



Catalyst 6500 Series Switch OC-12 ATM Module Memory Installation Note

Product Number: WS-OC12-32M-KIT=

This publication describes how to install the Catalyst 6500 series OC-12 ATM module memory kit.

Contents

This publication consists of these sections:

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Note

For translations of the warnings in this publication, see the [“Translated Safety Warnings”](#) section on [page 16](#).

Safety Overview

Safety warnings appear throughout this publication in procedures that may harm you if performed incorrectly. A warning symbol precedes each warning statement.



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. To see translations of the warnings that appear in this publication, refer to the translated safety warnings that accompanied this device.

Note: SAVE THESE INSTRUCTIONS

Note: This documentation is to be used in conjunction with the specific product installation guide that shipped with the product. Please refer to the Installation Guide, Configuration Guide, or other enclosed additional documentation for further details.

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. Voor een vertaling van de waarschuwingen die in deze publicatie verschijnen, dient u de vertaalde veiligheidswaarschuwingen te raadplegen die bij dit apparaat worden geleverd.

Opmerking BEWAAR DEZE INSTRUCTIES.

Opmerking Deze documentatie dient gebruikt te worden in combinatie met de installatiehandleiding voor het specifieke product die bij het product wordt geleverd. Raadpleeg de installatiehandleiding, configuratiehandleiding of andere verdere ingesloten documentatie voor meer informatie.

Varoitus

TÄRKEITÄ TURVALLISUUTEEN LIITTYVIÄ OHJEITA

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. Tässä asiakirjassa esitettyjen varoitusten käännökset löydät laitteen mukana toimitetuista ohjeista.

Huomautus SÄILYTÄ NÄMÄ OHJEET

Huomautus Tämä asiakirja on tarkoitettu käytettäväksi yhdessä tuotteen mukana tulleen asennusoppaan kanssa. Katso lisätietoja asennusoppaasta, kokoonpano-oppaasta ja muista mukana toimitetuista asiakirjoista.

Attention IMPORTANTES INFORMATIONS DE SÉCURITÉ

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. Pour prendre connaissance des traductions d'avertissements figurant dans cette publication, consultez les consignes de sécurité traduites qui accompagnent cet appareil.

Remarque CONSERVEZ CES INFORMATIONS

Remarque Cette documentation doit être utilisée avec le guide spécifique d'installation du produit qui accompagne ce dernier. Veuillez vous reporter au Guide d'installation, au Guide de configuration, ou à toute autre documentation jointe pour de plus amples renseignements.

Warnung WICHTIGE SICHERHEITSANWEISUNGEN

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. Übersetzungen der in dieser Veröffentlichung enthaltenen Warnhinweise sind im Lieferumfang des Geräts enthalten.

Hinweis BEWAHREN SIE DIESE SICHERHEITSANWEISUNGEN AUF

Hinweis Dieses Handbuch ist zum Gebrauch in Verbindung mit dem Installationshandbuch für Ihr Gerät bestimmt, das dem Gerät beiliegt. Entnehmen Sie bitte alle weiteren Informationen dem Handbuch (Installations- oder Konfigurationshandbuch o. Ä.) für Ihr spezifisches Gerät.

Figyelem! FONTOS BIZTONSÁGI ELŐÍRÁSOK

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.

Megjegyzés ŐRIZZE MEG EZEKET AZ UTASÍTÁSOKAT!

Megjegyzés Ezt a dokumentációt a készülékhez mellékelt üzembe helyezési útmutatóval együtt kell használni. További tudnivalók a mellékelt Üzembe helyezési útmutatóban (Installation Guide), Konfigurációs útmutatóban (Configuration Guide) vagy más dokumentumban található.

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. Per le traduzioni delle avvertenze riportate in questo documento, vedere le avvertenze di sicurezza che accompagnano questo dispositivo.

Nota CONSERVARE QUESTE ISTRUZIONI

Nota La presente documentazione va usata congiuntamente alla guida di installazione specifica spedita con il prodotto. Per maggiori informazioni, consultare la Guida all'installazione, la Guida alla configurazione o altra documentazione acclusa.

Advarsel VIKTIGE SIKKERHETSINSTRUKSJONER

Dette varselssymbolet betyr fare. Du befinner deg i en situasjon som kan forårsake personskade. Før du utfører arbeid med utstyret, bør du være oppmerksom på farene som er forbundet med elektriske kretssystemer, og du bør være kjent med vanlig praksis for å unngå ulykker. For å se oversettelser av advarslene i denne publikasjonen, se de oversatte sikkerhetsvarslene som følger med denne enheten.

Merk TA VARE PÅ DISSE INSTRUKSJONENE

Merk Denne dokumentasjonen skal brukes i forbindelse med den spesifikke installasjonsveiledningen som fulgte med produktet. Vennligst se installasjonsveiledningen, konfigureringsveiledningen eller annen vedlagt tilleggsdokumentasjon for detaljer.

Aviso INSTRUÇÕES IMPORTANTES DE SEGURANÇA

Este símbolo de aviso significa perigo. O utilizador encontra-se numa situação que poderá ser causadora de lesões corporais. Antes de iniciar a utilização de qualquer equipamento, tenha em atenção os perigos envolvidos no manuseamento de circuitos eléctricos e familiarize-se com as práticas habituais de prevenção de acidentes. Para ver traduções dos avisos incluídos nesta publicação, consulte os avisos de segurança traduzidos que acompanham este dispositivo.

Nota GUARDE ESTAS INSTRUÇÕES

Nota Esta documentação destina-se a ser utilizada em conjunto com o manual de instalação incluído com o produto específico. Consulte o manual de instalação, o manual de configuração ou outra documentação adicional inclusa, para obter mais informações.

¡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. Vea las traducciones de las advertencias que acompañan a este dispositivo.

Nota GUARDE ESTAS INSTRUCCIONES

Nota Esta documentación está pensada para ser utilizada con la guía de instalación del producto que lo acompaña. Si necesita más detalles, consulte la Guía de instalación, la Guía de configuración o cualquier documentación adicional adjunta.

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. Se översättningarna av de varningsmeddelanden som finns i denna publikation, och se de översatta säkerhetsvarningarna som medföljer denna anordning.

OBS! SPARA DESSA ANVISNINGAR

OBS! Denna dokumentation ska användas i samband med den specifika produktinstallationshandbok som medföljde produkten. Se installationshandboken, konfigurationshandboken eller annan bifogad ytterligare dokumentation för närmare detaljer.

Предупреждение ВАЖНЫЕ СВЕДЕНИЯ ПО БЕЗОПАСНОСТИ

Этот символ предупреждает о наличии опасности. При неправильных действиях возможно получение травм. Перед началом работы с любым оборудованием необходимо ознакомиться с ситуациями, в которых возможно поражение электротоком, и со стандартными действиями для предотвращения несчастных случаев. Переведенный текст предупреждений содержится в соответствующем документе, поставляемом вместе с устройством.

Примечание **СОХРАНЯЙТЕ ЭТУ ИНСТРУКЦИЮ**

Примечание Эта инструкция должна использоваться вместе с руководством по установке конкретного изделия, входящим в комплект поставки. Дополнительные сведения см. в руководстве по установке, руководстве по настройке и другой документации, поставляемой с изделием.

警告 有关安全的重要说明

这个警告符号指有危险。您所处的环境可能使身体受伤。操作设备前必须意识到电流的危险性，务必熟悉操作标准，以防发生事故。如果需要了解本说明中出现的警告符号的译文，请参阅本装置所附之安全警告译文。

注意 保存这些说明

注意 本文件应与本产品附带的详细安装说明一并阅读。如欲了解详情，请参阅《安装说明》、《配置说明》或所附的其他文件。

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、一般的な事故防止対策に留意してください。このマニュアルに記載されている警告の各国語版は、装置に付属の「Translated Safety Warnings」を参照してください。

注 これらの注意事項を保管しておいてください。

注 この資料は、製品に付属のインストレーションガイドと併用してください。詳細は、インストレーションガイド、コンフィギュレーションガイド、または添付されているその他のマニュアルを参照してください。

Installing the OC-12 ATM Memory Kit

The section is divided into the following topics:

- [Required Tools, page 6](#)
- [Removing the OC-12 ATM Module, page 7](#)
- [Installing the DRAM DIMMs, page 9](#)
- [Installing the OC-12 ATM Module, page 11](#)



Warning

Only trained and qualified personnel should be allowed to install, replace, or service this equipment.

Required Tools

The following tools are required to perform the memory module installation procedure:

- Number 1 and number 2 Phillips screwdrivers
- Antistatic mat or antistatic foam
- Your own ESD-prevention equipment or the disposable grounding wrist strap (included in the memory kit)

Removing the OC-12 ATM Module

**Caution**

During this procedure, wear grounding wrist straps and handle the module by the carrier edges only to avoid ESD damage to the module.

**Warning**

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

To remove the OC-12 ATM module from the chassis, perform these steps:

Step 1

Disconnect any network interface cables attached to the module.

Step 2

Verify that the captive installation screws on all of the modules in the chassis are tight. This step ensures that the space created by the removed module is maintained.

**Note**

If the captive installation screws are loose, the EMI gaskets on the installed modules will push the modules toward the open slot, reducing the opening size and making it difficult to reinstall the module.

Step 3

Loosen the two captive screws on the module to be removed.

Step 4

Depending on the orientation of the slots in the chassis (horizontal or vertical), perform one of the following two sets of steps:

Horizontal slots

- a. Place your thumbs on the left and right ejector levers, and simultaneously rotate the levers outward to unseat the module from the backplane connector. (See [Figure 1](#).)
- b. Grasp the front edge of the module, and slide the module part of the way out of the slot. Place your other hand under the module to support the weight of the module. Do not touch the module circuitry. (See [Figure 2](#).)

Vertical slots

- a. Place your thumbs on the ejector levers located at the top and bottom of the module, and simultaneously rotate the levers outward to unseat the module from the backplane connector.
- b. Grasp the edges of the module, and slide the module straight out of the slot. Do not touch the module circuitry.

Step 5

Place the module on an antistatic mat or antistatic foam.

Figure 1 Opening the Ejector Levers (Horizontal Chassis Shown)

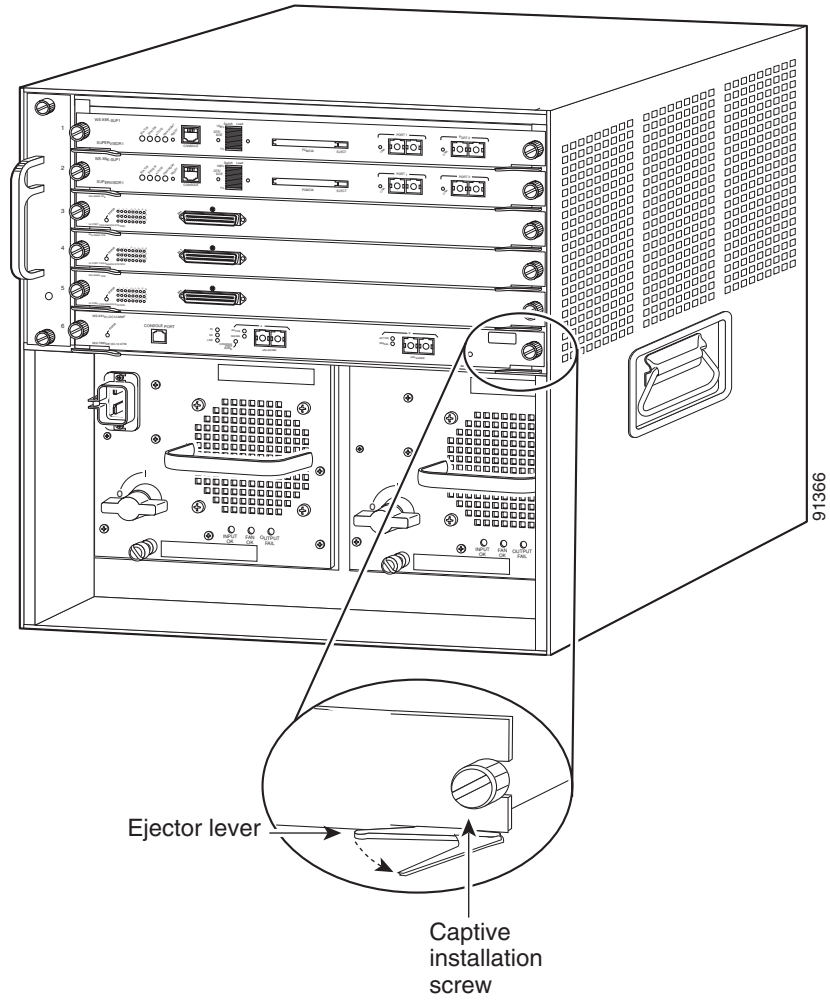
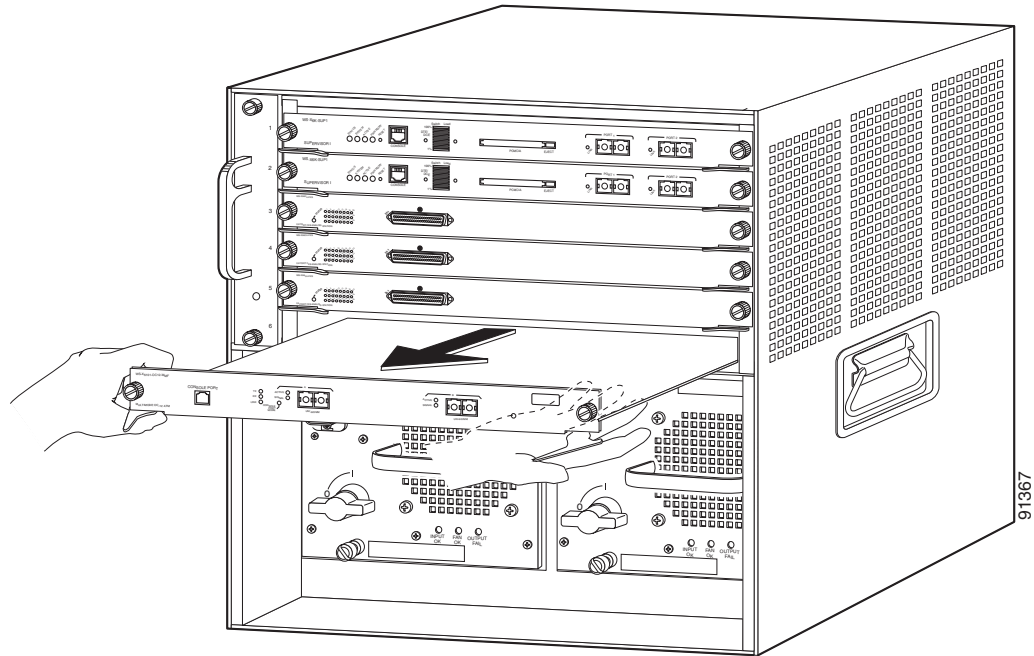


Figure 2 Removing the Module from the Chassis (Horizontal Chassis Shown)



Installing the DRAM DIMMs

The WS-OC12-32M-KIT= memory kit contains two 16-MB DRAM DIMMS that are installed in a DIMM socket located on the OC-12 ATM module. (See [Figure 3](#).)



Caution

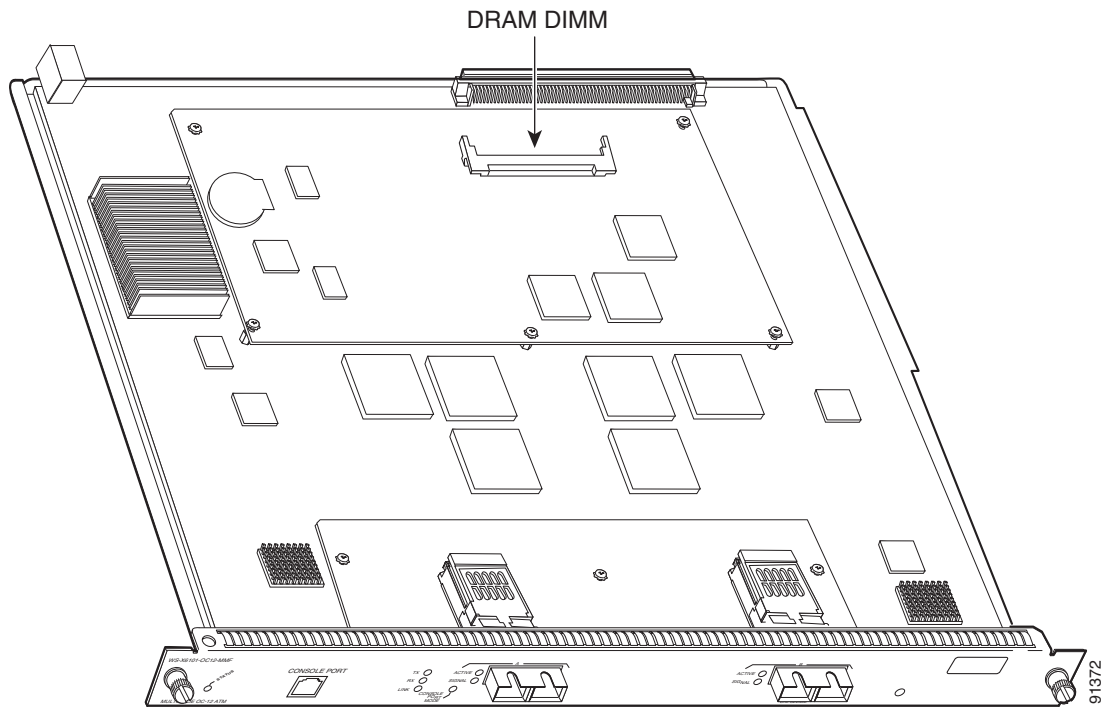
DIMMs are sensitive components that are susceptible to ESD damage. To prevent ESD damage, always wear an ESD wrist strap and handle the DIMMs by their edges only; avoid touching the memory modules, pins, or traces (the metal *fingers* along the connector edge of the DIMM).



Note

The DIMM socket supports two DIMMs, one stacked on top of the other. Install the bottom DIMM first, then install the top DIMM.

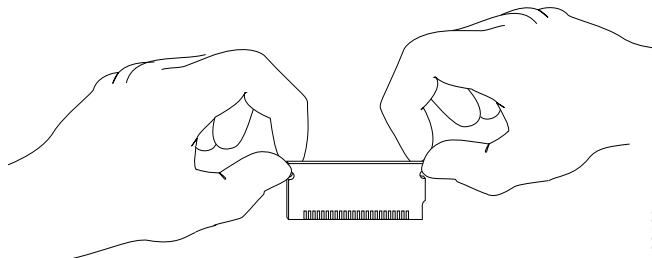
Figure 3 OC-12 ATM Module DRAM DIMM Socket Location



To install the two DRAM DIMMs, perform the following steps:

- Step 1** Remove one DRAM DIMM from the antistatic package.
- Step 2** Hold the DIMM by its edges. (See [Figure 4](#).)

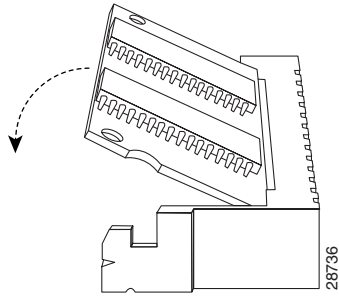
Figure 4 Handling a DIMM



- Step 3** Tilt the DIMM to approximately the same angle as the socket, and insert the connector edge into the bottom set of connectors in the socket. Note the notch (key) on the right connector edge of the DIMM. (See [Figure 5](#).) This key assures correct orientation of the DIMM in the socket.



Caution When inserting the DIMM, use firm but not excessive pressure. If you damage a socket, you will have to return the OC-12 ATM module to Cisco for repair.

Figure 5 Installing the DIMM

- Step 4** Press the DIMM down until it is secured by the spring clips. (See [Figure 5](#).)
- Step 5** When the DIMM is installed, check the two alignment holes and ensure that the spring retainer is visible. If it is not, the DIMM is not seated properly. If the DIMM appears misaligned, carefully remove it and reseat it in the socket. Push the DIMM firmly back into the socket until the retainer springs snap into place.
- Step 6** Remove the second DRAM DIMM from the antistatic package and repeat [Step 2](#) through [Step 5](#) for the second (upper) DIMM.

Installing the OC-12 ATM Module



Caution

To prevent ESD damage, handle modules by the carrier edges only and wear a grounding wrist strap.

To reinstall the OC-12 ATM module in the chassis, follow these steps:

- Step 1** Verify that the captive installation screws are tightened on all modules installed in the chassis. This action assures that the EMI gaskets on all modules are fully compressed in order to maximize the opening space for the removed module.

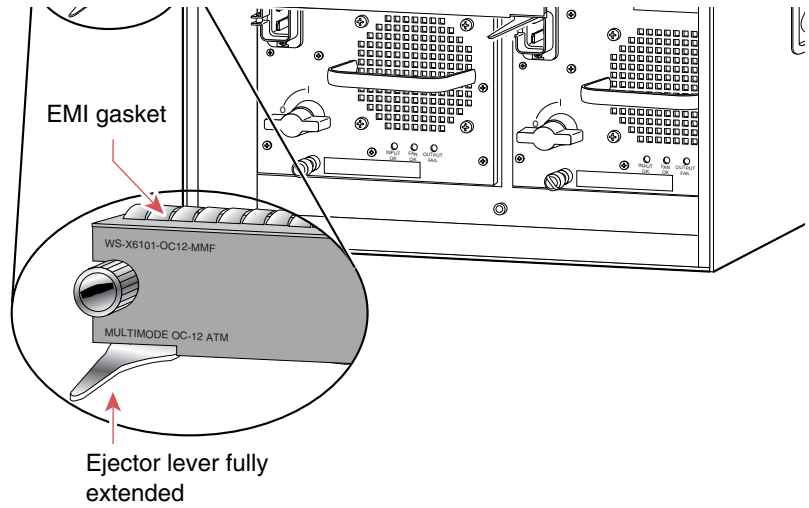


Note

If the captive installation screws are loose, the EMI gaskets on the installed modules will push adjacent modules toward the open slot, reducing the opening size and making it difficult to install the removed module.

- Step 2** Fully open both ejector levers on the module being installed. (See [Figure 6](#).)

Figure 6 Positioning the Module in a Horizontal Slot Chassis



Step 3 Depending on the orientation of the slots in the chassis (horizontal or vertical), perform one of the following two sets of steps:

Horizontal slots

- a. Position the module in the slot. (See [Figure 6.](#)) Make sure that you align the sides of the module carrier with the slot guides on each side of the slot.
- b. Carefully slide the module into the slot until the EMI gasket along the top edge of the module makes contact with the module in the slot above it and both ejector levers have closed to approximately 45 degrees with respect to the module faceplate.

- c. Using the thumb and forefinger of each hand, grasp the two ejector levers, and press down to create a small 0.040 inch (1 mm) gap between the module's EMI gasket and the module above it. (See [Figure 7](#).)



Note Do not press down too forcefully on the levers because they will bend and get damaged.

Figure 7 *Clearing the EMI Gasket in a Horizontal Slot Chassis*

- d. While pressing down, simultaneously close the left and right ejector levers to fully seat the module in the backplane connector. The ejector levers are fully closed when they are flush with the module faceplate.



Note Failure to fully seat the module in the backplane connector can result in error messages.

- e. Tighten the two captive installation screws on the module.



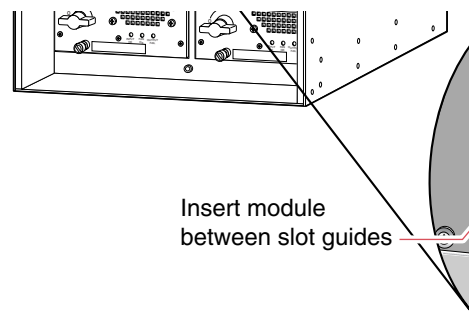
Note Make sure that the ejector levers are fully closed before tightening the captive installation screws.

- f. Verify that the module STATUS LED is lit. Periodically check the STATUS LED. If the STATUS LED changes from orange to green, the module has successfully completed the boot process and is now online. If the STATUS LED remains orange or turns red, the module has not successfully completed the boot process and may have encountered an error.

Vertical slots

- a. Position the module in the slot. (See [Figure 8.](#)) Make sure that you align the sides of the module carrier with the slot guides on the top and bottom of the slot.

Figure 8 Positioning the Module in a Vertical Slot Chassis

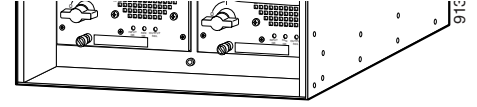


- b. Carefully slide the module into the slot until the EMI gasket along the right edge of the module makes contact with the module in the slot adjacent to it and both ejector levers have closed to approximately 45 degrees with respect to the module faceplate. (See [Figure 9.](#))
- c. Using the thumb and forefinger of each hand, grasp the two ejector levers and exert a slight pressure to the left, deflecting it approximately 0.040 inches (1 mm) to create a small gap between the module's EMI gasket and the module adjacent to it. (See [Figure 9.](#))

**Note**

Do not exert too much pressure on the ejector levers because they will bend and get damaged.

Figure 9 Clearing the EMI Gasket in a Vertical Slot Chassis



- d. While pressing down on the ejector levers, simultaneously close the levers to fully seat the module in the backplane connector. The ejector levers are fully closed when they are flush with the module faceplate.
- e. Tighten the two captive installation screws on the module.



Note Make sure that the ejector levers are fully closed before tightening the captive installation screws.

- f. Verify that the module STATUS LED is lit. Periodically check the STATUS LED. If the STATUS LED changes from orange to green, the module has successfully completed the boot process and is now online. If the STATUS LED remains orange or turns red, the module has not successfully completed the boot process and may have encountered an error.
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Translated Safety Warnings

This section repeats in multiple languages the basic warnings that appear in this publication.

Installation Warning



Warning

Only trained and qualified personnel should be allowed to install, replace, or service this equipment.

Waarschuwing

Deze apparatuur mag alleen worden geïnstalleerd, vervangen of hersteld door bevoegd geschoold personeel.

Varoitus

Tämän laitteen saa asentaa, vaihtaa tai huoltaa ainoastaan koulutettu ja laitteen tunteva henkilökunta.

Attention

Il est vivement recommandé de confier l'installation, le remplacement et la maintenance de ces équipements à des personnels qualifiés et expérimentés.

Warnung

Das Installieren, Ersetzen oder Bedienen dieser Ausrüstung sollte nur geschultem, qualifiziertem Personal gestattet werden.

Figyelem!

A berendezést csak szakképzett személyek helyezhetik üzembe, cserélhetik és tarthatják karban.

Avvertenza

Questo apparato può essere installato, sostituito o mantenuto unicamente da un personale competente.

Advarsel

Bare opplært og kvalifisert personell skal foreta installasjoner, utskiftninger eller service på dette utstyret.

Aviso

Apenas pessoal treinado e qualificado deve ser autorizado a instalar, substituir ou fazer a revisão deste equipamento.

¡Advertencia!

Solamente el personal calificado debe instalar, reemplazar o utilizar este equipo.

Varning! Endast utbildad och kvalificerad personal bör få tillåtelse att installera, byta ut eller reparera denna utrustning.

Предупреждение Установку, замену и обслуживание этого оборудования может осуществлять только специально обученный квалифицированный персонал.

警告 只有经过培训且具有资格的人员才能进行此设备的安装、更换和维修。

警告 この装置の設置、交換、保守は、訓練を受けた相応の資格のある人が行ってください。

Lightning Activity Warning



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

Waarschuwing Tijdens onweer dat gepaard gaat met bliksem, dient u niet aan het systeem te werken of kabels aan te sluiten of te ontkoppelen.

Varoitus Älä työskentele järjestelmän parissa äläkä yhdistä tai irrota kaapeleita ukkosilmalla.

Attention Ne pas travailler sur le système ni brancher ou débrancher les câbles pendant un orage.

Warnung Arbeiten Sie nicht am System und schließen Sie keine Kabel an bzw. trennen Sie keine ab, wenn es gewittert.

Figyelem! Villámlás közben ne dolgozzon a rendszeren, valamint ne csatlakoztasson és ne húzzon ki kábeleket!

Avvertenza Non lavorare sul sistema o collegare oppure scollegare i cavi durante un temporale con fulmini.

Advarsel Utfør aldri arbeid på systemet, eller koble kabler til eller fra systemet når det tordner eller lyner.

Aviso Não trabalhe no sistema ou ligue e desligue cabos durante períodos de mau tempo (trovoada).

¡Advertencia! No operar el sistema ni conectar o desconectar cables durante el transcurso de descargas eléctricas en la atmósfera.

Varning! Vid åska skall du aldrig utföra arbete på systemet eller ansluta eller koppla loss kablar.

Предупреждение Не следует работать с устройством, а также подключать или отключать кабели во время грозы.

警告 请勿在发生雷电时操作系统，也不要在此期间连接或断开电缆。

警告 雷が発生しているときは、システムに手を加えたり、ケーブルの接続や取り外しを行わないでください。

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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This document is to be used in conjunction with the *Catalyst 6500 Series Switch Module Installation Guide*.

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