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NX-5610-24F8G
Core Aggregation Switch
Product Guide

Preface

Thank you for using our products. This manual will guide you through the installation of the device. This manual describes the functional and physical features and provides the device installation steps, hardware troubleshooting, module technical specifications, and specifications and usage guidelines for cables and connectors. The product user's manual mainly introduces the software and hardware parameters, installation method and matters needing attention in the installation process of NX-5610-24F8G switch.

Audience

It is intended for the users who have some experience in installing and maintaining network hardware. At the same time, it is assumed that the users are already familiar with the related terms and concepts

Obtaining Technical Assistance

Website:https://www.nodexon.com/
Technical Support Website:https://nodexon.com/support
Community:http://www.nodexon.com/community
Technical Support Email:support@nodexon.com
Case Portal :https://www.nodexon.com/caseportal
Website:https://www.nodexon.com/

This Manual Includes The Following Chapters

Chapter 1: product introduction. Describe the basic functional characteristics of the switch, detailed hardware and software specifications and appearance information.

Chapter 2: hardware connectivity. Instruct the connection between switch and other equipment and matters needing
attention.

Chapter 3: product installation. Instruct switch hardware installation method and matters needing attention.

Chapter 4: product packaging and usage recommendations.

Chapter 1 product introduction

1.1 product introduction

The NX-5610-24F8G three-tier, stackable administrative switch is designed for small and medium enterprises (SMEs), large enterprises and Internet service providers (ISPs). They offer high performance, flexibility, fault tolerance, and advanced software capabilities to achieve maximum return on investment. NX-5610-24F8G switches with gigabit Ethernet RJ45 and SFP ports, 10G SFP+ ports, advanced security features and advanced quality of service (QoS), can be used as core, distribution or access layer switches, with high-end port density, switch stack and easy management, is an ideal choice for all kinds of commercial network applications.

1. 2 Product features

Full gigabit port full gigabit RJ45 Combo ports, 4 10 gigabit SFP optical fiber ports, 24 gigabit SFP ports, breaking the traditional 100 MB limit, data transmission does not slow down

 Broadcom high-end chip, performance is more stable and strong

Broadcom's high-end chips can greatly improve the speed of network data processing

Support stacked function

Support physical stack of 9 switches, virtual stack of 32 switches, support ring/Daisy chain stack link

Support Apollo cloud platform one-stop management

Support the cloud platform to visually manage the resources of switches and PD devices, making operation and maintenance management simpler

1.3 Product software and hardware technical specifications

Hardware

Chip	Broadcom high performance chip
Flash	16MB
storage	256MB DDR
Port	8 10/100/1000Mbps RJ45 ports (Combo）
	4 10G SFP ports
	24 Gigabit SFP ports
	1 RJ45 Console port， 1 10/100/1000Mbps management RJ45 port
	1 USB 2.0,1 Mini-usb Console port

performance	Forward mode: store and forward
	Back width：128Gbps
	Rate：96Mpps
	Support 16K MAC
Thunder Proof	±6KV
ESD	touch：±6KV air：±8KV
Input	100-240V/50-60Hz
Size (L×W×H）	440mm×320mm×44mm

Software Features

Route	Support RIP V1/V2, OSPFv1\OSPFv2dynamic routing
	Support static route
DHCP	Support DHCP Service
	Support DHCP Relay
	Support DHCP Snooping
	Support 4K VLAN
VLAN	Support 802.1Q VLAN MAC VLAN, IP VLAN

	Voice VLAN

	Follow IEEE 802.1d standard
MAC List	Support MAC Address automatic learning and aging
	Support static, dynamic, filter address table
Safety performance	password protection
	Support user access restrictions based on port number, IP address, MAC address
	Support HTTPS、SSL V3、TLS V1、SSH V1/V2
	Support IP-MAC-PORT 3 in one
	Support ARP protect, IP protect, DoS protect
	Support DHCP Snooping, DHCP attack protect
	Support 802.1X AC, AAA
	Support port security and port isolation

	Support CPU protect function
	Support L2(Layer 2)-L4(Layer 4)Packet

ACL	filtering function
	Support port mirroring, port redirection, flow speed limit, QoS remarking
QoS	Supports 8 port queues
	Support port priority, 802.1p priority, DSCP priority
	Support SP, WRR, WFQ priority scheduling algorithm
	Support automatic identification, management and acquisition of information
Tree	Support STP(IEEE 802.1d), RSTP(IEEE 802.1w) and MSTP(IEEE 802.1s)standard
	Support loop protection, root bridge protection, TC protection, BPDU protection, BPDU filtering
Multicast	Support IGMP v1/v2 Snooping

	Support for quick exit mechanism
	Support Multicast VLAN

	Supports multicast filtering, message statistics and unknown multicast discarding
Storm Control	Support multicast control
	Support broadcast control
	Support Unknown unicast control
Link Together	Support static aggregation
	Support dynamic convergence
	Support IP, MAC, mixed load balancing mode
	Maximum support is 32 aggregation groups
IPv6	Support IPv6 Ping、IPv6 Tracert、IPv6 Telnet
	Support IPv6 SSH 、IPv6 SSL
	Support WEB Management (HTTP、 HTTPS、SSL V3）
	Support CLI (Telnet,SSH V1/V2, Local port）
	Support SNMP V1/V2/V3
Manage and	Support LLDP、RMON

Maintain	Support ARP protect IP protect bDoS protect
	Support Apollo
	Support CPU monitoring 、Storage monitoring
	Support system log, grading warning
	Support Ping. Tracert test, line test

1.4 Product appearance
The front panel
Contains indicator light, RJ45 port, SFP port, CONSOLE port & USB port

PWR	Power light	red	on	Power normal
			off	Power out, power switch not open, power abnormal
LINK/ACT	Device connect light	green	flicker	The corresponding RJ45 port is connected
			off	The corresponding RJ45 port is unconnected
SYS	System light	green	flicker	System working normal
			off	System working
				abnormally, System damaged
XG	SFP light	green	flicker	The corresponding RJ45 port is unconnected

			off	The corresponding RJ45 port is unconnected

RJ45 port

NX-5610-24F8G support 8 10/100/1000mbps adaptive RJ45 Combo port, 1 RJ45 Console port, 1 gigabit RJ45 management port

SFP port

The NX-5610-24F8G provides 4 10G SFP uplink port and 24 gigabit SFP ports, which can be inserted into gigabit SFP modules

RST button

When the switch is powered on, press the button with a needle and release the device to enter the restart state.

When the SYS lamp lights up and the device is restarted, press the button for longer than 5S with a needle and the device enters the reset state. When SYS lights up and the device is reset successfully.

The Console Port

Console port is used to connect to serial ports on computers or other terminals to manage or configure switches.

Rear panel

Includes: power socket, power switch, grounding terminal

1. Power socket
2. Ground terminal

Power socket

Connect the power cord to the switch NX-5610-24F8G

and the access power should be 100-240v ~ 50/60hz ac power

Ground terminal

Please ground the wire in case of lighting strike. To avoid lightning strike and extend the service life of products

Chapter 2: hardware connection

2.1 Connect the RJ45 port

Connect the network cable to the RJ45 port of the switch and the opposite network device

2.2 Connect to the SFP port

The NX-5610-24F8G SFP port only supports gigabit fiber modules. It is recommended to use standard SFP module products. The installation process of fiber optic module of switch is as follows:

Grasp the fiber module from the side and insert it smoothly along the SFP port slot of the switch until the fiber module is in close contact with the switch;

Confirm the Rx and Tx ports of the fiber module when connecting, insert one end of the fiber into the Rx and Tx ports, ensure that the Tx and Rx ends of the interface are correctly connected, and the other end of the fiber is connected to another device;

After power-on, check the status of the corresponding indicator. If the indicator is on, the link is up. If the indicator is off, the link is down. Check the line and confirm that the peer device is enabled.

⚠

It is not allowed to excessively bend the fiber, and its radius of curvature should be no less than 10cm ;

Ensure the cleanliness of the fiber end face;

Please do not look directly into the fiber optic connector with your eyes, as this may cause eye damage.

2.3 Check Before Power-On

Check that the power supply of the power outlet meets the switch specifications.

Check that the power supply, switch, and rack are properly grounded.

Check whether the switch is connected to other network devices.

2.4 device initialization

The switch will automatically initialize after the power is turned on and the power switch is turned on.

The indicator light will appear as follows:

After the power is turned on, the power indicator remains steady. When SYS enters the flashing state, the system runs normally.

The indicator of each port indicates the connection status of each port, indicating that the switch has started to work normally.

⚠ Note: To avoid damage to the equipment and personal injury caused by improper use, please observe the following precautions.

Safety precautions

Power supply remains off during the installation process.

Wear an esd-preventive wrist strap and ensure that the esd-preventive wrist strap is in good contact with the skin to avoid

Chapter 3 Product Installation

3.1 Installation Precautions

Potential safety hazards.
Witch only can work normally under the correct power supply. Please confirm that the power supply voltage matches the
Voltage indicated by the switch.
Before powering on the switch, please make sure that the power circuit is not overloaded, so as not to affect the normal
Operation of the switch and cause unnecessary damage.
To avoid the risk of electric shock, do not open the case while the switch is working, even if it is not charged, do not open it yourself;
Before cleaning the switch, first pull out the power plug of the switch. Do not wipe with a moist fabric. Do not use liquid to clean.
Humidity
In order to ensure long-term stable operation of the switch and prolong its service life, please maintain a certain temperature and humidity in the environment. Too high or too low ambient humidity is likely to cause leakage, deformation and even corrosion of metal parts. If the temperature is too high, the aging process of the insulation material will be accelerated, which will seriously affect the service life of the equipment. The normal operation and storage temperature / humidity of this series of switches are as follows

Environmental Description	temperature	Relative humidity
Working Environment	0°C~40°C	10% to 90% RH does not condense
Storage environment	-40 ° C ~ 70 ° C	5% to 90% RH does not condense

Elevation

Products with this mark are only suitable for safe use in areas below 2000m above sea level .
Dustproof

Dust falling on the surface of the switch can cause electrostatic adsorption and poor contact of the metal contacts. Although the device itself has made certain measures in anti-static, when the static electricity exceeds a certain intensity, it will still cause fatal

damage to the electronic components on the internal circuit board. To avoid the static electricity affecting the normal operation of the

device, please pay attention to the following:

Regular dust removal to keep indoor air clean;

Make sure that the equipment is well grounded to ensure the smooth transfer of static electricity.

Interface

Electromagnetic interference will affect the electronic components such as capacitors and inductors inside the device by means of capacitive coupling, inductive coupling, impedance coupling, etc. To reduce the adverse effects caused by electromagnetic

interference, please pay attention to the following:

The power supply system takes necessary measures against grid interference

The switch should be away from high-frequency, high- power, high-current equipment, such as wireless transmitters;

Take electromagnetic shielding measures when necessary.

Lighting Protection

When a lightning strike occurs, a strong current is generated in an instant, and the air in the discharge path is instantaneously heated to 20,000 degrees Celsius, and an instantaneous large current is enough to cause fatal damage to the electronic device. For better lightning protection, please note the following:

Confirm that the rack is in good contact with the ground

Make sure the power outlet is in good contact with the ground;

Reasonable wiring to avoid internal induction lightning;

When using outdoor wiring, it is recommended to use a signal lightning arrester.

Installation Rack Requirements

Regardless of whether the switch is installed in a rack or other horizontal workbench, please note the following:

Verify that the rack or table is stable, strong, and capable of withstanding a weight of at least 5.5 kg

Confirm that the rack itself has a good cooling system, or keep the room well ventilated;

Make sure the rack is well grounded, and the distance between the power socket and the switch is less than 1.5 meters.

Tool Preparation

The Phillips screwdriver, electrostatic wrist strap, and cable fiber may be used during installation.

3.2 The product installation

19 "standard rack mounting

The NX-5610-24F8G is designed in accordance with the standard 19-inch rack size and can be easily installed on

the rack. The specific installation steps are as follows:

Check the grounding and stability of the rack;

Install the two L -shaped brackets in the accessories on both sides of the switch panel and fix them
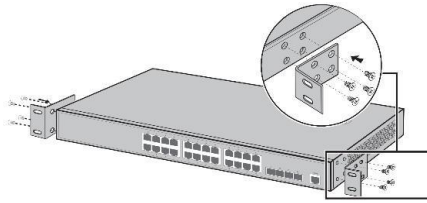
with the screws provided in the accessories.
The switch is placed in position within the frame, is supported by the carriage; screw the L -shaped bracket fixed to the fixed rack guide slot ends, the switch to ensure a stable, horizontally mounted on the machine frame,

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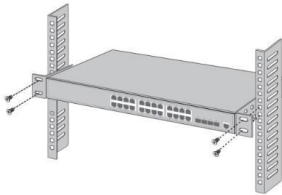
⚠ Note

Good grounding of the rack is an important guarantee for antistatic, anti-leakage, lightning protection and anti-interference of the equipment. Therefore, ensure that the grounding wire of the rack is properly installed.
The equipment installed in the rack is generally from bottom to
top to avoid overload installation;
Avoid placing other heavy objects on the surface of the switch to avoid accidents;
Ensure heat dissipation and air circulation.

3.3 Login management interface

Step1
Connect the network cable connected to the computer to the RJ45 port of the switch when the equipment is working normally

Step2
Manually change the computer IP address to 192.168.254.X (X is 2~254), and the subnet mask: 255.255.255.0

Step3

Open the computer's browser, enter 192.168.254.1 in the address box, and hit enter

Step4、 Enter the Web administrator login interface of the switch, enter the default username and password admin in the input fields of username and password, and then click login

Step5

You have entered the web administration interface of the switch and are ready to start configuring the switch

Chapter 4 Packing List And Usage Suggestion

4.1 Open the package and check the following list

Carefully

items	quantity	instruction
switch	1	\
adapter	1	power
hanger	2	Use to install
Warranty card	1	After sale
User manual	1	Use to install

Use Advice
For safety, non-professionals should not open the shell;
When the product is powered on, pay attention to the danger of strong power and safety protection;
Please select the right power adapter to power the switch, and confirm whether it conforms to the requirements of the switch before use;
Do not use the switch in a humid environment to avoid water entering the fuselage through the shell and causing damage to the machine;
Please start the power after the circuit connection is completed;
When the product is powered on, please do not plug or unplug the cable at will unless in special circumstances;
Do not use the switch in places with dust and electromagnetic radiation, and do not use the switch in places with high temperature and no ventilation.
Please do not place heavy objects on the switch to avoid accidents;
It is recommended to use switches indoors and waterproof water tanks outdoors.

Note: the pictures in the instruction manual are for reference only