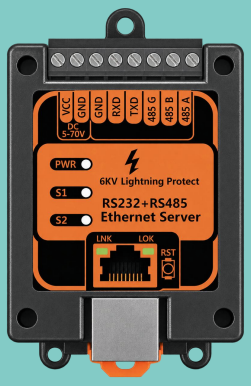
DIN-Rail RS-232 and RS-485 Serial Server

Model: FCT-1200-F1D1R1

1 RS-485 channel + 1 RS-232 channel · independent simultaneous communication

Surge protection: 6 kV for power and serial ports; 4 kV for network port

DC 5–70 V · Mounting on rail / wall-mounted



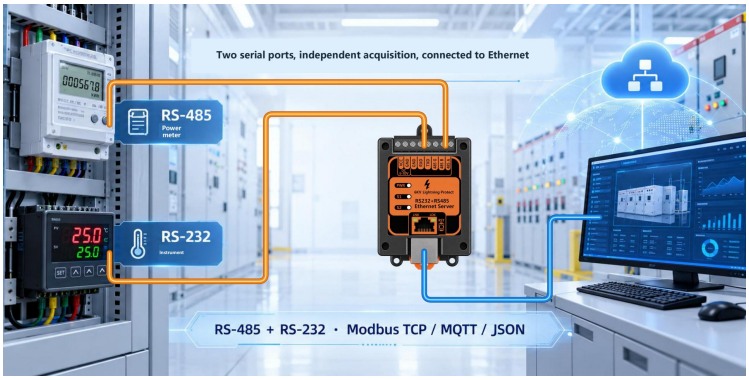
Product Overview

- 1 channel each for RS-485 and RS-232, enabling independent simultaneous communication, allowing different serial port devices to be connected to the same Ethernet network.
- Supports Modbus RTU to TCP, MQTT transparent transmission, and Modbus to JSON, facilitating integration with monitoring platforms.
- Power supply and serial ports have 6 kV surge protection and network port has 4 kV surge protection, suitable for on-site device networking.

Key Features

- **Dual Path Acquisition** RS-485 and RS-232 operate independently simultaneously
- **Port Surge Protection** Power supply and serial port: 6 kV; network port: 4 kV
- **Platform Integration** Modbus to TCP; MQTT transparent transmission / JSON
- **Parameter Adaptation** Supports custom baud rate; RS-232 up to 256 kbps
- **Existing Software** Virtual serial port / Socket, reduces application modification
- **Remote Management** Cross-routing, reconnection after network outage, remote upgrade

Single unit application; two types of instruments connected centrally



Application example: The RS-485 meter and RS-232 instrument are connected to separate serial ports, and data is collected by a host computer via the network.

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Application protocols and serial port parameters are configured according to the instrument; the device diagram is for illustration, and terminals and wiring shall conform to the actual delivery.

Dual connection application 2 serial ports extended across network



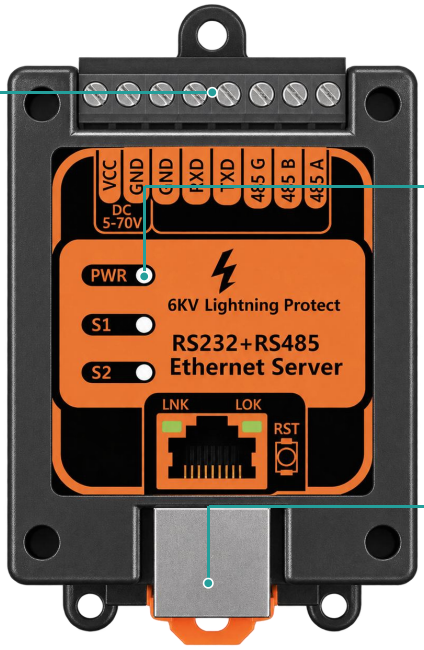
Application example: One unit at each end, establishing transparent channels via RS-485 and RS-232 respectively; the IP network may include routing and switching nodes.

TCP Client on side B connects to the IP and port of the corresponding TCP Server on side A; serial port parameters and business protocols must match, and the network must be accessible.

Interfaces and Installation

This diagram is recreated based on confirmed eight-pin terminals; actual appearance shall be as delivered

8-pin terminals
Power supply / RS-232 / RS-485



Status Indicators
PWR / S1 / S2

Wall-mounted Mounting Holes
Mounting hole position based on actual

RJ45 Fast Ethernet port
Actual socket located at the bottom

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Technical Specifications

Hardware and Electrical

Item	Specification
Processor	ARM Cortex-M4, main frequency 240 MHz
Ethernet	1 × RJ45，10/100BASE-T(X)，Auto-MDI/MDIX
Serial Port	1 RS-485 channel + 1 RS-232 channel; two channels independent simultaneous communication
Serial port speed	300–921600 bps; RS-232 maximum 256 kbps; customizable
Terminal Block	8-pin, 5.08 mm pitch screw terminals
Power Input	DC 5–70 V; supports overload and reverse connection protection
Total Power Consumption	< 3 W
Lightning Protection	Power supply, serial port 6 kV; RJ45 network port 4 kV
Enclosure / installation	Plastic casing, fanless; 35 mm rail or wall-mounted.
Size / Weight	97 × 54 × 32 mm; 72 g / unit
Temperature / Humidity	−40 to +85 °C; 0%–95% RH, no condensation
MTBF	> 100000 hours

Communications and Management

Item	Function
Network Protocol	TCP、UDP、ARP、ICMP、HTTP、DNS、DHCP、SNMP、MQTT
Operating Mode	TCP Server / Client，UDP Server / Client
Modbus	Modbus RTU to Modbus TCP
MQTT / JSON	Supports MQTT transparent transmission and Modbus to JSON data packet conversion
Session Connection	Up to 4 TCP or UDP sessions per serial port channel
Software integration	Virtual serial ports, TCP/IP Sockets; supports across gateways and across routes.
Data and Monitoring	Serial framing, status, and parameter monitoring; automatic reconnection when network down
Configuration Maintenance	Web, Windows configuration tool, serial port configuration, SNMP; local and remote upgrade

Multiple session requests and polling for the same terminal should be coordinated by the upper-level system.

Terminal Pinout and Wiring

Order	Marking	Purpose
1–2	VCC / GND	DC 5–70 V positive / negative supply
3–5	GND / RXD / TXD	RS-232 signal ground / receive / send
6–8	485 G / 485 B / 485 A	RS-485 signal ground / B / A

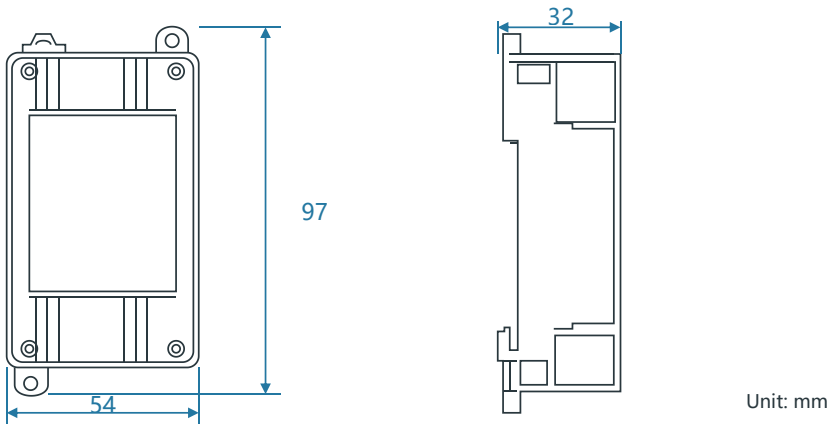
Front-facing view: Terminals at the top from left to right: VCC / GND / GND / RXD / TXD / 485 G / 485 B / 485 A.

Port Surge Protection

Interface	Open-circuit peak voltage	Protection Notes
Power Interface	6 kV	Overload and reverse connection protection; reduces risk of induced lightning and surges from power lines
RS-232 / RS-485	6 kV	Reduce risk of induced lightning and surges from signal lines
RJ45 Ethernet	4 kV	Reduce induced lightning and surge risks from network cables
Test criteria for surge protection and overvoltage: GB/T 17626.5 (IEC 61000-4-5) surge immunity test; open-circuit voltage waveform: 10/700 μs; test source impedance: 40 Ω.		

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Dimensions and Mounting



Unit: mm

Dimensions in mm; overall size: 97 × 54 × 32 mm; mounted on 35 mm rails or wall mounts, wiring space is reserved as per physical dimensions.

Ordering Codes and Configuration

FCT-	1200-	F1	D1R1
Company and product type	Industrial serial device server series	1 Fast Ethernet copper port	1 RS-485 line + 1 RS-232 line

NO	Name	Definition
1	**Company and type**	FC = Feichang; T is the product type identifier.
2	**Product Series**	1200 = Plastic rail-based industrial serial device server series
3	**Ethernet specifications**	F = Fast Ethernet copper port; F1 = 1 10/100 Mbps RJ45.
4	**Serial port specifications**	D = RS-485, R = RS-232; D1R1 = 1 channel for each interface, independent for both
5	**Power Supply and Installation**	DC 5–70 V; 35 mm rail or wall-mounted, mounting parts, power supply, and cables to be confirmed in the order.

Ordering Examples

Full Model Code	Configuration
FCT-1200-F1D1R1	1 RS-485 + 1 RS-232 + 1 Fast Ethernet port; DC 5–70 V.

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