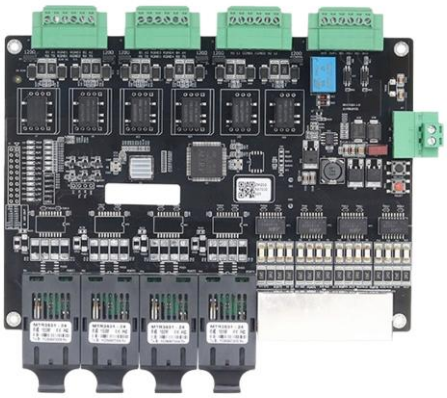
# CES5108 Series

## 8-Port Layer 2 100M Managed Embedded Intrinsically Safe Industrial Ethernet Switch with 6 × RS485/CAN Ports



- 8 x 100M Ethernet ports, configurable as all copper ports, 2 x fiber ports and 6 x copper ports, or 4 x fiber ports and 4 x copper ports
- Support 2/4 x isolated RS485 serial ports and optional 2 × isolated CAN ports
- MW-Ring (recovery time < 20 ms @ 200 switches), ERPS, STP/RSTP for network redundancy
- Serial and CAN-to-network conversion supports protocols including UDP, TCP, Modbus, HTTPD, WebSocket, and MQTT
- Support virtual serial port and CAN relay modes
- DC 9~36V power input compliant with intrinsically safe circuit design standards
- -40°C to +75°C operating temperature range

## Product Description

The CES5108 series is an 8-port Layer 2 managed 100M embedded intrinsically safe industrial Ethernet switch with 6 × RS485/CAN ports. It integrates serial and CAN-to-network conversion, employs store-and-forward switching, and delivers robust bandwidth processing capabilities. It automatically detects packet errors to minimize transmission failures, effortlessly supports 100Mbps networking, and ensures stable, reliable, and efficient data transmission. Supporting web-based management and multiple network protocols, it enhances network efficiency, reliability, and security to meet diverse complex network requirements. Each serial port and CAN interface operates independently without interference, supporting various protocol conversion networks for industrial control, IoT, and other applications. The fiber port accommodates multiple optical module options, enabling long-distance transmission with strong electromagnetic interference resistance. The copper ports support 10/100M, full/half-duplex, and auto MDI/MDI-X, delivering high-bandwidth, low-latency, and highly reliable network communication for industrial automation applications.

The CES5108 series features 8 × 100M Ethernet ports, 2/4 × RS485 ports, and 2 × CAN ports, with configurable options including all copper ports, 2 x fiber ports and 6 x copper ports, or 4 x fiber ports and 4 x copper ports. CES5108 series features reliable industrial-grade design for -40°C to +75°C operating temperatures. Passes rigorous functional, temperature, safety, and electromagnetic immunity testing to meet diverse field network and harsh industrial environment demands. Widely applicable in industrial automation, integrated energy systems, smart cities, intelligent transportation, smart mining, and smart factories.

## Product Features

- 8 x 100M Ethernet ports, configurable as all copper ports, 2 x fiber ports and 6 x copper ports, or 4 x fiber ports and 4 x copper ports
- Optional 2/4 × isolated RS485 serial ports;
- Optional 2 × isolated CAN ports;
- 2 × alarm inputs and 1 × alarm output interface;
- MW-Ring (recovery time < 20 ms @ 200 switches), ERPS, STP/RSTP for network redundancy
- Serial/CAN-to-network conversion supporting UDP, TCP, Modbus, HTTP/S, WebSocket, MQTT protocols;
- Virtual serial port and CAN relay modes supported;
- 802.1Q VLAN segmentation for multiple broadcast domains to enhance security;
- QoS (Quality of Service) with priority transmission to resolve network congestion;
- Storm suppression to prevent network storms;
- Static multicast MAC address binding to reduce multicast data broadcasting;
- MW-NMP proprietary network management protocol;
- Port mirroring and Ping for convenient troubleshooting;
- External input, port disconnection, and ring network status alarms;
- DC 9~36V power input compliant with intrinsically safe circuit design standards;
- Operating temperature range: -40°C to +75°C.

## Technical Specifications

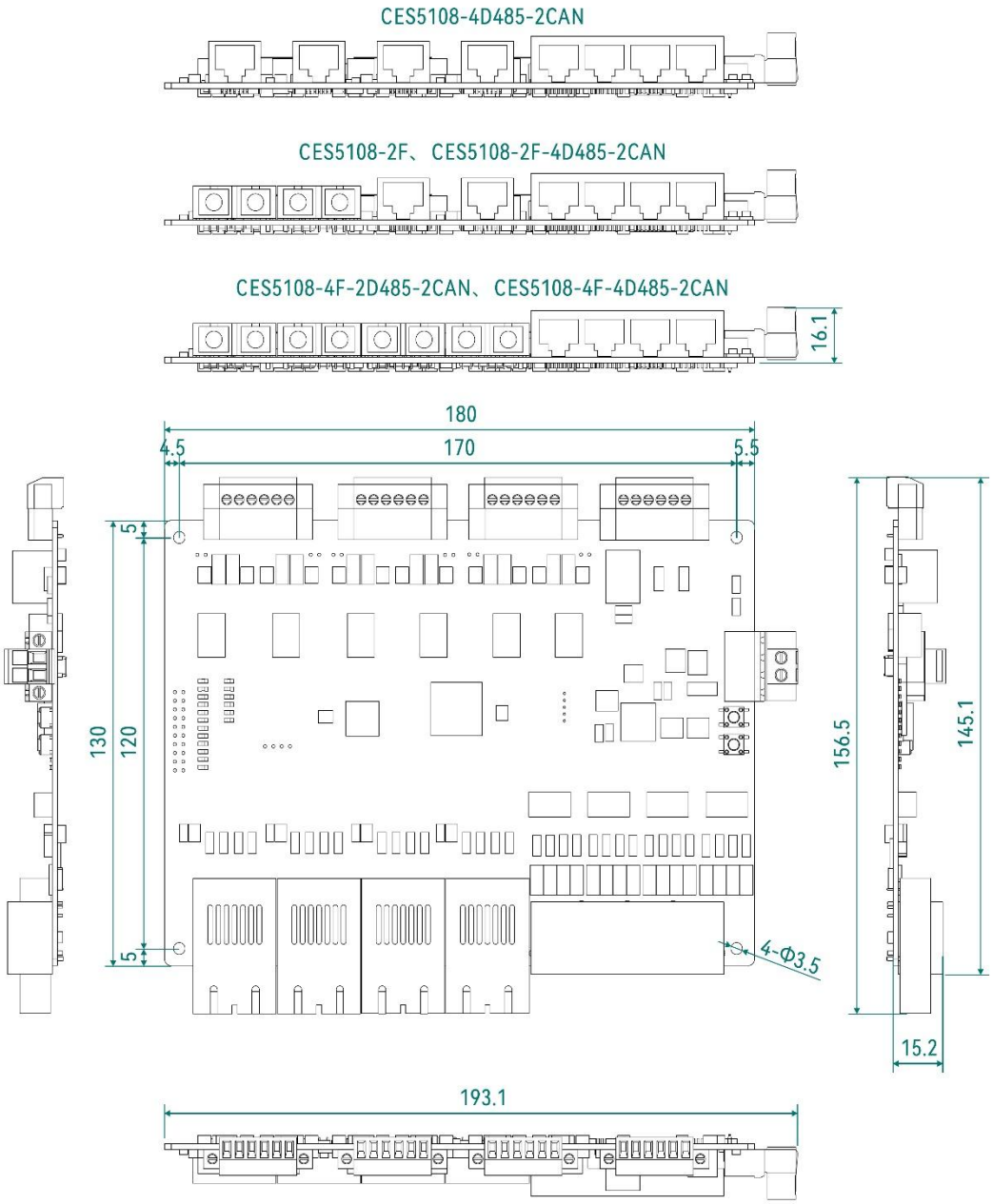
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|---|---|
| **Protocol Standard** | |
| IEEE Standards | IEEE 802.3, IEEE 802.3u, IEEE 802.3x, IEEE 802.1w, IEEE 802.1Q, IEEE 802.1p |
| **Switch Capability** | |
| Processing Type | Store-and-Forward |
| Backplane Bandwidth | 1.8Gbps |
| Buffer Size | 768kbit |
| Jumbo frame | 2kByte |
| MAC Table Size | 2K |
| **Interface** | |
| 100M Fiber Port | 2/4 × 100Base-FX fiber ports, SC/FC/ST interfaces, transmission distance supports 1310nm multimode dual-fiber 2km or 1310nm single-mode dual-fiber 20km (single-fiber/dual-fiber, 40/60/80/100km) |
| 100M Copper Port | 8/6/4 × 10/100Base-T(X) auto-sensing intrinsically safe RJ45 ports , supporting full/half-duplex, auto MDI/MDI-X |
| Serial Port (Optional) | Interface type: 2/4 × RS485 serial ports<br>Interface signals: A, B, AGND<br>Baud rate: 600bps~460800bps<br>Data bits: 7-bit, 8-bit<br>Stop bits: 1-bit, 2-bit<br>Parity bit: None, odd parity, even parity<br>Isolation voltage: 1.5kVDC<br>Pull-up/pull-down resistor: 1kΩ<br>Terminating resistor: Built-in 120Ω RS485 terminating resistor, |

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|---|---|
| | configurable via jumper cap |
| CAN (Optional) | Interface Type: 2 CAN ports<br>Connection Method: 6-pin 3.81mm pitch locking terminal block<br>Interface Signals: H, L, CGND<br>Baud Rate: 5kbps~1000kbps<br>Isolation Voltage: 1.5kVDC<br>Termination Resistor: RS485 built-in 120Ω termination resistor, configurable via jumper cap |
| Alarm Interface | 2 × alarm input ports and 1 relay alarm output port, using 6-position 3.81mm pitch locking terminal blocks. Alarm inputs support external DC 9-36V power loss alarms |
| Button | Reboot and factory reset |
| Status LED | Power indicator, operation indicator, alarm indicator, ring network indicator, Ethernet connection/activity indicator, serial port indicator, CAN indicator. Supports external signal output for indicators |
| **Power Supply** | |
| Input Voltage | DC9~36V |
| Power Consumption | ≤3.7W@DC12V (Full Power), ≤4W@DC12V (2F), ≤4.4W@DC12V (4F) |
| Connection | 2-position 5.08mm pitch with locking terminal blocks |
| **Physical Characteristics** | |
| Dimensions | 180×130×16.1mm (connectors excluded) |
| Installations | Embedded |
| Weight | About 0.21kg |
| **Working Environment** | |
| Operating Temp | -40°C~+75°C |

| | |
|---|---|
| Storage Temp | -40°C~+85°C |
| Relative Humidity | 5%~95% (non-condensing) |

## Dimensions

Unit: mm



## Ordering Information

| Standard Model | 100M Fiber Port | 100M Copper Port | RS485 | CAN | Input Voltage |
|---|---|---|---|---|---|
| CES5108-4D485-2CAN | / | 8 | 4 | 2 | DC9~36V |
| CES5108-2F (M/S) | 2 | 6 | / | / | |
| CES5108-2F(M/S)-4D485-2CAN | 2 | 6 | 4 | 2 | |
| CES5108-4F(M/S)-2D485-2CAN | 4 | 4 | 2 | 2 | |
| CES5108-4F-4D485-2CAN | 4 | 4 | 4 | 2 | |



Contact Us

COME-STAR COMMUNICATION(WUHAN) CO., LTD.

Address: Puneng Industrial Park, Fenghuang Garden 1st Road, East Lake High-Tech Development Zone, Wuhan, China.

Tel: +86-027-59257958

Mail: sales@come-star.com

Official site: www.come-star.com

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