



D-Link DXS-3400-24SC 24-Port Layer 3 Stackable 10 Gigabit Fiber Managed Switch Installation Guide

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DXS-3400-24SC

20-port 10 GbE SFP+ and 4-port 10GBase-T/SFP+ combo design Managed L2+ Switch /



Quick Installation Guide

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Introduction

This Quick Installation Guide gives instructions for setting up the D-Link DXS-3400-24SC switch. The model you have purchased may appear slightly different from those shown in the illustrations.

Package Contents

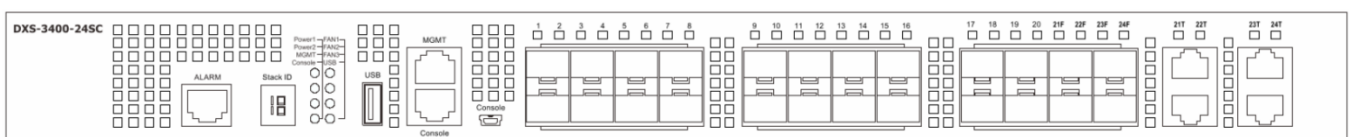
Open the shipping carton of the Switch and carefully unpack its contents. Please consult the packing list located to make sure all items are present and undamaged.

- | | |
|--|---|
| <ul style="list-style-type: none">• One DXS-3400-24SC switch• One AC power cord• One console cable Mini-USB• One console cable• AC power module• Three fans | <ul style="list-style-type: none">• Two mounting brackets• One rack mounting kit• Four rubber feet with adhesive backing• One Quick Installation Guide• One CD (optionally) |
|--|---|

If any of the above items are damaged or missing, please contact your local reseller for replacement.

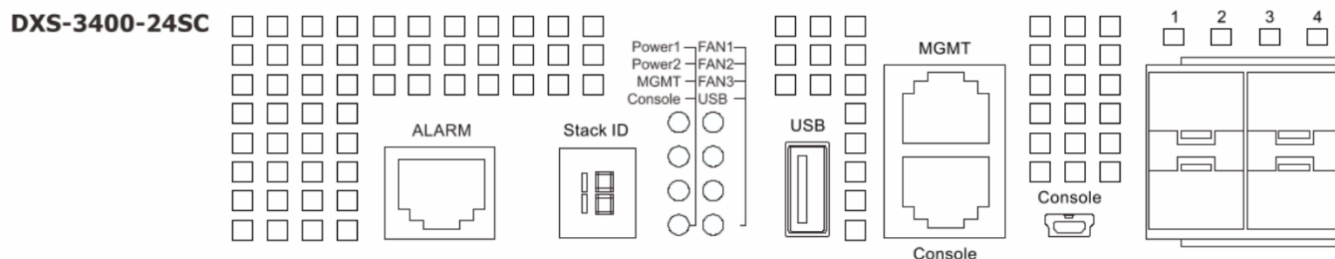
Hardware Overview

Front Panel



Port	Description
Alarm	The RJ-45 (8 pins) Alarm port provides external alarm detection. The Switch will send out the traps and logs when two of the pins are shorted among the pair.
USB	Inserting a flash drive into the USB 2.0 Type-A port provides additional storage space for portable firmware images and configuration files that can be copied to and from the NVRAM of the Switch.
MGMT	The RJ-45 MGMT port is an out-of-band management port that operates at 10/100/1000 Mbps wire speed. This port can be used to configure the Switch without being connected to the network.
Console (RJ-45)	The RJ-45 console port can be used to connect to the Command Line Interface (CLI) of the Switch for configuration, management, and monitoring. This port uses a special console cable (included in this package) with a DB-9 interface to connect the Switch to the serial port (COM) of the PC.
Console (Mini-USB)	The Mini-USB console port can be used to connect to the Command Line Interface (CLI) of the Switch with a special mini-USB console cable (included in this package) for configuration, management, and monitoring.
10 Gigabit SFP+ Ports	The DXS-3400-24SC is equipped with 20 SFP+ ports. These ports can operate at 1/10 Gbps wire speeds.
10 Gigabit Combo RJ-45/SFP+ Ports	The Switch is equipped with 4 combo ports that can either operate as RJ-45 Ethernet ports or SFP+ ports. The RJ-45 ports can operate at 100/1000/10000 Mbps wire speeds. The SFP+ ports can operate at 1/10 Gbps wire speeds.

LED Indicators

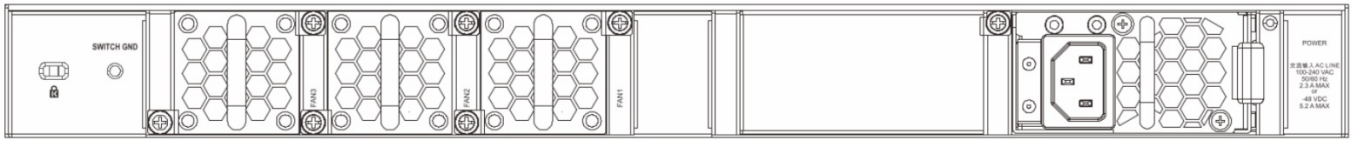


LED	Colour	Stack ID Status	Description
Stack ID	1-4		Indicates the stacking ID, which can be assigned manually by the user or automatically by the system.
	H		This indicates this switch is the master switch in the stack.
	h		This indicates this switch is the backup master switch in the stack.
	E		Indicates there was an error in the system's self-test.
	G		This indicates the Safeguard engine entered the exhausted mode.
		Solid Green	Power on.

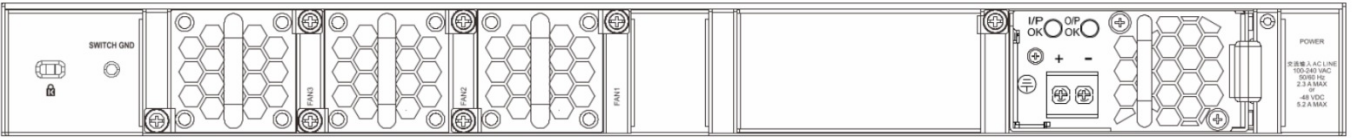
Power 1. Power 2	Green / Amber	Solid Amber	Power supply fails.
		Light Off	Power off.
Management (MGMT)	Green	Solid Green	After a link to the MGMT port was successfully established.
		Blinking Green	Activity on this port is taking place.
		Light Off	There is no link present or when this interface was shut down from within the Switch's configuration.
Console	Green /Amber	Solid Green	The RJ-45 console port is active.
		Solid Amber	The mini-USB console port is active.
		Light Off	Both console ports are not active.
Fan1, Fan2, Fan3	Green / Amber	Solid Green	When the fan is operating normally.
		Solid Amber	When the switch is booting up or when a diagnostics test is taking place.
		Blinking Amber	When a fan fails.
		Light Off	When the fan is not receiving power.
USB	Green / Red	Solid Green	When a USB flash drive is plugged in.
		Blinking Green	When the Switch is reading or writing data to and from the USB drive.
		Solid Red	When a USB drive failure has been detected.
		Light Off	When no USB drive is plugged into the USB port.
Port LEDs	Green /Amber	Solid Green	RJ-45 ports: there is a connection to a 10 Gbps Ethernet device on any of the ports; SFP+ fiber ports: there is a connection to a 10 Gbps Ethernet device on any of the ports.
		Solid Amber	RJ-45 ports: there is a connection to a 100/1000 Mbps Ethernet device on any of the RJ-45 ports; SFP+ fiber ports: there is a connection to a 1 Gbps Ethernet device on any of the SFP+ fiber ports.
		Blinking	RJ-45 ports: when a port is active: SFP+ fiber ports: when a port is active.
		Light Off	RJ-45 ports: there is no link or activity; SFP+ fiber ports: there is no link or activity.

Rear Panel

Below is the rear panel view of the DXS-3400-24SC with an AC power supply.



Below is the rear panel view of the DXS-3400-24SC with a DC power supply.

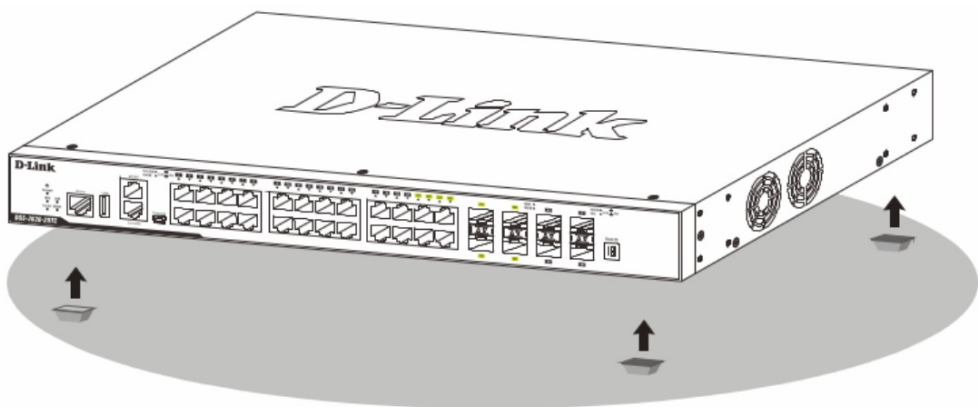


Component	Description
Security Lock	Provide a Kensington-compatible security lock to be able to connect to a secure immovable device. Insert the lock into the notch and turn the key to secure the lock. The lock-and-cable apparatus should be purchased separately.
Switch GND	Switch GND is used for connecting the grounding wire.
Three Fan Module Slots	These slots can be equipped with the following fan module. <ul style="list-style-type: none"> DXS-FAN 100 (normal fan tray with front-to-back airflow)
Two Power Supply Module Slots	These slots can be equipped with the following additional power modules. Only one power supply module is included. Any additional modules should be bought separately. <ul style="list-style-type: none"> DXS-PWR300AC (300 Watt AC power supply tray with front-to-back airflow) DXS-PWR300DC (300 Watt DC power supply tray with front-to-back airflow)

Installation Guidelines

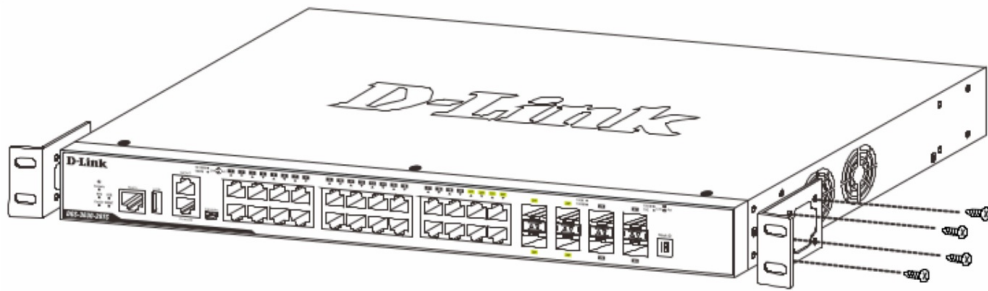
Installing the Switch without a Rack

When installing the switch on a desktop or shelf, the rubber feet included with the device must be attached on the bottom at each corner of the device's base. Allow enough ventilation space between the device and the objects around it.

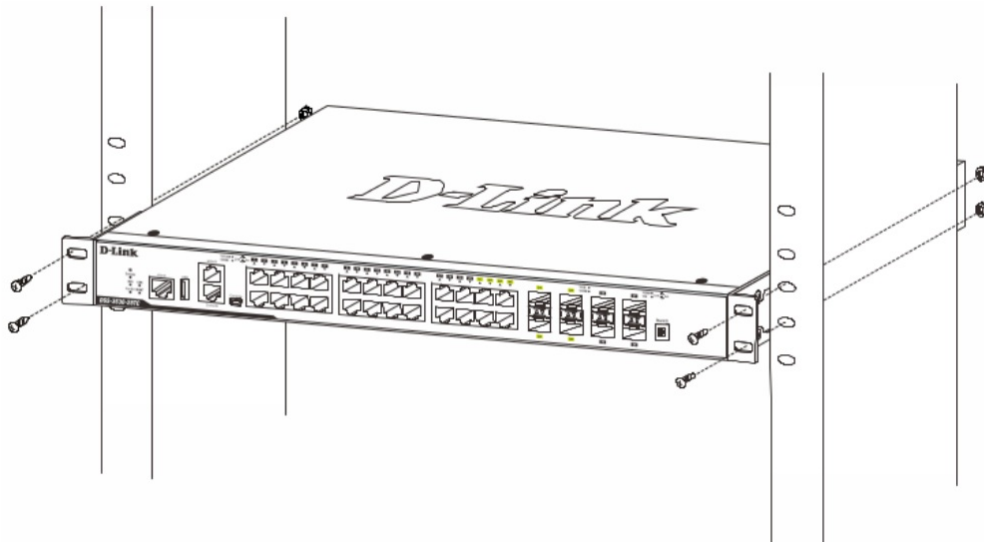


Installing the Switch in a Standard 19" Rack

The Switch can be mounted in a standard 19"(1U) rack using the provided mounting brackets. Fasten the mounting brackets to the sides of the Switch using the screws provided.

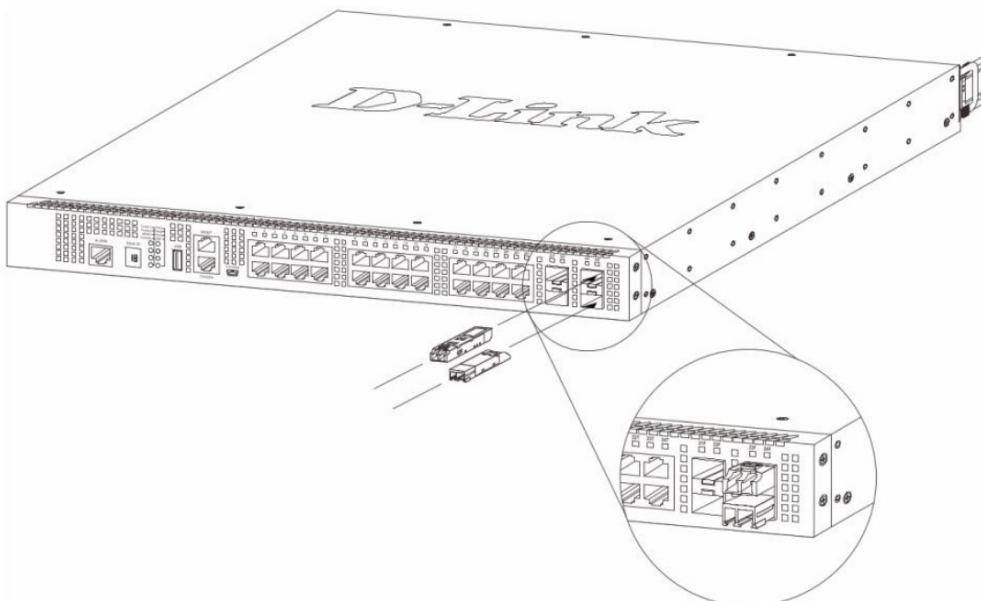


Fasten the mounting brackets in any available open space in the rack using the screws provided.



Installing Transceivers into the Transceiver Ports

The Switch is equipped with Small Form-factor Pluggable Plus (SFP+) ports, which supply connecting SFP, 1000Base-T SFP, WDM SFP, SFP+, WDM SFP+, and CWDM SFP+ transceivers.



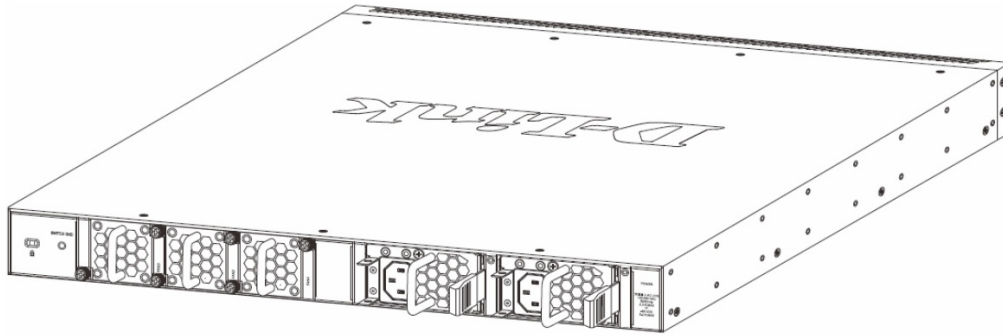
Connecting to Power

Installing an AC Power Module

Connect the one end of the AC power cord supplied to the AC power connector and the other end into a properly grounded electrical outlet. The switch will automatically adjust the AC power setting to adapt to any voltage supply in the range from 100~240VAC to 50~60Hz.

In addition, an optional second AC power supply module can be plugged into the second power supply module slot. When the primary AC power connection fails, the secondary AC power connection will take over all the power immediately and automatically. The AC power supply modules are hot-swappable, meaning, that they can be inserted and removed while the switch is powered on.

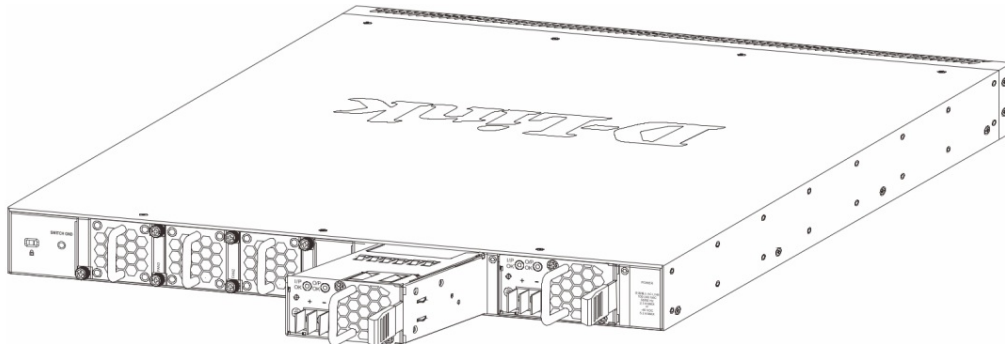
Install an AC Power Supply Module as shown in the picture below.



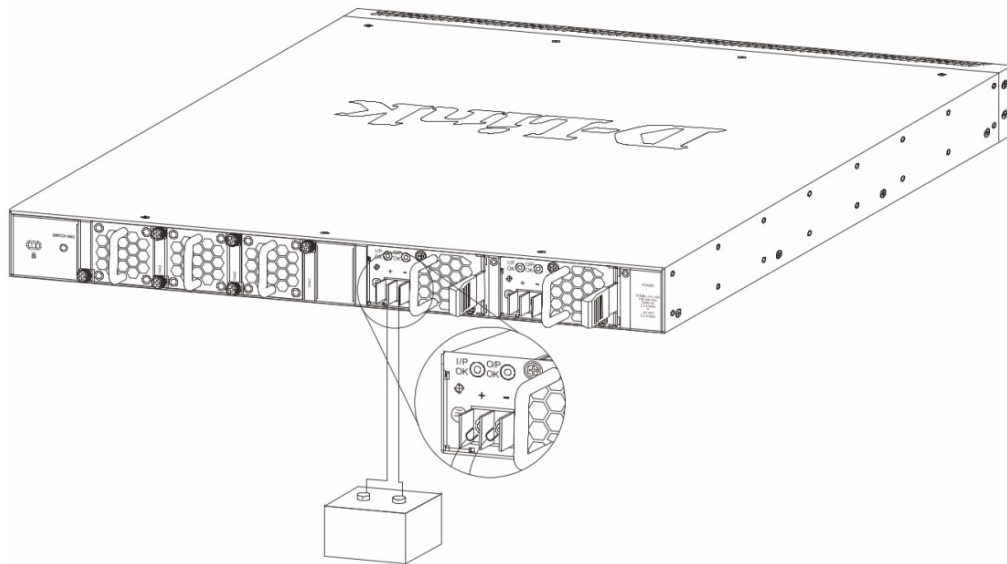
Installing a DC Power Module

This switch supports a unique dual power input feature. The DC power module will be activated if the AC power module turns off.

1. Install a DC Power Supply Module. Use the grounding screw on the DC Power Module and a minimum of 18 AWG-stranded copper wire to ground the switch.



2. Connect the one end of the DC power cord supplied to a DC power module, that will be activated when the AC power is not working, and to a power source (-48VDC/5.2A). Please make sure that connection polarity (positive and negative) is correct.

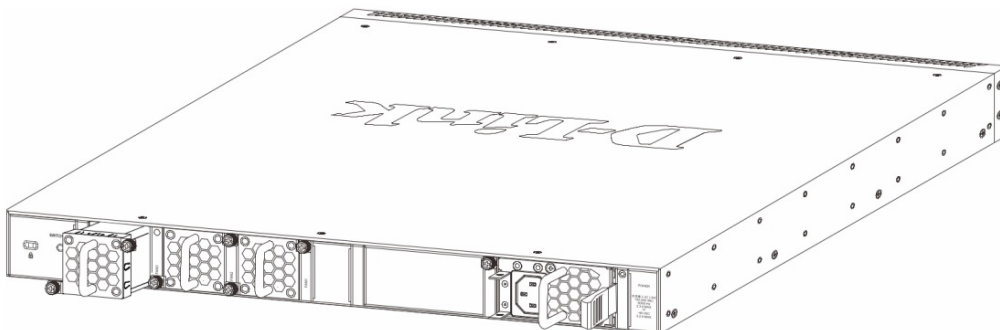


The DC power and AC power of the device will back up each other immediately when one of the power sources fails. If both power sources fail, unplug the switch. When the power source has been restored, plug the switch's power back in.

NOTE: the Power Modules all support a specific airflow direction. This air-flow direction must be the same as the Fan Module installed. By default the airflow direction of the Power Module and Fan Module installed is front-to-back.

Installing Fan Modules into the Fan Module Ports

Located on the rear panel of this switch there are three fan module slots.



The user can easily remove and insert fan modules into these ports.

Switch Connections

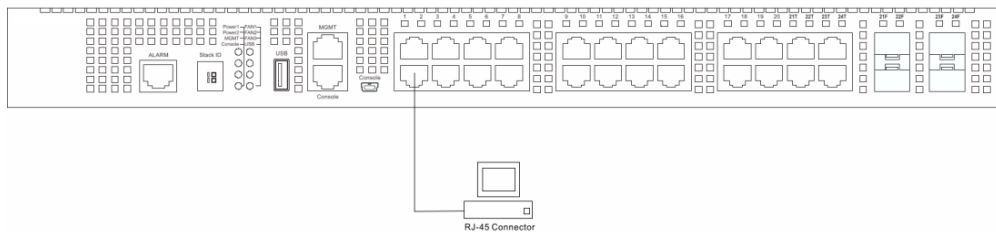
Switch to End Node

The end node is a generic name for edge networking devices that will be connected to this switch. Typical examples of end nodes are Personal Computers (PCs), Notebooks, Access Points, Print Servers, VoIP Phones, and more. Each end node will be outfitted with a 100/1000/10000 Mbps, RJ-45, networking port.

Normally end nodes will connect to this switch by using a standard twisted-pair, UTP/STP, network cable.

After a successful connection, the corresponding port light will illuminate and blink to indicate that network activity is taking place on that port.

The diagram below displays a typical end node connected to the Switch.

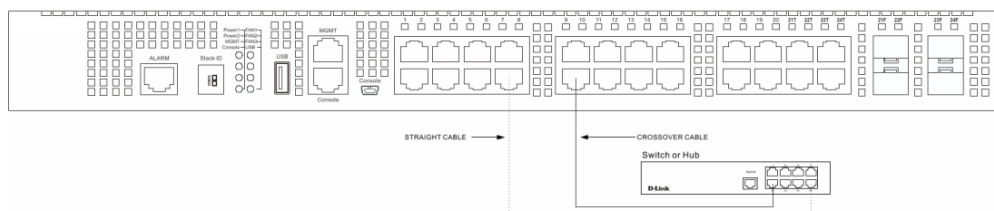


Switch to Another Switch

The Switch can be used to connect to any other switch or hub in the network. This network topology is used when the Switch does not have enough ports to cater for all the end nodes in the network.

There is a great deal of flexibility in how connections are made using the appropriate cabling.

- Connect a 100BASE-TX switch port to the Switch via a twisted-pair Category 5 UTP/STP cable.
- Connect a 1000BASE-T switch port to the Switch via a twisted-pair Category 5e UTP/STP cable.
- Connect a 10GBASE-T switch port to the Switch via a twisted-pair Category 6a UTP/STP cable.
- Connect a switch supporting a 1/10 Gbps optical uplink to the Switch's SFP+ ports via fiber optical cabling.



Switch Stacking

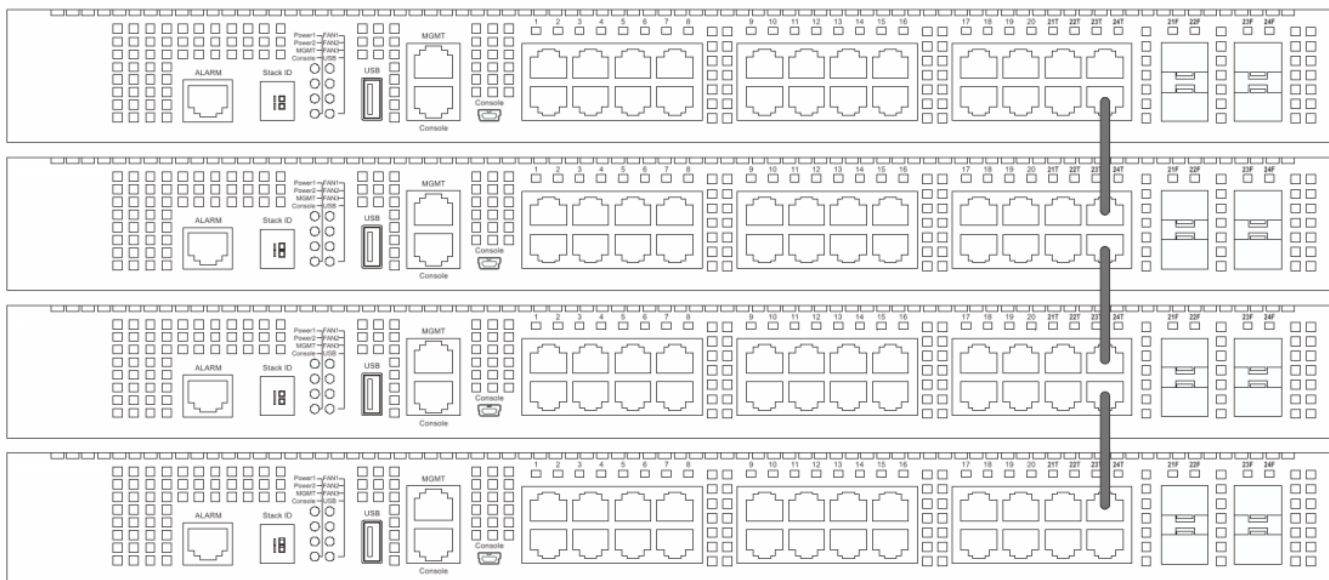
The DXS-3400-24SC series supports stacking up to 4 switches together while being managed through one console connection on the master switch, or by an IP address through the MGMT port, or by multiple IP addresses through any of the RJ-45/SFP+ ports using Telnet, the Web UI, and SNMP.

- Duplex Chain – The Duplex Chain topology stacks switches together in a chain-link format. Each switch in a chain is connected to the upper and the lower units, while the upper and the lower switches are not connected. If there is a break in the chain, then data transfer will be affected.
- The Duplex Ring stacks switch in a ring or circle format. Each switch in a chain is connected to the upper and the lower units, the upper and the lower switches are also connected. This topology is very resilient due to the fact that if there is a break in the ring, data can still be transferred through the stacking cables between switches in the stack.

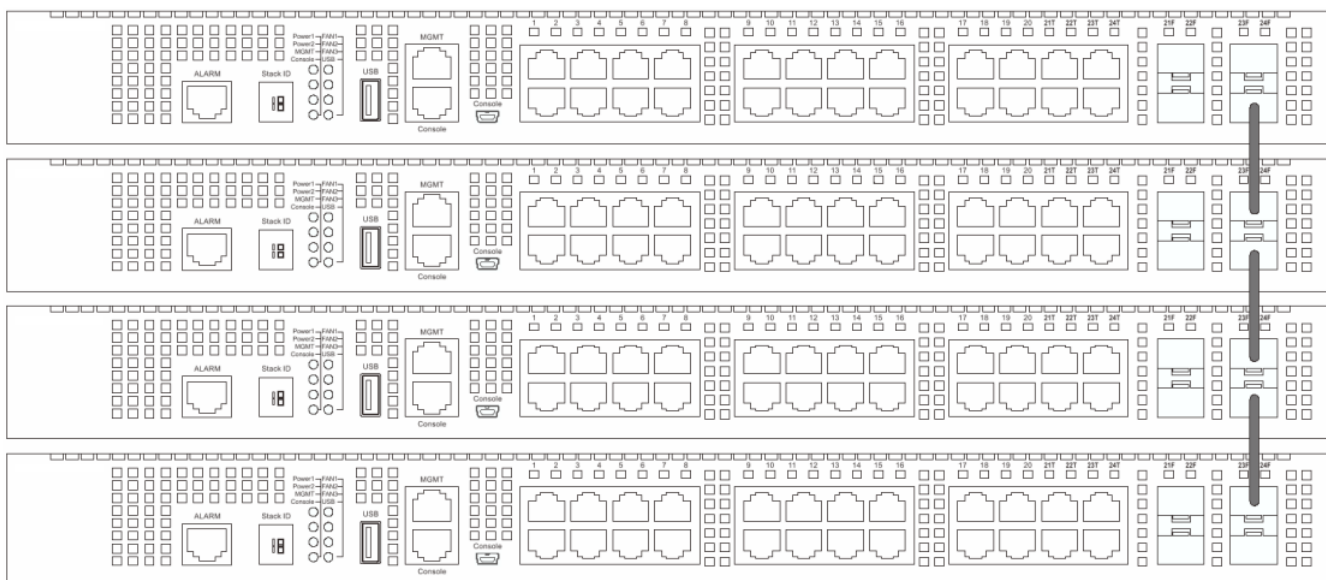
Switches in the series can be physically stacked using standard Category 6a cables with RJ-45 connectors, optical fiber cables connected to SFP+ transceivers, or Direct Attached Cables (DAC) with SFP+ connectors. Only the last 4 ports on the Switch can be used for physical stacking.

Physical stacking needs to be enabled and can be configured to support either a 2-port or a 4-port stacking configuration. When the 2-port stacking configuration is used, a full-duplex speed of up to 40 Gbps will be used between the two switches. When the 4-port stacking configuration is used, a full-duplex speed of up to 80 Gbps will be used between two switches.

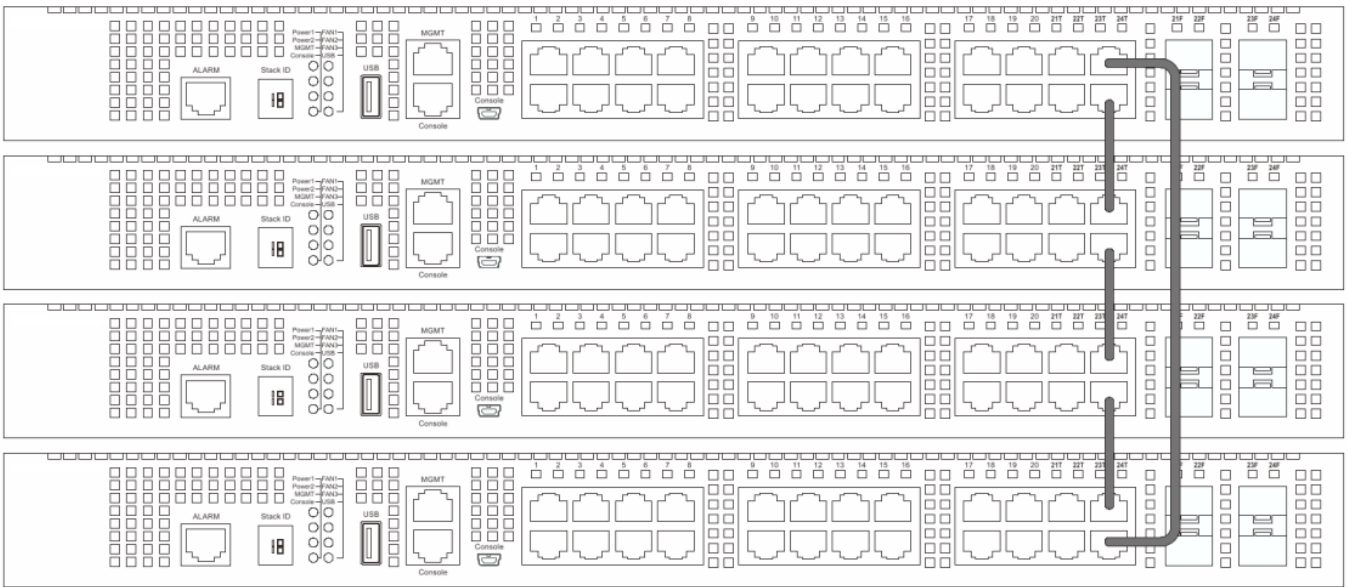
The figure below illustrates how switches can be stacked in a Duplex Chain formation using Category 6a cables with RJ-45 connectors where the 2-port stacking configuration is used.



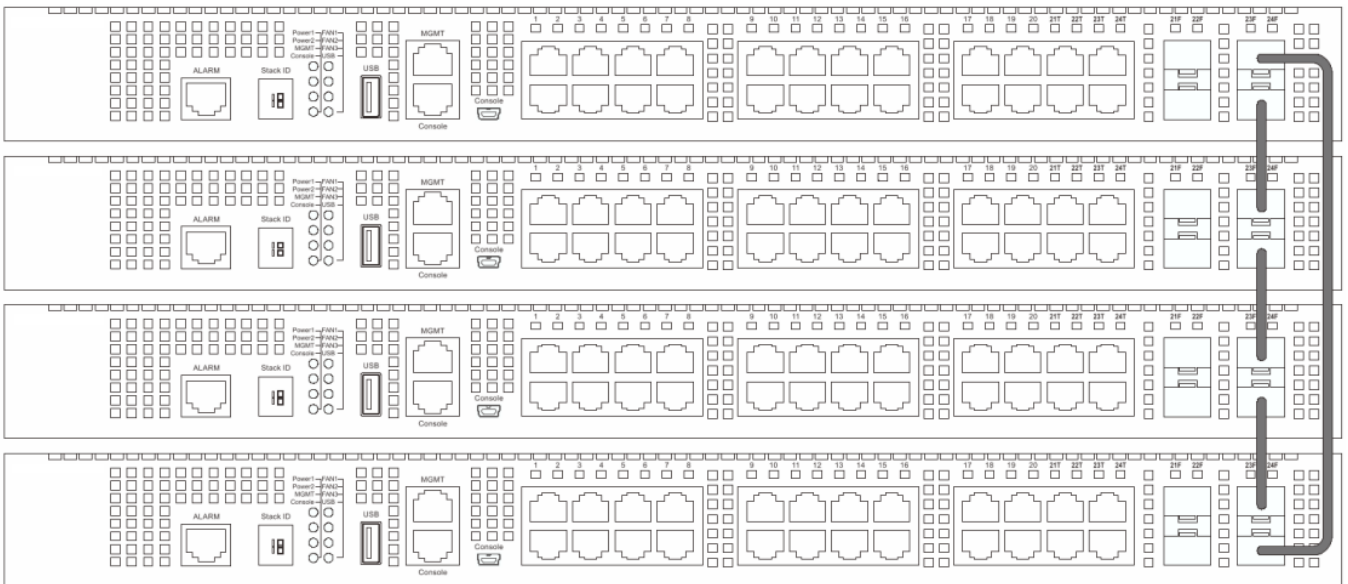
The figure below illustrates how switches can be stacked in a Duplex Chain formation using optical fiber cables connected to SFP+ transceivers or DAC with SFP+ connectors where the 2-port stacking configuration is used.



The figure below illustrates how switches can be stacked in a Duplex Ring formation using Category 6a cables with RJ-45 connectors where the 2-port stacking configuration is used.



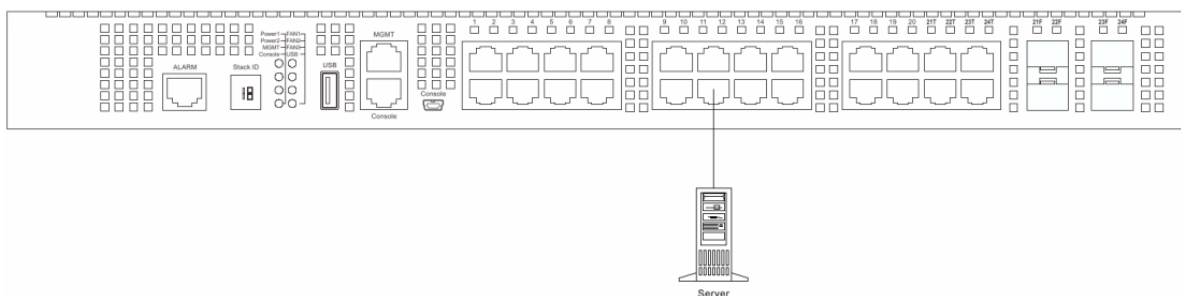
The figure below illustrates how switches can be stacked in a Duplex Ring formation using optical fiber cables connected to SFP+ transceivers or DAC with SFP+ connectors where the 2-port stacking configuration is used.



NOTE: Stacking Input/Output 1 (SIO1) is a logical stacking port pair. SIO2 is also a logical stacking port pair. A logical stacking port pair must always be connected to the same switch in the stack. Splitting logical stacking port pairs between different Switches in the stack might not guarantee a stable stacking connection.

Switch to a Server

The Switch is ideal for connecting to a network backbone, server, or server farm. The RJ-45 ports operate at a speed of 100/1000/10000 Mbps. The SFP+ ports operate at a speed of 1/10 Gbps.



Management Options

Web-based Management Interface

After successfully installing the Switch, the user can configure the Switch, monitor the LED panel, and display statistics graphically using one of the Web browsers given below:

- Internet Explorer
- Mozilla Firefox
- Google Chrome

SNMP-based Management

The Switch can be managed with an SNMP-compatible console program. The Switch supports SNMP version 1.0, version 2.0, and version 3.0.

Command Line Interface

The user can also connect a computer to the console port or the MGMT port to access the Switch. The command-line interface provides complete access to all Switch management features.

Connecting to the Console Port

To use the RJ-45 console port, the following equipment is needed:

- A terminal or a computer with both an RS-232 serial port and the ability to emulate a terminal (it is possible to use Hyperterminal, Putty, Minicom etc).
- A console cable with a male DB-9 connector on one end and an RJ-45 connection on the other. This cable should be included with the Switch.

To connect a terminal to the console port:

1. Connect the male DB-9 connector on the console cable to the RS-232 serial port on the computer.
2. Insert the RJ-45 connector into the console port on the front of the Switch. Set the terminal emulation software as follows:

- Serial port: COM port 1 or COM port 2
- Baud rate: 115200
- Data bits: 8
- Parity: none
- Stop bits: 1
- Flow control: none

3. After you have correctly set up the terminal, unplug and re-insert the power cable from and into the power receptacle on the back of the Switch to reboot it. The boot sequence appears in the terminal. After the boot sequence completes, the console login screen will be displayed.

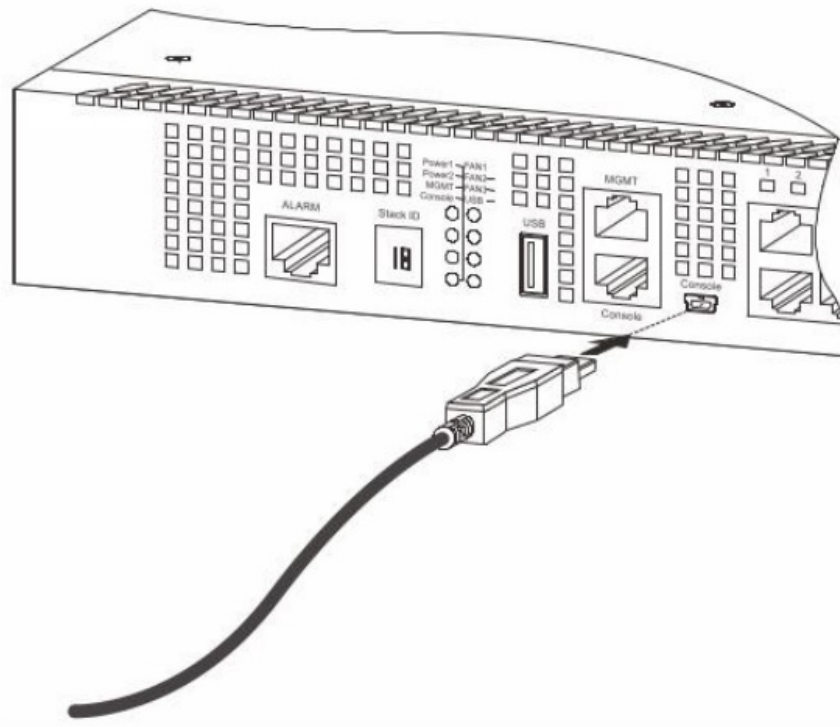
Connecting to the Mini-USB Console Port

To use the mini-USB console port, the following equipment is needed:

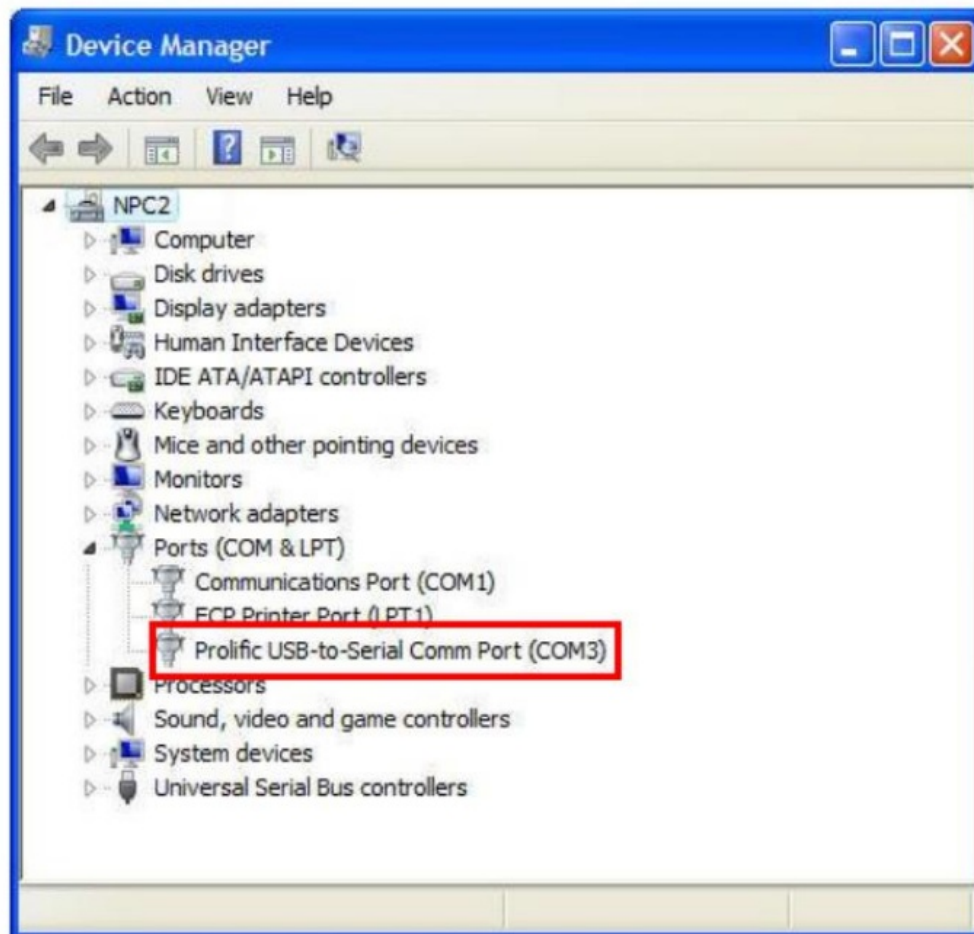
- A terminal or a computer with a USB 2.0 port and the ability to emulate a terminal (it is possible to use Hyperterminal, Putty, Minicom etc).
- A console cable with a 5-pin mini-B male connector on one end and a USB Type-A male connector on the other. This cable should be included with the Switch. It establishes the physical connection to the console port.
- Software to emulate a virtual COM port to be used in the terminal emulation software. This software can only be used on a Microsoft Windows operating system.

To connect the mini-USB console port on the Switch to the computer:

1. Install the software to emulate a virtual COM port on the computer.
2. Connect the USB Type-A male connector on the console cable (shipped with the Switch) to the USB port on the computer, then insert the mini-B male connector into the mini-USB console port on the front of the Switch.

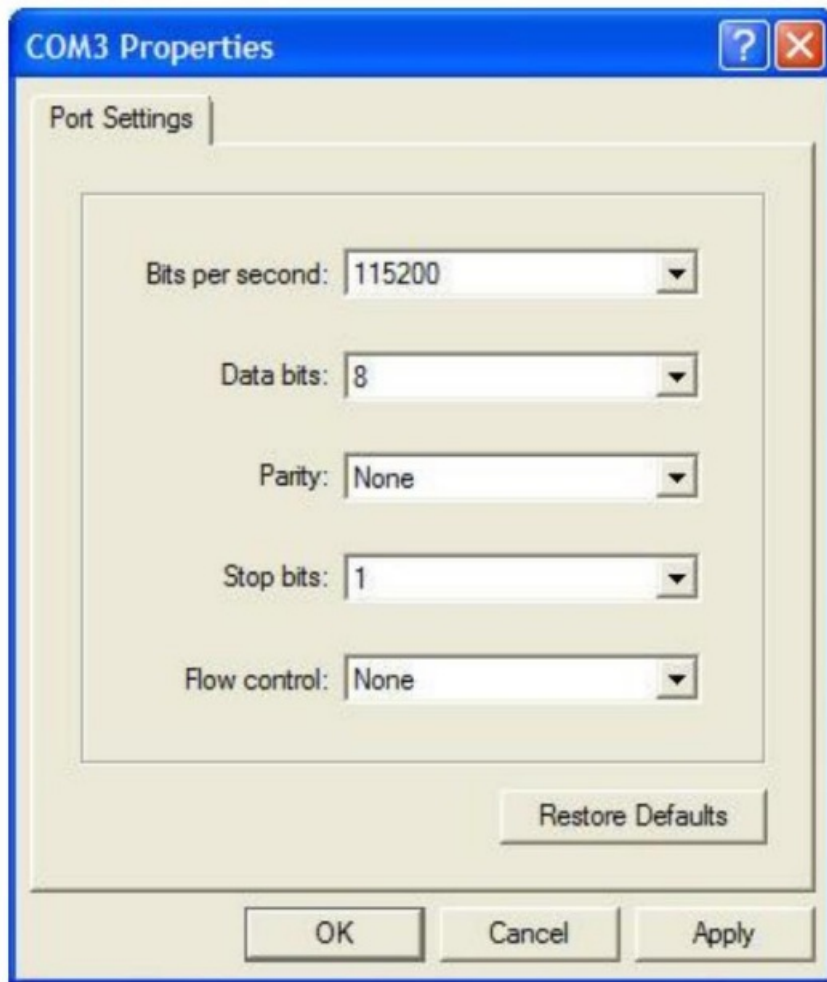


3. Check the serial port number in Device Manager. The name of the virtual COM port is **Prolific USB-to-Serial Comm Port**.



Set the terminal emulation software as follows:

- Serial port: COM port
- Baud rate: 115200
- Data bits: 8
- Parity: none
- Stop bits: 1
- Flow control: none



4. To be able to view the boot procedure, the Switch needs to be rebooted. The simplest way, at this stage, to reboot the Switch is to unplug and re-insert the power cable from and into the power receptacle on the back of the Switch. After correctly configuring the terminal settings and re-inserting the power cable, the boot procedure will appear in the terminal.

After the boot sequence has been completed, the console login screen will be displayed.

First Time Connecting to the Switch

Upon initial connection to the Switch, the login screen appears (see example below).

```
DXS-3400-24SC TenGigabit Ethernet Switch

Command Line Interface
Firmware: Build 1.00.013
Copyright(C) 2016 D-Link Corporation. All rights reserved.

Switch>
```

By default, there is no Username and Password configured in the account settings of this switch. This will allow the user to simply connect to this Switch for the first time by pressing the **Enter** key. After pressing **Enter**, access will be given to enter commands after the command prompt (**Switch>**) appears.

NOTE: the first user automatically gets Administrator level privileges. At least one Admin-level user account must be created for the Switch.

NOTE: It is highly recommended to create a user account containing a username and a password on the Switch to prevent unauthorized access to the management interface.

Connecting to the MGMT Port

The front panel of the Switch features an MGMT port, which can be used to connect to a computer using a standard Ethernet cable. A web browser or Telnet client can be used to connect to the Switch using the MGMT port.

To use the MGMT port, connect one end of an Ethernet cable to a computer and the other end to the Switch. The default IP address of the MGMT port is 192.168.0.1 and the subnet mask is 255.255.255.0. Make sure that the computer being used for the switch management has a non-conflicting IP address in the 192.168.0.0/24 network.

To view the IP settings of the MGMT port, use the following command:

```
Switch#show ip interface mgmt 0

mgmt_ipif 0 is enabled, Link status is up
  IP address is 192.168.0.1/24
  Gateway is 0.0.0.0

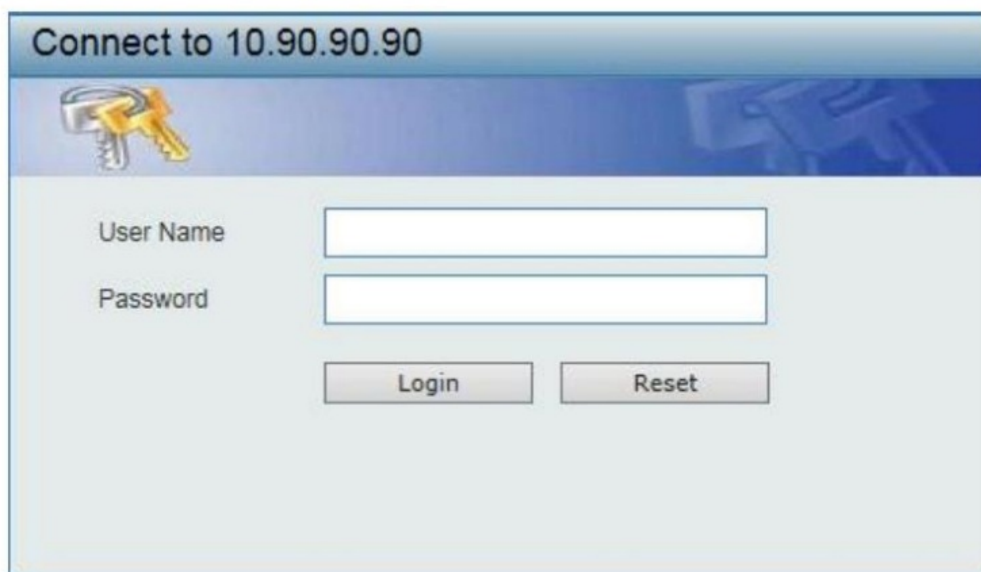
Switch#
```

The IP settings or enabled status of the MGMT port can be changed through the console port. For example, to change the IP address of the MGMT port, use the following commands:

```
Switch#configure terminal
Switch(config)#interface mgmt 0
Switch(config-if)#ip address 192.168.1.1 255.255.255.0
Switch(config-if)#
```

Logging onto the Web Manager

To access the Web User Interface open the standard web browser, enter the Switch's IP address into the address bar of the browser, and press the Enter key. By default, the MGMT port can be accessed using the IP address 192.168.0.1. To access the Web UI from normal LAN ports, the default IP address is 10.90.90.90. After pressing the Enter key, the following authentication window should appear, as shown below.

The image shows a web browser window titled "Connect to 10.90.90.90". The window has a blue header with a key icon. Below the header, there are two input fields: "User Name" and "Password". At the bottom, there are two buttons: "Login" and "Reset".

Connect to 10.90.90.90	
User Name	<input type="text"/>
Password	<input type="password"/>
<input type="button" value="Login"/> <input type="button" value="Reset"/>	

When connecting to the Web UI of the Switch for the first time, leave the **User Name** and **Password** fields blank and click **Login** since there are no login user accounts created by default on this switch.

Additional Information

For more detailed information on how to set up and configure the switch, please visit the website <http://www.dlink.com/>



Documents / Resources

<div><p>D-Link DXS-3400-24SC 24-Port 10GbE SFP+ and 24-Port 10GbE RJ45 Layer 3 Managed Switch Quick Installation Guide Быстрая установка для установки</p></div>	<p>D-Link DXS-3400-24SC 24-Port Layer 3 Stackable 10 Gigabit Fiber Managed Switch [pdf] nstallation Guide DXS-3400-24SC, 24-Port Layer 3 Stackable 10 Gigabit Fiber Managed Switch</p>
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References

- [D For Home | D-Link](#)
- [D-Link Главная](#)