



# Regulatory Compliance and Safety Information for the Cisco 7500 Series Routers

---

Read this document before installing or servicing the following systems:

- Cisco 7505
- Cisco 7505-MX
- Cisco 7507
- Cisco 7507-MX
- Cisco 7513
- Cisco 7513-MX
- Cisco 7576



**Note**

---

Only trained and qualified service personnel (as defined in IEC 60950 and AS/NZS 3260) should install, replace, or service the equipment. Install the system in accordance with the U.S. National Electric Code if you are in the United States.

---



**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.

---

This document contains the following sections:

- [Translated Safety Warnings, page 2](#)
- [European Directives, page 21](#)
- [Regulatory Standards Compliance, page 23](#)
- [EMC Environmental Conditions for Products Installed in the European Union, page 24](#)
- [EMC Class A Statements/Warnings, page 24](#)
- [Telecom Approvals Listing, page 26](#)
- [Site Preparation and Safety Information, page 30](#)



---

Corporate Headquarters:  
Cisco Systems, Inc., 170 West Tasman Drive, San Jose, CA 95134-1706 USA

Copyright © 2003 Cisco Systems, Inc. All rights reserved.

- [Related Documentation, page 37](#)
- [Obtaining Documentation, page 38](#)
- [Documentation Feedback, page 39](#)
- [Obtaining Technical Assistance, page 39](#)
- [Obtaining Additional Publications and Information, page 40](#)

## Translated Safety Warnings

This section includes translations in multiple languages of the warnings that may appear in your product documents.

- [Warning Definition, page 3](#)
- [Safety Information Referral Warning, page 4](#)
- [Power Supply Disconnection Warning, page 5](#)
- [Restricted Area Warning, page 6](#)
- [Electric Shock Warning, page 7](#)
- [AC Power Supply Warning, page 8](#)
- [DC Power Disconnection Warning, page 9](#)
- [Grounded Equipment Warning, page 10](#)
- [DC Protection, page 11](#)
- [Ground Connection Warning, page 12](#)
- [Unit Connection Warning, page 13](#)
- [Ground Conductor Warning, page 14](#)
- [SELV Circuit Warning, page 15](#)
- [Product Disposal Warning, page 16](#)
- [Class 1 Laser Product Warning, page 17](#)
- [Chassis Warning—Rack-Mounting and Servicing, page 18](#)
- [Overheating Prevention Warning, page 20](#)

## 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.   |

## Safety Information Referral Warning



### Warning

Before you install, operate, or service the system, read the *Site Preparation and Safety Guide*. This guide contains important safety information you should know before working with the system.

### Waarschuwing

Lees de handleiding *Vorbereitung en veiligheid van de locatie Handleiding* voordat u het systeem installeert of gebruikt of voordat u onderhoud aan het systeem uitvoert. Deze handleiding bevat belangrijke beveiligingsvoorschriften waarvan u op de hoogte moet zijn voordat u met het systeem gaat werken.

### Varoitus

Ennen kuin asennat järjestelmän tai käytät tai huollat sitä, lue *Asennuspaikan valmistelu-jaturvaopas* -opasta. Tässä oppaassa on tärkeitä turvallisuustietoja, jotka tulisi tietää ennen järjestelmän käyttämistä.

### Attention

Avant d'installer le système, de l'utiliser ou d'assurer son entretien, veuillez lire le *Guide de sécurité et de préparation du site*. Celui-ci présente des informations importantes relatives à la sécurité, dont vous devriez prendre connaissance.

### Warnung

Warnhinweis Bevor Sie das System installieren, in Betrieb setzen oder warten, lesen Sie die *Anleitung zur Standortvorbereitung und Sicherheitshinweise*. Dieses Handbuch enthält wichtige Informationen zur Sicherheit, mit denen Sie sich vor dem Verwenden des Systems vertraut machen sollten.

### Avvertenza

Prima di installare, mettere in funzione o effettuare interventi di manutenzione sul sistema, leggere le informazioni contenute nella documentazione sulla *Guida alla sicurezza*. Tale guida contiene importanti informazioni che è necessario acquisire prima di iniziare qualsiasi intervento sul sistema.

### Advarsel

Før du installerer, tar i bruk eller utfører vedlikehold på systemet, må du lese *Veiledning for stedsklargjøring og sikkerhet*. Denne håndboken inneholder viktig informasjon om sikkerhet som du bør være kjent med før du begynner å arbeide med systemet.

### Aviso

Antes de instalar, funcionar com, ou prestar assistência ao sistema, leia o *Guia de Preparação e Segurança do Local*. Este guia contém informações de segurança importantes que deve conhecer antes de trabalhar com o sistema.

### ¡Advertencia!

Antes de instalar, manejar o arreglar el sistema, le aconsejamos que consulte la *Guía de prevención y preparación de una instalación*. Esta guía contiene importante información para su seguridad que debe saber antes de comenzar a trabajar con el sistema.

### Varning!

Innan du installerar, använder eller utför service på systemet ska du läsa *Förberedelser och säkerhet Handbok*. Denna handbok innehåller viktig säkerhetsinformation som du bör känna till innan du arbetar med systemet.

## Power Supply Disconnection Warning



Warning

Before working on a chassis or working near power supplies, unplug the power cord on AC units; disconnect the power at the circuit breaker on DC units.

Waarschuwing

Voordat u aan een frame of in de nabijheid van voedingen werkt, dient u bij wisselstroom toestellen de stekker van het netsnoer uit het stopcontact te halen; voor gelijkstroom toestellen dient u de stroom uit te schakelen bij de stroomverbreker.

Varoitus

Kytke irti vaihtovirtalaitteiden virtajohto ja katkaise tasavirtalaitteiden virta suojakytkimellä, ennen kuin teet mitään asennuspohjalle tai työskentelet virtalähteiden läheisyydessä.

Attention

Avant de travailler sur un châssis ou à proximité d'une alimentation électrique, débrancher le cordon d'alimentation des unités en courant alternatif ; couper l'alimentation des unités en courant continu au niveau du disjoncteur.

Warnung

Bevor Sie an einem Chassis oder in der Nähe von Netzgeräten arbeiten, ziehen Sie bei Wechselstromeinheiten das Netzkabel ab bzw. schalten Sie bei Gleichstromeinheiten den Strom am Unterbrecher ab.

Figyelem!

Mielőtt elkezdene dolgozni a házon vagy tápegységek közelében, húzza ki a váltóáramú készülékek tápkábelét; egyenáramú készülék esetén szakítsa meg az áramot az árammegszakítónál

Avvertenza

Prima di lavorare su un telaio o intorno ad alimentatori, scollegare il cavo di alimentazione sulle unità CA; scollegare l'alimentazione all'interruttore automatico sulle unità CC.

Advarsel

Før det utføres arbeid på kabinettet eller det arbeides i nærheten av strømforsyningsenheter, skal strømledningen trekkes ut på vekselstrømsenheter og strømmen kobles fra ved strømbryteren på likestrømsenheter.

Aviso

Antes de trabalhar num chassis, ou antes de trabalhar perto de unidades de fornecimento de energia, desligue o cabo de alimentação nas unidades de corrente alternada; desligue a corrente no disjuntor nas unidades de corrente contínua.

¡Advertencia!

Antes de manipular el chasis de un equipo o trabajar cerca de una fuente de alimentación, desenchufar el cable de alimentación en los equipos de corriente alterna (CA); cortar la alimentación desde el interruptor automático en los equipos de corriente continua (CC).

Varning!

Innan du arbetar med ett chassi eller nära strömförsörjningsenheter skall du för växelströmsenheter dra ur nätsladden och för likströmsenheter bryta strömmen vid överspänningsskyddet.

Предупреждение

Перед выполнением монтажных работ или других работ в непосредственной близости от источников питания отключите кабель электропитания от устройств с питанием переменным током. Устройства с питанием постоянным током отключите с помощью выключателя питания.

**警告** 在机架或电源附近工作时，请拔下交流设备的电源电缆，断开直流设备断路器的电源。

**警告** シャーシの作業を行うとき、または電源装置の付近で作業するときは、事前にAC装置から電源コードを外してください。DC装置の場合は、回路ブレーカーで電源を切断します。

---

**Предупреждение** Перед выполнением монтажных работ или других работ в непосредственной близости от источников питания отключите кабель электропитания от устройств с питанием переменным током. Устройства с питанием постоянным током отключите с помощью выключателя питания.

**警告** 在机架或电源附近工作时，请拔下交流设备的电源电缆，断开直流设备断路器的电源。

**警告** シャーシの作業を行うとき、または電源装置の付近で作業するときは、事前にAC装置から電源コードを外してください。DC装置の場合は、回路ブレーカーで電源を切断します。

---

## 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.  |

## Electric Shock Warning



|              |   |
|--------------|---|
| Warning      | This unit might have more than one power cord. To reduce the risk of electric shock, disconnect the two power supply cords before servicing the unit.   |
| Waarschuwing | Dit toestel kan meer dan één netsnoer hebben. Om het risico van een elektrische schok te verminderen, dient u de stekkers van de twee netsnoeren uit het stopcontact te halen voordat u het toestel een servicebeurt geeft. |
| Varoitus     | Tässä laitteessa saattaa olla useampi kuin yksi virtajohto. Irrota molemmat virtalähteestä tulevat johtimet ennen laitteen huoltamista, jotta vältät sähköiskun vaaran.   |
| Attention    | Il est possible que cette unité soit munie de plusieurs cordons d'alimentation. Pour éviter les risques d'électrocution, débrancher les deux cordons d'alimentation avant de réparer l'unité.                               |
| Warnung      | Diese Einheit hat möglicherweise mehr als ein Netzkabel. Zur Verringerung der Stromschlaggefahr trennen Sie beide Netzgerätekabel ab, bevor Sie die Einheit warten.   |

|               |   |
|---------------|---|
| Avvertenza    | Questa unità potrebbe essere dotata di più di un cavo di alimentazione. Per ridurre il rischio di scossa elettrica, scollegare i due cavi di alimentazione prima di procedere alla manutenzione dell'unità. |
| Advarsel      | Denne enheten kan være utstyrt med mer enn én strømlledning. Koble fra de to strømlledningene før det utføres reparasjonsarbeid på enheten for å redusere faren for elektriske støt.                        |
| Aviso         | Esta unidade poderá ter mais do que um cabo de alimentação. Para reduzir o risco de choque eléctrico, desligue os dois cabos de alimentação antes de efectuar reparações na unidade.                        |
| ¡Advertencia! | Puede ser que este equipo posea más de un cable de alimentación. Para reducir el riesgo de descarga eléctrica, desenchufar los dos cables antes de proceder al mantenimiento de la unidad.                  |
| Varning!      | Denna enhet kan vara försedd med mer än en nätsladd. För att minska risken för elektriska stötar skall båda nätsladdarna dras ur innan du utför underhållsarbete på enheten.                                |

## AC Power Supply Warning



### Warning

The AC power supply for the Cisco 7505, Cisco 7507, and Cisco 7513 has double pole/neutral fusing.

### Waarschuwing

De wisselstroom voeding voor de Cisco 7505, Cisco 7507, en Cisco 7513 heeft tweepolige/neutral zekeringen.

### Varoitus

Cisco 7505 Cisco 7507:n ja Cisco 7513:n vaihtovirtalähteessä on kaksinapainen/nollajohtimellinen liitäntä.

### Attention

L'alimentation en courant alternatif du Cisco 7505, Cisco 7507 et du Cisco 7513 est munie de doubles fusibles pôle/neutre.

### Warnung

Das Wechselstrom-Netzgerät für den Cisco 7505, Cisco 7507 und Cisco 7513 ist mit zweipoliger/neutraler Sicherung ausgestattet.

### Avvertenza

L'alimentatore CA per il Cisco 7505 ed il Cisco 7507 Cisco 7513 è dotato di fusibili a polo doppio/ neutro.

### Advarsel

Vekselstrømsforsyningsenheden for Cisco 7505 Cisco 7507 og Cisco 7513 har både topolede og nøytrale sikringer.

### Aviso

O fornecimento de corrente alternada ao Cisco 7505 Cisco 7507 e ao o Cisco 7513 possui fusão bipolar/neutra.



¡Advertencia! La fuente de alimentación de corriente alterna (CA) para los equipos Cisco 7505 Cisco 7507 y Cisco 7513 posee doble fusible, para el polo activo y el neutro.

Warning! Strömförsörjningsenheten för växelström för Cisco 7505 Cisco 7507 och Cisco 7513 har dubbel pol-/neutralsäkring.

## DC Power Disconnection Warning



### Warning

Before performing any of the following procedures, ensure that power is removed from the DC circuit. To ensure that all power is OFF, 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.

### Waarschuwing

Voordat u een van de onderstaande procedures uitvoert, dient u te controleren of de stroom naar het gelijkstroom circuit uitgeschakeld is. Om u ervan te verzekeren dat alle stroom UIT is geschakeld, kiest u op het schakelbord de stroomverbreker die het gelijkstroom circuit bedient, draait de stroomverbreker naar de UIT positie en plakt de schakelaarhendel van de stroomverbreker met plakband in de UIT positie vast.

### Varoitus

Varmista, että tasavirtapiirissä ei ole virtaa ennen seuraavien toimenpiteiden suorittamista. Varmistaaksesi, että virta on KATKAISTU täysin, paikanna tasavirrasta huolehtivassa kojetaulussa sijaitseva suojakytkin, käännä suojakytkin KATKAISTU-asentoon ja teippaa suojakytkimen varsi niin, että se pysyy KATKAISTU-asennossa.

### Attention

Avant de pratiquer l'une quelconque des procédures ci-dessous, vérifier que le circuit en courant continu n'est plus sous tension. Pour en être sûr, localiser le disjoncteur situé sur le panneau de service du circuit en courant continu, placer le disjoncteur en position fermée (OFF) et, à l'aide d'un ruban adhésif, bloquer la poignée du disjoncteur en position OFF.

### Warnung

Vor Ausführung der folgenden Vorgänge ist sicherzustellen, daß die Gleichstromschaltung keinen Strom erhält. Um sicherzustellen, daß sämtlicher Strom abgestellt ist, machen Sie auf der Schalttafel den Unterbrecher für die Gleichstromschaltung ausfindig, stellen Sie den Unterbrecher auf AUS, und kleben Sie den Schaltergriff des Unterbrechers mit Klebeband in der AUS-Stellung fest.

### Avvertenza

Prima di svolgere una qualsiasi delle procedure seguenti, verificare che il circuito CC non sia alimentato. Per verificare che tutta l'alimentazione sia scollegata (OFF), individuare l'interruttore automatico sul quadro strumenti che alimenta il circuito CC, mettere l'interruttore in posizione OFF e fissarlo con nastro adesivo in tale posizione.

### Advarsel

Før noen av disse prosedyrene utføres, kontroller at strømmen er frakoblet likestrømkretsen. Sørg for at all strøm er slått AV. Dette gjøres ved å lokalisere strømbryteren på brytertavlen som betjener likestrømkretsen, slå strømbryteren AV og teipe bryterhåndtaket på strømbryteren i AV-stilling.

**Aviso** Antes de executar um dos seguintes procedimentos, certifique-se que desligou a fonte de alimentação de energia do circuito de corrente contínua. Para se assegurar que toda a corrente foi DESLIGADA, localize o disjuntor no painel que serve o circuito de corrente contínua e coloque-o na posição OFF (Desligado), segurando nessa posição a manivela do interruptor do disjuntor com fita isoladora.

**¡Advertencia!** Antes de proceder con los siguientes pasos, comprobar que la alimentación del circuito de corriente continua (CC) esté cortada (OFF). Para asegurarse de que toda la alimentación esté cortada (OFF), localizar el interruptor automático en el panel que alimenta al circuito de corriente continua, cambiar el interruptor automático a la posición de Apagado (OFF), y sujetar con cinta la palanca del interruptor automático en posición de Apagado (OFF).

**Varning!** Innan du utför någon av följande procedurer måste du kontrollera att strömförsörjningen till likströmskretsen är bruten. Kontrollera att all strömförsörjning är BRUTEN genom att slå AV det överspänningsskydd som skyddar likströmskretsen och tejpa fast överspänningsskyddets omkopplare i FRÅN-läget.

## 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.

**Figyelem!**

A készüléket védőföldeléssel kell ellátni. Győződjön meg róla, hogy a készülék normál használat során csatlakozik a földhöz.

**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.

**Предупреждение** Данное устройство должно быть заземлено. Убедитесь, что при обычной работе устройство заземлено.

**警告** 此设备应该接地。请确保主机在正常使用期间连接接地。

**警告** この装置はアースに接続するものです。通常の使用では、ホストがアース端子に接続されていることを確認してください。

---

**Предупреждение** Данное устройство должно быть заземлено. Убедитесь, что при обычной работе устройство заземлено.

**警告** 此设备应该接地。请确保主机在正常使用期间连接接地。

**警告** この装置はアースに接続するものです。通常の使用では、ホストがアース端子に接続されていることを確認してください。

---

## DC Protection



**Warning**

This product relies on the building's installation for short-circuit (overcurrent) protection. Ensure that a Listed and Certified fuse or circuit breaker 35A minimum, 60VDC, is used on all current-carrying conductors.

**Waarschuwing**

Dit product moet worden beveiligd tegen kortsluiting (overstroom) door de installatie van het gebouw. Zorg dat er een goedgekeurde zekering of stroomonderbreker (35 A, minimaal 60 V gelijkstroom) op alle stroomdragende geleiders staat.

**Varoitus**

Tämä laite käyttää rakennuksen oikosulkusuojausta (ylivirtasuojauksia). Varmista, että kaikissa virtajohtimissa käytetään hyväksytyjä sulakkeita tai katkaisijoita (35 A, vähintään 60 V tasavirtaa).

**Attention**

La protection de ce produit contre les courts-circuits (surtensions) doit être assurée par la configuration électrique du bâtiment. Vérifiez que tous les conducteurs de courant sont équipés d'un fusible ou d'un disjoncteur de 35 A et d'un minimum de 60 V cc, normalisé et homologué.

|             |   |
|-------------|---|
| Warnung     | Dieses Produkt erfordert Gebäude-Absicherung gegen Kurzschlüsse (Überstrom). Achten Sie darauf, daß auf allen stromführenden Leitern eine anerkannte, zugelassene Sicherung oder ein Stromkreisunterbrecher 35A, Minimum 60VDC, verwendet wird.                           |
| Avvertenza  | Questo prodotto fa affidamento sulla protezione dell'edificio contro i cortocircuiti. Accertarsi che un fusibile o interruttore di circuito omologato da 35 A, 60 V c.c. minimo, venga utilizzato su tutti i conduttori sotto tensione.                                   |
| Advarsel    | Dette produktet er avhengig av bygningens installasjon for beskyttelse mot kortslutning (overspenning). Påse at en oppført og godkjent sikring eller strømbryter, på 35 A, minimum 60 volt likestrøm, brukes på alle strømførende ledere.                                 |
| Aviso       | Este produto depende da instalação existente no edifício para a protecção contra curto-circuito (sobrecarga). Certifique-se de que um fusível ou disjuntor listado e certificado de 35 A, mínimo 60 VDC, seja utilizado em todos os condutores de transporte de corrente. |
| Advertencia | Este producto cuenta con la instalación del edificio para la protección de cortocircuitos (sobrecorriente). Asegúrese de usar un fusible listado y certificado o cortacircuitos 35A, mínimo 60 V cc, en todos los conductores de corriente.                               |
| Varning!    | Denna produkt förlitar sig på byggnadens installation för skydd mot kortslutning (överström). Se till att en registrerad och certifierad säkring eller ett överspänningsskydd på 35 A, minst 60 V likström, används på alla strömförande ledare.                          |

## Ground Connection Warning



Warning

When installing the unit, the ground connection must always be made first and disconnected last.

Waarschuwing

Bij de installatie van het toestel moet de aardverbinding altijd het eerste worden gemaakt en het laatste worden losgemaakt.

Varoitus

Laitetta asennettaessa on maahan yhdistäminen aina tehtävä ensiksi ja maadoituksen irti kytkeminen viimeiseksi.

Attention

Lors de l'installation de l'appareil, la mise à la terre doit toujours être connectée en premier et déconnectée en dernier.

Warnung

Der Erdanschluß muß bei der Installation der Einheit immer zuerst hergestellt und zuletzt abgetrennt werden.

Avvertenza

In fase di installazione dell'unità, eseguire sempre per primo il collegamento a massa e disconnetterlo per ultimo.

Advarsel

Når enheten installeres, må jordledningen alltid tilkobles først og frakobles sist.

|               |   |
|---------------|---|
| Aviso         | Ao instalar a unidade, a ligação à terra deverá ser sempre a primeira a ser ligada, e a última a ser desligada. |
| ¡Advertencia! | Al instalar el equipo, conectar la tierra la primera y desconectarla la última.                                 |
| Varning!      | Vid installation av enheten måste jordledningen alltid anslutas först och kopplas bort sist.                    |

## Unit Connection Warning



|              |   |
|--------------|---|
| Warning      | To be installed and maintained by service personnel as defined by AS/NZS 3260. Incorrect connection of this or connected equipment to a General Purpose Outlet could result in a hazardous situation. The telecommunication lines must be disconnected before unplugging the main power connection and while the housing is open.   |
| Waarschuwing | Installatie en onderhoud mag alleen worden uitgevoerd door servicepersoneel zoals gedefinieerd in AS/NZS 3260. Als de apparatuur of de daarmee verbonden apparaten niet correct worden aangesloten op een geaard stopcontact, kan dit leiden tot een potentieel gevaarlijke situatie. Kabels voor telecommunicatie moeten worden losgekoppeld voordat de hoofdstekker uit het stopcontact wordt gehaald en als de behuizing is geopend. |
| Varoitus     | Huoltohenkilökunnan asennettava ja huollettava AS/NZS 3260:n mukaisesti. Tämän tai liitetyn laitteiston virheellinen liitäntä pistorasiaan voi aiheuttaa vaaratilanteen. Tietoliikennelinjat on kytkettävä irti ennen päävirtaliitääntä ja kun kotelo on auki.  |
| Attention    | L'installation et l'entretien doivent être exécutés par un électricien qualifié (AS/NZS 3260). Une mauvaise connexion ou une connexion à une prise ordinaire présente un risque d'accident électrique. Il importe que les lignes de télécommunication soient déconnectées et le boîtier ouvert avant de débrancher la source d'alimentation principale.   |
| Warnung      | Installation und Instandhaltung durch Wartungspersonal, wie durch AS/NZS 3260 definiert. Unsachgemäßes Anschließen dieser oder verbundener Geräte an eine Universalsteckdose stellt eine potentielle Gefahrenquelle dar. Die Telekommunikationsleitungen müssen getrennt werden, bevor die Hauptstromverbindung ausgesteckt wird und während das Gehäuse offen ist.   |
| Avvertenza   | Installazione da effettuarsi solamente da parte del personale addetto in base alle norme AS/NZS 3260. Il collegamento inadeguato di questo dispositivo o il collegamento dello stesso ad una presa generica può provocare situazioni di rischio. È necessario scollegare le linee per le telecomunicazioni prima di togliere l'alimentazione di corrente a dispositivo aperto.  |
| Advarsel     | Må installeres og vedlikeholdes av servicepersonell slik AS/NZS 3260 definerer. Feil tilkobling av denne eller tilkoblet utstyr til et vanlig strømuttak kan føre til en farlig situasjon. Telelinjene må frakobles før strømforsyningen og mens kabinettet er åpent.   |

|               |   |
|---------------|---|
| Aviso         | Para ser instalado e mantido pelo pessoal técnico, tal como definido pela AS/NZS 3260. A ligação incorrecta deste equipamento ou de outro equipamento ligado a uma tomada multi-usos pode ter como resultado uma situação perigosa. As linhas de telecomunicações devem ser desligadas antes de ser desactivada a ligação da corrente de alimentação e enquanto o invólucro estiver aberto. |
| ¡Advertencia! | La instalación y el mantenimiento debe realizarlos el personal de servicio, según lo dispuesto en la norma AS/NZS 3260. La conexión incorrecta de este equipo a un enchufe de uso general puede dar lugar a situaciones de peligro. Las líneas de telecomunicación deben estar desconectadas antes de desenchufar la toma de corriente principal mientras la carcasa esté abierta.          |
| Varning!      | Måste installeras och underhållas av servicepersonal i enlighet med AS/NZS 3260. Felaktig anslutning av denna eller tillhörande utrustning till ett växelströmsuttag kan resultera i en farlig situation. Telekommunikationslinjer måste frånkopplas innan det skyddsjordade kontaktdonet dras ur och medan höljet är öppet.  |

## Ground Conductor Warning



### Warning

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

### Waarschuwing

De aardingsleiding mag nooit buiten werking gesteld worden en de apparatuur mag nooit bediend worden zonder dat er een op de juiste wijze geïnstalleerde aardingsleiding aanwezig is. Neem contact op met de bevoegde instantie voor elektrische inspecties of met een elektricien als u er niet zeker van bent dat er voor passende aarding gezorgd is.

### Varoitus

Älä koskaan ohita maajohdinta tai käytä laitteita ilman oikein asennettua maajohdinta. Ota yhteyttä asianmukaiseen sähkötarkastusviranomaiseen tai sähköasentajaan, jos olet epävarma maadoituksen sopivuudesta.

### Attention

Ne jamais rendre inopérant le conducteur de masse ni utiliser l'équipement sans un conducteur de masse adéquatement installé. En cas de doute sur la mise à la masse appropriée disponible, s'adresser à l'organisme responsable de la sécurité électrique ou à un électricien.

### Warnung

Auf keinen Fall den Erdungsleiter unwirksam machen oder das Gerät ohne einen sachgerecht installierten Erdungsleiter verwenden. Wenn Sie sich nicht sicher sind, ob eine sachgerechte Erdung vorhanden ist, wenden Sie sich an den zuständigen elektrischen Fachmann oder einen Elektriker.

### Avvertenza

Non escludere mai il conduttore di protezione né usare l'apparecchiatura in assenza di un conduttore di protezione installato in modo corretto. Se non si sa con certezza che è disponibile un collegamento di messa a terra adeguato, esaminare le Norme CEI pertinenti o rivolgersi a un elettricista qualificato.

|               |   |
|---------------|---|
| Advarsel      | Omgå aldri jordingslederen og bruk aldri utstyret uten riktig montert jordingsleder. Ta kontakt med det riktige organet for elektrisk inspeksjon eller en elektriker hvis du er usikker på om det finnes velegnet jording.  |
| Aviso         | Nunca anule o condutor à terra nem opere o equipamento sem ter um condutor à terra adequadamente instalado. Em caso de dúvida em relação ao sistema de ligação à terra, contacte os serviços locais de inspeção eléctrica ou um electricista qualificado.   |
| ¡Advertencia! | No inhabilitar nunca el conductor de tierra ni hacer funcionar el equipo si no existe un conductor de tierra instalado correctamente. Póngase en contacto con una autoridad apropiada de inspección eléctrica o con un electricista competente si no está seguro de que hay una conexión a tierra adecuada. |
| Varning!      | Koppla aldrig från jordledningen och använd aldrig utrustningen utan en på lämpligt sätt installerad jordledning. Om det föreligger osäkerhet huruvida lämplig jordning finns skall elektrisk besiktningsauktoritet eller elektriker kontaktas.   |

## SELV Circuit Warning



|              |  |
|--------------|--|
| Warning      | 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.   |
| Waarschuwing | Om elektrische schokken te vermijden, mogen veiligheidscircuits met extra lage spanning (genaamd SELV = Safety Extra-Low Voltage) niet met telefoonnetwerkspanning (TNV) circuits verbonden worden. LAN (Lokaal netwerk) poorten bevatten SELV circuits en WAN (Regionaal netwerk) poorten bevatten TNV circuits. Sommige LAN en WAN poorten gebruiken allebei RJ-45 connectors. Ga voorzichtig te werk wanneer u kabels verbindt.   |
| Varoitus     | Jotta välttyt sähköiskulta, älä kytke pienjännitteisiä SELV-suojapiirejä puhelinverkkojännitettä (TNV) käyttöihin virtapiireihin. LAN-portit sisältävät SELV-piirejä ja WAN-portit puhelinverkkojännitettä käytäviä piirejä. Osa sekä LAN- että WAN-porteista käyttää RJ-45-liittimiä. Ole varovainen kytkiessäsi kaapeleita.  |
| Attention    | Pour éviter une électrocution, ne raccordez pas les circuits de sécurité basse tension (Safety Extra-Low Voltage ou SELV) à des circuits de tension de réseau téléphonique (Telephone Network Voltage ou TNV). Les ports du réseau local (LAN) contiennent des circuits SELV et les ports du réseau longue distance (WAN) sont munis de circuits TNV. Certains ports LAN et WAN utilisent des connecteurs RJ-45. Raccordez les câbles en prenant toutes les précautions nécessaires. |
| Warnung      | Zur Vermeidung von Elektroschock die Sicherheits-Kleinspannungs-Stromkreise (SELV-Kreise) nicht an Fernsprechnetzspannungs-Stromkreise (TNV-Kreise) anschließen. LAN-Ports enthalten SELV-Kreise, und WAN-Ports enthalten TNV-Kreise. Einige LAN- und WAN-Ports verwenden auch RJ-45-Steckverbinder. Vorsicht beim Anschließen von Kabeln.   |

|               |  |
|---------------|--|
| Avvertenza    | Per evitare scosse elettriche, non collegare circuiti di sicurezza a tensione molto bassa (SELV) ai circuiti a tensione di rete telefonica (TNV). Le porte LAN contengono circuiti SELV e le porte WAN contengono circuiti TNV. Alcune porte LAN e WAN fanno uso di connettori RJ-45. Fare attenzione quando si collegano cavi.  |
| Advarsel      | Unngå å koble lavspenningskretser (SELV) til kretser for telenettspenning (TNV), slik at du unngår elektrisk støt. LAN-utganger inneholder SELV-kretser og WAN-utganger inneholder TNV-kretser. Det finnes både LAN-utganger og WAN-utganger som bruker RJ-45-kontakter. Vær forsiktig når du kobler kabler.   |
| Aviso         | Para evitar choques eléctricos, não conecte os circuitos de segurança de baixa tensão (SELV) aos circuitos de tensão de rede telefónica (TNV). As portas LAN contêm circuitos SELV e as portas WAN contêm circuitos TNV. Algumas portas LAN e WAN usam conectores RJ-45. Tenha o devido cuidado ao conectar os cabos.  |
| ¡Advertencia! | Para evitar la sacudida eléctrica, no conectar circuitos de seguridad de voltaje muy bajo (safety extra-low voltage = SELV) con circuitos de voltaje de red telefónica (telephone network voltage = TNV). Los puertos de redes de área local (local area network = LAN) contienen circuitos SELV, y los puertos de redes de área extendida (wide area network = WAN) contienen circuitos TNV. En algunos casos, tanto los puertos LAN como los WAN usan conectores RJ-45. Proceda con precaución al conectar los cables. |
| Varning!      | För att undvika elektriska stötar, koppla inte säkerhetskretsar med extra låg spänning (SELV-kretsar) till kretsar med telefonnätspänning (TNV-kretsar). LAN-portar innehåller SELV-kretsar och WAN-portar innehåller TNV-kretsar. Vissa LAN- och WAN-portar är försedda med RJ-45-kontakter. Iaktta försiktighet vid anslutning av kablar.  |

## 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.

### Figyelem!

A készülék végső elhelyezéséről az adott országban érvényes törvények és előírások szerint kell intézkedni.

### 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.

**Предупреждение** Окончательная установка данного изделия должна выполняться в соответствии со всеми региональными и местными правилами и нормами.

**警告** 本产品的废弃处理应根据所有国家的法律和规章进行。

**警告** この製品を廃棄するときは、各国の法律および規制に従って処理してください。

---

**Предупреждение** Окончательная установка данного изделия должна выполняться в соответствии со всеми региональными и местными правилами и нормами.

**警告** 本产品的废弃处理应根据所有国家的法律和规章进行。

**警告** この製品を廃棄するときは、各国の法律および規制に従って処理してください。

---

## Class 1 Laser Product Warning



**Warning** Class 1 laser product.

**Waarschuwing** Klasse-1 laser produkt.

**Varoitus** Luokan 1 lasertuote.

**Attention** Produit laser de classe 1.

**Warnung** Laserprodukt der Klasse 1.

**Avvertenza** Prodotto laser di Classe 1.

|               |                            |
|---------------|----------------------------|
| Advarsel      | Laserprodukt av klasse 1.  |
| Aviso         | Produto laser de classe 1. |
| ¡Advertencia! | Producto láser Clase I.    |
| Varning!      | Laserprodukt av klass 1.   |
| 警告            | 第1種レーザー製品                  |
| 주의            | 1급 레이저 제품.                 |

## Chassis Warning—Rack-Mounting and Servicing



### Warning

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.

### Waarschuwing

Om lichamelijk letsel te voorkomen wanneer u dit toestel in een rek monteert of het daar een servicebeurt geeft, moet u speciale voorzorgsmaatregelen nemen om ervoor te zorgen dat het toestel stabiel blijft. De onderstaande richtlijnen worden verstrekt om uw veiligheid te verzekeren:

- Dit toestel dient onderaan in het rek gemonteerd te worden als het toestel het enige in het rek is.
- Wanneer u dit toestel in een gedeeltelijk gevuld rek monteert, dient u het rek van onderen naar boven te laden met het zwaarste onderdeel onderaan in het rek.
- Als het rek voorzien is van stabiliseringshulpmiddelen, dient u de stabilisatoren te monteren voordat u het toestel in het rek monteert of het daar een servicebeurt geeft.

### Varoitus

Kun laite asetetaan telineeseen tai huolletaan sen ollessa telineessä, on noudatettava erityisiä varotoimia järjestelmän vakavuuden säilyttämiseksi, jotta vältetään loukkaantumiselta. Noudata seuraavia turvallisuusohjeita:

- Jos telineessä ei ole muita laitteita, aseta laite telineen alaosaan.
- Jos laite asetetaan osaksi täytettyyn telineeseen, aloita kuormittaminen sen alaosasta kaikkein raskaimmalla esineellä ja siirry sitten sen yläosaan.
- Jos telinettä varten on vakaimet, asenna ne ennen laitteen asettamista telineeseen tai sen huoltamista siinä.

- Attention** Pour éviter toute blessure corporelle pendant les opérations de montage ou de réparation de cette unité en casier, il convient de prendre des précautions spéciales afin de maintenir la stabilité du système. Les directives ci-dessous sont destinées à assurer la protection du personnel :
- Si cette unité constitue la seule unité montée en casier, elle doit être placée dans le bas.
  - Si cette unité est montée dans un casier partiellement rempli, charger le casier de bas en haut en plaçant l'élément le plus lourd dans le bas.
  - Si le casier est équipé de dispositifs stabilisateurs, installer les stabilisateurs avant de monter ou de réparer l'unité en casier.
- Warnung** Zur Vermeidung von Körperverletzung beim Anbringen oder Warten dieser Einheit in einem Gestell müssen Sie besondere Vorkehrungen treffen, um sicherzustellen, daß das System stabil bleibt. Die folgenden Richtlinien sollen zur Gewährleistung Ihrer Sicherheit dienen:
- Wenn diese Einheit die einzige im Gestell ist, sollte sie unten im Gestell angebracht werden.
  - Bei Anbringung dieser Einheit in einem zum Teil gefüllten Gestell ist das Gestell von unten nach oben zu laden, wobei das schwerste Bauteil unten im Gestell anzubringen ist.
  - Wird das Gestell mit Stabilisierungszubehör geliefert, sind zuerst die Stabilisatoren zu installieren, bevor Sie die Einheit im Gestell anbringen oder sie warten.
- Avvertenza** Per evitare infortuni fisici durante il montaggio o la manutenzione di questa unità in un supporto, occorre osservare speciali precauzioni per garantire che il sistema rimanga stabile. Le seguenti direttive vengono fornite per garantire la sicurezza personale:
- Questa unità deve venire montata sul fondo del supporto, se si tratta dell'unica unità da montare nel supporto.
  - Quando questa unità viene montata in un supporto parzialmente pieno, caricare il supporto dal basso all'alto, con il componente più pesante sistemato sul fondo del supporto.
  - Se il supporto è dotato di dispositivi stabilizzanti, installare tali dispositivi prima di montare o di procedere alla manutenzione dell'unità nel supporto.
- Advarsel** Unngå fysiske skader under montering eller reparasjonsarbeid på denne enheten når den befinner seg i et kabinett. Vær nøye med at systemet er stabilt. Følgende retningslinjer er gitt for å verne om sikkerheten:
- Denne enheten bør monteres nederst i kabinettet hvis dette er den eneste enheten i kabinettet.
  - Ved montering av denne enheten i et kabinett som er delvis fylt, skal kabinettet lastes fra bunnen og opp med den tyngste komponenten nederst i kabinettet.
  - Hvis kabinettet er utstyrt med stabiliseringsutstyr, skal stabilisatorene installeres før montering eller utføring av reparasjonsarbeid på enheten i kabinettet.
- Aviso** Para se prevenir contra danos corporais ao montar ou reparar esta unidade numa estante, deverá tomar precauções especiais para se certificar de que o sistema possui um suporte estável. As seguintes directrizes ajudá-lo-ão a efectuar o seu trabalho com segurança:
- Esta unidade deverá ser montada na parte inferior da estante, caso seja esta a única unidade a ser montada.
  - Ao montar esta unidade numa estante parcialmente ocupada, coloque os itens mais pesados na parte inferior da estante, arrumando-os de baixo para cima.
  - Se a estante possuir um dispositivo de estabilização, instale-o antes de montar ou reparar a unidade.

- ¡Advertencia!** Para evitar lesiones durante el montaje de este equipo sobre un bastidor, o posteriormente durante su mantenimiento, se debe poner mucho cuidado en que el sistema quede bien estable. Para garantizar su seguridad, proceda según las siguientes instrucciones:
- Colocar el equipo en la parte inferior del bastidor, cuando sea la única unidad en el mismo.
  - Cuando este equipo se vaya a instalar en un bastidor parcialmente ocupado, comenzar la instalación desde la parte inferior hacia la superior colocando el equipo más pesado en la parte inferior.
  - Si el bastidor dispone de dispositivos estabilizadores, instalar éstos antes de montar o proceder al mantenimiento del equipo instalado en el bastidor.
- Varning!** För att undvika kroppsskada när du installerar eller utför underhållsarbete på denna enhet på en ställning måste du vidta särskilda försiktighetsåtgärder för att försäkra dig om att systemet står stadigt. Följande riktlinjer ges för att trygga din säkerhet:
- Om denna enhet är den enda enheten på ställningen skall den installeras längst ned på ställningen.
  - Om denna enhet installeras på en delvis fylld ställning skall ställningen fyllas nedifrån och upp, med de tyngsta enheterna längst ned på ställningen.
  - Om ställningen är försedd med stabiliseringsdon skall dessa monteras fast innan enheten installeras eller underhålls på ställningen.

## Overheating Prevention Warning



- Warning** To prevent the system from overheating, do not operate it in an area that exceeds the maximum recommended ambient temperature of 104°F (40°C).
- Waarschuwing** Om te voorkomen dat het systeem oververhit raakt, dient u het systeem niet te gebruiken in een ruimte waar de maximaal aanbevolen omgevingstemperatuur van 40°C wordt overschreden.
- Varoitus** Jotta järjestelmä ei kuumentuisi liikaa, sitä ei saa käyttää alueella, jonka lämpötila ylittää suositellun maksimiympäristölämpötilan 40°C.
- Attention** Pour éviter toute surchauffe du système, il est recommandé de maintenir une température ambiante inférieure à 40°C.
- Warnung** Um das System vor Überhitzung zu schützen, vermeiden Sie dessen Verwendung in einer Gegend, in der die Umgebungstemperatur das empfohlene Maximum von 40°C überschreitet.
- Avvertenza** Per evitare che il sistema si surriscaldi, non utilizzatelo in una zona dove la temperatura ambiente ecceda la temperatura massima raccomandata di 40°C (104°F).
- Advarsel** For å hindre at systemet blir overopphetet, må det ikke brukes i et område der temperaturen overstiger den maksimalt anbefalte temperaturen på 40°C.
- Aviso** Para evitar o sobreaquecimento do sistema, não o utilize em áreas que excedam a temperatura ambiente máxima recomendada de 40°C (104°F).

¡Advertencia! Para impedir que el sistema se caliente, no lo utilice en zonas en las que la temperatura ambiente llegue a los 40°C (104°F).

Varning! Förhindra att systemet blir överhettat genom att inte använda det på en plats där den rekommenderade omgivningstemperaturen överstiger 40°C.

## European Directives

This section includes the telecom directives for the European Community, Switzerland, Norway, Iceland and Liechtenstein. The Declaration of Conformity is with regard to directives 1999/5/EC.

### European Community, Switzerland, Norway, Iceland and Liechtenstein Declaration of Conformity With Regard to R&TTE Directive 1999/5/EC

The Declaration of Conformity related to the products in this document can be found at the following URL: [http://tools.cisco.com/cse/prdapp/jsp/externalsearch.do?action=externalsearch&page=EXTERNAL\\_SEARCH](http://tools.cisco.com/cse/prdapp/jsp/externalsearch.do?action=externalsearch&page=EXTERNAL_SEARCH)

|                    |  |
|--------------------|--|
| <b>Deutsch:</b>    | Dieses Great entspricht den grundlegenden Anforderungen und den weiteren entsprechenden Vorgaben der Richtlinie 1999/5/EU. |
| <b>Dansk:</b>      | Denne udstyr er i overensstemmelse med de væsentlige krav og andre relevante bestemmelser i Direktiv 1999/5/EF.            |
| <b>English:</b>    | This equipment is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.      |
| <b>Español:</b>    | Este equipo cumple con los requisitos esenciales así como con otras disposiciones de la Directiva 1999/5/CE.               |
| <b>Ελληνικά:</b>   | Αυτός ο εξοπλισμός συμμορφώνεται με τις ουσιαστικές απαιτήσεις και τις λοιπές διατάξεις της Οδηγίας 1999/5/EK.             |
| <b>Français:</b>   | Cet équipement est conforme aux exigences essentielles et aux autres dispositions pertinentes de la Directive 1999/5/EC.   |
| <b>Íslenska:</b>   | etta tæki er samkvæmt grunnkröfum og öðrum viðeigandi ákvæðum Tilskipunar 1999/5/EC.                                       |
| <b>Italiano:</b>   | Questo apparato è conforme ai requisiti essenziali ed agli altri principi sanciti dalla Direttiva 1999/5/CE.               |
| <b>Nederlands:</b> | Dit apparaat voldoet aan de essentiële eisen en andere van toepassing zijnde bepalingen van de Richtlijn 1999/5/EC.        |
| <b>Norsk:</b>      | Denne utstyret er i samsvar med de grunnleggende krav og andre relevante bestemmelser i EU-direktiv 1999/5/EF.             |

|                   |   |
|-------------------|---|
| <b>Português:</b> | Este equipamento está em conformidade com os requisitos essenciais e outras provisões relevantes da Directiva 1999/5/EC.  |
| <b>Romania:</b>   | Prin prezenta, noi Cisco Systems România SRL, declarăm pe propria răspundere că produsul Cisco 7505, Cisco 7505-MX, Cisco 7507, Cisco 7507-MX, Cisco 7513, Cisco 7513-MX, and Cisco 7576, îndeplinește principalele cerin e de conformitate cu Directiva Europeană 1999/5/EC. |
| <b>Suomi:</b>     | Tämä laite täyttää direktiivin 1999/5/EY oleelliset vaatimukset ja on siinä asetettujen muiden laitetta koskevien määräysten mukainen.  |
| <b>Svenska:</b>   | Denna utrustning är i överensstämmelse med de väsentliga kraven och andra relevanta bestämmelser i Direktiv 1999/5/EC.  |
| <b>Deutsch:</b>   | Dieses Great entspricht den grundlegenden Anforderungen und den weiteren entsprechenden Vorgaben der Richtlinie 1999/5/EU.  |

# Regulatory Standards Compliance

This section includes all regulatory, safety, EMC (Class A), Telecom, and NEBS standards. The Cisco 7505, Cisco 7505-MX, Cisco 7507, Cisco 7507-MX, Cisco 7513, Cisco 7513-MX, and Cisco 7576 is in compliance with national and international standards as described in [Table 1](#)

**Table 1** *Regulatory Compliance Standards*

| Specification         | Standard   |
|-----------------------|--|
| Regulatory Compliance | Products with the CE <sup>1</sup> Marking indicate compliance with the 1999/5/EC directive, which includes the following safety and EMC standards:   |
| Safety                | UL <sup>2</sup> 1950<br>CSA <sup>3</sup> -C22.2 No. 950<br>EN <sup>4</sup> 60950<br>IEC <sup>5</sup> 60950<br>TS <sup>6</sup> 001<br>AS/NZS <sup>7</sup> 3260<br>IEC 60825-1<br>IEC 60825-2<br>EN 60825-1<br>EN 60825-2<br>21CFR <sup>8</sup> 1040           |
| EMC <sup>9</sup>      | FCC <sup>10</sup> Part 15 (CFR 47) Class A<br>ICES <sup>11</sup> -003 Class A<br>EN55022 Class A<br>CISPR22 Class A<br>AS/NZS 3548 Class A<br>VCCI <sup>12</sup> Class A<br>EN55024<br>ETS 300 386<br>EN50082-1<br>EN61000-3-2<br>EN61000-3-3<br>EN61000-6-1 |

1. CE = European Compliance
2. UL = Underwriters Laboratories
3. CSA = Canadian Standards Association
4. EN = European Norm
5. IEC = International Electrotechnical Commission
6. TS = Technical Specification
7. AS/NZS = Standards Australia/Standards New Zealand
8. CFR = Code of Federal Regulations
9. EMC = electromagnetic compatibility
10. FCC = Federal Communications Commission
11. ICES = Interference-Causing Equipment Standard
12. VCCI = Voluntary Control Council for Information Technology Equipment

The Cisco 7505, Cisco 7505-MX, Cisco 7507, Cisco 7507-MX, Cisco 7513, Cisco 7513-MX, and Cisco 7576 meets the industry EMC, safety, and environmental standards described in [Table 2](#).

**Table 2** *Industry EMC, Safety and Environmental Standards*

| Description                          |
|--------------------------------------|
| GR-63-Core NEBS Level 3              |
| GR-1089-Core NEBS Level 3            |
| ETS 300 019 Storage Class 1.1        |
| ETS 300 019 Transportation Class 2.3 |
| ETS 300 019 Stationary Use Class 3.1 |

## GR-1089-Core Intrabuilding Lightning-Immunity Requirements



Caution

To comply with GR-1089-Core intrabuilding lightning-immunity requirements, you must use grounded, foil twisted-pair (FTP), Category 5 cabling.

## EMC Environmental Conditions for Products Installed in the European Union

This section applies to products to be installed in the European Union.

The equipment is intended to operate under the following environmental conditions with respect to EMC:

- A separate defined location under user control.
- Earthing and bonding shall meet the requirements of ETS 300 253 or CCITT K27.
- Where applicable, AC power distribution shall be one of the following types:
  - TN-S
  - TN-C (as defined in IEC 364-3)

In addition, if equipment is operated in a domestic environment, interference may occur.

## EMC Class A Statements/Warnings

This section includes the EMC Class A warnings for the Cisco 7505, Cisco 7505-MX, Cisco 7507, Cisco 7507-MX, Cisco 7513, Cisco 7513-MX, and Cisco 7576.

## FCC Class A

Modifying the equipment without Cisco's authorization may result in the equipment no longer complying with FCC requirements for Class A or Class B digital devices. In that event, your right to use the equipment may be limited by FCC regulations, and you may be required to correct any interference to radio or television communications at your own expense.



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 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.

## Canada – Class A

This Class A digital apparatus complies with Canadian ICES-003.  
Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

## International – CISPR 22 Class A

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 – VCCI Class A

This is a Class A product based on the standard of the Voluntary Control Council for Interference by Information Technology Equipment (VCCI). If this equipment is used in a domestic environment, radio disturbance may arise. When such trouble occurs, the user may be required to take corrective actions.

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。

## Taiwan – BSMI Class A

This is a Class A information product. It may cause radio frequency interference in residential environments. Under such circumstances, the user may be requested to take appropriate countermeasures.

**警告使用者：這是甲類資訊產品，在居住環境中使用時，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。**

## Hungary – Class A

This equipment is a Class A product and should be used and installed properly according to the Hungarian EMC Class A requirements (MSZEN55022). The Class A equipment is derived for typical commercial establishments for which special conditions of installation and protection distance are used.

Figyelmeztetés a felhasználói kézikönyv számára: Ez a berendezés "A" osztályú termék, felhasználására és üzembe helyezésére a magyar EMC "A" osztályú követelményeknek (MSZ EN 55022) megfelelően kerülhet sor, illetve ezen "A" osztályú berendezések csak megfelelő kereskedelmi forrásból származhatnak, amelyek biztosítják a megfelelő speciális üzembe helyezési körülményeket és biztonságos üzemelési távolságok alkalmazását.

## Korea – Class A

**Class A Device** This device is registered for EMC requirements for industrial use. The seller or buyer should be aware of this. If this type was sold or purchased by mistake, it should be replaced with a residential-use type.

| 기종별   | 사용자 안내문   |
|-------|---|
| A 급기기 | 이기는 업무용으로 전자파적합등록을한 기기이오니 판매자 또는 사용자는 이점을 주의하시기 바라며 만약 잘못 판매 또는 구입하였을 때에는 가정용으로 교환하시기 바랍니다. |

## Telecom Approvals Listing

The Cisco 7505, Cisco 7505-MX, Cisco 7507, Cisco 7507-MX, Cisco 7513, Cisco 7513-MX, and Cisco 7576 meets the requirements listed in this section for telecommunications equipment.

## FCC Part 68 Notice

The Cisco 7505, Cisco 7505-MX, Cisco 7507, Cisco 7507-MX, Cisco 7513, Cisco 7513-MX, and Cisco 7576 equipment complies with Part 68 of the FCC rules. A label on the bottom of the chassis contains the FCC registration number among other information. If requested, this information must be provided to the telephone company.

This equipment cannot be used on telephone company-provided coin services. Connection to the Party Line Service is subject to state tariffs.

If this equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. If advance notice is not practical, the telephone company will notify you as soon as possible. You will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations, or procedures that might affect the operation of the equipment. If this happens, the telephone company will provide advance notice in order for you to make the necessary modifications to maintain uninterrupted service.

If you experience trouble with this equipment, please contact Cisco Systems for repair and warranty information. If the problem is causing harm to the telephone network, the telephone company might request that you remove the equipment from the network until the problem is resolved. All repairs should be handled by authorized Cisco Systems service personnel.

We recommend that you install an AC surge arrestor in the AC outlet to which this device is connected. This action will help to avoid damage to the equipment caused by local lightning strikes and other electrical surges.

This equipment uses the Uniform Service Order Code (USOC) jacks that is described in [Table 3](#).

**Table 3** *USOC Jacks for Port Adapters*

| Model Number    | Facility Interface Code | Service Order Code | Jack Type          |
|-----------------|-------------------------|--------------------|--------------------|
| PA-2CT1/PRI     | 04DU9-BN/DN/1KN/1SN/1ZN | 6.0N               | Use registered CSU |
| PA-4B-U         | 02IS5                   | 6.0N               | RJ49C/CA-A11       |
| PA-8B-S/T       | 02IS5                   | 6.0N               | RJ48C/CB-1D        |
| PA-A3-8T1IMA    | 04DU9-BN/DN/1KN/1SN/1ZN | 6.0N               | RJ48C              |
| PA-MC-2T1       | 04DU9-BN/DN/1KN/1SN/1ZN | 6.0N/F             | RJ48C              |
| PA-MC-4T1       | 04DU9-BN/DN/1KN/1SN/1ZN | 6.0N/F             | RJ48C              |
| PA-MC-8T1       | 04DU9-BN/DN/1KN/1SN/1ZN | 6.0N/F             | RJ48C              |
| PA-MC-8DSX1     | 04DU9-BN/DN/1KN/1SN/1ZN | 6.0N/F             | RJ48C              |
| PA-MCX-2TE1     | 04DU9-1SN               | 6.0Y               | RJ48C              |
| PA-MCX-4TE1     | 04DU9-1SN               | 6.0Y               | RJ48C              |
| PA-MCX-8TE1     | 04DU9-1SN               | 6.0Y               | RJ48C              |
| PA-VXA-1TE1-24+ | 04DU9-BN/1KN/1SN        | 6.0Y               | RJ48C              |
| PA-VXB-2TE1     | 04DU9-BN/1KN/1SN        | 6.0Y               | RJ48C              |
| PA-VXB-2TE1+    | 04DU9-BN/1KN/1SN        | 6.0Y               | RJ48C              |
| PA-VXC-2TE1     | 04DU9-BN/1KN/1SN        | 6.0Y               | RJ48C              |
| PA-VXC-2TE1+    | 04DU9-BN/1KN/1SN        | 6.0Y               | RJ48C              |

## CS-03 Certification

The Cisco 7505, Cisco 7505-MX, Cisco 7507, Cisco 7507-MX, Cisco 7513, Cisco 7513-MX, and Cisco 7576 meets the requirements of the Industry Canada label (CS-03) for telecommunications equipment.

**Table 4** *CS-03 Approval for Port Adapters*

| Model Number | Approval Number |
|--------------|-----------------|
| PA-2CT1/PRI  | 2461 7791 A     |
| PA-4B-U      | 2461 8057A      |

**Table 4 CS-03 Approval for Port Adapters (Continued)**

| Model Number    | Approval Number |
|-----------------|-----------------|
| PA-8B-S/T       | 2461 7920A      |
| PA-A3-8T1IMA    | 2461 9914 A     |
| PA-MC-2T1       | 2461 9227 A     |
| PA-MC-4T1       | 2461 9227 A     |
| PA-MC-8T1       | 2461 9227 A     |
| PA-MC-8DSX1     | 2461 9227 A     |
| PA-MCX-2TE1     | 2461 10722 A    |
| PA-MCX-4TE1     | 2461 10722 A    |
| PA-MCX-8TE1     | 2461 10722 A    |
| PA-VXA-1TE1-24+ | 2461 10101 A    |
| PA-VXB-2TE1     | 2461 10101 A    |
| PA-VXB-2TE1+    | 2461 10101 A    |
| PA-VXC-2TE1     | 2461 10101 A    |
| PA-VXC-2TE1+    | 2461 10101 A    |

Observe the following general information and safety precautions:

- The industry Canada label identifies CS-03 certified equipment. This certification means that the equipment meets certain telecommunications network protection, operation, and safety requirements as described in the appropriate terminal equipment requirements document(s). The department does not guarantee the equipment will operate to the user's satisfaction.
- Before installing the equipment, check that you have permission to connect it to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.
- Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alterations made by the user to this equipment, or any equipment malfunctions, may cause the telecommunications company to request that the user disconnect the equipment.
- Ensure that the electrical ground connections of the power utility, telephone lines, and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.



**Warning**

**Do not attempt to make such connections yourself. Contact the appropriate electric inspection authority or electrician as appropriate.**

# JATE

The Cisco 7505, Cisco 7505-MX, Cisco 7507, Cisco 7507-MX, Cisco 7513, Cisco 7513-MX, and Cisco 7576 meets the requirements of the Japan Approvals Institute for Telecommunications Equipment (JATE). [Table 5](#) lists the JATE approval details.

**Table 5** *JATE Approvals for Port Adapters*

| Applicant           | Model Number      | Approval Number       |
|---------------------|-------------------|-----------------------|
| Nihon Cisco Systems | PA-A2-4T1C-OC3SM  | N97-K063-0            |
| Nihon Cisco Systems | PA-A2-4T1C-T3ATM  | N96-K063-0            |
| Nihon Cisco Systems | PA-A3-T3          | N98-N324-0            |
| Nihon Cisco Systems | PA-A3-8T1IMA      | D99-0385JP            |
| Nihon Cisco Systems | PA-A3-OC3SMI      | N98-3009-0            |
| Nihon Cisco Systems | PA-A3-OC3SML      | N98-3010-0            |
| Nihon Cisco Systems | PA-A3-OC12 MM/SMI | L99-1292              |
| Nihon Cisco Systems | PA-A4-OC12SMI     | L99-1292              |
| Nihon Cisco Systems | PA-8B-S/T         | T97-5318-0            |
| Nihon Cisco Systems | PA-CT3/4T1        | N98-N060-0            |
| Nihon Cisco Systems | PA-2CT1           | N97-K005-0            |
| Nihon Cisco Systems | PA-MC-T3          | N98-N325-0            |
| Nihon Cisco Systems | PA-MC-2T3+        | L99-1065              |
| Nihon Cisco Systems | PA-MC-2T1         | C99-0657JP, L99-1159  |
| Nihon Cisco Systems | PA-MC-4T1         | T98-6318-0            |
| Nihon Cisco Systems | PA-MC-8T1         | T98-6317-0            |
| Nihon Cisco Systems | PA-MC-8DSX1       | T98-6317-0            |
| Nihon Cisco Systems | PA-MCX-2TE1       | CD00-0556JP, L00-0140 |
| Nihon Cisco Systems | PA-MCX-4TE1       | CD00-0557JP, L00-0141 |
| Nihon Cisco Systems | PA-MCX-8TE1       | CD00-0558JP, L00-0142 |
| Nihon Cisco Systems | PA-MCX-8TE1-M     | L01-0254              |
| Nihon Cisco Systems | PA-POS-OC3 MM/SMI | L01-0358              |
| Nihon Cisco Systems | PA-POS-OC3 SHL    | D01-1059JP            |
| Nihon Cisco Systems | PA-POS-2OC3       | D03-0017JP            |
| Nihon Cisco Systems | PA-SRP-OC12SMI    | L99-1291              |
| Nihon Cisco Systems | SRPIP-OC12 SMX    | L00-0330              |
| Nihon Cisco Systems | PA-T3             | N98-N325-0            |
| Nihon Cisco Systems | PA-T3+            | N98-N358-0            |
| Nihon Cisco Systems | PA-2T3            | N98-N326-0            |
| Nihon Cisco Systems | PA-2T3+           | N98-N359-0            |
| Nihon Cisco Systems | PA-8T-X21         | N96-N158-0            |

*Table 5 JATE Approvals for Port Adapters (Continued)*

| Applicant           | Model Number                       | Approval Number       |
|---------------------|------------------------------------|-----------------------|
| Nihon Cisco Systems | PA-8T-V35                          | N97-K064-0            |
| Nihon Cisco Systems | PA-8T-232                          | M96-N218-0            |
| Nihon Cisco Systems | PA-4T                              | N98-K058-0            |
| Nihon Cisco Systems | PA-4T+                             | N97-K012-0            |
| Nihon Cisco Systems | PA-VXA-1TE1-24+<br>PA-VXA-1TE1-30+ | CD01-0783JP, L01-0254 |
| Nihon Cisco Systems | PA-VXB-2TE1                        | CD00-0021JP, L00-0011 |
| Nihon Cisco Systems | PA-VXB-2TE1+                       | CD00-0021JP, L00-0011 |
| Nihon Cisco Systems | PA-VXC-2TE1                        | CD00-0021JP, L00-0011 |
| Nihon Cisco Systems | PA-VXC-2TE1+                       | CD00-0021JP, L00-0011 |

## Site Preparation and Safety Information



### Note

Only trained and qualified service personnel (as defined in IEC 60950 and AS/NZ 3260) should install, replace, or service the equipment.



### Warning

The instructions in this guide warn you about situations that could cause bodily injury. Before working on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents.

## Preparing Your Site for Installation

To ensure normal system operation, plan your site configuration and prepare your site before installation.

### Choosing a Site for Installation

- Install the system in a restricted access area, where access can be gained only by service personnel through the use of a special tool, lock and key, or other means of security.
- Choose a site with a dry, clean, well-ventilated and air-conditioned area.
- Choose a site that maintains an ambient temperature of 32 to 104° F (0 to 40°C).

### Ensuring Overcurrent Protection

The system relies on the protective devices in the building installation for protection against short-circuit, overcurrent, and earth (grounding) fault. Ensure that the protective devices in the building installation are properly rated to protect the system, and that they comply with national and local codes.

## Grounding the System

- Do not defeat the ground conductor on an AC plug.
- Connect AC-powered systems to grounded power outlets.
- Connect the system to earth (ground).

## Creating a Safe Environment

- Keep tools and chassis components off the floor and away from foot traffic.
- Clear the area of possible hazards, such as moist floors, ungrounded power extension cables, and missing safety grounds.
- Keep the area around the chassis free from dust and foreign conductive material (such as metal flakes from nearby construction activity.)

## Rack-Mounting the System

A rack-mount kit and cable-management brackets come with the system. The kit is not suitable for racks with obstructions (such as a power strip) that could impair access to system components. Allow sufficient clearance around the rack for system maintenance.

## Ensuring Proper Airflow

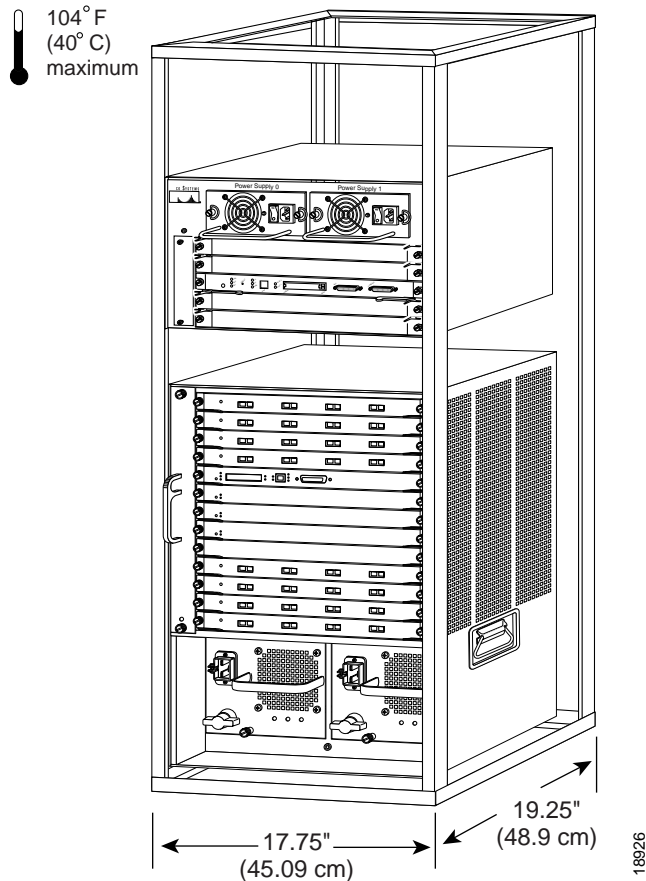
- Install the system in an open rack whenever possible. If installation in an enclosed rack is unavoidable, ensure that the rack has adequate ventilation.
- Maintain ambient airflow to ensure normal operation. If the airflow is blocked or restricted, or if the intake air is too warm, an overtemperature condition can occur.
- Allow at least 6 inches (15.24 cm) of clearance around the ventilation openings of the chassis.
- Avoid placing the system in an overly congested rack or directly next to another equipment rack. Heat exhaust from other equipment can enter the inlet air vents and cause an overtemperature condition.
- Equipment near the bottom of a rack might generate excessive heat that is drawn upward and into the intake ports of the equipment above. The warm air can cause an overtemperature condition in the equipment above.
- Ensure that cables from other equipment do not obstruct the airflow through the chassis or impair access to the power supplies or cards. Route cables away from field-replaceable components to avoid disconnecting cables unnecessarily for equipment maintenance or upgrades.

## Stabilizing the System

- Install any stabilizers that came with your equipment rack before mounting or servicing the system in the rack.
- Load the rack from the bottom to the top, with the heaviest system at the bottom.
- Do not stack the system on top of any other equipment. If the system falls, it can cause severe bodily injury and damage the equipment.

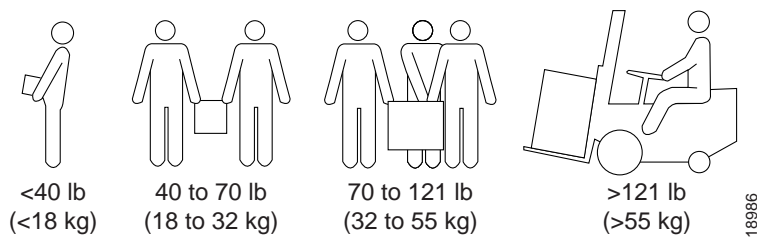
- If you are using an equipment shelf, ensure that the shelf is constructed to support the weight and dimensions of the chassis.
- If you are using a 2-post rack, ensure that the weight of the chassis does not make the rack unstable. Secure the 2-post rack with ceiling brackets if the rack is populated with heavy equipment.
- Bolt the rack to the floor for stability.

**Figure 1** *Standard Equipment RACK Dimensions*



## Lifting the System

**Figure 2** *Safely Lifting the System*



- Disconnect all power and external cables before lifting the system.



- Ensure that your footing is solid and the weight of the system is evenly distributed between your feet.
- Lift the system slowly, keeping your back straight. Lift with your legs, not with your back. Bend at the knees, not at the waist.
- Do not attempt to lift the system with the handles on the power supplies or on any of the cards. These handles are not designed to support the weight of the system.
- Depending on the weight of the system, more than one person might be required to lift it.

## Power Considerations

AC and DC power supplies, and an optional redundant (second) power supply, are available for most systems.



Note

---

Refer to your hardware installation guide for AC and DC power specifications and for redundant power supply availability.

---

Be careful when connecting systems to the supply circuit so that wiring is not overloaded.

### AC Power

- The system is designed for connection to TN power systems. A TN power system is a power distribution system with one point connected directly to earth (ground). The exposed conductive parts of the installation are connected to that point by protective earth conductors.
- Ensure that the plug-socket combination is accessible at all times, because it serves as the main disconnecting device.

### DC Power

- Connect DC-input power supplies only to a DC power source that complies with the safety extra-low voltage (SELV) requirements in the UL 1950, CSA 950, EN 60950, and IEC 60950 standards.
- Incorporate a readily accessible two-poled disconnect device in the fixed wiring.
- Ensure that power is removed from the DC circuit before installing or removing power supplies. 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 with upturned 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.

### Redundant Power

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

## 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 system:

- 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).
- Handle cards by the faceplates and edges only; avoid touching the printed circuit board and connector pins.
- 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

---

For safety, periodically check the resistance value of the antistatic strap. The measurement should be between 1 and 10 megohms (Mohms).

---

## Installing and Servicing the System

- Disconnect all power and external cables before installing the system.
- Install the system in compliance with your local and national electrical codes:
  - United States: National Fire Protection Association (NFPA) 70; United States National Electrical Code.
  - Canada: Canadian Electrical Code, Part I, CSA C22.1.
  - Other countries: If local and national electrical codes are not available, refer to IEC 364, Part 1 through Part 7.
- Do not work alone under potentially hazardous conditions.
- Do not perform any action that creates a potential hazard to people or makes the equipment unsafe.
- Do not touch the backplane or midplane with your hand or metal tools.
- Remove all jewelry (including rings and chains) or other items that could get caught in the system or heat up and cause serious burns.

## Disconnecting Power

- Locate the emergency power-off switch for the room before working with the system.
- Turn off the power and disconnect the power from the circuit when working with components that are not hot-swappable or when working near the system backplane or midplane. If the system does not have an on/off switch, unplug the power cord.
- To completely de-energize the system, disconnect the power connection 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.

- Do not touch the power supply when the power cord is connected. Line voltages are present within the power supply even when the power switch is off and the power cord is connected.

## Working with WAN Interfaces

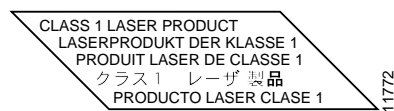
- Use caution when installing or modifying telephone lines to prevent electric shock.
- Do not work on the system or connect or disconnect cables during periods of lightning activity.
- Do not touch uninsulated telephone wires or terminals unless the telephone line has been disconnected at the network interface.
- Hazardous network voltages are present in WAN ports regardless of whether power to the system is off or on. When detaching cables, detach the end away from the system first.
- Do not use a telephone (unless it is the cordless type) during an electrical storm.
- Do not use a telephone to report a gas leak in the vicinity of the leak.
- Do not install telephone jacks in wet locations unless the jack is specifically designed for wet locations.

## Working with Lasers

- Fiber-optic ports (for example, FDDI, OC-3, OC-12, OC-48, ATM, GBIC, and 100BaseFX) are considered Class 1 laser or Class 1 LED ports.
- 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.
- 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.

Figure 3, Figure 4, and Figure 5 show examples of Class 1 laser and LED labels. The smaller labels shown in Figure 5 and Figure 6 usually appear on field-replaceable cards. Or the larger label shown in Figure 7 appears on the chassis.

**Figure 3** *Class 1 Laser Label for a Single-Mode Fiber Port*



**Figure 4** *Class 1 LED Label for a Multimode Fiber Port*



Figure 5 Class 1 Laser Label for a Chassis



## Preventing EMI

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 predict 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

## Disposing of the System

Dispose of the system and its components (including batteries) as specified by all national laws and regulations.

## Related Documentation

All of the following documentation is available online and on the Documentation CD-ROM. Some of the documentation is available as printed documents. For a complete list of documentation, refer to the [Cisco 7500 Series Routers Documentation Roadmap](http://www.cisco.com/univercd/cc/td/doc/product/core/cis7505/3625.htm) available online at <http://www.cisco.com/univercd/cc/td/doc/product/core/cis7505/3625.htm>.

Your router and the Cisco IOS software running on it contain extensive features and functionality and are documented in the following resources:

- Cisco IOS software:

For configuration information and support, refer to the Cisco IOS software configuration documentation set that corresponds to the software release installed on your Cisco hardware.



### Note

You can access Cisco IOS software configuration and hardware installation and maintenance documentation on the World Wide Web at <http://www.cisco.com>, <http://www-china.cisco.com>, or <http://www-europe.cisco.com>.

- Cisco 7500 series routers:

For hardware installation and maintenance information on the Cisco 7500 series routers, refer to the Quick Start Guide that shipped with your router, or refer to the [Cisco 7500 Installation and Configuration Guide](http://www.cisco.com/univercd/cc/td/doc/product/core/cis7505/cicg7500/index.htm) available online at <http://www.cisco.com/univercd/cc/td/doc/product/core/cis7505/cicg7500/index.htm>.

- Site preparation and safety information:
  - [Site Preparation and Safety Guide](http://www.cisco.com/univercd/cc/td/doc/product/lan/cat5000/hardware/safety/index.htm) available online at <http://www.cisco.com/univercd/cc/td/doc/product/lan/cat5000/hardware/safety/index.htm>.
- To view Cisco documentation or obtain general information about the documentation, refer to the following sections:
  - [Cisco.com](#), page 38
  - [Documentation CD-ROM](#), page 38
  - [Ordering Documentation](#), page 38
  - [Documentation Feedback](#), page 39
  - [Obtaining Additional Publications and Information](#), page 40

# Obtaining Documentation

Cisco provides several ways to obtain documentation, technical assistance, and other technical resources. These sections explain how to obtain technical information from Cisco Systems.

## Cisco.com

You can access the most current Cisco documentation on the World Wide Web at this URL:

<http://www.cisco.com/univercd/home/home.htm>

You can access the Cisco website at this URL:

<http://www.cisco.com>

International Cisco websites can be accessed from this URL:

[http://www.cisco.com/public/countries\\_languages.shtml](http://www.cisco.com/public/countries_languages.shtml)

## Documentation CD-ROM

Cisco documentation and additional literature are available in a Cisco Documentation CD-ROM package, which may have shipped with your product. The Documentation CD-ROM is updated regularly and may be more current than printed documentation. The CD-ROM package is available as a single unit or through an annual or quarterly subscription.

Registered Cisco.com users can order a single Documentation CD-ROM (product number DOC-CONDOCCD=) through the Cisco Ordering tool:

[http://www.cisco.com/en/US/partner/ordering/ordering\\_place\\_order\\_ordering\\_tool\\_launch.html](http://www.cisco.com/en/US/partner/ordering/ordering_place_order_ordering_tool_launch.html)

All users can order annual or quarterly subscriptions through the online Subscription Store:

<http://www.cisco.com/go/subscription>

Click Subscriptions & Promotional Materials in the left navigation bar.

## Ordering Documentation

You can find instructions for ordering documentation at this URL:

[http://www.cisco.com/univercd/cc/td/doc/es\\_inpk/pdi.htm](http://www.cisco.com/univercd/cc/td/doc/es_inpk/pdi.htm)

You can order Cisco documentation in these ways:

- Registered Cisco.com users (Cisco direct customers) can order Cisco product documentation from the Networking Products MarketPlace:

<http://www.cisco.com/en/US/partner/ordering/index.shtml>

- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco Systems Corporate Headquarters (California, USA) at 408 526-7208 or, elsewhere in North America, by calling 800 553-NETS (6387).

## Documentation Feedback

You can submit e-mail comments about technical documentation to [bug-doc@cisco.com](mailto:bug-doc@cisco.com).

You can submit comments by using the response card (if present) behind the front cover of your document or by writing to the following address:

Cisco Systems  
Attn: Customer Document Ordering  
170 West Tasman Drive  
San Jose, CA 95134-9883

We appreciate your comments.

## Obtaining Technical Assistance

For all customers, partners, resellers, and distributors who hold valid Cisco service contracts, the Cisco Technical Assistance Center (TAC) provides 24-hour-a-day, award-winning technical support services, online and over the phone. Cisco.com features the Cisco TAC website as an online starting point for technical assistance. If you do not hold a valid Cisco service contract, please contact your reseller.

### Cisco TAC Website

The Cisco TAC website (<http://www.cisco.com/tac>) provides online documents and tools for troubleshooting and resolving technical issues with Cisco products and technologies. The Cisco TAC website is available 24 hours a day, 365 days a year.

Accessing all the tools on the Cisco TAC website requires a Cisco.com user ID and password. If you have a valid service contract but do not have a login ID or password, register at this URL:

<http://tools.cisco.com/RPF/register/register.do>

### Opening a TAC Case

Using the online TAC Case Open Tool (<http://www.cisco.com/tac/caseopen>) is the fastest way to open P3 and P4 cases. (P3 and P4 cases are those in which your network is minimally impaired or for which you require product information.) After you describe your situation, the TAC Case Open Tool automatically recommends resources for an immediate solution. If your issue is not resolved using the recommended resources, your case will be assigned to a Cisco TAC engineer.

For P1 or P2 cases (P1 and P2 cases are those in which your production network is down or severely degraded) or if you do not have Internet access, contact Cisco TAC by telephone. Cisco TAC engineers are assigned immediately to P1 and P2 cases to help keep your business operations running smoothly.

To open a case by telephone, use one of the following numbers:

Asia-Pacific: +61 2 8446 7411 (Australia: 1 800 805 227)

EMEA: +32 2 704 55 55

USA: 1 800 553-2447

For a complete listing of Cisco TAC contacts, go to this URL:

<http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml>

## TAC Case Priority Definitions

To ensure that all cases are reported in a standard format, Cisco has established case priority definitions.

Priority 1 (P1)—Your network is “down” or there is a critical impact to your business operations. You and Cisco will commit all necessary resources around the clock to resolve the situation.

Priority 2 (P2)—Operation of an existing network is severely degraded, or significant aspects of your business operation are negatively affected by inadequate performance of Cisco products. You and Cisco will commit full-time resources during normal business hours to resolve the situation.

Priority 3 (P3)—Operational performance of your network is impaired, but most business operations remain functional. You and Cisco will commit resources during normal business hours to restore service to satisfactory levels.

Priority 4 (P4)—You require information or assistance with Cisco product capabilities, installation, or configuration. There is little or no effect on your business operations.

## Obtaining Additional Publications and Information

Information about Cisco products, technologies, and network solutions is available from various online and printed sources.

- The Cisco Product Catalog describes the networking products offered by Cisco Systems, as well as ordering and customer support services. Access the Cisco Product Catalog at this URL:

[http://www.cisco.com/en/US/products/products\\_catalog\\_links\\_launch.html](http://www.cisco.com/en/US/products/products_catalog_links_launch.html)

- Cisco Press publishes a wide range of general networking, training and certification titles. Both new and experienced users will benefit from these publications. For current Cisco Press titles and other information, go to Cisco Press online at this URL:

<http://www.ciscopress.com>

- Packet magazine is the Cisco quarterly publication that provides the latest networking trends, technology breakthroughs, and Cisco products and solutions to help industry professionals get the most from their networking investment. Included are networking deployment and troubleshooting tips, configuration examples, customer case studies, tutorials and training, certification information, and links to numerous in-depth online resources. You can access Packet magazine at this URL:

<http://www.cisco.com/packet>

- iQ Magazine is the Cisco bimonthly publication that delivers the latest information about Internet business strategies for executives. You can access iQ Magazine at this URL:

<http://www.cisco.com/go/iqmagazine>

- Internet Protocol Journal is a quarterly journal published by Cisco Systems for engineering professionals involved in designing, developing, and operating public and private internets and intranets. You can access the Internet Protocol Journal at this URL:

[http://www.cisco.com/en/US/about/ac123/ac147/about\\_cisco\\_the\\_internet\\_protocol\\_journal.html](http://www.cisco.com/en/US/about/ac123/ac147/about_cisco_the_internet_protocol_journal.html)

- Training—Cisco offers world-class networking training. Current offerings in network training are listed at this URL:

<http://www.cisco.com/en/US/learning/index.html>




---

This document is to be used in conjunction with the documents listed in the “[Related Documentation](#)” section.

CCIP, CCSP, the Cisco Arrow logo, the Cisco *Powered* Network mark, Cisco Unity, Follow Me Browsing, FormShare, and StackWise are trademarks of Cisco Systems, Inc.; Changing the Way We Work, Live, Play, and Learn, and iQuick Study are service marks of Cisco Systems, Inc.; and Aironet, ASIST, BPX, Catalyst, CCDA, CCDP, CCIE, CCNA, CCNP, Cisco, the Cisco Certified Internetwork Expert logo, Cisco IOS, the Cisco IOS logo, Cisco Press, Cisco Systems, Cisco Systems Capital, the Cisco Systems logo, Empowering the Internet Generation, Enterprise/Solver, EtherChannel, EtherSwitch, Fast Step, GigaStack, Internet Quotient, IOS, IP/TV, iQ Expertise, the iQ logo, iQ Net Readiness Scorecard, LightStream, MGX, MICA, the Networkers logo, Networking Academy, Network Registrar, *Packet*, PIX, Post-Routing, Pre-Routing, RateMUX, Registrar, ScriptShare, SlideCast, SMARTnet, StrataView Plus, Stratm, SwitchProbe, TeleRouter, The Fastest Way to Increase Your Internet Quotient, TransPath, and VCO are registered trademarks of Cisco Systems, Inc. and/or its affiliates in the United States and certain other countries.

All other trademarks mentioned in this document or Website are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (0401R)

Copyright © 2003 Cisco Systems, Inc. All rights reserved.

 Printed in the USA on recycled paper containing 10% postconsumer waste.

