

# QuickStart Guide

FortiGate Rugged 60F

# **Product Registration**

Thank you for purchasing a Fortinet Device. To access:

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

Please register your Fortinet Device:

Vous devez enregistrer le produir:

Debe registrar el producto:

登録のお願い:

请马上注册:

http://support.fortinet.com



June 25, 2020

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# Package Contents - FGR-60F

# FORTIGET. FortiGate Rugged 60F B PYPASS S STATUS HA POWER CONSOLE 1 2 3 4 BYPASS WAN1 WAN2 SFP1 SFP2

FortiGate Rugged 60F



QuickStart Guide



**Ethernet Cable** 



4x Extended Rubber Feet



DC Power Connector



DIN Rail Bracket and Screws

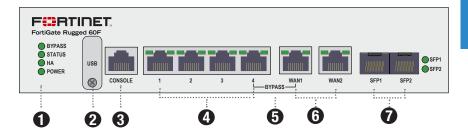


Wall Mount Bracket



Wall Mount & Bracket Scews (1 set of Bracket Screws for the DIN or Wall Bracket)

# Front Panel - FGR-60F



# BYPASS

- Green: PHY mode
- Red: Bypass mode

# HA

- Green: HA enabled (normal)
- Amber: HA enabled (failover)
- Off: HA disabled

# STATUS

- Green: Operating normally
- Flashing Green: Device startup
- Amber: Device error

# **POWER**

- Green: Device is on
- Off: Device is off
- 2 USB (USB A) USB 2.0 server port
- **3** Console (RJ-45) CLI management computer connection
- 4 Ethernet Ports 1 to 4 (RJ-45) 1 Gbps Ethernet connections
- **5** LAN/WAN Bypass (RJ-45) 1 Gbps Ethernet connections
- **6** Shared WAN1 & WAN2 Ports (RJ-45) 1 Gbps Ethernet connections NOTE: WAN1/WAN2 and SFP1/SFP2 are shared interfaces
- 7 Shared SFP1 & SPF2 Ports (SFP) 1 Gbps Ethernet connections

# **Ethernet LED Indicators**



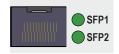
# Ethernet & WAN Speed

- Green: Connected at 1000Mbps
- Amber: Connected at 100Mbps
- Off: 10Mbpps or no link established

# Ethernet & WAN Link/Act

- Green: Connected
- Flashing Green: Data activity
- Off: No link established

# **SFP LED Indicators**

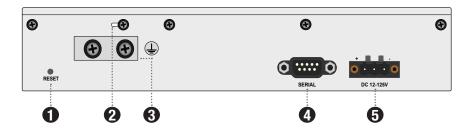


# SFP Speed

- Green: Connected at 1000Mbps
- Off: No link established

# SFP Activity

# Rear Panel - FGR-60F



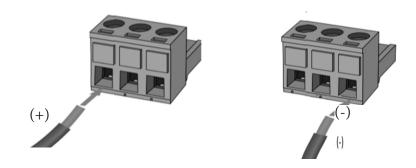
- 1 RESET button
- 2 Ground Screw (#12 AWG) optional ground connection
- 3 Earth Ground (Lug Plate) ground connection
- 4 SERIAL Port (DB9) RS232 connection
- **5** Power Connector (3 Pin Male) +12V to +125V DC, 2A Max

# Installation

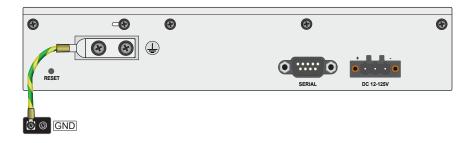
# **Power Connections**

# Warning:

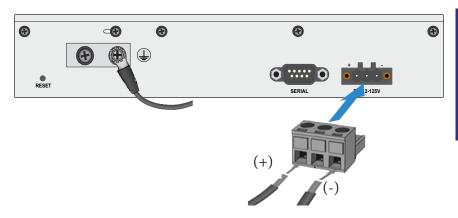
- The input voltage must be between +12V and +125V DC Connecting the positive terminals to ground (0V) and negative terminals to negative voltages (-12V to -125V) is not supported and will cause damage
- Connect earth ground using the lug plate or grounding screw
- Calculate the maximum wire length according to your wire gauge
- DC cables must be a minimum of 12 AWG
- 1. Connect the positive terminal (+) of the device terminal block to +12V to +125V DC power source, then connect the negative (-) of the terminal block to the 0V/GROUND



2. Connect the earth ground terminal of the device to chassis ground or earth ground

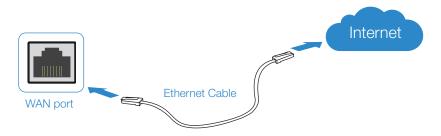


3. Insert the wired terminal block into the power connection on the device



# **Internet Connections**

1. Connect the WAN port to an Internet connection using the provided Ethernet cable

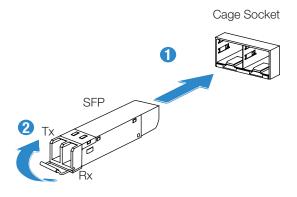


11

# **SFP Ports**

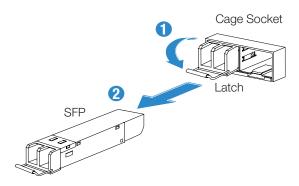
# To install the SFP transceivers

- 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



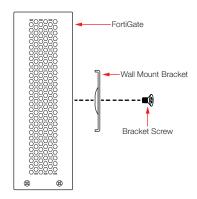
For additional info on SFP's, visit:

support.fortinet.com

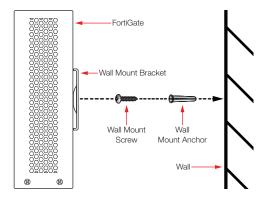
# **Wall Mount Option**

To attach the unit to a wall:

- 1. Mark the location on the wall where the anchors will be located
- 2. Drill holes into the wall, then insert the provided anchors into the holes
- 3. Screw the two screws provided into the two anchors, leaving enough of the screw exposed to ensure that the unit can be mounted
- 4. Connect the wall mount bracket to the bottom of the device using the provided bracket screws



5. Mount the device onto the screws and ensure that it is mounted securely

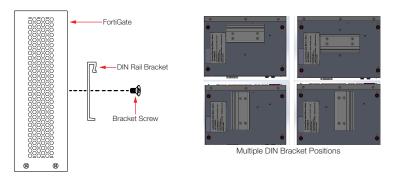


**WARNING:** To ensure adequate air flow, the minimum radiating distance between mounted devices is 100mm(3.9in)

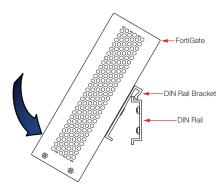
# **DIN Rail Option**

The FortiRugged-60F supports DIN rails with 35mm(1.4in) x 15mm(0.6in) and 35mm(1.4in) x 7.5mm(0.3in) sizes. The minimum radiating distance between DIN rail devices is 100mm(3.9in).

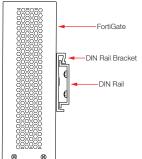
1. Connect the DIN rail bracket to the bottom of the device using the provided bracket screws. Note there are 4 available bracket positions.



2. Position the bottom of the device directly in front of the DIN rail, ensuring that the top of the DIN rail bracket hooks over the top of the DIN rail



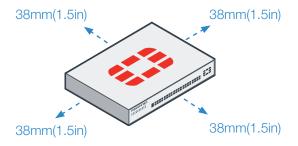
3. Rotate the device until the bottom of the DIN rail bracket sits against the bottom of the DIN rail



# Desktop / Extended Feet Option

Your device is already equipped with feet for a flat surface. You can optionally install the extended grey feet for more surface clearance.

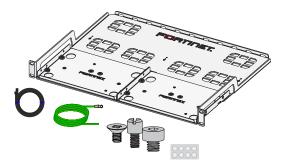
- 1. Place the unit on a flat, clean and stable surface
- 2. Ensure there is at least 38mm(1.5in) of clearance for adequate airflow



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

# Rack/Rail Mount Option

Fortinet carries a variety of standard and custom rack and rail mount accessories, including a rack mount tray kit, SP-RACKTRAY-02.



SP-RACKTRAY-02

**Ordering:** Contact Fortinet to order brackets, rail slide kits, rack mount kits and other accessories, such as a console cable

# **Setup Options**

Set up your device locally or on the cloud. Choose one of the following options to complete your setup, then configure your device.





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.



# **B** FortiExplorer

FortiExplorer for iOS is a user-friendly iOS application that helps you configure, manage, and monitor appliances. FortiExplorer rapidly provisions, deploys, and monitors Security Fabric components such as FortiGate, FortiWiFi, and FortiAP devices.





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.

Requires a console cable (available for purchase).

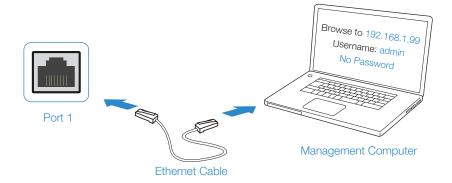
17



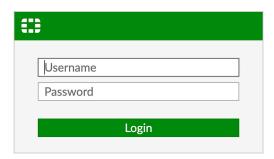
- 1. Connect port 1 to the Management Computer using the supplied Ethernet cable
- 2. Enable DHCP or set the Management Computer's IP and subnet to:

**Static IP Address:** 192.168.1.1 **Subnet Mask:** 255.255.255.0

3. Visit 192.168.1.99 in a web browser



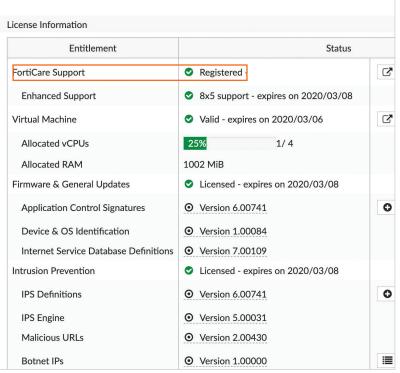
4. Log in with username admin and no password



5. When prompted to register, enter your Fortinet credentials



The FortiCare Support Status in the FortiOS License Information widget will change to Registered

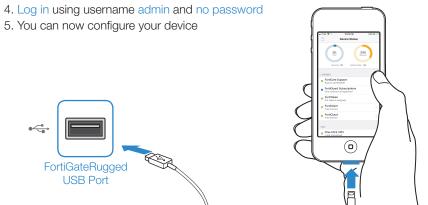


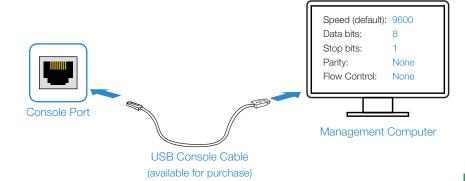
19



C CLI

- 1. Download and launch the FortiExplorer iOS App
- 2. Connect your Apple Lightning to USB cable to the FortiGateRugged USB port
- 3. Tap your device when it appears in FortiExplorer

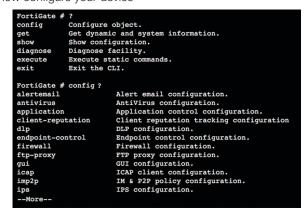




- 1. Connect the Console Port with a console cable to the Management Computer
- 2. Start a terminal program on the Management Computer and select an available COM Port using the following default settings:

Baud rate: 9600
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 device



**Note:** Type ? for a list of commands. Type a command with ?, such as config ? to list the options. For advanced options, visit support.fortinet.com

# **BIOS Options**

The FortiRugged 60F provides an option in the BIOS menu to set the CPU speed from high performance mode (default) to low power mode. See the admin guide on docs.fortinet.com for more information.

1. During OS bootup, press any key to enter the BIOS menu

```
Please wait for OS to boot, or press any key to display configuration menu..
```

2. Type I for the System Information menu

```
[C]: Configure TFTP parameters.
[R]: Review TFTP parameters.
[T]: Initiate TFTP firmware transfer.
[F]: Format boot device.
[I]: System information.
[B]: Boot with backup firmware and set as default.
[Q]: Quit menu and continue to boot.
[H]: Display this list of options.
Enter C,R,T,F,I,B,Q,or H:
```

3. Type F for the CPU frequency menu

```
[S]: Set serial port baudrate.
[F]: Set CPU freq.
[R]: Set restricted mode.
[T]: Set menu timeout.
[U]: Set security level.
[I]: Display system information.
[E]: Reset system configuration.
[Q]: Quit this menu.
[H]: Display this list of options.
Enter S,F,R,T,U,I,E,Q,or H:
```

4. Type 0 for Low power mode or 1 for High performance mode

```
0: Low power mode
1: High performance mode
Enter CPU freq mode selection [High performance mode]:
```

5. Type Q to exit the BIOS

### **Cautions and Warnings**

### **Environmental specifications**

Ambient operating temperature: -40°C to 75°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 (Tma) 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 (Tma) 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'équipment dans un rack doit être telle que la quantité de fluy d'air nécessaire au bon fonctionnement de l'équinement n'est nas 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 lié 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.

Surtension - 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

Reliable Farthing - 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 Bestricted Access Location nent: Le matériel est conçu pour être installé dans un endroit où l'accès est

A skilled person must install the equipment

L'équipement doit être installé par une personne qualifiée.

Warning: A readily accessible disconnect device shall be incorporated in the building

Avertissement: Un dispositif de déconnexion facilement accessible doit être incorporé dans l'installation électrique du bâtiment.

Warning: A UL Listed external disconnect device, i.e. circuit breaker or other, with over current protection suitable for local code (rated 15A recommended) shall be installed with this equipment.

Avertissement: Un dispositif de déconnection externe homologué UL, exemple d'un disjoncteur ou autre, avec des protections de surintensité appropriées (nominal 15A recommandé) à l'installation de ce matériel.

Battery - Risk of explosion if the battery is replaced by an incorrect type. Do not dispose of batteries in a fire. They may explode. Dispose of used batteries according to your local egulations, IMPORTANT: Switzerland: Annex 4.10 of SR814.013 applies to batte

Batterie - Risque d'explosion si la batterie est remplacée par un type incorrect. Ne ietez pas les batteries au feu. Ils peuvent exploser, detez les piles usagées conformément aux réglementations locales. IMPORTANT: Suisse: l'annexe 4.10 de SR814.013 s'appliquent

太雷油加里車換不正確會有標件的份險 請依製造商說明書處理用過之電池

# CAUTION

There is a danger of explosion if a battery is incorrect replaced. Replace only with the same or equivalent type

Dispose batteries of according to the manufacturer's instructions.

Disposing a battery into fire, a hot oven, mechanically crushing, or cutting it can result in

Leaving a battery in an extremely hot environment can result in leakage of flammable liquid. gas, or an explosion.

If a battery is subjected to extremely low air pressure, it may result in leakage of flammable liquid, gas, or an explosion.

Lithium-Ratterie Achtung: Evolosionsgefahr hei fehlerhafter Ratteriewechsel. Ersetzen Sie nur den gleichen oder gleichwertigen Typ. Batterien gemäß den Anweisungen des Herstellers entsorgen.

Beseitigung einer BATTERIE in Feuer oder einen heißen Ofen oder mechanisches der Schneiden einer RATTERIE die zu einer EXPLOSION führen kann

Verlassen einer BATTERIE in einer extrem hohen Umgebungstemperatur, die zu einer EXPLOSION oder zum Austreten von brennbarer Flüssigkeit oder Gas führen kann

Eine BATTERIE, die einem extrem niedrigen Luftdruck ausgesetzt ist, der zu einer EXPLOSION oder zum Austreten von brennbarer Flüssigkeit oder Gas führen kann.

Grounding — To prevent damage to your equipment, connections that enter from outside the building should pass through a lightning / surge protector, and be properly grounded. Use an electrostatic discharge workstation (ESD) and/or wear an anti-static wrist strap while you work. In addition to the grounding terminal of the plug, on the back panel, there is another, separate terminal for earthing.

Mise à la terre - Pour éviter d'endommager votre matériel, assurez-vous que les branchements qui entrent à partir de l'extérieur du bâtiment passent par un parafoudre / parasurtenseur et sont correctement mis à la terre. Utilisez un poste de travail de décharge plectrostatique (ESD) et / ou portez un bracelet anti-statique lorsque vous travaillez. Ce sède une borne de mise à la terre qui est prévu à l'arrière du produit, à ceci s'ajoute la mise à la terre de la prise.

This product has a separate protective earthing terminal provided on the back of the product in addition to the grounding terminal of the attachment plug. This separate protective earthing terminal must be permanently connected to earth with a green with ow stripe conductor minimum size # 14 AWG and the connection is to be installed by a qualified service personnel.

Ce produit a une borne de mise à la terre séparé sur le dos de l'appareil, en plus de la borne de mise à la terre de la fiche de raccordement. Cette borne de mise à la terre séparée doit être connecté en permanence à la terre avec un conducteur vert avec la taille bande jaune de minimum # 14 AWG et la connexion doit être installé par un personnel

## **Regulatory Notices**

### Federal Communication Commission (FCC) - USA

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

(1) this device may not cause harmful interference, and

(2) this device must accept any interference received; including interference that may cause

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 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-3 (A) / NMB-3 (A)

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regula-tions 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 édicte 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。

# 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

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:台北市内湖區行勞路176號2樓

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26

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