40km optional)
- With 2 10/100M adaptive Ethernet ports.
- 2 RS485 channels and 1 RS422 channel, (RS485 and RS422 cannot be used at the same time), and 1 RS232 channel
- 32-bit embedded 400MHz CPU, 128M RAM, powerful overall performance.

Software Features

- Support ARP, IP, ICMP, UDP, TCP, HTTP, DHCP, SNMP, MQTT, MODBUS and other protocols
- Terminal server parameter configuration You can connect to the terminal server via web for configuration, making it extremely convenient for you to apply the serial server to your work.
- Software upgrade support Software upgrades are available to facilitate the expansion of product functions, performance improvements and maintenance.
- Support for status monitoring

The device not only provides indicators to analyses the working status of the server, but also provides statistics on the input/output data of the network port and each port, which can be analyzed by the system administrator.

Safety Feature

The UT-6102 serial device server adopts the following kinds of security mechanisms to ensure that users can use this product safely enough.

- The server management password can be set so that only the system administrator can manage the terminal server, thus preventing unauthorized persons from making arbitrary changes to the serial server to ensure the security of the serial server configuration.
- The port can be restricted to the host name to be logged in, so that users of hosts that have not been backed up through the restricted port will not be able to access the server, in order to ensure secure access to the server.
- As the serial server is connected to the network during its operation, in order to ensure its security in network access.
- The hosts or network segments that are allowed to access the server can be restricted, and unauthorized users that are not backed up in the host list and network segment list will not be able to access the server through the network.

1.3 Product Application Mode

1.3.1 Virtual serial port mode



1.3.4 Multi-host mode (up to 6 hosts)



2. UT-6102 Serial Device Server Installation Instruction

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2.1 Software Installation Instruction

2.1. IP address search and change software

- See attachment for details
- 2.2. Virtual serial port software
- See attachment for details

2.2 LED Indicator Description

Define name	Light Color	Function	Status
P1	Red	Channel 1 power indicator	Always on when powered on, off when powered off
P2	Red	Channel 2 power indicator	Always on when powered on, off when powered off
FDX	Green	Correct fiber connection	Always on
RUN	Green	System operation indicator	0.5S on, 0.5S off alternately flashing
ТХ	Green	Serial data receive indicator	Flashing with data, extinguished without data
RX	Green	Serial data receive indicator	Flashing with data, extinguished without data

2.3 Interface Definition

2.3.1 7pin 5.08 terminal serial port interface definition



7Pin 5.08	Channel 1	Channel 2	00422	62222
terminal	RS-485	RS-485	K5422	K5232
1	A(DATA+)	-	A (TxD+)	-
2	B(DATA-)	-	B (TxD-)	-
3	-	A(DATA+)	A(RxD+)	-
4	-	B(DATA-)	B (RxD-)	-
5	-	-	-	ТХ
6	-	-	-	RX
7	-	-	-	GND

2.3.2 Ethernet RJ45 interface definition

100Base-T pin definition are shown in the table below:



Green light for LINK Yellow light for ACT

PIN No.	MDI Signal	MDI-X Signal
1	BI_DA+/TX+	BI_DB+/RX+
2	BI_DA-/TX-	BI_DB-/RX-
3	BI_DB+/RX+	BI_DA+/TX+
4	-	-
5	-	-
6	BI_DB-/RX-	BI_DA-/TX-
7	-	-
8	-	-

Note: "TX±" is sending data±, "RX±" is receiving data±, "-" is unused.

2.3.3 Power supply interface definition:



6pin 5.08 Terminal	Definition	Description
1	V2-	2-channel Power input positive
2	V2+	2-channel Power input negative
3	PG	Access ground
4	PG	Access ground
5	V1-	1-channel Power input positive
6	V1+	1-channel Power input negative

3. UT-6102 Serial Device Server Technical Parameter

3.1 Product technical parameter

Processor	32bit 400MHZ
RAM	128M
Ethernet electrical port	2-channel 10/100M (embedded 1.5KV electromagnetic isolation) adaptive MDI/MDI-X Etherne interface, interface type RJ45
Ethernet optical port	1-channel 100Base-FX port Interface type SC/ ST
Serial port standard	RS-232, RS-485, RS-422 (RS422 and RS485 channel 1 share a serial port)
Serial port	7 x 5.08 terminal
Indicator light	Power indicator P1, P2, Run indicator RUN, Optical indicator FDX, Serial data receive indicato RX, Serial data send indicator TX
Power connector	6Pin 5.08 terminal dual-channel power supply with built-in anti-reverse connection protection to avoid damage to the device by wrong positive and negative connections
Scope of power supply	DC12~48V
Function button	1 factory reset button RESET
Max. power consumption	зw
Housing	Metal housing, protection level: IP30
Operating environment	Storage temperature: -40~85°C Operating temperature: -40~85°C Relative humidity: 5 ~95% (non-condensing)
Dimension L×W×H	150mm x 100mm x 37mm (without mountings)
Weight	350g

3.2 Fiber optic parameter

Indicator parameter		Technical parameter						
		Multi-mode (MM)	Single-mode (SM)					
	Dual fiber transm waveler	nit and receive ngths	1310	1310	1310	1550		
	Transmitting single	Transmitting wavelength nm	1310	1310	1310	1490		
Ор	fiber (T model)	Receiving wavelength nm	1550	1550	1550	1550		
tical c	Ti Receiving single wa fiber (R type) wa	Transmitting wavelength nm	1550	1550	1550	1550		
chara		Receiving wavelength nm	1310	1310	1310	1490		
teris	Transmission c	listance km	2	20	40	80		
tics	Transmitted power dBm		Transmitted power dBm		-15~-2	-15~-2	-5~-0	-5~-0
	Receiving sensit	Receiving sensitivity dBm(≤)		-34	-34	-34		
	Optical satura	ation dBm	-3	-3	-3	-3		
	Optical loss	dBm/km	0.5	0.5	0.3	0.25		

4. UT-6102 Serial Device Server WEB Operating Instruction

4.1 Web administration login page

Serial Device Server × +								9 🛛
(192.168.1.125		🦁 🛛 🤁 <i>द E度 <ctrl+k< i="">></ctrl+k<></i>	☆ 自	÷	^	•	- 13, -	≡
							ZH EY	N
		V@TEK						
	Username :	Please input username						
	Password :	Please input password						
		login Cancel						

System default IP address: 192.168.1.125. Username/Password: admin

4.2 System menu list

Contents	Function
System home page	Setting up device related information
System setup	Set up device network configuration, user management, SNMP settings, mqtt settings
Serial port setup	Set serial port related parameter
Working mode	Setting the device's operating mode
Status search	Check various configurations and status of the device
Device management	Managing equipment operation

4.3 System Home Page

System Home - System Information (displaying serial device server information)

Device number	Serial device server number
Device name	Serial device server name
Company name	User company name
Maintenance staff, contact	Fill in the name of the maintenance staff and their contact details to facilitate internal management by the user
details	company



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System Home	Device infomation	UT-6102			
System Infomation	Device name	Serial Server	Maintenance staff	SZUTEK	
	Company name	UTEK	Contact	400-1144-149	
System setting	Hardware Infomatio	n			
	Product serial number	UT-6102	Hardware version	v1.0.1	
Serial port setting	Software infomation	1			
	App version	v.40.60701_1012_P03	Release date	2022-04-12	
Operation mode	Copyright infomation	n			
	Manufacture	UTEK TECHNOLOGY(SHENZHEN) CO., LTD.			
Status Search	Company Address	Floor 8-10, Building 7, Skyworth Innovation V	/alley, No. 8, Tangtou No.1 Road, Shiyan	Street, Bao an District, Shenzhen	
	Contact number	086-0755-27886063	Enterprise URL	www.szutek.com	
Y Device Management	Time infomation				
	Operation hours	00:04:02	System time	2022-05-19 13:39:31	

4.4 System setup

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4.4.1 System setup II	Paddress setting (set serial device	service networking IF	parameter)
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Server name	Set the serial device server name.
Enable DHCP	Select the check box to get the IP address of the serial device server automatically.
Ethernet IP address	Set the Ethernet IP address of the serial device server.
Ethernet subnet mask	Set the Ethernet subnet mask of the serial device server.
Default gateway	Set the default gateway of the serial device server
Main DNS	Set the main DNS
Backup DNS	Set the backup DNS
	Submit (must be submitted after setting the above options to complete the settings, and the new IP address takes effect immediately
Submit, Cancel	after submission, you can use the newly set IP address to access the device). Cancel (no changes).

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System Home	Server configuration	Serial Device Server		
System setting	Network port configuration	ion		
Ip Address Setting	Enable DHCP :			
Address Filter	Ethernet iP address : Ethernet subnet mask :	255.255.255.0		
User Management	Default gateway :	192.168.1.1		
SNMP Setting	Primary DNS :	192.168.1.2		
MQTT Setting	Backup DNS :	192.168.1.3		
Serial port setting			Submit Cancel	
Operation mode				
Status Search				

4.4.2 System setup --- address filtering (set up serial device service to filter networking addresses)

Enable address filtering	Select this item to enable the address filtering function, a total of 4 groups of Ethernet IP segments can be filtered
Activate NO.x	Select this item to filter the current group IP network segment
Start IP address	Set the start IP address of the filter segment
Termination of IP address	Set the termination IP address of the filtered network segment
Submit, Cancel	Submit (must be submitted after setting the above options to complete the settings), Cancel (no changes)

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System Home	Address Filter		
NT N	Enable :		
System setting	Active NO.1 :		
Ip Address Setting	Starting IP address :	192.168.1.2	
Address Filter	Terminate IP address :	192.168.1.254	
User Management ⋿	Active NO.2 :		
CNIMD Cotting	Starting IP address :	192.168.2.2	
Sivine Setting	Terminate IP address :	192.168.2.254	
MQTT Setting			
	Active NO.3 :		
T Serial port setting	Starting IP address :	192.168.3.2	
Operation mode	Terminate IP address :	192.168.3.254	

4.4.4 System setup ---- User management (set the user management account information for the serial device service)

Modify	Change current user password
Delete	Delete current user information
Add User	Add a new user account name
User name	Set the username of the new user added
Password, Confirm Password	Set the password of the new user added
Permission	Select the newly added user permissions, Users is the user permissions account, by default only one administrators user is allowed for a device.
Submit, Cancel	Submit (must be submitted after setting the above options to complete the settings), Cancel (no changes)

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System Home	User Management			
System setting	Usename admin	Permission adminstor	Operation Modify	
Ip Address Setting				Add User
Address Filter				
User Management	E			
SNMP Setting				
MQTT Setting				

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				admin Logout
System Home	Add User			
W	Username :	(4~6 digits : composed of a-z,A-Z o	or 0-9)	
System setting	Password :	(4~6 digits : composed of a-z,A-Z o	or 0-9)	
	Confirm Password :	(4~6 digits : composed of a-z,A-Z o	or 0-9)	
Ip Address Setting	Permission :	Users •		
Address Filter			Submit Cancel	
User Management				
SNMP Setting				
MQTT Setting				
Serial port setting				

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4.4.5 System setup --- SNMP setup (Set SNMP Trap parameters and options for serial device service)

Enable SNMP	Select the check box to enable Simple Network Management Protocol
Trap receiving address	Set the Trap server address
Community name	Set the community name of the network management protocol
System start-up	Select this option to enable sending system start time signals
Login failure	Select this option to enable sending login failure event signals
IP address change	Select this option to enable sending IP address change event signals
Administrator change password	Select this option to enable sending administrator password change event signals
Submit, Cancel	Submit (must be submitted after setting the above options to complete the settings), Cancel (no changes)

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System Home	SNMP Trap Setting Enable SNMP			
System setting	Trap receiving address	192.168.1.100		
	Community name	public		
Ip Address Setting	System Event Settings			
Address Filter	System start-up			
	Login failure	V		
User Management =	IP address change	v		
SNMP Setting	Administrator change password			
MQTT Setting			to bank	

4.4.6 System setup --- MQTT setup (set MQTT parameters and options for the serial device server)

Enable MQTT	Select this to enable MQTT and the device will create MQTT client tasks
Server address	Set the MQTT server address
Server port	Set the MQTT server port number
MQTT Username	Set the username information for MQTT login
MQTT Password	Set the user password information for MQTT login
Uplink device ID	Set the client ID of the published topic
Uplink theme	Set the posting theme
Downlink device ID	Set the client ID of the subscription topic
Downside theme	Set subscription topics
Submit, Cancel	Submit (must be submitted after setting the above options to complete the settings), Cancel (no changes)

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System Home	MQTT Settings			
	Enable MQTT :			
System setting	Server address :	192.168.1.120		
Ip Address Setting	Server port :	1883		
	MQTT username :	userA		
Address Filter	MQTT password :	123456		
User Management	E Uplink device ID :	24000001		
SNMP Setting	Upside theme :	tips_upload		
MQTT Setting	Downlink device ID :	24000002		
	Downside theme :	tips_download		
T senal port setting			Submit	Cancel
Operation mode			Submit	

4.5 Serial port setup

Serial port setup (serial communication setup)

Alias	Set the serial port alias of the serial port server
Interface type	Interface type (including RS232/485/422)
Baud rate	Serial port baud rate (the value should be the same as the baud rate of the device connected to the serial port)
Data bits	Data bits (default is 8, specific should be consistent with the device connected to the serial port)
Parity bits	Parity bits (including None, Even, Odd, default to None, the specific should be consistent with the device connected to the serial port)
Stop bits	Stop bit (default is 8, specific should be consistent with the device connected to the serial port)
RTS control	Auto, XON/XOFF, CTS/RTS are optional.
Interval time	Data packing interval
Packing length	Data packing length
Delimiter enablement	Select the enable delimiter
Delimiter	Set the encoding of the delimiter for the transmitted data (0-0xff)
Delimiter handling	Select to keep or discard
Submit, Cancel	Submit (after setting the above options, you need to click "Submit" to check whether the parameters are compliant and save the page, if the parameters are set to the rules to save to the device), Cancel (no changes)
Note	Channel 1 supports RS-485/RS422, channel 2 only supports RS-485, if channel 1 is set to RS-422, channel 2 will not be available. Channel 3 only supports RS-232, baud rate up to 115200, need to restart the corresponding serial port to take effect after modification, or restart the device to take effect.

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System Home	Serial Port Setting CH1-RS485/RS422 CH2-RS	485 CH3-RS232	
System setting	Serial Port Parameter		
Serial port setting	Alias : Interface type :	serial1 RS485 ▼	(Range:0-20 characters)
Operation mode	Baud rate : Data bit :	115200 •	
Status Search	Parity check : Stop bit :	none 💌	
X Device Management	RST Control : Data Packaging Setting	Auto 👻	
	Interval time :	0	(0-6000 milliseconds)
	Packing length :	0	(0-1000 byte)
	Delimiter enabling :		

4.6 Working mode (server working mode)

4.6.1 TCP server mode

Working mode	Working mode options
Command protocol	No other compatible protocols
compatibility	
Data protocol conversion	Only transparent transmission is supported
Listening port	Set the command port of the serial port (range 0-65534)
Max. number of	Number of hosts connected to the device (up to 8)
connections	
TCP preservation time	Set the retention time for TCP connections
Submit, Cancel	Submit (after setting the above options, you need to click "Submit" to check whether the parameters are compliant
	and save the page, if the parameters fit the rules set to the device), cancel (no changes)
Apply to all serial ports	Apply all serial ports (you can check this if the settings for each serial port are the same)

				🛕 admin Logout
System Home	Operation mode CH1-RS485/RS422 CH2-RS485 CH3	3-RS232		
System setting	Basic Settings			
Serial port setting	Operating mode : Command protocol compatibility :	TCP Server Mode ▼ none ▼		
Operation mode	Listening port :	10010	(0-65534)	
	Maximum number of connection : TCP preservation time :	8 10	(0-8) (0-120 minutes)	
Status Search	Resting time : 应用选顶	0	(0-120 minutes,0 is to turn off this feature)	
Device Management	设置应用到所有串口: 🗐			
			提交取消	

4.6.2 TCP Client Model

Working mode	Working mode options
Command protocol	
compatibility	
Data protocol conversion	Only transparent transmission is supported
TCP preservation time	Set the retention time for TCP connections
Target IP address	Set the IP address of the connected target host
Target port	Set the target port for the connection
Local port	Set the local port number of the serial port service
Submit, Cancel	Submit (after setting the above options, you need to click "Submit" to check whether the parameters are compliant
	and save the page, if the parameters fit the rules set to the device), Cancel (no changes)
Apply to all serial ports	Apply all serial ports (if the settings are the same for each serial port, you can check the sub-item)

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System Home	Operation mode CH1-RS485/RS422 CH2-RS485 CH	3-RS232					
System setting	Basic Settings						
	Operating mode :	TCP Client Mode 🔹					
Serial port setting	Command protocol compatibility :	none					
	TCP preservation time :	10			(0-120 minutes)		
Operation mode		Target IP address	Target port		Local Port		Reset
	Target IP address1 :	0.0.0.0	0	(0-65534)	0	(0-65534)	
Status Search	Target IP address2 :	0.0.0.0	0	(0-65534)	0	(0-65534)	
	Target IP address3 :	0.0.0.0	0	(0-65534)	0	(0-65534)	
X Device Management	Target IP address4 :	0.0.0.0	0	(0-65534)	0	(0-65534)	
	Target IP address5 :	0.0.0.0	0	(0-65534)	0	(0-65534)	
	Target IP address6 :	0.0.0.0	0	(0-65534)	0	(0-65534)	
	Target IP address7 :	0.0.0.0	0	(0-65534)	0	(0-65534)	
	Taxant ID address 9 .	0000	0	(0-65534)	0	(0-65534)	(m)

4.6.3 UDP Client Model

Working mode	Working mode options	
Command protocol	Na athar compatible protocols	
compatibility		
Data protocol	Only transport transmission is supported	
conversion	Only transparent transmission is supported	
TCP preservation time	Set the retention time for TCP connections	
Target IP address	Set the IP address of the connected target host	
Target port	Set the target port for the connection	
Submit Concel	Submit (after setting the above options, you need to click "Submit" to check whether the parameters are compliant	
Submit, Cancel	and save the page, if the parameters fit the rules set to the device), Cancel (no changes)	
Apply to all serial ports	Apply all serial ports (if the settings are the same for each serial port, you can check the sub-item)	



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System Home	Operation mode CH1-RS485/RS422 CH2-RS485 CH3-R	5232					
System setting	Basic Settings						
	Operating mode :	UDP Client Mode 👻					
Serial port setting	Command protocol compatibility :	none 👻					
	Data protocol conversion :	Target IP address	Target port		本地端口(若为0则由系统自动分配)		田田
Operation mode	目标IP地址1:	192.168.1.100	5001	(0-65534)	6001	(0-65534)	
	目标证明的12	192.168.1.100	5002	(0-65534)	6002	(0-65534)	
Status Search	目标TP###	192 168 1 100	5003	(0-65534)	6003	(0-65584)	
		102.168.1.100	5003	(0-05554)	6004	(0-05554)	
V Device Management	EthloPAcul4	192,106,1,100	5004	(0-65554)	0004	(0-65554)	
	目标IP地址5:	192.168.1.100	5005	(0-65534)	6005	(0-65534)	•
	目标IP地址6:	192.168.1.100	5006	(0-65534)	6006	(0-65534)	
	目标IP地址7:	192.168.1.100	5007	(0-65534)	6007	(0-65534)	
	目标IP地址8:	192.168.1.100	5008	(0-65534)	6008	(0-65534)	
	应用选项 设显应用到所有单口:				提交 取消		

4.6.4 Remote Pair Master Mode

In this mode, the device creates a TCP client service and only supports connecting a TCP server service for communication.

Working mode	Working mode options
Command protocol	No other compatible protocols
compatibility	
Data protocol conversion	Only transparent transmission is supported
TCP preservation time	Set the retention time for TCP connections
Target IP address	Set the IP address of the connected target host
Target port	Set the target port for the connection
Submit, Cancel	Submit (after setting the above options, you need to click "Submit" to check whether the parameters are compliant
	and save the page, if the parameters fit the rules set to the device), Cancel (no changes)
Apply to all serial ports	Apply all serial ports (if the settings are the same for each serial port, you can check the sub-item)

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	~ "

			A domin
System Home	Operation mode CH1-RS485/RS422 CH2-RS485 CH3-R	5232	
System setting	Basic Settings	Damate Dak Marker Mada	
Serial port setting	Command protocol compatibility : Data protocol conversion :	none Transparent transmission	
Operation mode	目标IP地址: 目标读口:	0.0.0.0	(0-65534)
Status Search	TCP保活时间:	10	(0-120分钟)
Device Management	设置应用到所有串口:		
			提交 取消

4.6.5 Remote Pair Slave Mode

In this mode, the device creates a TCP server service and supports only one TCP client service for connection communication.

Working mode	Working mode options
Command protocol	No other compatible protocols

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compatibility	
Data protocol conversion	Only transparent transmission is supported
TCP preservation time	Set the retention time for TCP connections
Local port	Set the port number for the device to create a TCP server
Submit, Cancel	Submit (after setting the above options, you need to click "Submit" to check whether the parameters are compliant
	and save the page, if the parameters fit the rules set to the device), cancel (no changes)
Apply to all serial ports	Apply all serial ports (if the settings are the same for each serial port, you can check the sub-item)

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DWIEN				admin Logout
System Home	Operation mode CH1-RS485/RS422 CH2-RS485 CH3-RS	232		
System setting	Basic Settings			
Serial port setting	Operating mode : Command protocol compatibility : Data protocol conversion :	Remote Pair Slave Mode none Transparent transmission		
Coveration mode	本地端口:	10010	(0-65534)	
	TCP保活时间:	10	(0-120分钟)	
Status Search	应用选项 设置应用到所有率□: □			
Device Management			提交 取消	

4.6.6 MCP&VCOM Mode (TCP/IP Virtual Serial Port Mode)

TCP/IP virtual serial port mode works in the windows system environment, through the driver to map the port on the serial server into a virtual COM port of the local host, so that the original COM port-based operation of the upper software does not need to do any modification as if the application of the local real COM port, the driver can support up to COM1024, making the monitoring of serial devices more flexible and convenient, multiple connection resources can also do connection backup.

Working mode	Working mode options
Command protocol	
compatibility	No other compatible protocols
Data protocol conversion	Only transparent transmission is supported
TCP preservation time	Set the retention time for TCP connections
	Since the MCP and VCOM modes correspond to different virtual serial software, you need to confirm one of them
Mode confirmation	when selecting this mode
Data port	This is the port corresponding to the virtual serial port software driver for data communication (not configurable)
Command next	This is the port that corresponds to the virtual serial port software driver for monitoring the connection status (not
Command port	configurable)
Submit Canaal	Submit (after setting the above options, you need to click "Submit" to check whether the parameters are compliant
Submit, Cancel	and save the page, if the parameters fit the rules set to the device), cancel (no changes)
Apply to all serial ports	Apply all serial ports (if the settings are the same for each serial port, you can check the sub-item)



注:为防止网络端口冲突,设备多个串口间不可同时配置 MCP 模式和 VCOM 模式

应用选顶 设置应用到所有串口: 🔟

4.6.7 Modbus Server Mode

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In this mode, the device creates a TCP server mode with a standard Modbus-RTU frame format for communication, with the Ethernet network as the Modbus master and the serial port side as the Modbus slave.

提交 取消

Working mode	Working mode options
Command protocol compatibility	No other compatible protocols
Data protocol conversion	Only transparent transmission is supported
TCP preservation time	Set the retention time for TCP connections
Local port	Set the local port number when creating a TCP server service
Maximum connections	Set the maximum number of connections
Resting time	Set the standstill time, when there is no data communication within the set time then the Server side will actively disconnect the Client side
Submit, Cancel	Submit (after setting the above options, you need to click "Submit" to check whether the parameters are compliant and save the page, if the parameters fit the rules set to the device), cancel (no changes)
Apply to all serial ports	Apply all serial ports (if the settings are the same for each serial port, you can check the sub-item)

7
× 1
W

ystem Home	Operation mode CH1-RS485/RS422 CH2-RS485 CH3-RS	5232		
ystem setting	Basic Settings			
	Operating mode :	Modbus Server Mode		
erial port setting	Command protocol compatibility :	none 👻		
	Data protocol conversion :	Transparent transmission 👻		
eration mode	本地病口:	10010	(0-65534)	
	最大连接数:	8	(0-8)	
an and an	TCP保活时间:	10	(0-120分钟)	
itus Search	静止时间:	0	(0-120分钟,0为关闭此功能)	
	应用选项			
vice Management	设管应用到所有串口: 🔟			

4.6.8 Modbus Client Mode

In this mode the device creates a TCP client mode, the data protocol is standard Modbus-RTU frame format for communication, the Ethernet network is used as Modbus slave and the serial port side as Modbus master.

Working mode	Working mode options
Command protocol	No other compatible protocols

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compatibility	
Data protocol conversion	Only transparent transmission is supported
TCP preservation time	Set the retention time for TCP connections
Target IP address	Set the IP address of the server
Target port	Set the server port number
Local port	Set the port number to which the device is bound when creating a client locally
Reset	Cancel the current line of configuration information to re-enter
Submit, Cancel	Submit (after setting the above options, you need to click "Submit" to check whether the parameters are compliant
	and save the page, if the parameters fit the rules set to the device), cancel (no changes)
Apply to all serial ports	Apply all serial ports (if the settings are the same for each serial port, you can check the sub-item)

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istem setting	Basic Settings						
	Operating mode :	Modbus Client Mode	•				
rial port setting	Command protocol compatibility :	none 👻					
	Data protocol conversion :	Transparent transmission	•		_		
eration mode	TCP爆活时间:	10			(0-120分钟)		
		ENVIPARIE		(0.05520)	本地網口	(0.65534)	<u>#</u> #
tur Coprela		0.0.0.0	0	(0-65554)	0	(0-05554)	_
itus search	目标IP地址2:	0.0.0.0	0	(0-65534)	0	(0-65534)	
	目标IP地址3:	0.0.0.0	0	(0-65534)	0	(0-65534)	
vice Management	目标IP地址4:	0.0.00	0	(0-65534)	0	(0-65534)	
	目标IP地址5:	0.0.00	0	(0-65534)	0	(0-65534)	
	目标IP地址6:	0.0.0.0	0	(0-65534)	0	(0-65534)	
	目标IP地址7:	0.0.0.0	0	(0-65534)	0	(0-65534)	
	目标IP地址8:	0.0.0.0	0	(0-65534)	0	(0-65534)	

4.6.9 MQTT Mode

Working mode	Working mode options
Command protocol	No other compatible protocole
compatibility	
Data protocol conversion	Only transparent transmission is supported
MQTT enable	Set the current serial port to work on MQTT service enable
Submit Consel	Submit (after setting the above options, you need to click "Submit" to check whether the parameters are
Submit, Cancel	compliant and save the page, if the parameters fit the rules set to the device), cancel (no changes)
Apply to all serial ports	Apply all serial ports (if the settings are the same for each serial port, you can check the sub-item)



V⊕TEK			ZH t Madmin Logo
System Home	Operation mode CH1-RS485/RS422 CH2-RS485 CH3-	15232	
System setting	Basic Settings		
Serial port setting	Operating mode : Command protocol compatibility : Data protocol conversion :	MQTT Mode none Transparent transmission	
Operation mode	MQTT使能:		
Status Search	应用选项 设置应用到所有串口:		
X Device Management			提交 取消

4.7 Status Search

Serial communication	View the serial interface form, baud rate, data bits, stop bits, parity, flow control related parameters, click "Refresh"
parameter	to update to the latest status
Network connection	Check the network connection status of the serial port, click "Refresh" to update to the latest status
status	
Serial communication	Check the communication status of the serial port, click "Refresh" to update to the latest status
status	

V⊕TEK							ZH <mark>à</mark> admin Lo	
System Home	Serial Commu Serial port	nication Parameters	Baud rate	Data bit	Stop bit	Parity check	Flow control	*
System setting	1						Pofresh	
Serial port setting							Kerresi	
Operation mode								

Serial communication parameter

ифтек										ZI	H EN
										🛕 admin Lo	
System Home	Network Conr	nection Status									
Sustam catting	Serial port 1	Interface form	IP1	IP2	IP3	IP4	IP5	IP6	IP7	IP8	
										Refresh	
Serial port setting											
Operation mode											

Network connection status



V⊕TEK					ZH EN admin Logout
System Home	Serial Cor Serial po	mmunication Status rt Tx Count	Rx Count	Tx Total	Rx Total
System setting					Refresh Cleared
Operation mode					

Serial communication status

4.8 Equipment Management

Firmware upgrade	Select the new version of the local package and click Start to upload the file information to upgrade the device
Restore factory	Click "Restore factory settings", the serial server will be restored to factory default settings
Port restart	Select the port that needs to be restarted, submit it and restart the port
System restart	Click " Restart" to restart the serial device server.



Firmware upgrade



Restore factory



Port restart

V⊕TEK	ZH EN
System Home	System Restart
System setting	To confirm that you want to restart the device, press the "Restart" button.
Operation mode	Warning: The resatr operation will discard all unsaved configuration parameter changes.interrupt the serial communication and Ethernet connection.and the uncompleted data may be lost. Restart
Status Search	
Firmware Upgrade Restore Factory	
Port Restart System Restart	

Port restart

5. UT-6102 Serial Device Server Troubleshooting Instruction

5.1 Run serial_ethernet_connector_CH.exe to search for the IP address of the serial port server

1. First check whether the physical connection is normal, the network cable (distinguish between cross wires and direct lines) and power supply is connected, observe the power indicator, LAN light, ACT (connected to the 10M network, this light does not light, 100M light)

2. Host network card is or available, can not communicate with other local other hosts.

3. Close all the tools and software that can block broadcast packets (do not open the firewall that comes with the system)

4. In the browser into the configuration, set the IP when suddenly abnormal disconnection, such as: power failure, after the device can not be searched, through the console port into the configuration to reset the IP.

5.2 Cannot open serial port

- 1. Ensure that the network working state is normal, can ping through the server
- 2. Check whether the virtual serial port has been established successfully
- 3. Check the working status to see if the port is occupied
- 4. Delete the corresponding COM port in the registry and remap it.

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5.3 Cannot transmit or receive data

1. Ensure that the serial port can be opened normally

2. Observe whether the IP and port number under [connected to 0 from 1] of [serial to Ethernet tool] indicate "connected", if not, check the connection between the serial port and the upper network.

3. Observe whether the values of "Sent" and "Received" under [connected to 0 from 1] of [Serial to Ethernet tool] have increased, if not, check the connection between the serial port and the upper network, if If "Sent" has grown and "Received" has not grown, check the connection between the serial port

5.4 Forget the password you set before

1. By pressing and holding the "reset" button for 5 seconds and then release, the device enters the restore factory settings, when the RUN light is restored 1s interval slow flashing, the device restore factory settings is complete, at this time the factory initial account password admin: admin login system, the factory IP address is static: 192.168. 1.125.

5.5 Transmission and receipt of data is garbled

1. Check whether the wiring is correct

2. Check whether the line distance has exceeded the standard distance and the quality of the line (also by lengthening the line transceiver or optical partition)

3. Check whether the set serial port parameters (baud rate, data bits, stop bits, parity bits, etc.) match with the bottom device

4. If you can receive normal data, the problem may be related to the packaging mechanism, you can set the packaging length and packaging waiting time in the "serial port settings".

5.6 Cannot be connected when acting as a TCP server

Confirm that no other PC has a connection to the corresponding port of the serial communication server: Go to [Statistics] of the serial communication server to check [Active TCP information].

Whether [authentication] in [detailed parameters] is [none] or not

If none of the above methods can solve your problem, please contact the manufacturer

6 Virtual Serial Application

First, install our VCOM server on Windows platform. The installation is completed and runs as follows:

emote De	vice Management	COM Mapping (Options About Exit	Language		
Add Devic	e Search IP	Remove Device	Login Settings Assign	IP Logout Import Se	ttings Export Settings	Firmware Update Open in Browser
- ^ -	Туре	MAC	IP	Device Description	Info.	COM Number
	1					

6.1 Remote devices management

1. Device search

The device serial port works in MCP&VCOM->VCOM Mode and connect the device, start the attached software "VCOM" (Figure 1 below), select remote devices Management->Add Device to pop up the search interface of all UT-6102 in the

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network. IP search interface; as shown in Figure 2, select the "Search" button to find all the UT-6102 IP addresses and basic information of the network, as shown in Figure 3; then select "cancel" in Figure 3, to get Figure 4 device information list, click OK to display the search device information in the VCOM interface, as shown in Figure 5, the device has been added.

📵 VCOM	ſ.					- 🗆 X
<u>R</u> emote Dev	rice Management	<u>COM Mapping</u>	ptions <u>A</u> bout <u>E</u> xit			
Add Device	Search IP	Remove Device		Logout Import Sett	ngs Export Settings	Firmware Update Open in Browser
# ^	Туре	MAC	IP	Device Description	Info	COM Number
					1	

Figure 1



Figure 2



🚇 vсом		- ,				1					
Add Devic	evice Management	COM Map	oping C	Login	About Settings	Exit Lan	Logout] [Import Set	tings E	port Settings	Firmware Update Open in Browser
# ^	Туре	MAC		IP			Device	Description	Info.		COM Number
			Add De	vice						X	n
			🔽 Selec	t / Clear /	All						
			#	Т	ype	MAC		IP	No.		
				3	ports	CA:C8:4C:9	6:32:BA	192, 168, 1, 12	5		
<u>.</u>											
			Sea	rch [IPv6			ОК		Cancel	
		10		1							

Figure 3

Remote De	vice Management	COM Mapping	Options Abou	t <mark>Exit</mark> Li	anguage		
Add Devic	e Search IP	Remove Device	Login Set	tings 🛛 Assign IP	Logout [Import Se	ttings Export Settings	Firmware Update Open in Browser
# ^	Туре	MAC	IP		Device Description	Info.	COM Number



VCOM												
Remote Dev	ice Management	COM Mapping	Options	About	Exit	Lang	uage					
Add Device	e Search IP	Remove Device	Login	Settings	Assi	jn IP	Logout	[Import Set	tings	Export Settings	Firmware Update	Open in Browser
# ^	Туре	MAC	IP				Device De	escription	Info.		COM Number	
1	3 ports	CA:C8:4C:96:32:BA	192.16	58.1.125			Server		Latch	ed		
											5 r	



2. Jump to the web page to login

In the software "VCOM", first select the added devices, then select remote devices Management interface, click "Open in Browser", you can enter the web page through IE browser. You can enter the web login interface through IE browser.





Serial Device Server × +		- ÷	83
(192.168.1.125	🦁 勰 C 🔍 百度 <ctrl+k></ctrl+k>	☆自 ♣ 合 ♥ ㅋ ㅂ - =	=
		ZH EN	
	IJ⊕TEK		
	Username : Please input username		
	Password : Please input password		
	login Cancel		

Figure 6

6.2 COM Mapping

6.2.1 Creating a virtual serial port

1. In the software "VCOM", select COM Mapping - Add COM, the "Add Device" window pops up, as shown below, and then click OK. that is to create the corresponding virtual serial port.





🗒 vco	м								
Remote	Device Manageme	ent COM Mapping	Options Abo	ut Exit	Language				
Add	COM	It COM Remove CO	OM Modify C	DM En	able COM Disa	ble COM	mport COM List	Export COM List	
# ^	Туре	IP	Port	COM F	Port Connecti	on Status			
1	3 ports	192, 168, 1, 125	1	COM2	N/A				
2	3 ports	192.168.1.125	2	COM3	N/A				
	3 ports	192.168.1.125	3	COM4	N/A				

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6.2.2 Delete the virtual serial port

In the software "VCOM", first select the virtual serial port to be deleted, and then select the COM Mapping interface, click "Remove COM" to delete the virtual serial port, as shown in the following figure

mote	Device Manage	ment CO	OM Mapping	Options	About	Exit	Language					
Add	COM	put COM	Remove CO	M Mo	odify COM	Enabl	e COM	Disable COM	Import	COM List	Export COM List	
# ^	Туре	IP			Port	COM Por	t Co	nnection Status				
						COMS	N/					
	3 ponts	192.3	68.1.125			COM4	N/	\				
										ė		



6.2.3 Modify the virtual serial port

In the software "VCOM", first select the virtual serial port to be deleted, and then select the COM Mapping interface, click "Modify COM" pop-up interface as shown in Figure 1 below, and then select "COM2" to modify Port1 corresponding to "COM2" to "COM5", as shown in Figure 2.

	Λ		1					
Remote D	evice Managem	ent COM Mapping O	otions About	Exit Languag	je			
Add C	OM Inp	ut COM Remove COM	Modify COM	Enable COM	Disable COM	Import COM List	Export COM List	
# ^	Туре	IP	Port	COM Port 0	Connection Status			
1	3 ports	192.168.1.125	1	COM2 1	I/A			
2	3 ports	192, 168, 1, 125	2	COM3 N	I/A			
3	3 ports	192.168.1.125	3	COM4 N	I/A			
8								
-								
-								
			COM Port Setti	ngs				
			COM number of	of the first selected p	ort COM5	_		
					COM1 (in use)			
-					COM3 (in use)			
					COM4 (in use)			
					COM6			
3					COM7 COM8	+		
					00110			
-								
-								

Figure 10

Add C	:OM Inpu					
		at COM Remove COM	Modify COM	Enable COM	1 Disable COM	1 List Export COM List
#	Туре	IP	Port	COM Port	Connection Status	
1	3 ports	192.168.1.125	1	COM5	N/A	
2	3 ports	192.168.1.125	2	COM3	N/A	
	3 ports	192, 168, 1, 125	3	COM4	N/A	



Figure 11

6.2.4 Enable virtual serial port

In the software "VCOM", first select the virtual serial port that needs to be disabled, and then select COM Mapping interface, click "Enable COM" to enable the corresponding virtual serial port, as shown in the following figure

				м	💮 vco
t Language	Exit Languag	ons About	nt COM Mapping Opt	Device Manageme	Remote
Enable COM Disable COM Import COM List Export COM List	Enable COM	Modify COM	COM Remove COM	COM	Add
OM Port Connection Status	COM Port C	Port	IP	Туре	# ^
DMS N/A	COM5 N COM3 N	2	192.168.1.125 192.168.1.125	3 ports 3 ports	1
DM4 N/A	COM4 N	3	192.168.1.125	3 ports	
Image:					

Figure 12

6.2.5 Disable virtual serial port

In the software "VCOM", first select the virtual serial port that needs to be disabled, and then select COM Mapping interface, click "Disable COM" to disable the corresponding virtual serial port, as shown in the following figure

🚯 vco	M					
Remote	Device Manageme	ent COM Mapping	g Option	is About	Exit Lang	juage
Add	COM	ut COM Remov	e COM	Modify COM	Enable CO	M Disable COM Import COM List Export COM List
# ^	Туре	IP		Port	COM Port	Connection Status
1	3 ports	192.168.1.125		1	COM5	N/A
2	3 ports	192, 168, 1, 125		2	COM3	N/A
3	3 ports	192,168,1,125		3	COM4	NA
-						
-						

Figure 13

6.2.6 Importing virtual serial port list

In the software "VCOM", select COM Mapping interface, click "Import COM List" pop-up interface shown in Figure 1 below, click "Browse", select the saved virtual serial port configuration information as shown in Figure 14, click "OK" to import successfully as shown in Figure 15

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Add	COM	ut COM Remove COM	Modify COM	Enable CO	M Disable COM Import COM List	Export COM List		
^	Туре	IP	Port	COM Port	Connection Status			
	3 ports	192.168.1.125	1	COM5	N/A			
	3 ports	192.168.1.125	2	COM3	N/A			
	3 ports	192.168.1.125	3	COM4	N/A			
		Import Co	OM List		×			



🕕 усом							
Remote Der	vice Management	COM Mapping Optic	ons About	Exit Lang	uage		
Add CO	OM Input C	OM Remove COM	Modify COM] Enable CON	1 Disable COM Import COM	M List Export COM List	
# ^	Туре	IP	Port	COM Port	Connection Status		
1	3 ports	192, 168, 1, 125	1	COM5	N/A		
2	3 ports	192.168.1.125	2	COM3	N/A		
3	3 ports	192.168.1.125	3	COM4	N/A		



6.2.7 Exporting virtual serial port list

Software "VCOM", select COM Mapping interface, click "Export COM List" pop-up interface shown in Figure 16 below, click "Browse", select the virtual serial port configuration information path to be saved, click "OK" to export successfully as shown in Figure 17

🔁 vco	М				
Remote	Device Manageme	ent COM Mapping Options	About	Exit Lang	juage
Add	COM	It COM	lodify COM	Enable CO	M Disable COM Import COM List Export COM List
# ^	Туре	IP	Port	COM Port	Connection Status
1	3 ports	192, 168, 1, 125	1	COM5	N/A
2	3 ports	192.168.1.125	2	COM3	N/A
	3 ports	192.168.1.125	3	COM4	N/A
			_		
		Export CO	M List		
		File Name:	C:\Users\11	494\Desktop\610	2.ini
			Browse		OK Cancel
			-	1	

Figure 16



VCO Remote	M Device Managem	ent COM Mapping Option	s About	Exit Lan	guage	
Add	COM	ut COM Remove COM	Modify COM	Enable CC	Disable COM Import COM List Export COM List	
# ^	Туре	IP	Port	COM Port	Connection Status	_
1	3 ports	192.168.1.125	1	COM5	N/A	
2	3 ports	192.168.1.125	2	COM3	N/A	
3	3 ports	192.168.1.125	3	COM4	N/A	
			Informa	tion		
			0	Export COM p	port settings ok.	
					ОК	

Figure 17

6.3 Options

Select whether to open the VCOM software directly or minimize it on the taskbar when opening it; by default, the software is minimized on the taskbar and configured as shown below

	м				
Remote D	Device Management	COM Mapping Options	About	Exit Langu	Jage
Add (COM Input C	OM Remove C	art Minimi:	zed	Disable COM Import COM List Export COM List
# ^	Туре	IP	Port	COM Port	Connection Status
1	3 ports	192.168.1.125	1	COM5	N/A
2	3 ports	192.168.1.125	2	COM3	N/A
3	3 ports	192.168.1.125	3	COM4	N/A
<u></u>					

6.4 About

Click the "About" button to view the software version information as shown below

	M		a baut	Evit		
Add	COM Inp	ut COM Remove COM	Modify COM	Exit Lang	M Disable COM Import COM List Export COM List	
# ^	Туре	IP	Port	COM Port	Connection Status	
1	3 ports	192.168.1.125	1	COM5	N/A	
2	3 ports	192.168.1.125	2	COM3	N/A	
3	3 ports	192.168.1.125	3	COM4	N/A	
			About VC	ом		
				Serial device	server series	
			AN			
				Ver:3.9.1		
				-		

6.5 Exit

Click the "Exit" button to exit the software