Model:UT-6102 Series

(Product Name： 100M optical port to electrical ports and RS232/485/422 Serial Device Server)

Datasheet

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1. Overview

UT-6102 serial device server provides 100M optical port to electrical port and RS-232/485/422 port, which can convert serial port data to TCP/IP and optical fiber interface, realizing bi-directional transparent transmission of data between serial port and TCP/IP network interface. So that serial devices can immediately have TCP/IP network interface function to connect to the network for data communication, greatly expanding the communication distance of serial devices.

2. Main Functions & Features

- CPU: 400MHz
- Network Port: RJ45 interface 10/100M (built-in 1500V electromagnetic isolation, surge 10/700us common mode:2000V/differential mode 1000V, auto- MDI/MDI-X)
- Network Protocol: ARP, IP, ICMP, UDP, TCP, HTTP, DHCP, SNMP, MQTT, MODBUS.
- Operating Mode:VCOM, MCP, TCP SERVER, TCP CLIENT, UDP, Remote Pair mode, Modbus TCP SERVER, Modbus TCP CLIENT, MQTT
- Configuration Method: Web browser, VCOM,Telnet
- Serial Configuration: Serial configuration: RS485, 2 channels, RS422, 1 channel (RS485 and RS422 can not be used at the same time) RS232, 1 channel
- Serial port protection: 10/700us differential mode 1KV, common mode 2KV
- Baud rate: 300-921600bps (RS485422), 300-115200RS232
- Parity bits: None, Odd, Even, Mark, Space
- Data bits:7,8
- Stop bit:1, 1.5, 2
- Flow control: RTS/CTS, XON/XOFF
- Supply voltage: dual 12-48VDC1.2/50us differential mode 1KV common mode 2KV
- Electrostatic protection: contact 6KV, air 8KV

3. Technical Parameters

Processor	32bit 400MHZ
Storage	128M

Ethernet electrical port	2-port 10/100M (built-in 1.5KV electromagnetic isolation), auto- MDI/MDI-X Ethernet interface, interface mode RJ45
Ethernet Optical Port	1*100Base-FX port, interface mode SC/ST
Serial Standard	RS-232, RS-485, RS-422(RS422 and RS485 channel 1 share a common serial port)
Serial Connector	7*5.08 terminal
Indicator light	Power indicator P1, P2, operation indicator RUN, fiber indicator FDX, serial data receiving indicator RX, serial data sending indicator TX
Power connector	6PIN 5.08 terminal dual-channel power supply, built-in protection against reverse connection, to avoid positive and negative connection error damage equipment
Power range	DC12~48V
Function buttons	1 factory reset button RESET
Max. power consumption	3W
Housing	Metal housing, protection level IP30
Operating environment	Storage temperature: -40~85°C Operating temperature: -40~85°C Relative humidity: 5 ~95% (Non-condensation)
Dimensions L×W×H	161mm×91mm×37mm（Without mounting parts）
Net. Weight	350g

4. Fiber optic parameter

Indicator parameter			Technical Parameter			
			Multi-mode	Single-mode		
Optical Characteristics	Dual fiber transmitting and receiving wavelengths		1310	1310	1310	1550
	Transmit Single fiber (T type)	Transmitting wavelength nm	1310	1310	1310	1490
		Receiving wavelength nm	1550	1550	1550	1550
	Receive single fiber (R type)	Transmitting wavelength nm	1550	1550	1550	1550
		Receiving wavelength nm	1310	1310	1310	1490
	Transmission distance km		2	20	40	80
	Transmitting power dBm		-15~-2	-15~-2	-5~0	-5~0
	Reception sensitivity dBm(≤)		-32	-34	-34	-34
	Light saturation dBm		-3	-3	-3	-3
	Light loss dBm/Km		0.5	0.5	0.3	0.25

5. Indicator Definition

Definition Name	Light Color	Function	Status
P1	Red	First channel power indicator	Power-on constant, power-off extinguished
P2	Red	Second channel power indicator	Power-on constant, power-off extinguished
FDX	Green	Correct fiber connection	Constant
RUN	Green	System operation indicator	0.5S light, 0.5S off alternating flash
TX	Green	Serial data reception indicator	Blinking with data, off without data
RX	Green	Serial data reception indicator	Blinking with data, off without data

6. Product Certification

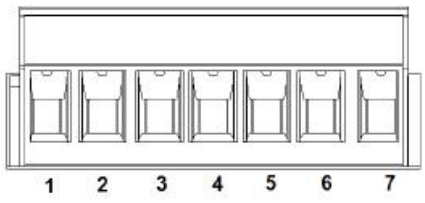
EMC	55032/24
EMI	Class A
EMS	IEC61000-4-2 ESD: Contact 6kV,Air 8kV IEC61000-4-3 RS: 80MHz-1GHz 3V/m IEC61000-4-4 EFT: Power 2kV,Signal 1kV IEC61000-4-5 Surge: Power differential mode 1KV, common mode 2KV（8/20） Ethernet ports differential mode 1KV, common mode 2KV（10/700） RS-232/485/422 differential mode 1KV, common mode 2KV IEC61000-4-6 CS: 150KHz-80MHz 3V/m

7. Software Parameters

Operating System	Based on Linux
Protocol support	ARP,IP,ICMP,UDP,TCP,HTTP,DHCP,SNMP,MQTT,MODBUS
Configuration method	Web browser, VCOM Utility(Virtual COM Only Windows)
Operating Mode	VCOM,MCP,TCP SERVER,TCP CLIENT,UDP,Remote Pair mode,Modbus TCP SERVER,Modbus TCP CLIENT, MQTT
Baud rate	RS-422/485: 300-921,600bps RS-232: 300-115,200bps
Data Bits	5,6,7,8
Stop Bits	1,2
Check Bits	None,Odd,Even
Flow Control	RTS/CTS,DTR/DSR,XON/XOFF（Only RS-232）

8. Interface definitions

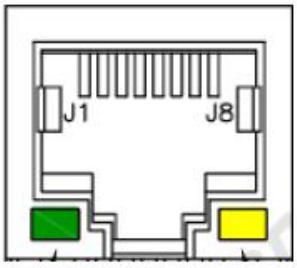
- 7 pin 5.08 Terminal serial connection definition：



7 pin 5.08 terminal	RS-485 Channel 1	RS-485 Channel 1	RS-422	RS-232
1	A(DATA+)	-	A(TxD+)	-
2	B(DATA-)	-	B(TxD-)	-
3	-	A(DATA+)	A(RxD+)	-
4	-	B(DATA-)	B(RxD-)	-
5	-	-	-	TX
6	-	-	-	RX
7	-	-	-	GD

- Ethernet RJ45 interface definition

  100Base-T pin definition are shown in the following table

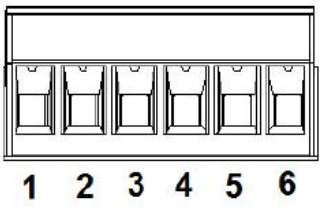


Green light is Link,
yellow light is ACT

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	-	-
7	-	-

Note: "TX±" is transmitting data±, "RX±" is receiving data±, "-" is not used.

- Power interface definition



6 pin 5.08 terminal	Definition	Description
1	V2-	2-channel, power input positive
2	V2+	2-channel, power input negative
3	PG	GND
4	PG	GND
5	V1-	1-channel, power input positive
6	V1+	1-channel, power input negative

7. Appearance

8. Structure dimensions

Physical dimensions: Length 150±0.5mm, Width 100±0.5mm, Height 30mm±0.5mm