

# IP-COM

## Quick Installation Guide

### L2 Managed Switch G3328F/G3350F

### Package contents

- Switch x 1
- Power cord x 1
- L-shaped bracket x 2
- Footpad x 4
- Screw (M3x8 mm) x 8
- Console cable x 1 (only for G3328F)
- Quick installation guide x 1

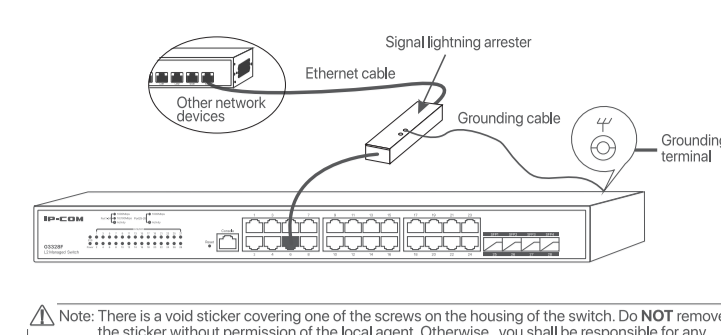
This guide instructs how to install, connect and manage the device. For details, please visit [www.ip-com.com](http://www.ip-com.com) or download the user guide of the device. G3328F is used for illustration in this guide unless otherwise specified.

## 1 Install the device

### 1.1 Safety precautions

Before performing an operation, read the operation instructions and precautions to be taken, and follow them to prevent accidents. The warning and danger items in other documents do not cover all the safety precautions that must be followed. They are only supplementary information, the installation and maintenance personnel need to understand the basic safety precautions to be taken.

- Do not use this apparatus near water.
- Clean only with dry cloth.
- Do not block any ventilation openings, such as newspapers, table-cloth, curtains, etc.
- Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus that produce heat.
- Do not damage the ground conductor or operate the device in the absence of well installed ground conductor. Conduct the appropriate electrical inspection.
- Protect the power cord from being walk on or pinched particularly at the plugs, convenience receptacles and at the point where they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer.
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Main plug used as the disconnect device, the disconnect device shall remain readily accessible as follows:
  - Plugs shall be designed so that the disconnect device shall not be pulled out of the outlet.
  - Plugs shall be designed so that they cannot be pulled out of the outlet.
  - Plugs shall be designed so that they cannot be pulled out of the outlet.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- Warning: To reduce the risk of fire or electric shock, do not operate this apparatus to rain or moisture. The apparatus shall not be exposed to dripping or splashing. Warning: To reduce the risk of electric shock, do not remove or cover as there are user-serviceable parts inside. Refer servicing to qualified personnel.
- If an outdoor cable is required, check whether the signal lightning arrester and AC surge arrester are connected to the switch.



Note: There is a void sticker covering one of the screws on the housing of the switch. Do NOT remove the sticker unless removal of the back cover. Otherwise, you will be responsible for any damage.

### 1.2 Preparation for installation

You shall prepare the following tools and materials for device installation.

- Rack mounting: ESD bracket (or ESD gloves), screwdriver, screws (suitable for securing the switch to the rack).
- Wall mounting: ESD bracket (or ESD gloves), metal, hammer drill, rubber hammer, ladder, split level, screwdriver, expansion bolts (M5\*40 mm), screws (PA5\*25 mm, head diameter: 10 mm).
- Desktop mounting: ESD bracket (or ESD gloves)

### 1.3 Installation

#### Rack mounting (to a standard 19-inch rack)

- Ensure that the rack is stable and level, and is properly grounded.
- Fix the two L-shaped brackets to both sides of the switch with the included screws (self-prepared). Ensure that the switch is stable on the rack.

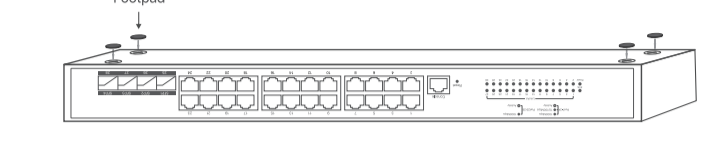
#### Wall mounting

- This switch can only be installed on non-flammable walls, such as a concrete wall.
- Do NOT install the switch with its ventilation openings facing downwards; otherwise, there will be potential safety hazards.
- The switch is only suitable for mounting at heights 5 m.

- Rotate the two L-shaped brackets by 90 degrees and fix them to both sides of the switch with the included screws.
- Place the switch horizontally onto the wall with its RJ45 ports facing upwards. Then mark the screw holes with the marker.
- Drill holes in the marked positions, and then hammer the expansion bolts (self-prepared, M5\*40 mm) into the holes.
- Pass the screws (self-prepared, PA5\*25 mm, head diameter: 10 mm) through the holes of the two L-shaped brackets, and secure the screws into the expansion bolts with a screwdriver. Ensure that the switch is installed firmly with its RJ45 ports facing upward.

#### Desktop mounting

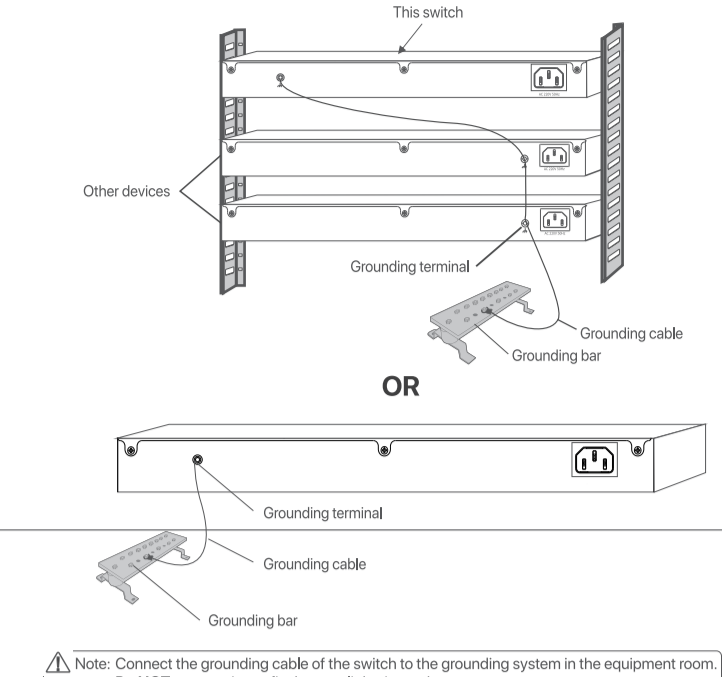
- Turn the four footpads on the bottom of the switch. Then turn the switch upside down, and place it horizontally on a big enough, clean, stable and flat desktop.



## 1.4 Grounding

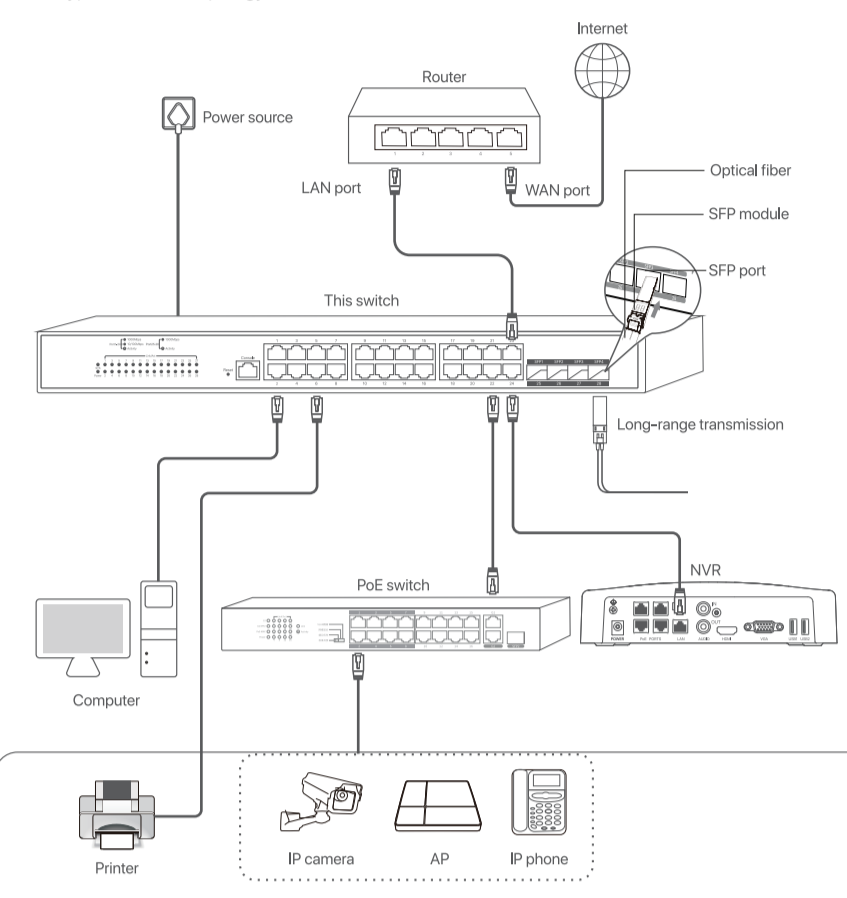
Grounding is important for lightning protection, anti-interference, and personal safety.

- Connect one end of the grounding cable to the grounding terminal of the switch.
- Connect the other end of the grounding cable to another grounded device or to the bonding post on the grounding bar.



## 2 Connect the device

The typical network topology of this switch is as shown below.



After connection, please check whether the switch is connected properly according to the following table.

LED Indicator	Description
Power	<b>Blinking:</b> The system works properly. <b>Solid on:</b> The system is not working properly. <b>Off:</b> The switch is powered on or not powered on properly.
LINK/ACT (1-28) or G3328F/150-78 or G3350F	<b>Solid on:</b> The port is connected to a device, but no data is being transmitted over the port. <b>Blinking:</b> The port is connected to a device, and data is being transmitted over the port. <b>Off:</b> The port is not connected or is not connected properly. A green light indicates that the negotiation rate of the port is 1000 Mbps, while an orange light indicates a negotiation rate of 10/100 Mbps or 100 Mbps.

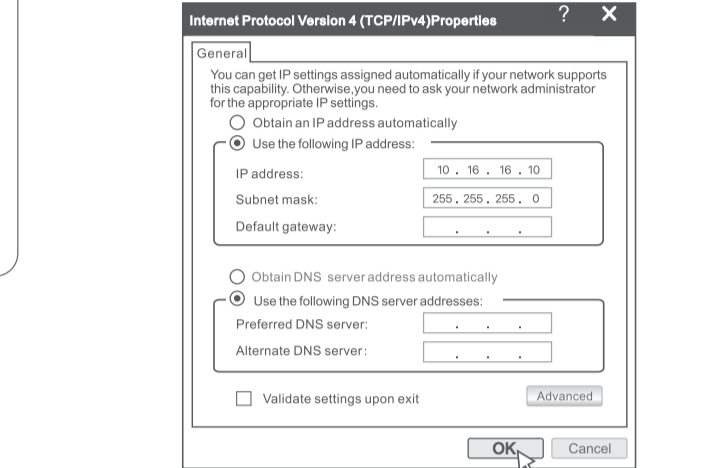
Tips:  
- The SFP ports of G3328F and G3350F are independent SFP ports. The switch supports auto MDI/MDIX. You can use either a straight through cable or a crossover cable to connect the switch to Ethernet device.

## 3 Manage the device

You can manage the switch through the local web UI or IP-COM CloudFi App.

### Through local web UI

- Use an Ethernet cable to connect the computer to one of the ports 1-24 (ports 1-48 for G3350F) of the switch.
- Set the IP address of Ethernet (or Local Area Connection) of the computer to the same network segment of the switch's IP address. The default IP address of the switch is **10.16.16.168**. You can set the IP address of the computer to **10.16.16.X** (X ranges from 2 to 254 excluding 168 and is not occupied) and the subnet mask to **255.255.255.0**.

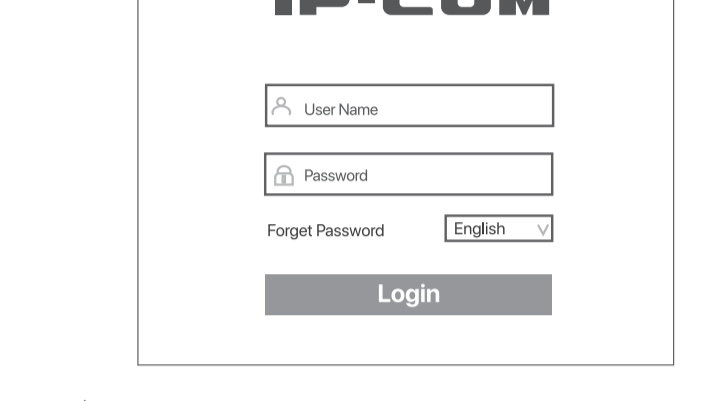


After successfully logging in to the web UI of the switch, you can configure the switch now.

### Through IP-COM CloudFi App

- Before configuring the cloud management function, ensure that the switch has been connected to the internet.
- Ensure the App is updated to the latest version. The operations may differ due to different versions.

- Start a web browser (such as Chrome) on the computer, enter the management IP address of the switch (default: **10.16.16.168**) in the address bar, and press **Enter** on the keyboard.
- Enter the login user name and password (both are admin by default) on the login page of the switch, and click **Login**.

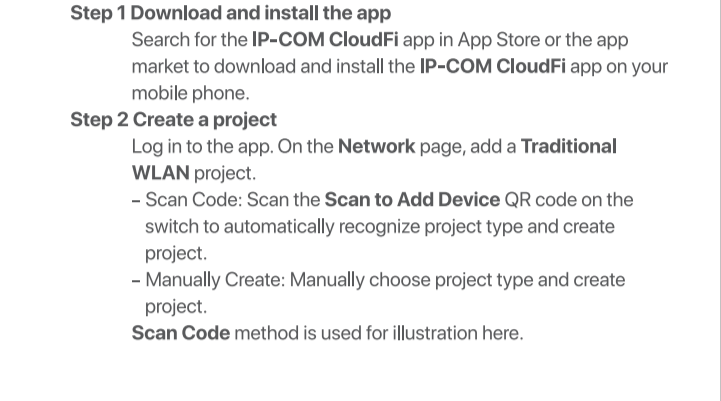


If you fail to access the above page, please refer to question 1 in FAQ.

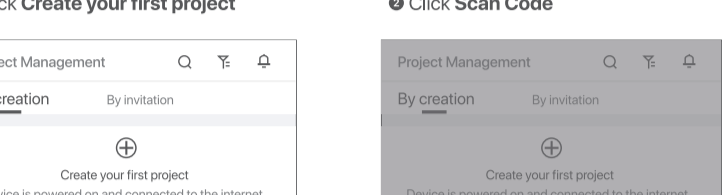
### Through IP-COM CloudFi App

- Before configuring the cloud management function, ensure that the switch has been connected to the internet.
- Ensure the App is updated to the latest version. The operations may differ due to different versions.

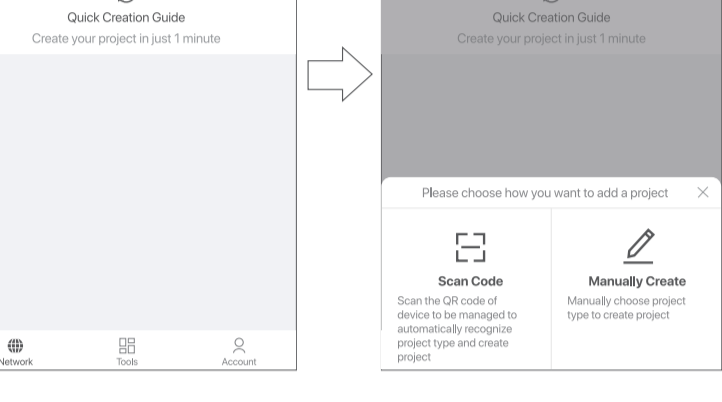
- Download and install the app Search for the **IP-COM CloudFi** app in App Store or the app market to download and install the **IP-COM CloudFi** app on your mobile phone.
- Create a project Log in to the app. On the **Network** page, add a **Traditional WLAN** project.
  - Scan Code: Scan the **Scan to Add Device QR** code on the switch to automatically recognize project type and create project.
  - Manually Create: Manually choose project type and create project.Scan Code method is used for illustration here.



### Create your first project



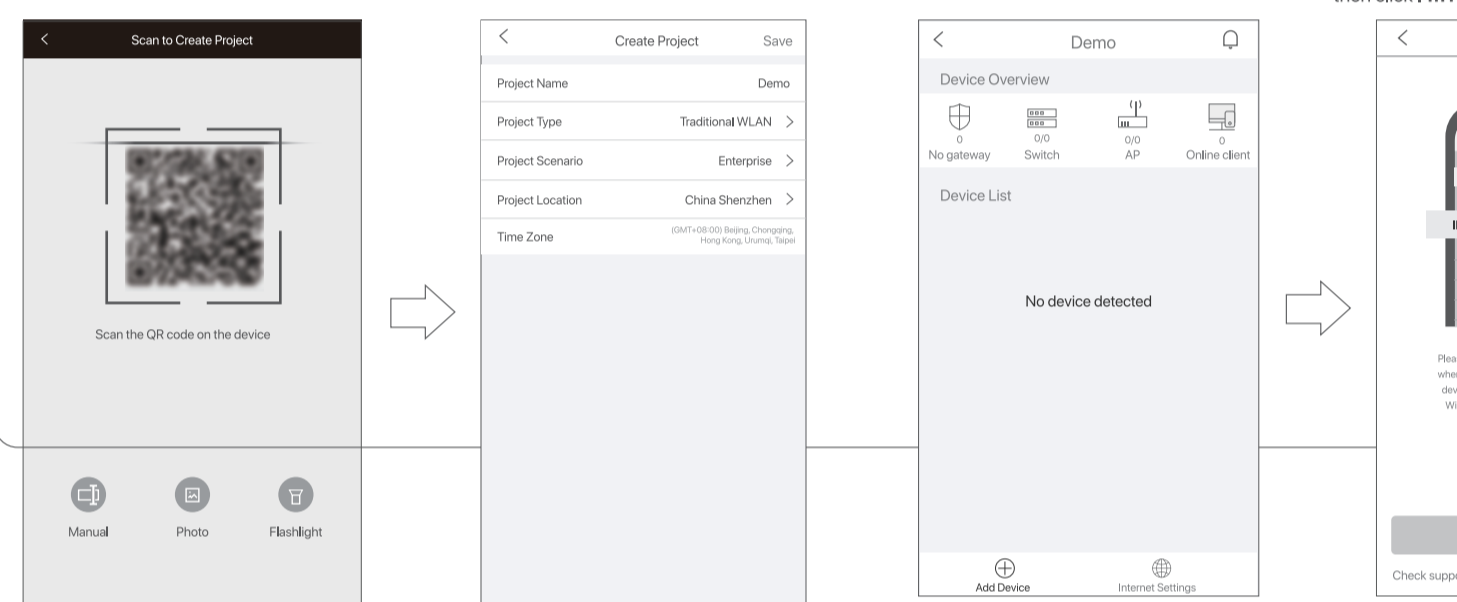
### Scan Scan to Add Device QR code on the switch, or click Manual to input the device type, model and MAC address



### Step 3 Add a device in the project

- Add device in local network: Applicable when your mobile phone is connected to the LAN network of the switch.
- Add device remotely: Applicable when your mobile phone cannot connect to the LAN network of the switch. To use this method, you need to obtain the device model and MAC address of the switch or the Scan to Add Device QR code in advance.

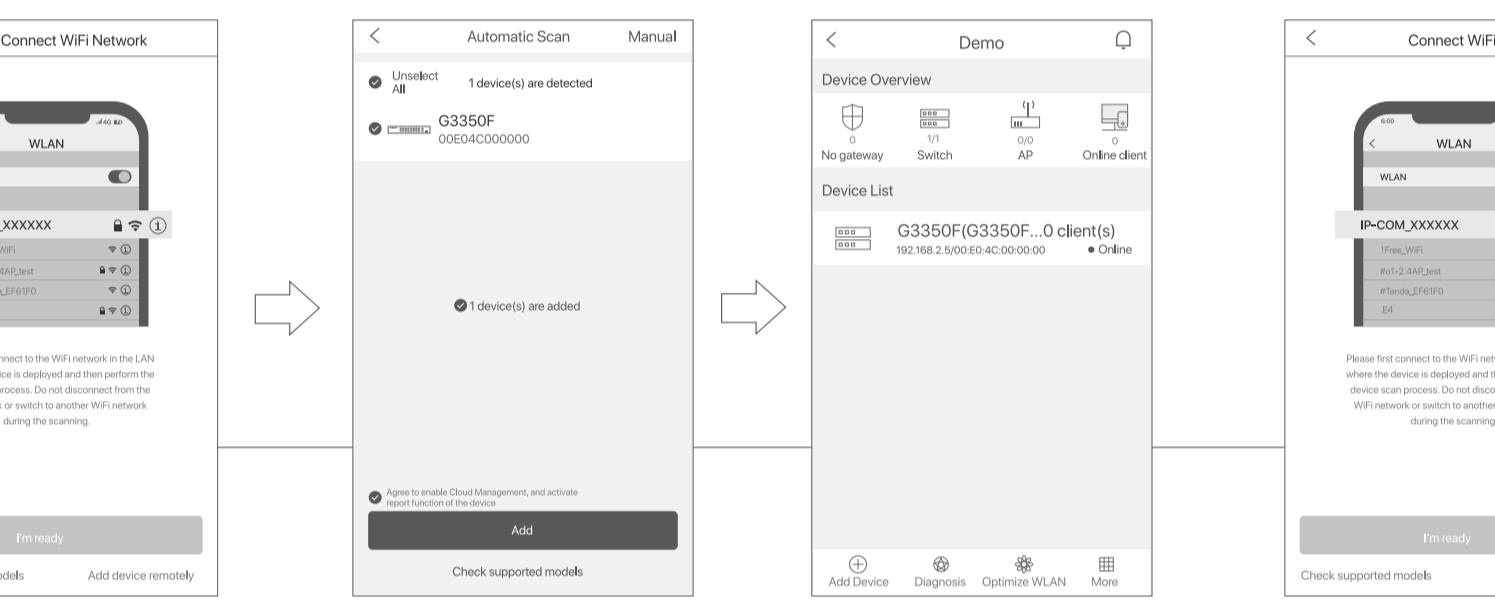
- Add device in local network
- Enter the project, click Add Device
- Connect your mobile phone to the WiFi network of the LAN where this switch is deployed (This WiFi network should have internet access), and then click I'm ready
- After the automatic scan, agree to enable cloud management and add the switch
- The switch is added successfully



### (2) Add device remotely

- Before adding remotely, ensure that the cloud management function of the switch is already enabled on the web UI (Basic Functions > Cloud Management).

- Click Add Device remotely at the lower right corner
- Follow the instructions, click I'm ready
- The switch is added successfully



### (3) Scan the Scan to Add Device QR code on the switch, or click Manual to input the device type, model and MAC address

- Before configuring the cloud management function, ensure that the switch has been connected to the internet.
- Ensure the App is updated to the latest version. The operations may differ due to different versions.

- Scan the QR code on the device
- Set project parameters and click Save
- Project is created
- Enter the project, click Add Device
- Connect your mobile phone to the WiFi network of the LAN where this switch is deployed (This WiFi network should have internet access), and then click I'm ready
- After the automatic scan, agree to enable cloud management and add the switch
- The switch is added successfully



## FAQ

### 1. I cannot log in to the web UI of the switch. What should I do?

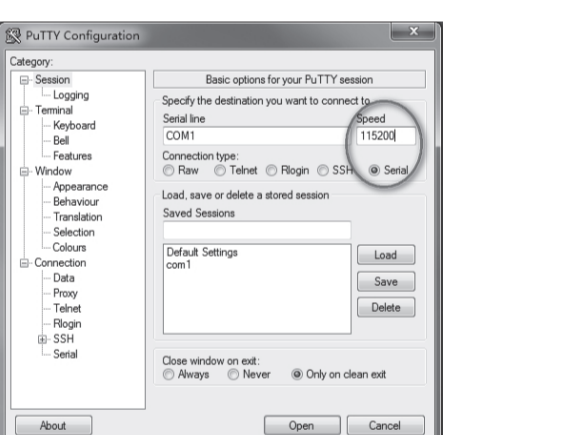
- Try the following solutions:
  - Check whether the switch is powered on properly. The **Power** LED indicator is solid on.
  - Check whether the computer is connected to the switch properly with an Ethernet cable. The **LINK/ACT** LED indicator lights solid on or blinking.
  - Check whether the IP address of Ethernet (or Local Area Connection) of the computer is set to **10.16.16.X** (X ranges from 2 to 254 excluding 168 and is not occupied).
  - Clear the cache of the web browser or try another web browser.
  - Disable the firewall of the computer, or try another computer.
  - Check whether only one device with the IP address 10.16.16.168 exists in the local network.
  - If the problem persists, reset the switch and try again.
- Reset method: When the **SYS** LED indicator is blinking, press and hold the **Reset** button for about 10 seconds, and then release it when all indicators are solid on. When the **SYS** LED indicator blinks again, the switch is restored to factory settings.

### 2. I forget the login user name and password when logging in to the web UI. What should I do?

Try entering the default login user name and password (both are admin) when you still fail to log in to the web UI, reset the switch, then use the default user name and password to log in.

### 3. How do I connect the switch through the Console port (only for G3328F)?

- Connect the computer and the Console port of the switch with the included console cable.
- Run a serial port connection software (such as PuTTY) on the computer. Enter **115200** in the **Speed** box and select **Serial** as the **Connection type**. Then click **Open**.



Step 3 Press **Enter** twice and enter the user name and password of the switch (both are admin by default) on the page to enter the command-line interface of the switch.



## Specifications English

Model	G3328F	G3350F
Port	10/100/1000 Mbps RJ45 port 24	10/100/1000 Mbps RJ45 port 48
Port	1000 Mbps SFP port 4	1 independent SFP ports 2 independent SFP ports 2
Console port	1 x Built-in 115200 /	1
Switching mode	Store-and-forward	Store-and-forward
Performance	MAC address table learning Auto aging, auto learning	MAC address table learning Auto aging, auto learning
Dimensions (L x W x H)	440mm x 176mm x 44mm	440mm x 240mm x 44mm
Input voltage	100-240V AC, 50/60Hz, 0.7A	100-240V AC, 50/60Hz, 1.5A
Lighting protection	RJ45 port Common mode: 6 kV Power supply Common mode: 6 kV, Differential mode: 4 kV	RJ45 port Common mode: 6 kV Power supply Common mode: 6 kV, Differential mode: 4 kV
Operating environment	Temperature: 0°C ~45°C Humidity: (5%-95%) RH, non-condensing	Temperature: 0°C ~45°C Humidity: (5%-95%) RH, non-condensing
Storage environment	Temperature: -40°C ~70°C Humidity: (5%-95%) RH, non-condensing	Temperature: -40°C ~70°C Humidity: (5%-95%) RH, non-condensing
Data transmission rate	Ethernet: 10 Mbps (half duplex)/20 Mbps (full duplex) Fast Ethernet: 100 Mbps (half duplex)/200 Mbps (full duplex) Gigabit Ethernet: 2000 Mbps (full duplex)	Ethernet: 10 Mbps (half duplex)/20 Mbps (full duplex) Fast Ethernet: 100 Mbps (half duplex)/200 Mbps (full duplex) Gigabit Ethernet: 2000 Mbps (full duplex)
Transmission media	Ethernet: CAT5 UTP/STP or better Fast Ethernet: CAT5 UTP/STP or better Gigabit Ethernet: CAT6 or CAT6 UTP/STP 1000Base-SX-MMF 1000Base-LX-MMF or SFP	Ethernet: CAT5 UTP/STP or better Fast Ethernet: CAT5 UTP/STP or better Gigabit Ethernet: CAT6 or CAT6 UTP/STP 1000Base-SX-MMF 1000Base-LX-MMF or SFP
Network standards	IEEE 802.3, IEEE 802.3u, IEEE 802.3x, IEEE 802.3ab, IEEE 802.3z, IEEE 802.1q, IEEE 802.1p, IEEE 802.1x, IEEE 802.1y, IEEE 802.1z	IEEE 802.3, IEEE 802.3u, IEEE 802.3x, IEEE 802.3ab, IEEE 802.3z, IEEE 802.1q, IEEE 802.1p, IEEE 802.1x, IEEE 802.1y, IEEE 802.1z

## Характеристики Русский

Модель	G3328F	G3350F
Порт	Порт RJ45 10/100/1000 Мбит/с 24	48
Порт	Порт SFP 1000 Мбит/с 4	2 независимых порта SFP 2 независимых порта SFP
Консольный порт	1 x Встроенный 115200 /	1
Ключевые характеристики	Сохранение и дальнейшая передача	Сохранение и дальнейшая передача
Выполнение	Автоматическое старение, автоматическое обучение	Автоматическое старение, автоматическое обучение
Изучение MAC-адресов	Автоматическое старение, автоматическое обучение	Автоматическое старение, автоматическое обучение
Таблица MAC-адресов	16 К	16 К
Размеры (Д x Ш x В)	440 мм x 176 мм x 44 мм	440 мм x 240 мм x 44 мм
Входное напряжение	100-240 В переменного тока, 50/60 Гц, 0,7 А	100-240 В переменного тока, 50/60 Гц, 1,5 А
Защита от электромагнитных помех	Порт RJ45 Обычный режим: 6 кВ	Порт RJ45 Обычный режим: 6 кВ, Дифференциальный режим: 4 кВ
Источники питания	Обычный режим: 6 кВ, Дифференциальный режим: 4 кВ	Обычный режим: 6 кВ, Дифференциальный режим: 4 кВ
Рабочая среда	Температура: 0°C ~45°C Влажность: (5%-95%) RH, неконденсирующая	Температура: 0°C ~45°C Влажность: (5%-95%) RH, неконденсирующая
Условия хранения	Температура: -40°C ~70°C Влажность: (5%-95%) RH, неконденсирующая	Температура: -40°C ~70°C Влажность: (5%-95%) RH, неконденсирующая
Скорость передачи информации	Ethernet: 10 Мбит/с (полудуплекс)/20 Мбит/с (полнодуплекс) Fast Ethernet: 100 Мбит/с (полудуплекс)/200 Мбит/с (полнодуплекс) Гигабит Ethernet: 2000 Мбит/с (полнодуплекс)	Ethernet: 10 Мбит/с (полудуплекс)/20 Мбит/с (полнодуплекс) Fast Ethernet: 100 Мбит/с (полудуплекс)/200 Мбит/с (полнодуплекс) Гигабит Ethernet: 2000 Мбит/с (полнодуплекс)
Средства передачи	Ethernet: Кабель CAT5 UTP/STP или лучше Fast Ethernet: Кабель CAT5 UTP/STP или лучше Gigabit Ethernet: Кабель CAT6 или CAT6 UTP/STP 1000Base-SX-MMF 1000Base-LX-MMF или SFP	Ethernet: Кабель CAT5 UTP/STP или лучше Fast Ethernet: Кабель CAT5 UTP/STP или лучше Gigabit Ethernet: Кабель CAT6 или CAT6 UTP/STP 1000Base-SX-MMF 1000Base-LX-MMF или SFP
Стандарты сети	IEEE 802.3, IEEE 802.3u, IEEE 802.3x, IEEE 802.3ab, IEEE 802.3z, IEEE 802.1q, IEEE 802.1p, IEEE 802.1x, IEEE 802.1y, IEEE 802.1z	IEEE 802.3, IEEE 802.3u, IEEE 802.3x, IEEE 802.3ab, IEEE 802.3z, IEEE 802.1q, IEEE 802.1p, IEEE 802.1x, IEEE 802.1y, IEEE 802.1z

## Спецификации Български

Модел	G3328F	G3350F
Порт	10/100/1000 Mbps RJ45-Port 24	48
Порт	1000 Mbps SFP-Port 4	2 независимых SFP-Ports 2 независимых SFP-Ports
Консольный порт	1 x Встроенный 115200 /	1
Ключевые характеристики	Сохранение и дальнейшая передача	Сохранение и дальнейшая передача
Выполнение	Автоматическое старение, автоматическое обучение	Автоматическое старение, автоматическое обучение
Изучение MAC-адресов	Автоматическое старение, автоматическое обучение	Автоматическое старение, автоматическое обучение
Таблица MAC-адресов	16 К	16 К
Размеры (Д x Ш x В)	440 мм x 176 мм x 44 мм	440 мм x 240 мм x 44 мм
Входное напряжение	100-240 V AC, 50/60 Hz, 0.7 A	100-240 V AC, 50/60 Hz, 1.5 A
Защита от электромагнитных помех	RJ45 порт Обычный режим: 6 kV	RJ45 порт Обычный режим: 6 kV, Дифференциальный режим: 4 kV
Источники питания	Обычный режим: 6 kV	Обычный режим: 6 kV, Дифференциальный режим: 4 kV
Рабочая среда	Температура: 0°C ~45°C Влажность: (5%-95%) RH, неконденсирующая	Температура: 0°C ~45°C Влажность: (5%-95%) RH, неконденсирующая
Условия хранения	Температура: -40°C ~70°C Влажность: (5%-95%) RH, неконденсирующая	Температура: -40°C ~70°C Влажность: (5%-95%) RH, неконденсирующая
Скорость на передаче на данные	Ethernet: 10 Mbps (полудуплекс)/20 Mbps (полнодуплекс) Fast Ethernet: 100 Mbps (полудуплекс)/200 Mbps (полнодуплекс) Гигабит Ethernet: 2000 Mbps (полнодуплекс)	Ethernet: 10 Mbps (полудуплекс)/20 Mbps (полнодуплекс) Fast Ethernet: 100 Mbps (полудуплекс)/200 Mbps (полнодуплекс) Гигабит Ethernet: 2000 Mbps (полнодуплекс)
Носители на передаче	Ethernet: Кабель CAT5 UTP/STP или лучше Fast Ethernet: Кабель CAT5 UTP/STP или лучше Gigabit Ethernet: Кабель CAT6 или CAT6 UTP/STP 1000Base-SX-MMF 1000Base-LX-MMF или SFP	Ethernet: Кабель CAT5 UTP/STP или лучше Fast Ethernet: Кабель CAT5 UTP/STP или лучше Gigabit Ethernet: Кабель CAT6 или CAT6 UTP/STP 1000Base-SX-MMF 1000Base-LX-MMF или SFP
Мрежовы стандарти	IEEE 802.3, IEEE 802.3u, IEEE 802.3x, IEEE 802.3ab, IEEE 802.3z, IEEE 802.1q, IEEE 802.1p, IEEE 802.1x, IEEE 802.1y, IEEE 802.1z	IEEE 802.3, IEEE 802.3u, IEEE 802.3x, IEEE 802.3ab, IEEE 802.3z, IEEE 802.1q, IEEE 802.1p, IEEE 802.1x, IEEE 802.1y, IEEE 802.1z

## Spezifikationen Deutsch

Modell	G3328F	G3350F
Port	10/100/1000 Mbit/s RJ45-Port 24	48
Port	1000 Mbit/s SFP-Port 4	4 unabhängige SFP-Ports 2 unabhängige SFP-Ports
Modem-Anschluss	1 x Built-in 115200 /	1
Leistungsmerkmale	Speicherung und Weiterleitung	Speicherung und Weiterleitung
MAC-Adressentabelle	Automatisches Lernen, automatisches Lernen	Automatisches Lernen, automatisches Lernen
MAC-Adressentabelle	16 K	16 K
Abmessungen (L x B x H)	440 mm x 176 mm x 44 mm	440 mm x 240 mm x 44 mm
Nennspannung	100-240 V AC, 50/60 Hz, 0,7 A	100-240 V AC, 50/60 Hz, 1,5 A
Blitzschutz	RJ45-Port Normales Modus: 6 kV	Normales Modus: 6 kV, Differenzmodus: 4 kV
Strömsorgung	Modus: 6 kV	Modus: 6 kV, Differenzmodus: 4 kV
Betriebsumgebung	Temperatur: 0°C ~45°C Luftfeuchtigkeit: (5% ~ 95%) RH, nicht kondensierend	Temperatur: 0°C ~45°C Luftfeuchtigkeit: (5% ~ 95%) RH, nicht kondensierend
Lagerumgebung	Temperatur: -40°C ~70°C Luftfeuchtigkeit: (5% ~ 95%) RH, nicht kondensierend	Temperatur: -40°C ~70°C Luftfeuchtigkeit: (5% ~ 95%) RH, nicht kondensierend
Datenübertragungsgeschwindigkeit	Ethernet: 10 Mbit/s (Halbduplex)/20 Mbit/s (Voll-duplex) Fast Ethernet: 100 Mbit/s (Halbduplex)/200 Mbit/s (Voll-duplex) Gigabit Ethernet: 2000 Mbit/s (Voll-duplex)	Ethernet: 10 Mbit/s (Halbduplex)/20 Mbit/s (Voll-duplex) Fast Ethernet: 100 Mbit/s (Halbduplex)/200 Mbit/s (Voll-duplex) Gigabit Ethernet: 2000 Mbit/s (Voll-duplex)
Übertragungsmittel	Ethernet: CAT5 UTP/STP oder besser Fast Ethernet: CAT5 UTP/STP oder besser Gigabit Ethernet: CAT6 oder CAT6 UTP/STP 1000Base-SX-MMF 1000Base-LX-MMF oder SFP	Ethernet: CAT5 UTP/STP oder besser Fast Ethernet: CAT5 UTP/STP oder besser Gigabit Ethernet: CAT6 oder CAT6 UTP/STP 1000Base-SX-MMF 1000Base-LX-MMF oder SFP
Netzwerkstandards	IEEE 802.3, IEEE 802.3u, IEEE 802.3x, IEEE 802.3ab, IEEE 802.3z, IEEE 802.1q, IEEE 802.1p, IEEE 802.1x, IEEE 802.1y, IEEE 802.1z	IEEE 802.3, IEEE 802.3u, IEEE 802.3x, IEEE 802.3ab, IEEE 802.3z, IEEE 802.1q, IEEE 802.1p, IEEE 802.1x, IEEE 802.1y, IEEE 802.1z

## Specifiche Italiano

Modello	G3328F	G3350F
Porte	Porti RJ45 10/100/1000 Mbps 24	48
Porte SFP	Porti SFP 1000 Mbps 4	2 porte SFP indipendenti 2 porte SFP indipendenti
Porta console	1 x Ingresso 115200 /	1
Modalità di switching	Store-and-forward	Store-and-forward
Prestitazioni	Apprendimento degli indirizzi MAC Automatico, apprendimento automatico	Apprendimento degli indirizzi MAC Automatico, apprendimento automatico
Tabelle degli indirizzi MAC	16 K	16 K
Dimensioni (L x P x A)	440 mm x 176 mm x 44 mm	440 mm x 240 mm x 44 mm
Tensione di ingresso	100-240 V CA, 50/60 Hz, 0,7 A	100-240 V CA, 50/60 Hz, 1,5 A
Protezione contro i fulmini	Porta RJ45 Modalità comune: 6 kV	Porta RJ45 Modalità comune: 6 kV, Modalità differenziale: 4 kV
Alimentazione	Modalità comune: 6 kV, Modalità differenziale: 4 kV	Modalità comune: 6 kV, Modalità differenziale: 4 kV
Ambiente operativo	Temperatura: 0°C ~45°C Umidità: (5% ~ 95%) RH, senza condensa	Temperatura: 0°C ~45°C Umidità: (5% ~ 95%) RH, senza condensa
Ambiente di immagazzinaggio	Temperatura: -40°C ~70°C Umidità: (5% ~ 95%) RH, senza condensa	Temperatura: -40°C ~70°C Umidità: (5% ~ 95%) RH, senza condensa
Velocità di trasmissione dati	Ethernet: 10 Mbps (half duplex)/20 Mbps (full duplex) Fast Ethernet: 100 Mbps (half duplex)/200 Mbps (full duplex) Gigabit Ethernet: 2000 Mbps (full duplex)	Ethernet: 10 Mbps (half duplex)/20 Mbps (full duplex) Fast Ethernet: 100 Mbps (half duplex)/200 Mbps (full duplex) Gigabit Ethernet: 2000 Mbps (full duplex)
Mezzi di trasmissione	Ethernet: Cabo UTP/STP CAT5 o superiore Fast Ethernet: Cabo UTP/STP CAT5 o superiore Gigabit Ethernet: Cabo UTP/STP CAT6 o CAT6 UTP/STP 1000Base-SX-MMF 1000Base-LX-MMF o SFP	Ethernet: Cabo UTP/STP CAT5 o superiore Fast Ethernet: Cabo UTP/STP CAT5 o superiore Gigabit Ethernet: Cabo UTP/STP CAT6 o CAT6 UTP/STP 1000Base-SX-MMF 1000Base-LX-MMF o SFP
Standard di rete	IEEE 802.3, IEEE 802.3u, IEEE 802.3x, IEEE 802.3ab, IEEE 802.3z, IEEE 802.1q, IEEE 802.1p, IEEE 802.1x, IEEE 802.1y, IEEE 802.1z	IEEE 802.3, IEEE 802.3u, IEEE 802.3x, IEEE 802.3ab, IEEE 802.3z, IEEE 802.1q, IEEE 802.1p, IEEE 802.1x, IEEE 802.1y, IEEE 802.1z

## Especificações Português