



Cisco ONS 15194 Installation Note

This document contains instructions for installing the ONS 15194 IP Transport Concentrator.

Do not remove the Cisco ONS 15194 from its shipping container until you are ready to install it. Keep it in the shipping container to prevent accidental damage until you determine where you will install it. When you are ready to unpack the Cisco ONS 15194, follow the unpacking instructions in this document. Inspect all items for shipping damage. If anything is damaged, immediately contact a customer service representative.

Before you install your Cisco ONS 15194, consider power and cabling requirements that must be in place at your installation site, the equipment you will need to install the system, and the environmental conditions your installation site must meet to maintain normal operation. This document guides you through the process installing your Cisco ONS 15194.

Included are the following sections:

- [Safety Guidelines, page 2](#)
- [Site Preparation, page 3](#)
- [Unpacking the ONS 15194, page 4](#)
- [Rack-Mount Installation, page 4](#)
- [Inserting and Removing Cards, page 5](#)
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Carefully read all enclosed documentation before you install the ONS 15194 to avoid harming yourself or the ONS 15194.

Safety Guidelines

Safety guidelines for working with the ONS 15194 are presented in the following sections:

- [Safety Warnings](#)
- [Laser Safety](#)
- [Fan Safety](#)
- [Electrical Equipment Safety](#)
- [Preventing Electrostatic Discharge Damage](#)

Safety Warnings

Whenever one of the following messages appear, it indicates a procedure, that if performed incorrectly, might cause harm to you or the equipment. Note all such warnings and cautions and act accordingly.



Caution

You are about to perform an action which, if performed incorrectly, may cause damage to the ONS 15194.



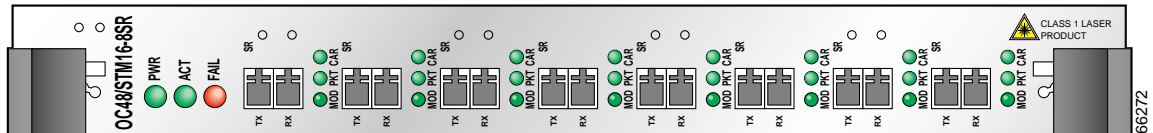
Warning

This warning 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.

Laser Safety

The single-mode transmitter in the line cards uses a class 1 laser product to transmit the light signal to the network. Keep the transmit port covered whenever a fiber cable is not connected to it, and avoid staring into open ports or apertures. A warning icon is printed on the line card panel (see top right corner in [Figure 1](#)).

Figure 1 OC-48c/STM-16 Line Card



Warning

Invisible laser radiation may be emitted from the aperture ports of single-mode line cards when no fiber cable is connected. Avoid exposure and do not stare into open apertures to avoid permanent eye damage.

Fan Safety

The fan mechanism located in the fan tray in the bottom section of the ONS 15194 contains moving parts which, if touched during operation, might cause physical injury.



Do not insert fingers or other objects into the area of the fan mechanism.

Electrical Equipment Safety

General guidelines for working with electrical equipment follow:

- Before opening the ONS 15194, locate the emergency power-off switch for the room in which you are working.
- Disconnect all power and external cables before installing or disconnecting the ONS 15194.
- Do not perform any action that creates a potential hazard to people or makes the equipment unsafe.
- Carefully examine the work area for possible hazards such as moist floors, ungrounded power extension cables, or missing safety grounds.

Preventing Electrostatic Discharge Damage

Electrostatic discharge (ESD) can damage equipment and impair electrical circuitry. It occurs when electronic components are improperly handled and can result in intermittent or complete failures. Always ensure that the chassis is electrically connected to earth ground. Wear an ESD-preventive wrist strap, ensuring that it makes good skin contact. To safely channel unwanted ESD voltages to ground, connect the clip to an unpainted surface of the chassis frame.

Site Preparation

Site preparation information is presented in the following sections:

- [Tools and Required Equipment](#)
- [Rack-Mounting Requirements](#)



This product requires an external disconnect device in the building's installation. Ensure that a Listed and Certified circuit breaker, rated 40 A, minimum 60 VDC is used on all current-carrying conductors.

Tools and Required Equipment

Before unpacking the ONS 15194, verify that you have the following:

- Cables—All necessary fiber-optic cables to connect to all routers. You will need one pair of fiber-optic cables to connect to each interface on each OC-48c/STM-16 line card. There are eight interfaces on each of the eight line cards.

- Power source—Two separate DC power sources are required for complete ONS 15194 redundancy.
- Rack space—Space in rack for mounting the chassis.

Rack-Mounting Requirements

The ONS 15194 chassis is designed for rack mounting. To prepare for rack-mounting, ensure that there is adequate space in your rack for the ONS 15194. The chassis size (h x w x d) is 9 rack units (RU) x 19 x 14 inches (40.0 x 48.2 x 36.5 cm). Maintain at least 6 inches (15.2 cm) of space behind the chassis for air ventilation. Leave space in front of the chassis for cable connections. There is no need for air space on the top, bottom, or sides of the chassis.

Unpacking the ONS 15194

Before you unpack the equipment, inspect the packaging for any damage that may have occurred during shipping. If you observe any external damage to the boxes, contact a support representative immediately, before beginning the installation procedure.

Open the boxes and unpack the equipment at the location where you are installing the ONS 15194. The basic ONS 15194 includes the following:

- 1 chassis with 2 PEM cards and 2 controller cards installed.
- 1 RS-232C serial cable for connecting to the controller cards.
- 2 Ethernet cables for connecting to the controller cards.
- 2 48V DC cables for connecting to a battery power source.
- Cisco Documentation CD.
- Rack-mount installation kit (containing 8 nuts, bolts, and washers and 1 paper stencil of the chassis).
- UART password key.

Any additional line or switch cards that you ordered will be packaged separately.

Verify that all listed equipment is contained in the package. If any items are missing, report this immediately to a support representative.

After you prepare the area for installation and verify that all equipment is present, you can proceed with the ONS 15194 installation.



Caution

To prevent ESD damage, use an ESD-preventive wrist strap when you unpack and install system components.

Rack-Mount Installation

The ONS 15194 is not designed to be installed as a shelf-mounted or a free-standing system. You must install the ONS 15194 in a rack, as follows:

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- Step 1** Open the rack-mount installation kit containing the paper stencil and eight nuts, bolts, and washers.

- Step 2** Unfold the stencil and place it on the rack at the location where the ONS 15194 chassis will be installed. Line up the holes marked on the stencil with the eight holes in the rack.
- Step 3** Insert a nut from the back of the rack toward the front (so that the bolt can be screwed into the nut from the front of the rack) at the location of each of the eight marked holes.



Warning Two people are required to lift the chassis. To prevent injury, keep your back straight and lift with your legs, not your back.

- Step 4** Lift the ONS 15194 up to the location of the nuts and have a second person screw in two of the bolts (one on each side) with the washers placed between the bolt and the ONS 15194 panel.
- Step 5** When the chassis is in place with one bolt on each side, screw in the other six bolts to secure the chassis to the rack.
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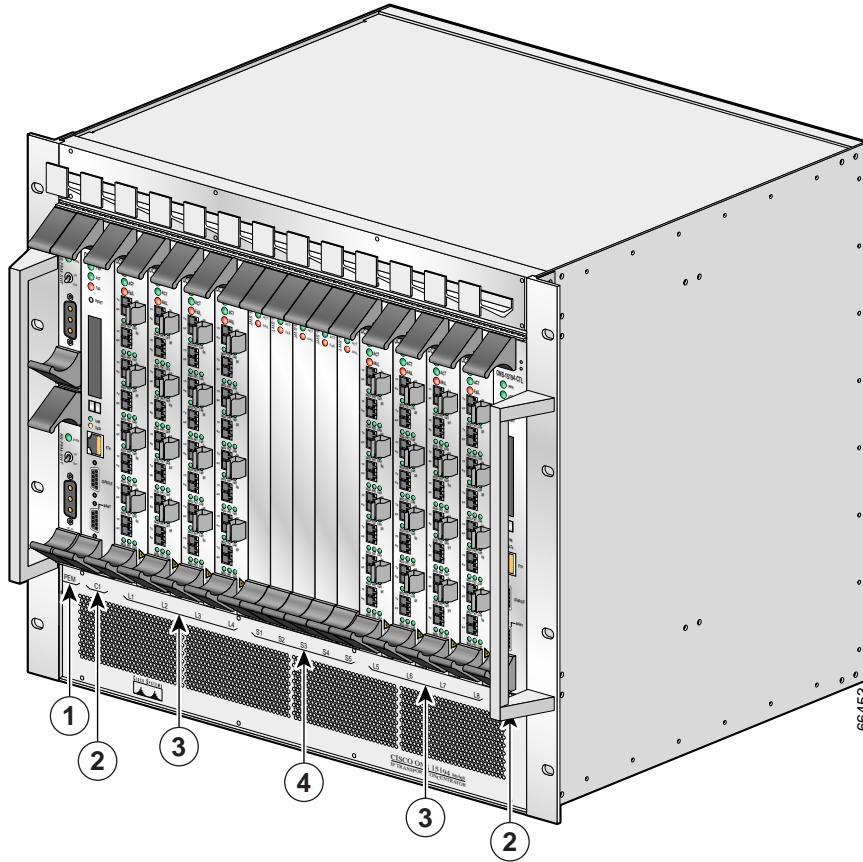
Inserting and Removing Cards

When the chassis is secure in the rack, you can install line and switch cards into the ONS 15194. Inserting and removing ONS 15194 cards are covered in the following sections:

- [Inserting Cards](#)
- [Removing Cards](#)

The possible cards and their respective slots in the ONS 15194 chassis are labeled in [Figure 2](#):

Figure 2 ONS 15194 Cards and Slots



	Card Type	ONS 15194 Chassis Slots
1	PEM cards	PEM
2	Controller cards	C1, C2
3	Line card	L1 to L8
4	Switch cards	S1 to S5

Inserting Cards

Open the packaging for one card. Keep unused cards in their original packaging until use. Remove the blank card from the slot where the card is to be inserted and insert the card into the empty slot. If there is currently a card in the slot, refer to [“Removing Cards”](#) for information on removing the card.

To insert a card into the chassis, do the following:

-
- Step 1 Gently push the card into the slot until it is inserted into the backplane.
 - Step 2 Press on the two black handles toward the center of the card, to lock the card in place.
 - Step 3 Screw the card in place on the top and bottom.
-

Continue to install all necessary line and switch cards into the chassis. Leave blank cards in any unused slots.



Caution

Make sure that all cards are inserted completely into the backplane because a partially inserted card can cause unexpected behavior.

Removing Cards

To remove a card from the chassis, do the following:

-
- Step 1** Unscrew the card from the chassis (one screw each on the top and bottom of the card).
 - Step 2** Pull the two black handles out, toward the top and bottom of the card, respectively.
 - Step 3** Gently pull the card out of the slot.
-

Store any unused cards in their original packaging to protect them.

Powering Up the ONS 15194

Before powering up the ONS 15194, take note of the following safety warnings:



Warning

This equipment shall be connected directly to the DC supply system earthing electrode conductor or to a bonding jumper from an earthing terminal bar or bus to which the DC supply system earthing electrode is connected.



Warning

This equipment shall be located in the same immediate area (such as, adjacent cabinets) as any other equipment that has a connection between the earthed conductor of the same DC supply circuit and the earthing conductor, and also the point of earthing of the DC system. The DC system shall not be earthed elsewhere.



Warning

The DC supply source is to be located within the same premises as this equipment.



Warning

There shall be no switching or disconnecting devices in the earthed circuit conductor between the DC source and the point of connection of the earthing electrode conductor.



Warning

Connect the equipment only to a 48 Volt DC power source that complies with the Safety Extra-Low Voltage (SELV) requirements in IEC 60950 based safety standards.

**Warning**

Only use the power cable shipped with the ONS 15194.

After you install all the necessary cards into the chassis, power up the ONS 15194 as follows:

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- Step 1** Attach the power cable three-pin connector to the mating connector of the PEM, and tighten the thumbscrews.
 - Step 2** Connect the power cable leads to the power source connecting the ground lead first, followed by the 48VDC leads. Observe proper polarity when connecting the leads. Connect the red lead to the -48 VDC source and connect the black lead to the -48 VDC return.

**Caution**

Use only listed compression-type connectors for 48 VDC connections. The connectors shall be suitable for use with copper conductors. Do not use soldering lug connectors, screwless (push-in) connectors, quick-connect or other friction fit connectors for terminating power and ground connections.

- Step 3** Power up each of the PEM cards using the On/Off switch located on the card. The PWR LED should go on (green) immediately.
 - Step 4** Verify that the controller card PWR LED is on. If it is not on, verify that there is power to the ONS 15194. Initially, the FAIL LED will be on. Approximately 30 seconds after power up, the FAIL LED should go off. The ACT LED should begin to flash once per second. The standby controller card ACT LED should flash once per 3 seconds.
 - Step 5** Verify that the PWR LEDs for each line and switch cards is on. The ACT LED should flash fast for 3 to 4 seconds and then, as it becomes synchronized with the active controller card, it should flash once per second. The FAIL LED will initially go on for 3 to 4 seconds, after which it should turn off.
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Cable Connections

Cable connections are presented in the following sections:

- [Fiber-Optic Cable Connections](#)
- [Ethernet Cable Connections](#)
- [Serial Cable Connections](#)

Fiber-Optic Cable Connections

Fiber-optic cable connections depend on the type of line card being used in the connected router and the configuration of the ONS 15194. Possible scenarios are presented in the following sections:

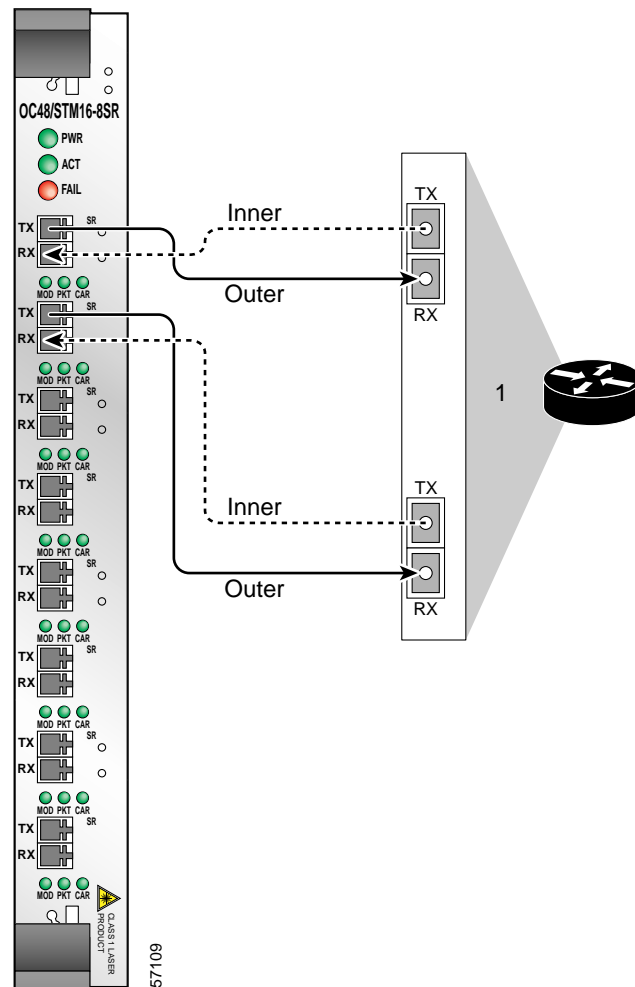
- [Connecting Router DPT Line Card to a Single ONS 15194](#)
- [Connecting a Router DPT Line Card to Two Redundant ONS 15194s](#)
- [POS and APS Connections](#)

When an interface is correctly connected to functional equipment, the respective CARRIER LED on the line card should go on. Verify the corresponding link connectivity indication on the router interface card.

Connecting Router DPT Line Card to a Single ONS 15194

Connect each router DPT line card to the ONS 15194 as shown in [Figure 3](#).

Figure 3 Router Connectivity to 8-Port Line Card



Connecting a Router DPT Line Card to Two Redundant ONS 15194s

Two ONS 15194s can operate in an “inner-outer” fiber topology by connecting all inner SRP ring fibers to one ONS 15194 and all outer SRP ring fibers to another ONS 15194. Such a connection, in conjunction with the SRR protocol on the SRP nodes, provides ONS 15194 system redundancy.

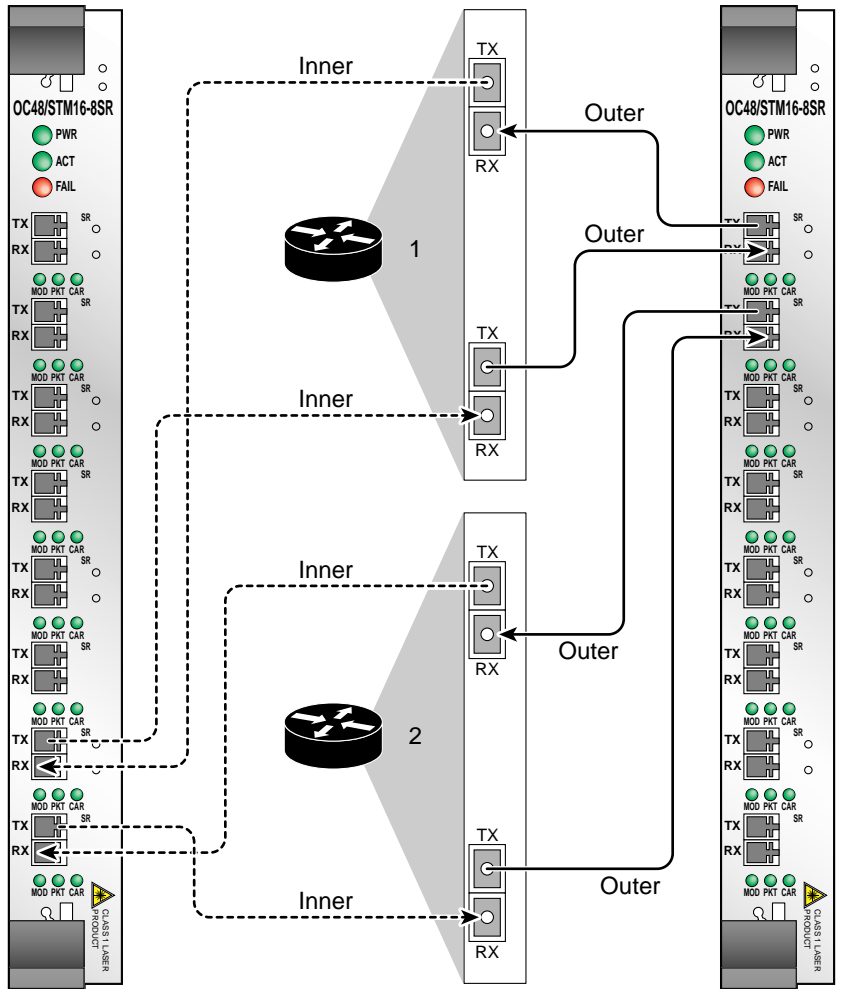
You must connect the Tx/Rx connector pair of the router to different ONS 15194s. Connect both inner fibers of a node to the same connector pair in one ONS 15194 chassis and both outer fibers of the node to the same connector pair in a second ONS 15194 chassis as shown in [Figure 4](#).



Note

In order for two ONS 15194s to work together and provide system redundancy, all routers in the ring must support the single ring redundancy (SRR) functionality. SRR is supported in IOS Release 12.0(16)S and later S releases.

Figure 4 Router Connectivity to Two Redundant ONS 15194s



POS and APS Connections

Connect each POS node to a single interface. Connect automatic protection switching (APS) nodes to two separate interfaces one for working and one for protection. The working and protection links for the ONS 15194 must correspond to the working and protection connections on the router.

Ethernet Cable Connections

Connect Ethernet cables between a hub/switch and the Ethernet connector on both the active and standby controller cards. Both controller cards should be connected to a hub. They can be connected to the same or different hubs. When the controller cards are correctly connected, the LINK LEDs will be on. The DATA LED indicates when there is information being passed on the line.

**Warning**

The ports labeled "Eth," "Console," "Maint," and "PCMCIA" are safety extra-low voltage (SELV) circuits. SELV circuits should only be connected to other SELV circuits. Avoid connecting the SELV circuits to the telephone network voltage (TNV) circuits."

Serial Cable Connections

**Note**

Before the ONS 15194 can be accessed via Ethernet, you must configure the networking parameters using a direct serial connection to the active controller card. See the *ONS 15194 Installation and Configuration Guide* on the Documentation CD.

Connect the RS-232C serial cable between the CONSOLE connector on one of the controller cards and the COM port on your PC. The CONSOLE port controls the active controller card in the ONS 15194, even if it is connected via the standby controller card.

Use the MAINT connector only in the following instances:

- Accessing the Boot Application—See the *ONS 15194 Boot Application* on the Documentation CD or at cisco.com.
- Connecting the UART password recovery key—See *Configuring the ONS 15194* on the Documentation CD or at cisco.com.

**Caution**

Do not leave the UART password key plugged into the MAINT port. In addition to being a security hazard, the software will not run if the ONS 15194 is powered down and powered back up again.

Do not establish a permanent connection to this serial interface.

The default RS-232C connection parameters are 9600 bps, no parity, and no flow control.

**Note**

You can connect to only one of the controller cards via its CONSOLE port at any one time.

Fan Tray Replacement

The fan tray and grid are factory installed. You can replace the fan tray while the ONS 15194 is running, as follows:

- Step 1** Unscrew all screws holding the fan tray grid on the lower front of the ONS 15194.
- Step 2** Remove the fan tray grid.
- Step 3** Gently pull the fan tray out of the chassis.

**Caution**

Do not leave the fan tray out of the chassis for more than 2 minutes while the ONS 15194 is operational to avoid over-heating the system.

- Step 4** Slide the replacement fan tray into place.

Step 5 Replace the fan tray grid and replace the screws.

Agency Approvals

The ONS 15194 meets the agency approvals for safety and EMI as listed in [Table 1](#).

Table 1 Agency Approvals

Category	Agency Approval
Safety	UL 1950, Third Edition (US)
	CSA C22.2, No. 950-95, Third Edition (Canada)
	EN/IEC 60950 (EC, Japan)
	EN 41003
	AUSTEL TS001
	AS/NZS 3260 (Australia)
EMI	EN 60825 Laser Safety (Class 1)
	FCC subpart B Class A (US)
	AS/NZS 3548 Class A (Australia)
	EMC Directive 89/336/EEC: EN 55022 Class A EN 6100-3-2 EN 55024
	VCCI Class A (Japan)

Translated Safety Warnings

Warning Definition



Warning

This warning 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.

Waarschuwing

Dit waarschuwingssymbool betekent gevaar. U verkeert in een situatie die lichamelijk letsel kan veroorzaken. Voordat u aan enige apparatuur gaat werken, dient u zich bewust te zijn van de bij elektrische schakelingen betrokken risico's en dient u op de hoogte te zijn van standaard maatregelen om ongelukken te voorkomen.


Varoitus	Tämä varoitusmerkki merkitsee vaaraa. Olet tilanteessa, joka voi johtaa ruumiinvammaan. Ennen kuin työskentelet minkään laitteiston parissa, ota selvää sähkökytkentöihin liittyvistä vaaroista ja tavanomaisista onnettomuuksien ehkäisykeinoista.
Attention	Ce symbole d'avertissement indique un danger. Vous vous trouvez dans une situation pouvant causer des blessures ou des dommages corporels. Avant de travailler sur un équipement, soyez conscient des dangers posés par les circuits électriques et familiarisez-vous avec les procédures couramment utilisées pour éviter les accidents.
Warnung	Dieses Warnsymbol bedeutet Gefahr. Sie befinden sich in einer Situation, die zu einer Körperverletzung führen könnte. Bevor Sie mit der Arbeit an irgendeinem Gerät beginnen, seien Sie sich der mit elektrischen Stromkreisen verbundenen Gefahren und der Standardpraktiken zur Vermeidung von Unfällen bewußt.
Avvertenza	Questo simbolo di avvertenza indica un pericolo. La situazione potrebbe causare infortuni alle persone. Prima di lavorare su qualsiasi apparecchiatura, occorre conoscere i pericoli relativi ai circuiti elettrici ed essere al corrente delle pratiche standard per la prevenzione di incidenti.
Advarsel	Dette varselsymbolet betyr fare. Du befinner deg i en situasjon som kan føre til personskade. Før du utfører arbeid på utstyr, må du være oppmerksom på de faremomentene som elektriske kretser innebærer, samt gjøre deg kjent med vanlig praksis når det gjelder å unngå ulykker.
Aviso	Este símbolo de aviso indica perigo. Encontra-se numa situação que lhe poderá causar danos físicos. Antes de começar a trabalhar com qualquer equipamento, familiarize-se com os perigos relacionados com circuitos eléctricos, e com quaisquer práticas comuns que possam prevenir possíveis acidentes.
¡Advertencia!	Este símbolo de aviso significa peligro. Existe riesgo para su integridad física. Antes de manipular cualquier equipo, considerar los riesgos que entraña la corriente eléctrica y familiarizarse con los procedimientos estándar de prevención de accidentes.
Varning!	Denna varningssymbol signalerar fara. Du befinner dig i en situation som kan leda till personskada. Innan du utför arbete på någon utrustning måste du vara medveten om farorna med elkretsar och känna till vanligt förfarande för att förebygga skador.

Invisible Laser Radiation Warning




Warning	Because invisible laser radiation may be emitted from the aperture of the port when no cable is connected, avoid exposure to laser radiation and do not stare into open apertures.
Waarschuwing	Omdat er onzichtbare laserstraling uit de opening van de poort geëmitteerd kan worden wanneer er geen kabel aangesloten is, dient men om blootstelling aan laserstraling te vermijden niet in de open openingen te kijken.
Varoitus	Kun porttiin ei ole kytketty kaapelia, portin aukosta voi vuotaa näkymätöntä lasersäteilyä. Älä katso avoimiin aukkoihin, jotta et altistu säteilylle.
Attention	Etant donné qu'un rayonnement laser invisible peut être émis par l'ouverture du port quand aucun câble n'est connecté, ne pas regarder dans les ouvertures béantes afin d'éviter tout risque d'exposition au rayonnement laser.
Warnung	Aus der Öffnung des Ports kann unsichtbare Laserstrahlung austreten, wenn kein Kabel angeschlossen ist. Kontakt mit Laserstrahlung vermeiden und nicht in offene Öffnungen blicken.
Avvertenza	Poiché quando nessun cavo è collegato alla porta, da quest'ultima potrebbe essere emessa radiazione laser invisibile, evitare l'esposizione a tale radiazione e non fissare con gli occhi porte a cui non siano collegati cavi.
Advarsel	Usynlige laserstråler kan sendes ut fra åpningen på utgangen når ingen kabel er tilkoblet. Unngå utsettelse for laserstråling og se ikke inn i åpninger som ikke er tildekket.
Aviso	Evite uma exposição à radiação laser e não olhe através de aberturas expostas, porque poderá ocorrer emissão de radiação laser invisível a partir da abertura da porta, quando não estiver qualquer cabo conectado.
¡Advertencia!	Cuando no esté conectado ningún cable, pueden emitirse radiaciones láser invisibles por el orificio del puerto. Evitar la exposición a radiaciones láser y no mirar fijamente los orificios abiertos.
Varning!	Osynliga laserstrålar kan sändas ut från öppningen i porten när ingen kabel är ansluten. Undvik exponering för laserstrålning och titta inte in i ej täckta öppningar.

Product Disposal Warning

	Warning	Ultimate disposal of this product should be handled according to all national laws and regulations.
	Waarschuwing	Het uiteindelijke wegruimen van dit product dient te geschieden in overeenstemming met alle nationale wetten en reglementen.
	Varoitus	Tämä tuote on hävitettävä kansallisten lakien ja määräysten mukaisesti.
	Attention	La mise au rebut ou le recyclage de ce produit sont généralement soumis à des lois et/ou directives de respect de l'environnement. Renseignez-vous auprès de l'organisme compétent.
	Warnung	Die Entsorgung dieses Produkts sollte gemäß allen Bestimmungen und Gesetzen des Landes erfolgen.
	Avvertenza	Lo smaltimento di questo prodotto deve essere eseguito secondo le leggi e regolazioni locali.
	Advarsel	Endelig kassering av dette produktet skal være i henhold til alle relevante nasjonale lover og bestemmelser.
	Aviso	Deitar fora este produto em conformidade com todas as leis e regulamentos nacionais.
	¡Advertencia!	Al deshacerse por completo de este producto debe seguir todas las leyes y reglamentos nacionales.
	Varning!	Vid deponering hanteras produkten enligt gällande lagar och bestämmelser.

Installation Warning

	Warning	Only trained and qualified personnel should be allowed to install, replace, or service this equipment.
	Waarschuwing	Deze apparatuur mag alleen worden geïnstalleerd, vervangen of hersteld door bevoegd geschoold personeel.
	Varoitus	Tämän laitteen saa asentaa, vaihtaa tai huoltaa ainoastaan koulutettu ja laitteen tunteva henkilökunta.
	Attention	Il est vivement recommandé de confier l'installation, le remplacement et la maintenance de ces équipements à des personnels qualifiés et expérimentés.

Warnung	Das Installieren, Ersetzen oder Bedienen dieser Ausrüstung sollte nur geschultem, qualifiziertem Personal gestattet werden.
Avvertenza	Questo apparato può essere installato, sostituito o mantenuto unicamente da un personale competente.
Advarsel	Bare opplært og kvalifisert personell skal foreta installasjoner, utskiftninger eller service på dette utstyret.
Aviso	Apenas pessoal treinado e qualificado deve ser autorizado a instalar, substituir ou fazer a revisão deste equipamento.
¡Advertencia!	Solamente el personal calificado debe instalar, reemplazar o utilizar este equipo.
Varning!	Endast utbildad och kvalificerad personal bör få tillåtelse att installera, byta ut eller reparera denna utrustning.

Restricted Area Warning



Warning

This unit is intended for installation in restricted access areas. A restricted access area is where access can only be gained by service personnel through the use of a special tool, lock and key, or other means of security, and is controlled by the authority responsible for the location.

Waarschuwing

Dit toestel is bedoeld voor installatie op plaatsen met beperkte toegang. Een plaats met beperkte toegang is een plaats waar toegang slechts door servicepersoneel verkregen kan worden door middel van een speciaal instrument, een slot en sleutel, of een ander veiligheidsmiddel, en welke beheerd wordt door de overheidsinstantie die verantwoordelijk is voor de locatie.

Varoitus

Tämä laite on tarkoitettu asennettavaksi paikkaan, johon pääsy on rajoitettua. Paikka, johon pääsy on rajoitettua, tarkoittaa paikkaa, johon vain huoltohenkilöstö pääsee jonkin erikoistyökalun, lukkoon sopivan avaimen tai jonkin muun turvalaitteen avulla ja joka on paikasta vastuussa olevien toimivaltaisten henkilöiden valvoma.

Attention

Cet appareil est à installer dans des zones d'accès réservé. Ces dernières sont des zones auxquelles seul le personnel de service peut accéder en utilisant un outil spécial, un mécanisme de verrouillage et une clé, ou tout autre moyen de sécurité. L'accès aux zones de sécurité est sous le contrôle de l'autorité responsable de l'emplacement.

Warnung

Diese Einheit ist zur Installation in Bereichen mit beschränktem Zutritt vorgesehen. Ein Bereich mit beschränktem Zutritt ist ein Bereich, zu dem nur Wartungspersonal mit einem Spezialwerkzeugs, Schloß und Schlüssel oder anderer Sicherheitsvorkehrungen Zugang hat, und der von dem für die Anlage zuständigen Gremium kontrolliert wird.

Avvertenza	Questa unità deve essere installata in un'area ad accesso limitato. Un'area ad accesso limitato è un'area accessibile solo a personale di assistenza tramite un'attrezzo speciale, lucchetto, o altri dispositivi di sicurezza, ed è controllata dall'autorità responsabile della zona.
Advarsel	Denne enheten er laget for installasjon i områder med begrenset adgang. Et område med begrenset adgang gir kun adgang til servicepersonale som bruker et spesielt verktøy, lås og nøkkel, eller en annen sikkerhetsanordning, og det kontrolleres av den autoriteten som er ansvarlig for området.
Aviso	Esta unidade foi concebida para instalação em áreas de acesso restrito. Uma área de acesso restrito é uma área à qual apenas tem acesso o pessoal de serviço autorizado, que possua uma ferramenta, chave e fechadura especial, ou qualquer outra forma de segurança. Esta área é controlada pela autoridade responsável pelo local.
¡Advertencia!	Esta unidad ha sido diseñada para instalarse en áreas de acceso restringido. Área de acceso restringido significa un área a la que solamente tiene acceso el personal de servicio mediante la utilización de una herramienta especial, cerradura con llave, o algún otro medio de seguridad, y que está bajo el control de la autoridad responsable del local.
Varning!	Denna enhet är avsedd för installation i områden med begränsat tillträde. Ett område med begränsat tillträde får endast tillträdas av servicepersonal med ett speciellt verktyg, lås och nyckel, eller annan säkerhetsanordning, och kontrolleras av den auktoritet som ansvarar för området.

More Than One Power Supply Warning



Warning

This unit might have more than one power supply connection. All connections need to be removed to de-energize the unit.

Waarschuwing

Deze eenheid kan meer dan één stroomtoevoerverbinding bevatten. Alle verbindingen dienen ontkoppeld te worden om de eenheid te ontkrachten.

Varoitus

Tässä laitteessa voi olla useampia kuin yksi virtakytkentä. Kaikki liitännät on irrotettava, jotta jännite poistetaan laitteesta.

Attention

Pour supprimer toute tension et tout courant électrique de l'unité, TOUTES les connexions d'alimentation doivent être débranchées.

Warnung

Dieses Gerät kann mehr als eine Stromzufuhr haben. Um sicherzustellen, daß der Einheit kein Strom zugeführt wird, müssen alle Verbindungen entfernt werden.

Avvertenza

Questo prodotto può avere più di una connessione di alimentazione elettrica. Tutte le connessioni devono essere staccate per togliere la corrente dal prodotto.

Advarsel	Denne enheten kan ha mer enn én strømtilførselskobling. Alle koblinger må fjernes fra enheten for å utkoble all strøm.
Aviso	Esta unidade poderá ter mais do que uma conexão de fonte de energia. Todas as conexões necessitam de ser removidas para desactivar a unidade.
¡Advertencia!	Esta unidad puede contar con más de una conexión para fuentes de alimentación. Para cortar por completo el suministro de energía, deben desconectarse todas las conexiones.
Varning!	Denna enhet har eventuellt mer än en strömförsörjningsanslutning. Alla anslutningar måste tas bort för att göra enheten strömlös.

SELV-IEC 60950 DC Power Supply Warning



Warning

Connect the unit only to 48 Volt DC power source that complies with the Safety Extra-Low Voltage (SELV) requirements in IEC 60950 based safety standards.

Waarschuwing

Sluit de eenheid alleen maar aan op een gelijkstroombron die voldoet aan de veiligheidsvereisten voor extra-laag voltage (SELV) in de op IEC 60950 gebaseerde veiligheidsnormen.

Varoitus

Liitä laite ainoastaan tasavirtalähteeseen, joka on yhdenmukainen IEC 60950:n suojattujen erittäisen alhaisen jännitteen (SELV) turvavaatimusten kanssa.

Attention

Connectez l'unité uniquement à une alimentation CC compatible avec les recommandations SELV (Safety Extra-Low Voltage) des normes de sécurité IEC 60950.

Warnung

Schließen Sie die Einheit nur an eine Gleichstrom-Stromquelle an, die mit den Safety Extra-Low Voltage (SELV)-Anforderungen in den auf IEC 60950 basierenden Sicherheitsstandards übereinstimmen.

Avvertenza

Collegare l'unità esclusivamente a una presa di corrente continua rispondente ai requisiti SELV (Safety Extra-Low Voltage) in base alle norme di sicurezza IEC 60950.

Advarsel

Koble bare enheten til en likestrømsforsyning som er i henhold til kravene for lavspenning (SELV) i IEC 60950-baserte sikkerhetsstandarder.

Aviso

Conecte a unidade apenas à fonte da energia de CC que se encontra em conformidade com os requisitos dos circuitos de segurança de baixa tensão (SELV) constantes dos padrões de segurança baseados no IEC 60950.

- ¡Advertencia! Conecte la unidad sólo en una fuente de energía DC que cumpla con los requisitos de voltaje extra bajo (SELV - Extra-Low Voltage) en los estándares de seguridad IEC 60950.
- Varning! Anslut enheten endast till en likströmsförsörjningsenhet som uppfyller kraven för SELV (skyddskretsar för mycket låg spänning) i IEC 60950-baserade säkerhetsstandarder.
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Grounded Equipment Warning



- Warning** This equipment is intended to be grounded. Ensure that the host is connected to earth ground during normal use.
- Waarschuwing** Deze apparatuur hoort geaard te worden. Zorg dat de host-computer tijdens normaal gebruik met aarde is verbonden.
- Varoitus** Tämä laitteisto on tarkoitettu maadoitettavaksi. Varmista, että isäntälaitte on yhdistetty maahan normaalikäytön aikana.
- Attention** Cet équipement doit être relié à la terre. S'assurer que l'appareil hôte est relié à la terre lors de l'utilisation normale.
- Warnung** Dieses Gerät muß geerdet werden. Stellen Sie sicher, daß das Host-Gerät während des normalen Betriebs an Erde gelegt ist.
- Avvertenza** Questa apparecchiatura deve essere collegata a massa. Accertarsi che il dispositivo host sia collegato alla massa di terra durante il normale utilizzo.
- Advarsel** Dette utstyret skal jordes. Forviss deg om vertsterminalen er jordet ved normalt bruk.
- Aviso** Este equipamento deverá estar ligado à terra. Certifique-se que o host se encontra ligado à terra durante a sua utilização normal.
- ¡Advertencia! Este equipo debe conectarse a tierra. Asegurarse de que el equipo principal esté conectado a tierra durante el uso normal.
- Varning! Denna utrustning är avsedd att jordas. Se till att värdenheten är jordad vid normal användning.
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Two Person Lifting Requirement



Warning	Two people are required to lift the chassis. To prevent injury, keep your back straight and lift with your legs, not your back.
Waarschuwing	Er zijn twee personen nodig om het chassis op te tillen. Om letsel te voorkomen dient u uw rug recht te houden en met uw benen te tillen in plaats van met uw rug.
Varoitus	Asennuspohjan nostamiseen tarvitaan kaksi henkilöä. Nosta jalkojen (ei selän) avulla pitäen selkäsi suorana, jotta välttäisit loukkaantumista.
Attention	Le châssis doit être soulevé par au minimum deux personnes. Pour éviter tout risque d'accident, maintenez le dos droit et poussez sur vos jambes. Ne soulevez pas l'unité avec votre dos.
Warnung	Um das Chassis anzuheben, sind zwei Leute erforderlich. Um Verletzungsgefahr auszuschalten, halten Sie den Rücken gerade und heben Sie mit den Beinen, nicht dem Rücken.
Avvertenza	Per sollevare il chassis occorre l'intervento di due persone. Onde evitare il rischio di lesioni personali, tenere sempre ben dritta la schiena e piegare solo le gambe durante il sollevamento in modo da scaricare il peso sulle gambe e non sulla schiena.
Advarsel	Det er nødvendig at to personer løfter kabinettet. Hold ryggen rett og løft med beina - ikke ryggen - for å unngå personskade.
Aviso	São necessárias duas pessoas para levantar o chassis. Para evitar lesões, mantenha as costas direitas e levante o peso com ambas as pernas, sem forçar as costas.
¡Advertencia!	Se requieren dos personas para elevar el chasis. Para evitar lesiones, mantenga su espalda en posición recta y levante con sus piernas, no con su espalda.
Varning!	Det krävs två personer för att lyfta chassit. För att undvika skador ska du hålla ryggen rak och lyfta med benen, inte ryggen.

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