

# 快速入門指南

FortiGate\FortiWiFi 80F 系列

# 在你開始之前

註冊您的設備以訪問 FortiGuard 更新、雲管理、韌體升級、技術支持和保修範圍。

<http://support.fortinet.com>

## FortiExplorer App

從您的移動設備快速配置、部署和監控 Security Fabric 組件，包括 FortiGate 和 FortiWiFi 設備。立即免費下載。



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

備註：依據硬件和韌體版本，您的FortiExplorer應用程序可能只有某些配置方法可用。有關詳細資訊，請參閱應用程序。

**FORTINET**

September 7, 2021

FG-80F, FG-81F, FG-80F-Bypass, FG-80F-POE, FG-81F-POE, FWF-80F-2R, FWF-81F-2R, FWF-81F-2R-POE

Copyright© 2021 Fortinet, Inc. All rights reserved. Fortinet®, FortiGate®, FortiCare® and FortiGuard®, and certain other marks are registered trademarks of Fortinet, Inc., in the U.S. and other jurisdictions, and other Fortinet names herein may also be registered and/or common law trademarks of Fortinet. All other product or company names may be trademarks of their respective owners. Performance and other metrics contained herein were attained in internal lab tests under ideal conditions, and actual performance and other results may vary. Network variables, different network environments and other conditions may affect performance results. Nothing herein represents any binding commitment by Fortinet, and Fortinet disclaims all warranties, whether express or implied, except to the extent Fortinet enters a binding written contract, signed by Fortinet's General Counsel, with a purchaser that expressly warrants that the identified product will perform according to certain expressly-identified performance metrics and, in such event, only the specific performance metrics expressly identified in such binding written contract shall be binding on Fortinet. For absolute clarity, any such warranty will be limited to performance in the same ideal conditions as in Fortinet's internal lab tests. In no event does Fortinet make any commitment related to future deliverables, features or development, and circumstances may change such that any forward-looking statements herein are not accurate. Fortinet disclaims in full any covenants, representations, and guarantees pursuant hereto, whether express or implied. Fortinet reserves the right to change, modify, transfer, or otherwise revise this publication without notice, and the most current version of the publication shall be applicable. For Product License Agreement / EULA and Warranty Terms, visit <https://www.fortinet.com/content/dam/fortinet/assets/legal/EULA.pdf>

## Default Logins



https://192.168.1.99  
Username: *admin*  
Password: leave blank



SSID: *fortinet*  
Password: *fortinet*

## 管理員指南

有關詳細的入門指南、設置和配置訊息，請參閱 <https://docs.fortinet.com/> 上的管理指南。

## 客戶服務

有關合同、許可、產品註冊和帳戶管理，請聯繫FortiCare支援，網址為 <https://www.fortinet.com/support/contact>

## 自助服務資源

在 <https://www.fortinet.com/support/support-services/forticare-support> 訪問我們的知識庫、論壇、視頻和技術專家

感謝您選擇 Fortinet

根據硬件和韌體版本，可能只有某些配置方法可用。有關詳細信息，請參閱應用程序。

### BLE 自動偵測

- 1 在您的 Fortinet 設備和手機上啟用藍牙，然後將它們放在一起
- 2 FortiExplorer 將自動檢測您的設備
- 3 按照屏幕上的說明完成設置

-或者-

### USB 連接

- 1 使用 USB 數據線將您的手機連接到您的 Fortinet 設備
- 2 如果未檢測到設備，請導航至我的結構，點擊添加並按照 FortiExplorer 的屏幕說明進行操作

-或者-

### FortiGate Cloud Key 註冊

- 1 瀏覽到 My Fabric，然後選擇 Add
- 2 掃描 Fortinet 設備上的 FortiGate Cloud Key
- 3 按照螢幕上的說明完成設置

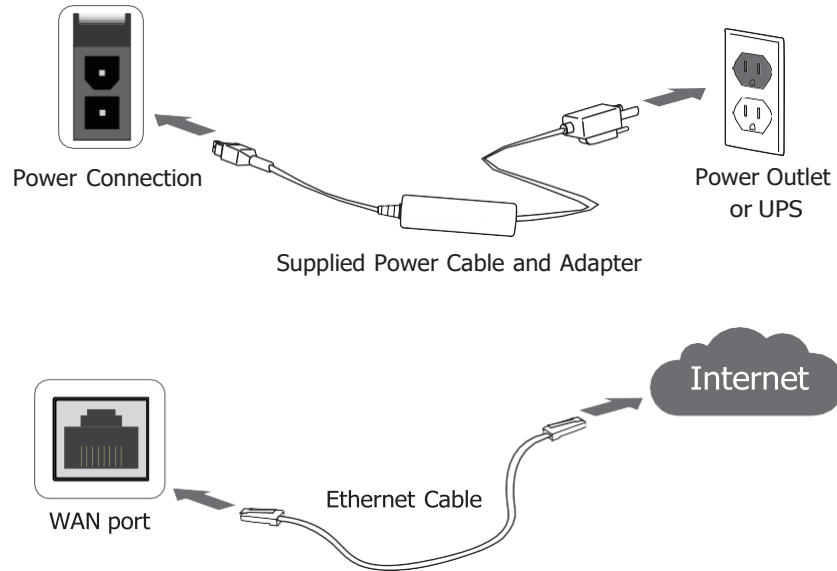
-或者-

### WiFi (只在FortiWiFi 型號)

- 1 使用設備標籤上的 SSID詳細訊息將您的手機連接到FortiWiFi的網路
- 2 瀏覽到My Fabric，然後選擇Add
- 3 按照FortiExplorer螢幕上的說明進行操作，並參考設備標籤以獲取默認主機和密碼

備註: FortiExplorer可以管理沒有WiFi功能的FortiGate設備，只要它們已經被設置允許使用HTTP/S管理員訪問

## 安裝



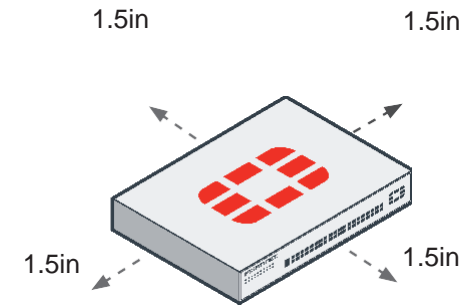
1. 使用提供的電源變壓器與電線將您的設備插入電源插座
2. 使用隨附的乙太網路線將 WAN port 連接到 internet

備註：建議將您的 FortiGate 連接到不斷電系統 (UPS) 以免停電

可選：FortiGate/FortiWiFi 80F/81F 系列具有可選的雙直流輸入，用於故障轉移備援。如果使用兩個直流輸入，則只有一個啟動。如果使用的直流輸入出現故障，第二個輸入將被啟動。

## 桌面安裝選項

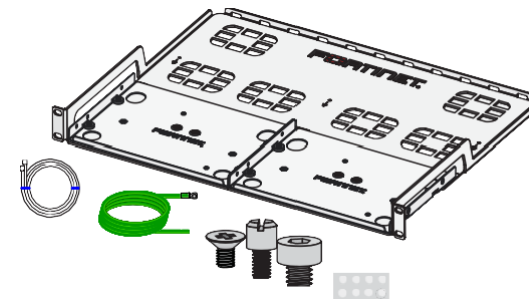
1. 將設備放置在平坦、乾淨、穩定的表面上
2. 確保至少有 1.5 英吋的間隙，以保證足夠的氣流



3. 將提供的電源線插入設備後部，然後插入接地電源插座或單獨的電源

## 機架安裝選項

Fortinet 提供各種標準和訂製的機架和滑軌安裝配件，包括機架安裝托盤套件 SP-RACKTRAY-02

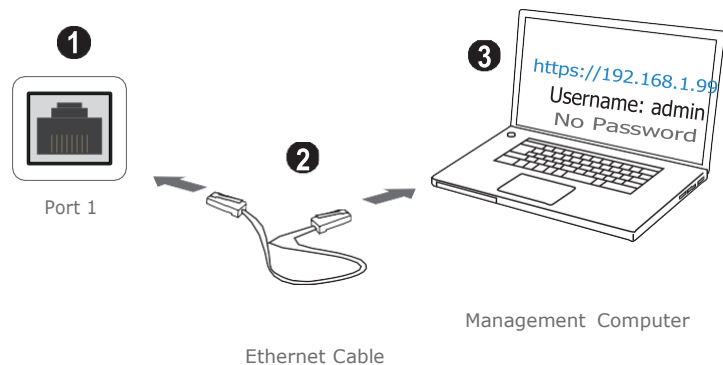


SP-RACKTRAY-02

## 其他設置選項

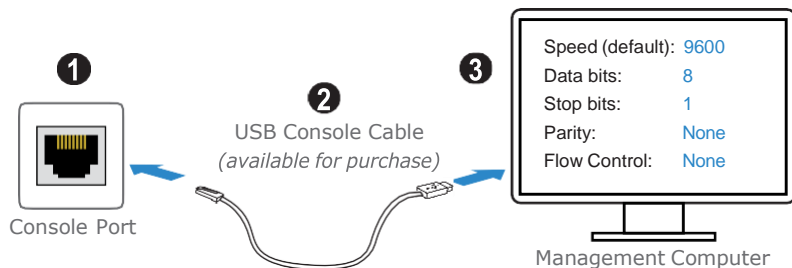
在本地設置您的 Fortinet 設備或使用 forticloud.com 連接

### GUI



備註：關於靜態 IP 配置，請使用 192.168.1.1 和子網路遮罩 255.255.255.0

### CLI

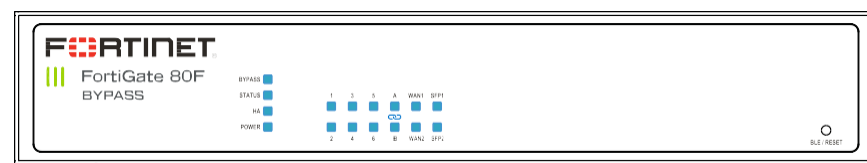


備註：有關詳細的 CLI 指南，請瀏覽 [docs.fortinet.com](https://docs.fortinet.com)

### FortiGate Cloud Key (連接一個 WAN 口上網)

- 1 前往 [forticloud.com](https://forticloud.com) 並使用您的 FortiCloud 憑證登入或註冊
- 2 按照螢幕上的說明進行操作，然後單擊 Add FortiGate
- 3 輸入設備標籤上的 FortiGate Cloud Key

## 包裝盒內含 - FG 80F 系列



FortiGate 80F/81F/ByPass



QuickStart Guide



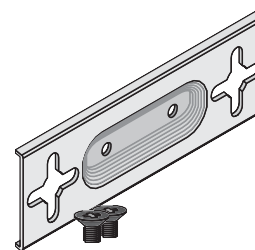
Power Cable



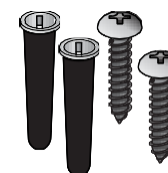
12V DC Power Adapter



Ethernet Cable

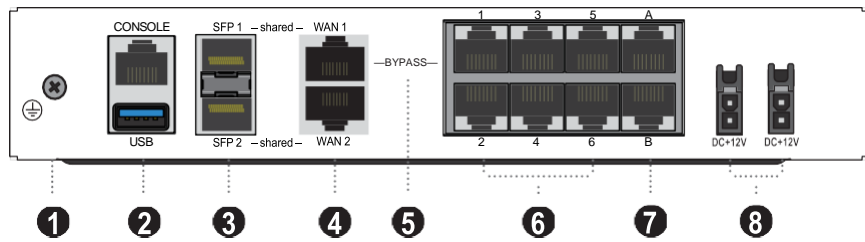


Wall Mount Kit  
(不包含在內，單獨出售)



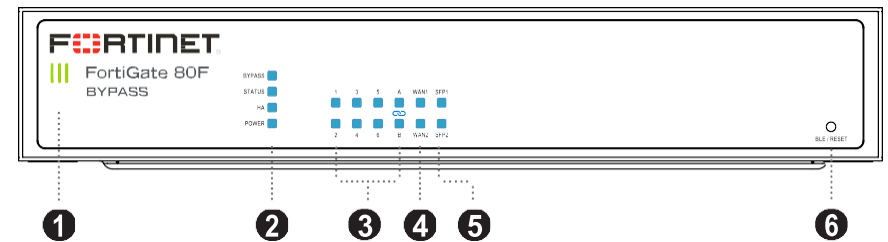
Wall Mount Hardware  
(不包含在內，單獨出售)

## 後面板 - FG 80F Series



- ❶ Grounding Screw additional protective earth connection, reserved for applications where a permanent local connection of protective earth is required
- ❷ Console (RJ-45) CLI management computer interface  
USB (USB A) USB 3.0 server port
- ❸ SFP Shared Ports 1 & 2 (SFP) 1 Gbps SFP interface
- ❹ WAN Shared Ports 1 & 2 (RJ45) 1 Gbps Ethernet interface
- ❺ BYPASS Port Pair (RJ45) 1 Gbps Ethernet interface  
*(FG 80F-Bypass model only. WAN1 & Port1 are the default configuration)*
- ❻ Ports 1 to 6 (RJ-45) 1 Gbps Ethernet interface
- ❼ FortiLink Ports A & B (RJ-45) 1 Gbps Ethernet interface
- ❽ Power Input 12V DC 3A, 100-240V AC 50/60Hz  
*(optional redundant power adapter and cable available for purchase)*

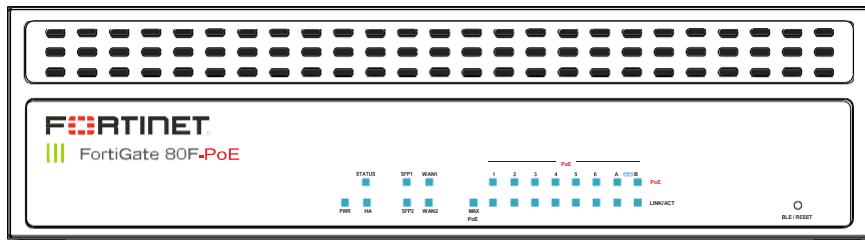
## 前面板 - FG 80F 系列



- ❶ LOGO  
  - ||| FortiGate
  - Green: The device is on
  - Off: The device is off
- ❷ BYPASS  
*(FG 80F-Bypass model only)*
  - Amber: Bypass Port Pair is active(WAN1 & Port1, default configuration)
  - Off: Bypass Port Pair is off
- STATUS
  - Green: Operating normally; BLE is off
  - ⚡ Flashing Green: Booting up
  - ⚡ Flashing Amber: BLE is on
- HA
  - Green: Operating in an HA cluster
  - Amber: HA failover
  - Off: Not in an HA cluster
- POWER
  - Green: Both power supplies are functioning
  - Amber: One power supply is functioning
  - Off: Power is off
- ❸ PORT LINK/ACT
  - ⚡ Flashing Green: 1000M/100M/10M data activity
  - Off: No link established
- ❹ WAN  
*(WAN & SFP are Shared Ports)*
  - ⚡ Flashing Green: 1000M/100M/10M data activity
  - Off: No link established
- ❺ SFP
  - ⚡ Flashing Green: 1000M/100M/10M data activity
  - Off: No link established
- ❻ BLE/RESET Activates BLE management or restores to factory default



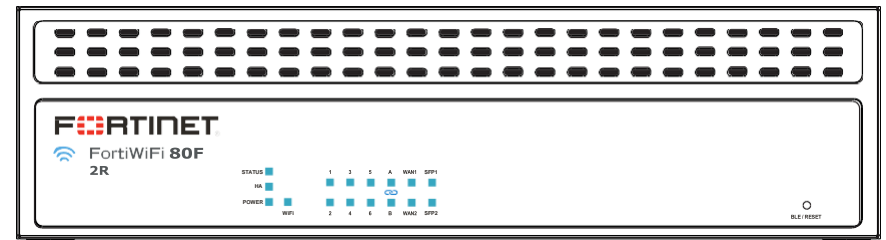
## 包裝盒內含 - FG 80F-POE 系列



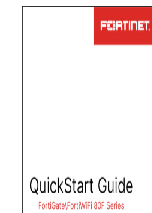
- 1
- 2
- 3
- 4
- 5
- 6

- 1 LOGO
  - FortiGate
  - Green: The device is on
  - Off: The device is off
- 2 PWR
  - Green: Both power supplies are functioning
  - Amber: One power supply is functioning
  - Off: Power is off
- STATUS
  - Green: Operating normally; BLE is off
  - Flashing Green: Booting up
  - Flashing Amber: BLE is on
- HA
  - Green: Operating in an HA cluster
  - Amber: HA failover
  - Off: Not in an HA cluster
- 3 SFP/WAN (WAN & SFP are Shared Ports)
  - Flashing Green: 1000M/100M/10M data activity
  - Off: No link established
- 4 MAX PoE
  - Red: Providing Max PoE Power, 96W
  - Off: PoE power available
- 5 Ports PoE
  - Green: PoE power on
  - Off: PoE power off
- LINK/ACT
  - Flashing Green: 1000M/100M/10M data activity
  - Off: No link established
- 6 BLE/RESET Activates BLE management or restores to factory default

## 包裝盒內含 - FWF 80F-2R 系列



FortiWiFi-80F-2R/81F-2R



QuickStart Guide



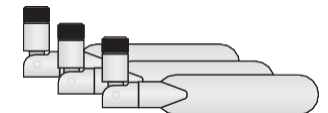
Power Cable



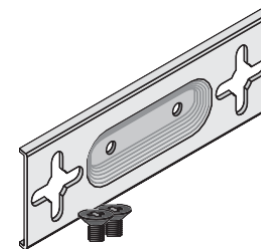
12V DC Power Adapter



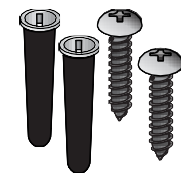
Ethernet Cable



3x Antennas



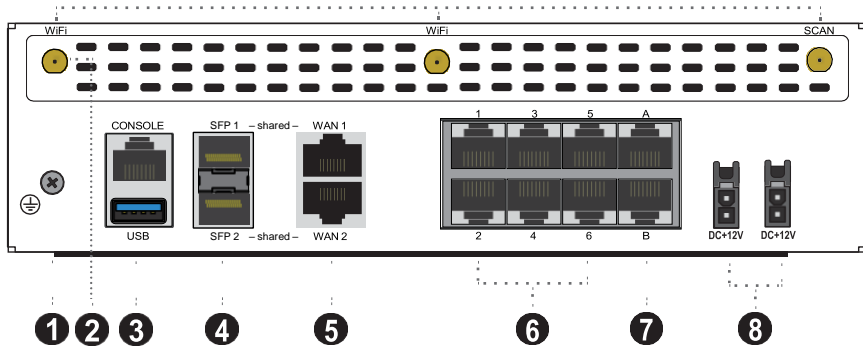
Wall Mount Kit  
(不包含在內，單獨出售)



Wall Mount Hardware  
(不包含在內，單獨出售)

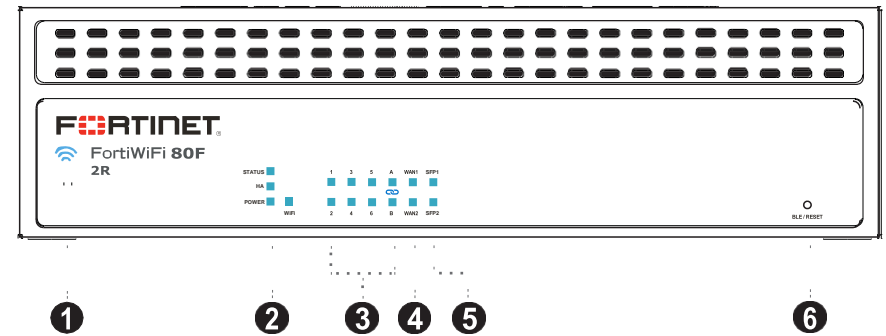


## 後面板 - FWF 80F-2R 系列



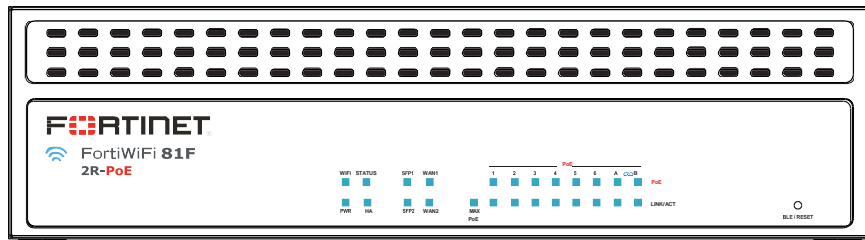
- ❶ Grounding Screw additional protective earth connection, reserved for applications where a permanent local connection of protective earth is required
- ❷ Antenna Connection (SMA) passive directional antenna connection
- ❸ Console (RJ-45) CLI management computer interface  
USB (USB A) USB 3.0 server port
- ❹ SFP Shared Ports 1 & 2 (SFP) 1 Gbps SFP interface
- ❺ WAN Shared Ports 1 & 2 (RJ45) 1 Gbps Ethernet interface
- ❻ Ports 1 to 6 (RJ-45) 1 Gbps Ethernet interface
- ❼ FortiLink Ports A & B (RJ-45) 1 Gbps Ethernet interface
- ❽ Power Input 12V DC 5A, 100-240V AC 50/60Hz  
*(optional redundant power adapter and cable available for purchase)*

## 前面板 - FWF 80F-2R



- ❶ LOGO
  - FortiWiFi
  - Blue: The device is on
  - Off: The device is off
- ❷ STATUS
  - Green: Operating normally; BLE is off
  - Flashing Green: Booting up
  - Flashing Amber: BLE is on
- HA
  - Green: Operating in an HA cluster
  - Amber: HA failover
  - Off: Not in an HA cluster
- POWER
  - Green: Both power supplies are functioning
  - Amber: One power supply is functioning
  - Off: Power is off
- WIFI
  - Green: WiFi connected
  - Flashing Green: WiFi activity
  - Off: WiFi is off
- ❸ PORT LINK/ACT
  - Flashing Green: 1000M/100M/10M data activity
  - Off: No link established
- ❹ WAN  
*(WAN & SFP are Shared Ports)*
  - Flashing Green: 1000M/100M/10M data activity
  - Off: No link established
- ❺ SFP
  - Flashing Green: 1000M/100M/10M data activity
  - Off: No link established
- ❻ BLE/RESET Activates BLE management or restores to factory default

## 包裝盒內含 - FWF 81F-2R-POE



FortiWiFi-81F-2R-POE



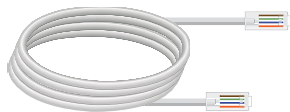
QuickStart Guide



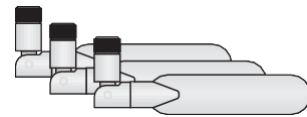
Power Cable



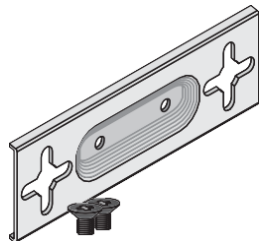
54V DC Power Adapter



Ethernet Cable



3x Antennas

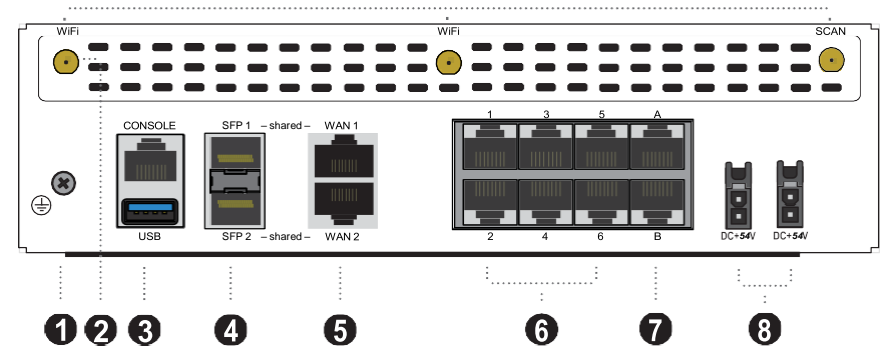


Wall Mount Kit  
(不包含在內，單獨出售)



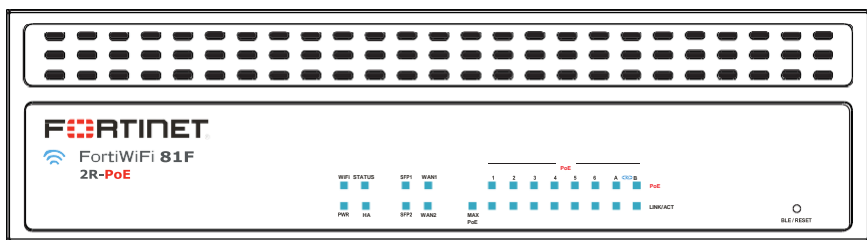
Wall Mount Hardware  
(不包含在內，單獨出售)

## 後面板 - FWF 81F-2R-POE



- ❶ Grounding Screw additional protective earth connection, reserved for applications where a permanent local connection of protective earth is required
- ❷ Antenna Connection (SMA) passive directional antenna connection
- ❸ Console (RJ-45) CLI management computer interface  
USB (USB A) USB 3.0 server port
- ❹ SFP Shared Ports 1 & 2 (SFP) 1 Gbps SFP interface
- ❺ WAN Shared Ports 1 & 2 (RJ45) 1 Gbps Ethernet interface
- ❻ Ports 1 to 6 (RJ-45) 1 Gbps Ethernet interface
- ❼ FortiLink Ports A & B (RJ-45) 1 Gbps Ethernet interface
- ❽ Power Input 54V DC 2.78A, 100-240V AC, 50/60Hz  
(optional redundant power adapter and cable available for purchase)

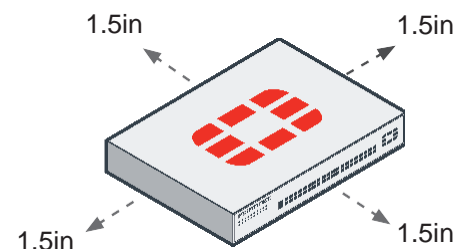
# 前面板 - FWF 81F-2R-POE



- 1** LOGO
  - FortiWiFi
  - Blue: The device is on
  - Off: The device is off
- 2** WIFI
  - Green: WiFi connected
  - Flashing Green: WiFi activity
  - Off: WiFi is off
- STATUS**
  - Green: Operating normally; BLE is off
  - Flashing Green: Booting up
  - Flashing Amber: BLE is on
- PWR**
  - Green: Both power supplies are functioning
  - Amber: One power supply is functioning
  - Off: Power is off
- HA**
  - Green: Operating in an HA cluster
  - Amber: HA failover
  - Off: Not in an HA cluster
- 3** SFP/WAN (WAN & SFP are Shared Ports)
  - Flashing Green: 1000M/100M/10M data activity
  - Off: No link established
- 4** MAX PoE
  - Red: Providing Max PoE Power, 96W
  - Off: PoE power available
- 5** Ports PoE
  - Green: PoE power on
  - Off: PoE power off
- LINK/ACT**
  - Flashing Green: 1000M/100M/10M data activity
  - Off: No link established
- 6** BLE/RESET
  - Activates BLE management or restores to factory default

# 桌面安裝選項

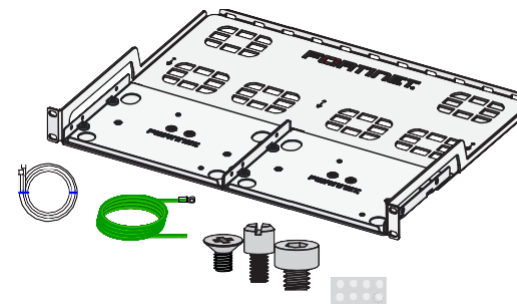
1. 將設備放置在平坦、乾淨、穩定的表面上
2. 確保至少有 1.5英寸的間隙，以保證足夠的氣流



3. 將提供的電源線插入設備後部，然後插入接地電源插座或單獨的電源

# 機架/導軌安裝選項

FFortinet提供各種標準和訂製的機架和滑軌安裝配件，包括機架安裝托盤套件SP-RACKTRAY-02



SP-RACKTRAY-02

訂購：聯繫 Fortinet 訂購支架、滑軌套件、機架安裝套件和其他附件，例如console cable

## Cautions and Warnings

### Environmental specifications

Ambient operating temperature: 0°C to 40°C

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

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

### Safety

**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 regulations. **IMPORTANT:** Switzerland: Annex 4.10 of SR814.013 applies to batteries.

**Batterie** – Risque d’explosion si la batterie est remplacée par un type incorrect. Ne jetez pas les batteries au feu. Ils peuvent exploser. Jetez les piles usagées conformément aux réglementations locales. **IMPORTANT:** Suisse: l’annexe 4.10 de SR814.013 s’applique aux batteries.

警告
本電池如果更換不正確會有爆炸的危險
請依照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 an explosion.
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.

**WARNING:**
Lithium-Batterie Achtung: Explosionsgefahr bei fehlerhafter Batteriewechsel. Ersetzen Sie nur den gleichen oder gleichwertigen Typ. Batterien gemäß den Anweisungen des Herstellers entsorgen.

Beseitigen einer BATTERIE in Feuer oder einen heißen Ofen oder mechanisches Zerkleinern oder Schneiden einer BATTERIE, 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.

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

This product is intended to be supplied by a Listed pluggable A via Class I external power supply adapter by means of a power cord connected to a socket-outlet with earthing connection.

Ce produit est destiné à être alimenté par un adaptateur d'alimentation externe de classe I par l'intermédiaire d'un cordon d'alimentation enfichable de classe A qui doit être branché à une prise de courant avec terre.

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 Environment Réseau 0 par IEC/TR 62101. Ce produit est uniquement connecté aux réseaux PoE sans installation externe de routage.

Disconnect ES2 (TNV) circuit connector before removing cover.
Débranchez le câble du circuit ES2 (TNV) avant d'enlever le couvercle.

**IMPORTANT SAFETY INSTRUCTIONS** - When using your telephone equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock and injury to persons, including the following:
**OBSIGNES DE SÉCURITÉ IMPORTANTES** – Lorsque vous utilisez votre équipement téléphonique, des précautions de sécurité de base doivent toujours être suivies pour réduire le risque d'incendie, de choc électrique et de blessures corporelles, y compris ce qui suit:

- Do not use this product near water for example, near a bathtub, washbowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.
-Ne pas utiliser ce produit près de l'eau, par exemple, près d'une baignoire, d'un lavabo, d'un évier de cuisine ou cuve à lessive, dans un sous-sol humide ou près d'une piscine.

-Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.
-Évitez d'utiliser un téléphone (autre qu'un téléphone sans fil) pendant un orage. Il peut y avoir un risque de choc électrique par la foudre.

- Do not use the telephone to report a gas leak in the vicinity of the leak.
-Ne pas utiliser le téléphone pour rapporter une fuite de gaz à proximité de la fuite.

-Use only the power cord and batteries indicated in this manual. Do not dispose of batteries in a fire. They may explode. Check with local codes for possible special disposal instructions.
-Utilisez uniquement le cordon d'alimentation et les piles indiquées dans ce manuel. Ne jetez pas les batteries au feu. Ils peuvent exploser. Vérifiez les codes locaux pour connaître les instructions spéciales d'élimination.

SAVE THESE INSTRUCTIONS
CONSERVER CES INSTRUCTIONS

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.

**CAUTION:** To reduce the risk of fire, use only No. 26 AWG or larger (e.g., 24 AWG) UL Listed or CSA Certified Telecommunication Line Cord
**ATTENTION:** Pour réduire le risque d'incendie, utilisez uniquement 26 AWG ou supérieur (par exemple, 24 AWG) lister UL ou cordon certifié CSA

**CAUTION:** The interconnecting cables between the development kit and the LCD touch screen monitor are required to be rated min. 60 deg.C, min. 30 Vdc., marked VW-1 or FT-1. The length of the cable should not exceed 3.05 m
**ATTENTION:** Les câbles d'interconnexion entre le kit de développement et le moniteur à écran tactile LCD doivent être classé min. 60 degrés C, min. 30 Vdc, marqué VW-1 ou FT-1. La longueur du câble ne doit pas dépasser 3,05 m

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 électrostatique (ESD) et/ ou portez un bracelet anti-statique lorsque vous travaillez. Ce produit possède une borne de mise à la terre qui est pré vu 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 yellow stripe conductor minimum size #12 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 connectée en permanence à la terre avec un conducteur avec la taille bande jaune de minimum #12AWG et la connexion doit être installé par un personnel qualifié.

## Regulatory Notices

### Federal Communication Commission (FCC) – USA

This device complies with Part 15 of 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 B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in residential installation. 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. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
Reorient or relocate the receiving antenna.
Increase the separation between the equipment and receiver.
Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
Consult the dealer or an experienced radio/TV technician for help.

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

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

*Model: FWF-80F-2R, FWF-81F-2R, FWF-80F-2R-3G4G-DSL, FWF-81F-2R-3G4G-DSL, FWF-80F-2R-POE, FWF-81F-2R-POE, FWF-81F-2R-3G4G-POE*

**Caution:** Operation of this device is restricted to indoor use only.

For operation within 5.15 – 5.25GHz frequency range, it is restricted to indoor environment.

This device meets all the other requirements specified in Part 15E, Section 15.407 of the FCC Rules.

This equipment complies with ANSI TIA/EIA/968-B and Part 68 of the FCC rules and the requirements adopted by the ACTA. On the base of this equipment is a label that contains, among other information, a product identifier in the format US: AAEEQ#TXXXX. If requested, this number must be provided to the telephone company.

This equipment uses the following USOC jacks: RJ11.
A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA. A compliant telephone cord and modular plug is provided with this product. It is designed to be connected to a compatible modular jack that is also compliant. See installation instructions for details.

The REN is used to determine the number of devices that may be connected to a telephone line. Excessive RENs on a telephone line may result in the device not ringing in response to an incoming call. In most but not all areas, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total REN, contact the local telephone company. The REN for this product is separately shown on the label and also part of the product identifier that has the format US: AAEEQ#TXXXX. The digits represented by # are the REN without a decimal point (e.g., .03 is a REN of 0.3).

If this equipment, FWF-80F-2R-3G4G-DSL, FWF-81F-2R-3G4G-DSL causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required until the problem is resolved. But if advance notice is not practical, you will be notified by the telephone company as soon as possible. You will be advised of your right to file a complaint with the FCC if you believe it is necessary. The telephone company may make changes in its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

The telephone company may ask that you disconnect this equipment from the network until the problem has been corrected or until you are sure that the equipment is not malfunctioning.

If you experience trouble with this equipment, or repair or warranty information, please

contact the following address and phone number for information.

Fortinet Inc.
899 Kifer Road, Sunnyvale, CA 94086 USA
1-866-933-9960 (US and Canada)
1-613-725-2466 (International)
http://www.fortinet.com

It is recommended that the customer install an AC surge arrester in the AC outlet to which this device is connected. This is to avoid damaging the equipment caused by local lightning strikes and other electrical surges.
This equipment may not be used on coin service provided by the telephone company. Connection to party line service is subject to state tariffs.

### Industry Canada (IC CS) – Canada

**NOTICE:** This product meets the applicable Industry Canada terminal technical specifications. This is confirmed by the registration number. The abbreviation, IC, before the registration number signifies that registration was performed based on a Declaration of Conformity indicating that Industry Canada technical specifications were met. It does not guarantee the equipment will operate to the user's satisfaction.

**AVIS:** Ce produit est conforme aux spécifications techniques terminales applicables d'Industrie Canada. Cette conformité est confirmée par le numéro d'enregistrement. Le sigle IC, placé devant le numéro d'enregistrement, signifie que l'enregistrement s'est effectué conformément à une déclaration de conformité et indique quelles spécifications techniques d'Industrie Canada ont été respectées. Il ne garantit pas que le matériel fonctionnera à la satisfaction de l'utilisateur.

**NOTICE:** The Ringer Equivalence Number (REN) for this terminal equipment is 0.1. The REN assigned to each terminal equipment provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed five.

**AVIS:** L'indice d'équivalence de la sonnerie (IES) du présent matériel est de 0.1. L'IES assigné à chaque dispositif terminal indique le nombre maximal de terminaux qui peuvent être reliés à une interface téléphonique. La terminaison d'une interface peut consister en une combinaison quelconque de dispositifs, à la seule condition que la somme d'indices d'équivalence de la sonnerie de tous les dispositifs n'exécde pas 5.

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

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

### Innovation, Science and Economic Development (ISED) – Canada

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:
1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

1. L'appareil ne doit pas produire de brouillage;
2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

*Model: FWF-80F-2R, FWF-81F-2R, FWF-80F-2R-3G4G-DSL, FWF-81F-2R-3G4G-DSL, FWF-80F-2R-POE, FWF-81F-2R-POE, FWF-81F-2R-3G4G-POE*

For product available in the USA/Canada market, only channel 1–11 can be operated. Selection of other channels is not possible.

Pour les produits disponibles aux États-Unis / Canada du marché, seul le canal 1 à 11 peuvent être exploités. Sélection d'autres canaux n'est pas possible.

This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Cet équipement est conforme aux limites d'exposition aux rayonnements ISED établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20cm de distance entre la source de rayonnement et votre corps.

The maximum antenna gain permitted for devices in the band 5725-5850 MHz shall be such that the equipment still complies with the e.i.r.p. limits specified for point-to-point and non-point-to-point operation as appropriate.

Le gain maximal d'antenne permis (pour les dispositifs utilisant la bande 5725-5850 MHz) doit se conformer à la limite de p.i.r.e. spécifiée pour l'exploitation point à point et non point à point, selon le cas.

The maximum antenna gain permitted for devices in the bands 5250-5350 MHz and 5470-5725 MHz shall comply with the e.i.r.p. limit; and

Le gain maximal d'antenne permis pour les dispositifs utilisant les bandes 5250-5350 MHz et 5470-5725 MHz doit se conformer à la limite de p.i.r.e.;

(ii) where applicable, antenna type(s), antenna model(s), and worst-case tilt angle(s) necessary to remain compliant with the e.i.r.p. elevation mask requirement set forth in section 6.2.2.3 shall be clearly indicated..

(ii) lorsqu'il y a lieu, les types d'antennes (s'il y en a plusieurs), les numéros de modèle de l'antenne et les pics angles d'inclinaison nécessaires pour rester conforme à l'exigence de la p.i.r.e. applicable au masque d'élevation, énoncée à la section 6.2.2.3, doivent être clairement indiqués.

**Caution:** The device for the band 5150-5250 MHz is only for indoor usage to reduce potential for harmful interference to co-channel mobile satellite systems.

**Attention:** Le dispositif de la bande 5150-5250 MHz est réservé à un usage intérieur

afin de réduire l'interférence nuisible potentielle aux systèmes mobiles par satellite co-canal.

**Caution:** The maximum antenna gain permitted for devices in the bands 5250-5350 MHz and 5470-5725 MHz shall comply with the e.i.r.p. limit; and the maximum antenna gain permitted for devices in the band 5725-5825 MHz shall comply with the e.i.r.p. limits specified for point-to-point and non point-to-point operation as appropriate.

**Attention:** Le gain maximal d'antenne permis pour les dispositifs utilisant les bandes 5250-5350 MHz et 5470-5725 MHz doit se conformer à la limite de p.i.r.e.; le gain maximal d'antenne permis (pour les dispositifs utilisant la bande 5725-5825 MHz) doit se conformer à la limite de p.i.r.e. spécifiée pour l'exploitation point à point et non point à point, selon le cas.

This radio transmitter (C: 7280B-3417T0695A / Model: FWF-80F-2R, FWF-81F-2R, FWF-80F-2R-3G4G-DSL, FWF-81F-2R-3G4G-DSL) has been approved by ISED to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Le présent émetteur radio (C: 7280B-3417T0695A / Model: FWF-80F-2R, FWF-81F-2R, FWF-80F-2R-3G4G-DSL, FWF-81F-2R-3G4G-DSL.) a été approuvé par ISED pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal et l'impédance requise pour chaque type d'antenne. Les types d'antenne non inclus dans cette liste, ou dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

This radio transmitter (C: 7280B-3417T0695A / Model: FWF-80F-2R-POE, FWF-81F-2R-POE, FWF-81F-2R-3G4G-POE) has been approved by ISED to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Le présent émetteur radio (C: 7280B-3417T0695A / Model: FWF-80F-2R-POE, FWF-81F-2R-POE, FWF-81F-2R-3G4G-POE) a été approuvé par ISED pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal et l'impédance requise pour chaque type d'antenne. Les types d'antenne non inclus dans cette liste, ou dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

This device and it's antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter except in accordance with IC multi-transmitter product procedures.

Cet appareil et son antenne (s) ne doit pas être co-localisés ou fonctionner en association avec une autre antenne ou transmetteur.

*Model: FWF-80F-2R, FWF-81F-2R, FWF-80F-2R-3G4G-DSL, FWF-81F-2R-3G4G-DSL, FWF-80F-2R-POE, FWF-81F-2R-POE, FWF-81F-2R-3G4G-POE*

Antenna Type	Dipole					
Antenna Connector	SMA					
Antenna No.	2400MHz	2450MHz	2500MHz	5150MHz	5900MHz	5850MHz
Ant1	2.00	3.24	2.64	3.27	2.01	1.58
Ant2	2.00	3.24	2.64	3.27	2.01	1.58
Ant3	2.00	3.24	2.64	3.27	2.01	1.58
Antenna Type	PIFA					
Antenna Connector	IPEX					
Antenna No	2400MHz	2450MHz	2500MHz			
BLE	-2.76	0.74	-0.83			

### Model: FG-80F, FG-81F, FG-80F-Bypass

Antenna	Qty	Antenna Type	Connector	Gain (dBi) 2.4GHz
BT (Internal)	1	PIFA	IPEX	1.3

**IMPORTANT: The device must be professionally installed and must use the supplied antenna.**

### Professional Installation Instructions

1. Installation personnel
This product is designed for specific application and needs to be installed by qualified personnel who has RF and related rule knowledge. The general user shall not attempt to install or change the settings.
2. Installation location
The product shall be installed at a location where the radiating antenna can be kept 20cm from nearby person in normal operation condition to meet Regulatory RF exposure requirement. The installation applies to indoor locations.
3. External antenna(s)
Use only the antenna(s) that have been approved by the manufacturer. The non-approved antenna(s) may produce unwanted/spurious or excessive RF transmitting power that may lead to the violation of FCC/ISED limit and is prohibited.
4. Warning
Please carefully select the installation position and ensure that the final output power does not exceed the limit set forth in relevant rules. The violation of the rule could lead to serious federal penalty.

### Instructions d'installation professionnelle

1. Installation
Ce produit est conçu pour un usage spécifique et doit être installé par un personnel qualifié maîtrisant les radiofréquences et règles similaires. L'utilisateur ne doit pas tenter d'installer ou de modifier les paramètres.
2. Emplacement d'installation
En usage normal, afin de respecter les exigences réglementaires concernant l'exposition aux radiofréquences, ce produit doit être installé de façon à respecter une distance

de 20cm entre l'antenne émettrice et. L'installation s'applique aux emplacements intérieurs.  
 3. Antenne externe (s)  
 Utiliser uniquement l'antenne (s) approuvées par le fabricant. L'utilisation d'autres antennes peut conduire à un niveau de rayonnement essentiel ou non essentiel dépassant les niveaux limites définis par FCC/ISED, ce qui est interdit.  
 4. Avertissement  
 Choisir avec soin la position d'installation et s'assurer que la puissance de sortie ne dépasse pas les limites en vigueur. La violation de cette règle peut conduire à de sérieuses pénalités fédérales.

**European Conformity (CE) - EU**

This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.



The product transmits within the frequency ranges and less than or equal to the power listed below:  
 2402-2480MHz less than 20dBm  
 2412-2472MHz less than 20dBm\*\*  
 5180-5240MHz less than 23dBm\*\*  
 5260-5320MHz less than 23dBm \*  
 5500-5700MHz less than 30dBm \*

Note:  
 \* Only with DFS bands certification. Applies to FortWiFi 81F-2R Series  
 \*\* Applies to FortWiFi 81F-2R Series  
 This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

**Simplified EU Declaration of Conformity**  
 This declaration is only valid for Fortinet products (including combinations of software, firmware and hardware) provided by Fortinet or Fortinet's authorized partners to the end-customer directly for use within the EU or countries that have implemented the EU Directives and/or spectrum regulation. Any Fortinet products not obtained directly from Fortinet or Fortinet's authorized partners may not comply with EU Directives and Fortinet makes no assurances for such products.

**Български**

Този продукт е в съответствие с Директива 2014/53/EC.

**Česky**

Tento produkt je v souladu se směrnicí 2014/53/EU.

**Dansk**

Denne produkt er i overensstemmelse med direktiv 2014/53/EU.

**Deutsch**

Dieses Produkt entspricht der Richtlinie 2014/53/EU.

**Eesti**

See toode vastab direktiivile 2014/53/EL.

**English**

This product is in compliance with Directive 2014/53/EU.

**Español**

Este producto cumple con la Directiva 2014/53/UE.

**Ελληνική**

Το προϊόν αυτό συμμορφώνεται με την Οδηγία 2014/53/EE.

**Français**

Ce produit est conforme à la Directive 2014/53/UE.

**Hrvatski**

Ovaj proizvod je u skladu s Direktivom 2014/53/EU.

**Italiano**

Questo prodotto è conforme alla Direttiva 2014/53/UE.

**Latviski**

Šis produkts atbilst Direktīvai 2014/53/EU.

**Lietuvių**

Šis gaminyš atitinka direktyvą 2014/53/ES.

**Malti**

Dan il-prodott huwa konformi mad-Direttiva 2014/53/UE.

**Magyar**

Ez a termék megfelel a 2014/53/EU irányelvnek.

**Nederlands**

Dit product is in overeenstemming met Richtlijn 2014/53/EU.

**Norsk**

Denne produktet er i samsvar med direktiv 2014/53/EU.

**Polski**

Ten produkt jest zgodny z dyrektywą 2014/53/UE.

**Português**

Este produto está em conformidade com a Diretiva 2014/53/UE.

**Rumunski**

Acest produs este in conformitate cu Directiva 2014/53/UE.

**Slovensky**

Tento produkt je v súlade so smernicou 2014/53/EU.

**Slovensko**

Ta izdelek je v skladu z Direktivo 2014/53/EU.

**Suomi**

Tämä tuote on direktiivin 2014/53/EU mukainen.

**Svenska**

Denna produkt överensstämmer med direktiv 2014/53/EU.

Note: The full Declaration of Conformity for this product is available in the link below:  
<https://site.fortinet.com/ProductRegulatory/EU>

The device is restricted to indoor use only when operating in the 5150 to 5350 MHz frequency range in the following countries:

	AT	BE	BG	HR	CY	CZ	DK
	EE	FI	FR	DE	EL	HU	UK (NI)
	IT	LV	LT	LU	MT	NL	PL
	PT	RO	SK	SI	ES	SE	UK

**Compliance with 2014/53/EU Radio Equipment Directive (RED)**

In accordance with Article 10.8(a) and 10.8(b) of the RED, the following table provides information on the frequency bands used and the maximum RF transmit power of the product for sale in the EU:

Standard	Frequency Range	Max. Transmit Power
Bluetooth	2402-2480 MHz	2.44 (EIRP)
	2412-2472MHz	19.84 (EIRP)
	5180-5240MHz	22.77 (EIRP)
	5260-5320MHz	22.60 (EIRP)
WLAN	5500-5700MHz	29.67 (EIRP)
	WCDMA*	Band 1: 1920-1980MHz (Uplink); 2110-2170MHz(Downlink); Band 8: 880-915MHz (Uplink); 925-960MHz(Downlink)
LTE*	Band 1: 1920-1980MHz(Uplink); 2110-2170MHz(Downlink) Band 3: 1710-1755MHz(Uplink); 1805-1880MHz(Downlink) Band 7: 2500-2570MHz(Uplink); 2620-2690MHz(Downlink) Band 8: 880-915MHz (Uplink); 925-960MHz(Downlink)	25.7dBm (Conducted)
	Band 20: 832-862MHz(Uplink); 731-821MHz(Downlink) Band 28: 703-748MHz(Uplink); 758-803MHz(Downlink) Band 32: 1452-1498MHz(Downlink) Band 42: 3400-3600MHz Band 43: 3600-3800MHz Band 46: 5150-5925MHz(Downlink)	25.7dBm (Conducted)

Note: \* Applies to models FWF-80F-2R-3G4G-DSL, FWF-81F-2R-3G4G-DSL, FWF-80F-2R-3G4G-POE, FWF-81F-2R-3G4G-POE

**Voluntary Control Council for Interference (VCCI) – Japan**

この装置は、クラスB機器です。この装置は、住宅環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。取扱説明書に従って正しい取り扱いをして下さい。

V C C I – B

**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>

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

**National Telecommunications Commission (NCC) – Taiwan**

Model: FG-80F, FG-81F, FG-80F-Bypass, FG-80F-POE, FG-81F-POE  
 NCC警語  
 取得審驗證明之低功率射頻器材，非經核准，公司、商號或使用 者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。低功率射頻器材之使用不得影響

飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前述合法通信，指依電信管理法規運作之無線電通信。低功率射頻器材須忍受合法通信或工業、科學及醫療用電磁輻射性電機設備之干擾。

**Model: FG-80F, FG-81F, FG-80F-Bypass  
 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 [www.anatel.gov.br](http://www.anatel.gov.br)

**Model: FG-80F, FG-81F, FG-80F-Bypass  
 Korea Certification (KC) – Korea**

A급 기기 (업무용 방송통신기자재)  
 이 기기는 업무용(A급) 전자파적합기기로서 판매자 또는 사용자는 이 점을 주의하시기 를 바라며, 가정외의 지역에서 사용하는 것을 목적으로 합니다.

해당무선설비기기는 운용중 전파혼신 가능성이 있으므로 인명안전과 관련 된 서비스는 할 수 없습니다.  
 해당무선설비기기는 운용중 전파혼신 가능성이 있음

**UK Conformity Assessed (UKCA) – United Kingdom**

The product transmits within the frequency ranges and less than or equal to the power listed below:  
 2402-2480MHz less than 20dBm  
 2405-2480MHz less than 20dBm  
 2412-2472MHz less than 20dBm  
 5180-5240MHz less than 23dBm  
 5260-5320MHz less than 23dBm\*  
 5500-5700MHz less than 30dBm\*

Note: \* Only with DFS bands certification.

Standard	Frequency Range	Max. Transmit Power
Bluetooth	2402-2480 MHz	2.44 (EIRP)
	2412-2472MHz	19.84 (EIRP)
	5180-5240MHz	22.77 (EIRP)
	5260-5320MHz	22.60 (EIRP)
WLAN	5500-5700MHz	29.67 (EIRP)
	WCDMA*	Band 1: 1920-1980MHz (Uplink); 2110-2170MHz(Downlink) Band 8: 880-915MHz (Uplink); 925-960MHz(Downlink)
LTE*	Band 1: 1920-1980MHz(Uplink); 2110-2170MHz(Downlink) Band 3: 1710-1755MHz(Uplink); 1805-1880MHz(Downlink) Band 7: 2500-2570MHz(Uplink); 2620-2690MHz(Downlink) Band 8: 880-915MHz (Uplink); 925-960MHz(Downlink)	25.7dBm (Conducted)
	Band 20: 832-862MHz(Uplink); 731-821MHz(Downlink) Band 28: 703-748MHz(Uplink); 758-803MHz(Downlink) Band 32: 1452-1498MHz(Downlink) Band 42: 3400-3600MHz Band 43: 3600-3800MHz Band 46: 5150-5925MHz(Downlink)	25.7dBm (Conducted)

Note: \* Applies to models FWF-80F-2R-3G4G-DSL, FWF-81F-2R-3G4G-DSL, FWF-81F-2R-3G4G-POE

This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

This product is in compliance with Statutory Instrument 1206 Radio Equipment Regulations 2017

The full Declaration of Conformity for this product is available in the link below:  
<https://site.fortinet.com/ProductRegulatory/UK>

The device is restricted to indoor use only when operating in the 5150 to 5350 MHz frequency range in the following countries:



