# MIEN5205C Series

## 5-Port Layer 2 Managed DIN Rail Industrial Ethernet Switch


- 1/2×100Base-FX ports (multi/single-mode, SC/FC/ST connector), 4/3×10/100Base-T(X) ports (RJ45 connector)
- Support serial or CAN terminal device networking, enabling bidirectional transparent transmission between serial/CAN buses and Ethernet (UDP/TCP)
- Support ring network redundancy protocols like MW-Ringv1/v2 and STP/RSTP to enhance network reliability
- Fast ring network redundancy less than 20ms (MW-Ringv1/v2) enhancing system communication reliability
- Support dual DC 9~60V power input
- With IP40 high-strength metal enclosure and fanless design, the device can reliably operate in the temperature ranging from -40°C to +85°C

## Product Description

MIEN5205C series is a layer 2 managed DIN rail switch that supports 5 Ethernet ports and optionally features 2*RS232/485 or CAN ports. It allows for the integration of serial devices or CAN devices into the network. The Fast Ethernet ports can be configured as 1 fiber and 4 copper or 2 fiber and 3 copper, providing flexibility. The switch uses a store-and-forward mechanism, offering robust bandwidth processing capabilities. It automatically detects packet errors, reducing transmission issues.

The product is designed with industrial-grade components, adhering to high standards in system design and production control. It can be mounted on a 35mm standard DIN rail and features a high-strength metal enclosure, making it rugged and durable. With fanless heat dissipation, it can operate in a wide temperature range from -40℃ to +85℃, and it is designed with high-standard industrial protection features to withstand harsh working environments, ensuring stable communication performance.

MIEN5205C series support web management functions and various network protocols, including MW-Ring v1/v2, STP/RSTP, VLAN, QoS, port mirroring, static multicast MAC address binding, network diagnostics, alarms, and online system upgrades. These features enhance network performance, reliability, and security, meeting the requirements of complex networks. It supports various network transmission modes such as UDP, TCP Client, TCP Server, and UDP multicast, enabling the networking of CAN and serial terminal devices.

The product has undergone rigorous testing for functionality, high and low-temperature resistance, safety standards, and EMC compliance, making it suitable for complex networks and demanding industrial environments. It can be widely applied in various fields, including comprehensive energy, smart cities, rail transit, intelligent transportation, smart factories, and industrial automation.

## Features and Benefits

- Support rate limiting for broadcast, multicast, and unknown unicast packets at both ingress and egress.
- Support rate limiting for unknown unicast, unknown multicast, known multicast, and broadcast packets to suppress network storms.
- Support QoS (Quality of Service) to prioritize voice, video, and critical data transmission in network devices, addressing network congestion.
- Support 802.1Q VLAN to create multiple broadcast domains through Access, Trunk, and Hybrid interfaces, enhancing network security.
- Support static multicast MAC address binding to reduce multicast data broadcasting, conserving network resources.
- Support alarm functions, including port link status and ring network status alerts.
- Support port mirroring to capture data at port entrances and exits for network detection and fault management.
- Support RSTP (Rapid Spanning Tree Protocol), compatible with STP, to eliminate network loops and enhance network reliability.
- Serial/CAN port supports UDP or UDP multicast mode, enabling point-to-point, point-to-multipoint, or multipoint-to-multipoint communication efficiently.
- Serial/CAN port supports TCP Client/Server modes, establishing reliable connections using TCP. TCP Client can establish 1 connection, and TCP Server can establish up to 4 connections.
- Support various packet segmentation mechanisms for CAN/Serial-to-Ethernet conversion, meeting different network real-time requirements.
- CAN communication supports normal mode, loopback mode, and listen-only mode, suitable for regular communication, bus testing, and fault diagnosis, respectively.
- Support CAN ID filtering, allowing specified ID range standard frames or extended frames to be transmitted.
- Support port statistics, counting different types of sent and received data frames, enabling port traffic monitoring.
- Support user roles for guests and administrators, allowing hierarchical user management with different permissions.
- Enable online device reboot, factory reset, and system upgrades

## Specification

| Software | |
|---|---|
| Switching | Support port configuration, rate configuration, storm suppression, and port statistics<br>Support port-based VLAN and 802.1Q VLAN<br>Support MAC address aging |
| CAN/Serial | Support various network operation modes such as UDP, TCP Client, TCP Server, and UDP multicast<br>Support byte count statistics for both sending and receiving data between the serial interface and the network<br>Support CAN operating modes, including normal mode, listen-only mode, and loopback mode<br>Provide CAN ID filtering and CAN frame statistics |
| Redundancy | Support private ring network technology MW-Ringv1/v2<br>Support RSTP (Rapid Spanning Tree Protocol) and compatible with STP (Spanning Tree Protocol) |
| Multicast | Support static multicast MAC address binding |
| Management and Maintenance | Support static IP configuration<br>Support QoS (Quality of Service) with 802.1P/DSCP/Port priority mapping, providing control over absolute and relative priorities<br>Support port mirroring, Ping, and alarms<br>Offer user management with different permission levels, online reboot, factory reset, system upgrade, and configuration file upload/download<br>Support MixView and MaxView management |
| **Switch Capability** | |
| Processing Type | Store-and-Forward |
| Backplane Bandwidth | 1.2Gbps |
| Buffer Size | 768kbit |
| MAC Table Size | 2K |
| **Interface** | |
| 100M Fiber Port | 1/2*100Base-FX ports (single-mode/multi-mode, SC/FC/ST, wavelength, and transmission distance are optional) |
| 100M Copper Port | 4/3*10/100Base-T(X) auto-sensing RJ45 ports, support full/half-duplex and auto MDI/MDI-X |

## Specification

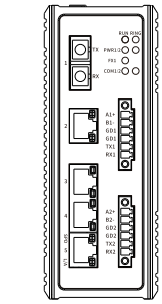
| | |
|---|---|
| Serial Port | Interface Type: 2*RS232/485 (optional)<br>Interface Signals: A, B, GND, TX, RX<br>Baud Rate: 600bps-115200bps<br>Data Bits: 7-bit, 8-bit<br>Stop Bits: 1-bit, 2-bit<br>Parity: None, Odd, Even, Mark, Space<br>Connection: 6-pin with a 3.81mm pitch locking terminal connector |
| CAN | Interface Type: 2 CAN ports (optional)<br>Interface Signals: CANH, CANL, GND<br>Baud Rate: 5kbps-1000kbps<br>Connection: 6-pin with a 3.81mm pitch locking terminal connector<br>Termination Resistor: Built-in 120Ω termination resistor, configurable via a DIP switch |
| Relay | 1 relay alarm output with 3 positions and a 3.81mm pitch locking terminal connector |
| Button | Factory Reset |
| Status LED | Power indicator<br>Operation indicator<br>Ring network indicator<br>Interface indicator<br>Ethernet port speed indicator<br>Serial/CAN indicator |
| **Power Supply** | |
| Input Voltage | DC9~60V, dual power redundancy, non-polarity |
| Power Consumption | ＜2.9W@DC24V(F),＜3.7W@DC24V(2F) (full load) |
| Connection | 5-pin with a 5.08mm pitch locking terminal connector |
| **Physical Characteristics** | |
| Dimensions | 140×54×110 mm (DIN rail mounting clip excluded) |
| Installations | Easy installation on 35mm DIN rails |
| IP Code | IP40 |
| Weight | 0.64kg |
| **Working Environment** | |
| Operating Temp | -40℃~+85℃ |

## Specification

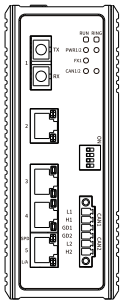
| | |
|---|---|
| Storage Temp | -40℃~+85℃ |
| Relative Humidity | 5%~95% (non-condensing) |
| **Industry Standard** | |
| EMC | IEC 61000-4-2 (ESD): Level 4<br>IEC 61000-4-5 (Surge): Level 4<br>※Ethernet ports support 6kV lightning protection<br>IEC 61000-4-4 (EFT): Level 4 |
| Certification | CE, FCC, RoHS |

## Dimensions

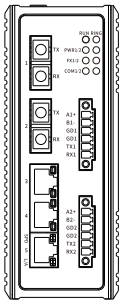
Unit: mm



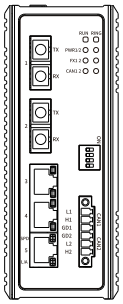
MIEN5205C-F-2D485



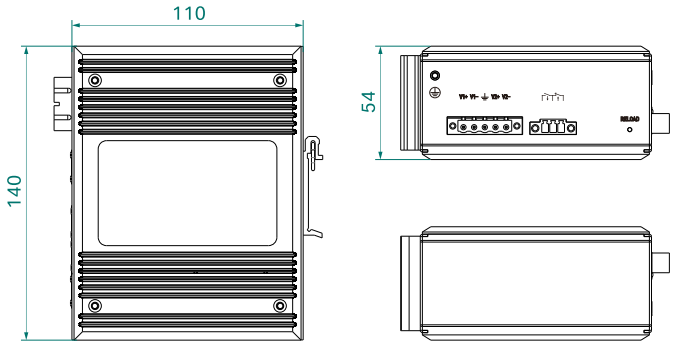
MIEN5205C-F-2CAN



MIEN5205C-2F-2D485



MIEN5205C-2F-2CAN



## Ordering Information

| Standard Model | 100M Fiber Port | 100M Copper Port | RS232/485 | CAN | Input Voltage |
|---|---|---|---|---|---|
| MIEN5205C-F(M/S)-2D485 | 1 | 4 | 2 | / | Dual DC9~60V power input |
| MIEN5205C-2F(M/S)-2D485 | 2 | 3 | 2 | / | |
| MIEN5205C-F(M/S)-2CAN | 1 | 4 | / | 2 | |
| MIEN5205C-2F(M/S)-2CAN | 2 | 3 | / | 2 | |

## Contact Us

**Wuhan Maiwe Communication Co., Ltd**

Address: No.52 Liufang Avenue, East lake High-tech Development Zone, Wuhan, China.

Tel: 027-87170217

Mail: enquiry@maiwe.com

Official site: www.maiwe.com