# **Quick Start Guide**

**OSD2258** 

## **10-PORT REDUNDANT RING**

**GIGABIT ETHERNET SWITCH** 

### **INDEX 1**

| 1            | INTRODUCTION  | 4           |
|--------------|---|-------------|
| 2            | INSTALLATION  | 4           |
| 2.1          | LOCATION  | 4           |
| 3            | OSD2258 FRONT AND REAR PANELS                                       | 5           |
| 3.1          | FRONT PANEL   | 5           |
| 3.2          | TOP PANEL   | 6           |
| 3.3          | BOTTOM PANEL  | 6           |
| 4            | POWER SUPPLY CONNECTIONS  | 7           |
| 5            | ALARM CONNECTIONS   | 7           |
| 6            | SWITCH CONFIGURATION  | 8           |
| 7            | LED INDICATORS  | 9           |
| 8            | FITTING SFP CONNECTORS  | 9           |
| 9            | CLI OVERVIEW 1  | 0           |
| 9.1          | CONNECT TO CLI 1  | 0           |
| 9.2          | CLI COMMANDS FOR IP CONFIGURATION 1                                 | 1           |
| 10           | GUI OVERVIEW 1  | 2           |
| 10.1         | DEFAULT SETTING 1   | 2           |
| 10.2         | LOG INTO THE SWITCH 1   | 2           |
| 10.3         | IP CONFIGURATION 1  | 3           |
| 10.4         | VLAN1   | 3           |
| 11           | RESET TO FACTORY DEFAULT1   | 3           |
| 12           | WARRANTY 1  | 4           |
| 12.1         | WARRANTY PERIOD 1   | 4           |
| 12.2         | REPAIRS1  | 4           |
| 12.2         | 1.1 WARRANTY REPAIRS  | 4           |
| 12.2         | 2.2 OUT-OF-WARRANTY REPAIRS   | 4           |
| 12.2         | L.3 SITE REPAIRS 1  | 4           |
| 12.2         | 2.4 EXCLUSIONS 1  | 4           |
| FIGURE       |   | _           |
| FIGUE        | KE 1: FRONT PANEL   | 5           |
| FIGUE        | RE 2: TOP PANEL   | 6           |
| FIGUE        | KE 3: BUTTOM PANEL  | 6           |
| FIGUE        | KE 4: POWER CONNECTION  | /           |
| FIGUE        | KE 5: SWITCH DEFAULT POSITION                                       | 8           |
| FIGUE        | KE 6: FITTING/KEMUVING SFP CONNECTORS                               | 9           |
| TARI         | E 1. DC POWER CONNECTION  | 7           |
| TUL          |   | 1           |
| TARE         | F 2: ALARM CONNECTIONS  | 7           |
| TABL         | E 2: ALARM CONNECTIONS<br>F 3: SWITCH SETTINGS                      | 7<br>8      |
| TABL<br>TABL | E 2: ALARM CONNECTIONS<br>E 3: SWITCH SETTINGS<br>E 4: LED FUNCTION | 7<br>8<br>9 |

PAGE 3

OSD2258 QUICK START GUIDE

### **1 INTRODUCTION**

Thank you for choosing the OSD2258 10-Port Redundant Ring Gigabit 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.
- A Protective eyewear should be worn in the vicinity of laser equipment.

#### 2.1 LOCATION

As with any electric device, the OSD2258 should be placed where it 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 -20°C to 75°C (-4°F to 167°F).
- 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.

PAGE 4

OSD2258 QUICK START GUIDE

### 3 OSD2258 FRONT AND REAR PANELS

#### 3.1 FRONT PANEL



FIGURE 1: FRONT PANEL

PAGE 5

OSD2258 QUICK START GUIDE

#### 3.2 TOP PANEL



FIGURE 2: TOP PANEL

#### 3.3 BOTTOM PANEL



FIGURE 3: BOTTOM PANEL

OSD2258 QUICK START GUIDE

### 4 Power Supply Connections

Connect the dual redundant power to the 4-way terminal block located on the top of the unit. The OSD2258 requires external +10 to  $+36V_{DC}$  or 22 to  $28V_{AC}$  @ 10VA Max power.





FIGURE 4: 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> or 22 to $28V_{AC}$ @ 10VA |  |  |

### **5** Alarm Connections

The OSD2258 has two monitoring alarm outputs: 1) Ring to Bus Alarm and 2) Temperature Alarm. The alarm connections and conditions for alarm outputs are as set out in Table 2. There are four pins on the 3.5mm terminal block used alarm output. Maximum ratings the relay can drive is 100mA @ $46V_{(max)}$ . Note: Alarm output has no polarity.

| TABLE 2: | ALARM | CONNECTIONS |
|----------|-------|-------------|
|          |       |             |

| Alarm<br>Output | Alarm1 Ring /Bus Status | Alarm CH2 Temperature |  |
|-----------------|-------------------------|-----------------------|--|
| Open            | Ring                    | Less than 80°C        |  |
| Closed          | Bus*                    | Higher than 80°C      |  |

\*Note: Bus alarm is only triggered *after* a ring connection is established.

OSD2258 QUICK START GUIDE

### 6 Switch Configuration

The OSD2258 has an 8-way DIP switch located on the bottom of the unit to control a number of functions. Table 3 outlines the function of each switch. Default position of switch 1-8 is all Off (down position) – see Figure 5.





3 4 5

6

OFF

8

| TABLE 3: | SWITCH | SETTINGS |
|----------|--------|----------|

| SWITCH<br>NUMBER | DESCRIPTION              | FUNCTION             | SWITCH POSITION |
|------------------|--------------------------|----------------------|-----------------|
|                  | CUIMada                  | Enable WebGUI        | On              |
| 1                | GUI Mode                 | Disable WebGUI       | Off*            |
|                  | Not Used                 | -                    | On              |
| 2                | Not Used                 | -                    | Off*            |
| _                | Not Used                 | -                    | On              |
| 3                |                          | -                    | Off*            |
|                  | High PoE                 | 60W per port         | On              |
| 4                |                          | Auto Mode            | Off*            |
| _                | Not Used                 | -                    | On              |
| 5                |                          | -                    | Off*            |
| -                | Ring/Non-Ring            | Ring Mode Disabled   | On              |
| 6                |                          | Ring Mode Enabled    | Off*            |
| 7                | EEE <sup>†</sup> Disable | Disable EEE Function | On              |
|                  |                          | Enable EEE Function  | Off*            |
|                  | Decorrect                | Programming Mode     | On              |
| 8                | Keservea                 | User Mode            | Off*            |

\* Default settings. SW1-5,8 switch should remain in OFF position at all times.

<sup>+</sup> EEE- Energy Efficient Ethernet (IEE802.3az standard) - enabling this function lowers the power consumption around 10% on ports 1-8 only.

OSD2258 QUICK START GUIDE

### 7 LED Indicators

| LED              | Function    |   |  |  |
|------------------|-------------|---|--|--|
| Redundant        | Off         | Power is Not Applied to Corresponding Input |  |  |
| Power 1 and 2    | Green       | Power Connected to Corresponding Input      |  |  |
| Dowor            | Off         | Unit is Off                                 |  |  |
| rowei            | Green       | Unit is Powered On                          |  |  |
|                  | Off         | Non-Ring Mode (SW6 On)                      |  |  |
| Ding             | Green       | Redundant Ring                              |  |  |
| Kilig            | Amber       | Bus   |  |  |
|                  | Green/Amber | Initializing                                |  |  |
| Link (mood)      | Off         | 10Mb or No Link                             |  |  |
| Conner Port 1.8  | Blink Amber | 100Mb                                       |  |  |
| Copper Fort 1-8  | Amber       | 1Gb   |  |  |
| A at Common Dont | Off         | No Connection/No Activity                   |  |  |
|                  | Green       | Link Established                            |  |  |
| 1-0              | Blink       | Activity                                    |  |  |
| SED Dorts 0, 10  | Off         | No Link Established                         |  |  |
| SFF FUILS 9-10   | Blink       | SFP Link OK/Activity                        |  |  |

#### TABLE 4: LED FUNCTION

#### 8 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.

Fiber SFP



#### FIGURE 6: FITTING/REMOVING SFP CONNECTORS

PAGE 9

OSD2258 QUICK START GUIDE

### 9 CLI OVERVIEW

#### 9.1 CONNECT TO CLI

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

|  | Silicon Laboratories CP210x VCP Drivers for Windows XP/2003 Server/Vi  |
|--|--|
| Open File - Security Warning.         The publisher could not be verified. Are you sure you want to run this software?         Image: CP210x_VCP_Win_XP_S2K3_Vista_7.exe         Publisher: Unknown Publisher         Type: Application         From: C:\Allan\Products\2244   | Stillcon Laboratories CP210x VCP Universitor Windows AP/2003 Server/Vit.           Welcome to the InstallShield Wizard for Silicon<br>Laboratories CP210x VCP Drivers for Windows<br>XP/2003 Server/Vista/7 v6.1.00           The InstallShield Wizard will copy Silicon Laboratories<br>CP210x VCP Drivers for Windows XP/2003 Server/Vista/7<br>v6.1.00 onto your computer. To continue, click Next. |
| Run       Cancel         Image: Always ask before opening this file         Image: Always ask before openi | < Back Next > Cancel   |
|  |  |
| Silicon Laboratories CP210x VCP Drivers for Windows XP/2003 Server/Vi<br>Choose Destination Location<br>Select folder where setup will install files.  | Silicon Laboratories CP210x VCP Drivers for Windows XP/2003 Server/Vi X<br>License Agreement<br>Please read the following license agreement carefully.   |
| Setup will install Silicon Laboratories CP210x VCP Drivers for Windows XP/2003<br>Server/Vistar7 v61.00 in the following folder.<br>To install to this folder, click Next. To install to a different folder, click Browse and select<br>another folder.  | END-USER LICENSE AGREEMENT<br>IMPORTANT: READ CAREFULLY<br>BEFORE AGREEING TO TERMS<br>SILICON LABORATORIES INC., SILICON LABORATORIES INTERNATIONAL PTE.<br>LTD., AND THEIR AFFILATES (COLLECTIVELY, "SILICON LABS") HAVE<br>DEVELOPED CERTAIN MATERIALS (E.G., DEVELOPMENT TOOLS, EXAMPLE CODE,<br>EMBEDDABLE CODE, DLLS. SOFTWARE/COMPUTER PROGRAMS AND OTHER                                       |
| Destination Folder<br>c:\\MCU\CP210x\Windows_XP_S2K3_Vista_7 Browse  | THIRD PARTY PROPRIETARY MATERIALI ("LICENSED MATERIALS") THAT YOU<br>MAY USE IN CONJUNCTION WITH SILCON LASS' MOLI PRODUCTS. ANY USE OF<br>THE LICENSED MATERIALS IS SUBJECT TO THIS END-USER LICENSE<br>CONTRACT OF A SUBJECT TO THIS END-USER LICENSE<br>OF accept the terms of the license agreement<br>I do not accept the terms of the license agreement<br>InstallSheld                          |
| < Back Next > Cancel   | <back next=""> Cancel</back>   |
| Silicon Laboratories CP210x VCP Drivers for Windows XP/2003 Server/Vi  | Silicon Laboratories CP210x VCP Drivers for Windows XP/2003 Server/Vista/  |
| Choose Destination Location<br>Select folder where setup will install files.   | InstallShield Wizard Complete The InstallShield Wizard has successfully copied the Silicon   |
| Setup will install Silicon Laboratories CP210x VCP Drivers for Windows XP/2003<br>Server/Vista/7 v6.1.00 in the following folder.<br>To install to this folder, click Next. To install to a different folder, click Browse and select<br>another folder.   | Laboratories CP210x VCP Drivers for Windows XP/2003<br>Server/Vista/7 v6.1.00 to your hard drive. The driver installer<br>listed below should be executed in order to install drivers or<br>update an existing driver.   |
|  | Click Finish to complete the Silicon Laboratories CP210x VCP<br>Drivers for Windows XP/2003 Server/Vista/7 v6.1.00 setup.  |
| Destination Folder<br>c:\\MCU\CP210x\Windows XP_S2K3_Vista_7Browse   |  |

OSD2258 QUICK START GUIDE

K Back Finish

DOC ID: 10117602

Cano

Next > Cancel

< Back

PAGE 10

| Silicon Laboratories CP210x VCP Drivers for Windows XP/2003 Server/Vista/  | Silicon Laboratories CP210x VCP Drivers for Windows XP/2003 Server/Vista/ |
|--|---|
| InstallShield Wizard Complete  | InstallShield Wizard Complete   |
| 🖏 Silicon Laboratories CP210x USB to UART Bridge Driver Installer 🔀  | Silicon Laboratories CP210x USB to UART Bridge Driver Installer 🗙         |
| Silicon Laboratories<br>Silicon Laboratories CP210x USB to UART Bridge<br>Installation Location: Driver Version 6.1<br>C:\Program Files\Silabs\MCU\CP210x\<br>Change Install Location Install Cancel | Silicon La Silicon Location Location, Install Cencel                      |
| < Back Finish Cancel   | Kancel  |

- 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: 57600 ٠
    - Data Bits: 8 .
    - Parity: None
  - Stop Bits: 1 •

\_

PAGE 11

- Flow Control: None ٠
- 3. Check the link by pressing <ENTER>. The line should jump to the next line.

#### 9.2 CLI COMMANDS FOR IP CONFIGURATION

| Common Format  |
|--|
| {command_name} <parameter></parameter>   |
| vc(version_check): Get software version number   |
| defaultsetting: Reset configuration to default   |
| topo_check<br>Function: Get topology status of an established Ring/Bus.<br>Format: {tc}  |
| node_check<br>Function: Get running status of the node with given MAC address.<br>Format: {nc} <00:26:dc:xx:xx:xx>(hex)<br>Example: 'nc 00:26:dc:00:22:51'> check the Node with given out MAC Address. |
| local_node_check<br>Function: Get running status of local node.<br>Format: {lnc}   |
| float_backup_enable<br>Function: Enable Float Backup function for all nodes in a Ring(Bus).<br>Format: {fbe}   |
| float_backup_disable<br>Function: Disable Float Backup function for all nodes in a Ring(Bus).<br>Format: {fbd}   |
| node_ip_set<br>Function: Setup ip of the node with given MAC address.<br>Format: {node_ip_set/nis} <00:26:dc:xx:xx:xx>(hex) <ip address=""> <net mask=""> <gateway address=""></gateway></net></ip>    |
| node_all_set<br>Function: Setup ip for all nodes on a bus or ring.<br>Format: {node_all_set/nas} <base address="" ip=""/> <net mask=""> <gateway address=""> <step></step></gateway></net>             |
| configsnmp: Change to snmp configuration sub menu  |
| configoam: Change to OAM configuration sub menu  |
| The end  |
|  |

### OSD2258 QUICK START GUIDE

### **10 GUI Overview**

#### 10.1 DEFAULT SETTING

- IP Address: 192.168.0.99
- Subnet Mask: 255.255.255.0
- Gateway: 192.168.0.1

#### 10.2 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 default 192.168.0.99.
- The GUI should now have access to the OSD2258 through the web browser



**Configuration** settings, **Monitoring** and **Maintenance** can all be accessed vis the drop down menu titles located on the left of the screen





### **OSD2258 QUICK START GUIDE**

#### 10.3 IP CONFIGURATION

The IP can be configured to user requirements/settings. Click "Save" button to save changes.

#### **IP Configuration**

|                 | Configured    | Current       |
|-----------------|---------------|---------------|
| IP Address      | 192.168.0.90  | 192.168.0.90  |
| Subnet Mask     | 255.255.255.0 | 255.255.255.0 |
| Default Gateway | 192.168.0.2   | 192.168.0.2   |

Save Reset

#### 10.4 VLAN

To Enable VLAN and enable settings, click the Enable VLAN box. Click "Save" button to save changes. Earlier versions will have the VLAN function permanently enabled.

| VLAN Co                 | nfiguratio | on          |        |                      |                       |                |  |  |  |
|-------------------------|------------|-------------|--------|----------------------|-----------------------|----------------|--|--|--|
| Enable VLAN             |            |             |        |                      |                       |                |  |  |  |
| VLAN Mode Configuration |            |             |        |                      |                       |                |  |  |  |
| VLAN Mod<br>Manageme    | e 🛛 🛛      | 802.1Q<br>1 | VLAN   | •                    |                       |                |  |  |  |
| Port VLA                | N Config   | uratio      | on     |                      |                       |                |  |  |  |
| Port No                 | Mode       | Por         | t VLAN | Tagged VLAN (Tagged) | Fixed VLAN (Untagged) | Forbidden VLAN |  |  |  |
| 1                       | Access 🔻   |             | 1      |                      |                       |                |  |  |  |
| 2                       | Access 👻   |             | 1      |                      |                       |                |  |  |  |
| 3                       | Access -   |             | 1      |                      |                       |                |  |  |  |
| 4                       | Access -   | ]           | 1      |                      |                       |                |  |  |  |
| 5                       | Access -   | ]           | 1      |                      |                       |                |  |  |  |
| 6                       | Access -   |             | 1      |                      |                       |                |  |  |  |
| 7                       | Access -   | ]           | 1      |                      |                       |                |  |  |  |
| 8                       | Access -   |             | 1      |                      |                       |                |  |  |  |
| Save                    |            |             |        |                      |                       |                |  |  |  |

## **11 Reset to Factory Default**

Changes made to settings, IP, VLAN etc through the GUI are saved when in default position. If for any reason the unit requires to be reset to factory settings the following command using the CLI (see section 9) should be used. Note: All previous settings will be erased!

#### default\_setting

Function: Reset configuration to default. **Format: {ds}** 

OSD2258 QUICK START GUIDE

### **12 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:

#### 12.1 WARRANTY PERIOD

For warranty period, please call your local OSD distributor.

#### 12.2 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.

#### 12.2.1 WARRANTY REPAIRS

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

#### 12.2.2 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.

#### 12.2.3 SITE REPAIRS

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

#### 12.2.4 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.

**OSD2258 QUICK START GUIDE** 

PAGE 15

OSD2258 QUICK START GUIDE

Optical Systems Design Pty. Ltd. 7/1 Vuko Pl. Warriewood 2102 P.O. Box 891 Mona Vale N.S.W. Australia 2103 Telephone: +61 2 9913 8540 Facsimile: +61 2 9913 8735 Email: sales@osd.com.au Web Site: www.osd.com.au



Printed in Australia

PAGE 17

OSD2258 QUICK START GUIDE