

Cisco TelePresence MSE 8000 safety and compliance information

On this page:

[Safety information symbols](#)

[Safety precautions and general hazards](#)

[Operating guidelines](#)

[Safety warnings](#)

[SELV compliance](#)

[Power connection](#)

[Technical specifications](#)

[Anti-static precautions](#)

[Compliance information](#)

[WEEE information](#)

[VCCI statements](#)

[MSE 8321 \(ISDN blade\) information](#)

[MSE 8310 \(ISDN blade\) information](#)

Safety information symbols



A note provides information, which you should consider.



A caution carries information about procedures or events which if not considered may cause damage to the data or hardware of your system.



A warning carries information about procedures, which must be followed to reduce the risk of electric shock and danger to personal health.



This symbol, where it appears, indicates that there is a hazard due to moving fan blades.



The book symbol, where it appears on the unit, indicates that you must read the manual (this safety information and the Getting Started Guide that accompanied the unit).

Safety precautions and general hazards

The following general safety precautions must be observed during all phases of operation, service and repair of this equipment. Failure to comply with these precautions or with specific warnings elsewhere in this manual violates safety standards of design, manufacture and intended use of the equipment. Cisco assumes no liability for the customer's failure to comply with these requirements.



If the MSE 8000 is installed in a closed or multi-unit rack assembly, the ambient temperature may be greater than the room ambient temperature, therefore consideration should be given to installing the MSE 8000 in an environment compatible with the maximum rated ambient temperature specified in the [Operating Environment](#) section of this information.



The installation of the MSE 8000 in a rack should be such that the amount of airflow required for safe operation is not compromised.



Mounting of the MSE 8000 in a rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.



The MSE 8000 must be installed in a restricted location. This is defined as an area intended for qualified or trained personnel only with access controlled by a locking mechanism such as a key.



The MSE 8000 when fully loaded with blades can exceed 100kg (220 pounds) in weight. The MSE 8000 weighs approximately 50kg (110 pounds) when empty of blades and fan trays. Two people using an appropriate lifting device are required to install the MSE 8000 system or remove it from a rack safely.



All operations for the installation can only be performed within a restricted access location [see above for definition] by suitably trained service personnel. The MSE 8000 has no user-replaceable or user-installed parts. **User servicing is not permitted.**



The MSE 8000 must be placed in the lowest available place within a rack to provide stability. If the rack provides stabilizers they must be used during installation.



The MSE 8000 uses front-to-rear cooling fans. To ensure adequate cooling, allow a minimum of 91.4cm (36 inches) in front and at the rear of the MSE 8000 system. Allow the same distance for installation and servicing. Do not block the fan intake or outlet. Ensure that the fan intake is not placed inline with the outlet from any other fan or convection cooled device.



Ensure that the rack has been installed in the building in accordance with the manufacturer's instructions and that it is strong enough to accommodate the weight of the MSE 8000 and any other units placed within it.



Before un-installing the unit from the rack, all blades must be removed from the chassis and all power connections must be removed from the MSE 8000.



You must install either a blade or a blanking blade in each of the ten slots in the chassis.



Each power cable is required to have its own circuit breaker.



All circuit breakers must be in the OFF position before installing or removing the power connections.



For power redundancy, each power feed should be powered from a separate power source.



Only specified hot swap operations are allowed with the power connected. For all other actions, you must either disconnect the power or have the circuit breakers in the off position. All circuit breakers must be OFF to remove power from the MSE 8000.



Warning! Hazardous moving fan blades. Keep fingers and other body parts away. If fan tray is powered, wait 20 seconds, after operating retaining latches, before further removing the fan tray.



The MSE 8000 is capable of accepting -40.5V DC to -72V DC in abnormal conditions. It is highly recommended that only -48V DC to -60V DC is used.



Any DC power cable supplied with an AC power supply unit for the MSE 8000 is considered an internal cable to the MSE 8000 system.



The MSE 8000 powering scheme does not require a reference to earth from the negative or return lines. The conditions for powering the MSE 8000 are such that the negative terminal must have a more negative voltage than the return terminal, and that power inputs A and B must each provide identical powering schemes.



Fuses on the system blades and fan trays are not operator or service personnel replaceable parts.

Servicing the MSE 8000 (Factory Use Only)

Fuse Ratings:

All except 8510/ 8710 Blades:	Fast acting, 6.3A, 250VAC, Breaking Capacity 1500A;
8510/ 8710 Blades:	Fast acting, 10A, 250VAC, Breaking Capacity 1500A,

Fuse Identification:

J7, J8, J9, J10 :	Blade fuses [except blades 8510/ 8710] located on the power boards of each blade;
J9, J10, J11, J12 :	Fan tray fuses, located on the power boards of each fan trays;
F1, F2, F3, F4:	MSE 8510/MSE 8710 blades, located on the power board of each blade;



MSE 8000 fuses are not customer or service personnel field-replaceable parts, and must only be replaced by the original manufacturer, or a Cisco Systems approved alternative, under factory conditions.

The safety precautions listed below represent warnings of certain dangers of which Cisco is aware. You, as the user of the product, should note these warnings and all other safety precautions necessary for the safe operation of the equipment in your operating environment.

Operating guidelines

- Risk of electrical shock if opened. Never operate with cover removed.
- No user serviceable parts.
- Only trained and qualified personnel should install or replace this equipment.
- Rack-mount following the instructions in the MSE 8000 Getting Started Guide that accompanied the unit.
- After installing a fan tray and operating the retaining latches, tighten the locking screws in each latch [1 per latch] to ensure that the moving fan blades are not accessible without the use of a tool.

Safety warnings

- Only trained and qualified personnel should be allowed to install or replace this equipment.
- Read the installation instructions in the Cisco TelePresence MCU 5300 Series Getting Started Guide that accompanied the unit before you connect the system to its power source.

- The MSE 8000 does not contain any replaceable batteries and the internal batteries are designed to last the lifetime of the system



Never defeat the earth (ground) conductor or operate the equipment in the absence of a suitably installed earth conductor. Contact the appropriate electrical inspection authority or an electrician if you are uncertain that suitable earthing is available.

- Ultimate disposal of this product should be handled according to all national laws and regulations



Do not operate the unit with the cover removed. Operating the unit without the cover in place will invalidate the safety approvals and pose a risk of fire and electrical hazards.



Do not work on the DC power lines while the system is connected to power.



Do not work on the system or connect or disconnect cables during periods of lightning activity.



To avoid electric shock, do not connect safety extra-low voltage (SELV) circuits to telephone-network voltage (TNV) circuits. LAN ports contain SELV circuits, and WAN ports contain TNV circuits. Some LAN and WAN ports both use RJ-45 connectors. Use caution when connecting cables.

- The console, Ethernet and ISDN ports on the ISDN module are SELV interfaces. ISDN lines where they enter the building are usually classified as TNV. These lines should never be connected directly to the ISDN module. Use an isolating device such as a Network Termination Unit (NTU) or Channel Service Unit (CSU) between off-premise ISDN lines and the ports on the ISDN module



This equipment is to be installed and maintained by service personnel only as defined by AS/NZS 60950 Service Person.



To prevent bodily injury when mounting or servicing this unit in a rack, you must take special precautions to ensure that the system remains stable. The following guidelines are provided to ensure your safety:

- This unit should be mounted at the bottom of the rack if it is the only unit in the rack
- When mounting this unit in a partially filled rack, load the rack from the bottom to the top with the heaviest component at the bottom of the rack
- If the rack is provided with stabilizing devices, install the stabilizers before mounting or servicing the unit in the rack



Hazard due to moving fan blades when powered fan tray is removed. After loosening the locking screws and operating the retaining latches, wait 20 seconds before any further fan tray removal.

Safety requirements

For protection, observe the following safety precautions when setting up the equipment:

- Follow all cautions, warnings, and instructions marked on the equipment
- Ensure that the voltages and frequency rating of your power source match the voltage and frequency inscribed on electrical rating label attached to the equipment
- Never push objects of any kind through openings in the equipment. They may touch dangerous voltage points or short components, resulting in fire, electric shock, or damage to your equipment
- Refer servicing of equipment to qualified personnel

Lifting



Owing to the weight of the system, do not attempt to install it in or remove it from a rack without an appropriate lifting device.

Modifications to equipment



Because of the danger of introducing additional hazards and/or the possibility of compromising emissions compliance, do not install substitute parts or perform any unauthorized modification of the equipment. Contact your local support organization for service and repair to ensure that safety features are maintained.

Cisco is not responsible for regulatory compliance of a modified Cisco product.

SELV compliance

The safety status of I/O connections complies with SELV requirements.

Power connection

The disconnect devices for servicing are defined as the circuit breakers in all power supply conductors.



The Cisco MSE 8000 must be installed in a restricted access location. The IEC, EN and UL 60950 define a restricted access location as an area intended for qualified or trained personnel only and having access controlled by a locking mechanism, such as a key lock or an access card system.



The MSE 8000 is shipped with protective earthing terminals on the rear of the chassis. To reduce the risk of electric shock, always ensure that these terminals are connected to earth within the installation.

Connect a protective earth cable to the protective earth terminals on the rear of the chassis. The protective earth terminals are marked with the earth symbol. Connect the other end of this earth cable to a true earth or the same earth as other equipment within the restricted location. The protective earth connection must comply with applicable national, local, and site regulations.



The earth symbol indicates the location on the unit of the protective earthing terminals.

DC connections to the MSE 8000

This section describes connecting a DC power feed to the Cisco MSE 8000.

Before attempting to connect power to the MSE 8000, make sure of the following conditions:

- The chassis is connected to protective earth as described above
- There is a circuit breaker in each power supply conductor that is correctly rated to comply with local and international regulations
- All circuit breakers are in the OFF or disconnected position
- The DC power lines are capable of taking the maximum current and voltage for the MSE 8000 system and only double hole lugs will be used to connect the DC cables to the terminals of the MSE 8000
- The DC power supply gives the correct DC voltage -48V DC to -60V DC
- The two fan trays are installed
- Every slot in the chassis has either a blade or blanking blade installed

To connect DC power cables to the MSE 8000:

1. Using a TORX T20 screwdriver, remove the four screws that secure the transparent cover at the rear of the chassis; remove the transparent cover.
2. Connect the negative and return power cables to the MSE 8000 DC terminals.



The DC terminals of the MSE 8000 accept double hole lug connectors on a 3/4 inch (19.1mm) spacing. The diameter of the terminals is 1/4 inch (6.4mm).

3. Tighten all nuts to a torque of 4 Nm (35 inch pounds)
4. Connect the DC cables to the circuit breakers according to the manufacturer's instructions.
5. Ensure all the power connection terminals are connected at the correct polarity and torque.
6. Refit the transparent cover before switching on the power supply or engaging the circuit breakers in the ON position.



To comply with the NEC regulations in North America, 90°C 2 AWG copper cables must be used. Where other international regulations apply, 4 AWG or 25mm² copper cables can be used.



The circuit breakers are the only means of disconnecting power from the MSE 8000.

Technical specifications

Power requirements

Table 1: Cisco MSE 8000 ratings

Rating	Value
Nominal voltage	-48V DC to -60V DC
Maximum input current per cable	85A at -48V DC
Circuit breaker (NEC requirement)	125A
Circuit breaker (other than NEC)	100A

Operating environment

The Cisco MSE 8000 is for indoor controlled environment use only.

The Cisco MSE 8000 must only be used within the following environmental conditions:

Table 2: Operating environment

Environment	Temperature	Humidity
Operating environment	0°C to 35°C	10% to 95% (non-condensing)
Non-operating environment	-10°C to 60°C	10% to 95% (non-condensing)
Optimum operating environment	21°C to 23°C	45% to 50% (non condensing)

Anti-static precautions



Wear an anti-static wrist strap and use an ESD-protected mat when handling components.

When servicing or removing components or connections, first attach an anti-static wrist strap with a banana plug connection to the ESD grounding socket provided on the top front of the unit.

The ESD grounding socket is marked with the following symbol:



ESD grounding socket symbol

Compliance information

USA — Electromagnetic Compatibility Information

System Classes

In the United States, the Federal Communications Commission (FCC) governs the levels of electromagnetic emissions from a digital device. Electromagnetic emissions can interfere with radio and television transmission. To reduce the risk of harmful interference, the FCC has established requirements for manufacturers of digital devices.

FCC statement

FCC Class A

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.

To comply with FCC Regulations Part 15 when using a Cisco MSE 8000 installed with any Cisco MCU MSE 8510 blades a suitable closed-door cabinet must be used.

European Union Notice

The Declaration of Conformity is available on request.

Products with the CE marking comply with the protection requirements of the following EU Directives:

- EMC Directive 2004/108/EC by application of the harmonized standard.



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 to correct this interference.

- Low Voltage Directive 2006/95/EC, by application of the harmonized standard.

To ensure compliance

To ensure compliance, the system must be reliably connected to earth using the unit's earth terminals.

Canada — Electromagnetic Compatibility Information

Communications Canada (i.e., the Department of Communications) regulates digital devices similar to the FCC in the United States. Every product should be labeled or provided with documentation that states the class of the product. The DOC defines the environment in which a digital device should be used as the FCC does. Products labeled DOC Class A are for an industrial or a commercial area.

The unit is DOC Class A and should not be used in a residential area. An end-user in Canada is responsible for ensuring that his system is suitable for its environment as stated in the above paragraph.

ICES-003 Class A Notice

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

Finland

Laite on liitettävä suojamaadoitus-koskettimilla varustettum pistorasiaan.

Norway

Apparatet må tilkoples jordnet stikkontakt.

Sweden

Apparaten skall anslutas till jordat uttag.

WEEE information

For all the regulations relating to product end of life please adhere to information located on the following web site <http://cisco-returns.com>.

VCCI statements

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。

VCCI-A

MSE 8321 (ISDN blade) information

Your ISDN connection



To reduce the risk of fire, use only 26 AWG or larger telecommunication line cord.

Outside North America

Check with your network provider to ensure that your incoming ISDN PRI line is terminated in an NTU/CSU (Network Termination Unit/ Channel Service Unit). If it is not, then seek their advice regarding the provisioning of such a device. Do not connect the ISDN gateway directly to an external ISDN line.

Within North America

If your network provider has not terminated all of your incoming ISDN PRI lines with an NTU/CSU, Cisco recommends that you install a suitably approved CSU to protect the ISDN gateway from damage by surges on your ISDN PRI lines.

FCC Part 68 certification

This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On the exterior of the cabinet of this equipment is a label that contains, among other information, a product identifier in the format US:**CODDDNANMSE8000**. If requested, this number must be provided to the telephone company.

■ ACTA Registration Number:	CODDDNANMSE8000
■ Ringer Equivalence Number (REN):	N/A
■ Facility Interface Code (FIC):	04DU9.BN/DN/1KN/1SN
■ Service Order Code (SOC):	6.0F
■ USOC Jack Type:	RJ48C

A FCC compliant telephone cord and modular plug is provided with this equipment. This equipment is designed to be connected to the telephone network or premises wiring using a compatible modular jack that is Part 68 compliant. See the Getting Started Guide that accompanied the unit for details.

The REN is used to determine the quantity of devices that may be connected to the telephone line. Excessive RENs on the telephone line may result in the devices not ringing in response to an incoming call. Typically, 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 RENs) contact the local telephone company.

If this equipment Cisco MSE 8321 causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice isn't practical, the telephone company will notify the customer as soon as possible. Also, 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 to its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens the telephone company will provide advance notice so you can make the necessary modifications to maintain uninterrupted service.

If trouble is experienced with this equipment Cisco MSE 8321, for repair or warranty information, contact Cisco technical support. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.

Connection to party line service is subject to state tariffs. (Contact the state public utility commission, public service commission or corporation commission for information.)

MSE 8310 (ISDN blade) information

Your ISDN connection



To maintain connectivity with the ISDN network, the ISDN GW 8310 blade must be connected to the ISDN network via an in-building NTU (Network Termination Unit) or CSU (Channel Service Unit).

Check with your network provider to ensure that your incoming ISDN PRI line has been terminated in an NTU/CSU. If it has not, then seek their advice regarding the provisioning of such a device. Do not connect the ISDN GW blade directly to an external ISDN line.



You must use the Y cable, even if you plan to connect just one of the ISDN interfaces. Using a standard straight-through cable will not work.



The Cisco ISDN GW 8310 blade may not be compliant with EMC (Electromagnetic Compatibility) standards if you use a cable other than the supplied Y cable.

FCC Part 68 certification

This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On the exterior of the cabinet of this equipment is a label that contains, among other information, a product identifier in the format US:**CODDDNANMSE8000**. If requested, this number must be provided to the telephone company.

■ ACTA Registration Number:	CODDDNANMSE8000
■ Ringer Equivalence Number (REN):	N/A
■ Facility Interface Code (FIC):	04DU9.BN/DN/1KN/1SN
■ Service Order Code (SOC):	6.0F
■ USOC Jack Type:	RJ48C

A FCC compliant telephone cord and modular plug is provided with this equipment. This equipment is designed to be connected to the telephone network or premises wiring using a compatible modular jack that is Part 68 compliant. See the Getting Started Guide that accompanied the unit for details.

The REN is used to determine the quantity of devices that may be connected to the telephone line. Excessive RENs on the telephone line may result in the devices not ringing in response to an incoming call. Typically, 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 RENs) contact the local telephone company..

If this equipment Cisco MSE 8310 causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice isn't practical, the telephone company will notify the customer as soon as possible. Also, 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 to its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens the telephone company will provide advance notice so you can make the necessary modifications to maintain uninterrupted service.

If trouble is experienced with this equipment Cisco MSE 8310, for repair or warranty information, contact Cisco technical support. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.

Connection to party line service is subject to state tariffs. (Contact the state public utility commission, public service commission or corporation commission for information.)