Y204-R 4-Port Ethernet DTU Specification



> **Reference:** Technical manual coming soon. **Related:** Serial Gateway Overview

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1. Overview

Y204-R expands the Yengear Ethernet DTU family to four independent serial channels. The ordering SKU selects four RS232 or four RS485 ports, and each carries dual Socket contexts, A and B. Together with a `10/100Base-T` RJ45 uplink, Y204-R replaces traditional serial device servers while adding transparent TCP, UDP, HTTP, and MQTT tunnels, Modbus RTU to Modbus TCP conversion, and browser-based management.

Item	Description
MCU and Firmware	Dual-core `240 MHz` MCU, RTOS, hardware and software watchdog
Serial Ports	`4 x` RS232 or `4 x` RS485, by ordering SKU
Ethernet	`10/100Base-T` RJ45, static IP or DHCP
Power Input	`9 to 36 VDC` terminal, `12 V` barrel input on front panel
Mounting	DIN-rail enclosure with removable terminal blocks

Highlights

- Four independently managed serial buses, each mirrored to Socket A and B for concurrent SCADA, MES, or cloud access
- Firmware parity with the rest of the standard DTU family, including registration packets, NET/UART heartbeat, HTTP OTA, JSON upload, and Alibaba Cloud MQTT templates
- EMC-hardened power design with terminal and barrel connectors for redundant `24 V` or `12 V` feeds
- Browser console and AT command set for configuration and debugging from any browser

2. Ordering Information

2.1 Model Configuration

`Y204-R` is a four-port serial DTU with an RJ45 Ethernet uplink. The ordering suffix selects four RS232 ports (`-232`) or four RS485 ports (`-485`).

For family codes and examples, see Model Groups and Suffixes.

2.2 Typical SKU Options

SKU	Serial Configuration
Y204-R-232	`4 x` RS232
Y204-R-485	`4 x` RS485

3. Key Features

1. **Four Independent Serial Channels**: Consolidates multiple field devices onto one Ethernet uplink.
2. **Dual Socket per Port**: Socket A and B on every port enable concurrent service or redundant paths.
3. **Industrial Protocol Support**: Supports TCP, UDP, HTTP, MQTT, and Modbus RTU to Modbus TCP conversion.
4. **High-Reliability Power Design**: Wide-range DC input, watchdog protection, and redundant power connector options.
5. **Convenient Maintenance**: Web UI, remote AT, JSON upload, and HTTP OTA.

4. Technical Specifications

4.1 Electrical and Hardware

Parameter	Specification
Processor	Dual-core `240 MHz` MCU
Power Input	`9 to 36 VDC` terminal, optional `12 V` barrel
Protection	EMC hardening, hardware and software watchdog
Mounting	DIN-rail industrial enclosure

4.2 Serial and Network

Parameter	Specification
Serial Ports	`4 x` RS232 / RS485
Baud Rate	`9600 bps` (default)
Ethernet	`10/100Base-T` RJ45
IP Mode	Static IP / DHCP
Socket Channels	Socket A and B for each serial port

4.3 Software Functions

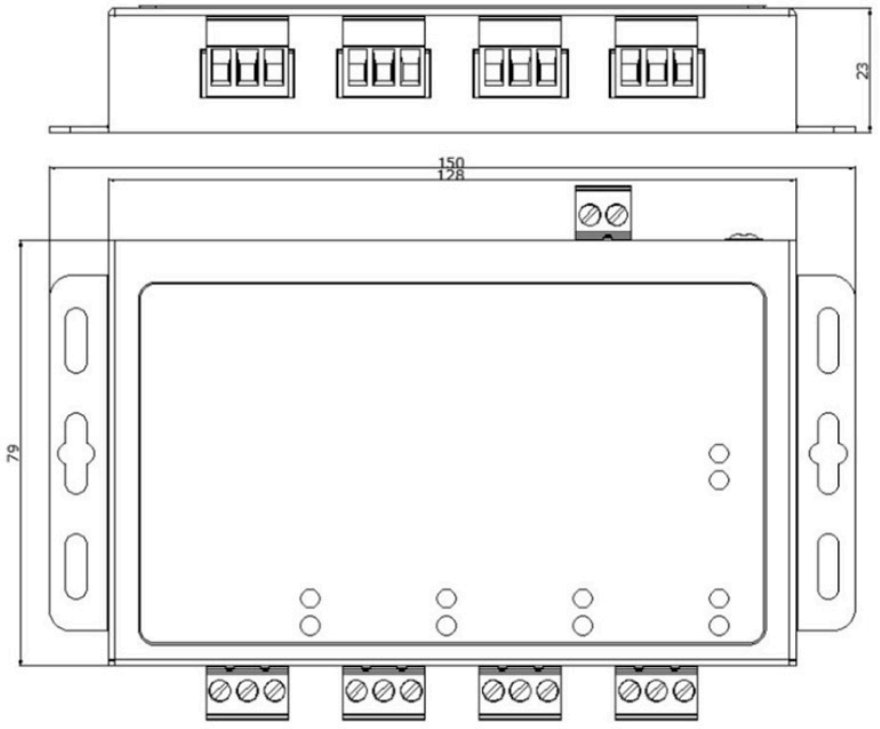
Item	Description
Protocols	TCP / UDP / HTTP / MQTT
Gateway Function	Modbus RTU to Modbus TCP
Value-Added Functions	Registration packet, NET/UART heartbeat, JSON upload, HTTP OTA
Maintenance	Web UI and remote AT

5. Interfaces and Indicators

Interface / Indicator	Description
COM1 to COM4	Four serial interfaces for field devices
RJ45	Ethernet uplink
Power Terminal / Barrel Jack	Redundant power input options
Status LEDs	Power, link, and data activity
Reload Button	Parameter recovery and maintenance

6. Mechanical and Installation

6.1 Dimension Drawing



This drawing can be used for cabinet installation and wiring clearance planning for the Y204-R.

- DIN-rail enclosure for industrial control cabinets
- Removable terminal blocks for quick field replacement
- Recommended for control panels that need to retain four independent serial buses

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