



Juniper Networks

Security Products Safety Guide



For translated versions of this guide, refer to the ScreenOS Documentation CD (shipped with your product) or to the Juniper Networks Technical Documentation website.

Juniper Networks, Inc.
1194 North Mathilda Avenue
Sunnyvale, CA 94089
USA
408-745-2000
www.juniper.net

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FCC Statement

The following information is for FCC compliance of Class A devices: 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. The equipment generates, uses, and can radiate radio-frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case users will be required to correct the interference at their own expense.

The following information is for FCC compliance of Class B devices: The equipment described in this manual generates and may radiate radio-frequency energy. If it is not installed in accordance with NetScreen's installation instructions, it may cause interference with radio and television reception. This equipment has been tested and found to comply with the limits for a Class B digital device in accordance with the specifications in part 15 of the FCC rules. These specifications are designed to provide reasonable protection against such interference in a residential installation. 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.
- Consult the dealer or an experienced radio/TV technician for help.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.

Caution: Changes or modifications to this product could void the user's warranty and authority to operate this device.

Disclaimer

THE SOFTWARE LICENSE AND LIMITED WARRANTY FOR THE ACCOMPANYING PRODUCT ARE SET FORTH IN THE INFORMATION PACKET THAT SHIPPED WITH THE PRODUCT AND ARE INCORPORATED HEREIN BY THIS REFERENCE. IF YOU ARE UNABLE TO LOCATE THE SOFTWARE LICENSE OR LIMITED WARRANTY, CONTACT YOUR JUNIPER NETWORKS REPRESENTATIVE FOR A COPY.

Table of Contents

Safety Recommendations and Warnings	1
Definition of Safety Warning Levels	2
Safety Warnings.....	2
Installation.....	2
Power Disconnection.....	2
User-Serviceable Parts	3
Circuit Breaker—Maximum Voltage.....	3
SELV Circuit.....	3
Lightning Activity.....	3
Lithium Battery.....	3
General Site and Installation Requirements.....	4
On-site Precautions	4
Equipment Rack-Mounting	5
Power Considerations	5
Power Cable Warning (Japanese).....	6
AC Power	6
DC Power	7
Redundant Power.....	7
Handling Security Devices.....	7
Preventing ESD.....	7
Working with Lasers.....	8
Preventing EMI.....	9
Covering Empty Slots	9
Jewelry Removal.....	9
Compliance Statements	9
Industry Canada Statement	9
Federal Communication Commission Interference Statement.....	10
Taiwan DGT.....	11
VCCI Compliance.....	11
Wireless Connections	12
Product Reclamation and Recycling Program	12

Safety Recommendations and Warnings



NOTE: For translated versions of this guide, refer to the ScreenOS Documentation CD (shipped with your product) or to the Juniper Networks Technical Documentation website at www.juniper.net/techpubs.

The instructions in this guide warn you about situations that could cause bodily injury. This guide contains general safety recommendations and warnings. For more specific guidelines about installing or using a security device, refer to the Juniper Networks hardware installation guide for your product.

Before working on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. Keep these important guidelines in mind when installing or manipulating a Juniper Networks security device:

- *Always* disconnect all power supply connections before:
 - removing a chassis
 - changing a fuse
- Locate the emergency power-off switch for the area where you are working.
- Allow adequate air circulation and avoid the devices tipping over, by not stacking or balancing the equipment on other devices. Ensure the installation is securely in place.
- Look carefully for possible hazards in the work area, such as moist floors, ungrounded power extension cables, and missing safety grounds.
- Do not perform any action that creates a potential hazard to people or makes the equipment unsafe.
- Do not work alone if potentially hazardous conditions exist.

Definition of Safety Warning Levels

This manual uses the following three levels of safety warnings:

NOTE: You might find this information helpful in a particular situation, or might otherwise overlook it.



CAUTION: You need to observe the specified guidelines to avoid minor injury or discomfort to you, or severe damage to the device.



WARNING: This symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents.

Safety Warnings

For your protection, and the protection of people around you, ensure that you adhere to the following set of safety warnings.

Installation



WARNING: Read the cabling instructions before connecting the security device to its power source, refer to the Juniper Networks hardware installation guide for your product.

Power Disconnection



WARNING: Before working on a device that has an On/Off switch, turn the power OFF and disconnect the power cord to all power supplies.

For DC power supplies, locate the circuit breaker on the panel board that services the DC circuit, switch the circuit breaker to the OFF position, and tape the switch handle of the circuit breaker in the off position.

User-Serviceable Parts



WARNING: The chassis of all devices is tamper proof and should never be opened under any circumstances. Doing so will void the warranty.

Some devices have user-serviceable parts such as fuses or modules, which can be accessed externally. The user can replace the fuse, remove the modules, and replace them when necessary. However, the modules must be returned to the manufacturer for service or replacement. For more information on user-serviceable parts, refer to the installation guide that shipped with your product.

Circuit Breaker—Maximum Voltage



WARNING: The device relies on the building's safety features for protection against short-circuit, over-current, and earth (grounding) fault. Consequently, ensure that the building's safety features are properly rated to protect the device. Depending on which type of power—AC or DC—the device uses, the phase conductor (or all current-carrying conductors) should use a fuse or breaker that has the MAXIMUM voltage specified for the device. Refer to the Juniper Networks hardware installation guide for your product.

SELV Circuit

Juniper Networks security devices support Ethernet 10BaseT, 100BaseT, 1000BaseT, serial, console, and auxiliary ports, which contain safety extra-low voltage (SELV) circuits. To find out which cable to use with which interface, refer to the Juniper Networks installation guide that shipped with your product.



CAUTION: Do not connect the Ethernet 10BaseT, 100BaseT, or 1000BaseT ports to a telephone line or any Telco line (e.g., T-1, T-3, RJ-48 lines).

Lightning Activity



WARNING: Do not work on the device during periods of lightning activity. More specifically, do not connect or disconnect cables, as the device can function as a conduit.

Lithium Battery



WARNING: There is a danger of explosion if the battery is incorrectly replaced. Return the device to the manufacturer for battery replacement. Moreover, the chassis should never be opened under any circumstances. Doing so will also void the warranty.

General Site and Installation Requirements



CAUTION: For the safe installation and operation of your device, ensure that your site is properly prepared before beginning the hardware installation.

- Check the power at your site to ensure that you are receiving “clean” power (free of spikes and noise). Install a power conditioner if necessary.
 - Choose a site that maintains an ambient temperature of 32 to 104°F (0 to 40°C). The security device is intended for use in a normal office environment. For more extreme conditions, verify that temperature, humidity, and power conditions meet the specifications for each Juniper Networks platform. For specifications, refer to the installation guide that shipped with your product.
 - The device relies on the building’s safety features for protection against short-circuit, over-current, and earth (grounding) fault. Ensure that the building’s safety features are properly rated to protect the device.
 - Ensure that the device is installed in a secure location where access to the device is limited to authorized personnel.
-

On-site Precautions

NOTE: You can place the security device on a desktop or mounted in a rack. The location of the chassis and the layout of your equipment rack or wiring room are extremely important for proper system operation. Equipment placed too close together will cause inadequate ventilation, besides rendering areas of the device inaccessible for system maintenance during any system malfunctions and shutdowns.

When planning your site layout and equipment locations, follow the precautions described below to help avoid equipment failures and reduce the possibility of environmentally caused shutdowns. If you are experiencing shutdowns or unusually high errors with your existing equipment, these precautions may help you isolate the cause of the failures and prevent future problems.

- Ensure that the room in which you operate your system has adequate air circulation. Electrical equipment generates heat. Natural air temperature might not be sufficient to cool the equipment to acceptable operating temperatures without an additional ventilation system.
 - Choose a site with a dry, clean, well-ventilated and air-conditioned area.
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Equipment Rack-Mounting

NOTE: The following information will help you plan an acceptable equipment rack configuration.

- Do not stack or balance the equipment on other devices to avoid tripping over cords and cables, and to allow air circulation. Verify that the installation is secure.
 - Install the device in an open rack whenever possible. If you install the device in an enclosed rack, ensure that it has adequate ventilation. Ensure that the rack is not overly congested because each unit generates heat. An enclosed rack should have louvered sides and a fan to provide cooling air.
 - When mounting a chassis in an open rack, ensure that the rack frame does not block the intake or the exhaust ports. If the chassis is installed on slides, check the position of the chassis when it is seated all the way into the rack.
 - In an enclosed rack with a ventilation fan in the top, excessive heat generated by equipment near the bottom of the rack can be drawn upward and into the intake ports of the equipment above it in the rack. Ensure that you provide adequate ventilation for equipment at the bottom of the rack.
 - Baffles can help to isolate exhaust air from intake air, which also helps to draw cooling air through the chassis. The best placement of the baffles depends on the airflow patterns in the rack, which can be found by experimenting with different arrangements.
-

Power Considerations

AC and DC power supplies, and an optional redundant power supply, are available for some security devices.



CAUTION: Do not overload the wiring; be careful when connecting devices to the supply circuit.

NOTE: Refer to your hardware installation guide for AC and DC power specifications and cabling information, and for redundant power supply availability.

Always use the power cable that is shipped with the product. Do not use a power cable for another product.

Power Cable Warning (Japanese)



注意

付属の電源コードセットはこの製品専用です。
他の電気機器には使用しないでください。

The preceding translates as follows:

Warning

The attached power cable is only for this product. Do not use the cable for another product.

AC Power



WARNING: The devices are designed for connection to TN power systems. A TN power system is a power distribution system with one point connected directly to the ground. The exposed conductive parts of the installation are connected to that point by protective ground conductors.

Ensure that the plug-socket combination is accessible at all times, because it serves as the main disconnecting device.

Ensure that the device is connected to an AC power source equipped with a surge protection device.

DC Power



WARNING: Connect DC-input power supplies only to a DC power source that complies with the safety extra-low voltage (SELV) requirements in the UL 60950-1, CSA 60950-1, EN 60950-1, and IEC 60950-1 standards.

Incorporate a freely accessible two-poled disconnect device in the fixed wiring.

Ensure that there is no power in the DC circuits before installing or removing power supplies. As a precautionary measure, you can tape the switch handle of the DC circuit breaker in the off position.

Use only copper conductors to connect to a DC terminal block.

Use approved wiring terminations, such as closed-loop or spade-type lugs, when stranded wiring is required. These terminations should be the appropriate size for the wires and should clamp both the insulation and the conductor.

Ensure that no exposed portion of the DC-input power source wire extends from the terminal block plug. An exposed wire can conduct a harmful level of electricity. If you remove the cover on the DC terminal block for any reason, make sure that you replace the cover when you are done.

Redundant Power

If your security device includes an optional redundant power supply, connect each of the two power supplies to different input power sources. Failure to do so makes the device susceptible to total power failure in the event that one of the power supplies fails.



WARNING: If you need to de-energize the device to perform servicing, disconnect both power supplies. Otherwise, system components, such as a plug-in I/O card, could be damaged.

Handling Security Devices

Preventing ESD

Electrostatic discharge (ESD) damage occurs when electronic cards or components are mishandled and can result in complete or intermittent failures. Note the following guidelines before you install or service the device.



CAUTION: Always wear an ESD-preventive wrist or ankle strap when handling electronic components. Connect one end of the strap to an ESD jack or an unpainted metal component on the system (such as a captive installation screw).

Always handle cards by the faceplates and edges only; avoid touching the printed circuit board and connector pins.

Always place any removed component on an antistatic surface or in a static shielding bag.

Avoid contact between the cards and clothing. The wrist strap only protects the card from ESD voltages on the body; ESD voltages on clothing can still cause damage.

NOTE: As a precautionary measure, periodically check the resistance value of the antistatic strap. The measurement should be between 1 and 10 megohms (Mohms).

Working with Lasers

Some Juniper Networks security devices are equipped with fiber-optic ports, which emit radiation that may be harmful to the human eye. Be aware of the following.

Fiber-optic ports (for example, GBIC and mini-GBIC) are considered Class 1 laser or Class 1 LED ports.



WARNING: Class 1 Laser product.



WARNING: Class 1 LED product.



WARNING: Do not stare into the laser beam or view it directly with optical instruments.

To avoid exposure to radiation, do not stare into the aperture of a fiber-optic port. Invisible radiation might be emitted from the aperture of the port when no fiber cable is connected.

These products have been tested and found to comply with Class 1 limits of IEC 60825-1, IEC 60825-2, EN 60825-1, EN 60825-2, and 21CFR1040.

Preventing EMI

NOTE: When you run wires for any significant distance in an electromagnetic field, electromagnetic interference (EMI) can occur between the field and the signals on the wires. Note that:

- Bad plant wiring can result in radio frequency interference (RFI).
 - Strong EMI, especially when it is caused by lightning or radio transmitters, can destroy the signal drivers and receivers in the system, and can even create an electrical hazard by conducting power surges through lines and into the system.
-

To prevent and remedy strong EMI, consult RFI experts.

Covering Empty Slots

Ensure that all cards, faceplates, and covers are in place. Blank faceplates and cover panels are used to:

- Prevent exposure to hazardous voltages and currents inside the chassis
- Help contain electromagnetic interference (EMI) that might disrupt other equipment
- Direct the flow of cooling air through the chassis

Jewelry Removal



WARNING: Before working on equipment that is connected to power lines, remove jewelry, including rings, necklaces, and watches. Metal objects heat up when connected to power and ground and can cause serious burns or weld the metal object to the terminals.

Compliance Statements

Industry Canada Statement

The following is applicable to devices with wireless interfaces:

Operation is subject to the following two conditions:

1. This device may not cause interference, and
2. This device must accept any interference, including interference that may cause undesired operation of the device

This device has been designed to operate with an antenna having a maximum gain of 4 dB. Antenna having a higher gain is strictly prohibited per regulations of Industry Canada. The required antenna impedance is 50 ohms.

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the EIRP is not more than required for successful communication.

To prevent radio interference to the licensed service, this device is intended to be operated indoors and away from windows to provide maximum shielding.

Equipment (or its transmit antenna) that is installed outdoors is subject to licensing.

Federal Communication Commission Interference Statement

The following is applicable to devices with wireless interfaces:

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 a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, 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 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.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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

IMPORTANT NOTE:

FCC Radiation Exposure Statement: This equipment complies with FCC 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.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Juniper Networks declared that the 5GT-ADSL Wireless device is limited in CH1 ~ 11 from 2400 to 2483.5 MHz by specified firmware controlled in the USA.

Taiwan DGT

The following is applicable to devices with wireless interfaces.

- (1) 經審驗合格之射頻電信終端設備，非經許可，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。
- (2) 射頻電信終端設備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。所謂合法通信，係指依電信法規定作業之無線電信。
- (3) 輸入、製造射頻電信終端設備之公司、商號或其使用者違反本辦法規定，擅自使用或變更無線電頻率、電功率者，除依電信法規定處罰外，電信總局並得撤銷其審驗合格證明。

VCCI Compliance

The following VCCI compliance information applies to security products that meet VCCI Class A or Class B limits. Please refer to the specifications section in the Juniper Networks hardware installation guide for your product to determine whether the product meets Class A or Class B limits.

クラスA情報技術装置

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラス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。

The preceding translates as follows:

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.

クラスB情報技術装置

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスB情報技術装置です。この装置は、家庭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。

The preceding translates as follows:

This is a Class B product based on the standard of the Voluntary Control Council for Interference by Information Technology Equipment (VCCI). If this product is used near a radio or television receiver in a domestic environment, it may cause radio interference. Install and use the equipment according to the instruction manual.

Wireless Connections



WARNING: In countries other than the United States or Japan, you must set the correct country code with the `set wlan country-code` command to avoid violating local radio spectrum laws. This command sets the selectable channel range and transmit power level so that a WLAN connection can be established.

Product Reclamation and Recycling Program

Juniper Networks is committed to environmentally responsible behavior. As part of this commitment, we work to comply with environmental standards such as the European Union's *Waste Electrical and Electronic Equipment (WEEE) Directive* and *Restriction of Hazardous Substances (RoHS) Directive*.

These directives and other similar regulations from countries outside the European Union regulate electronic waste management and the reduction or elimination of specific hazardous materials in electronic products. The WEEE Directive requires electrical and electronics manufacturers to provide mechanisms for the recycling and reuse of their products. The RoHS Directive restricts the use of certain substances that are commonly found in electronic products today. Restricted substances include heavy metals, including lead, and poly-brominated materials. The RoHS Directive, with some exemptions, applies to all electrical and electronic equipment.

In accordance with Article 11(2) of Directive 2002/96/EC (WEEE), products put on the market after 13 August 2005 are marked with the following symbol or include it in their product documentation: a cross-out wheeled waste bin with a bar beneath.



Juniper Networks provides recycling support for our equipment worldwide to comply with the WEEE Directive. For recycling information, send e-mail to recycling@juniper.net indicating the type of Juniper Networks equipment that you wish to dispose of and the country where it is currently located, or contact your Juniper Networks account representative.

Products returned through our reclamation process are recycled, recovered, or disposed of in a responsible manner. Our packaging is designed to be recycled and should be handled in accordance with your local recycling policies.