

FortiSwitch 448E Series

FS-448E, FS-448E-PoE, FS-448E FPoE

Product Registration

Thank you for purchasing a Fortinet FortiSwitch. To access:

- Cloud Management
- FortiGuard Updates
- Firmware Upgrades
- Technical Support
- Warranty Coverage

Please register your Fortinet FortiSwitch:

Vous devez enregistrer le produit:

Debe registrar el producto:

登録のお願い:

请马上注册:

<http://support.fortinet.com>



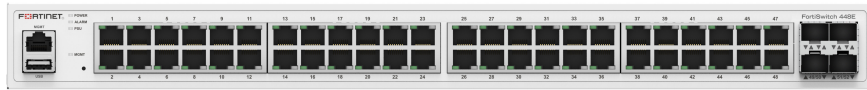
December 22, 2022

This guide covers: FS-448E, FS-448E-POE, FS-448E-FPOE

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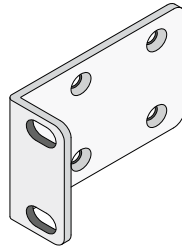
Contents - FS 448E



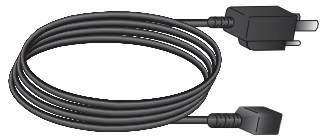
FortiSwitch 448E



QuickStart Guide



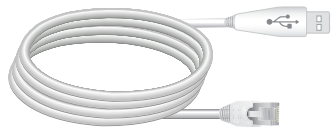
2x Rack-Mount Brackets



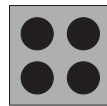
2x Power Cables



8x Bracket Screws



Console Cable
(USB to RJ45)



4x Rubber Feet

Front Panel - FS 448E



1 2

3

4

1 MGMT (RJ45) client management port, default IP 192.168.1.99
USB (2.0) for future use

2 POWER
■ Green: Power is on
■ Off: Power is off

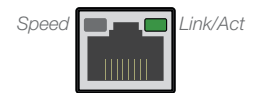
PSU
■ Amber: Power supply operating normally
■ Off: Power supply is off

ALARM
■ Amber: Fault detected
■ Off: No fault detected

MGMT
■ Green: Link connected
▣ Flashing Green: Management data activity
■ Off: No link established

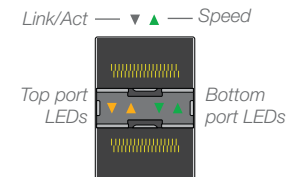
3 Ports 1 to 48 (RJ45) GE network connections
 Speed
 LED
■ Green: Connected at 1000Mbps
■ Amber: Connected at 100Mbps
■ Off: Connected at 10Mbps or not is use

Act/
Link
■ Green: Connected
▣ Flashing Green: Data activity
■ Off: No link established



4 Ports 49 to 52 (SFP+) 10Gbps SFP connections
 Speed
 LED
■ Green: Connected at 10Gbps
■ Amber: Connected at 1Gbps

Act/
Link
■ Green: Connected
▣ Flashing Green: Data activity
■ Off: No link established



Rear Panel - FS 448E



- 1 CONSOLE (RJ45) CLI management port
- 2 Redundant Power Supplies 100-240V AC, 1.5A Max, 50/60Hz

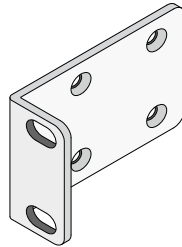
Contents - FS 448E-PoE



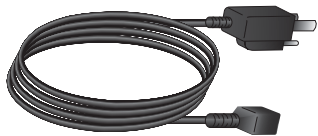
FortiSwitch 448E-PoE



QuickStart Guide



2x Rack-Mount Brackets



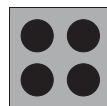
2x Power Cables



8x Bracket Screws



Console Cable
(USB to RJ45)



4x Rubber Feet

Front Panel - FS 448E-PoE

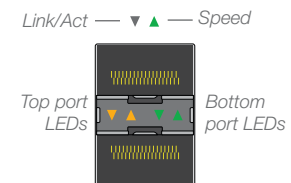
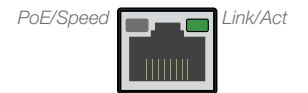


1 2

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4

- 1** MGMT (RJ45) client management port, default IP 192.168.1.99
USB (2.0) for future use
- 2** POWER
 - Green: Power is on
 - Off: Power is off
- ALARM**
 - Amber: Fault detected
 - Off: No fault detected
- PoE MAX**
 - Amber: Max PoE output reached
 - Off: PoE power available
- MGMT**
 - Green: Link connected
 - Flashing Green: Management data activity
 - Off: No link established
- 3** PoE Ports 1 to 48 (RJ45) GE network connections providing up to 421W for all ports
 - PoE LED ■ Amber: Providing PoE power
 - Off: Not providing PoE power
 - Link/Act LED ■ Green: Connected
 - Flashing Green: Data activity
 - Off: No link established
- 4** Ports 49 to 52 (SFP+) 10Gbps SFP connections
 - Speed LED ■ Green: Connected at 10Gbps
 - Amber: Connected at 1Gbps
 - Link/Act LED ■ Green: Connected
 - Flashing Green: Data activity
 - Off: No link established



Rear Panel - FS 448E-PoE



- 1 CONSOLE (RJ45) CLI management port
- 2 Redundant Power Supplies 100-240V AC, 7.0A Max, 50/60Hz

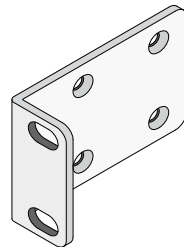
Contents - FS 448E-FPoE



FortiSwitch 448E-FPoE



QuickStart Guide



2x Rack-Mount Brackets



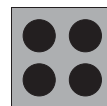
2x Power Cables



8x Bracket Screws



Console Cable
(USB to RJ45)



4x Rubber Feet

Front Panel - FS 448E-FPoE



1 2

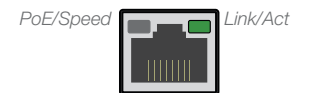
3

4

- 1** MGMT (RJ45) client management port, default IP 192.168.1.99
USB (2.0) for future use
- 2** POWER
 - Green: Power is on
 - Off: Power is off
- ALARM**
 - Amber: Fault detected
 - Off: No fault detected
- PoE MAX**
 - Amber: Max PoE output reached
 - Off: PoE power available
- MGMT**
 - Green: Link connected
 - Flashing Green: Management data activity
 - Off: No link established

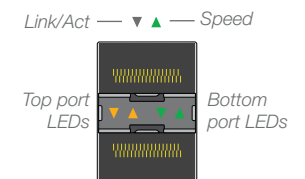
3 PoE Ports 1 to 48 (RJ45) GE network connections providing up to 800W for all ports

- PoE LED
 - Amber: Providing PoE power
 - Off: Not providing PoE power
- Link/Act
 - Green: Connected
 - Flashing Green: Data activity
 - Off: No link established

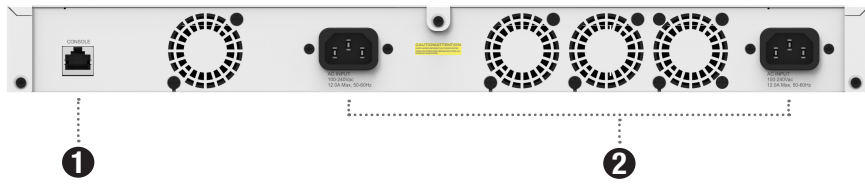


4 Ports 49 to 52 (SFP+) 10Gbps SFP connections

- Speed LED
 - Green: Connected at 10Gbps
 - Amber: Connected at 1Gbps
- Link/Act
 - Green: Connected
 - Flashing Green: Data activity
 - Off: No link established



Rear Panel - FS 448E-FPoE

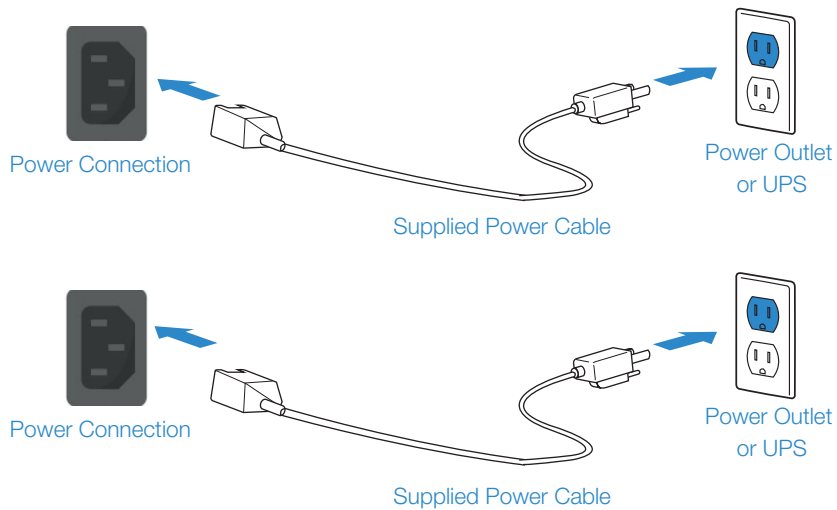


- 1 CONSOLE (RJ45) CLI management port
- 2 Redundant Power Supplies 100-240V AC, 12.0A Max, 50/60Hz

Installation Options

Your device includes a rackmount kit. You can also install your device as Desktop. Custom Rack/Rail kits are also available.

Basic Connections



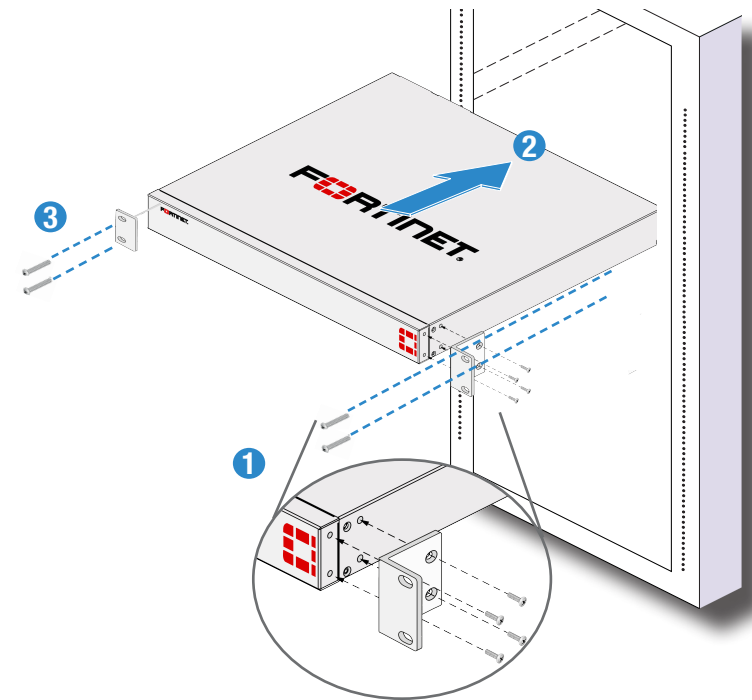
Plug in your device to a [power outlet](#) using the provided [power cables](#).

Note: We recommend connecting your FortiSwitch to an [uninterruptible power supply \(UPS\)](#) in case of a power outage

Rack Installation

This device mounts in a standard 19 inch rack.

1. [Attach](#) the provided rack-mount [brackets and screws](#)
2. [Position](#) the device and [slide into the rack](#)
3. [Fasten](#) rack screws to [secure the device](#)

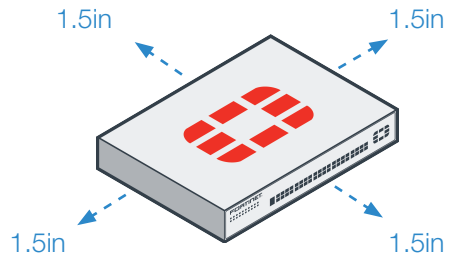


Caution: Ensure there is at least 1.5 inches of space above and below the device

Warning: For safety, it is recommended that two people install the device

Desktop Option

1. Place the unit on a flat, clean and stable surface
2. Ensure there is at least 1.5in of clearance for adequate airflow

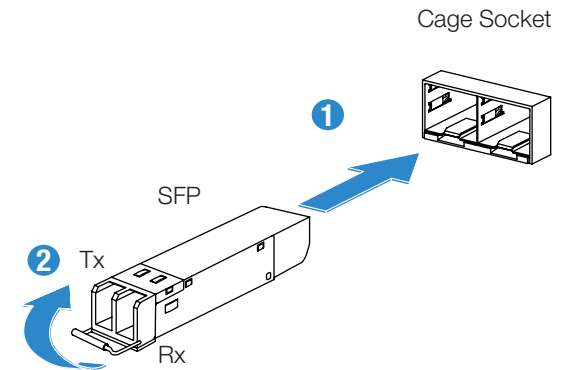


3. Plug the provided power cables into the rear of the unit and then into a grounded electrical outlet or separate power source

SFP Transceivers

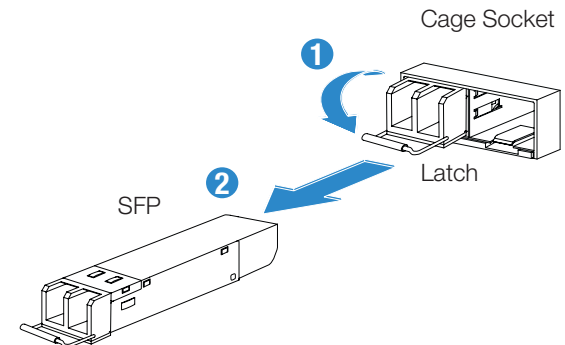
To install the SFP transceivers:

1. Slide the SFP into the cage socket until it clicks into place
2. Lift the latch to lock the SFP



To remove the SFP transceivers:

1. Lower the latch to unlock the SFP
2. Carefully pull the SFP out of the cage socket



Setup Options

Set up your device locally using the GUI or CLI. Choose an option to complete your setup, then configure your device.



Local Setup

A GUI

An [easy-to-use GUI](#), compatible with most web browsers. To minimize scrolling, the screen resolution should be at least 1280 x 1024 pixels.



Local Setup

B Command Line Interface (CLI)

An alternate configuration tool from the web-based manager that uses a [terminal emulation](#) application to [type commands](#) or upload batches of commands from a text file or [configuration script](#).



FortiLink Setup

C FortiLink Management

FortiGate units can [remotely manage](#) FortiSwitch units, known as using a [FortiSwitch in FortiLink mode](#). See the FortiOS Admin guide on [docs.fortinet.com](#) for detailed information.

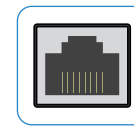


FortiCloud Setup

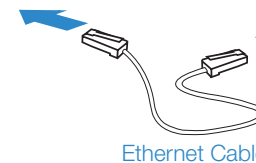
D FortiCloud Management

FortiSwitch Cloud manages FortiSwitch devices in [standalone mode](#). It allows you to provision, monitor, troubleshoot, and optimize your standalone FortiSwitch deployment through an [easy](#) to understand [user interface](#).

A GUI



Port 1



Ethernet Cable



Management Computer

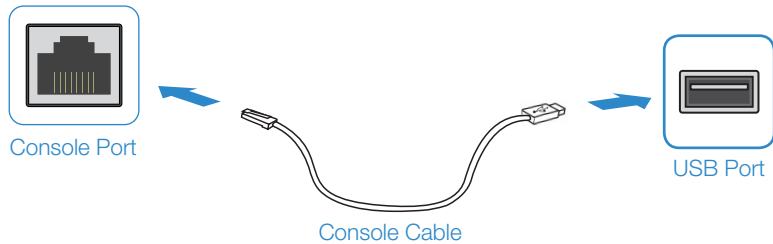
1. Connect [port 1](#) to the [Management Computer](#) using the supplied [Ethernet cable](#)
2. Enable [DHCP](#) or set the Management Computer's [IP](#) and [subnet](#) to:

Static IP Address: [192.168.1.1](#)
Subnet Mask: [255.255.255.0](#)

3. Visit [192.168.1.99](#) in a web browser
4. [Log in](#) with the username [admin](#) and [no password](#)
5. You can now configure your FortiSwitch

Note: After you log in for the first time, you will be prompted to set a new password

B CLI



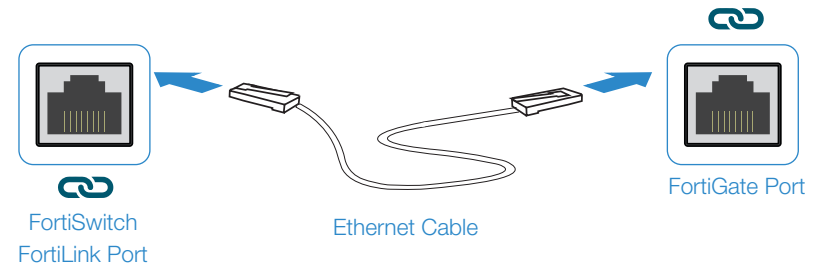
1. Connect the **Console Port** with a **Console Cable** to the **Serial Port** on the **Management Computer**
2. Start a **terminal program** on the **Management Computer** and select an available **COM Port** using the following default settings:

Baud rate: 115200
Data bits: 8
Parity: None
Stop bits: 1
Flow control: None

3. Log in using username **admin** and **no password**
4. You can now configure your FortiSwitch

Note: After you log in for the first time, you will be prompted to set a new password

C FortiLink



1. Connect a **FortiSwitch FortiLink Port** directly using an Ethernet Cable to a **FortiGate FortiLink Port** or any FortiGate Port that is not an HA port
2. Login to the FortiGate and go to the **WiFi & Switch Controller --> FortiLink Interface**
3. **Add a FortiGate Port** in the FortiLink interface and choose **Automatically authorize devices**
4. When the **FortiSwitch is online** in the **WiFi & Switch Controller --> Managed FortiSwitch** section, you can now manage your FortiSwitch

D Cloud Management

(Connect a port to the Internet)

1. Visit support.fortinet.com to register your device and cloud management license
2. Sign in at <https://fortilan.forticloud.com> to manage your Inventory List

Resources

Refer to the following resources to continue your FortiSwitch setup.

Fortinet Customer Service & Support

Create a support account, register and manage your products, download updates, firmware images and release notes, and create technical support tickets.

<https://support.fortinet.com>

Fortinet Document Library

Up-to-date versions of Fortinet publications for the entire family of Fortinet products.

<http://docs.fortinet.com>

Training Services

Course descriptions, availability, schedules, and location of training programs in your area.

<http://www.fortinet.com/support/training.html>

Technical Discussion Forums

Communicate with other customers and Fortinet partners about Fortinet products, services, and configuration issues.

<https://support.fortinet.com/forum>

FortiGuard Threat Research and Response

Up-to-date information on vulnerabilities and threats, includes a virus scanner, IP signature look-up, and web filtering tools.

<http://www.fortiguards.com>

Cautions and Warnings

Environmental specifications

Ambient operating temperature: 0°C to 45°C

Rack Mount Instructions - The following or similar rack-mount instructions are included with the installation instructions:

Instructions de montage en rack - Les instructions de montage en rack suivantes ou similaires sont incluses avec les instructions d'installation:

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.

Température ambiante élevée - S'il est installé dans un rack fermé ou à unités multiples, la température ambiante de fonctionnement de l'environnement du rack peut être supérieure à la température ambiante de la pièce. Par conséquent, il est important d'installer le matériel dans un environnement respectant la température ambiante maximale (T_{ma}) stipulée par le fabricant.

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.

Ventilation réduite - Installation de l'équipement dans un rack doit être telle que la quantité de flux d'air nécessaire au bon fonctionnement de l'équipement n'est pas compromise.

Mechanical Loading - Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.
Chargement Mécanique - Montage de l'équipement dans le rack doit être telle qu'une situation dangereuse n'est pas liée à un chargement mécanique inégal.

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.

Surtenion - Il convient de prendre l'ensemble des précautions nécessaires lors du branchement de l'équipement au circuit d'alimentation et être particulièrement attentif aux effets de la suralimentation sur le dispositif assurant une protection contre les courts-circuits et le câblage. Ainsi, il est recommandé de tenir compte du numéro d'identification de l'équipement.

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 (e.g. use of power strips).

Fiabilité de la mise à la terre - Fiabilité de la mise à la terre de l'équipement monté en rack doit être maintenue. Une attention particulière devrait être accordée aux connexions d'alimentation autres que les connexions directes au circuit de dérivation (par exemple de l'utilisation de bandes de puissance).

Refer to specific Product Model Data Sheet for Environmental Specifications (Operating Temperature, Storage Temperature, Humidity, and Altitude)

Référez à la Fiche Technique de ce produit pour les caractéristiques environnementales (Température de fonctionnement, température de stockage, humidité et l'altitude).

Safety

Warning: Equipment intended for installation in Restricted Access Location.
Avertissement: Le matériel est conçu pour être installé dans un endroit où l'accès est restreint.

Skilled person must install the equipment.
L'équipement doit être installé par une personne qualifiée

Caution: This equipment is to be used in a Network Environment 0 per IEC/TR 62101. This product is connected only to PoE networks without routing to the outside plant.

Attention: Ce matériel doit être utilisé dans un Environnement Réseau 0 par IEC/TR 62101. Ce produit est uniquement connecté aux réseaux PoE sans installation externe de routage.

CAUTION: Shock Hazard. Disconnect all power sources.
ATTENTION: Risque d'électrocution. Débranchez toutes les sources d'alimentation.

Regulatory Notices

Federal Communication Commission (FCC) – USA

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

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 generates, uses, and can radiate radio frequency energy, and if it is not installed and used in accordance with the instruction manual, it may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

WARNING: Any changes or modifications to this product not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Industry Canada Equipment Standard for Digital Equipment (ICES) – Canada

CAN ICES-003 (A) / NMB-003 (A)

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Cet appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

European Conformity (CE) - EU

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.



Voluntary Control Council for Interference (VCCI) – Japan

この装置は、クラスA機器です。この装置を住宅環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

VCCI-A

Product Safety Electrical Appliance & Material (PSE) – Japan

日本では電気用品安全法 (PSE) の規定により、同梱している電源コードは本製品の専用電源コードとして利用し、他の製品に使用しないでください。

Bureau of Standards Metrology and Inspection (BSMI) – Taiwan

The presence conditions of the restricted substance (BSMI RoHS table) are available at the link below:
限用物質含有情況表 (RoHS Table) 請到以下 網址下載:
<https://www.fortinet.com/bsmi>

For Class A - intended for industrial use such as data centers etc

此為甲類資訊技術設備，於居住環境中使用時，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。

英屬蓋曼群島商防特網股份有限公司台灣分公司
地址：台北市內湖區行愛路176號2樓
電話：(02) 27961666

China

此为A级产品，在生活环境中，该产品可能会造成无线电干扰。这种情况下，可能需要用户对其采取切实可行的措施。

For Models FS-448E and FS-448E-FPOE
Korea Certification (KC) – Korea

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Agência Nacional de Telecomunicações (ANATEL) – Brazil

Este produto não é apropriado para uso em ambientes domésticos, pois poderá causar interferências eletromagnéticas que obrigam o usuário a tomar medidas necessárias para minimizar estas interferências. Para maiores informações, consulte o site da ANATEL <http://www.anatel.gov.br>

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[Fortinet.com](https://www.fortinet.com)