



**Compact Industrial RS-485 Device Server
(RS-485 to Ethernet / Modbus RTU to Modbus TCP Converter)**

Part Number: DVS-485-2

CE FCC



<https://www.CommFront.com>

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■ **INTRODUCTION**

The DVS-485-2 is a compact, rugged, industrial-grade RS-485 device server that supports one channel bi-directional RS-485 to Ethernet conversion which can be used to transmit serial data over Ethernet and TCP/IP network. The applications of the DVS-485-2 include acting as an RS-485 to Ethernet converter or a Modbus RTU to Modbus TCP protocol converter; controlling RS-485 serial devices from remote Modbus TCP software or Modbus RTU master via Ethernet network; making a wide variety of M2M communication applications possible by enabling client access independent of any operating system or proprietary protocol; extending RS-485 serial communication distance over Ethernet network; and converting conventional serial data network into TCP/IP network. The DVS-485-2 was designed for harsh industrial environments and withstands a wide temperature range of -40°F to 185°F (-40°C to 85°C) and is equipped with 15kV ESD and 600W surge protection. The unit supports TCP and UDP for both server and client modes, and it features static IP and DHCP for minimizing configuration errors caused by manual entries. The DVS-485-2 features auto-negotiation for 10 or 100M data rates, and it also supports MDI and MDI-X (auto-crossover); no DIP switch or jumper settings are required.

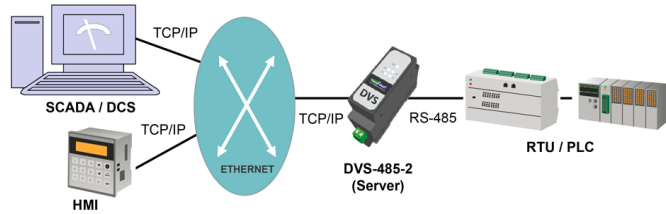
■ **FEATURES**

- Compact, rugged, industrial-grade RS-485 device server
- RS-485 to Ethernet converter or Modbus RTU to Modbus TCP protocol converter
- Designed for harsh industrial environments (DIN-Rail mounting)
- Easy configuration via AT commands (RS-485) or built-in web server
- Supports static IP and DHCP; supports TCP, UDP and Httpd Client modes
- Supports serial baud rates from 600 bps to 460 Kbps; RFC2217 compliant
- Auto-Negotiation for 10/100M data rates; MDI and MDI-X auto-crossover
- 15kV ESD and 600W surge protection
- Operating temperature: -40°F to 185°F (-40°C to 85°C)
- Surface Mount Technology manufactured to RoHS and ISO-9001 standards
- Compliance: CE, FCC
- 5-Year manufacturer's warranty

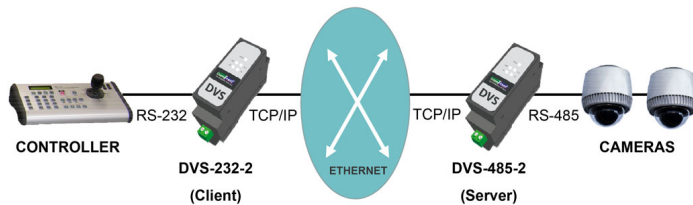
■ **SPECIFICATIONS**

Compatibility:	EIA/TIA RS-485; IEEE802.3
Power Source:	5 to 36 VDC
Power Consumption:	Less than 1W
Configuration:	AT commands (RS-485) or built-in web server
Ethernet Network:	10/100M Auto-Negotiation; MDI-X auto-crossover
Network Protocols:	IPv4; TCP/UDP/HTTP; ARP; ICMP
Network Buffer Size:	TX: 6KB; RX: 4KB
IP Settings:	Static IP or DHCP
Operating Modes:	TCP Server & Client; UDP Server & Client; Httpd Client
Max. Number of Client Connections:	8
Serial Port:	600 bps to 460 Kbps; RFC 2217 compliant
Serial Port Buffer Size:	RX: 2KB
Communication Protocols:	RS-485 (up to 32 nodes); Modbus RTU; Modbus TCP
Protection:	Up to 15kV ESD; 600W Surge Protection
Distances:	Ethernet: 328ft (100m); RS-485: 4000ft (1.2km)
Connectors:	Ethernet: 1x RJ45; 1x 3-Way Terminal Block (A, B, G); Power: 1x 2-Way Terminal Block
Dimensions (L x W x H):	4.3x1.1x2.6 in (110x28x65 mm)
Weight:	0.2 lb (90 g)
Operating Temperature:	-40°F to 185°F (-40°C to 85°C)
Operating Humidity:	5% to 95% Non-condensing

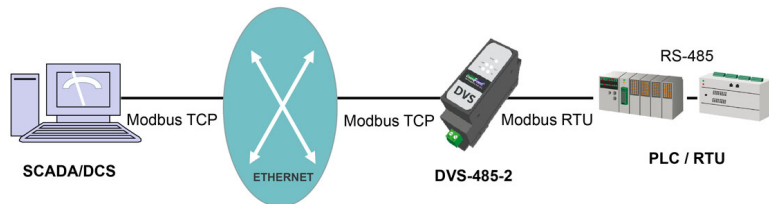
■ APPLICATIONS



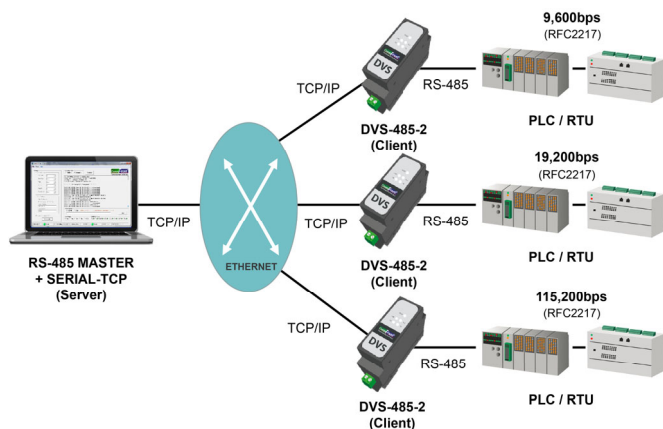
APPLICATION 1: DEVICE SERVER (M2M)



APPLICATION 2: SERIAL OVER ETHERNET

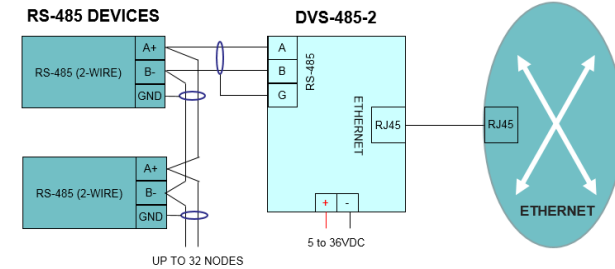


APPLICATION 3: MODBUS GATEWAY / MODBUS PROTOCOL CONVERTER



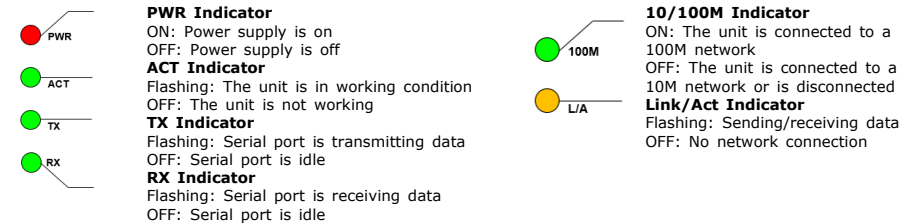
APPLICATION 4: CONVERTING RS-485 NETWORK INTO TCP/IP

■ CONNECTIONS



DVS-485-2 CONNECTION DIAGRAM

■ LED INDICATORS



■ FACTORY SETTINGS

IP Settings:	Static IP
IP Address:	192.168.1.201
Subnet Mask:	255.255.255.0
Gateway:	192.168.1.254
COM Port Settings:	115.2Kbps, 8, N, 1
Modbus:	Modbus RTU <-> Modbus TCP (OFF)
User Name:	admin
Password:	superuser

Note: To restore factory settings, press the "reset" button for 5 to 15 seconds.

■ TROUBLESHOOTING

- Make sure the power supply (5 to 36 VDC) is connected and turned on.
- Check LEDs and make sure connections are correct.
- Be sure that the DVS-485-2 and your PC are at the same sub network and the COM port settings match with each other (see "Factory Settings" table).
- Press the "reset" button for 5 to 15 seconds to restore factory settings, if necessary.
- Test with CommFront's Serial-TCP/IP software (the free version can be downloaded from: <https://www.commfront.com/pages/downloads>):
 - 1) Set Serial-TCP as a TCP client and connect to device server's TCP port (act as a TCP server).
 - 2) Send Hex commands to DVS-485-2's TCP port from the Serial-TCP's "Packet Sender" tool. When the command reaches the device server's TCP port, it will be forwarded to device server's COM port and come back to Serial-TCP software's COM port, thus creating an infinite loop. Click the "De-activate" button to stop the loop.

