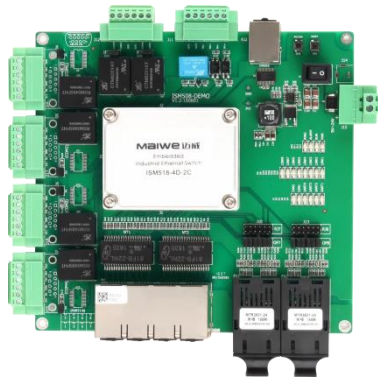# MIEN5105

5-Port Layer 2 Managed Embedded Industrial Switch with 4 Fieldbus Ports

- Support 2*100M fiber ports and 3/5 100M copper ports optional, support 2 RS485 and 2 CAN ports
- Support serial and CAN terminal device networking and achieve bidirectional transparent transmission between serial/CAN bus and Ethernet (UDP/TCP)
- Support the ring network redundancy protocols such as MW-Ringv1/v2, STP/RSTP to improve the network reliability
- Support DC12~48V power input
- Working temperature   -40 ℃ to +85 ℃

CE   FC   RoHS

Product Description

MIEN5105 series is a layer 2 managed embedded industrial Ethernet switch, integrating serial port and CAN networking. It provides 5*100M Ethernet ports, 2*RS485 and 2*CAN ports. The 100M ports support options of 5 copper or 2 fiber/3 copper ports. This switch adopts a storage and forward mechanism, with powerful bandwidth processing capabilities, automatically troubleshooting data packet errors, reducing transmission failures, and easily supporting 100Mbps networking to ensure stable, reliable, and efficient data transmission. It uses industrial grade components, combined with high standard system design and production control, embedded installation method, operating at a wide temperature range of -40 ℃ to+85 ℃ to adapt to various harsh working environments.

The MIEN5105 supports WEB network management function and various network protocols, such as MW-Ringv1/v2, STP/RSTP, VLAN, QoS, port mirroring, static multicast MAC address binding, network diagnosis, alarms and system online upgrades, which can improve network performance, reliability, and security, meet the needs of various complex networks. It supports multiple network working modes such as UDP, UDP Multicast, TCP Client/Server, etc., to achieve the serial and CAN terminal device networking. This product meets the requirements of complex networks and harsh industrial environments through strict testing of functions, high and low temperatures, safety regulations and EMC. It can be widely used in fields such as comprehensive energy, smart cities, rail transit, intelligent transportation, smart factories, and industrial automation.

⊕ Features and Benefits

- Support the exit and entry rate limits for broadcast, multicast, and unknown unicast messages

- Support the rate limits for unknown unicast, unknown multicast, known multicast and broadcast messages to suppress network storm

- Support QoS service quality, prioritize the transmission of voice, video, and important data in network devices, and solve network congestion

- Support 802.1Q VLAN and provides Access, Trunk, and Hybrid interfaces for easy partitioning of multiple broadcast domains, enhancing network security

- Support static multicast MAC address binding, reduce multicast data broadcast in the network, and save network resources

- Support alarm function, including port disconnection and ring status

- Support port mirroring and can collect data on port entry and exit for network detection and fault management

- Support RSTP spanning tree protocol, compatible with STP protocol, can eliminate network loops, and improve network reliability

- The serial/CAN ports support UDP or UDP multicast mode, can achieve point to point, point to multi-point, or multi-to-multi point communication through UDP protocol, which is fast and efficient

- The serial/CAN ports support TCP Client/Server mode,to establish connection by TCP protocol, provide reliable data transmission. The TCP Client can establish 1 connection, and the TCP Server can establish up to 4 connections

- Support multiple subcontracting mechanisms to convert serial/CAN data into Ethernet packets, meeting real-time requirements of different networks

- The CAN supports normal mode, loop mode and monitoring mode, which can be respectively used for normal communication, bus testing and troubleshooting

- Support CAN ID filtering, allows the standard or extended frame transmission within a specified ID range

- Support visitor and administrator users, with hierarchical management of different permission users
- Support online restart, factory reset and system upgrade

Specification

Software	
Switching	Support port configuration, rate configuration, storm detection and port statistics Support 802.1Q VLAN Support MAC address aging and static MAC address binding
Serial/CAN Port	Supports network operating modes such as UDP, TCP Client, TCP Server, and UDP Multicast Support serial port and network sending and receiving byte statistics Support CAN working modes of normal mode, monitoring mode, loop back mode Support CAN ID filtering and CAN frame statistics
Redundancy	Support MW-Ring/MW-RingV2 private ring network technology Support RSTP and is compatible with STP
Multicast	Support static multicast MAC address binding
Management and Maintenance	Support static IP Support QoS service quality, 802.1P/DSCP/port priority mapping, absolute and relative priority control Support port mirroring, Ping and alarm Support user management with different permissions, online restart, factory reset, system upgrade and configuration file upload/download Support MixView, MaxView management

Switch Capability	
Processing Type	Store-and-Forward
Backplane Bandwidth	1.22Gbps
Buffer Size	768Kbit
MAC Table Size	2K

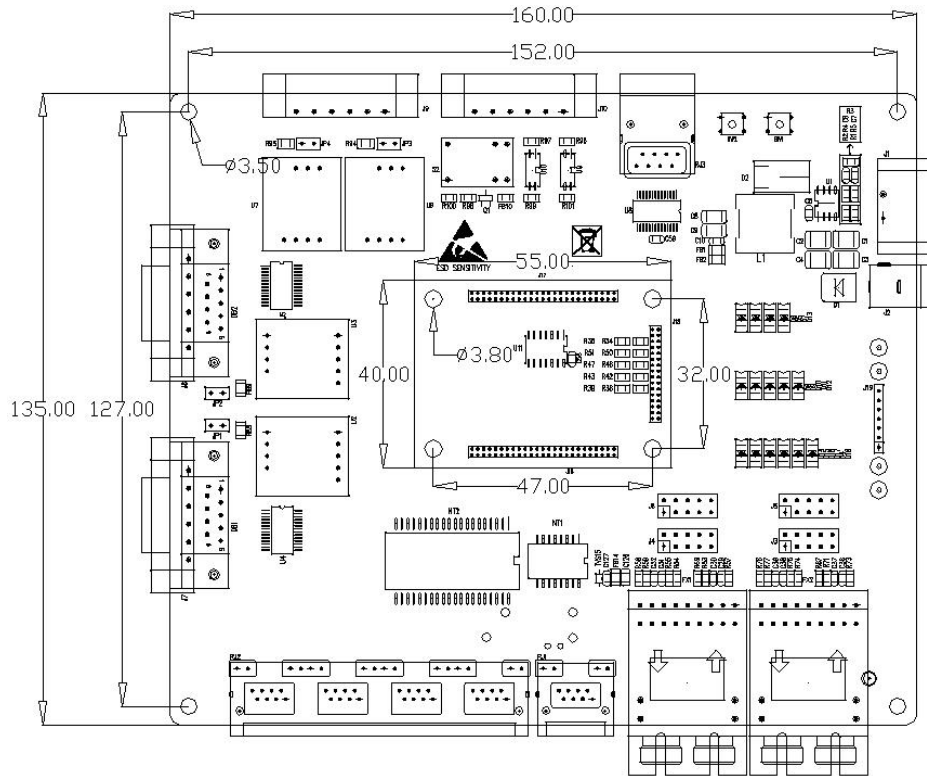| Interface	
100M Fiber port	2 100Base-FX fiber ports optional, support SC/FC/ST connector, single mode/multimode, wavelength, transmission distance optional
100M Copper port	3/5 10/100Base-T(X) auto-sensing RJ45ports optional, support full/half duplex, auto MDI/MDI-X
Serial Port	Port type: 2 RS485 serial ports Port signal: A+, B-, GND Baud rate: 600bps-115200bps Data bit: 7bit, 8bit Stop bit: 1 bit, 2 bit Check bit: no check, odd check, even check, Mark, Space Connector: 3.81 mm pitch 6-pin terminal block Terminal resistor: Built in 120Ω terminal resistor, can be set through jumper

MAIWE

Specification

CAN Port	Port type: 2*CAN bus ports Port signal: CANH, CANL, GND Baud rate: 5kbps -1000kbps Connector: 3.81 mm pitch 6-pin terminal block Terminal resistor: Built in 120Ω terminal resistor, can be set through jumper
Alarm	2*relay alarm inputs, 2 relay alarm outputs, 3.81 mm pitch 6-pin terminal block
Button	Restart and factory reset
Status LED	Power LED, Operation LED,Alarm LED, Ring LED, port LED, port rate LED, Serial/CAN port LED. Support external output of indicator signals

Power Supply

Input Voltage	DC12~48V
Power Consumption	<5W(full load)
Connection	5.08mm pitch 2-pin terminal block

Physical Characteristics

Dimensions	160x135(mm)
Installations	Embedded

Working Environment

Operating Temp	-40℃~+85℃
Storage Temp	-40℃~+85℃
Relative Humidity	5%~95% (non-condensing)

⬇ Dimensions

Unit: mm

Ordering Information

Standard Model	100M Fiber Port	100M Copper Port	RS485	CAN	Input Voltage
MIEN5105-2D485-2CAN	/	5	2	2	DC12~48V
MIEN5105-2F(M/S)-2D485-2CAN	2	3	2	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