

## IEM7128G

Embedded Mounting

Multi-service Access Managed Industrial Ethernet Switch Module

- Support 16 10/100/1000Base-T(X), 4 1000Base-X and 8 QSGMII
- Adopt SW-Ring patent technology, support single ring, coupling ring, chain ring, Dual-homing ring network function, automatic recovery time of network failure < 20ms
- Input voltage: 3.3VDC±5%
- Support -40~75°C wide operating temperature range



## Introduction

IEM7128G is a multi-service access managed embedded industrial Ethernet switch module, which has the characteristics of high integration, small size, rich functions, simple and convenient. The product provides 16 Gigabit copper ports, 4 Gigabit fiber ports, 8 Gigabit QSGMII interfaces; Using embedded installation mode, users can customize the PCB floor specifications, through the module pins can choose any Ethernet interface type, to meet the needs of different application sites.

Network management system supports various network protocols and industrial standards, such as STP/RSTP/MSTP, 802.1Q VLAN, QoS, IGMP Static Multicast, LLDP, Port Trunking, Port Mirroring, etc. It also possesses complete management functions, including Port Configuration, Port Statistics, Access Control, 802.1X Authentication, Network Diagnosis, Rapid Configuration, Online Upgrading and so on, and supports CLI, WEB, Telnet, SNMP and other access methods. It can provide users with good experience with friendly design of network management system interface, simple and convenient operation.

Hardware adopts fanless, low power consumption, wide temperature and voltage design and has passed rigorous industrial standard tests, which can suit for the industrial scene environment with harsh requirements for EMC. It can be widely used in smart grid, rail transit, smart city, safety city, new energy, intelligent manufacturing and other industrial fields.

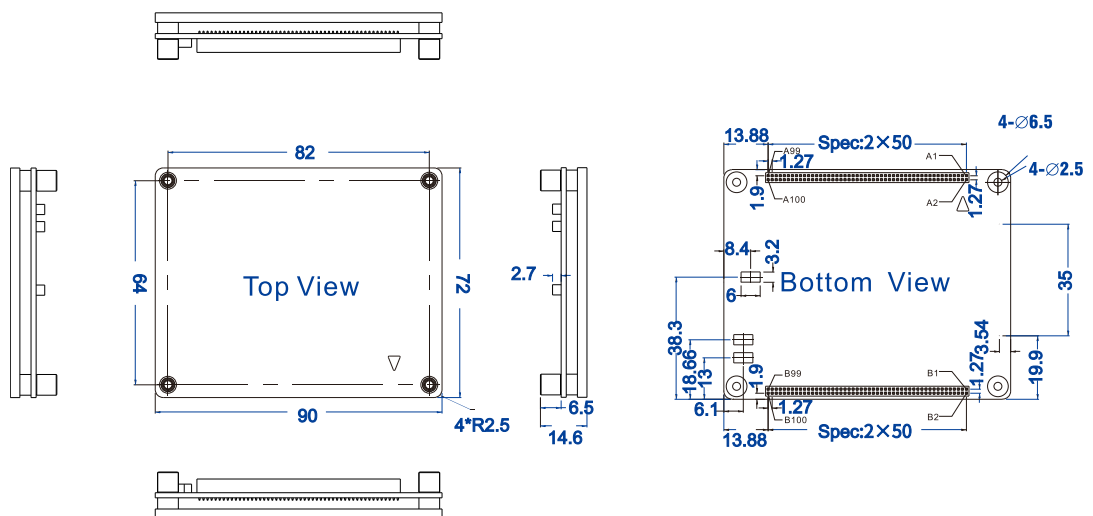
## Features and Benefits

- ⊙ SNMPv1/v2c is used for network management of various levels
- ⊙ RMON can be used for efficient and flexible network monitoring
- ⊙ Port mirroring can conduct data analysis and monitoring, which is convenient for online debugging
- ⊙ QoS supports real-time traffic classification and priority setting
- ⊙ File management is convenient for the device rapid configuration and online upgrading
- ⊙ Log management records the information of booting, operation and connection
- ⊙ Bandwidth management can reasonably distribute network bandwidth, preventing unpredictable network status
- ⊙ Port statistics can be used for the port real time traffic statistics
- ⊙ User password can conduct user hierarchical management to improve the device management security
- ⊙ ACL can enhance network flexibility and security
- ⊙ Relay alarm is convenient for troubleshooting of construction site
- ⊙ Storm suppression can restrain broadcast, unknown multicast and unicast
- ⊙ SSHD configuration could encrypt transmitted data, prevent DNS and IP spoofing
- ⊙ TELNET configuration and HTTPS configuration can guarantee the access security of data

- VLAN is used for simplifying network planning
- Port Trunking can increase network bandwidth and enhance the reliability of network connection to achieve optimum bandwidth utilization
- IGMP Snooping and static multicast can be used for filtering multicast traffic to save the network bandwidth
- SW-Ring and STP/RSTP can achieve network redundancy, preventing network storm
- LLDP can achieve automatic topology discovery, which is convenient for visual management
- E-mail alarm is convenient for rapid fault discovery during remote management
- Bandwidth management and flow control can reasonably distribute network bandwidth, preventing unpredictable network status
- Port isolation could achieve port isolation in the same VLAN and save Vlan resources
- Ping, Traceroute, Port Loopback and VCT could achieve network diagnosis and troubleshooting
- DHCP server can be used for distributing IP address with different strategies

## Dimension

Unit: mm



## Specification

<p>Standard &amp; Protocol</p>	<p>IEEE 802.3 for 10Base-T                  IEEE 802.3u for 100Base-TX and 100Base-FX                  IEEE 802.3z for 1000Base-X                  IEEE 802.3ab for 1000Base-T                  IEEE 802.3x for Flow Control                  IEEE 802.1D for Spanning Tree Protocol</p>
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	<p>IEEE 802.1w for Rapid Spanning Tree Protocol</p> <p>IEEE 802.1s for Multiple Spanning Tree Protocol</p> <p>IEEE 802.1Q for VLAN</p> <p>IEEE 802.1p for CoS</p> <p>IEEE 802.1X for 802.1X Authentication</p> <p>IEEE 802.1AB for LLDP</p> <p>IEEE 802.3ad for LACP</p>
<b>Management</b>	<p>SNMP v1/v2c Centralized Management of Equipment, RMON, Port Mirroring, DHCP Server, File Management, Port Statistics, Log management, LLDP</p>
<b>Security</b>	<p>Classification of User Permissions, Radius Server Authentication, ACL, 802.1X Authentication, Port Alarm, Power Supply Alarm, Storm Suppression, SSHD Configuration, Telnet Configuration, HTTPS Configuration</p>
<b>Switch Function</b>	<p>802.1Q Vlan, Static Aggregation, Bandwidth Management, Flow Control, Port Isolation</p>
<b>Unicast / Multicast</b>	<p>Static Multicast, GMRP, IGMP-Snooping</p>
<b>Redundancy Technology</b>	<p>SW-Ring, STP/RSTP/MSTP</p>
<b>Troubleshooting</b>	<p>Ping, Traceroute, Port Loopback</p>
<b>Time Management</b>	<p>SNTP</p>
<b>Interface</b>	<ul style="list-style-type: none"> <li>• Ethernet port</li> </ul> <p>Gigabit copper port: 16 10/100/1000Base-T(X)</p> <p>Gigabit fiber port: 4 1000Base-X</p> <p>QSGMII port: 8 10/100/1000BASE-T PHY</p> <ul style="list-style-type: none"> <li>• Console port</li> </ul> <p>TTL level serial data</p> <ul style="list-style-type: none"> <li>• Alarm interface</li> </ul> <p>support 1 alarm output</p>



Switch Property	Transmission mode: store and forward 100M forwarding speed: 148810pps Gigabit forwarding speed: 1488100pps MAC address: 16K Packet buffer size: 12Mbit Backplane bandwidth: 56G Switch time delay: <10μs
Power Supply	3.3VDC±5%
Power Consumption	No-load: <12W@3.3VDC
Working Environment	Operating temperature: -40~75°C Relative humidity: 5%~95% (no condensation)
Physical Characteristic	Installation: embedded mounting Dimension (W x H x D): 90mm×72mm×14.6mm Weight: 90g
Authentication	CE, FCC, RoHS
Warranty	5 years

## Ordering Information

Available Models	Gigabit Copper Port	Gigabit Fiber Port	QSGMII Interface	Power Supply
IEM7128G	16	4	8	3.3VDC±5%



Address: 3/B, Zone 1, Baiwangxin High Technology Industrial Park, Song Bai Road, Nanshan District, Shenzhen, 518108, China

TEL.: +86-755-26702668 ext 835 FAX: +86-755-26703485

E-mail: [ics@3onedata.com](mailto:ics@3onedata.com)

Website: [www.3onedata.com](http://www.3onedata.com)

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