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**OPTICAL**

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**SYSTEMS**

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**DESIGN**

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**Quick Start Guide**

**OSD2512**

**MANAGED 12 x 10/100/1000BASE-T (RJ45)**

**AND 2 x 1G (SFP) ETHERNET SWITCH**



# OPTICAL SYSTEMS DESIGN

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## 1 INTRODUCTION

Thank you for choosing the OSD2512 14-Port Gigabit Managed Ethernet Switch. This Quick Start Guide is designed to guide you through the installation and basic software function.

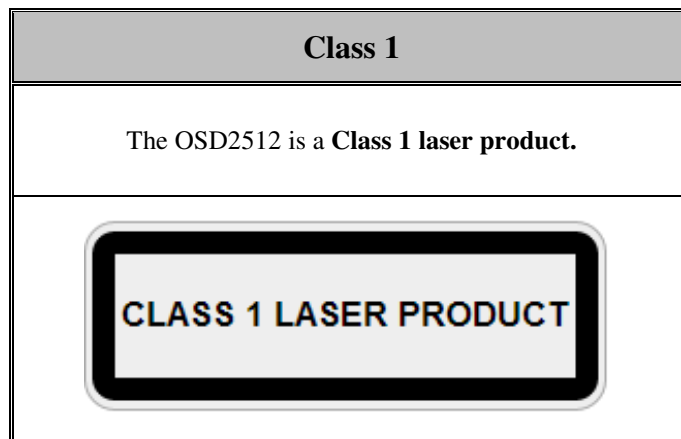
## 2 INSTALLATION

### 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 (SFP) per IEC 60825-1:2014 standard.



### 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.

## 3 OSD2512 FRONT AND REAR PANELS

### 3.1 FRONT PANEL



FIGURE 1: FRONT PANEL

1. Board Status LED
2. USB Console Port
3. View LED Mode Button
4. View Mode LEDs Indicators
5. Copper Port Status LEDs
6. RJ45 Copper Ports
7. SFP Fiber LED
8. SFP Fiber Ports
9. SFP Fiber LED
10. Reset Button

### 3.2 REAR PANEL



FIGURE 2: REAR PANEL

11. Earth
12. Power 1 LED
13. Dual Redundant Power Input
14. Power 2 LED

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## 4 Power Supply Connections

Connect the dual redundant power to the 4-way terminal block located on the rear of the unit.

The OSD2512 requires external +10 to +36V<sub>DC</sub> @ 40VA Max power.



FIGURE 3: POWER CONNECTION

TABLE 1: DC POWER CONNECTION

External Power Pin	Specification
Pin 1, Pin 3	0V (Ground Isolated)
Pin 2, Pin 4	+10 to +36V <sub>DC</sub> @ 40VA max

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## 5 LED Indicators

TABLE 2: LED FUNCTION

	Function
Board Status LED	<ul style="list-style-type: none"> <li>• Green – Normal status</li> <li>• Red Blinking – Internal Warning</li> </ul>
View Mode LED Indicators	Controlled by View LED Mode Button. Pressing the Mode button cycles the Copper Port Status LED indication. Speed Mode → Duplex Mode → Status Mode → Reserved →.
Copper Port Status LED	<p>The Copper Port Status LED will indicate different information.</p> <p>Speed Mode:</p> <ul style="list-style-type: none"> <li>• Green – 1Gbps</li> <li>• Yellow – 100MBps</li> <li>• Off – No Connection</li> <li>• Blinking - Traffic</li> </ul> <p>Duplex Mode:</p> <ul style="list-style-type: none"> <li>• Green – Full Duplex</li> <li>• Yellow – Half Duplex</li> <li>• Off – No Connection</li> <li>• Blinking - Traffic</li> </ul> <p>Status Mode:</p> <ul style="list-style-type: none"> <li>• Green – Connection good</li> <li>• Off – No Connection</li> </ul>
Fiber Port Status LED	<ul style="list-style-type: none"> <li>• Green – 1Gbps</li> <li>• Off – No Connection</li> <li>• Blinking - Traffic</li> </ul>

## 6 Fitting SFP Connectors

Care should be taken when inserting/removing the SFP connectors from the 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 appropriate fiber cable.

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

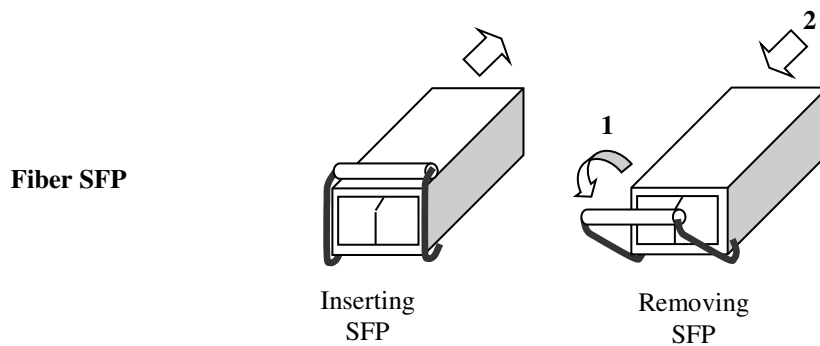


FIGURE 4: FITTING/REMOVING SFP CONNECTORS

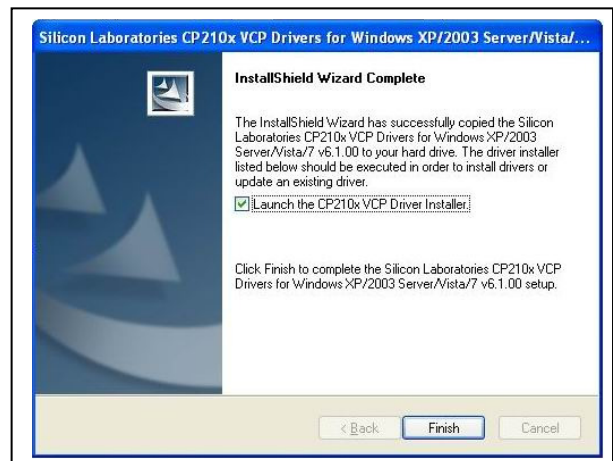
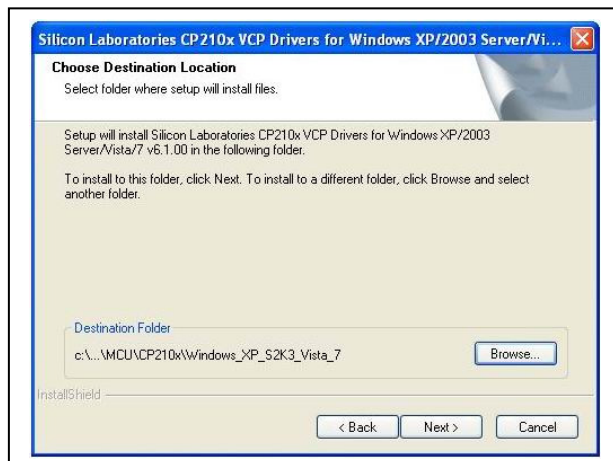
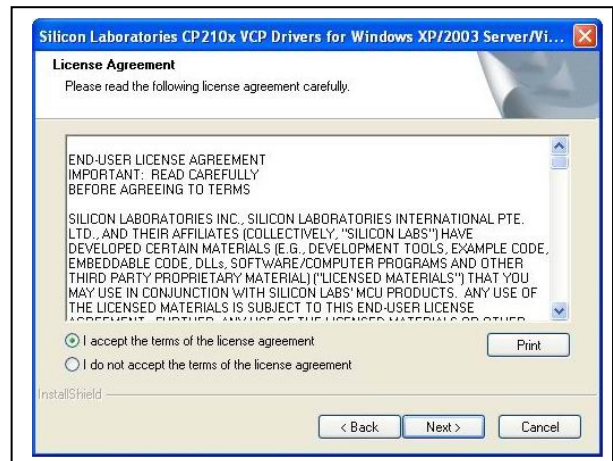
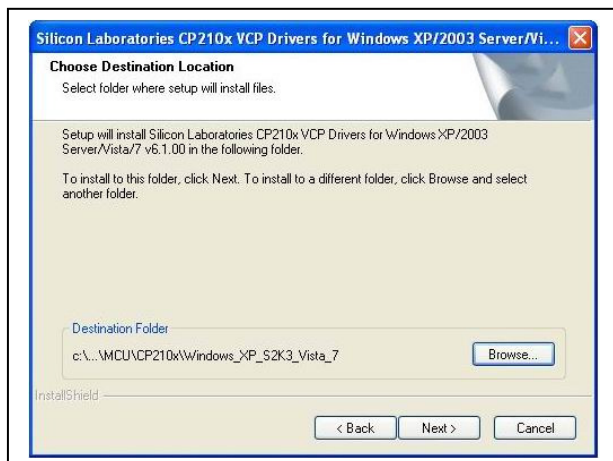
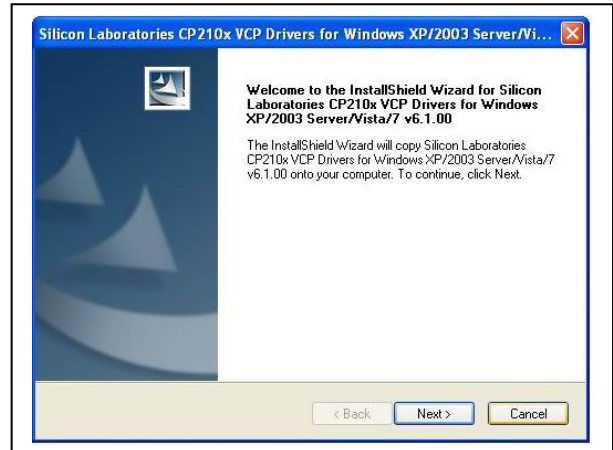


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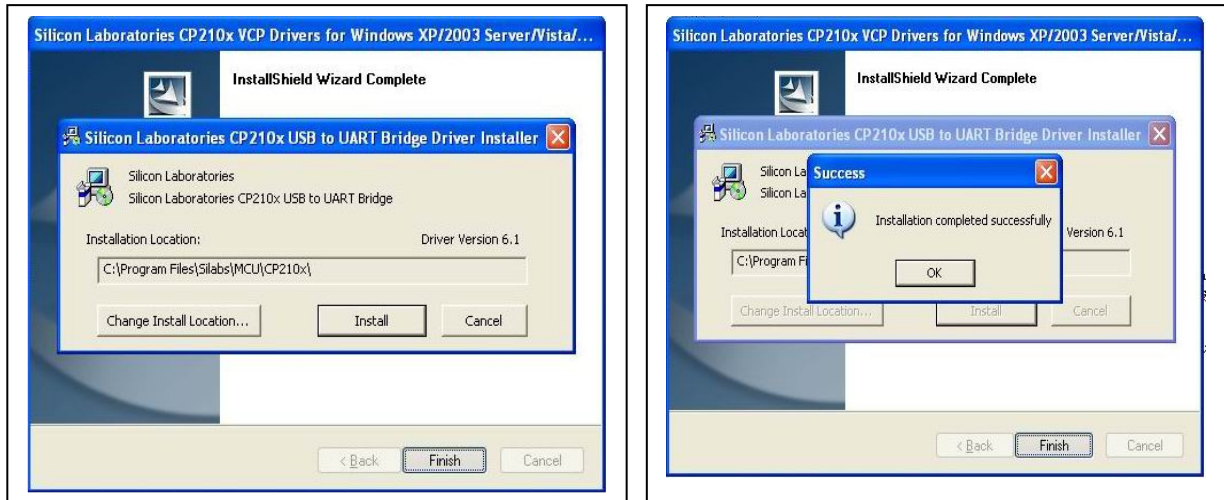
## 7 CLI OVERVIEW

### 7.1 CONNECT TO CLI

The Silicon Laboratories CP210x VCP Drivers is needed to be installed on the PC before connecting the switch.



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1. Connect the Console Port on UUT to PC with USB cable (Type A to Type B).
2. Using HyperTerminal to set up the following parameters.
  - Baud Rate: 115200
  - Data Bits: 8
  - Parity: None
  - Stop Bits: 1
  - Flow Control: None
3. Check the link by pressing <ENTER>. The line should jump to the next line.
4. Using the Username and password to login the switch
  - Default Username: admin
  - Default Password: (None)

## 7.2 CLI COMMAND FOR IP CONFIGURATION

- *show ip interface brief*: Display the current IP address and subnet mask.
- *configure terminal -> interface vlan 1 -> ip address <IP address> <subnet mask>*: Setup the switch IP address.
- *copy running-config startup-config*: Save the current configuration to start-up configuration.

**PS: All configuration changes must be saved otherwise all the changes will be lost after rebooting!**

## 8 GUI Overview

### 8.1 DEFAULT SETTING

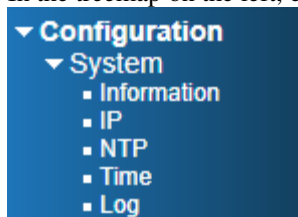
- IP Address: 192.168.0.99
- Subnet Mask: 255.255.255.0
- Gateway: 192.168.0.1
- User Name: admin
- Password: (None)

### 8.2 LOG INTO THE SWITCH

- Connect a switch port to a PC, Change the PC's network IP address to connect to the switch (i.e.: 192.168.0.2).
- In a web browser, enter the URL 192.168.0.99.
- Enter the username and password.

### 8.3 IP CONFIGURATION

In the treemap on the left, expand the **Configuration -> System -> IP**.



#### IP Configuration

Mode	Host	
DNS Server 0	No DNS server	
DNS Server 1	No DNS server	
DNS Server 2	No DNS server	
DNS Server 3	No DNS server	
DNS Proxy	<input type="checkbox"/>	

#### IP Interfaces

Delete	VLAN	DHCPv4			IPv4		DHCPv6			IPv6	
		Enable	Fallback	Current Lease	Address	Mask Length	Enable	Rapid Commit	Current Lease	Address	Mask Length
<input type="checkbox"/>	1	<input type="checkbox"/>	0		192.168.0.99	24	<input type="checkbox"/>	<input type="checkbox"/>			

#### IP Routes

Delete	Network	Mask Length	Gateway	Next Hop VLAN
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Enter the **IPv4 address** and **Mask Length** in the table.

Choose the management VLAN ID to access that IP in **VLAN** table if VLAN function is required.

If the multiple IP addresses are required, click **Add Interface** to add more IP interface.

Click **Save** to save the configuration.

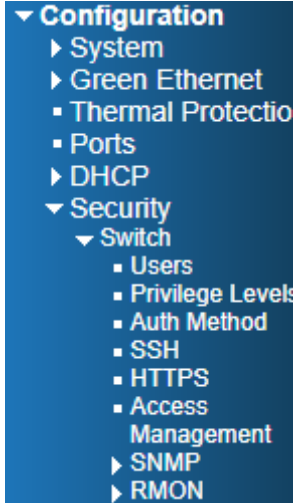
Use new IP address to access the switch.

**PS: All configuration changes must be saved otherwise all the changes will be lost after rebooting!**

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## 8.4 USERS AUTHENTICATION

In the tree map on the left, expand the **Configuration -> Security-> Switch-> Users**



### Users Configuration

User Name	Privilege Level
admin	15

Click **admin** to change the current admin account setting.

### Edit User

User Settings	
User Name	admin
Password	
Password (again)	
Privilege Level	15

If multiple users are required, click **Add New User**

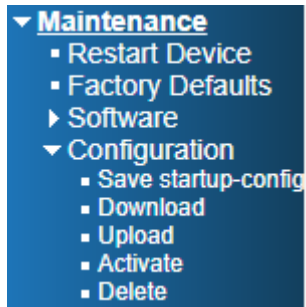
### Add User

User Settings	
User Name	
Password	
Password (again)	
Privilege Level	0

**PS: All configuration changes must be saved otherwise all the changes will be lost after rebooting!**

## 8.5 SAVE CONFIGURATION TO START-UP

In the treemap below, expand the **Maintenance** and expand **Configuration**, then select Save startup-config



### Save Running Configuration to startup-config

Please note: The generation of the configuration file may be time consuming, depending on the amount of non-default configuration.

Click **Save Configuration** to save the configuration on start-up.

## 9 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:

### 9.1 WARRANTY PERIOD

For warranty period, please call your local OSD distributor.

### 9.2 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.

#### 9.2.1 WARRANTY REPAIRS

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

#### 9.2.2 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.

#### 9.2.3 SITE REPAIRS

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

#### 9.2.4 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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