

CES5105C Series

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



- Support 2/3x100M fiber ports, 3/2xcopper ports, 2xRS232/RS485/CAN or RS485+CAN
- Support serial/ CAN terminal equipment networking and realize transparent transmission between CAN bus and Ethernet (UDP/TCP)
- Fast ring redundancy with less than 20ms (MW-Ringv1/v2) improves system communication reliability
- Support DC 6~32V power input, anti-reverse protection
- -40°C ~ +75°C working temperature

Product Description

CES5105C series is a layer 2 100M network managed embedded switch. It supports 5*100M Ethernet ports and 2*S232/RS485/CAN or RS485+CAN optional, integrated with serial port device networking or CAN device networking. CES5105C-2F comes with 2*fiber and 3*copper ports; CES5105C-3F comes with 3*fiber and 3*copper ports. The switch adopts a store-and-forward mechanism and has powerful bandwidth processing capabilities to automatically troubleshoot data packet errors, reduce transmission failures, and ensure stable, reliable, and efficient data transmission. In line with high-standard system design and production control, it adopts embedded installation method, operates in a wide temperature range of -40°C~+75°C, can adapt to various harsh working environments, and has stable communication performance.

CES5105C series supports a range of features and network protocols, such as MW-Ringv1/v2, STP/RSTP, VLAN, QoS, port mirroring, static multicast, MAC address binding, network diagnosis, alarm and system online upgrade, etc., which can improve the performance, reliability and security of the network and meet the needs of requirements of various complex networks. Supports various network transmission modes such as UDP, TCP Client, TCP Server, UDP multicast, etc., to realize networking of serial port terminal devices. It meets the demands of complex networks and harsh industrial environments and can be widely applied in areas such as comprehensive energy, smart cities, rail transportation, intelligent traffic, smart factories, industrial automation, and more.

Features and Benefits

- Support broadcast, multicast and unknown unicast packet egress and ingress rate limits
- Support unknown unicast, unknown multicast, known multicast and broadcast packet rate limiting to suppress network storms
- Support QoS quality of service, allowing voice, video and important data to be transmitted preferentially in network equipment to solve network congestion
- Supports 802.1Q VLAN and provides Access, Trunk, and Hybrid interfaces to easily divide multiple broadcast domains and enhance network security
- Support static multicast MAC address binding, reducing the broadcast of multicast data in the network and saving network resources
- Support port mirroring, which can collect port inlet and outlet data for network detection and fault management
- Support RSTP (Rapid Spanning Tree Protocol) compatible with STP (Spanning Tree Protocol) to eliminate network loops and enhance network reliability
- The serial port/CAN supports UDP or UDP multicast mode. Point-to-point, point-to-multi point or multipoint-to-multipoint communication can be achieved through the UDP protocol, which is fast and efficient
- The serial port/CAN supports TCP Client/Server mode, establishing connections through the TCP protocol, providing reliable data transmission. TCP Client can establish 1 connection, and TCP Server can establish up to 4 connections.
- CAN supports normal mode, loopback mode and listening mode, which can be used for normal communication, bus testing and troubleshooting respectively.
- Support CAN ID filtering, allowing transmission of standard frames or extended frames within a specified ID range
- Support port statistics, including different types of data frames sent and received, and monitor port traffic
- Support visitors and administrators, and management of users with different permissions
- Support device online restart, factory reset and system upgrade

Technical Specifications

Software	
Switching	<p>Support port configuration, port rate configuration, storm detection, port aggregation, and port statistics</p> <p>Support 802.1Q VLAN and port-based VLAN</p> <p>Support MAC address aging</p>
CAN/Serial	<p>Supports UDP, TCP Client, TCP Server, UDP multicast and other network working modes</p> <p>Supports statistics on the number of bytes sent and received by serial port and network</p> <p>Supports CAN working modes such as normal mode, monitoring mode, loopback mode, etc.</p> <p>Support CAN ID filtering, CAN frame statistics</p>
Redundancy	<p>Support MW-Ringv1/v2 proprietary ring network technology</p> <p>Support RSTP (Rapid Spanning Tree Protocol) and is compatible with STP (Spanning Tree Protocol)</p>
Multicast	Support static multicast MAC address binding
Management and Maintenance	<p>Support static IP</p> <p>Support QoS quality of service, 802.1P/DSCP/port priority mapping, absolute and relative priority control</p> <p>Support port mirroring, ping, alarm</p> <p>Supports user management with different permissions, online restart, factory reset, system upgrade, and configuration file upload/download</p> <p>Support MixView, MaxView management</p>
Switch Capability	
Processing Type	Store-and-Forward
Backplane Bandwidth	1.2Gbps
Buffer Size	768kbit
MAC Table Size	2K

Technical Specifications

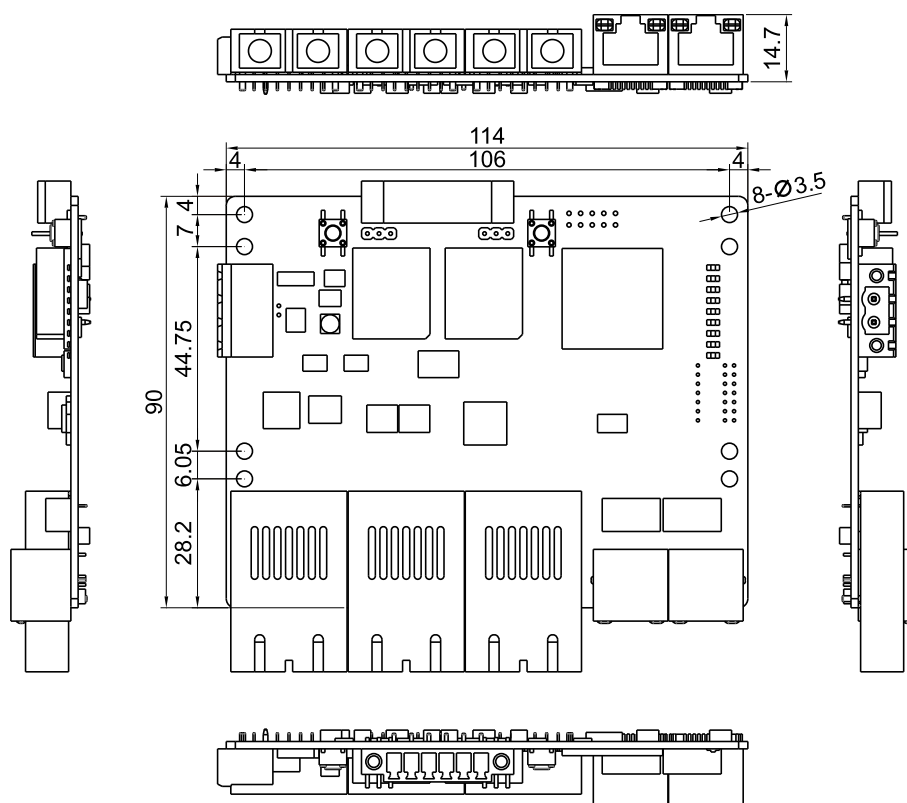
Interface	
100M Fiber Port	2/3*100Base-FX fiber ports, support single-mode/multi-mode, SC/FC/ST connector, wavelength and transmission distance optional
100M Copper Port	3/2*10/100Base-T(X) auto-sensing copper ports, support full/half duplex, auto MDI/MDI-X connection
Serial Port	<p>Interface type: 2*RS232 or 1/2*RS485</p> <p>Interface signals: A+/TX, B-/RX, GND</p> <p>Baud rate: 600bps-115200bps</p> <p>Data bits: 7bit, 8bit</p> <p>Stop bit: 1bit, 2bit</p> <p>Check digit: none, odd parity, even parity, Mark, Space</p> <p>Connection method: 6-position 3.81mm pitch locking terminal blocks</p> <p>Terminal resistor: built-in 120Ω terminal resistor, which can be set by jumper cap</p>
CAN Port	<p>Interface type: 1/2 CAN port optional</p> <p>Interface signals: CANH, CANL, GND</p> <p>Baud rate: 5kbps-1000kbps</p> <p>Connection method: 6-position 3.81mm pitch locking terminal blocks</p> <p>Terminal resistor: built-in 120Ω terminal resistor, which can be set by jumper cap</p>
Button	Restart and factory reset button
Statue LED	Power indicator light, operation indicator light, interface indicator light, electrical port speed indicator light, serial port/CAN indicator light, support external indicator light signals
Power Supply	
Input Voltage	DC 9-36V, reverse polarity protection
Power Consumption	<3.5W@DC24V
Connect	2-position 5.08mm pitch locking terminal blocks
Physical Characteristics	
Dimensions	114×90×14.7 mm

Technical Specifications

Installations	Embedded installation
Weight	0.12kg
Working Environment	
Operating Temp	-40℃~+75℃
Storage Temp	-40℃~+85℃
Relative Humidity	5%~95% (non-condensing)
Industry Standard	
EMC	IEC 61000-4-5 (Surge): Level 2 ※The network port supports 6kV lightning protection IEC 61000-4-4 (EFT): Level 3
Certification	CE, FCC, RoHS

Dimensions

Unit: mm (This series of products have the same installation dimensions and different interface types, take CES5105C-3F-2D485 dimensions as an example.)



Ordering Information

Standard Model	100M Fiber Port	100M Copper Port	RS232	RS485	CAN	Input Voltage
CES5105C-2F(M/S)-2D232	2	3	2	/	/	DC6-32V
CES5105C-2F(M/S)-2D485	2	3	/	2	/	
CES5105C-2F(M/S)-D485-CAN	2	3	/	1	1	
CES5105C-2F(M/S)-2CAN	2	3	/	/	2	
CES5105C-3F(M/S)-2D232	3	2	2	/	/	
CES5105C-3F(M/S)-2D485	3	2	/	2	/	
CES5105C-3F(M/S)-D485-CAN	3	2	/	1	1	
CES5105C-3F(M/S)-2CAN	3	2	/	/	2	



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