



WIRELESS LAN MANAGER

FortiWLM™ 1000D

QuickStart Guide



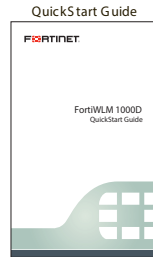
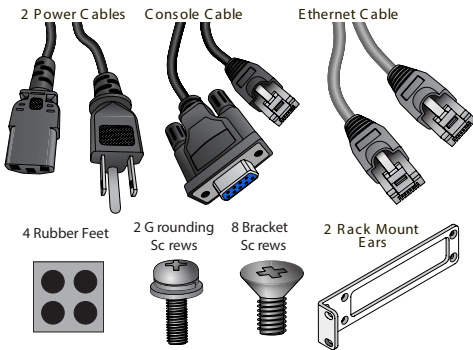
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Package contents

The box should contain:

- FortiWLM 1000D appliance
- FortiWLM 1000D QuickStart Guide
- 2 Power cables
- Ethernet cable
- Console cable
- 4 Rubber feet
- 2 Rack mount ears
- 2 Grounding screws
- 8 Bracket screws

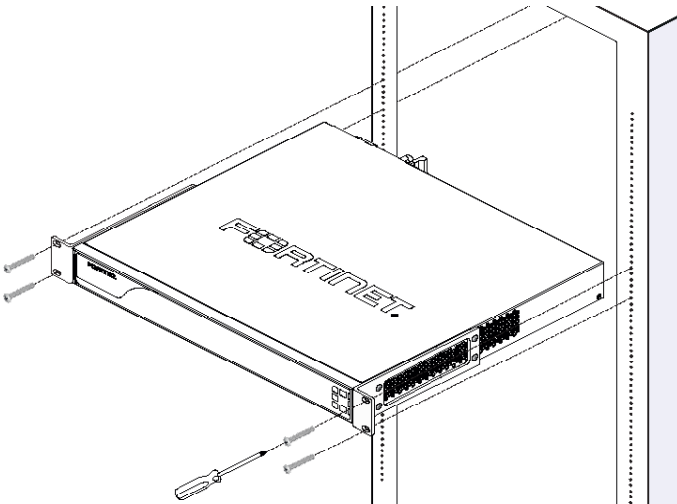
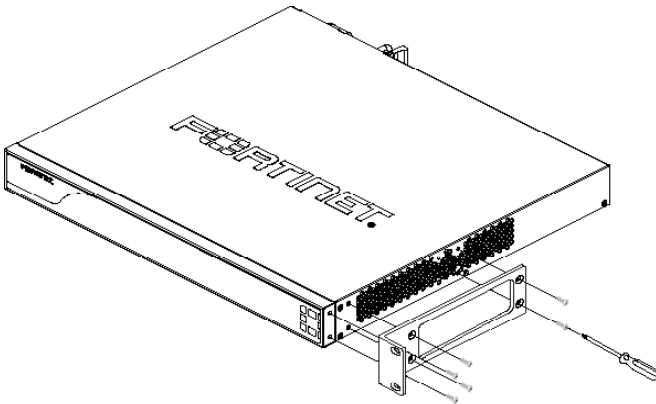


Rack mounting

FortiWLM appliances should be installed in a restricted access location such as a locked data center to ensure their physical security, which is fundamental to your network security. Mount the appliance in any standard 19 inch (48.3 cm) rack with the rack-mount brackets.

In a rack, a FortiWLM 1000D occupies 1U (1.77 inches/4.45 cm).

- 2-post rack: Attach the rack-mount brackets to the middle of each side of appliance so that its weight is distributed evenly.
- 4-post rack: Attach the rack-mount brackets to the front of each side of the appliance with flanges facing outwards, towards the notches in the rack.



SFP support in FortiWLM 1000D

FortiWLM 1000D supports all eight media ports; 4 RJ45 copper ports and 4 SFP (fibre) 1G ports. FortiWLM autosenses the SFP or RJ45 links connected during boot up and comes up with the active links. All the 4 SFP ports are capable of obtaining IP addresses. This enhances the support for FortiWLM in optical fibre networks.

When RJ45 and SFP links are connected, FortiWLM comes up in the SFP (fibre) mode. When no links are connected FortiWLM comes up based on the SFP or RJ45 links connected on the next reboot.

These are the supported SFP transceivers for FortiWLM 1000D.

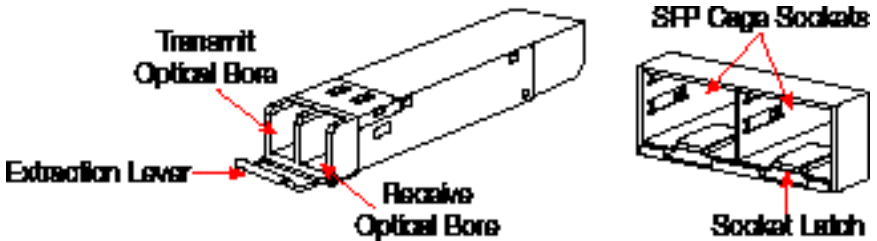
Supplier	Model	Type	Transceiver
FINISAR	FTLF8519P3BNL	SFP	1000Base-SX Dual Rate
NETGEAR	AGM731F	SFP	1000Base-SX/LC Connector
AXCEN	AXGE-5854-0511	SFP	1000Base-SX
HP	SFP SX J4858C	SFP	1000Base-SX
FINISAR	FTLX8571D3BCL	SFP+	10G-Base-SR
AVAGO	AFBR-709ASMZ	SFP+	10G-Base-SR
INTEL	FTLX8571D3BCV-IT	SFP+	1G/10G-Base-SR Dual Rate

Installing SFP transceivers

If not already installed, install the SFP transceivers that will be used to connect your appliance to the network.

Caution: Do not install or remove SFP transceivers while fiber-optic cables are still attached. This can cause damage to the cables, cable connectors, and optical interfaces. It may also prevent the transceiver from latching correctly into the socket.

Note: Installing and removing SFP transceivers can shorten their life. Do not install or remove transceivers more than is necessary.



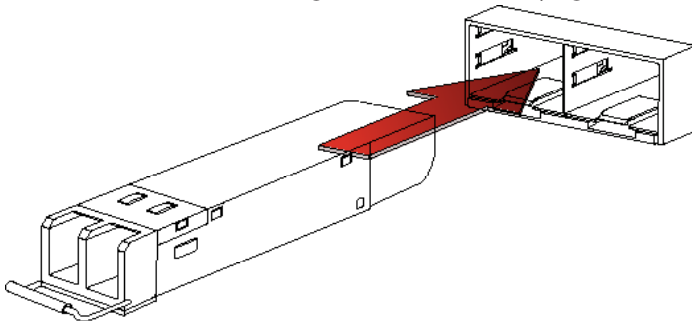
To install the SFP transceivers

1. On the appliance's front panel, remove the caps from SFP cage sockets.
2. Position the SFP transceiver in front of the cage socket so that the extraction lever is level with the socket latch.

Note: SFP cage socket orientation may vary. Ensure that the SFP transceiver module is correctly oriented.

3. Holding the sides of the SFP transceiver, gently slide it into the cage socket.

Caution: Do not force SFP transceivers into cage slots. Force can cause damage. If the transceiver does not easily slide in and click into place, it may not be aligned correctly or may be upside down. If this happens, remove the SFP transceiver, realign or rotate it, and try again.

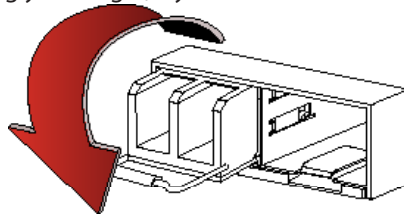


4. Press the transceiver firmly into the cage socket with your thumb until it clicks, indicating that it is latched.
5. To verify that the transceiver is latched, grasp its sides and try to pull it out without lowering the extraction lever.
If you can remove the transceiver, it was not latched correctly, and could become accidentally dislodged. Try again.

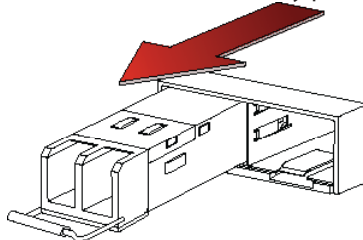
To remove the SFP transceivers

1. Disconnect the fiber optic cable from the transceiver connector.
2. To prevent dust from entering the optical bores, insert clean plugs.
3. To eject the transceiver, pull the extraction lever out and down.

Tip: Instead of using your finger, try a small flat-head screwdriver.



4. Hold the sides of the transceiver and carefully pull it from the cage socket.



5. Replace the cap on the SFP cage socket.
6. Put the removed SFP transceiver into an anti-static bag.

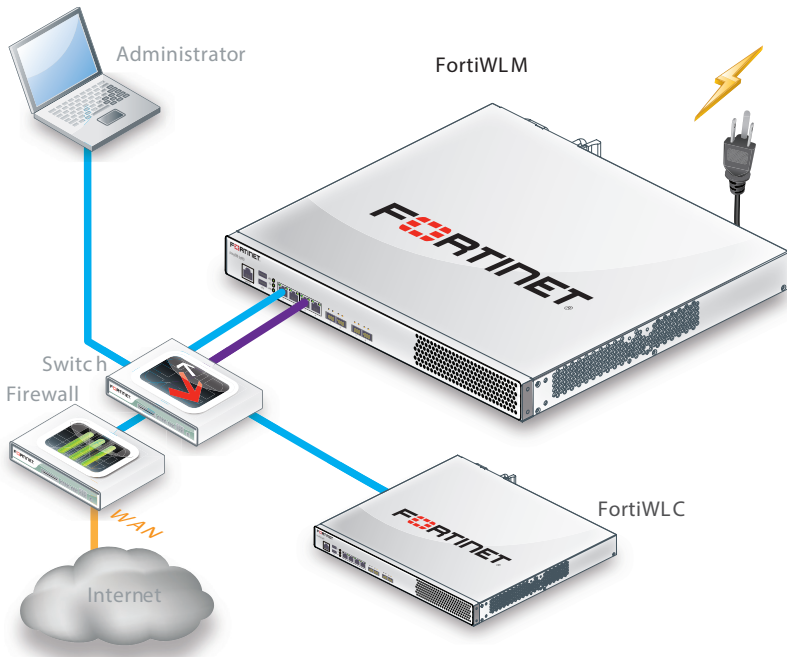
Connecting to FortiWLM

If the appliance has a redundant power supply, connect each power cable to a different power source.

IMPORTANT	<ul style="list-style-type: none">• FortiWLM-1000D is supported ONLY from FortiWLM 8.0-SR1 and later.• SFP support is not available in the 8.0-SR1 release.
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You can configure FortiWLM for your network through a connection to command line interface (CLI).

Connect FortiWLM only to your computer until you finish setup. (If you place FortiWLM in your network before FortiWLM is set up, traffic could be interrupted until setup is complete.) Detailed instructions are in the [Network Manager User Guide](#).



To connect to the CLI via serial console

Requires: Terminal emulator such as PuTTY, Tera Term, or a terminal server

The Software is pre-installed on the flash drive of the FortiWLM before it is shipped. The FortiWLM hardware must be installed on the network by following these steps::

1. If you are rack mounting the unit, attach the ears and then install the unit in a rack and ensure that you Ground yourself.
2. Connect two (FortiWLM-1000D) power cables to the FortiWLM and plug them into outlets. The power light should go on.
3. Connect the Ethernet cable in between one of the front facing Ethernet ports to switch or router.
4. Using the provided console cable, connect a PC (with terminal emulation software) to the FortiWLM (see Figure 5 on page 11).
5. From the PC terminal emulation program (Hyperterminal, Minicom, etc.), set the software configuration as follows:
 - Baud rate: 115200
6. Data Bits: 8
 - Parity: None
 - Stop Bits: 1
 - Flow Control: None
7. To power on, connect the FortiWLM-1000D to a power source. If only one of the FortiWLM-1000D power cables is connected you hear an audible alarm and the I/O LED on the front of the unit turns red.
8. Watch the boot sequence on the PC. When the login prompt appears, you are connected. Log on with the default name and password:
 - admin
 - admin
9. Run the setup command through the command line interface. The setup command lists the following parameters of the FortiWLM to be configured:
 - host name
 - admin password
 - guest password
10. By default, the FortiWLM IP address is configured to DHCP
11. To configure networking, select the option yes to modify the network settings.
12. Select the option yes to configure the DHCP Addressing and option no to configure the Static Addressing. The following parameters of the FortiWLM must be configured for static addressing:

- IP address
- netmask
- default gateway (IP)
- DNS server
- DNS domain
- Time zone settings

13. Synchronize the time with the NTP (Network Time Protocol) server

14. When asked if you want to commit the settings and reboot, answer yes.
The system is rebooted.

15. See the IP address using the show nms command.

Setup is now complete.

Shutting down



Always properly shut down the FortiWLM appliance's operating system before unplugging the appliance. This causes it to finish writing buffered data, and to slow and park the hard disks.

Do not unplug the FortiWLM appliance before halting the operating system. Failure to shut down correctly could cause data loss and hardware problems.

Should it become necessary to power off the server, use the `poweroff nms-server` CLI command. This command gracefully brings the server down to a state where the power can be unplugged.

Registering your product

Register

You must register the product with Fortinet in order to receive:

- Technical support • Software updates

Enregistrer

Vous devez enregistrer le produit pour recevoir:

- Support technique • Mises-à-jour logiciel

Registra

La registrazione vi permette di usufruire di:

- Supporto tecnico • Aggiornamenti software

Registrar

Debe registrar el producto para recibir:

- Apoyo técnico • Actualizaciones del software

登録のお願い

下記フォーティネットからのサービスを受けるために、ご購入製品の登録が必要です。

- テクニカルサポート • ソフトウェアのアップデート

请马上注册

您的飞塔产品

您在注册以后才能得到技术支持, 软件升级



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

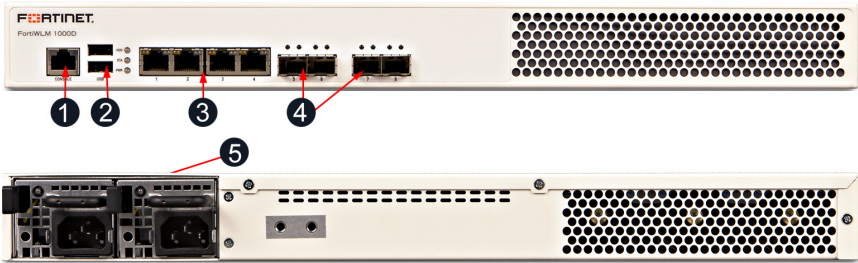
Toll free: 1 866 648 4638

Phone: 1 408 486 7899

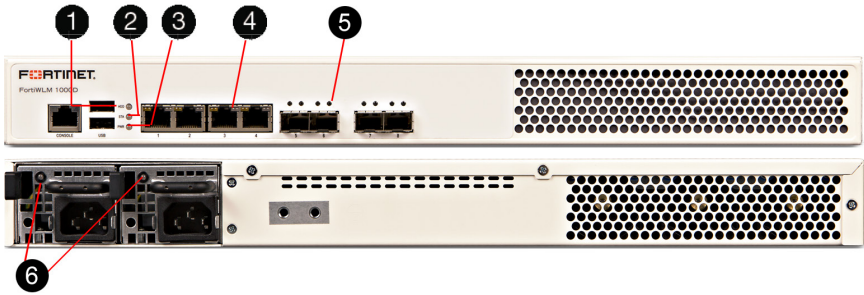
Fax: 1 408 235 7737

Email: register@fortinet.com

Ports & LEDs



#	Interface	Type	Protocol	Description
1	Console	RJ-45	RS-232 serial	Connection to the management computer. 9600 bps access to the CLI.
2	USB Ports	USB-B	USB 2.0	-
3	Ethernet Ports 1-4	RJ-45	Gigabit Ethernet	Connections to your network & the Internet.
4	SFP Ports 5-8	SFP LX or SX	Gigabit Ethernet	Connections to your network & the Internet. Small form-factor pluggable (SFP) transceiver.
5	Power Connection(s)			100 - 240 V AC 50 - 60 Hz 5 - 3 A



#	LED	State	Description
1	HDD (top)	Flashing Amber	Hard drive read or write activity.
		Off	System is normal.
2	Status (middle)	Green	Minor system alarm.
		Red	System failure.
3	Power (bottom)	Green	The appliance is receiving power.
4	Ethernet Ports Activity (left)	Flashing Amber	Port is transmitting & receiving data.
		Off	No link detected.
	Ethernet Ports Speed (right)	Green	Port is connected at 1 Gbps.
		Amber	Port is connected at 100 Mbps.
	SFP Ports Activity (left)	Off	Port is connected at 10 Mbps or is not in use.
		Flashing Amber	Port is transmitting & receiving data.
5	SFP Ports Speed (right)	Off	No link detected.
		Green	Port is connected at 1 Gbps.
6	Power supply status	Green	Power supply is operating normally.
		Off	Appliance is off.

Cautions and warnings

Environmental specifications

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

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

Elevated Operating Ambient — If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature (T_{ma}) specified by the manufacturer.

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

Reduced Air flow — Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.

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

Mechanical Loading — Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.

Chargement Mécanique — Montage de l'équipement dans le rack doit être telle qu'une situation dangereuse n'est pas liée à un chargement mécanique inégal.

Circuit overloading — Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

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 l'équipement.

Reliable earthing — Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g. use of power strips).

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

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

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

Safety

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'appliquent aux batteries.

警告

本電池如果更換不正確會有爆炸的危險
請依製造商說明書處理用過之電池

Caution: Disconnect power supply cords before servicing.

Attention: Débranchez les cordons de la source d'alimentation avant tout entretien.

Regulatory notices

Federal Communication Commission (FCC) – USA

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

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy, and if it is not installed and used in accordance with the instruction manual, it may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

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

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

CAN ICES-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 Regulations of the Canadian Department of Communications.

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

European Conformity (CE) – EU

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



Japan

Voluntary Control Council for Interference (VCCI)

この装置は、クラスA情報技術装置です。この装置を家庭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。V C C I – A

Product Safety Electrical Appliance & Material (PSE)

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Taiwan

Bureau of Standards Metrology and Inspection (BSMI)

這是甲類的資訊產品，在居住的環境中使用時，可能會造成射頻干擾，在這種情況下，使用者會被要求採取某些適當的對策。

China

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

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