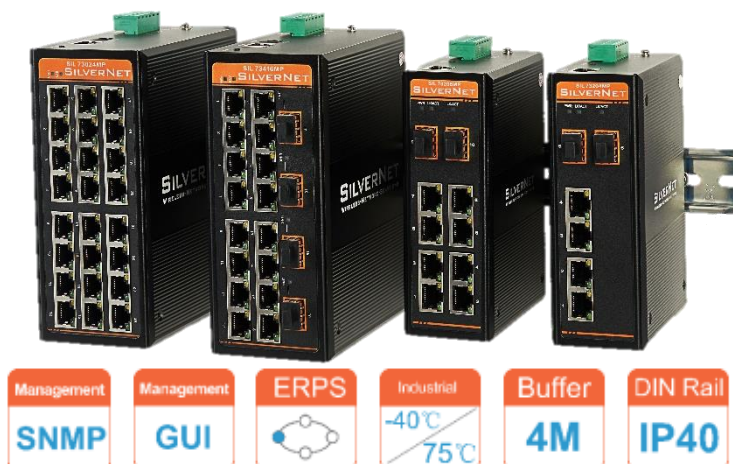


## Series 7 Managed Network Switch

SIL 73204MP  
SIL 73208MP  
SIL 73416MP  
SIL 73024MP

### Industrial Gigabit PoE+ Managed Switches



#### OVERVIEW

The SilverNet Industrial Gigabit PoE+ Managed Switches are fully managed layer 2 switches. The rugged industrial design makes the switches ideal for installation in harsh environments.

The Industrial Gigabit PoE+ Managed Switches come in four different versions, 4 or 8 x 10/100/1000Base-T ports with 2 x 1000Base-FX SFP slots, 16 x 10/100/1000Base-T ports with 4 x 1000Base-FX SFP slots and 24 x 10/100/1000Base-T ports.

The Industrial Gigabit PoE+ Managed Switches have dual input design, no fan, low power consumption and high reliability.

The SilverNet Industrial Gigabit PoE+ Managed Switches are ideal for extending Ethernet over distance via fibre daisy chain, whilst eliminating the need for individual power supplies for IP video cameras and wireless access points. The switches have an extended temperature range to enable them to cope with unconditioned outdoor cabinets and industrial environments.

The SilverNet Industrial Gigabit PoE+ Managed Switches are fully compliant with the IEEE802.3af/at standard, providing Power-over-Ethernet over twisted pair cables. The fibre optics ports feature a modular SFP slot for any kind of MSA-compliant pluggable 1.25Gbps SFP transceiver.

#### Features

- 4, 8, 16 or 24 x 10/100/1000Base-T
- 2 or 4 x 1000Base-FX SFP slots
- 20Gbps or 56Gbps 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

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# Technical Specifications

| Part No.              | SIL 73204MP                                                                                                                                                                                                                                                               | SIL 73208MP                                             | SIL 73416MP                                             | SIL 73024MP                                              |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|---------------------------------------------------------|----------------------------------------------------------|
| Ports                 |                                                                                                                                                                                                                                                                           |                                                         |                                                         |                                                          |
| Total number of ports | 6 ports                                                                                                                                                                                                                                                                   | 10 ports                                                | 20 ports                                                | 24 ports                                                 |
| Gigabit Ethernet      | 4 ports                                                                                                                                                                                                                                                                   | 8 ports                                                 | 16 ports                                                | 24 ports                                                 |
| Gigabit Fibre         | 2 SFP                                                                                                                                                                                                                                                                     |                                                         | 4 SFP                                                   | N/A                                                      |
| Number of PoE ports   | 4 ports                                                                                                                                                                                                                                                                   | 8 ports                                                 | 16 ports                                                | 16 ports (Ports 1-16)                                    |
| Max output per port   | 30W                                                                                                                                                                                                                                                                       |                                                         |                                                         |                                                          |
| Performance           |                                                                                                                                                                                                                                                                           |                                                         |                                                         |                                                          |
| Switch Bandwidth      | 20Gbps                                                                                                                                                                                                                                                                    |                                                         | 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 (Excluding PoE)                                                                                                                                                                                                                                                      |                                                         | <15W (Excluding PoE)                                    |                                                          |
| 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<br>UKCA BS EN IEC 61000-3-2:2019+A1:2021<br>UKCA BS EN 61000-3-3:2013/A2:2021<br>UKCA BS EN 55035:2017/A11:2020                                                                                                                            |                                                         |                                                         |                                                          |
| EMI                   | FCC Part 15 Class A                                                                                                                                                                                                                                                       |                                                         |                                                         |                                                          |
| EMS                   | IEC 61000-4-2 (ESD): Level 4 (8K/15K)<br>IEC 61000-4-3 (RS): Level 3 (10V/m)<br>IEC 61000-4-4 (EFT): Level 3 (1V/2V)<br>IEC 61000-4-5 (surge): Level 3 (4KV/2KV)<br>IEC 61000-4-6 (RF coupling): (10V/m)<br>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<br>UKCA BS IEC 62321-4:2013+AMD1:2017, IEC 62321-5:2013<br>UKCA BS IEC 62321-6:2015, IEC 62321-7-1:2015<br>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 | Dimensions Approx.<br>120 x 90 x 40mm<br>Weight: 0.6kg                                                                                                                                                                                                                    | Dimensions Approx.<br>120 x 90 x 40mm<br>Weight: 0.65kg | Dimensions Approx.<br>160 x 140 x 75mm<br>Weight: 1.1kg | Dimensions Approx.<br>160 x 140 x 70mm<br>Weight: 1.15kg |
| Enclosure             | IP40 Protection, Aluminium Alloy                                                                                                                                                                                                                                          |                                                         |                                                         |                                                          |
| Mounting              | DIN Rail, Wall mountable                                                                                                                                                                                                                                                  |                                                         |                                                         |                                                          |
| Environment           |                                                                                                                                                                                                                                                                           |                                                         |                                                         |                                                          |
| Operating Temperature | -40~+75°C (Storage -40~+85°C)                                                                                                                                                                                                                                             |                                                         |                                                         |                                                          |
| Humidity              | 5-90% (non-condensing)                                                                                                                                                                                                                                                    |                                                         |                                                         |                                                          |

## Standard Features

### STANDARD FEATURES

#### Physical Ports

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

#### SIL 73204MP

4-port 10/100/1000Base-T with PoE+ and 2-ports SFP (fibre) 100/1000Base-X

#### SIL 73208MP

8-port 10/100/1000Base-T with PoE+ Plus 2-ports SFP (fibre) 100/1000Base-X

#### SIL 73416MP

16-port 10/100/1000Base-T with PoE+ and 4-ports SFP (fibre) 100/1000Base-X

#### SIL 73024MP

24-port 10/100/1000Base-T with ports 1 to 16 operating on PoE+

#### 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 possibility 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

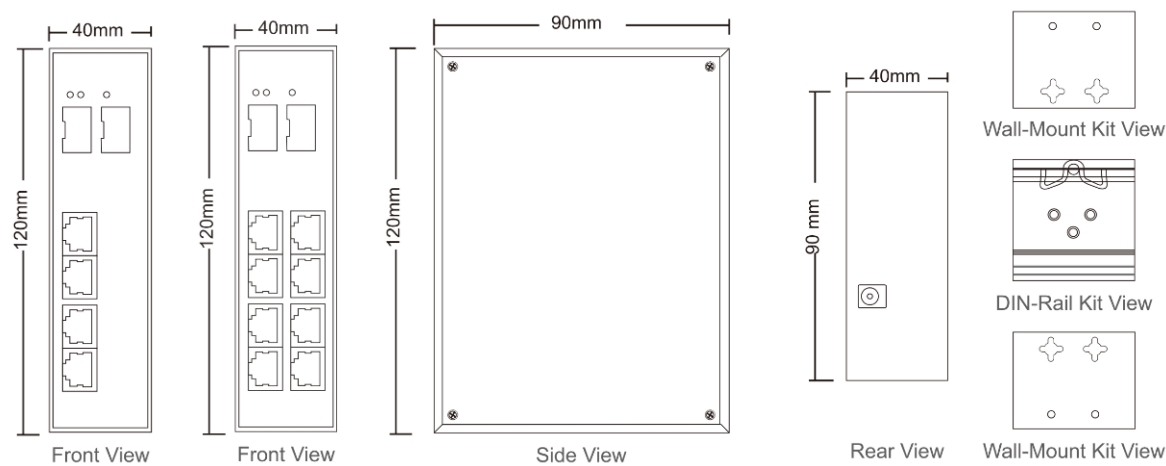
Supports IGMP snooping v1, v2 and v3  
Supports MLD snooping v1 and v2  
Querier mode support  
IGMP snooping port filtering

#### Management

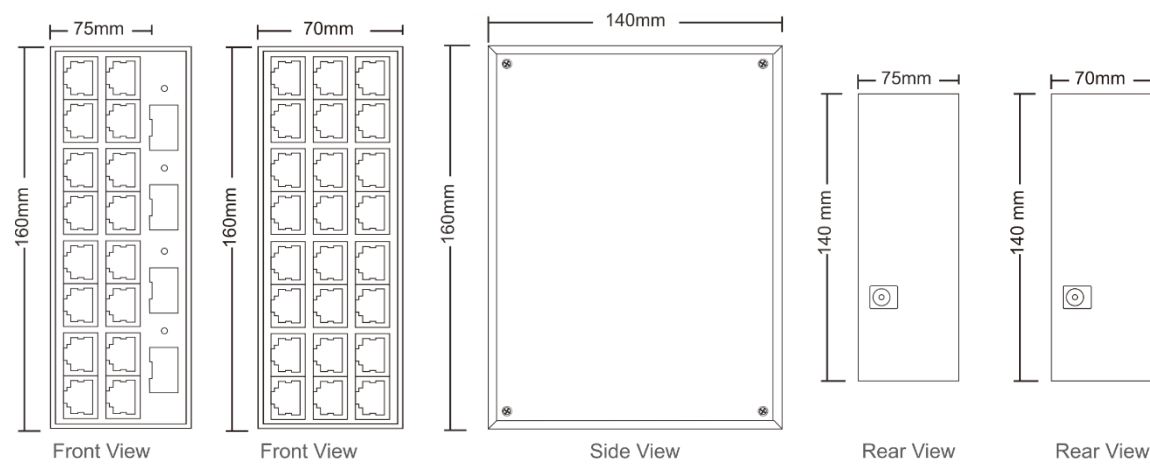
Switch Management Interfaces  
Console / Telnet Command Line Interface  
Web switch management  
SNMP v1 and v2c switch management  
Built-in Trivial File Transfer Protocol (TFTP) client  
Firmware upload / download via HTTP / TFTP  
NTP (Network Time Protocol)  
Reset button for system reboot or reset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

# Dimension Diagrams

## SIL 73204MP & SIL 73208MP

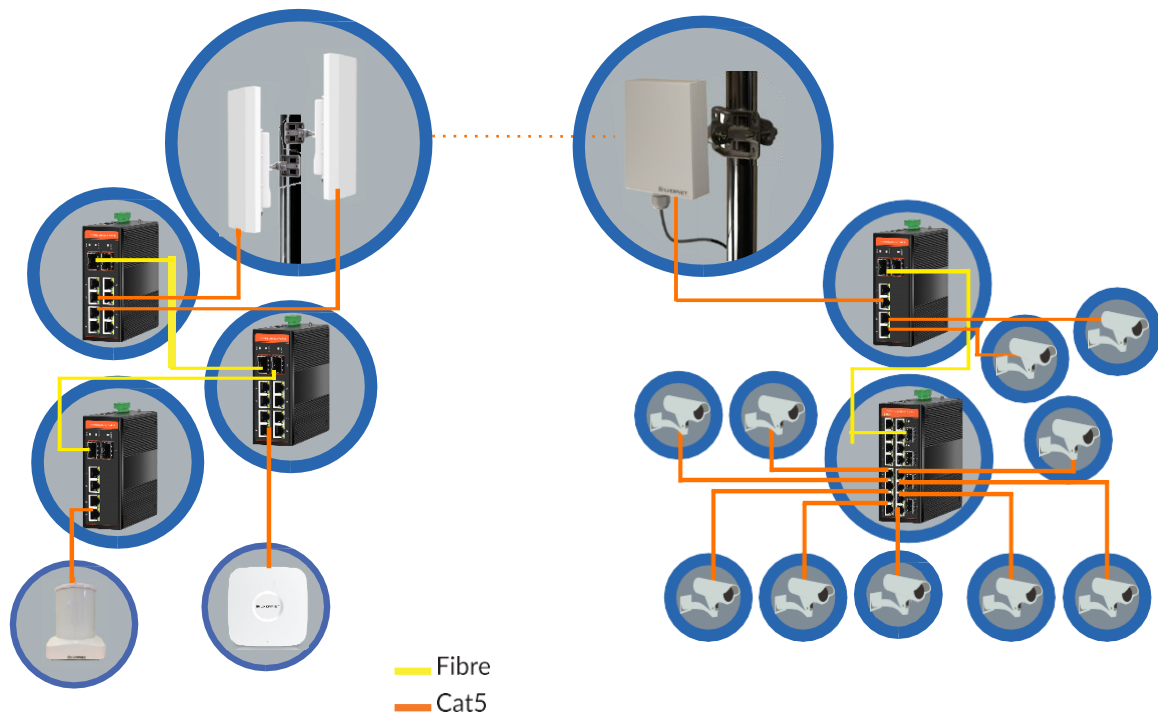


## SIL 73416MP & SIL 73024MP



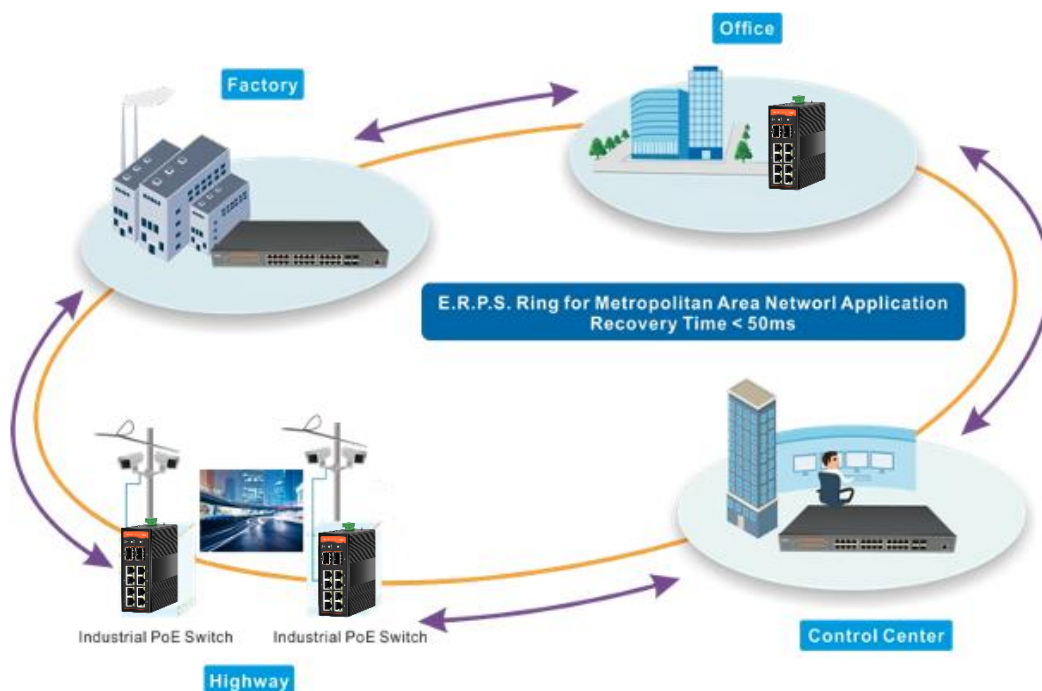
## Typical Applications

### Connection Applications



### Redundant Ring

Fast Recovery for Critical Network Applications



## 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         |

### 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                     |