



## IPS-1042FA Series

**Industrial 6-port slim type unmanaged PoE Ethernet switch with 4x10/100Base-T(X) P.S.E. and 2x100Base-FX**

### Features

- IPS-1042FA series provide 4x10/100Base-T(X) PoE(P.S.E.) and 2x100Base-FX single/multi-mode fiber ports
- Supports IEEE 802.3at compliant 30Watts PoE per port
- Support auto-negotiation and auto-MDI/MDI-X
- Support store and forward transmission
- Support flow control
- Support surge protection technology
- Warning system by relay output
- Slim type rigid IP-30 housing design
- DIN-Rail and wall mounting enabled

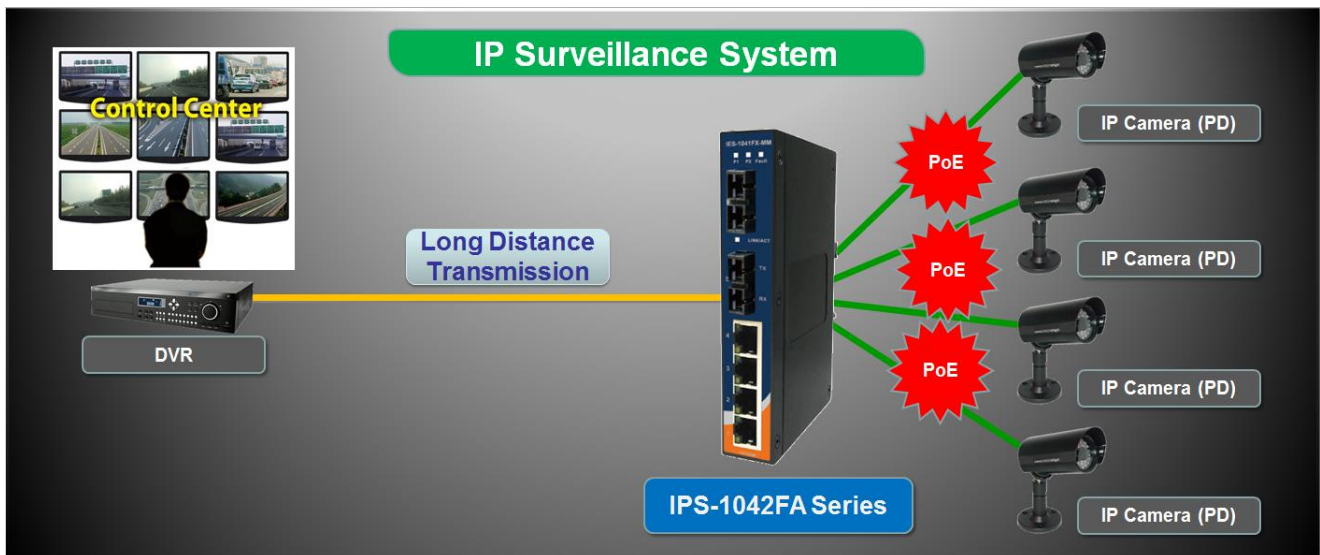


### Introduction

IPS-1042FA series are unmanaged PoE Ethernet switches with 4 x 10/100Base-T(X) P.S.E. and 2x100Base-FX ports. IPS-1042FA series supports Power over Ethernet, a system to transmit electrical power, along with data, to remote devices over standard twisted-pair cable in an Ethernet network. IPS-1042FA series has 4X10/100Base-T(X) P.S.E. (Power Sourcing Equipment) ports. P.S.E. is a device (switch or hub for instance) that will provide power in a PoE setup. IPS-1042FA series support redundant power inputs, configurable relay output alarm and rigid IP-30 housing. In addition, the wide operating temperature range from -40 to 75°C can satisfy most of operating environment.

### Practical Operation

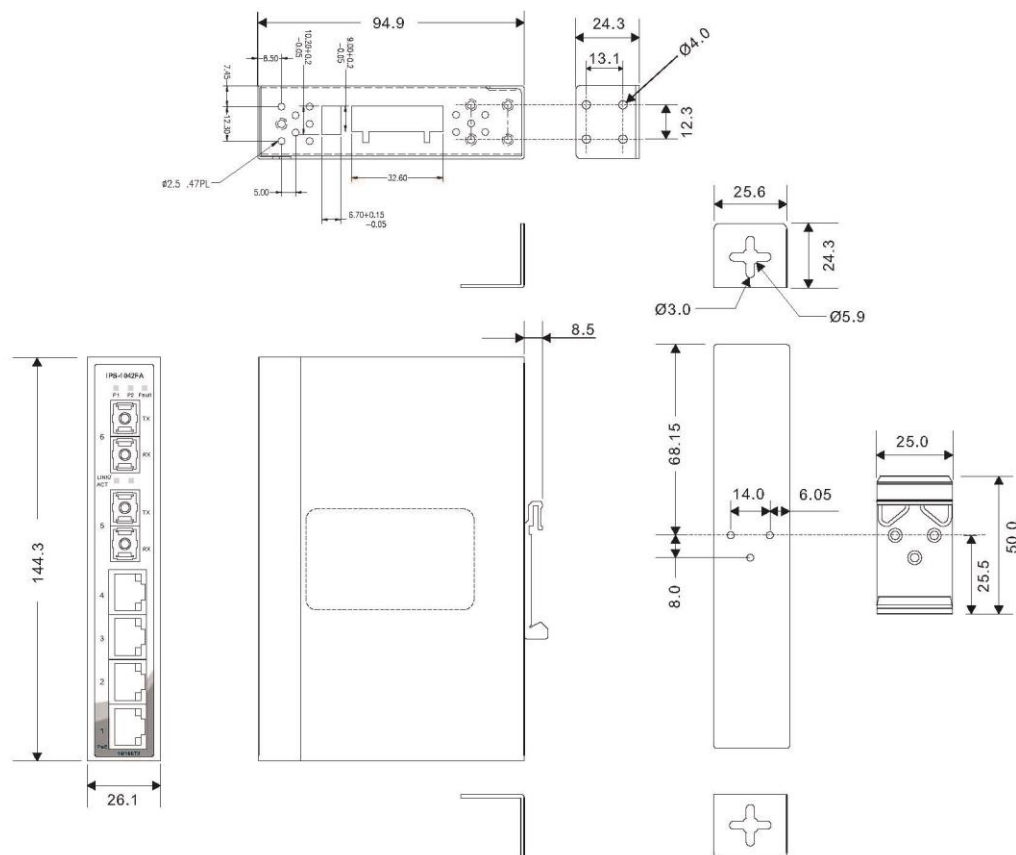
IPS-1042FA series can be used in connecting several Ethernet devices like Ethernet I/O, IP-Camera or other Ethernet switches. In addition, there are two different power inputs at terminal block to avoid interruption caused by power down. When the primary DC power input fails, the backup power input will take over immediately to guarantee a non-stop operation.



Connections of Ethernet devices

## Dimension

Unit = mm (Tolerance  $\pm 0.5$  mm)



## PoE Pin Definition

- 10/100Base-T(X) P.S.E. RJ-45 port

| RJ-45 Pin Definition |                            |
|----------------------|----------------------------|
| Pin No.              | Description                |
| #1                   | TD+ with PoE Power input + |
| #2                   | TD- with PoE Power input + |
| #3                   | RD+ with PoE Power input - |
| #6                   | RD- with PoE Power input - |

## Specifications

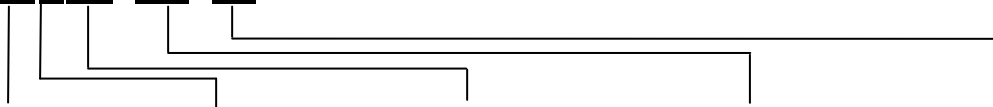
| ORing Switch Model                                       |                                                                                                                                            | IPS-1042FA-MM-SC        | IPS-1042FA-SS-SC |
|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|------------------|
| Physical Ports                                           |                                                                                                                                            |                         |                  |
| 10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX with P.S.E. |                                                                                                                                            | 4                       |                  |
| Fiber Ports Specification                                | Fiber Ports Number                                                                                                                         | 2                       | 2                |
|                                                          | Fiber Ports standard                                                                                                                       | 100Base-FX              | 100Base-FX       |
|                                                          | Fiber Mode                                                                                                                                 | Multi-mode              | Single-mode      |
|                                                          | Fiber Diameter (μm)                                                                                                                        | 62.5/125 μm & 50/125 μm | 9/125 μm         |
|                                                          | Fiber Optical Connector                                                                                                                    | SC                      | SC               |
|                                                          | Typical Distance (Km)                                                                                                                      | 2 Km                    | 30 Km            |
|                                                          | Wavelength (nm)                                                                                                                            | 1310 nm                 | 1310 nm          |
|                                                          | Max. Output Optical Power (dbm)                                                                                                            | -14 dbm                 | -8 dbm           |
|                                                          | Min. Output Optical Power (dbm)                                                                                                            | -23.5 dbm               | -15 dbm          |
|                                                          | Max. Input Optical Power (Saturation)                                                                                                      | 0 dbm                   | 0 dbm            |
|                                                          | Min. Input Optical Power (Sensitivity)                                                                                                     | -31 dbm                 | -34 dbm          |
|                                                          | Link Budget (db)                                                                                                                           | 7.5 db                  | 19 db            |
| Technology                                               |                                                                                                                                            |                         |                  |
| Ethernet Standards                                       | IEEE 802.3 for 10Base-T,<br>IEEE 802.3u for 100Base-T(X) and 100Base-FX,<br>IEEE 802.3x for Flow control<br>IEEE 802.3at PoE specification |                         |                  |
| MAC Table                                                | 1K MAC addresses                                                                                                                           |                         |                  |
| Processing                                               | Store-and-Forward                                                                                                                          |                         |                  |
| Switch Latency                                           | <7us                                                                                                                                       |                         |                  |
| Switch Bandwidth                                         | 1.2Gbps                                                                                                                                    |                         |                  |
| Packet buffer size                                       | 448K bits                                                                                                                                  |                         |                  |
| LED indicators                                           |                                                                                                                                            |                         |                  |
| Power Indicator                                          | Green : Power LED x 2                                                                                                                      |                         |                  |
| Fault Indicator                                          | Amber : Indicate PWR1 or PWR2 failure                                                                                                      |                         |                  |
| 10/100Base-T(X) RJ45 Port Indicator                      | Upper for Lick/Act indicator, Green for port Link/Act.<br>Lower for PoE indicator, Green for PoE power injected.                           |                         |                  |
| 100Base-FX Fiber Port Indicator                          | Green for port Link/Act.                                                                                                                   |                         |                  |
| Fault contact                                            |                                                                                                                                            |                         |                  |
| Relay                                                    | Relay output to carry capacity of 1A at 24VDC                                                                                              |                         |                  |
| Power                                                    |                                                                                                                                            |                         |                  |

|                             |                                                                                                                                                                                   |                                                          |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| Redundant Input Power       | Dual DC inputs. 50~57VDC on 6-pin terminal block.                                                                                                                                 |                                                          |
| Power Consumption (Typ.)    | 4 Watts<br>(power consumption of P.S.E. is not included)                                                                                                                          | 4 Watts<br>(power consumption of P.S.E. is not included) |
| PoE power budget            | 120W                                                                                                                                                                              |                                                          |
| Overload Current Protection | Present                                                                                                                                                                           |                                                          |
| Reverse Polarity Protection | Present                                                                                                                                                                           |                                                          |
| Physical Characteristic     |                                                                                                                                                                                   |                                                          |
| Enclosure                   | IP-30                                                                                                                                                                             |                                                          |
| Dimension (W x D x H)       | 26.1(W) x 94.9(D) x 144.3(H) mm (1.03 x 3.74 x 5.68 inch.)                                                                                                                        |                                                          |
| Weight (g)                  | 438 g                                                                                                                                                                             |                                                          |
| Environmental               |                                                                                                                                                                                   |                                                          |
| Storage Temperature         | -40 to 85°C (-40 to 185°F)                                                                                                                                                        |                                                          |
| Operating Temperature       | -40 to 75°C (-40 to 167°F)                                                                                                                                                        |                                                          |
| Operating Humidity          | 5% to 95% Non-condensing                                                                                                                                                          |                                                          |
| Regulatory approvals        |                                                                                                                                                                                   |                                                          |
| EMC                         | CE EMC (EN 55024, EN 55032), FCC Part 15B                                                                                                                                         |                                                          |
| EMI                         | EN 55032, CISPR32, EN 61000-3-2, EN 61000-3-3, FCC Part 15B class A                                                                                                               |                                                          |
| EMS                         | EN 55024 (IEC/EN 61000-4-2 (ESD), IEC/EN 61000-4-3 (RS),IEC/EN 61000-4-4 (EFT), IEC/EN 61000-4-5 (Surge), IEC/EN 61000-4-6 (CS), IEC/EN 61000-4-8(PFMF), IEC/EN 61000-4-11 (DIP)) |                                                          |
| Shock                       | IEC60068-2-27                                                                                                                                                                     |                                                          |
| Free Fall                   | IEC60068-2-31                                                                                                                                                                     |                                                          |
| Vibration                   | IEC60068-2-6                                                                                                                                                                      |                                                          |
| Safety                      | UL 60950-1, CSA C22.2 No. 60950-1-07, EN 60950-1, IEC 60950-1                                                                                                                     |                                                          |
| MTBF                        | 576828 hrs                                                                                                                                                                        | 624538 hrs                                               |
| Warranty                    | 5 years                                                                                                                                                                           |                                                          |

Note : HW version 5.0

## Ordering Information

**IPS-1AABCC-DD-EE**



| Code Definition | 10/100Base-T(X)<br>P.S.E.<br>Number | Port         | Additional<br>Port Number | Additional Port Type                  | Fiber Optical Mode | Fiber Optical Connector |
|-----------------|-------------------------------------|--------------|---------------------------|---------------------------------------|--------------------|-------------------------|
| Option          | - 04: 4 ports                       | - 2: 2 ports | - FA: 100Base-FX          | - MM: Multi-mode<br>- SS: Single-mode | - SC: SC connector |                         |

|                 | Model Name       | Description                                                                                                                                      |
|-----------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Available Model | IPS-1042FA-MM-SC | Industrial 6-port slim type unmanaged PoE Ethernet switch with 4x10/100Base-T(X) P.S.E. and 2x100Base-FX, multi-mode, 2Km/1310nm, SC connector   |
|                 | IPS-1042FA-SS-SC | Industrial 6-port slim type unmanaged PoE Ethernet switch with 4x10/100Base-T(X) P.S.E. and 2x100Base-FX, single-mode, 30Km/1310nm, SC connector |

## Packing List

- IPS-1042FA x 1
- Quick Installation Guide x 1
- Wall-mount Kit x 1
- Din-Rail Kit x 1

## Optional Accessories

- DR-75-48 : 75 Watts@48VDC DIN-Rail power supply
- DR-120-48 : 120 Watts@48VDC DIN-Rail power supply
- SDR-240-48 : 240 Watts@48VDC DIN-Rail power supply
- SDR-480-48 : 480 Watts@48VDC DIN-Rail power supply