

# ALLNET Media converter 2x RS232/RS422/RS485 to 10/100BASE-TX "ALL-SDS102v2"

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#### Highlights:

- 2x ports RS232/422/485 changeable by DIP switch
- Low Voltage range of 5~36v DC
- Data rates range of 600~230.4kbps

#### Introduction of 2 ports RS232/485/422 Serial Device Server

ALL-SDS102 is a dual serial device server, which can realize transparent transmission between TCP/UDP data packet and RS232/RS485/RS422 interface. The device has unique functions such as network printing, Modbus multi-host polling and watchdog mechanism. ALL-SDS102 is based on ARM processor and internally integrated with TCP/IP protocol. The user can easily realize the networking of embedded devices.

#### Features of the 2 Ports RS232/485/422 Serial Device Server

- Cortex-M4 kernel, industrial working temperature range and TCPIP protocol stack.
- Auto-MDI/MDIX,RJ45 port with 10/100Mbps
- TCP Server, TCP Client, UDP Client, UDP Server and HTTPD Client working mode
- Supports network printing
- Supports Modbus multi-host polling
- Two ports can work independently at the same time
- Supports Modbus RTU to Modbus TCP

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- Can distinguish which serial port is connected to the device by port number.
- Supports virtual serial port and provides the corresponding software USR-VCOM
- Serial baud rate from 600bps to 230.4K bps;Check bit of None,Odd,Even,Mark and Space.
- DNS and DHCP supported
- Provide PC TCP/IP socket programming example such as VB,C++,Delphi,Android and IOS.
- Built-in web page; can also customize the web page for users
- · Reload button, a key to restore default settings
- RJ45 with link/data indicator light, built-in isolation transformer, and 2 KV electromagnetic isolation
- IEEE purchased global unique MAC address (starting with D8-B0-4C); user can define the MAC address.
- · Supports firmware upgrades over the network
- · Supports keepalive, quickly detects dead links
- Support account and password, can be used to login and network settings page
- Supports one channel websocket, realizes bidirectional transparent transmission between web page and serial 0
- Two serial ports;each serial can work as rs232,rs485 or rs422;DB9 socket;provide RS485/RS422 converter
- Two channel serial communication display: TX/RX
- Support DC adapter
- Supports UDP broadcast function

#### **Simple Transparent transmission**

Transparent transmission means that whatever is transmitted, our device plays the role of a channel and sends data to the destination unchanged. On-site monitoring devices send data to Serial Device Servers transparent data transmission terminal, the terminal CUP receives data via serial port and packet data.

#### **Different parameterization methods**

#### **Software Settings**

Download settings software, search related Serial Device Servers in the LAN through the serial port server IP, name, MAC address, or the version number. Then set the parameters you need, otherwise keep the default. **Web-page Settings** 

- 1. Open your browser and inter the default IP address of the Serial Device Servers.
- 2. Open the login page of Serial Server, Enter the user name and password (default admin).
- 3. After setting parameter, Click Save and Restart, then setting will take effect.

#### Serial AT commands Settings

User can set parameter by module itself without going through another computer to configure. This setting method is used in the following situation: user have to configure IP address and destination IP address on site. AT command can meet the demand. After MCU connects serial server module by TTL (UART), MCU can configure setting by AT command.

#### Application Field of 2 ports RS232/485/422 Serial Device Servers

- Industrial data transmission, industrial automation
- · security and protection monitoring, public security
- Smart home, power control, environmental monitoring, intelligent agriculture
- Door check on work attendance system, POS system, rice selling system

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• Building automation system, power monitoring, self-service banking system, telecom machine room monitoring

#### **Work Modes**

#### **TCP Server**

Serial to Ethernet servers ALL-SDS102x listens on the setting port and waits for a TCP client connection. The data which the serial ports sent out transparently transmit to all connected TCP clients via ALL-SDS102/102v2

#### **Technical Details:**

System Information	
Processor	Cortex-M4
Basic Frequency	120MHz
Flash	512K byte
Ethernet	
Port Number	1
Interface Standard	RJ45
Rate	10/100 Mbps MDI/MDIX, auto switch between cross and direct connection
Protection	2KV electromagnetism isolation, shell insulation blocking
Network Protocol	IP, TCP, UDP, DHCP, DNS, HTTP, ARP, ICMP, Websocket, HTTPD Client
Receive Buffer	Max 16k bytes buffer
Serial	
Port Number	2 (RS232/485/422*2), 2 serial ports can simultaneously work at the different working modes.
Interface Standard	RS-232: TX/RX/RTS/CTS RS-485: A+/B- RS422: TX+/TX-/RX+/RX-
Data Bits	5, 6, 7, 8
Stop Bit	1, 2
Check Bit	None, Even, Odd, Space, Mark
Baud Rate	600 bps ~ 230K bps
Flow Control	RTS/CTS/Xon/Xoff
Buffer	Send and receive 2k bytes respectively
Protection	ESD protection, anti-surge
SocketA	

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Transparent Transmission Mode	TCP Server/TCP Client/UDP Server/UDP Client
Supported Function	Networking printing, Modbus Gateway, USR-Cloud, self- defined registration package, self-defined network and serial heartbeat package
SocketB	TCP Client/UDP Client
Software	
Virtual Serial(USR-VCOM)	Windows 2000 or higher (32 bit/64 bit)
Configuration	Built-in webpage, computer set-up software, serial command
Basic Parameter	
Size	150 x 79 x 30 mm
Operating Temp.	-40 ~ 85°C
Storage Temp.	-45 ~ 105°C, 5 ~ 95% RH
Input Voltage	DC 5 ~ 36V
Working Current	95mA (aver) @ 5V 45mA (aver) @ 12V
Power	<1W
More	
Certificate	CE, FCC, ROHS, KCC
Accessory	12V power supply, serial line, cable, converter

## **Attributes**

Attribute	Value
Features:	Seriel
Weight:	1 Kg
Warranty:	24.00 Months

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