OSD
NETWORKS

Operator Manual

OSD2184P / PW

**Micro 10/100/1000Base-T to 100/1000Base-X
3-Port Switch with IEEE802.3af/at/bt
& PoH PoE Source**

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1   TECHNICAL SUMMARY

1.1   BRIEF DESCRIPTION

1.1.1   OVERVIEW

The OSD2184P is a 3-port industrial ethernet switch offering Power over Ethernet meeting the latest IEEE802.3bt PoE specification with continued support for devices requiring IEEE802.3af/at and HDBase-T (PoH) PoE. Each of the two RJ45 ports is capable of providing 90W of power with a total power budget of 170W. This allows the latest PoE devices such as IP cameras, Wireless Access Points, microwave links and VOIP phones to be easily connected to your network. Support for SNMP v1,v2c,v3, VLAN and port based MAC address security make the OSD2184P suitable for use in critical networks. Optional DHCP allows for automatic assignment of IP address, subnet mask, default gateway address and domain name server (DNS) address for ease of integration into the network. With a compact design the OSD2184P can easily be mounted inside a network enclosure or a Smart Pole using the DIN rail or wall mounting brackets provided. Additionally, the OSD2184PW version can be powered from a 12VDC to 57VDC supply. A rugged IP30 casing, fanless design and wide operating temperature range from -40 to +75°C make this product ideally suited for use in a wide range of harsh industrial environments.

1.1.2   FEATURES AND BENEFITS

▲ Complies with IEEE802.3i/802.3u/ 802.3ab 10/100/1000Base-T, IEEE802.3u 100Base-Fx, IEEE802.3z 1000Base-Lx/Sx standards

▲ Has two fixed 10/100/1000Base-T copper ports and one 100Mbps/1000Mbps SFP port

▲ Auto MDI/MDIX on copper port (supports both straight through and crossover cables)

▲ Can be used with either singlemode or multimode fiber over a variety of link budgets

▲ Complies with IEEE802.3af/at/bt and HDBaseT (PoH) standards

▲ Provides up to 90W to each RJ45 port, up to 170W in total

▲ User selectable PoE mode setup via Push Button

▲ Integrates with third party NMS system via industry standard SNMP v1, v2c, v3

▲ Supports IEEE802.1Q VLAN

▲ Port based MAC address security to allow communication with approved products only

▲ Supports DHCP for automatic assignment of IP address, subnet mask, default gateway address and domain name server (DNS) address

▲ Web browser based Graphical User Interface (GUI)

▲ Available for operation over 1 or 2 fibers

▲ Powered by non-critical 46 to 57V_{DC} supplies for OSD2184P or 12 to 57V_{DC} for OSD2184PW (voltage booster version)

▲ Operates over the temperature range of -40°C to +75°C

▲ Remote PoE on/off control and status monitoring

▲ Supports 10KB jumbo frames

▲ SFP module sold separately

▲ DIN rail or wall mounting

1.2   TYPICAL SYSTEM DESIGN

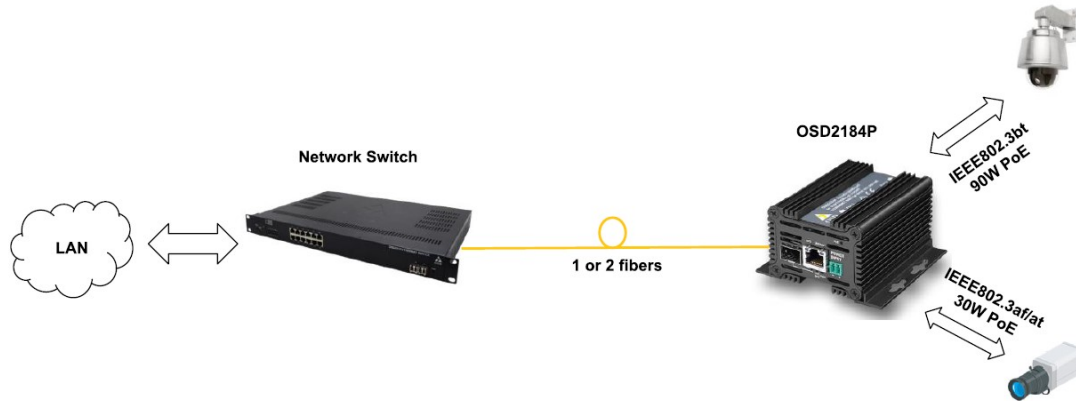Figure 1 below indicates a possible set-up for an OSD2184P/PW system.

FIGURE 1: TYPICAL SYSTEM DESIGN

OSD2184P / PW Operator Manual
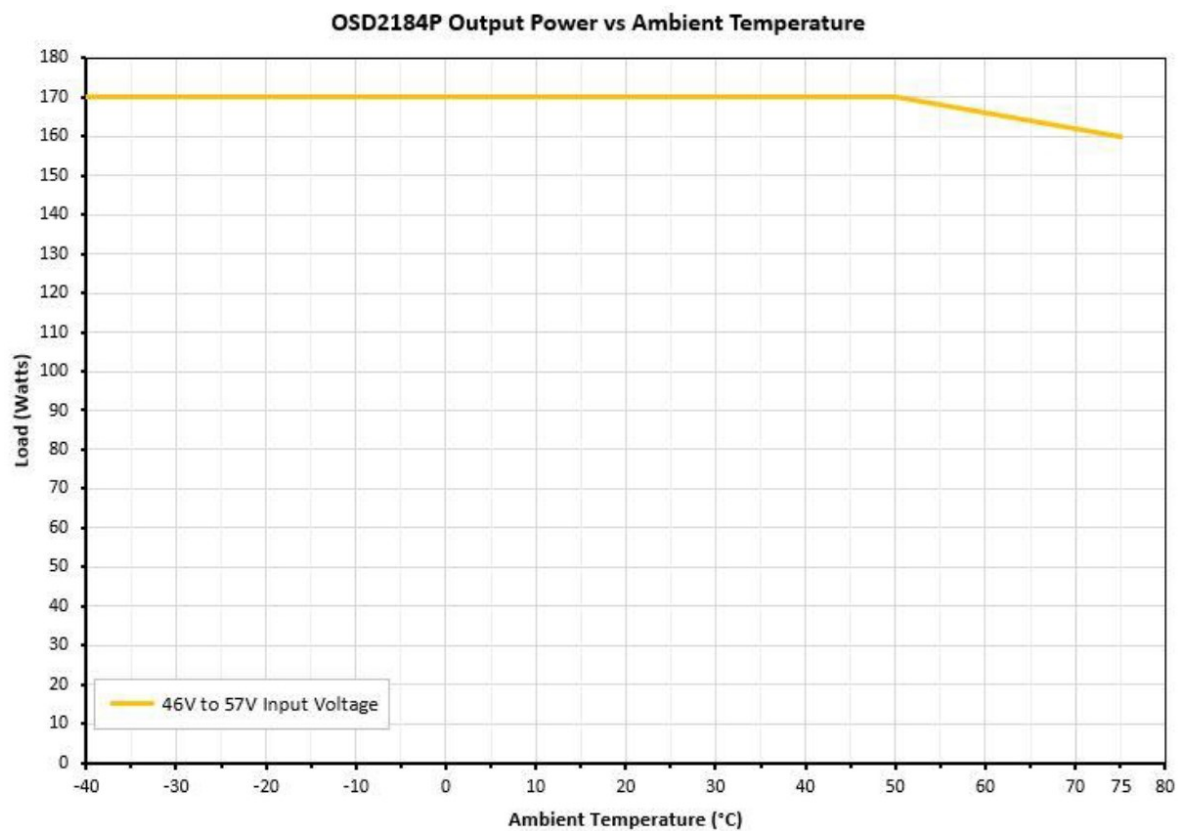
1.3   TECHNICAL SPECIFICATIONS

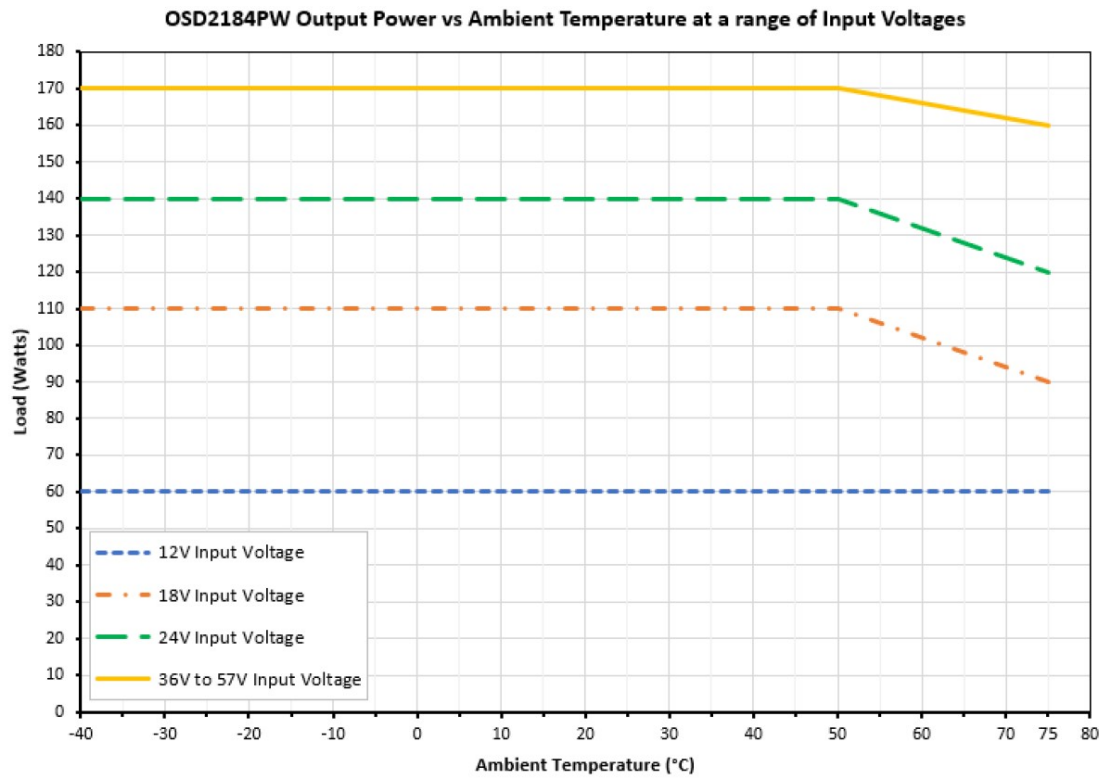TABLE 1: TECHNICAL SPECIFICATIONS

Hardware	
Ethernet	2 x 10/100/1000Base-T RJ45, IEEE802.3i/802.3u/802.3ab
Jumbo Frame Support	10KB
SFP	1 x Gigabit SFP ports (100Mbps or 1000Mbps user selectable)
Optical Data Interface	IEEE802.3z 1000Base-Lx/Sx, IEEE802.3u 100Base-Fx
Four PoE modes (user configurable via push button or GUI)	IEEE802.3af/at, IEEE802.3bt, HDBase-T (PoH) Additional PoE modes available via Web-GUI (see below table)
Enclosure Protection Class	IP30
Installation	DIN rail, wall mount or desktop
DIP Switch	3 way DIP switch for configuration
Power Requirements OSD2184P	**Input Voltage**: +46V_{DC} to +57V_{DC} @ 8W +PoE output power for PD devices **Output PoE Voltage**: Vin - Vdrop
Power Requirements OSD2184PW	**Input Voltage**: +12V_{DC} to +57V_{DC} @ 15W +PoE output power for PD devices **Output PoE Voltage**: 56 to 57V - Vdrop
Output PoE Vdrop per port	PoE voltage drop per port <0.5V @ 30W, <1V @ 60W, <1.5V @ 90W
Power Connector	2 way 3.5mm terminal block
Indicators	2 x Copper Link/Activity on RJ45 2 x Copper Speed on RJ45 2 x PoE Power On/Off 4 x PoE Mode 1 x Power On/Off 1 x SFP Link/Speed on SFP
Environmental	-40 to +75ºC
Relative Humidity	0 to 95% non-condensing
Dimensions	90W x 88D x 49H mm
Weight	400g
Management	
Interfaces	Command Line Interface (CLI mini USB) Web browser based Graphical User Interface (GUI) SNMP v1, v2c, v3
Port Configuration	Auto negotiation
Port Status	Speed, duplex mode, ink status, auto negotiation status
Port Security	Individual port partner MAC address allocation (manual entry)
VLAN	IEEE802.1Q VLAN
Warranty	
Warranty Period	5 Years
MTBF (Ground Benign Environment, 30ºC)	455,000 hours for OSD2184P 402,000 hours for OSD2184PW

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PoE

Operating Mode	Legacy Detection Options	Pair Number Options	Maximum Power Options
BT	Enable, Disable	2 4	15W, 30W 15W, 30W, 60W, 90W
PoH	Disable	2 4	45W 90W
Pre-BT	Enable, Disable	2 4	30W 60W
Mode 4P CDP	Enable	2 4	30W 60W
BT Special	Enable	2	45W
BT Class0=Class4	Enable	2 4	30W 60W, 90W
2P 3 Finger	Enable	2	30W
4P 4 Finger	Enable	4	60W
BT with PoH	Enable	2 4	45W 90W
BT PoH Like on all Class	Enable	2 4	45W 90W
BT Special Class 4	Enable	2 4	30W 60W

*PoE Configurable parameters via Web-GUI

PoE Output Power Budget (Total Power of Two Copper Ports) with temperature derating

OSD2184P Output Power vs Ambient Temperature

OSD2184PW Output Power vs Ambient Temperature at a range of Input Voltages

Chart showing Load (Watts) vs Ambient Temperature (°C):
- 12V Input Voltage
- 18V Input Voltage
- 24V Input Voltage
- 36V to 57V Input Voltage

1.4 FRONT / REAR PANEL LAYOUT

Front Panel: The front panel consists of one fixed copper port for 10/100/1000Base-T, one SFP port and a 2-way terminal block power connector

Rear Panel: one fixed copper port for 10/100/1000Base-T, a 3-way DIP switch and a USB port.

The SFP device is sold separately giving the user choice to use either one or two fiber communications with various optical power outputs depending on the distance required. Each section will be described further throughout this manual.

Front Panel
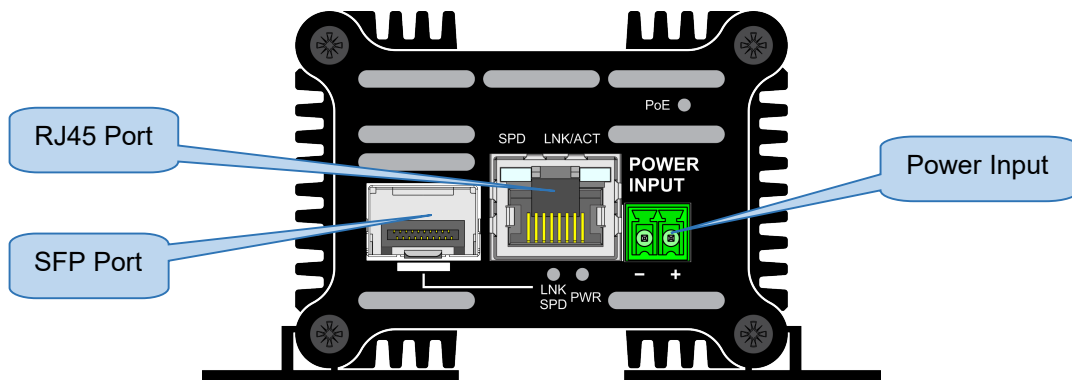
Rear Panel

FIGURE 2: PANEL LAYOUT

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2 INSTALLATION AND OPERATION

2.1 INTRODUCTION

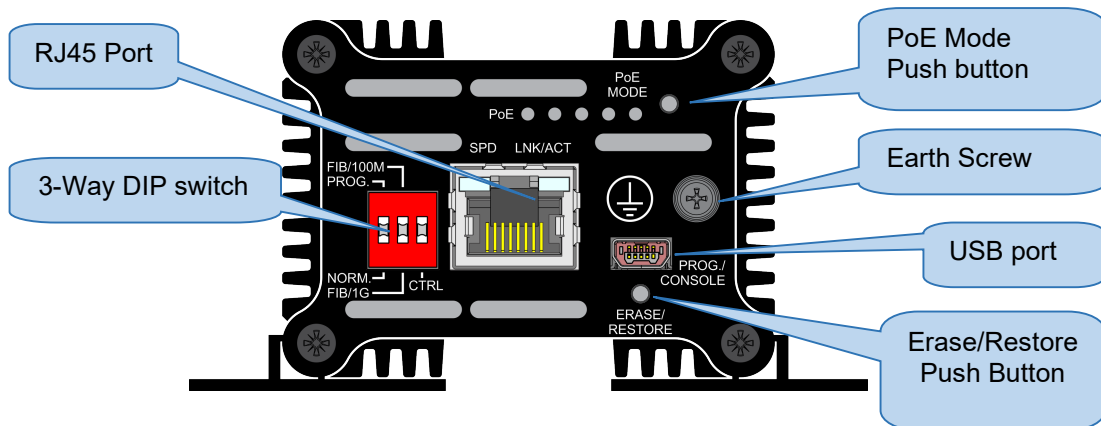This section outlines the methods required to install and operate the OSD2184P/PW successfully. It should be studied carefully if damage to the equipment or poor results are to be avoided.

This equipment has been fully tested prior to dispatch and is ready for immediate operation. However, it is advisable to check for external transportation damage before operation. If damage is evident, return the unit with the packaging to your supplier immediately.

2.2 INSTALLATION

2.2.1 WARNING AND PRECAUTIONS

▲ ELECTROMAGNETIC COMPATIBILITY

WARNING: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

▲ OPTICAL OUTPUT OPERATION

WARNING: **Laser Safety:** Class 1 Laser Product per IEC/EN 60825-1:2014 standard.

Class 1
The OSD2184P/PW is a **Class 1 laser product.**
CLASS 1 LASER PRODUCT
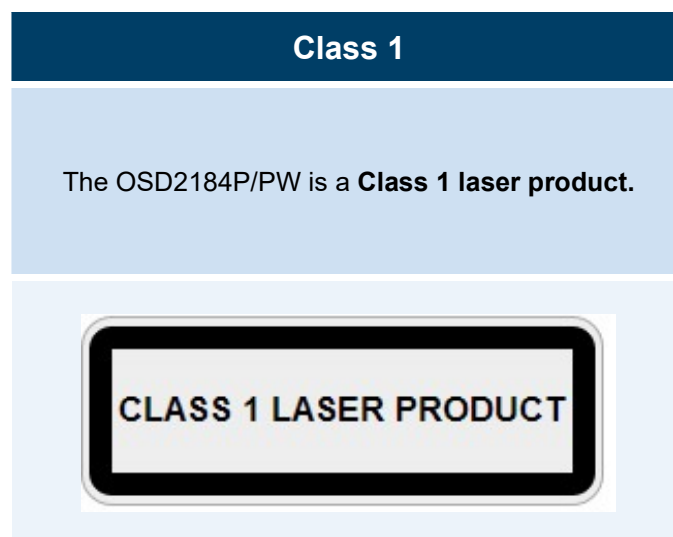
PRECAUTIONS

- ▲ All service personnel should be provided training as to the hazards of direct viewing of laser radiation and of the precautionary measures during servicing of equipment

- ▲ Areas where laser products are installed should be restricted in access to trained service personnel only and appropriate warning signs posted in the work area.

- ▲ All laser apertures should be covered by protective covers when not connected to optical fibers. Never leave outputs uncovered.

- ▲ Laser equipment should be positioned above or below eye level where possible. Apertures should be positioned away from personnel.

- ▲ Protective eyewear should be worn in the vicinity of laser equipment.

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2.2.2 DRAWINGS AND DIMENSIONS

The OSD2184P/PW is designed to be wall mounted onto a DIN-Rail (35mm top hat) fixture or by using 4 x M4 captivated screws (DIN Rail mount requires removal and flanges repositioned – see below). The unit dimensions (excluding connectors, SFPs, etc) is shown in below.
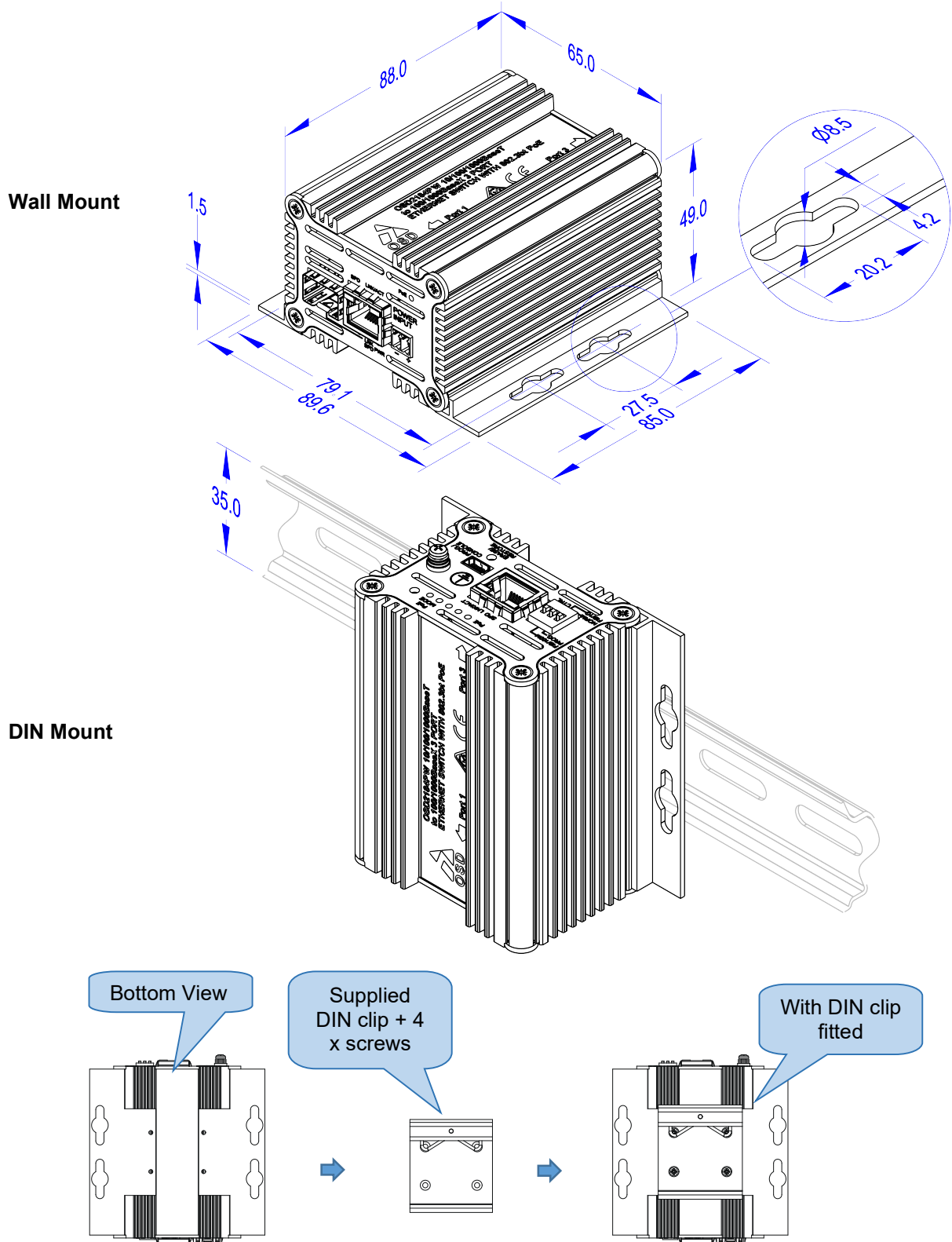
Wall Mount

DIN Mount

FIGURE 3: MOUNTING DIMENSIONS

2.2.3   LOCATION

As with any electrical device, the OSD2184P/PW should be placed where the switch will not be subjected to extreme temperatures, humidity, or electromagnetic interference. Specifically, the site selected should meet the following requirements:

- The ambient temperature should be between -40°C to 75°C.
- The relative humidity should be less than 95 percent, non-condensing.
- Surrounding electrical devices should not exceed the electromagnetic field (RFC) standards.
- Make sure that the switch receives adequate ventilation. Do not block the ventilation holes on any side of the switch.

Note: Without proper cooling and control (lowering) of ambient temperature, the components within the OSD2184P/PW can be subject to increased heat shortening the longevity and reliability. It is thus good engineering practice to ensure the unit is installed in a well-ventilated area.

2.2.4   POWER SUPPLY CONNECTIONS

IMPORTANT! There are two options available for the OSD2184P: The OSD2184P and OSD2184PW. The Table below (Table 2) indicates the power requirements for each. They both require external DC power which is connected via the 2-way terminal block located on the front panel as shown in Figure 4.

CAUTION ⚠	It is highly recommended to wait about 30 seconds before reconnecting the PD after the PD has been disconnected from the unit. This will prevent a high inrush current being applied to the unit. Although the OSD2184P/PW has a high inrush current tolerance (400mA for 50 to 75ms as per the IEEE802.3at standard), inrush currents higher than 1.5A may damage the device.

TABLE 2: POWER CONNECTION

OSD Version	External Power Pin	Specification
OSD2184P	+	$+46V_{DC}$ to $+57V_{DC}$ @ 8W
OSD2184PW	+	$+12V_{DC}$ to $+57V_{DC}$ @ 15W
	-	0V
	⏚	Chassis Ground connection point

*$\geq 52V_{DC}$ recommended for PoE+ or $\geq 55V_{DC}$ for 60W PoE

Front Panel
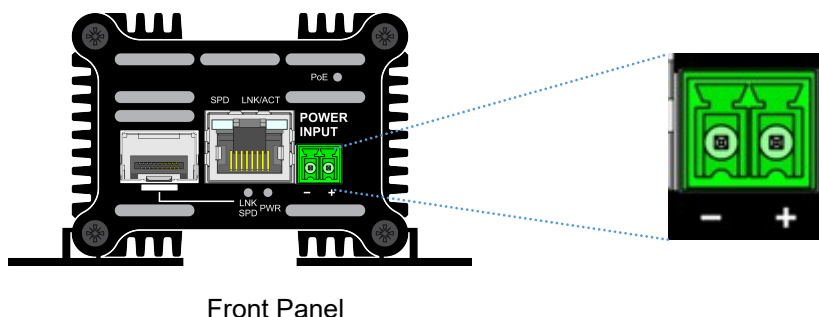
FIGURE 4: POWER SUPPLY CONNECTIONS

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2.2.5 LED INDICATORS
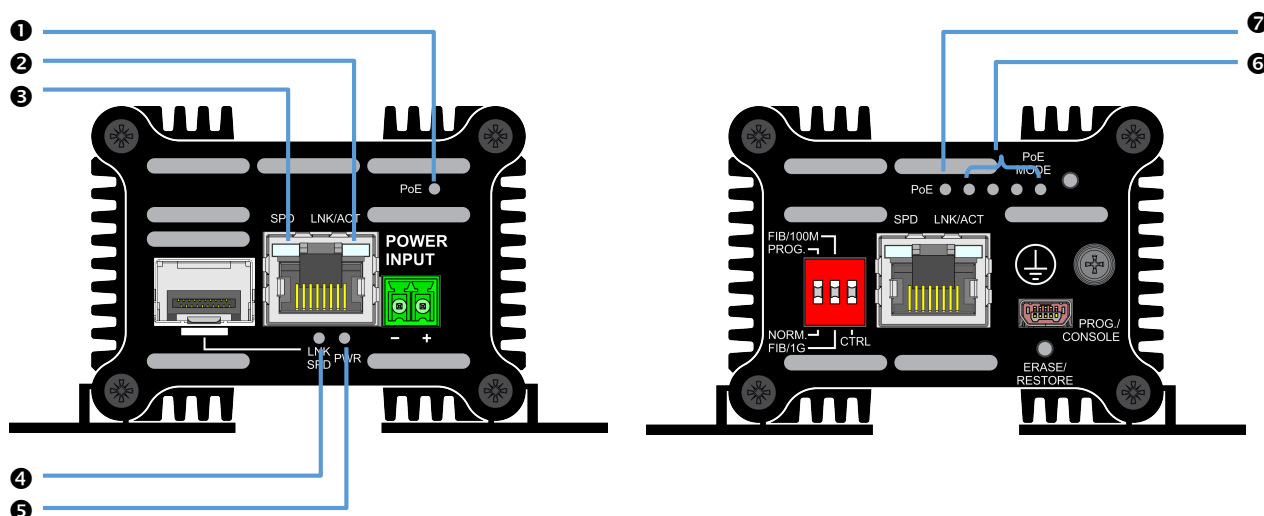
FIGURE 5: PORT/LED

TABLE 3: LED FUNCTION

No	Indicator	LED Colour	FUNCTION			
			On		Off	Blinking
❶	PoE	Green[1]	PoE Enable		No PoE	Invalid Device[2]
❷	LNK/ACT	Amber	Copper Link Activity		No Copper Link	Activity[3]
❸	SPD	Green	Copper Speed	1Gbps	10/100Mbps	-
❹	LNK SPD	Amber	Fiber Speed	100Mbps	No Optical Link	-
		Green		1Gbps		
❺	PWR	Green	Power On		Power Off	-
❻	PoE Mode	Green	See Table 5		See Table 5	-
❼	PoE	Green[1]	PoE Enable		No PoE	Invalid Device[2]

Notes: [1] When PoE LED is on it indicates that the unit is supplying power to the PSE
[2] Invalid device – No PoE output
[3] Activity indicates traffic for copper port

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2.2.6   CONTROLS

The OSD2184P/PW has a number of control functions: a 3-Way DIP Switch and a PoE Mode push button and Erase/Restore push button
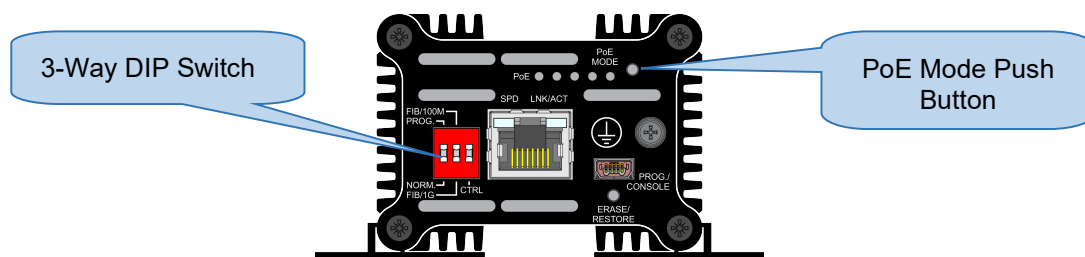
FIGURE 6: CONTROLS
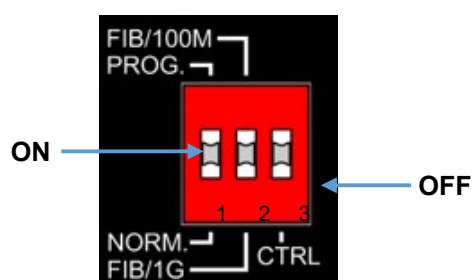
FIGURE 7: 3-WAY DIP SWITCH

TABLE 4: 3-WAY DIP SWITCH SETTINGS

SWITCH NUMBER	DESCRIPTION	SWITCH POSITION	FUNCTION
1	Function	ON	Programming Mode
		OFF	User Mode*
2	Optical Port Speed	ON	100BASE-X
		OFF	1000BASE-X*
3	CTRL	ON	PoE Enabled*
		OFF	PoE Disabled

* Default settings.

CTRL - PoE Enable/Disable Switch

In Disable mode, PoE is disabled to both ports regardless of the GUI settings

In Enable mode, PoE is enabled to both ports in default settings. If the user configured the PoE port settings via the GUI, the previous setting will be 'remembered' with either toggling of the switch and/or cycling the power to the unit.

ERASE/RESTORE Push Button

The ERASE/RESTORE push button erases most recent IP configuration settings and resets the unit to Factory Default Setting

- Ensure DIP switch 1 is in "Default" mode (OFF position) and the unit is off (not powered) when performing reset.
- Press and hold the Reset button for 10 seconds and power up the unit.
- Wait for unit to restart.
- The factory default setting is now restored. The IP address is set to 192.168.0.99.

PoE Mode Push Button

The PoE Mode push button is used to control the PoE settings. Pressing the push button will cycle through the different modes as set out in the table below.

TABLE 5: POE MODE

LED NUMBER	DESCRIPTION	MODE	FUNCTION
1	● ○ ○ ○	BT Mode	4 Pair power output, 90W Max, High Inrush Current Mode off
2	○ ● ○ ○	PoH Mode	4 Pair power output, 90W Max, High Inrush Current Mode off
3	○ ○ ● ○	BT Mode	2 Pair power output, 30W Max, High Inrush Current Mode off
4	○ ○ ○ ●	Custom Mode	There are no customized settings - this mode will be skipped.

2.2.7 FITTING SFP CONNECTORS

Care should be taken when inserting/removing the SFP connectors from SFP port as SFP modules are Electrostatic (ES) sensitive and Electrostatic Discharge (ESD) precautions should be taken when installing. Ensure that the SFP is fully engaged and latched into position.

Inserting SFP – Ensure that the SFP lever is in the locked position and insert into appropriate SFP port. Gently push the SFP until it locks into place. Remove plastic/rubber dust cap and fit fiber cable or RJ45 plug.

Removing SFP – Remove fiber connector or RJ45 plug. Pull the SFP lever down to unlock SFP from housing. Using the lever, gently pull the SFP out.

Fiber SFP

Inserting
SFP

Removing
SFP

Copper SFP

Inserting
SFP
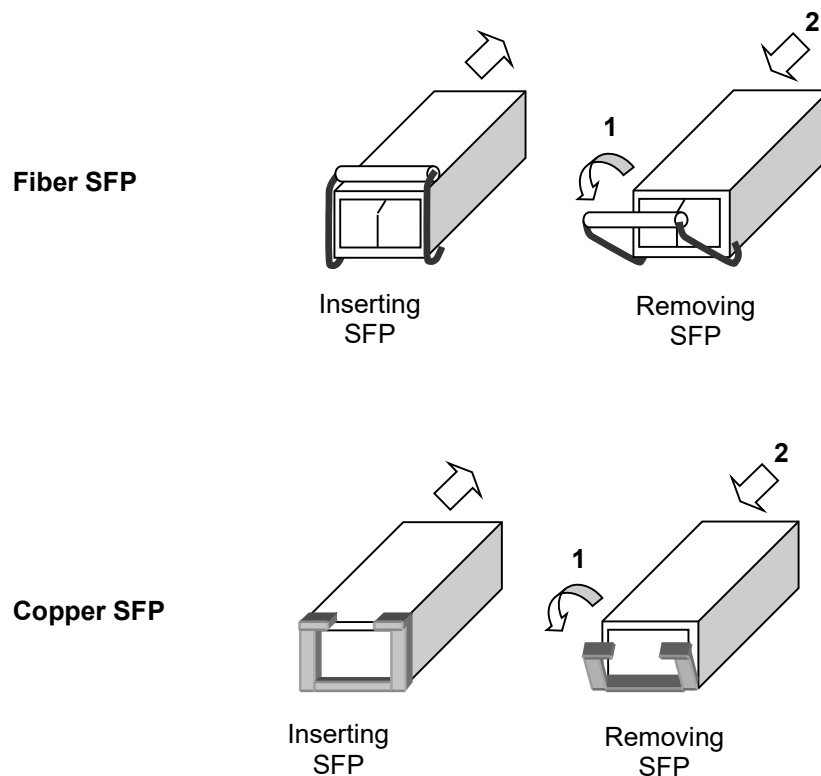
Removing
SFP

FIGURE 8: FITTING/REMOVING SFP CONNECTORS

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2.3 SINGLE/DUAL SIGNATURE PD OPERATION

The OSD2184P/PW supports single, dual or either single/dual signature PD by automatically detecting the user PD signature.

2.3.1 SINGLE SIGNATURE PD

A "single signature PD" shares the same detection signature, classification signature, and maintains power signature between both pair sets.
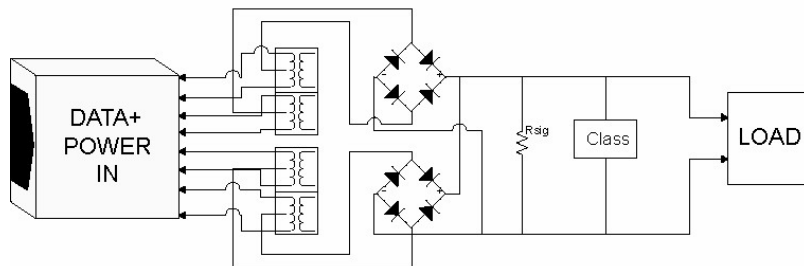
FIGURE 9: SINGLE SIGNATURE PD

2.3.2 DUAL SIGNATURE PD

A "dual signature PD" has independent detection signatures, classification signatures, and maintains power signatures on each pair set. It enables the load to work with two pair PSEs eg. A surveillance camera built with dual signature PD can have one pair connected to the camera and the other pair to a fan or heater. Note that dual signature PDs require two parallel PD interfaces, one for each pair set, where the power from the two PSEs are summed after each PD interface ie Camera (25W) + fan (10W) = 35W from one port.
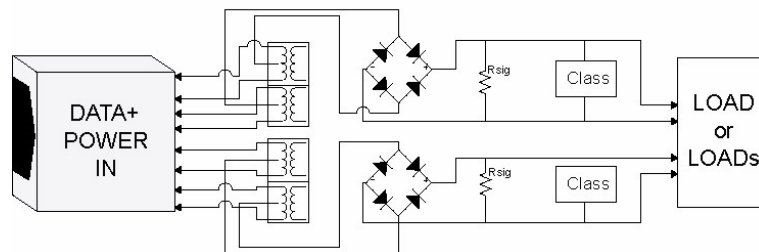
FIGURE 10: DUAL SIGNATURE PD

2.3.3   FIXED RJ45 COPPER PIN ASSIGNMENTS

The OSD2184P/PW complies with IEEE802.3af/at and IEEE802.3bt HDBaseT standards, and is capable of supplying up to 90W of PoE per RJ45 port. The OSD2184P supports Alternative A & B (pins 1/2, 3/6 & 4/5, 7/8). Four pair output mode transmits power over all 8 pins. Bidirectional data as well as power terminate on all 8 pins. Both or either ports can optionally support dual signature PD.

Figure 11 shows the pin configuration for the fixed RJ45 copper port.

Fixed Copper Port

SPD   LINK/ACT

8 7 6 5 4 3 2 1

1: Bidirectional Data A+, DC+
2: Bidirectional Data A-, DC+
3: Bidirectional Data B+, DC-
4: Bidirectional Data C+, DC+
5: Bidirectional Data C-, DC+
6: Bidirectional Data B-, DC-
7: Bidirectional Data D+, DC-
8: Bidirectional Data D-, DC-
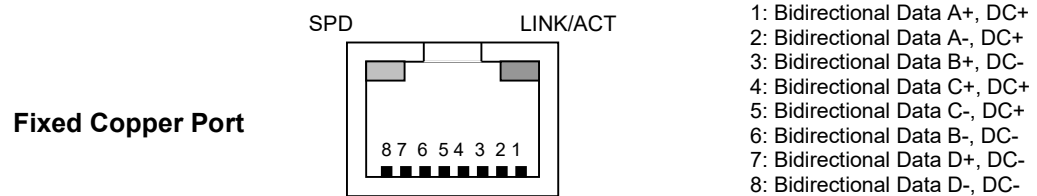
FIGURE 11: FIXED RJ45 ETHERNET CONNECTORS

2.4   OPERATION

When using the OSD2184P/PW for the first time, check that the unit is in good condition with no visible damage.

Upon power up check that the indicators illuminate accordingly on power up (see Table 3).

2.4.1   CONNECTIONS

For RJ45 connection use Category 5 (CAT5) or higher. Length should be no more than 100 meters.

For singlemode fiber connections, fiber used must be 9/125µm singlemode fiber.

For multimode fiber connections, fiber used must be 50/125µm or 62/125µm multimode fiber.

Plug in the appropriate connectors for system configuration;

- RJ45 cable to fixed copper ports (port 1 and 2) and copper SFP modules
- LC or SC fiber cable to fiber SFP modules.

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2.5 COMMAND LINE INTERFACE (CLI)

The Command Line Interface (CLI) is a useful tool for checking link status and debugging link connections. To enable the use of CLI, the OSD2184P must be connected to a PC with a USB port via a Mini USB to (typically) USB Type A cable. Using a terminal emulation program such as hyperterminal or SSCOM, a number of command lines specific to the OSD2184P can be implemented.

2.5.1 TERMINAL EMULATION SETUP

Using a terminal emulation program such as hyperterminal, the following parameters should be set up for correct command line operation. Select the appropriate "COM port" set up for the serial port.
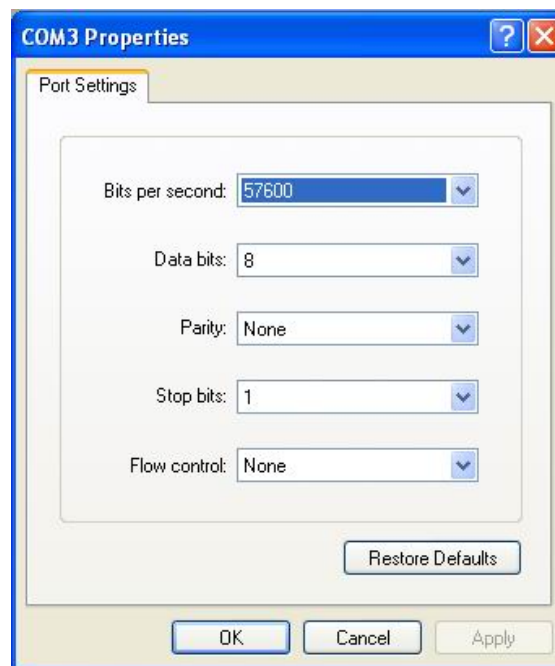
FIGURE 12: CLI PORT SETTINGS

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2.5.2 COMMAND LINE FUNCTIONS

There are a number of command line functions that enables the user to obtain limited information or reset the unit to factory default configuration.

Once the terminal emulation has been set up typing the "**?**" command will bring up a list of available CLI commands.
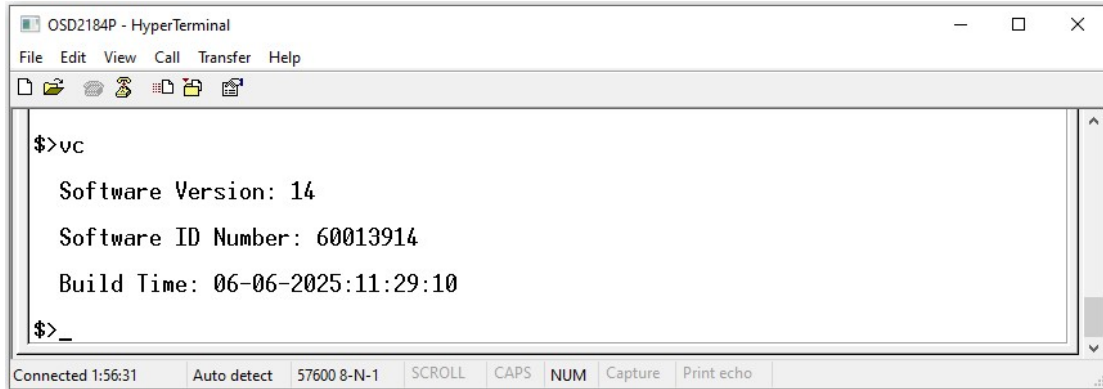
The following table outlines the user available command line commands and their functions.

TABLE 6: CLI COMMAND LIST

TERMINAL COMMAND LINE	SPECIFICATION	FUNCTION
?	help	Displays all user available CLI commands
vc	Version Check	Displays the current software version and revision installed on the unit
ipconfig	IP Configuration	Displays current IP, Mask and Gateway. Provides ability to change the IP settings.
ipconfig dhcp	DHCP Configuration	
poe_dump	Dump PD Information	Displays the running PoE Information for each Port/Channel
fd	Factory Default	Sets configuration into factory settings
ps	Port Security	Port security mode enable or disable on each port
psm	Port Security MAC	Operate MAC address for the port
sfpr	SFP Reboot	Enable or disable auto reboot when SFP link is down

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VERSION CHECK - \<vc\>

Note: Software version in below screen is for illustrative purpose.

```
OSD2184P - HyperTerminal                                    —  □  ✕
File  Edit  View  Call  Transfer  Help

$>vc

  Software Version: 14

  Software ID Number: 60013914

  Build Time: 06-06-2025:11:29:10

$>_

Connected 1:56:31   Auto detect   57600 8-N-1   SCROLL  CAPS  NUM  Capture  Print echo
```
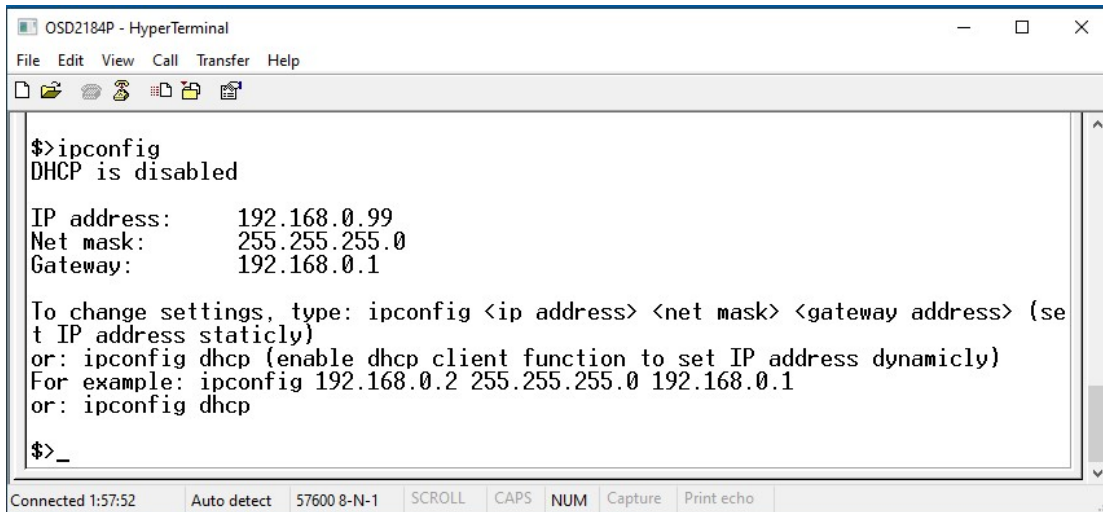
Displays a number of quick reference information about the product.

Software Version Number

Software ID Number

Build Time

IP CONFIGURATION - \<ipconfig\>

```
OSD2184P - HyperTerminal                                    —  □  ✕
File  Edit  View  Call  Transfer  Help

$>ipconfig
DHCP is disabled

IP address:      192.168.0.99
Net mask:        255.255.255.0
Gateway:         192.168.0.1

To change settings, type: ipconfig <ip address> <net mask> <gateway address> (se
t IP address staticly)
or: ipconfig dhcp (enable dhcp client function to set IP address dynamicly)
For example: ipconfig 192.168.0.2 255.255.255.0 192.168.0.1
or: ipconfig dhcp

$>_

Connected 1:57:52   Auto detect   57600 8-N-1   SCROLL  CAPS  NUM  Capture  Print echo
```
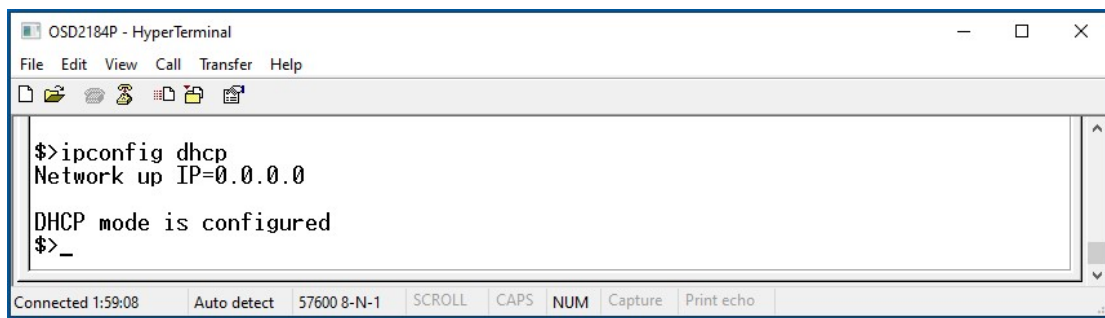
Displays the current IP address, Net mask and Gateway settings.
To make changes to the IP address, Net mask and Gateway, at the prompt enter the new
details in the following format;

ipconfig \<ip address\> \<netmask\> \<gateway address\>

IP CONFIGURATION DHCP - <ipconfig dhcp>

```
OSD2184P - HyperTerminal                                    —   □   ×
File  Edit  View  Call  Transfer  Help

$>ipconfig dhcp
Network up IP=0.0.0.0

DHCP mode is configured
$>_

Connected 1:59:08    Auto detect   57600 8-N-1   SCROLL   CAPS   NUM   Capture   Print echo
```

PoE Dump - <poe_dump>

```
$>poe_dump

---Poe status information---:
port   PDType  Current Voltage PowerRequested  PowerAssigned  Class on AlternativeA  Class on AlternativeB  Status
1      -       -       -       -               -              -                      -                      Power off: Unknown
3      Single  1.524A  50.900V 77.400W         90.0W          8                      -                      Power on device
```

Displays the current PoE output status of the following;

       Port
       PS Type
       Current
       Voltage
       Power Requested
       Power Assigned
       Class on AlternativeA
       Class on AlternativeB
       Status

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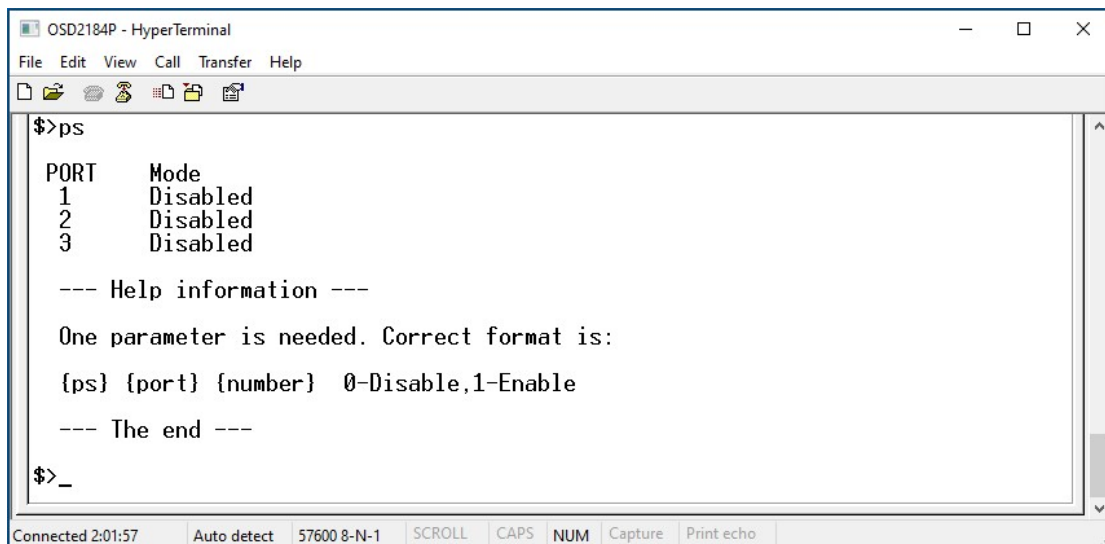
FACTORY DEFAULT - <fd>

```
OSD2184P - HyperTerminal                              —   □   ✕
File  Edit  View  Call  Transfer  Help

                      Not connected
$>fd

 Do you want to set factory default configuration[y/n] ?_

Connected 2:01:05   Auto detect   57600 8-N-1   SCROLL  CAPS  NUM  Capture  Print echo
```
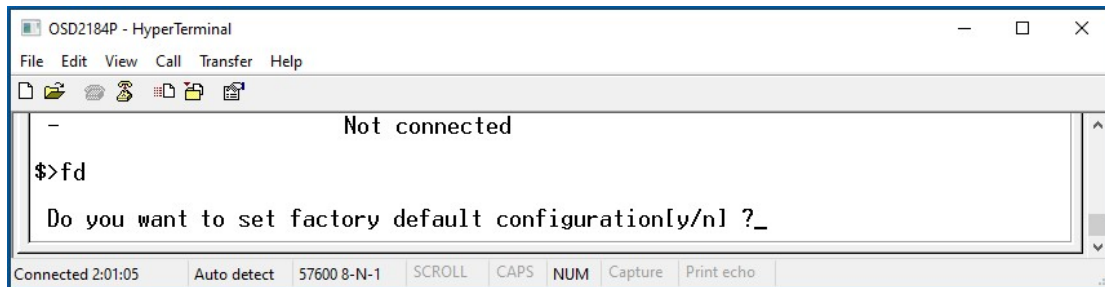
Resets the unit to its default factory setting. A prompt question will appear "Do you want to set factory default configuration [y/n]?

n – Exits the default configuration setting and returns to the home prompt.
y – Resets to default configuration sequence.

The unit will require a reboot (see Page 33) for changes to take effect.

PORT SECURITY - <ps>

```
OSD2184P - HyperTerminal                              —   □   ✕
File  Edit  View  Call  Transfer  Help

$>ps

 PORT      Mode
  1        Disabled
  2        Disabled
  3        Disabled

 --- Help information ---

 One parameter is needed. Correct format is:

 {ps} {port} {number}  0-Disable,1-Enable

 --- The end ---

$>_

Connected 2:01:57   Auto detect   57600 8-N-1   SCROLL  CAPS  NUM  Capture  Print echo
```
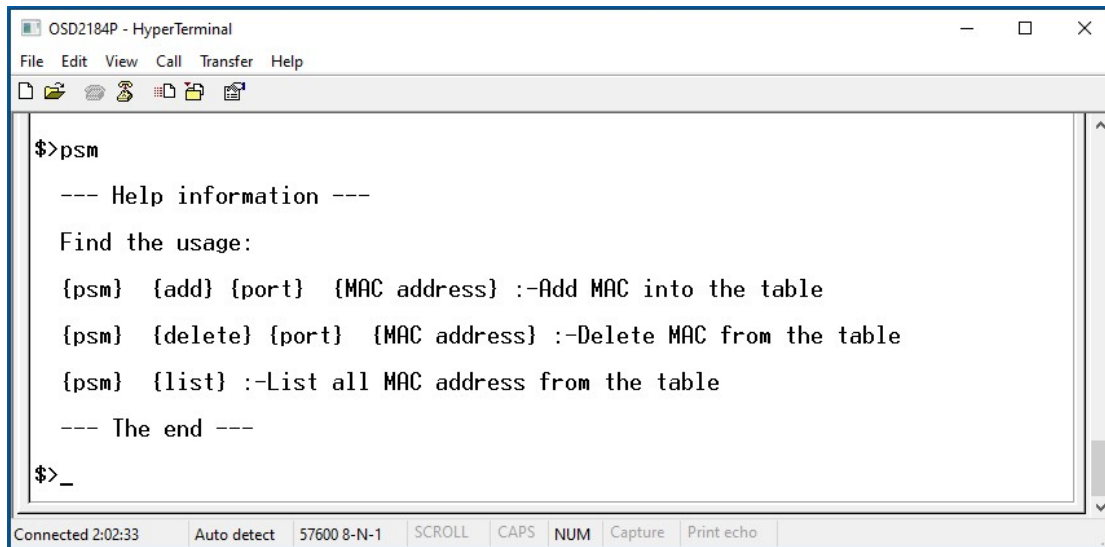
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PORT SECURITY MAC - <psm>
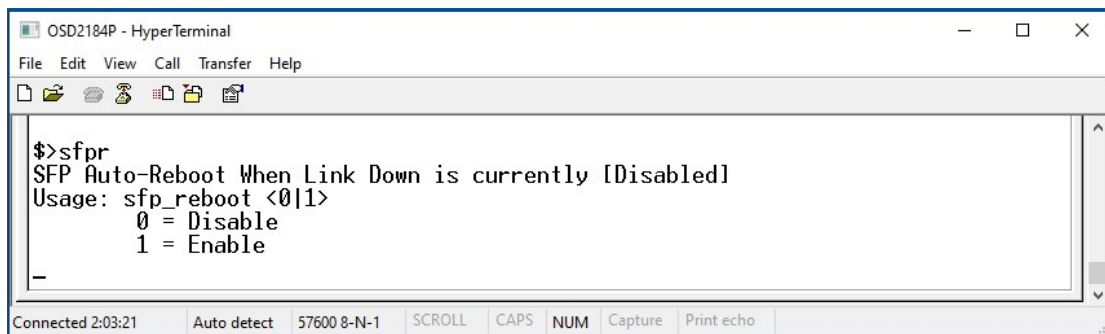
```
$>psm

  --- Help information ---

  Find the usage:

  {psm}  {add} {port}  {MAC address} :-Add MAC into the table

  {psm}  {delete} {port}  {MAC address} :-Delete MAC from the table

  {psm}  {list} :-List all MAC address from the table

  --- The end ---

$>_
```

SFP REBOOT - <sfpr>

```
$>sfpr
SFP Auto-Reboot When Link Down is currently [Disabled]
Usage: sfp_reboot <0|1>
       0 = Disable
       1 = Enable
_
```

Automatic Reboot when an SFP link is down. Displays current setting within [ ]. A prompt will appear <0/1> requesting an input of 0 or 1

0 – Disables the SFP link reboot function.
1 – Enables the SFP link reboot function.

The unit will save the changes to take effect.

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2.6   WEB GUI
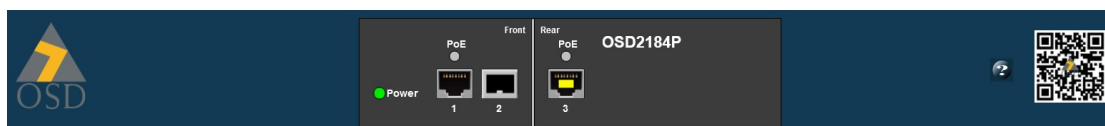
The OSD2184P/PW provides a web-based browser interface for configuring and monitoring the unit. This interface allows you to access the switch using any preferred web browser.

This chapter describes how to configure the switch using its web-based browser interface.
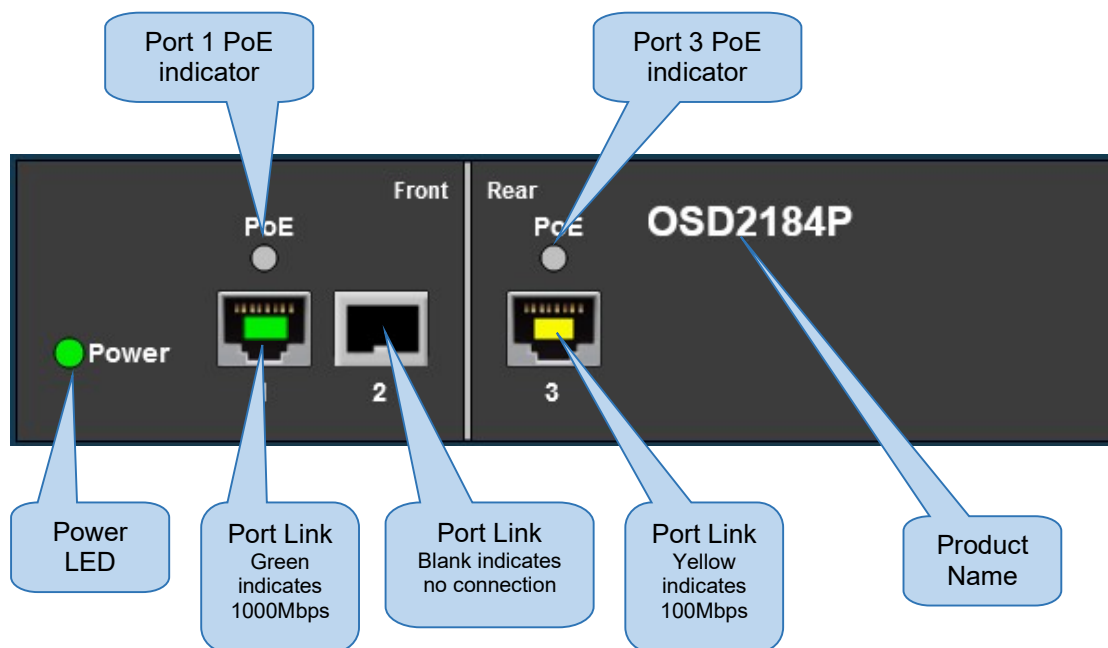
2.6.1   LOGGING ON TO THE SWITCH

SWITCH IP ADDRESS

In your web browser, specify the IP address of the switch. Default IP address is 192.168.0.99
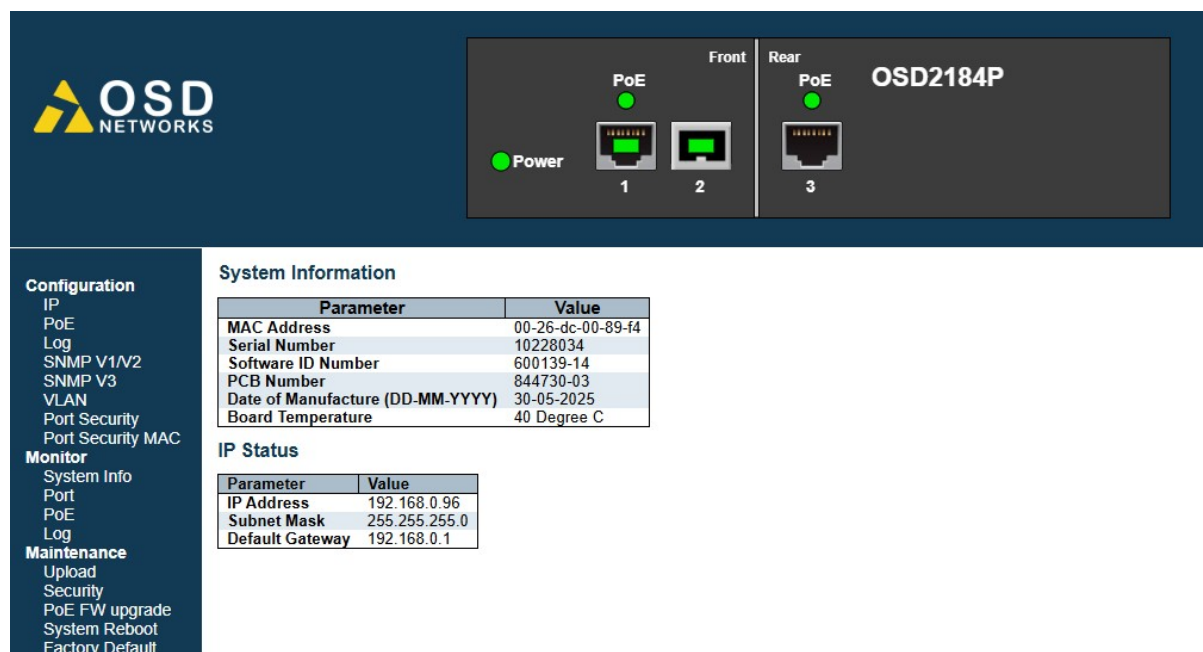
Upon connecting to the unit, the home screen will display some useful information. Green lighted ports, Power and PoE indicate connection to relevant port and active state of Power and PoE Port1 and Port3.

A table displaying system information is also displayed containing MAC address, Serial Number, Software, IP address, etc.

System Information

Parameter	Value
MAC Address	00-26-dc-00-8f-2e
Serial Number	10229872
Software ID Number	600139-14
PCB Number	844730-03
Date of Manufacture (DD-MM-YYYY)	27-08-2025
Board Temperature	28 Degree C

IP Status

Parameter	Value
IP Address	192.168.0.99
Subnet Mask	255.255.255.0
Default Gateway	192.168.0.1

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2.6.2 GUI MENU

Configuration
IP
PoE
Log
SNMP V1/V2
SNMP V3
VLAN
Port Security
Port Security MAC
Monitor
System Info
Port
PoE
Log
Maintenance
Upload
Security
PoE FW upgrade
System Reboot
Factory Default

The user has access to Configure, Monitor or Maintain the OSD2184P/PW. Each section will be explained within this manual.

CONFIGURATION → IP

IP Configuration

	Configured
DHCP enable	Disabled ⌄
IP Address	192.168.0.99
Subnet Mask	255.255.255.0
Default Gateway	192.168.0.1

[Save] [Reset]

DHCP ENABLE

Disabled: The DHCP is disabled
Enable: The DHCP is enabled

IP ADDRESS

Configured: The IP address can be changed by modifying this window.
Current: Displays the current saved IP address

SUBNET MASK

Configured: The Subnet Mask can be changed by modifying this window.
Current: Displays the current saved Subnet Mask

DEFAULT GATEWAY

Configured: The Default Gateway can be changed by modifying this window.
Current: Displays the current saved Default Gateway

Buttons

[Save] : saves the new settings

[Reset] : resets any changes made

CONFIGURATION → POE

PoE Configuration

Port	Enable	Operating Mode	Legacy	Pair	Maximum Power	High Inrush Current Mode
1	☑	◉ BT ○ PoH ○ Pre-BT ○ Mode 4P CDP ○ BT Special ○ BT Class0=Class4 ○ 2P 3Finger ○ 4P 4Finger ○ BT with PoH ○ BT PoH Like on Class ○ BT Special Class 4	◉ Disable ○ Enable	○ 2 ◉ 4	◉ 90 ○ 60 ○ 30 ○ 15	☐
3	☑	◉ BT ○ PoH ○ Pre-BT ○ Mode 4P CDP ○ BT Special ○ BT Class0=Class4 ○ 2P 3Finger ○ 4P 4Finger ○ BT with PoH ○ BT PoH Like on Class ○ BT Special Class 4	◉ Disable ○ Enable	○ 2 ◉ 4	◉ 90 ○ 60 ○ 30 ○ 15	☐

[Save] [Reset]

PORT

Indicates port number per row.

POE ENABLED

A tick indicates the PoE is enabled for the port.

OPERATING MODE

Allows the user to manually set the operating mode/class to each individual port. A blue button indicates the set operating mode.

LEGACY DEVICE

The OSD2184P provides legacy PoE support. A blue button indicates the Enable/Disable setting.

PAIR

The OSD2184P provides the user to select 2 pair or 4 pair. A blue button indicates the setting.

MAXIMUM POWER

The user can set the output maximum power to each port. A blue button indicates the setting.

HIGH INRUSH CURRENT MODE

Some PDs require very high inrush current (up to 1.6A). The OSD2184P/PW can support PDs with high inrush current. A tick indicates that high inrush current mode is enabled

Buttons

[Save] : saves the new settings

[Reset] : resets any changes made

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Configuration → Log

Event Log Settings

ID	Module	Log Level
1	PoE	Info ▼
2	SYS	Info ▼

Save

ID

Indicates the sequential log event number.

MODULE

Indicates the log event.
- **PoE**: PoE related information such as powering of PoE device, disconnection of PoE device, reason for powering failure, etc.
- **SYS**: General information of the system such as changing of IP, Port link up and link down, high temperature alarm, etc

LOG LEVEL

A drop-down window allows the user to select the desired log event setting.
- **Disable**: No information is logged from that module
- **Info**: Some basic information is logged
- **Debug**: Diagnostic information logged

Buttons

Save : saves the new settings

CONFIGURATION → SNMP V1/V2

SNMP V1/V2 Configuration

Enable V1 ☐
Enable V2 ☐

	Configured	Current
SNMP Read Community	public	public
SNMP Write Community	private	private
SNMP Trap Community	public	public
SNMP Trap Server IP	192.168.0.100	192.168.0.100

Save

ENABLE V1
☑*: SNMP V1 is enabled
☐*: SNMP V1 is disabled

ENABLE V2
☑*: SNMP V2 is enabled
☐*: SNMP V2 is disabled

SNMP READ COMMUNITY
Configured: The SNMP Read Community can be changed by modifying this
window.
Current: Displays the current saved SNMP Read Community

SNMP WRITE COMMUNITY
Configured: The SNMP Write Community can be changed by modifying this
window.
Current: Displays the current saved SNMP Write Community

SNMP TRAP COMMUNITY
Configured: The SNMP Trap Community can be changed by modifying this window.
Current: Displays the current saved SNMP Trap Community

SNMP TRAP SERVER IP
Configured: The SNMP Trap Server IP address can be changed by modifying this
window.
Current: Displays the current saved SNMP Trap Server IP Address

Buttons

Save : saves the new settings
Reset : resets any changes made

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CONFIGURATION → SNMP V3

SNMP V3 Configuration

Enable V3 ☐

Engine ID 800026dc03ffffffffff01

Delete	User Name	Security Level	Authentication Protocol	Authentication Password	Privacy Protocol	Privacy Password

Add New User

Save

ENABLE V3

    ☑*:* SNMP V3 is enabled

    ☐*:* SNMP V3 is disabled

ENGINE ID

An octet string identifying the engine ID that this entry should belong to. The string must contain an even number (in hexadecimal format) with number of digits between 10 and 64, but all-zeros and all-'F's are not allowed. The SNMPv3 architecture uses the User-based Security Model (USM) for message security and the View-based Access Control Model (VACM) for access control. For the USM entry, the usmUserEngineID and usmUserName are the entry's keys. In a simple agent, usmUserEngineID is always that agent's own snmpEngineID value. The value can also take the value of the snmpEngineID of a remote SNMP engine with which this user can communicate. In other words, if user engine ID equal system engine ID then it is local user; otherwise it's remote user.

DELETE

Check to delete the entry. It will be deleted during the next save.

USERNAME

A string identifying the user name that this entry should belong to. The allowed string length is 1 to 14. The maximum users that can be added are 5.

SECURITY LEVEL

Indicates the security model that this entry should belong to. Possible security models are:

- **NoAuth, NoPriv**: No authentication and no privacy.
- **Auth, NoPriv**: Authentication and no privacy.
- **Auth, Priv**: Authentication and privacy.

The value of security level cannot be modified if entry already exists. That means it must first be ensured that the value is set correctly.

AUTHENTICATION PROTOCOL

Indicates the authentication protocol that this entry should belong to. Possible authentication protocols are:

- **MD5**: An optional flag to indicate that this user uses MD5 authentication protocol.
- **SHA**: An optional flag to indicate that this user uses SHA authentication protocol.
  The value of security level cannot be modified if entry already exists. That means must first ensure that the value is set correctly.

AUTHENTICATION PASSWORD

A string identifying the authentication password phrase. For MD5 authentication protocol, the allowed string length is 8 to 32. For SHA authentication protocol, the allowed string length is 8 to 40.

PRIVACY PROTOCOL

Indicates the privacy protocol that this entry should belong to. Possible privacy protocols are:

AES: An optional flag to indicate that this user uses AES authentication protocol.

PRIVACY PASSWORD

A string identifying the privacy password phrase. The allowed string length is 8 to 32.

Buttons

Add New User : Click to add new user

Save : saves the new settings

CONFIGURATION → VLAN

VLAN Configuration

Enable VLAN ☐

VLAN Mode Configuration

VLAN Mode   802.1Q VLAN   ▾
Management VLAN 1

Port VLAN Configuration

Port No	Mode	Port VLAN	Tagged VLAN (Tagged)	Fixed VLAN (Untagged)
1	Access ▾	1		
2	Access ▾	1		
3	Access ▾	1		

[Save]

VLAN Configuration

ENABLE VLAN
> ☑ *:* VLAN is enabled
> ☐ *:* VLAN is disabled

VLAN Mode Configuration

VLAN MODE
> A drop-down menu will allow the user to select a VLAN mode:
> - 802.1Q VLAN: Virtual Local Area Networks (VLANs) separate an existing physical network into multiple logical networks. Thus, each VLAN creates its own broadcast domain. Communication between two VLANs can only occur through a router that is connected to both. VLANs work as though they are created using independent switches.
>
>   When VLAN mode is set to 802.1Q VLAN, port 1-3 can be configured and the VLAN configuration page will be displayed as;

VLAN Configuration

Enable VLAN ☑

VLAN Mode Configuration

VLAN Mode   802.1Q VLAN   ▾
Management VLAN 1

Port VLAN Configuration

Port No	Mode	Port VLAN	Tagged VLAN (Tagged)	Fixed VLAN (Untagged)
1	Access ▾	1		
2	Access ▾	1		
3	Access ▾	1		

[Save]

> - Port-Based VLAN: A port-based VLAN configuration assigns ports on the switch to a VLAN. The number of VLANs is limited to the number of ports on the switch. In a basic port-based VLAN configuration, ports with the same VLAN ID are placed into the same VLAN. One port can be a member of multiple VLANs. By Default, all the ports belong to group 1. Only ports assigned to group 1 can access the WebGUI.

Port VLAN Configuration

PORT NO

Displays port number per row

MODE

A drop-down menu allows user settings for the following;

- **Access:** Access ports are normally used to connect to end stations. Dynamic features like Voice VLAN may add the port to more VLANs behind the scenes. Access ports have the following characteristics:
  - Member of exactly one VLAN, the Port VLAN (a.k.a. Access VLAN), which by default is 1
  - Accepts untagged frames
  - Discards all frames not classified to the Access VLAN
  - On egress all frames are transmitted untagged

- **Trunk:** Trunk ports can carry traffic on multiple VLANs simultaneously, and are normally used to connect to other switches. Trunk ports have the following characteristics:
  The VLANs that a trunk port is member of may be limited by the use of Allowed VLANs
  - Frames classified to a VLAN that the port is not a member of are discarded
  - By default, all frames but frames classified to the Port VLAN (a.k.a. Native VLAN) get tagged on egress. Frames classified to the Port VLAN do not get C-tagged on egress
  - Egress tagging can be changed to tag all frames, in which case only tagged frames are accepted on ingress

- **Hybrid:** Hybrid ports resemble trunk ports in many ways, but adds additional port configuration features. In addition to the characteristics described for trunk ports, hybrid ports have these abilities:
  - Can be configured to be VLAN tag unaware
  - Ingress filtering can be controlled
  - Ingress acceptance of frames and configuration of egress tagging can be configured independently

PORT VLAN

Determines the port's VLAN ID (a.k.a. PVID). Allowed VLANs are in the range 1 through 4095, default being 1.
On ingress, frames get classified to the Port VLAN if the port is configured as VLAN unaware, the frame is untagged, or VLAN awareness is enabled on the port, but the frame is priority tagged (VLAN ID = 0).
On egress, frames classified to the Port VLAN do not get tagged if Egress Tagging configuration is set to untag Port VLAN.

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The Port VLAN is called an "Access VLAN" for ports in Access mode and Native VLAN for ports in Trunk or Hybrid mode.

TAGGED VLAN (TAGGED)

Ports in Trunk and Hybrid mode may control which VLANs they are allowed to become members of. Access ports can only be member of one VLAN, the Access VLAN.
The field's syntax is identical to the syntax used in the Enabled VLANs field.
All VLAN frames in field(except port VLAN), are transmitted with a tag.

FIXED VLAN (UNTAGGED)

All VLAN frames in this field, are transmitted without a tag.
This option is only available for ports in Hybrid mode.

Buttons

Save : saves the new settings

CONFIGURATION → PORT SECURITY

Port Security Configuration

Port	Mode
1	Disable ⌄
2	Disable ⌄
3	Disable ⌄

Save

PORT

Indicates port number per row.

MODE

Auto
10Mbps HDX
10Mbps FDX
100Mbps HDX
100Mbps FDX
1G FDX
Disable

Allows the user to manually set the port speed and duplex mode for the desired port.

- Auto: Auto Detect
- 10Mbps HDX: Half Duplex
- 10Mbps FDX: Full Duplex
- 100Mbps HDX: Half Duplex
- 100Mbps FDX: Full Duplex
- 1G FDX: Full Duplex
- Disable: Port Disable

Note: Port 1 to 4 are speed and full/half duplex selectable. Port 5 & 6 are enable/disable only.

Buttons

Save : saves the new settings

CONFIGURATION → PORT SECURITY MAC

Port Security Static MAC Address

Delete	Port	MAC Address

Add

Save

ADD

> Add VLAN IDs to the next save function

DELETE

> Deletes selected VLAN IDs during the next save function.

PORT

> Select the port number from the drop-down menu

VLAN ID

> Displays VLAN IDs.
> An empty VLAN ID allows the user to enter a new VLAN ID
> Valid VLAN IDs 1-4094

MAC ADDRESS

> Source MAC Address.The address must contain 12 hexadecimal digits, optionally separated in groups of two digits by either '.', ':' or '-'.
> The same MAC address can be configured in different VLAN. The same MAC address can not be configured on a different port with the same VLAN.
> Duplicated MAC addresses will be removed while saving the configuration.
> Special MAC addresses will not be accepted.
> Ensure valid MAC entry (eg:-not multicast MAC)

Notes;
A maximum of 30 entries can be added into the table.
When adding the same MAC address into the same VLAN, the duplicated entry will be automatically deleted.

Buttons

Add : click to add new entry.

Save : saves the new settings

MONITOR → SYSTEM INFO

System Information

Parameter	Value
MAC Address	00-26-dc-00-8f-2e
Serial Number	10229872
Software ID Number	600139-14
PCB Number	844730-03
Date of Manufacture (DD-MM-YYYY)	27-08-2025
Board Temperature	33 Degree C

IP Status

Parameter	Value
IP Address	192.168.0.99
Subnet Mask	255.255.255.0
Default Gateway	192.168.0.1

See Section 2.6.1

MONITOR → PORT

Port Status

Port	Copper_SFP	Link	Speed	Duplex
1	Copper	Up	1000	Full
2	SFP	Down	-	-
3	Copper	Down	-	-

PORT

Monitors each port activity.

COPPER_SFP

Indicates the port connection: Either Copper or SFP

LINK

Up: Connection established
Down: No Connection detected

SPEED

Indicates the port connection speed in Mbps.
- **10**: 10Mbps
- **100**: 100Mbps
- **1000**: 1000Mbps (1Gbps)

DUPLEX

Indicates port connection type. Full, Half

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MONITOR → PoE

PoE Port Status

PortNo	PDType	Current	Voltage	Power Requested	Power Assigned	Class on AlternativeA	Class On AlternativeB	Status
1	-	-	-	-	-	-	-	Not connected
3	-	-	-	-	-	-	-	Power off: Unknown

Global Status

Description	Status
PoE Output Voltage	52.0V
PoE Manager Temperature	50
PoE Controller Software Version	3.4.9

PORT
Indicates port number per row.

PD TYPE
Indicates the Power Device Type detected;
- Single Signature
- Dual Signature

CURRENT
Indicates the current drawn from the relevant PoE port/channel

VOLTAGE
Indicates the voltage from the relevant PoE port/channel

POWER REQUESTED
Indicates the power drawn from the relevant PoE port/channel

POWER ASSIGNED
Indicates the power assigned to the relevant PoE port/channel

CLASS ON ALTERNATIVEA
Indicates the class type on Alternative A from the relevant PoE port/channel

CLASS ON ALTERNATIVEB
Indicates the class type on Alternative B from the relevant PoE port/channel

STATUS
Indicates the detected PD class on the relevant port/channel

MONITOR → LOG

Log Information

ID	Time	Logs

Monitors and logs activity

ID

Indicates the event log identification

TIME

Displays the event log time

LOGS

Displays the brief event type

MAINTANANCE → UPLOAD

Software Upload

Browse... No file selected.   Upload

Use this section to upload OSD released software update.

Click the Browse (or Choose File) button and navigate to the folder where the updated software has been saved. Select the software file (usual format [file name]_fur.bin) example 60007611_fur.bin.

Click the Upload button. The software will be uploaded to the unit. Please wait until software has been uploaded completely as shown below and wait until the system has rebooted.

This process takes several seconds. The webpage will redirect to the "System Information" page. Please check this page to ensure that the Software ID Number has been uploaded by the new software.

Buttons

Browse... : Browse file location
Upload : Upload software

MAINTENANCE → SECURITY

Security

Change Login Details	
Current Username	admin
Current Password	
New Username	admin
New Password	
Confirm Password	

Save

Use this section to change user name and passwords

CURRENT USERNAME

Displays the current or default user name for the unit. *Default username is "admin"*

CURRENT PASSWORD

Enter the current password in order to change username or password. *Default password is left blank for user to select when setting up the unit. For user security, it is highly advised to set passwords!*

NEW USERNAME

Enter new username in this window. The allowed string length is 1 to 8.

NEW PASSWORD

Enter new password in this window. The allowed string length is 0 to 24. Any printable characters including space is accepted

CONFIRM PASSWORD

Enter new password again in this window. This window must match new password window in order for new password to take effect.

Buttons

Save : click save for new username and/or password settings to take effect.

MAINTENANCE → POE FW UPGRADE

PoE chip(PD69200) Firmware Upgrade

Browse... No file selected.   Upload

Use this section to upload OSD released firmware update.

Click the Browse (or Choose File) button and navigate to the folder where the updated firmware has been saved. Select the firmware file.

Click the Upload button. The firmware will be uploaded to the unit. Please wait until firmware has been uploaded completely as shown below and wait until the system has rebooted.

MAINTENANCE → SYSTEM REBOOT

System Reboot

Auto-Reboot Settings	Setting	Action
Auto-Reboot When SFP Link Down	Disable ▾	Save

Click below to manually reboot the system:

Restart System

Use this section to reboot the unit

SETTING

Disable: Disables auto reboot when SFP link is down

Enable: Enables auto reboot whenever link is down

Buttons

Save : click save for new username and/or password settings to take effect.

Restart System

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MAINTENANCE → FACTORY DEFAULT

Factory Defaults

[Default Settings]

Buttons

[Default Settings] : saves the new settings

3   MAINTENANCE

3.1   INTRODUCTION

The following section outlines the fault-finding procedure for the OSD2184P/PW modems. Please take note of the following:

▲   Personnel without appropriate training should not attempt any maintenance except that outlined below.

▲   If further maintenance is attempted you are warned that every care should be taken to ensure that internal measurements made while the equipment is operational are taken carefully as some components within the unit are expensive and may be damaged by failure of any portion of their support circuitry.

▲   Some components within the unit are Electrostatic (ES) sensitive and Electrostatic Discharge (ESD) precautions should be taken when performing maintenance upon the unit.

3.2   EXTERNAL INSPECTION

Visually check for the following:

▲   Check that the correct power source is connected to the power socket.

▲   Check that the Ethernet cables are connected to the modem correctly and that the distant OSD2184P/PW modem has been connected correctly to any external equipment.

▲   Inspect the optical connectors (for fiber SFP option) for any contamination and clean using isopropyl alcohol and a lint free tissue if any contamination is detected.

3.3   ROUTINE MAINTENANCE

▲   There is no routine maintenance required with the OSD2184P/PW.

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4 WARRANTY

Thank you for purchasing equipment designed, manufactured and serviced by Optical Systems Design (OSD). OSD warrants that at the time of shipment, its products are free from defects in material and workmanship and conforms to specifications. Our Warranty conditions are outlined below:

4.1 WARRANTY PERIOD

For warranty period, please contact your local OSD distributor.

4.2 REPAIRS

Optical Systems Design reserves the right to repair or replace faulty modules/units. Please obtain a "Return Material Authorisation" (RMA) form and number before returning goods.
Goods must be returned in adequate packing material to Optical Systems Design, Warriewood or its nominated authorised representative, for all repairs.

4.2.1 WARRANTY REPAIRS

Return shipments to OSD shall be at customer's expense and freight back to the customer will be at OSD expense.

4.2.2 OUT-OF-WARRANTY REPAIRS

OSD reserves the right to repair or replace any faulty goods. Freight costs and insurance for both journeys are met by the user. All equipment repaired by OSD will have a 3-Month Warranty from the date of dispatch.

4.2.3 SITE REPAIRS

By agreement site repairs may be undertaken for which out of pocket, hotel and travel expenses will be charged.

4.2.4 EXCLUSIONS

This warranty does not apply to defects caused by unauthorized modifications, misuse, abuse or transport damage to the equipment. All modifications to OSD's standard product will need written authorization and will be charged at normal repair rates. All modifications are to be carried out by OSD Technicians. Warranty is void if unauthorized removal and/or tampering with serial number and/or repair labels is evident.

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