



**NX-5610-24G4F**

**Core Aggregation Switch**

**Product Guide**

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## **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.

## **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**

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Community:<http://www.nodexon.com/community>

Technical Support Email:[support@nodexon.com](mailto:support@nodexon.com)

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## **"Product Use Guide"**

Introduces NX-5610-24G4F switch software and hardware parameters, installation methods and matters need attention during the installation process matters.

This manual includes the following sections:

**Chapter 1** : Product introduction. Briefly describe the basic functions and features of the switch, detailed hardware and software specifications, and appearance information.

**Chapter 2** : Hardware Connections. Guide the connection and precautions between the switch and other devices.

**Chapter 3** : Product Installation. Guide the hardware installation method and precautions of the switch.

**Chapter 4**: Product Packaging and Use Recommendations

## Chapter 1 Product Introduction

### 1.1 Product Brief Introduction

The NX-5610-24G4F uses a new generation of high-performance hardware and software platforms to provide flexible, cost-effective full Gigabit access and uplink ports, support for Layer 3 routing protocols, complete security protection mechanisms, and comprehensive ACL/QoS policies. Rich VLAN function, easy to manage and maintain, meets the user's easy-to-manage, high-security, and low-cost networking requirements for network devices. It is suitable for network access, aggregation, and core application scenarios in campus, hotel, and enterprise campus.

### 1.2 product characteristics

- Full Gigabit Ethernet port: 24 full Gigabit RJ45 network port, and 4 X 10G SFP fiber interface, 4 Gigabit RJ45 port(Combo), breaking the traditional fast limitation, data transmission without blunt
- Broadcom high- end chips, can greatly enhance the network data processing rate
- Support DHCP server, DHCP relay, DHCP Snooping
- Support one-stop management of Apollo cloud platform: Support cloud platform to visualize management of resources on switches and PD devices, making operation and maintenance management easier

### 1.3 Product Software and Hardware Specifications

Hardware specification

Chip	Broadcom high performance chip
Flash	16MB
RAM	256 MB DDR

port	24 10/100/1000Mbps RJ45 ports
	4 10G SFP+ fiber ports
	4 1000Mbps RJ45 port(Combo)
	1 RJ45 Console port, 1 1000M RJ45 management port
	1 USB 2.0, 1 Mini-usb Console port
performance	Forward mode: store and forward
	Backplane bandwidth: 128 Gbps
	Packet forwarding rate: 95.2 Mpps
	Support 16 K MAC address table depth
Lightning protection	± 6 KV
ESD	Contact: ±6K V air: ±8K V
Input power	100-240V/50-60Hz

Dimensions (L × W × H)	440mm × 320 mm × 44mm
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Software features

routing	Support RIP V1/V2 , OSPFv1/OSPFv2 dynamic routing
	Support static routing
DHCP	Support DHCP server
	Support DHCP relay
	Support DHCP Snooping
	Support 4K VLANs

VLAN	Support 802.1Q VLAN, MAC VLAN, IP VLAN
	Voice VLAN
MAC address table	Follow the IEEE 802.1d standard
	Support MAC address automatic learning and aging

	Support static, dynamic, filtering address table
	Support user access based on port number, IP address, and MAC address
	Support HTTPS, SSL V3, TLS V1, SSH V1/V2
	Support IP-MAC-PORT ternary binding
Safety features	Support ARP protection, IP source
	protection, DoS protection
	Support DHCP Snooping and DHCP attack protection
	Support 802.1X authentication, AAA
	Support port security, port isolation

	Support CPU protection
Access control (ACL)	<p>Support L2 (Layer 2) ~ L4 (Layer 4) packet filtering</p>
	Support port mirroring, port redirection, flow rate limiting, QoS remarking
	Support 8 port queues
	Support port priority, 802.1P priority, DSCP priority
Quality of Service (QoS)	Support SP, WRR, W FQ priority scheduling algorithm

Spanning tree	<p>Supports STP (IEEE 802.1d), RSTP (IEEE 802.1w) and MSTP (IEEE 802.1s) protocols</p>
	Support loop protection, root bridge protection, TC protection, BPDU protection, BPDU filtering

Multicast	Support IGMP v1/v2 Snooping
	Support fast leave mechanism
	Support for multicast VLAN
	Supports multicast filtering, packet statistics, and unknown multicast discards.
	Support for multicast suppression

Storm suppression	Support broadcast suppression
	Support for unknown unicast suppression
Link aggregation	Support static aggregation
	Support dynamic aggregation
	Support IP, MAC, hybrid load balancing mode
	Supports up to 32 aggregation groups

IPv6	<p>Support IPv6 Ping, IPv6 Tracert, IPv6 Telnet</p>
	<p>Support IPv6 SSH, IPv6 SSL</p>
	<p>Support WEB network management (HTTP, HTTPS, SSL V3)</p>
	<p>Support CLI (Telnet, SSH V1/V2, local serial port)</p>
Management and maintenance	<p>Support for SNMP V1/V2/V3</p>
	<p>Support LLDP, RMON</p>
	<p>Support ARP protection, IP source protection, DoS protection</p>
	<p>Support CPU monitoring, memory monitoring</p>
	<p>Support Apollo cloud platform one-stop management and maintenance</p>
	<p>Support system log, grading warning</p>

	Support Ping, Tracert detection, cable detection
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## 1. 4 product appearance

Front panel

Contains indicator light, RJ45 port, SFP port, CONSOLE port

Indicator

The NX-5610-24G4F indicator works as shown in the following table.

Indicator Light	Name	Colour	Working Status	Description
PWR	Power Indicator	Red	Constantly Bright	Power On Normally
			Not Bright	No Power, Power Switch Is Not Turned On, Power

				Supply Is Abnormal
LINK/A CT	Device Connection Indication	Green	Flicker	The Corresponding RJ45 Port Is Connected Normally.
			Not Bright	The Corresponding RJ45 Port Is Not Connected Properly.

SYS	System Indicator	Green	Flicker	The System Works Normally
			Not Bright	The System Is Not Working Properly And The Software Is Damaged.
XG 1-4	SFP Indicator	Green	Flicker	The Corresponding SFP Port Is Connected Normally.
			Not Bright	The Corresponding SFP Port Is Not Connected Properly.

### **RJ45 port**

The NX-5610-24G4F supports 24 10/100/1000Mbps adaptive RJ45 ports, 4 Combo 10/100/1000 Mbps RJ45 ports, 1 RJ45 Console port, and 1 Gigabit RJ45 management port.

### **SFP port**

NX-5610-24G4F provides four 10 Gigabit SFP port optical module expansion slots for plugging in Gigabit SFP modules.

### **RST button**

When the switch is powered on, press the button with the needle and release the device to enter the restart state. When the SYS light is turned on again, the device restarts.

When the switch is powered on, press the button for 5S or longer to release the button device to enter the reset. Status, when SYS lights up again, the device reset is successful.

## **Console port**

The Console port is used to connect to the serial port of a computer or other terminal to manage or configure the switch.

## **Rear panel**

Includes: power outlet, power switch, ground terminal



## **Outlet**

Connect the power cable to the switch NX-5610-24G4F. The power supply needs to be 100-240V~ 50/60Hz AC power.

## **Ground Terminal**

Use a wire ground to prevent lightning strikes. To avoid product lightning strikes and extend the life of the product

## **Chapter 2 Hardware connection**

### **2.1 port RJ45 connection**

Connect the switch and the RJ45 port of the peer network device with a network cable.

## 2.2 SFP ports connection

The SFP port of thNX-5610-24G4F only supports 10

Gigabit fiber modules. Pls use standard SFP module products.

The process of installing a fiber module on a switch is as follows:

1. 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
2. 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;
3. 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.



### Note:

- 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.

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## 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:

1. After the power is turned on, the power indicator remains steady. When SYS enters the flashing state, the system runs normally.
2. The indicator of each port indicates the connection status of each port, indicating that the switch has started to work normally.

## Chapter 3 Product installation

### 3.1 Installation Precautions

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

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#### 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 potential safety hazards.
- Switch 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:

1. Regular dust removal to keep indoor air clean;
2. Make sure that the equipment is well grounded to ensure
3. the smooth transfer of static electricity.

#### Interference

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:

1. The power supply system takes necessary measures against grid interference;
2. The switch should be away from high-frequency, high-power, high-current equipment, such as wireless transmitters;
3. Take electromagnetic shielding measures when necessary.

### **Lightning Protection Needs**

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:

1. Confirm that the rack is in good contact with the ground;
2. Make sure the power outlet is in good contact with the ground;
3. Reasonable wiring to avoid internal induction lightning;
4. 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:

1. Verify that the rack or table is stable, strong, and capable of withstanding a weight of at least 5.5 kg;
2. Confirm that the rack itself has a good cooling system, or keep the room well ventilated;
3. 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**

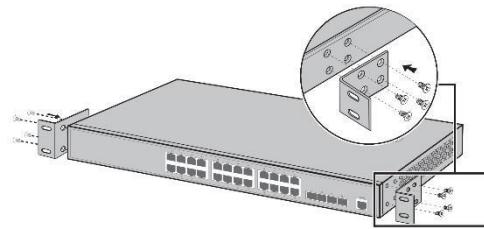
The Phillips screwdriver, electrostatic wrist strap, and cable fiber may be used during installation.

#### **3.2 product installation**

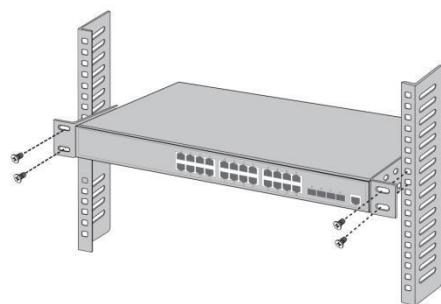
##### **19 inch standard rack mount**

The NX-5610-24G4F is designed to fit a 19 -inch standard rack and can be easily mounted to a rack. The specific installation steps are as follows:

1. Check the grounding and stability of the rack;
2. 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.



3. 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 anti-static, 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;

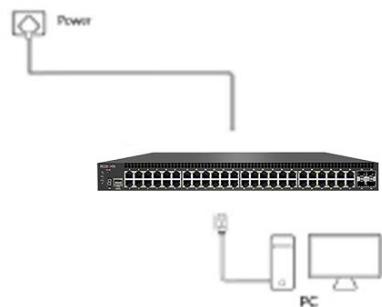
Avoid placing other heavy objects on the surface of the switch to avoid accidents; Ensure heat dissipation and air circulation.

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### **3.3 login management interface**

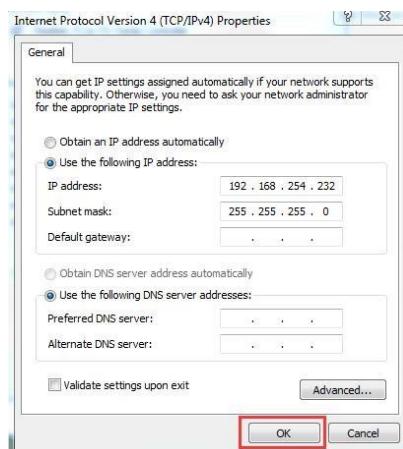
## Step1

Connect the network cable connected to the computer to the RJ45 port of the switch when the device is working normally.



## Step2

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



## Step3

Open the browser of the computer, enter 192.168.254.1 in the address box, and hit the Enter key.

## Step4

Enter the web network management login page of the switch, enter the default username and password admin in the username and password input fields, and then click Login.

## Step5

You have entered the web management interface of the switch and can start to configure the switch.



## Chapter 4, packing list and recommendations for use

### 4.1 Open the package and check the following list

carefully.

article	Quantity	Description
switch	1	\
power cable	1	Switch power supply
Hanging ear	2	For rack mounting

Warranty Card	1	For after-sales maintenance
Product manual	1	Used to guide users to install switches

#### 4.2 Suggestions for use

1. For safety reasons, non-professionals should not open the product casing;
2. Pay attention to the danger of strong electricity and safe protection when the product is powered on;
3. Please select the correct power adapter to supply power to the switch. Confirm whether it matches the switch requirements before use.
4. Do not use the switch in a humid environment to prevent water from entering the fuselage through the casing, resulting in damage to the machine;
5. Please turn on the power after the line connection is completed;
6. In the state of power-on of the product, please do not plug and unplug the cable at random;
7. Do not use the switch in places with excessive dust and electromagnetic radiation. Do not use the switch in a place with high temperature and no ventilation;
8. Please do not place heavy objects on the switch to avoid accidents;
9. It is recommended to use the switch indoors. It is recommended to add a waterproof box when using it outdoors.

Note: The pictures in the manual are for reference only, whichever is subject to the actual product.