

QuickStart Guide

FortiGate Rugged 60F Series

FGR-60F and FGR-60F-3G4G

Before you begin

Please register your device to access Fortiguard updates, cloud management, firmware upgrades, technical support, and warranty coverage.

<https://support.fortinet.com>

For technical documentation such as administration guides, reference manuals, and release notes, please visit:

<https://docs.fortinet.com>

Thank you for choosing Fortinet.

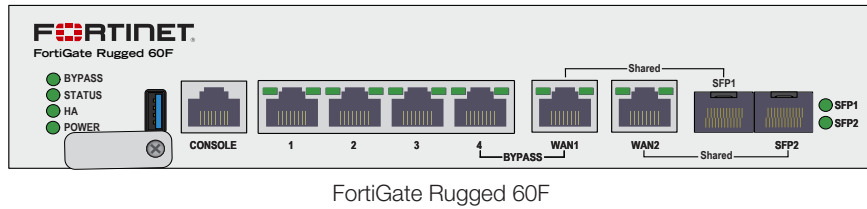


January 29, 2025

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Box Includes- FGR-60F



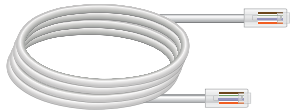
FortiGate Rugged 60F



1x QuickStart Guide



2x Ferrite Cores



1x CAT5e Ethernet Cable



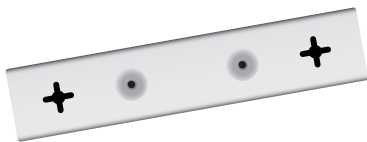
4x Extended Rubber Feet
(attached to device)



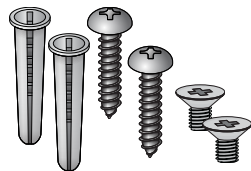
2x DC Power Connectors



1x DIN Rail Bracket

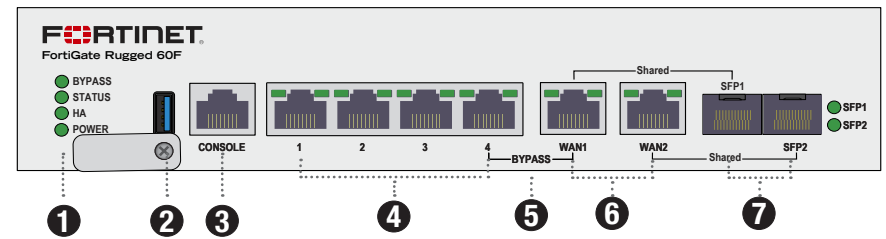


1x Wall Mount Bracket



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

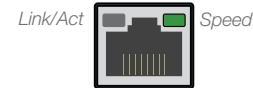
Front - FGR-60F



- 1 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 & SFP2 Ports (SFP) 1 Gbps Ethernet connections**

Ethernet LED Indicators



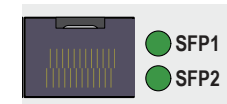
Ethernet & WAN Speed

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

Ethernet & WAN Link/Act

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

SFP LED Indicators



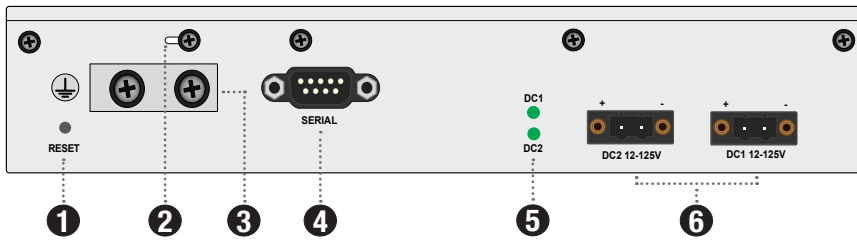
SFP Speed

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

SFP Activity

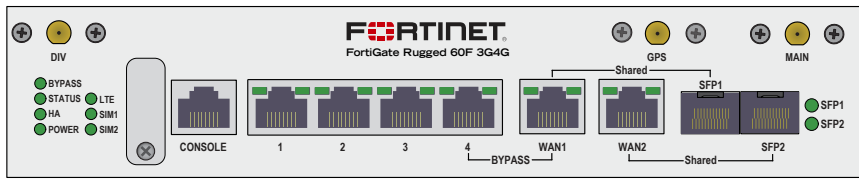
- Flashing Green: 1000Mbps activity

Rear - FGR-60F



- ➊ RESET button
- ➋ Ground Screw (#12 AWG) optional ground connection
- ➌ Earth Ground (Lug Plate) ground connection
- ➍ SERIAL Port (DB9) RS232 connection
- ➎ Power Supply Indicators (DC1 & DC2) By default, Alarm is enabled in the OS*
 - Green: Power supply is on
 - DC1 ● Red: Alarm is on*; power supply not providing power or not connected
 - Off: Power supply is off
 - Green: Power supply is on
 - DC2 ● Red: Alarm is on*; power supply not providing power or not connected
 - Off: Power supply is off
- ➏ Power Terminals (2 Pin Male) Redundant failover, 12V to 125V DC, 2A Max, see pg12

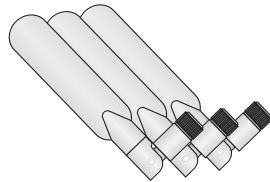
Box Includes - FGR-60F-3G4G



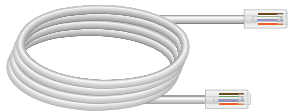
FortiGate Rugged 60F 3G4G



1x QuickStart Guide



3x Antennae



1x CAT5e Ethernet Cable



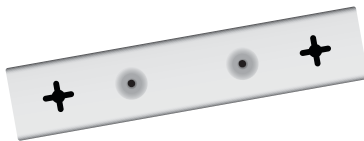
4x Extended Rubber Feet
(attached to device)



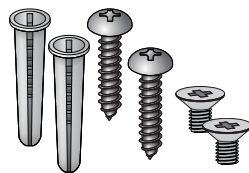
2x DC Power Connectors,
2x Ferrite Cores



1x DIN Rail Bracket

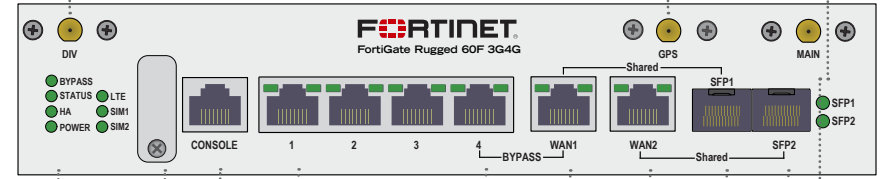


1x Wall Mount Bracket



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

Front - FGR-60F-3G4G

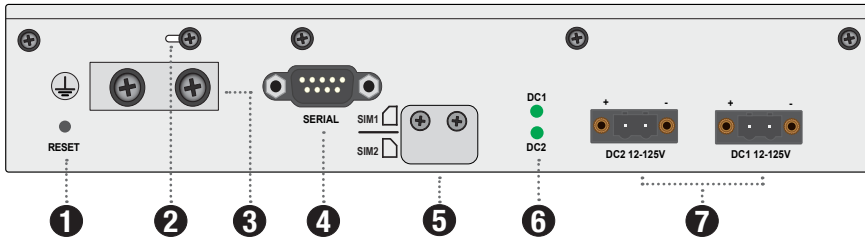


- 1** **BYPASS**
 - **Green:** PHY mode
 - **Red:** Bypass mode
- 2** **USB (USB A)** USB 2.0 server port
- 3** **Console (RJ-45)** CLI management computer connection
- 4** **Ethernet Ports 1 to 4 (RJ-45)** 1 Gbps Ethernet connections
- 5** **LAN/WAN Bypass (RJ-45)** 1 Gbps Ethernet connections
- 6**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

<ul style="list-style-type: none"> <i>Ethernet & WAN Speed</i> ● Green: Connected at 1000Mbps ● Amber: Connected at 100Mbps ● Off: 10Mbps or no link established <i>Ethernet & WAN Link/Act</i> ● Green: Connected ● Flashing Green: Data activity ● Off: No link established 	<ul style="list-style-type: none"> <i>SFP Speed</i> ● Green: Connected at 1000Mbps ● Off: No link established <i>SFP Activity</i> ● Flashing Green: 100Mbps activity
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- 8** **Antenna Connection (3x SMA)** WWAN and GPS antenna connections

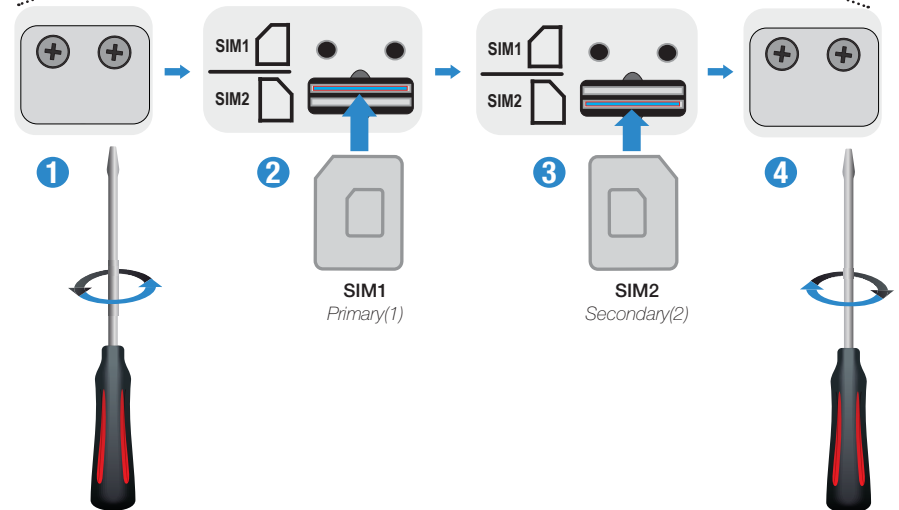
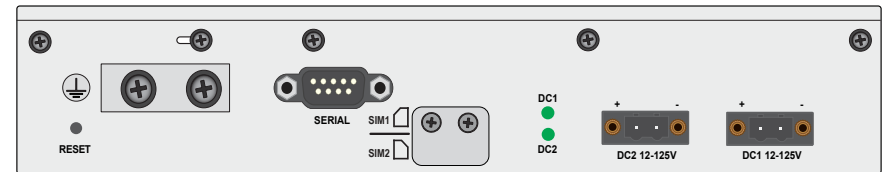
- LTE**
 - **Green:** 4G service is on
 - **Amber:** 3G service is on
 - **Off:** 3G/4G service is off
- SIM1**
 - **Green:** SIM1 is detected
 - **Off:** SIM1 is not detected
- SIM2**
 - **Green:** SIM2 is detected
 - **Off:** SIM2 is not detected
- HA**
 - **Green:** HA enabled (normal)
 - **Amber:** HA enabled (failover)
 - **Off:** HA disabled
- POWER**
 - **Green:** Device is on
 - **Off:** Device is off

Rear - FGR-60F-3G4G



- ➊ **RESET button**
- ➋ **Ground Screw (#12 AWG) optional ground connection**
- ➌ **Earth Ground (Lug Plate) ground connection**
- ➍ **SERIAL Port (DB9) RS232 connection**
- ➎ **SIM Slots (2x Micro SIM) SIM card slots**
- ➏ **Power Supply Indicators (DC1 & DC2) By default, Alarm is enabled in the OS***
 - **Green:** Power supply is on
 - DC1 ● **Red:** Alarm is on*; power supply not providing power or not connected
 - **Off:** Power supply is off
 - **Green:** Power supply is on
 - DC2 ● **Red:** Alarm is on*; power supply not providing power or not connected
 - **Off:** Power supply is off
- ➐ **Power Terminals (2 Pin Male) Redundant failover, 12V to 125V DC, 2A Max, see pg12**

SIM Slots - FGR-60F-3G4G



NOTE: Industrial SIM cards recommended for extreme temperature environments. SIM1 is primary, SIM2 is secondary; SIM type is 3FF - Micro SIM. Refer to the Admin Guide for cellular wireless configuration at <https://docs.fortinet.com>

FGR-60F-3G4G

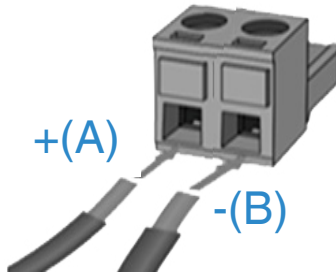
Installation

Power Connections

Warnings

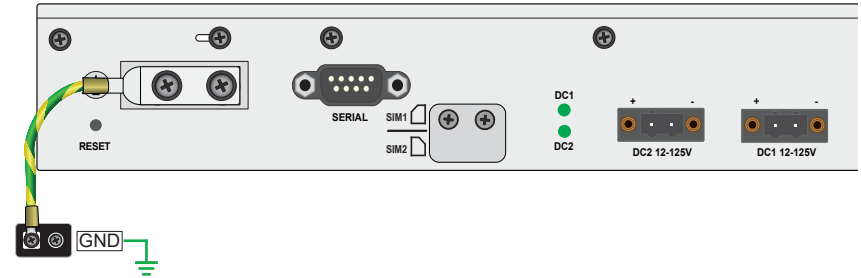
- The DC input supports negative ground (+12V to +125V DC) and positive ground (-12V to -125V DC) power sources
- Terminal +(A) is the high voltage potential pin and Terminal -(B) is the lower voltage potential pin
- Do not connect +(A) to a lower voltage potential than -(B)
- The voltage between +(A) and -(B) must be +12V to +125V DC
- Consult a professional electrician to install the device and determine a suitable wire gauge and length
- The DC terminal block wire gauge maximum is 12 AWG; the minimum is 30 AWG
- Connect earth ground using the lug plate or grounding screw
- Install the supplied ferrite cores, see pg14

1. Connect +(A) of the device terminal block to the DC power source, then connect the negative -(B) of the terminal block

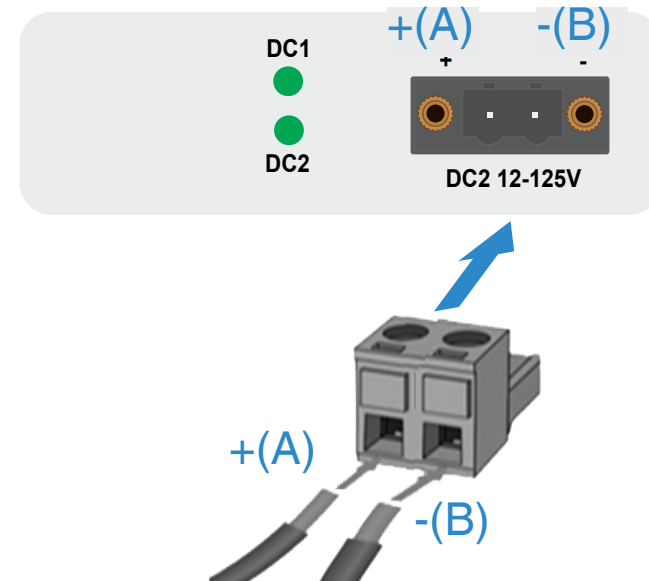


DC Input Power	+(A) Terminal	-(B) Terminal
Negative Ground	+12V to +125V DC	Ground
Positive Ground	Ground	-12V to -125V DC

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



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

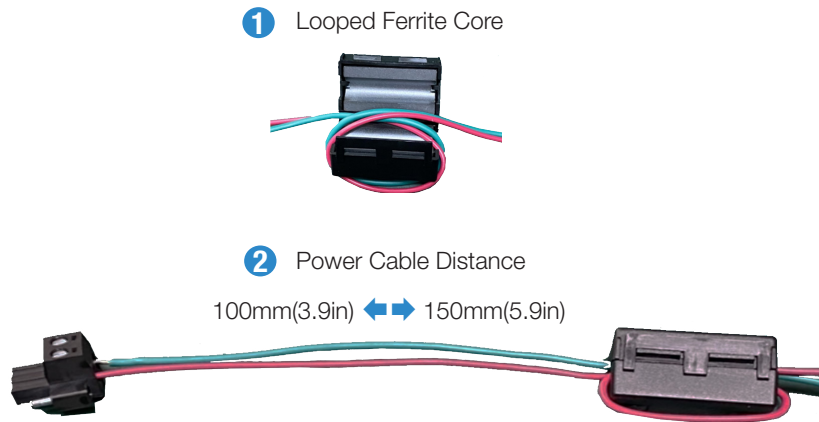


OPTIONAL: The FGR-60F Series have optional dual DC inputs for failover redundancy. If a DC input fails, the second input will supply power.

Ferrite Core Installation

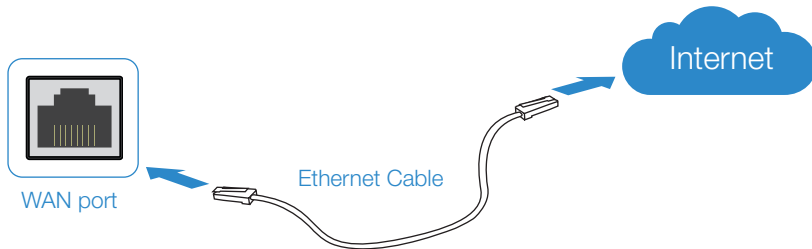
To install the supplied ferrite cores:

1. Open a ferrite core and loop the power cables around
2. Ensure there is 100mm(3.9in) to 150mm(5.9in) distance between the ferrite core and power connector, then close the ferrite core



Internet Connection

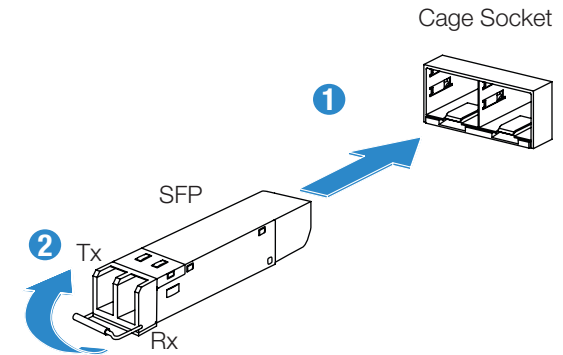
1. Connect the WAN port to an Internet connection using the provided Ethernet cable



SFP Ports

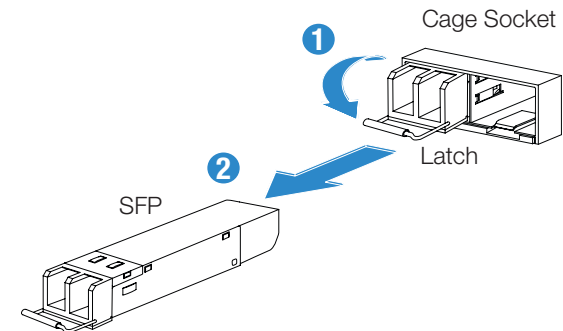
To install the SFP transceivers:

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



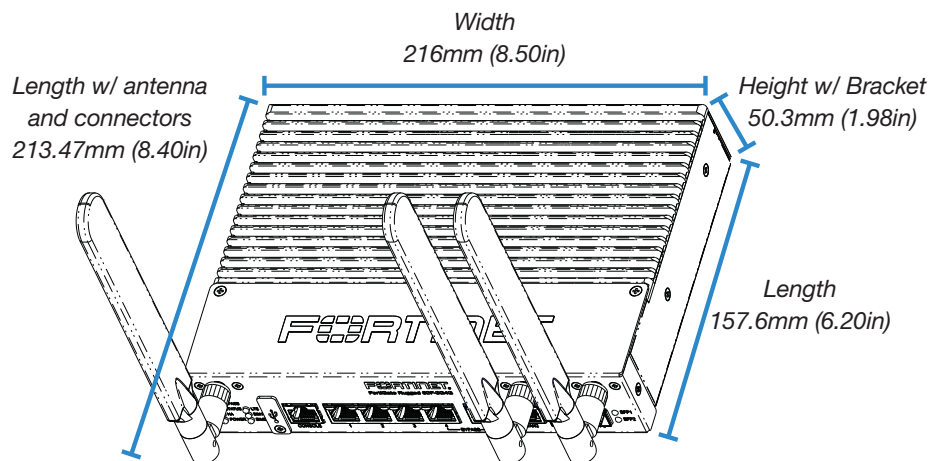
To remove the SFP transceivers:

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

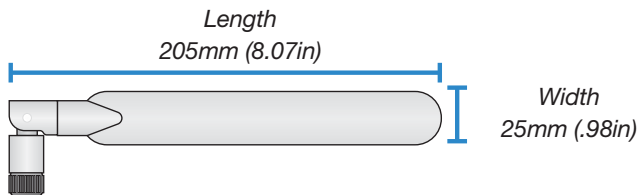


Dimensions

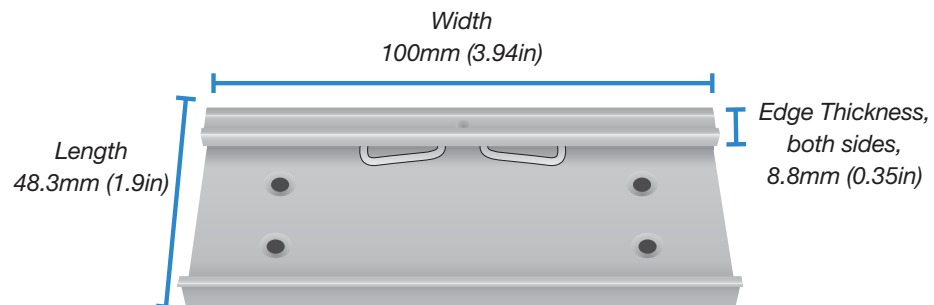
The FGR-60F and FGR-60F-3G4G share the same chassis dimensions.



For the FGR-60F-3G4G, the antenna dimensions are shown below.



The FGR-60F and FGR-60F-3G4G share the same DIN bracket.

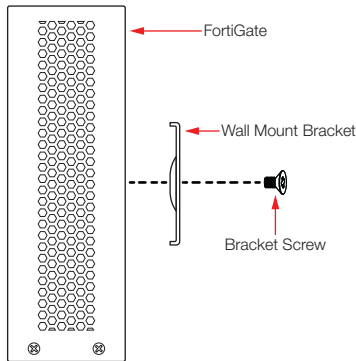


NOTE: The DIN plate thickness is 2.4mm(0.09in)

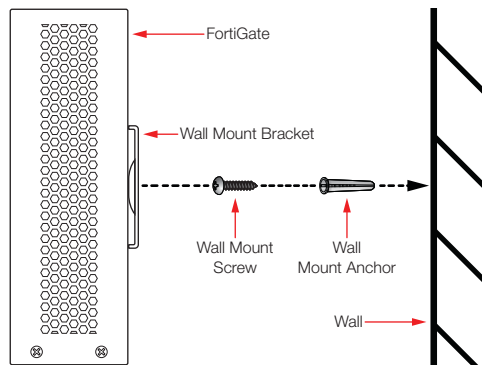
Wall Mount Option

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. Fasten 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

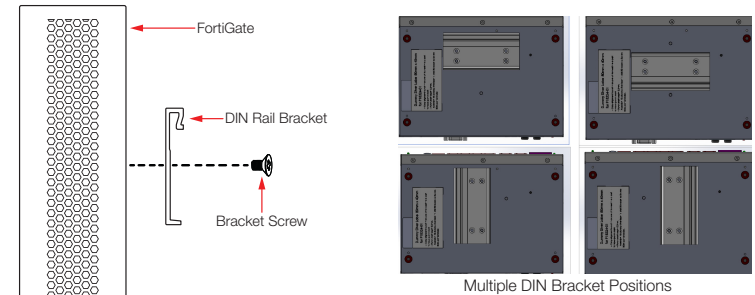


WARNING: To ensure adequate air flow, the minimum radiating distance between mounted devices is 100mm(3.9in)

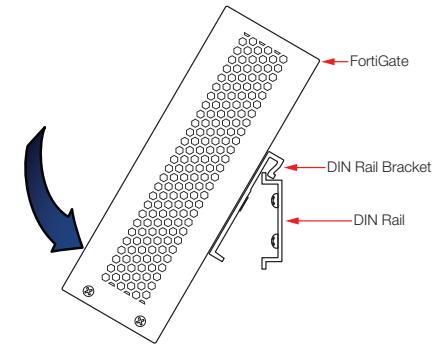
DIN Rail Option

The FGR-60F Series 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).

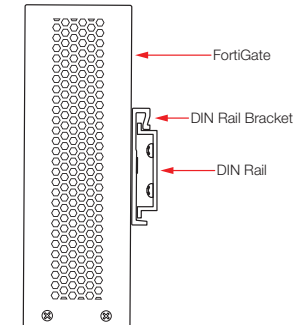
1. Connect the DIN rail bracket to the bottom of the device using the provided bracket screws. Note there are 4 available bracket positions.



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



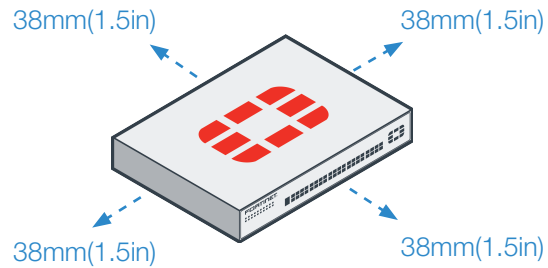
3. Rotate the device until the bottom of the DIN rail bracket sits against the bottom of the DIN rail



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.

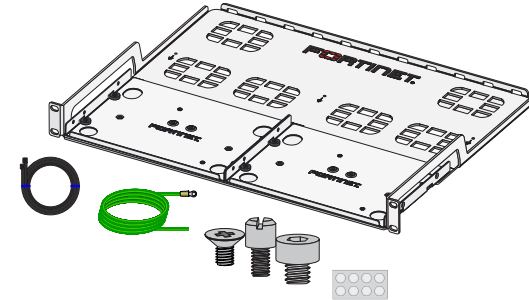
1. Place the unit on a flat, clean and stable surface
2. Ensure there is at least 38mm(1.5in) of clearance for adequate airflow



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

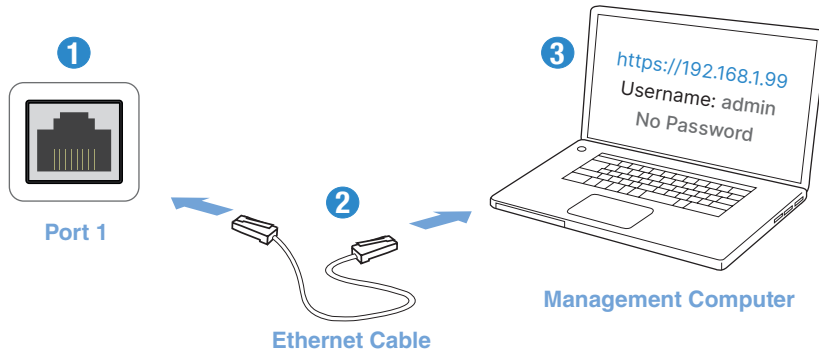
NOTE: FGR-60F Series is DNV GL Type Approved (IEC 60945:2002 4th Ed.), tested with a rackmount.

Setup Options

For detailed configuration instructions using the GUI, CLI, FortiGate Cloud, and FortiExplorer, see the Admin Guide:

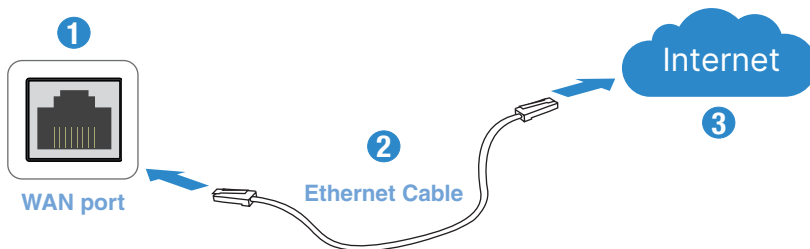
<https://docs.fortinet.com>

GUI



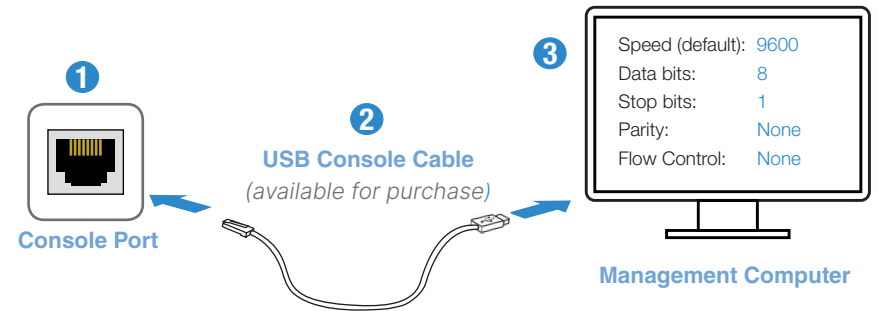
Note: For static IP configuration, use 192.168.1.1 with subnet mask 255.255.255.0

FortiGate Cloud



Note: Browse to forticloud.com and follow the on-screen instructions

CLI



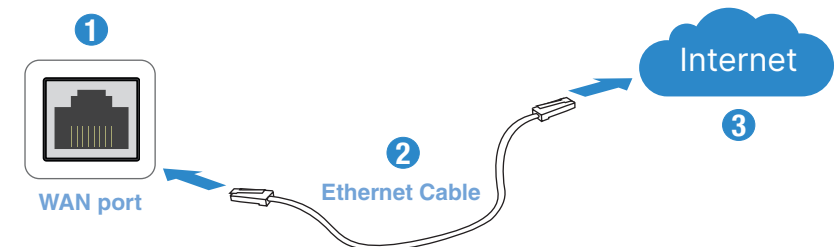
Note: For a detailed CLI guide, go to docs.fortinet.com

FortiExplorer

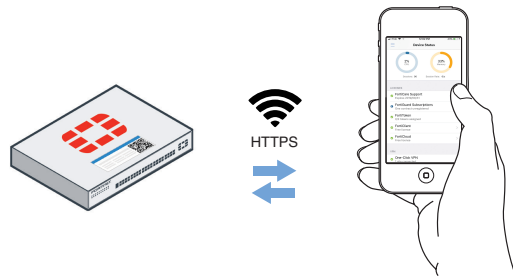


Scan the QR Code or visit <https://links.fortinet.com/fortiexplorer/downloads>

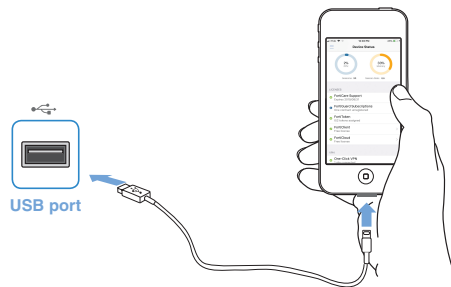
 FortiGate Cloud Key Setup



Note: Launch FortiExplorer and follow the on-screen instructions



Important: For wireless setup, ensure FortiExplorer is on the same wireless network as the Fortinet appliance; the default host and password are shown on your Fortinet device sticker



Note: For USB configuration, follow the on-screen instructions of your mobile device for USB authorization settings

BIOS Options

The FGR-60F Series 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

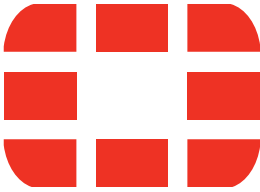
```
[S]: Set serial port baudrate.
[F]: Set CPU freq.
[R]: Set restricted mode.
[T]: Set menu timeout.
[U]: Set security level.
[I]: Display system information.
[E]: Reset system configuration.
[Q]: Quit this menu.
[H]: Display this list of options.
```

```
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



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