

SNQ-60x0-320 Series Data Center Switch
Quick Installation Guide

Introduction

This guide is to assist the reader with the most basic form of installation and connection to switches in this series. As there is more than one switch in this series, the diagrams might slightly differ, however, the installation and connection is the same for all switches in this series.

Package Contents

After purchasing any of the switches in this series, the following items will be included in the package:

- One SNQ-60x0-320F Series Switch (This includes 1 power supply module and 4 fan modules).
- One Quick Installation Guide.
- One AC power cord.
- One RS-232-to-RJ45 console cable.
- One Micro-USB-to-USB console cable.
- One pair of frontal rack-mount brackets.
- One pair of rack-mount slider brackets.
- Four rubber feet with adhesive patches.
- Eight Phillips-head frontal rack-mount bracket screws.
- One warranty card.

Note: If any of the above mention items was not found inside the package contents of this switch or are damaged in any way, contact your reseller immediately.

Hardware Installation

Installation Guidelines

This section will discuss the hardware installation guidelines that administrators must follow in order to properly and safely install this switch into the appropriate environment.

Installation using the Rubber Feet

When installing the switch in an area other than inside a switch rack, like on a desktop, rubber feet can be attached to the bottom panel of the switch. On the bottom panel of the switch, there are clearly marked squares where the rubber feet can be attached. These marked squares are usually found close to the corners of the switch's bottom panel.

Adhesive material is included on the rubber feet. Simply pull away the protective sticker, of each rubber foot and then attach the foot into the

appropriately marked square. The rubber feet cushion the switch, protecting the casing from scratches and preventing it from scratching other surfaces.

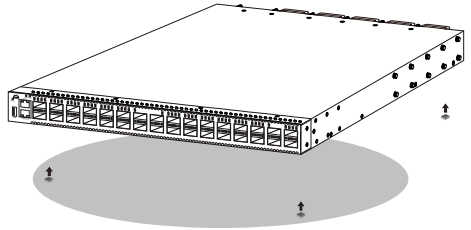


Figure 1 - Installation using the rubber feet

Install the switch on a sturdy, level surface that can support the weight of the switch. Do not place any heavy objects on the switch. Make sure that there is proper heat dissipation from and adequate ventilation around the switch. Leave at least 10 cm (4 inches) of space at the front and rear of the switch for ventilation.

Installation into a Rack

Normally, ToR switches are installed not only into a rack-mount unit but at the top of the rack. The switch can be mounted in a standard 19"(1U) rack using the provided mounting brackets. The following section will explain how to install the rack-mount brackets onto the switch and then mount the switch into a standard 1U rack-mount unit.

The following parts will be used to install the switch into a rack-mount unit:

- One pair of frontal rack-mount brackets.
- One pair of rack-mount slider brackets.
- Eight Phillips-head frontal rack-mount bracket screws.

Additional equipment needed to install the switch into a rack-mount unit:

- One Phillips-head screwdriver. This screwdriver will be used for the rack-mount bracket screws
- One additional screwdriver. This screwdriver will be used for the rack-mount unit screws and its type and size depends on the rack-mount unit screws being used.
- Eight rack-mount unit screws. These screws will be used to attach the switch onto to the rack-mount unit and are not included in the switch's packaging as rack-mount units differ at each installation site.

The figure below illustrates how to install the **frontal rack-mount brackets** onto the switch.

1. Place the switch on a flat horizontal surface.
2. Position the frontal rack-mount bracket over the screw holes on the side of the switch. The ears of the bracket must be facing forward and outwards.
3. Use the frontal rack-mount screws and the Phillips-head screwdriver to fasten the bracket onto the side of the switch.
4. Repeat steps 1 to 3 for the other frontal rack-mount bracket on the other side of the switch.

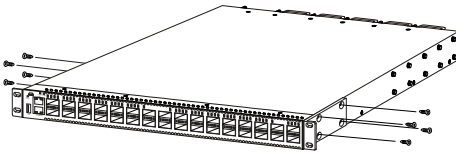


Figure 2 - Front Rack-Mount Bracket Installation

The figure below illustrates how to install the **rack-mount slider brackets** onto the rack-mount unit.

5. Take one rack-mount slider bracket and position it over the screw holes, on the back of the rack-mount unit, at the appropriate height. The ears of the bracket must be facing backwards and outwards.
6. Use the rack-mount unit screws and the additional screwdriver to fasten the bracket onto the back of the rack-mount unit.
7. Take the second rack-mount slider bracket and repeat steps 1 and 2, on the opposite side of the back of the rack-mount unit. Make sure to horizontally align the two rack-mount slider brackets.

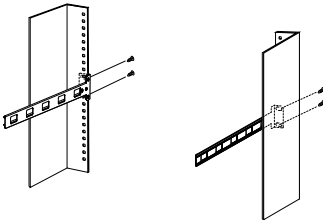


Figure 3 - Attach rack-mount slider brackets to rack

The figure below illustrates how to mount the switch onto the rack-mount slider brackets.

8. Position the switch so that the rack-mount slider brackets align horizontally within the two rows of rack-mount slider bracket pegs found on the side panel of the switch.

9. Slide the switch carefully backwards so that the rack-mount slider brackets fit into the space between the two rows of rack-mount slider pegs.

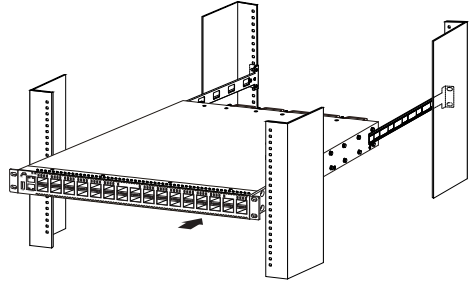


Figure 4 - Slide switch into position

The figure below illustrates how to complete the rack-mount installation.

10. Use the rack-mount unit screws and the additional screwdriver to fasten the frontal rack-mount brackets onto the front of the rack-mount unit.

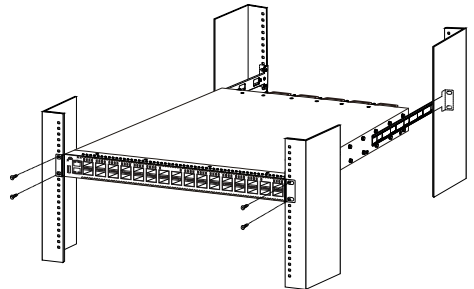


Figure 5 - Slide switch into position

Installing Transceivers into the Transceiver Ports

Switches in this series have 32 QSFP+ ports. QSFP+ technology allows a smooth transition from 10 to 40 Gigabit Ethernet infrastructures in data centers. Each of the switch's QSFP+ ports can operate in either the native 40 Gigabit Ethernet mode or the 4 times 10 Gigabit Ethernet mode. This switch supports both fiber and copper cabling solutions for these two modes.

The figure below illustrates how to properly insert QSFP+ transceivers into the switch's QSFP+ ports.

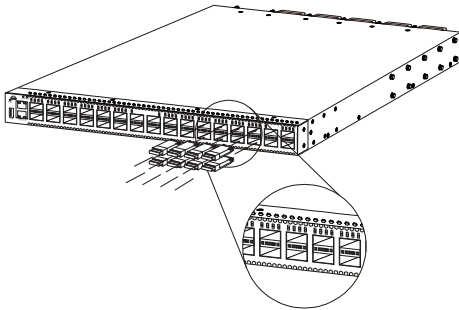


Figure 6 - Installing Transceivers into the Transceiver Ports

Connect the Power Cable

Connect one end of the AC power cord, included in the package, into the grounded electrical outlet at the site and insert the other end of the AC power cord into the AC power receptacle of the AC power supply module on the back panel of the switch. The switch will automatically adjust the voltage supplied to the voltage needed as this power supply supports any voltage power supply in the range from 100VAC to 240VAC at 50Hz to 60Hz.

The LED indicators on the front panel of the switch should come on.

Safety Instructions

The following sections provide safety precautions to follow when installing the switch.

Safety Precautions

For your protection, observe the following safety precautions when setting up your equipment:

- Follow all cautions and instructions marked on the equipment.
- Only trained and qualified personnel are allowed to install or to replace this equipment.
- Never push objects of any kind through openings in the equipment. Dangerous voltages may be present. Conductive foreign objects could produce a short circuit that could cause fire, electric shock, or damage to your equipment.
- This product is intended for restricted access whereby access is controlled through the use of a means of security (for example, key, lock, tool, badge access) and personnel authorized for access have been instructed

on the reasons for the restrictions and any precautions that need to be taken.

- Remove all metal jewelry, such as rings and watches, before installing or removing the device.
- Do not look directly at the fiber optic cable ends or inspect the cable ends with an optical lens.
- Do not install in direct sunlight, or a damp or dusty place.
- Do not expose the device to moisture or water.
- Disconnect all power supply cords before servicing.

Electrical Safety Precautions

For your protection, observe the following electrical safety precautions when setting up your equipment:

- Ensure that the voltage and frequency of your power source match the voltage and frequency inscribed on the equipment's electrical rating label.
- This switch is designed to work with power systems having a grounded neutral. To reduce the risk of electric shock, do not plug the switch into any other type of power system. Contact your facilities manager or a qualified electrician if you are not sure what type of power is supplied to your building.
- Not all power cords have the same current ratings. Do not use the power cord provided with your equipment for any other products or use. Household extension cords do not have overload protection and are not meant for use with these switches. Do not use household extension cords with this product.
- To prevent electric shock, do not remove the cover of this product. There are no user-serviceable parts inside. This unit contains hazardous voltages and should only be opened by a trained and qualified technician.
- Do not work on equipment or cables during periods of lightning activity.
- Check to see if there are any exposed copper strands coming from the installed wire. When this installation is done correctly there should be no exposed copper wire strands extending from the terminal block. Any exposed wiring can conduct harmful levels of electricity to persons touching the wires.
- The power source for the device should be located near the unit and should be easily accessible.
- **Circuit Overloading:** Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.
- **Warning:** A readily accessible disconnect device shall be incorporated in the building installation wiring.
Attention: Un dispositif de déconnexion facilement accessible doit être incorporé dans l'installation électrique du bâtiment.

- **Caution:** Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

Attention: Risque d'explosion si la batterie est remplacée par un type incorrect. Jetez les piles usagées selon les instructions.

警告: 如果更換不正確之電池型式會有爆炸的風險。請依製造商說明書處理用過之電池。

Rack-mount Safety Precautions

For your protection, observe the following rack-mount safety precautions when setting up your equipment:

- **Elevated Operating Ambient** - If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature (T_{ma}) specified by the manufacturer.
- **Reduced Air Flow** - Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.
- **Mechanical Loading** - Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.
- **Circuit Overloading** - Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.
- **Reliable Earthing** - Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (for example, use of power strips).
- For safety, equipment should always be loaded from the bottom up. That is, install the equipment that will be mounted in the lowest part of the rack first, then the next higher systems, etc.
- To prevent the rack from tipping during equipment installation, the anti-tilt bar on the rack must be deployed.
- The mounting brackets provided must be used to securely mount the device in a rack-mount unit.

Regulations & Warnings

FCC Warning

NOTE: This equipment has been tested and found to comply with the limits for a class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment uses, generates, and can radiate radio frequency energy and if not installed in accordance with the operator's manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause interference in which case the user will be required to correct the interference at his/her own expense.

WARNING: Changes or modifications made to this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

CE Mark 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.

BSMI Notice

警告使用者: 此為甲類資訊技術設備, 於居住的環境中使用時, 可能會造成射頻擾動, 在此種情況下, 使用者會被要求採取某些適當的對策。

警告

此為 A 級產品, 在生活環境中, 該產品可能會造成無線電干擾。在這種情況下, 可能需要用戶對其干擾採取切實可行的措施。

Safety Compliance

Warning: Class 1M Laser Product (Laser Radiation):

- **EN:** Class 1M laser radiation when open. Do not view directly with optical instruments
- **FR:** Radiation laser de classe 1M en cas d'ouverture. Ne pas observer directement avec des instruments optiques.

GBIC, SFP (Mini-GBIC), QSFP+, XENPAK, and XFP Regulatory Compliance

- Class 1M.
- EN60825-1:2007 2nd Edition or later, European standard.
- FCC 21 CFR Chapter 1, Subchapter J in accordance with FDA and CDRH requirements.

- Application of CE Mark in accordance with 2004/108/EEC EMC Directive and the 2006/95/EC Low Voltage Directives.
- UL and/or CSA registered component for North America.
- 47 CFR Part 15, Class A when installed into Alpha products.

Warranty

Switches in this series support a 2 year warranty.

Upgrade the ONIE

The latest ONIE file(s) can be downloaded from ftp://onie_4_client:p03LL8jW@ftp.alphanetworks.com

For More Information

For more information, please visit <http://www.alphanetworks.com>.