SILVERNET
WIRELESS-NETWORK-SOLUTIONS

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Series 7 Large Managed Network Switch

SIL 731216MP

Industrial Gigabit PoE+ Managed Switches

Management SNMP | Management GUI | ERPS | Industrial -40℃ 75℃ | Buffer 4M | DIN Rail IP40

OVERVIEW

The SIL 731216MP is a high-performance, fully managed Layer 2 Switch which will operate reliably in even the harshest industrial environments. Its rugged industrial design ensures durability and longevity.

This Industrial Gigabit PoE+ Managed Switch offers flexible connectivity options, providing 16 x 10/100/1000Base-T ports and 12 x 1000Base-FX SFP slots.

Featuring a dual input design, fanless operation, low power consumption, and high reliability, the SIL 731216MP delivers exceptional performance in all environments.

This Switch is a dependable solution for extending Ethernet over distance via fibre daisy chain. This will simplify installation and reduce costs, as it eliminates the need for separate power supplies for IP video cameras and wireless access points.

The extended temperature range of the SIL 731216MP means it can be operated reliably in unconditioned outdoor cabinets and other harsh industrial environments.

Fully compliant with the IEEE802.3af/at standard, the 731216MP provides power over Ethernet through twisted pair cables. The fibre optic ports are equipped with modular SFP slots that support any MSA-compliant pluggable 1.25Gbps SFP transceiver.

Features

- 16 x 10/100/1000Base-T
- 12 x 1000Base-FX SFP slots
- 56Gbps Backplane bandwidth
- IEEE803.af/at compliant
- RJ45 supports auto MDI/MDI-X function
- Auto negotiation speed, half/full duplex
- Store and forward
- Max packet size: 10K bytes
- MAC address size: 8K
- Wide range power design (9~56VDC)
- Operating temperature (-40°C ~+75°C)
- Resettable fuse to protect against overcurrent
- Reverse Polarity Protection
- DIN Rail or wall mountable
- EFT protection for power line
- Ethernet ESD protection
- IP40 Protection
- Rugged

Distributed By:

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Technical Specifications

Part No.	SIL 731216MP
Ports	
Total number of ports	28
Gigabit Ethernet	16
Gigabit Fibre	12
Number of PoE ports	16
Max output per port	30W
Performance	
Switch Bandwidth	56Gbps
MAC address size	8K
Processing type	Store and Forward
Time delay	<10μs
Jumbo Frames	10K bytes
Packet buffer space	4Mbit
Power	
Power input	9~56VDC, Redundant (2 Inputs Available)
Power consumption	10W Max
Standards	
Standards	G.8032 (ERPS) IEEE.802.3, IEEE802.3u, IEEE802.3z, IEEE802.3x, IEEE802.3ad, IEEE802.1p, IEEE802.1x, IEEE802.3ab, IEEE802.1Q, IGMP snooping
EMC	UKCA BS EN 55032:2015/A11:2020 UKCA BS EN IEC 61000-3-2:2019+A1:2021 UKCA BS EN 61000-3-3:2013/A2:2021 UKCA BS EN 55035:2017/A11:2020
EMI	FCC Part 15 Class A
EMS	IEC 61000-4-2 (ESD): Level 4 (8K/15K) IEC 61000-4-3 (RS): Level 3 (10V/m) IEC 61000-4-4 (EFT): Level 3 (1V/2V) IEC 61000-4-5 (surge): Level 3 (4KV/2KV) IEC 61000-4-6 (RF coupling): (10V/m) IEC61000-4-8 (Power Frequency Magnetic Field):Level 4 (30A/m)
LVD	UKCA BS EN IEC 62368-1:2020+A11:2020
ROHS	UKCA BS IEC 62321-1:2013, IEC 62321-3-1:2013 UKCA BS IEC 62321-4:2013+AMD1:2017, IEC 62321-5:2013 UKCA BS IEC 62321-6:2015, IEC 62321-7-1:2015 UKCA BS IEC 62321-7-2:2017, IEC 62321-8:2017
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32 0.5m
Vibration	IEC 60068-2-6
Physical	
Dimensions and weight	155mm x 128mm x 88mm ; 1.35kg
Enclosure	IP40 Protection, Aluminium Alloy
Mounting	DIN Rail, Wall mountable
Environment	
Operating Temperature	-40~+75℃ (Storage -40~+85℃)
Humidity	5-90% (non-condensing)

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Standard Features

STANDARD FEATURES

Physical Ports

- RJ45 with Auto MDI/MDI-X and Auto-negotiation
- SFP 100/1000Base-X

Power over Ethernet

- Complies with IEEE 802.3af / IEEE 802.3at Power over Ethernet (minimum 48-56VDC input required)
- IEEE 802.3af / 802.3at / devices powered
- Supports PoE power up to 30.8 Watts for each PoE port
- Auto detect powered device (PD)
- Circuit protection helps reduce power interference between ports
- Remote power feeding up to 100m
- PoE Management features
- IEEE 802.3af and IEEE 802.3at mode switch control
- Total PoE power budget control
- Per port PoE function enable/disable
- PoE Admin mode control
- PoE Port Power feeding priority
- Per PoE port power limit
- PD classification detection
- Temperature threshold control
- PoE Usage threshold control
- PD Alive check/reboot
- PoE schedule

Rugged Design

- IP40 Aluminium metal case protection
- DIN-rail and wall mount design
- 48V DC, redundant power with polarity reverse protect function
- Supports EFT protection 4K for power line
- Supports 4K Ethernet ESD protection
- -40°C~+75°C operating temperature

Security

- IP-Based Access Control List (ACL)
- MAC-Based Access Control List
- Source MAC / IP address binding
- DHCP Snooping to filter untrusted DHCP messages

Layer 2 Features

- Prevents packet loss with back pressure (Half-Duplex) and IEEE 802.3x pause frame flow control (Full-Duplex)
- Store and Forward architecture and runt/CRC filtering
- Storm control support
- Broadcast / Multicast / Unicast
- Supports VLAN
- IEEE 802.1Q Tagged VLAN
- Up to 255 VLANs groups, out of 4094 VLAN IDs
- Provider Bridging (VLAN Q-in-Q) support (IEEE 802.1ad)
- Supports Spanning Tree Protocol
- STP, IEEE 802.1D Spanning Tree Protocol
- RSTP, IEEE 802.1w Rapid Spanning Tree Protocol
- MSTP, IEEE 802.1s Multiple Spanning Tree Protocol, spanning tree by VLAN
- BPDU Guard
- Supports Link Aggregation
- 802.3ad Link Aggregation Control Protocol (LACP)
- Provides Port Mirror (1-to-1)
- Port mirroring to monitor the incoming or outgoing traffic on a particular port
- Loop protection to reduce the possiblity of broadcast loops

Quality of Service

- Ingress shaper and egress rate limit per port bandwidth control
- 8 priority queues on all switch ports
- Traffic classification
- IEEE 802.1p CoS
- Typical network application
- Strict priority and Weighted Round Robin (WRR) CoS policies
- Supports QoS and In/Out bandwidth control on each port

Multicast

- Supports IGMP snooping v1, v2 and v3
- Supports MLD snooping v1 and v2
- Querier mode support
- IGMP snooping port filtering

Management

- Switch Management Interfaces
- Console / Telnet Command Line Interface
- Web switch management
- SNMP v1 and v2c switch management
- Built-in Trivial File Transfer Protocol (TFTP) client
- Firmware upload / download via HTTP / TFTP
- NTP (Network Time Protocol)
- Reset button for system reboot or reset to factory default

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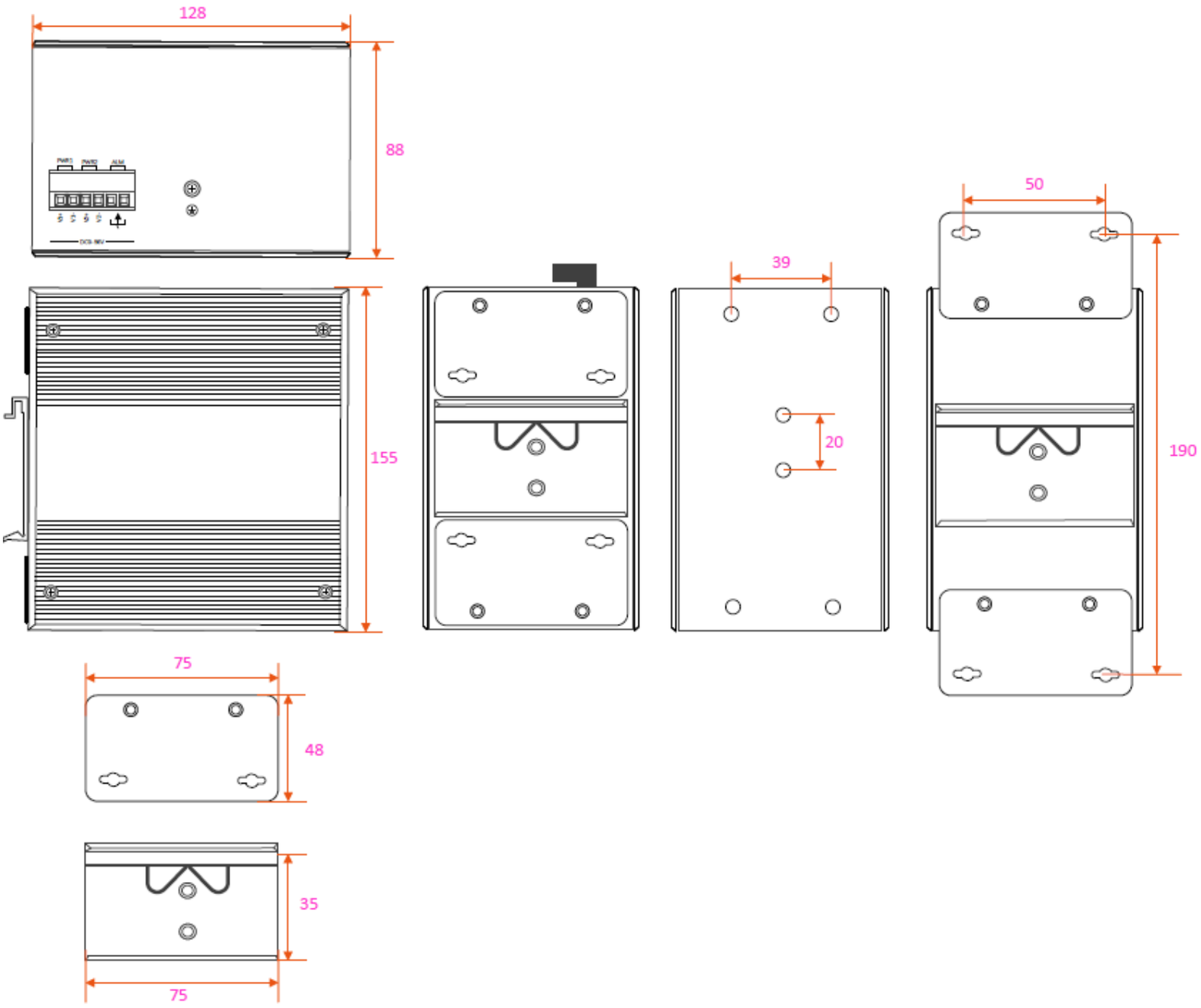
Dimension Diagrams



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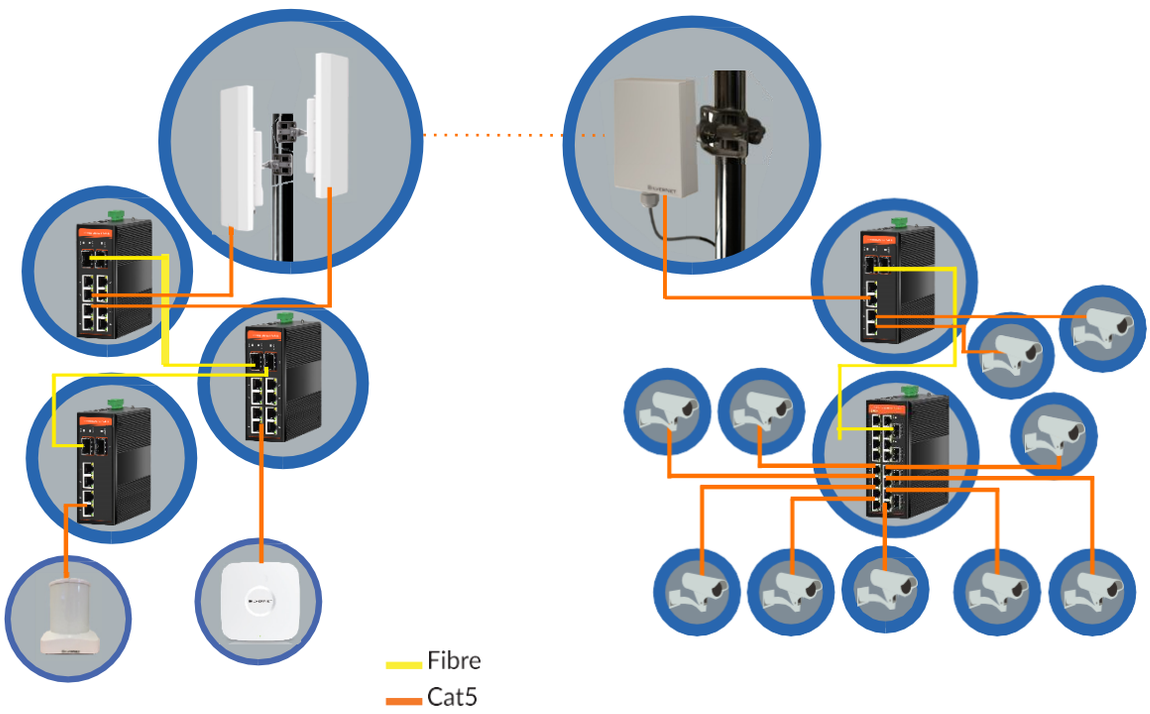
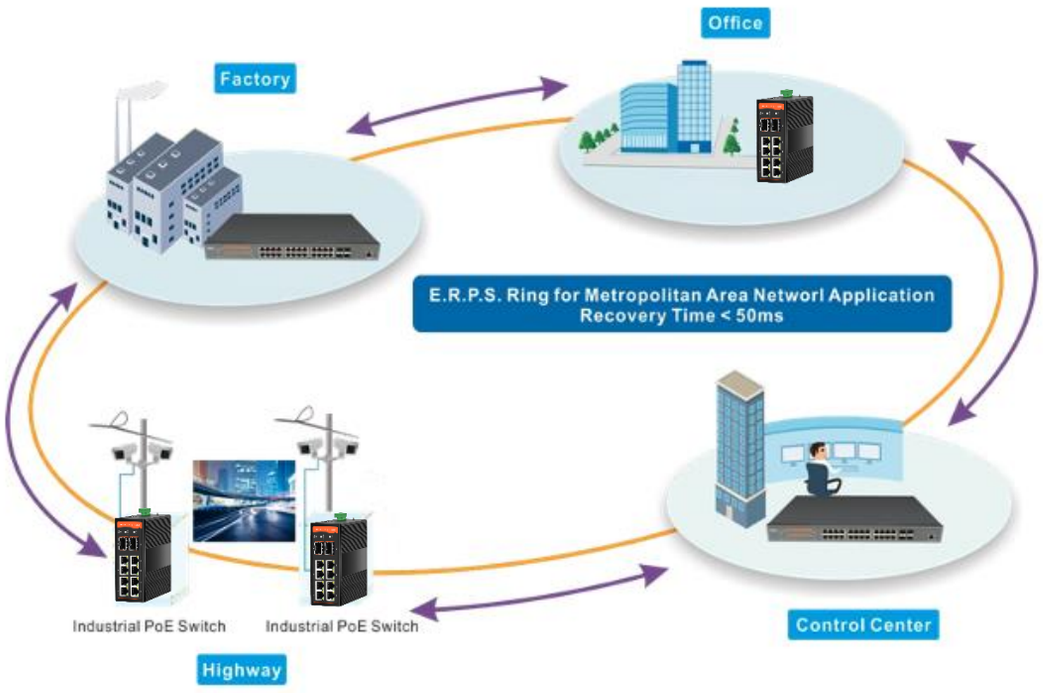
Typical Applications

Connection Applications



Redundant Ring

Fast Recovery for Critical Network Applications



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Part Numbers & Accessories

Managed Fibre Switches

Part Code	Description
SIL 73204MP	10/100/1000M 2Gx4GE POE+, two SFP slot, Excluding Power Supply
SIL 73208MP	10/100/1000M 2Gx8GE POE+, two SFP slot, Excluding Power Supply
SIL 73416MP	10/100/1000M 4Gx16GE POE+, four SFP slot, Excluding Power Supply
SIL 73024MP	10/100/1000M 24GE, 16 ports POE+, Excluding Power Supply
SIL 731216MP	10/100/1000M 16GE, 16 Ports POE+, Twelve SFP Slot, Excluding Power Supply

Power Supplies

Part Code	Description
SIL NDR-120-48 (48V 2.5A)	120W 48V 2.5A Industrial Din Rail Power Supply
SIL NDR-240-48 (48V 5A)	240W 48V 5A Industrial Din Rail Power Supply
SIL NDR-480-48 (48V 10A)	480W 48V 10A Industrial Din Rail Power Supply

1Gbps Fibre Transmission

Part Code	Description
SIL-SFP0-01-25-X850-0-5D	1G Multimode 850nm SFP, 550m
SIL-SFP0-01-25-X131-10XD	1G Singlemode 1310nm SFP, 10km
SIL-SFP0-01-25-X131-40XD	1G Singlemode 1310nm SFP, 40km
SIL-SFP0-01-25-X155-80XD	1G Singlemode 1550nm SFP, 80km
1Gbps BiDi	
SIL-SFP0-01-25-B131-10XD	1G SM 1310nm TX FP 10km with DDM, 1550nm RX
SIL-SFP0-01-25-B155-10XD	1G SM 1550nm TX FP 10km with DDM, 1310nm RX
SIL-SFP0-01-25-B139-10XD	1G SM 1310nm TX FP 10km with DDM, 1490nm RX
SIL-SFP0-01-25-B149-10XD	1G SM 1490nm TX FP 10km with DDM, 1310nm RX
SIL-SFP0-01-25-B131-40XD	1G SM 1310nm TX DFB 40km with DDM, 1550nm RX
SIL-SFP0-01-25-B155-40XD	1G SM 1550nm TX DFB 40km with DDM, 1310nm RX
SFP to Ethernet	
SIL-SFP0-01-25-XXXT-0-1	1G RJ45 Copper SFP, 100m