



Catalyst 4500-X 8-Port Network Uplink Module Installation Note

Revised: November 29, 2012

Product Numbers: C4KX-NM-8SFP+(=) C4KX-NM-BLANK(=)

This document provides the installation and the removal procedures for the 8-port 1G/10GBASE-X network uplink module that is supported on the Catalyst 4500-X series switch chassis.

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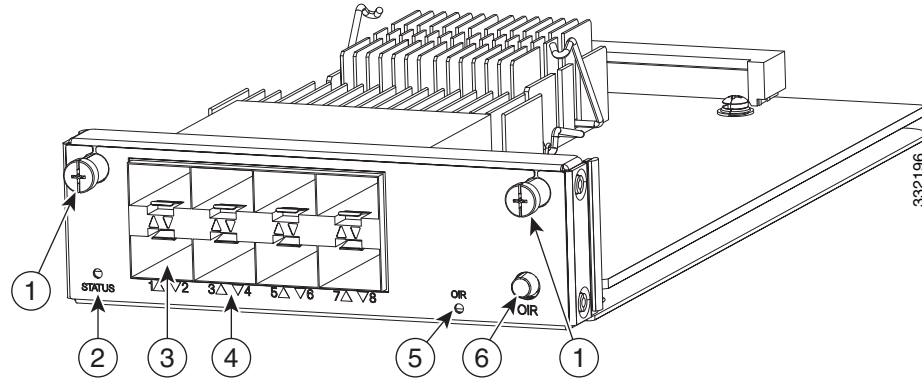


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Overview

The 8-port network uplink module installs only in the Catalyst 4500-X series switch chassis. It provides an additional eight 1G/10G ports using either SFP or SFP+ transceivers. The module is included as a standard component of the WS-C4500X-24X-ES and the WS-C4500X-40X-ES chassis or is available as an option on the other Catalyst 4500-X series chassis. Features of the network uplink module are shown in Figure 1.

Figure 1 8-Port Network Uplink Module Features



1	Captive installation screws	4	Port status LEDs (one port status LED per port)
2	STATUS LED	5	OIR LED
3	Uplink ports (8 ports) (ports require either SFP or SFP+ transceivers to operate)	6	OIR request switch

Network Uplink Module LEDs

Table 1 lists the meanings for the network uplink module LEDs.

Table 1 **Network Uplink Module LED Meanings**

LED	Color/Meaning
STATUS LED	<p>The STATUS LED provides the status of the network uplink module.</p> <ul style="list-style-type: none"> • Off—The network uplink module is unpowered or is only receiving 12 VDC from the chassis power supply. • Red—The network uplink module is receiving both 12 VDC and +3.3 VDC but the module is in reset mode. • Amber—The system software is processing an OIR request. • Green—The network uplink module is operating normally.
Port status LEDs (8 LEDs)	<p>The port status LED provides the status for each of the eight uplink ports:</p> <ul style="list-style-type: none"> • Off—The port is not active or the link is not connected • Amber—The port is disabled • Flashing Amber—The port failed diagnostics and is currently disabled • Green—The port is active (the link is connected and operational)
OIR (online insertion and removal)	<p>The OIR LED indicates that an OIR request is being processed or that the network uplink module is ready to be physically removed from the chassis. The OIR LED operates with the uplink module STATUS LED.</p> <p>Off—Normal network module operation. (Concurrently, the STATUS LED is lit green.)</p> <p>Flashing Amber—OIR has been requested either by pressing and holding the OIR button for a minimum of 5 seconds or you have requested an OIR through the Command Line Interface (CLI). (Concurrently, the network uplink module STATUS LED is lit green.)</p> <p>Flashing Amber—The software is processing the OIR request and is currently bringing the network uplink module to an offline state. (Concurrently, the network uplink module STATUS LED is flashing amber.)</p> <p>Green—The network module is offline and is ready to be removed. (Concurrently, the network uplink module STATUS LED is off.)</p>

Safety

Warning statements in the document use the following conventions:

Statement 1071—Warning Definition



Warning

IMPORTANT SAFETY INSTRUCTIONS

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. Use the statement number provided at the end of each warning to locate its translation in the translated safety warnings that accompanied this device.

SAVE THESE INSTRUCTIONS

Waarschuwing

BELANGRIJKE VEILIGHEIDSINSTRUCTIES

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 de standaard praktijken om ongelukken te voorkomen. Gebruik het nummer van de verklaring onderaan de waarschuwing als u een vertaling van de waarschuwing die bij het apparaat wordt geleverd, wilt raadplegen.

BEWAAR DEZE INSTRUCTIES

Varoitus

TÄRKEITÄ TURVALLISUUSOHJEITA

Tämä varoitusmerkki merkitsee vaaraa. Tilanne voi aiheuttaa ruumiillisia vammoja. Ennen kuin käsittelet laitteistoa, huomioi sähköpiirien käsittelemiseen liittyvät riskit ja tutustu onnettomuuksien yleisiin ehkäisytapoihin. Turvallisuusvaroitusten käännökset löytyvät laitteen mukana toimitettujen käännettyjen turvallisuusvaroitusten joukosta varoitusten lopussa näkyvien lausuntonumeroiden avulla.

SÄILYTÄ NÄMÄ OHJEET

Attention

IMPORTANTES INFORMATIONS DE SÉCURITÉ

Ce symbole d'avertissement indique un danger. Vous vous trouvez dans une situation pouvant entraîner des blessures ou des dommages corporels. Avant de travailler sur un équipement, soyez conscient des dangers liés aux circuits électriques et familiarisez-vous avec les procédures couramment utilisées pour éviter les accidents. Pour prendre connaissance des traductions des avertissements figurant dans les consignes de sécurité traduites qui accompagnent cet appareil, référez-vous au numéro de l'instruction situé à la fin de chaque avertissement.

CONSERVEZ CES INFORMATIONS

Warnung WICHTIGE SICHERHEITSHINWEISE

Dieses Warnsymbol bedeutet Gefahr. Sie befinden sich in einer Situation, die zu Verletzungen führen kann. Machen Sie sich vor der Arbeit mit Geräten mit den Gefahren elektrischer Schaltungen und den üblichen Verfahren zur Vorbeugung vor Unfällen vertraut. Suchen Sie mit der am Ende jeder Warnung angegebenen Anweisungsnummer nach der jeweiligen Übersetzung in den übersetzten Sicherheitshinweisen, die zusammen mit diesem Gerät ausgeliefert wurden.

BEWAHREN SIE DIESE HINWEISE GUT AUF.

Avvertenza IMPORTANTI ISTRUZIONI SULLA SICUREZZA

Questo simbolo di avvertenza indica un pericolo. La situazione potrebbe causare infortuni alle persone. Prima di intervenire su qualsiasi apparecchiatura, occorre essere al corrente dei pericoli relativi ai circuiti elettrici e conoscere le procedure standard per la prevenzione di incidenti. Utilizzare il numero di istruzione presente alla fine di ciascuna avvertenza per individuare le traduzioni delle avvertenze riportate in questo documento.

CONSERVARE QUESTE ISTRUZIONI

Advarsel VIKTIGE SIKKERHETSINSTRUKSJONER

Dette advarselssymbolet betyr fare. Du er i en situasjon som kan føre til skade på person. Før du begynner å arbeide med noe av utstyret, må du være oppmerksom på farene forbundet med elektriske kretser, og kjenne til standardprosedyrer for å forhindre ulykker. Bruk nummeret i slutten av hver advarsel for å finne oversettelsen i de oversatte sikkerhetsadvarslene som fulgte med denne enheten.

TA VARE PÅ DISSE INSTRUKSJONENE

Aviso INSTRUÇÕES IMPORTANTES DE SEGURANÇA

Este símbolo de aviso significa perigo. Você está em uma situação que poderá ser causadora de lesões corporais. Antes de iniciar a utilização de qualquer equipamento, tenha conhecimento dos perigos envolvidos no manuseio de circuitos elétricos e familiarize-se com as práticas habituais de prevenção de acidentes. Utilize o número da instrução fornecido ao final de cada aviso para localizar sua tradução nos avisos de segurança traduzidos que acompanham este dispositivo.

GUARDE ESTAS INSTRUÇÕES

¡Advertencia! INSTRUCCIONES IMPORTANTES DE SEGURIDAD

Este símbolo de aviso indica peligro. Existe riesgo para su integridad física. Antes de manipular cualquier equipo, considere los riesgos de la corriente eléctrica y familiarícese con los procedimientos estándar de prevención de accidentes. Al final de cada advertencia encontrará el número que le ayudará a encontrar el texto traducido en el apartado de traducciones que acompaña a este dispositivo.

GUARDE ESTAS INSTRUCCIONES

Varning! VIKTIGA SÄKERHETSANVISNINGAR

Denna varningssignal 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 vanliga förfaranden för att förebygga olyckor. Använd det nummer som finns i slutet av varje varning för att hitta dess översättning i de översatta säkerhetsvarningar som medföljer denna anordning.

SPARA DESSA ANVISNINGAR**Figyelem FONTOS BIZTONSÁGI ELOÍRÁSOK**

Ez a figyelmeztető jel veszélyre utal. Sérülésveszélyt rejtő helyzetben van. Mielőtt bármely berendezésen munkát végezte, legyen figyelemmel az elektromos áramkörök okozta kockázatokra, és ismerkedjen meg a szokásos balesetvédelmi eljárásokkal. A kiadványban szereplő figyelmeztetések fordítása a készülékhez mellékelt biztonsági figyelmeztetések között található; a fordítás az egyes figyelmeztetések végén látható szám alapján kereshető meg.

ORIZZE MEG EZEKET AZ UTASÍTÁSOKAT!**Предупреждение ВАЖНЫЕ ИНСТРУКЦИИ ПО СОБЛЮДЕНИЮ ТЕХНИКИ БЕЗОПАСНОСТИ**

Этот символ предупреждения обозначает опасность. То есть имеет место ситуация, в которой следует опасаться телесных повреждений. Перед эксплуатацией оборудования выясните, каким опасностям может подвергаться пользователь при использовании электрических цепей, и ознакомьтесь с правилами техники безопасности для предотвращения возможных несчастных случаев. Воспользуйтесь номером заявления, приведенным в конце каждого предупреждения, чтобы найти его переведенный вариант в переводе предупреждений по безопасности, прилагаемом к данному устройству.

СОХРАНИТЕ ЭТИ ИНСТРУКЦИИ**警告 重要的安全性说明**

此警告符号代表危险。您正处于可能受到严重伤害的工作环境中。在您使用设备开始工作之前，必须充分意识到触电的危险，并熟练掌握防止事故发生的标准工作程序。请根据每项警告结尾提供的声明号码来找到此设备的安全性警告说明的翻译文本。

请保存这些安全性说明

警告 安全上の重要な注意事項

「危険」の意味です。人身事故を予防するための注意事項が記述されています。装置の取り扱い作業を行うときは、電気回路の危険性に注意し、一般的な事故防止策に留意してください。警告の各国語版は、各注意事項の番号を基に、装置に付属の「Translated Safety Warnings」を参照してください。

これらの注意事項を保管しておいてください。

주의 중요 안전 지침

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이 지시 사항을 보관하십시오.

Aviso **INSTRUÇÕES IMPORTANTES DE SEGURANÇA**

Este símbolo de aviso significa perigo. Você se encontra em uma situação em que há risco de lesões corporais. Antes de trabalhar com qualquer equipamento, esteja ciente dos riscos que envolvem os circuitos elétricos e familiarize-se com as práticas padrão de prevenção de acidentes. Use o número da declaração fornecido ao final de cada aviso para localizar sua tradução nos avisos de segurança traduzidos que acompanham o dispositivo.

GUARDE ESTAS INSTRUÇÕES

Advarsel VIGTIGE SIKKERHEDSANVISNINGER

Dette advarselssymbol betyder fare. Du befinder dig i en situation med risiko for legemeskade. Før du begynder arbejde på udstyr, skal du være opmærksom på de involverede risici, der er ved elektriske kredsløb, og du skal sætte dig ind i standardprocedurer til undgåelse af ulykker. Brug erklæringsnummeret efter hver advarsel for at finde oversættelsen i de oversatte advarsler, der fulgte med denne enhed.

GEM DISSE ANVISNINGER

تحذير

إرشادات الأمان الهامة

يوضح رمز التحذير هذا وجود خطر. وهذا يعني أنك متواجد في مكان قد ينتج عنه التعرض لإصابات. قبل بدء العمل، احذر مخاطر التعرض للصدمات الكهربائية وكن على علم بالإجراءات القياسية للحيلولة دون وقوع أي حوادث. استخدم رقم البيان الموجود في آخر كل تحذير لتحديد مكان ترجمته داخل تحذيرات الأمان المترجمة التي تأتي مع الجهاز. قم بحفظ هذه الإرشادات

Upozorenje VAŽNE SIGURNOSNE NAPOMENE

Ovaj simbol upozorenja predstavlja opasnost. Nalazite se u situaciji koja može prouzročiti tjelesne ozljede. Prije rada s bilo kojim uređajem, morate razumjeti opasnosti vezane uz električne sklopove, te biti upoznati sa standardnim načinima izbjegavanja nesreća. U prevedenim sigurnosnim upozorenjima, priloženima uz uređaj, možete prema broju koji se nalazi uz pojedino upozorenje pronaći i njegov prijevod.

SAČUVAJTE OVE UPUTE**Upozornění DŮLEŽITÉ BEZPEČNOSTNÍ POKYNY**

Tento upozorňující symbol označuje nebezpečí. Jste v situaci, která by mohla způsobit nebezpečí úrazu. Před prací na jakémkoliv vybavení si uvědomte nebezpečí související s elektrickými obvody a seznamte se se standardními opatřeními pro předcházení úrazům. Podle čísla na konci každého upozornění vyhledejte jeho překlad v přeložených bezpečnostních upozorněních, která jsou přiložena k zařízení.

USCHOVEJTE TYTO POKYNY

Προειδοποίηση

ΣΗΜΑΝΤΙΚΕΣ ΟΔΗΓΙΕΣ ΑΣΦΑΛΕΙΑΣ

Αυτό το προειδοποιητικό σύμβολο σημαίνει κίνδυνο. Βρίσκεστε σε κατάσταση που μπορεί να προκαλέσει τραυματισμό. Πριν εργαστείτε σε οποιοδήποτε εξοπλισμό, να έχετε υπόψη σας τους κινδύνους που σχετίζονται με τα ηλεκτρικά κυκλώματα και να έχετε εξοικειωθεί με τις συνήθειες πρακτικές για την αποφυγή ατυχημάτων. Χρησιμοποιήστε τον αριθμό δήλωσης που παρέχεται στο τέλος κάθε προειδοποίησης, για να εντοπίσετε τη μετάφρασή της στις μεταφρασμένες προειδοποιήσεις ασφαλείας που συνοδεύουν τη συσκευή.

ΦΥΛΑΞΤΕ ΑΥΤΕΣ ΤΙΣ ΟΔΗΓΙΕΣ

אזהרה

הוראות בטיחות חשובות

סימן אזהרה זה מסמל סכנה. אתה נמצא במצב העלול לגרום לפציעה. לפני שתעבוד עם ציוד כלשהו, עליך להיות מודע לסכנות הכרוכות במעגלים חשמליים ולהכיר את הנהלים המקובלים למניעת תאונות. השתמש במספר ההוראה המסופק בסופה של כל אזהרה כדי לאתר את התרגום באזהרות הבטיחות המתורגמות שמצורפות להתקן.

שמור הוראות אלה

ВАЖНИ БЕЗБЕДНОСНИ НАПАТСТВИЈА

Симболот за предупредување значи опасност. Се наоѓате во ситуација што може да предизвика телесни повреди. Пред да работите со опремата, бидете свесни за ризикот што постои кај електричните кола и треба да ги познавате стандардните постапки за спречување на несреќни случаи. Искористете го бројот на изјавата што се наоѓа на крајот на секое предупредување за да го најдете неговиот период во преведените безбедносни предупредувања што се испорачани со уредот.

ЧУВАЈТЕ ГИ ОБИЕ НАПАТСТВИЈА

Ostrzeżenie

WAŻNE INSTRUKCJE DOTYCZĄCE BEZPIECZEŃSTWA

Ten symbol ostrzeżenia oznacza niebezpieczeństwo. Zachodzi sytuacja, która może powodować obrażenia ciała. Przed przystąpieniem do prac przy urządzeniach należy zapoznać się z zagrożeniami związanymi z układami elektrycznymi oraz ze standardowymi środkami zapobiegania wypadkom. Na końcu każdego ostrzeżenia podano numer, na podstawie którego można odszukać tłumaczenie tego ostrzeżenia w dołączonym do urządzenia dokumencie z tłumaczeniami ostrzeżeń.

NINIEJSZE INSTRUKCJE NALEŻY ZACHOWAĆ

Upozornenie

DÔLEŽITÉ BEZPEČNOSTNÉ POKYNY

Tento varovný symbol označuje nebezpečenstvo. Nachádzate sa v situácii s nebezpečenstvom úrazu. Pred prácou na akomkoľvek vybavení si uvedomte nebezpečenstvo súvisiace s elektrickými obvodmi a oboznámte sa so štandardnými opatreniami na predchádzanie úrazom. Podľa čísla na konci každého upozornenia vyhľadajte jeho preklad v preložených bezpečnostných upozorneniach, ktoré sú priložené k zariadeniu.

USCHOVAJTE SI TENTO NÁVOD

Opozorilo POMEMBNI VARNOSTNI NAPOTKI

Ta opozorilni simbol pomeni nevarnost. Nahajate se v situaciji, kjer lahko pride do telesnih poškodb. Preden pričnete z delom na napravi, se morate zavedati nevarnosti udara električnega toka, ter tudi poznati preventivne ukrepe za preprečevanje takšnih nevarnosti. Uporabite obrazložitevno številko na koncu posameznega opozorila, da najdete opis nevarnosti v priloženem varnostnem priročniku.

SHRANITE TE NAPOTKE!

警告

重要安全性指示

此警告符號代表危險，表示可能造成人身傷害。使用任何設備前，請留心電路相關危險，並熟悉避免意外的標準作法。您可以使用每項警告後的聲明編號，查詢本裝置隨附之安全性警告譯文中的翻譯。請妥善保留此指示

Tools Required

The following tools are required to perform the removal and replacement procedures:

- ESD wrist strap
- No. 2 Phillips-head screwdriver (possibly needed to loosen the captive installation screws)
- Antistatic mat or an antistatic bag

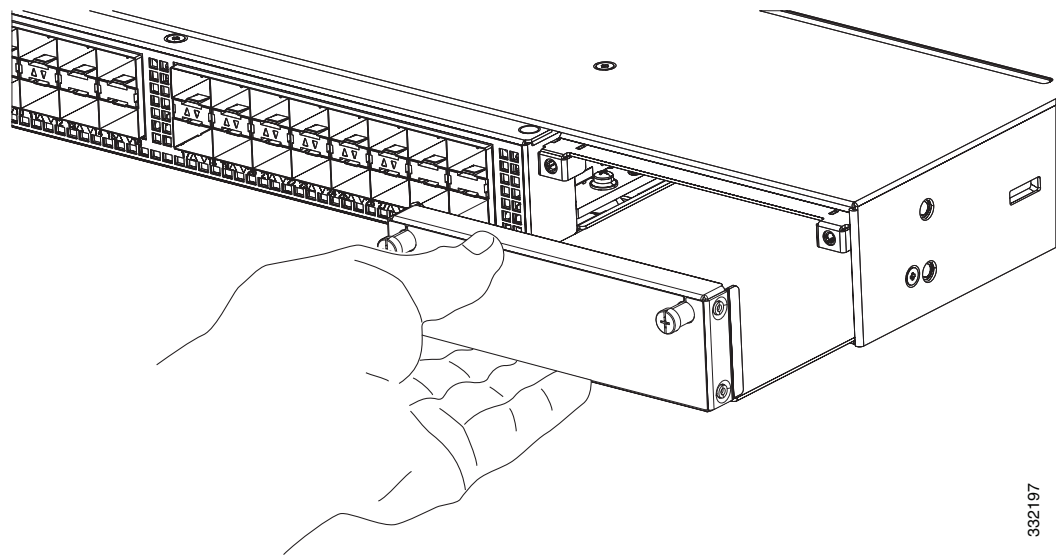
Installing the Network Uplink Module

To install the network uplink module, follow these steps:

- Step 1** Attach an ESD ground strap between your wrist and earth ground.
- Step 2** If you are upgrading your chassis with a network uplink module, you need to loosen the two captive installation screws on the network module blank panel (part no. C4KX-NM-BLANK), remove the blank panel, and set it aside. (See [Figure 2](#).)

If you are replacing a faulty network uplink module, go to the [“Removing the Network Uplink Module” section on page 13](#) for the procedure to remove the network uplink module.

Figure 2 Removing the Network Module Blank Panel

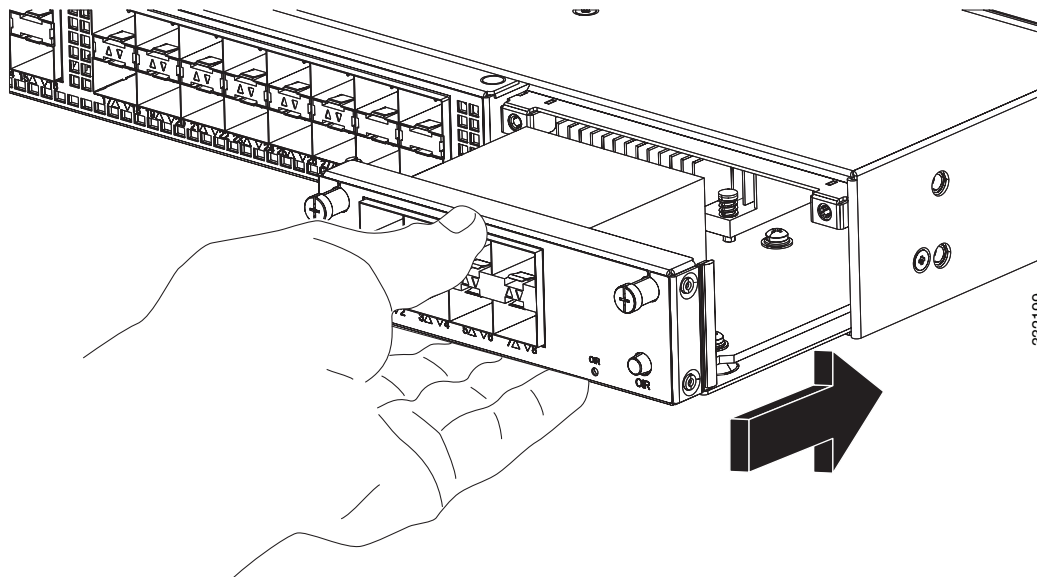


- Step 3** Remove the new network uplink module from the shipping packaging.
- Step 4** Position the new network uplink module in front of the chassis opening so that the bottom of the module tray is below the chassis guide rails. Slide the module into the slot until the network module makes contact with the connector at the back of the slot. (See [Figure 3](#).)



Note Make sure that you position the module tray below the chassis guide rails. The module will not insert properly if the tray is inserted above the guide rails.

Figure 3 **Installing the Network Module**



Step 5 Firmly press on both sides of the network module faceplate to seat the network module in the connector.

Step 6 Start and finger-tighten the two captive installation screws.

Step 7 Install either SFP or SFP+ transceivers in the network uplink module sockets as needed. To identify which SFP and SFP+ transceivers are supported by the network uplink module, see the [Cisco Gigabit Ethernet Transceiver Modules Compatibility Matrix](#) or the [Cisco 10-Gigabit Ethernet Transceiver Modules Compatibility Matrix](#).

To correctly install the SFP and the SFP+ transceivers, refer to the [Cisco SFP and SFP+ Transceiver Module Installation Notes](#).

Step 8 Attach the network interface cables to the uplink ports.

Removing the Network Uplink Module

To remove the network uplink module from a system chassis that is online, you must first request an OIR by either pressing and holding the network uplink module's OIR button for a minimum of 5 seconds or requesting a network uplink module OIR through the CLI. If the system is offline or powered off, an OIR request is not needed.

**Caution**

Removing the network uplink module while it is operating without first requesting an OIR can cause the system to crash.

To remove the network uplink module from the chassis, follow these steps:

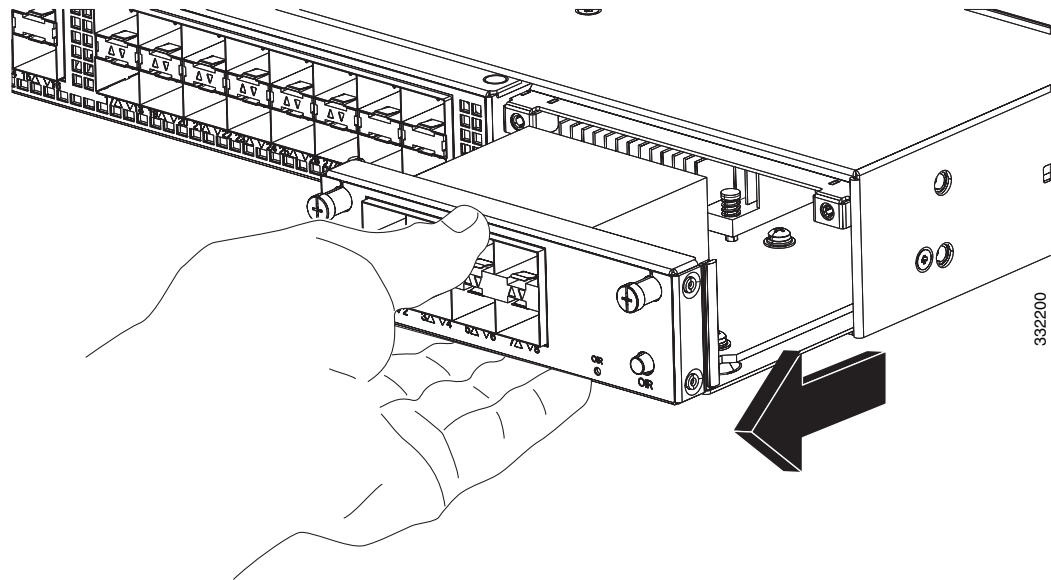
- Step 1** If the system is online, you must request an online insertion or removal (OIR) either by pressing and holding the OIR button located on the network module for a minimum of 5 seconds or by using the CLI command from the console.

**Note**

If the system is offline or powered off, an OIR request is not needed and you can proceed to Step 3.

- Step 2** Monitor the states of the STATUS and OIR LEDs located on the network module front panel. (See [Figure 1](#).) When the module STATUS LED is off and the OIR LED is lit green, the network uplink module can be safely removed from the chassis. See [Table 1](#) for STATUS and OIR LED states and meanings.
- Step 3** Attach a ESD wrist strap between your wrist and the chassis.
- Step 4** Disconnect any interface cables attached to the network module.
- Step 5** Loosen the two captive installation screws on the network module front panel.
- Step 6** Grasp the two captive installation screws and gently pull on them to release the network module from the chassis connector.
- Step 7** Grasp the top and bottom of the network module faceplate and carefully slide the network module out of the chassis. (See [Figure 4](#).) Place it on an antistatic mat or immediately place it in an antistatic bag.

Figure 4 Removing the Network Module



- Step 8** If you are not going to install a replacement network uplink module in the switch chassis, you must install a blank panel (part no. C4KX-NM-BLANK) over the empty module bay to maintain proper airflow through the chassis.
- Step 9** Position the blank panel over the network uplink module opening and secure it in place with the two captive installation screws.

Shipping Dimensions and Weights

Shipping box dimensions and shipping weight for a network uplink module (C4KX-NM-8SFP+= or C4KX-NM-8SFP+=) are listed in [Table 2](#).

Table 2 Shipping Box Dimensions and Weight for a Network Uplink Module

Specification	Description
Shipping box dimensions (H x W x D)	3.00 x 10.00 x 14.88 in (7.62 x 25.40 x 37.80 cm)
Shipping weight	1.85 lb (0.84 kg)

Related Documentation

[Table 3](#) lists the documentation supporting the Catalyst 4500-X series switch that is available on cisco.com.

Table 3 **Documentation Supporting the Catalyst 4500-X Series Switch**

Title	Description of Contents
<i>Catalyst 4500-X Series Switch Installation Note</i>	Contains instructions for rack-mounting the switch chassis.
<i>Catalyst 4500-X AC-Input Power Supply Installation Note</i>	Contains instructions for removing and installing the AC-input power supply in the Catalyst 4500-X switch chassis. Also contains descriptions of the supported AC power cords.
<i>Catalyst 4500-X DC-Input Power Supply Installation Note</i>	Contains instructions for removing and installing the DC-input power supply in the Catalyst 4500-X switch chassis.
<i>Catalyst 4500-X Fan Assembly Installation Note</i>	Contains instructions for removing and installing a fan assembly in the Catalyst 4500-X switch chassis.
<i>Regulatory Compliance and Safety Information for the Catalyst 4500-X Series Switch</i>	Contains the regulatory compliance and safety information for the Catalyst 4500-X series switch chassis. Also includes language translations of the warnings that appear in the other Catalyst 4500-X series switch documentation.
<i>Catalyst 4500 Series Switch Cisco IOS Software Configuration Guide, Release IOS XE 3.3.0SG(15.1(1)SG)</i>	Contains instructions on how to configure the Catalyst 4500-X switch.
<i>Catalyst 4500 Series Switch Cisco IOS Command Reference, Release IOS XE 3.3.0SG(15.1(1)SG)</i>	Contains descriptions of all of the software commands that support the Catalyst 4500-X switch.
<i>Release Notes for the Catalyst 4500 Series Switch, Release IOS XE 3.3.0SG(15.1(1)SG)</i>	Contains the latest software caveats and workarounds related to the Catalyst 4500-X switch.

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

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