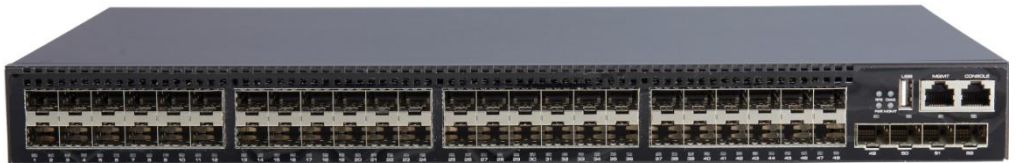


## Quick Start Guide

Commissioning the MS400991M  
52-Port 10G Multi Fiber L3 Switch 19"

v0.2



**Quick Start Guide**  
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## Quick Start Guide

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## Overview and Aim of this Quick Start Guide

This switch is a 48-Port Gigabit SFP+ and 4-Port 10G SFP+ L3 Managed Ethernet Switch. It is a full fiber stackable routing switches with fixed, built-in 10GbE uplink ports.

The fully managed switch provides high availability, scalability, security, energy efficiency, and easy operation with rich L3 features, ideal for aggregation or access layer of networks.

This guide will help you with

- connecting the power supply and commissioning the device,
- understanding the status LEDs and
- setting up the network management access.

### Note:

For comprehensive information about configuring the device please refer to the following documents:

- Web manual: describes Web network management system configuration instructions.
- CLI manual: describes CLI-based configuration instructions

## 0 Safety Information

Before performing an operation, read the following operation instructions and precautions to be taken, and follow them to prevent accidents.

### 0.1 General Requirements

- Only qualified and skilled personnel must install, configure, and unmount the device. The device must not be disassembled.
- When operating the device, obey the local safety regulations. The safety precautions provided in the document are supplementary and shall be in compliance with the local safety regulations.
- When operating the device, in addition to the precautions (please see the notes below), follow the specific safety instructions.
- The installation and maintenance personnel need to understand the basic safety precautions to be taken.
- Do not block the ventilation while the device is running. Keep a minimum distance of 5 cm from the ventilation to the walls or the other objects that block the ventilation.
- Do not operate the device in an area that exceeds the maximum recommended ambient temperature of 75°C.
- Do not place the device in the environment that has inflammable and explosive air or fog. Do not perform any operation in this environment.

### 0.2 Electric Safety

- The unit is designed as class III device according to EN62368-1. The electrical safety relies on the supply with an electrical power source of class ES1.
- Ensure that the input voltage is safely electrical insulated (double or reinforced insulation) from dangerous voltages.
- Before touching the device or hand-operating parts, wear a grounded electrostatic discharge (ESD) wrist strap. It can prevent the sensitive components from damage by the static electricity in the human body.

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**0.3 Optical Safety**

- When handling optical fibers, do not stand close to, or look at the optical fiber outlet directly with unaided eyes.
- Cutting and splicing fibers must be performed by the trained personnel only.
- Before cutting or splicing a fiber, ensure the fiber is disconnected from the optical source. After disconnecting the fiber, use protecting caps to protect all the optical connectors.

**1 Hardware Introduction**



**Fig. 1: Display and Connections**

**1.1 Status LEDs**


The status LEDs on the device's front side (s. Fig. 1) have the following meaning:

Indicators		Status	Description
PWR	AC Power Indicator	On (Green)	AC power is operating normally
		Off	AC power is not operating
RPS	DC Power Indicator	On (Green)	DC power is operating normally
		Off	DC power is not operating
DIAG	System Indicator	Blink (Green)	System is loading
		On (Green)	System is operating normally
MGMT	Management Port Indicator	On (Green)	Network management port is linking
		Off	Network management port is not linking
		Blink	Data forwarding
Port Link Indicator		On	Link up
		Blink	Port sending or receiving data
		Off	Link down, no connection

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### 1.3 Interfaces

Interfaces	Description
SFP	100/1000 Base-X SFP
SFP+	10 GbE SFP+
RJ-45 port	MGMT. Ethernet management port CONSOLE: Console port for web management
AC plug-in interface	Rated voltage: 100...240 VAC, 50/60 Hz Maximum voltage: 90...264 VAC, 47..63 Hz
DC plug-in interface	Removable 5-Pin terminal block Voltage range 11...13VDV Current value 8.33 A
	Ground screw

## 2 Device Installation

### Note:

All necessary mounting parts are provided with the enclosed mounting accessory set.

### 2.1 19" rack Installation

Please follow the steps below:

1. Attach the 2 brackets on the switch with screws provided in the accessory kit.
2. Put the bracket-mounted switch smoothly into a standard 19" rack. Fasten the switch to the rack with the screws provided. Leave enough space around the switch for good air circulation.



Keep the following points in mind:

- The brackets can't serve as a bearing
- Do not place anything on top of the switch.
- It is suggested to install the rack tray on the bottom of the switch.
  - Keep a distance of at least 5 cm to walls or nearby devices to provide ventilation and to avoid overheating.
  - Do not block the switch cooling openings to ensure proper ventilation.
  - Position the device the way that connected cables will not cause mechanical tension on the device or its attachment.

### 2.2 SFP/SFP+ Transceiver Installation

The switch is equipped with 48 times 100/1000 MbE SFP transceiver slots and four 10 GbE SFP+ transceiver slots

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- Put on a ESD wrist strap (or antistatic gloves)
- Insert the SFP/SFP+ transceiver to the guide rail inside the fiber interface line card. Do not put the SFP/SFP+ transceiver up-side-down.
- Push the SFP/SFP+ transceiver along the guide rail gently until you feel the transceiver snap into place at the bottom of the line card.
- Note: the SFP/SFP+ transceiver is hot swappable.

### 2.3 Ground cable connection

#### Note:

The equipment is intended to be grounded to comply with emission and immunity requirements. Ensure that the switch functional ground screw is connected to earth ground during normal use.

Use one end of GND cable to connect the grounding connector of the switch, the other end to a ground point. The GND cable used is recommended to be plastic insulating one with copper core, with cross-sectional area greater than AWG 12.

### 2.4 Connecting power supply

The switch is powered by a 100...230 VAC or 48...57 VDC power connection (s. Fig. 1)

Supply with 100...230 VAC

- Insert the cold device plug of the power cable provided in the delivery into the socket on the back panel of the switch
- Connect the other end of the power cable to a power outlet
- The switch startups after powering

Supply with 48...57 VDC

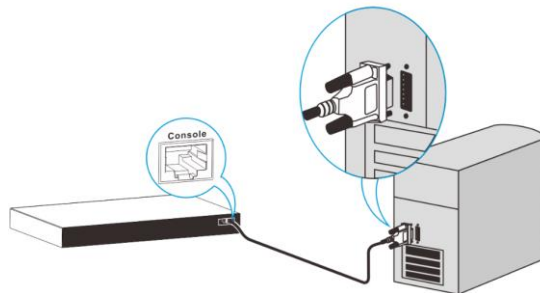
- Connect positive/negative wires of DC power separately to the "+" and "-" power terminals, using a screw driver to screwing stably.
- Connect the mains supply to the building's power supply network
- The switch startups after powering

#### Note:

To switch off the device, disconnect the power supply.

## 3 Connecting to console

The switch provides a serial RJ-45 console port.



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To gain access to console interface

- Attach the RJ-45 end to console port of the switch.
- Connect the other side of the console cable to a character terminal (PC).
- Power on the switch and the character terminal. Configure the switch through the character terminal.

## 4 Access for Network Management

### Note:

For accessing the device after starting up successfully please refer to one of the following documents:

- Web manual: describes Web network management system configuration instructions.
- CLI manual: describes CLI-based configuration instructions

## 5 Firmware Updates and Further Information

You have access to current firmware versions and further information once you have registered on our website.

### 5.1 Registration

1. In your internet browser open the address "www.microsens.com" and navigate to the page "Partner Login".
2. Follow the link "Please register here".
3. Fill out and submit the online user registration form.
4. You will receive an e-mail containing a user name and password for the partner login.

### 5.2 Login

1. In your internet browser open the address "www.microsens.com" and navigate to the page "Partner Login".
2. Enter your username and your password.
3. Click the button "Login".
4. To find your switch quickly, enter the item number of your switch into the search box on the website.

### 5.3 Firmware Image File

Please navigate to your switch and select the tab "System Management". This tab contains recent download files for your device.

Upload the firmware image file to the device by using the Web Manager. For further information please refer to the web manual of your device.

### 5.4 MICROSENS Support

For further questions please contact our support:

- E-mail: support@microsens.com
- Phone: +49 (0)2381 9452-345 (Mo. – Fr., 7:30 AM – 04:00 PM CET)

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