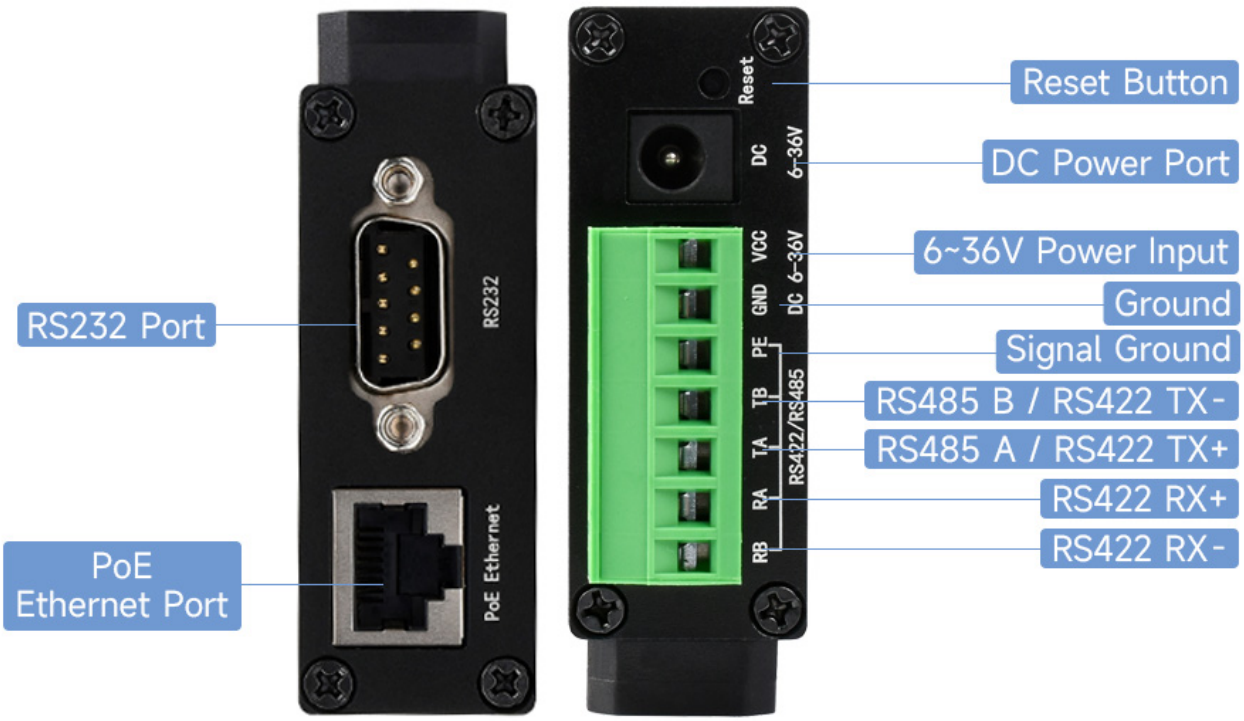
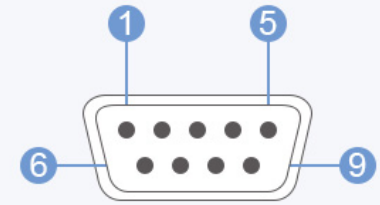
Waveshare

RS232/485/422 TO POE ETH (B)

This is an RS232/485/422 device data acquisitor/IoT gateway designed for an industrial environment. It combines multi functions in one, including serial server, Modbus gateway, MQTT gateway, RS232/485/422 to JSON, etc. Adopting RS232/485/422 and Ethernet interface with PoE function, it can be connected with screw terminals for power input by the power port (outer diameter: 5.5mm, inner diameter: 2.1mm).

The rail-type case design, is small in size, easy to install, and cost-effective. It is very suitable for collecting the data of RS232/485/422 and sensors in the industrial field, including local network collection or uploading to the data that the cloud server autonomously collects and sends.





RS232 Pinout Definition

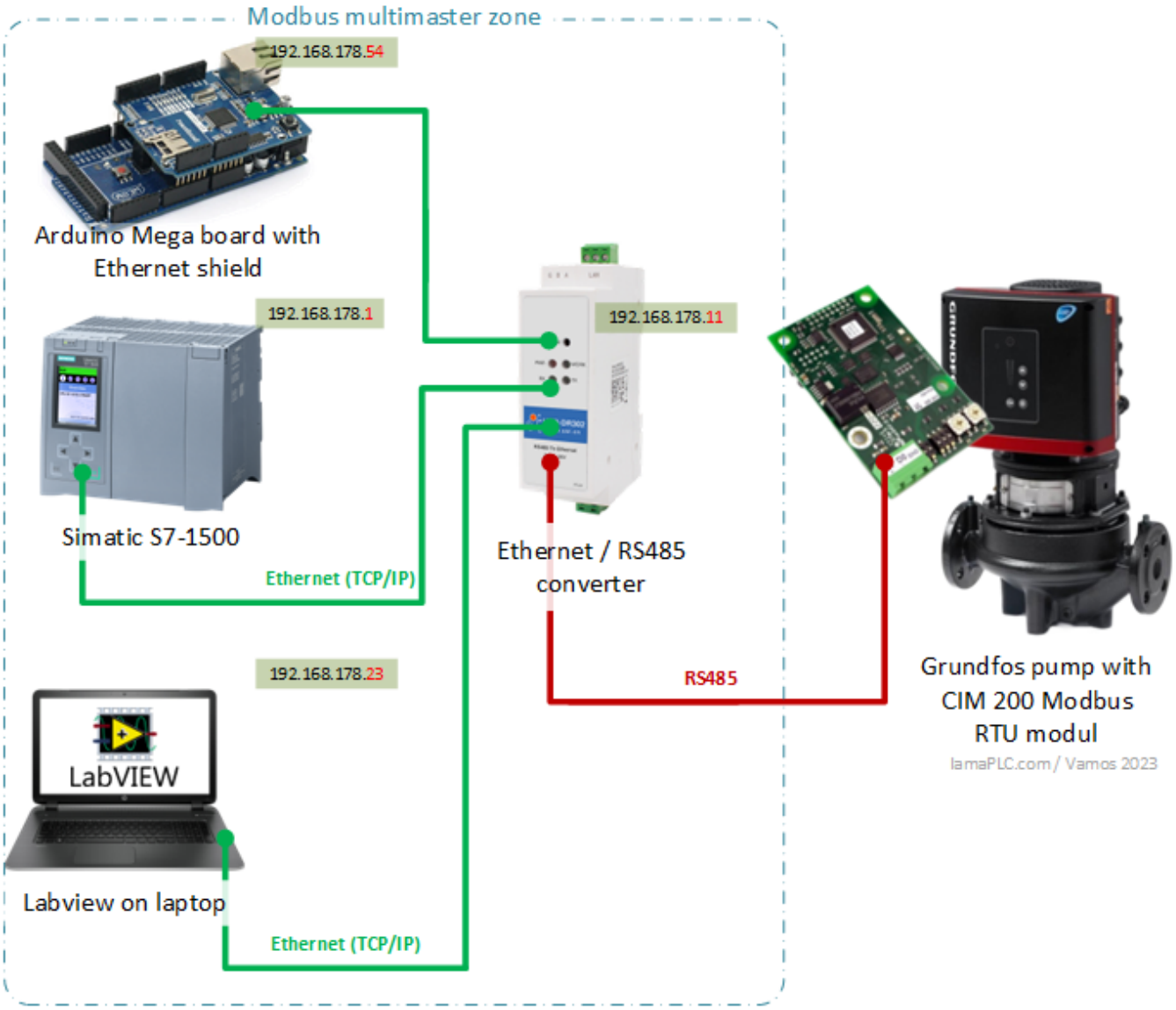
RS232 PINOUT	
DB9 Male (PIN)	RS232 PIN
2	(RXD)
3	(TXD)
5	GND
1 , 4 , 6 , 7 , 8 , 9	N/C

Technical parameters

Model	**RS232/485/422 TO POE ETH (B)**
Product type	Serial server, Modbus gateway, MQTT gateway
Primary function	Realize the bidirectional transparent transmission function of RS232/485/422 to Ethernet
Communication interface	RS232/485/422 × 1, Ethernet port × 1
Power supply	Screw terminal DC 6~36V or PoE network port
Isolation protection	Power isolation, signal isolation protection
Communication interface	

Model	**RS232/485/422 TO POE ETH (B)**
Ethernet	PoE Ethernet port, support IEEE 802.3af standard 10 / 100M self-adaptive RJ45 interface, 2KV surge protection Default address: **192.168.1.200** or **192.168.1.254**. To find the device, install the following program: virCOM
Serial port	Isolated RS232/485/422
Serial parameters	
Baud rate	300 .. 115200 bps
Parity bit	none, odd parity, even parity, mark, space
Data bits	5 .. 9 bits
Flow Control	no flow control
Software	
Protocol	ETHERNET, IP, TCP, UDP, HTTP, ARP, ICMP, DHCP, DNS
Configuration method	PC configuration, WEB browser, device management function library
Communication method	TCP/IP direct communication, virtual serial port mode
Operating mode	TCP server, TCP client (TCP server also coexist), UDP, UDP multicast

Application example



Through the CIM 200 module, the Grundfos pump can be controlled directly from the various controllers, and all its parameters can be read. These parameters can be displayed, for example, on HMI or SCADA. The Ethernet / RS485 converter converts TCP telegrams into RTU form and transmits them as such. Thanks to this unit, the connection can serve several master units (multimaster).

Indicator light

PWR	Power Indicator
LINK	(1) Link is green when the network cable is connected. (2) When the TCP connection is established (or in UDP mode), Link is blue (actually with a faint green light). It can be used to judge whether the serial port server has established a communication link with the host computer software.
ACT	(1) When the network port sends data to the serial port, the indicator light is green. The flashing time is 1 second longer than the actual communication time, which makes it easier to find short data communication. (2) When the serial port sends data to the network port, the indicator light is blue and green at the same time. Since blue is brighter, if you see blue, it indicates that there is a serial port returning data to the network port. This can determine whether the device responds to commands from the host computer. If there is no response, it indicates that the serial port baud rate is incorrect or the serial port is not connected properly.

Use indicator light to debug communication method:

1) If the Link light is not green, the network cable is not connected properly, please check the network cable.
2) If the Link light is not blue (only consider the TCP working mode), the host computer software does not have a serial port The server establishes a connection, please consider whether the IP address is configured in the same network segment.
3) If the Active light is green, it means that the network port is sending data, but there is no serial device returning data. Please check whether the baud rate is configured properly and whether the RS485 positive and negative are connected reversely.

waveshare, converter, modbus, modbus rtu, modbus tcp, communication