

Rail Kit Install Guide: Intel® Modular Server System MFSYS25

**A Guide for Technically Qualified Assemblers of Intel® Identified Subassemblies/
Products**

Intel Order Number: E12567-002



Disclaimer

Information in this document is provided in connection with Intel® products. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document. Except as provided in Intel's Terms and Conditions of Sale for such products, Intel assumes no liability whatsoever, and Intel disclaims any express or implied warranty, relating to sale and/or use of Intel® products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright or other intellectual property right. Intel products are not designed, intended or authorized for use in any medical, life saving, or life sustaining applications or for any other application in which the failure of the Intel product could create a situation where personal injury or death may occur. Intel may make changes to specifications and product descriptions at any time, without notice.

Intel® server boards contain a number of high-density VLSI and power delivery components that need adequate airflow for cooling. Intel's own chassis are designed and tested to meet the intended thermal requirements of these components when the fully integrated system is used together. It is the responsibility of the system integrator that chooses not to use Intel developed server building blocks to consult vendor datasheets and operating parameters to determine the amount of airflow required for their specific application and environmental conditions. Intel Corporation can not be held responsible if components fail or the server board does not operate correctly when used outside any of their published operating or non-operating limits.

Intel, Intel Pentium, and Intel Xeon are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.

* Other names and brands may be claimed as the property of others.

Copyright © 2007, Intel Corporation. All Rights Reserved

Safety Information

Important Safety Instructions

Read all caution and safety statements in this document before performing any of the instructions. See also Intel Server Boards and Server Chassis Safety Information on the *Intel® Server Deployment Toolkit CD* and/or at <http://support.intel.com/support/motherboards/server/sb/cs-010770.htm>.

Wichtige Sicherheitshinweise

Lesen Sie zunächst sämtliche Warnund Sicherheitshinweise in diesem Dokument, bevor Sie eine der Anweisungen ausführen. Beachten Sie hierzu auch die Sicherheitshinweise zu Intel-Serverplatinen und Servergehäusen auf der *Intel® Server Deployment Toolkit CD* oder unter <http://support.intel.com/support/motherboards/server/sb/cs-010770.htm>.

Consignes de sécurité

Lisez attention toutes les consignes de sécurité et les mises en garde indiquées dans ce document avant de suivre toute instruction. Consultez Intel Server Boards and Server Chassis Safety Information sur le *Intel® Server Deployment Toolkit CD* ou bien rendez-vous sur le site <http://support.intel.com/support/motherboards/server/sb/cs-010770.htm>.

Instrucciones de seguridad importantes

Lea todas las declaraciones de seguridad y precaución de este documento antes de realizar cualquiera de las instrucciones. Vea Intel Server Boards and Server Chassis Safety Information en el *Intel® Server Deployment Toolkit CD* y/o en <http://support.intel.com/support/motherboards/server/sb/cs-010770.htm>.

重要安全指导

在执行任何指令之前，请阅读本文件中的所有注意事项及安全声明。并参阅 <http://support.intel.com/support/motherboards/server/sb/CS-010770.htm> 上的 *Intel Server Boards and Server Chassis Safety Information*（《Intel 服务器主板与服务器机箱安全信息》）。

Warnings

Heed safety instructions: Before working with your server product, whether you are using this guide or any other resource as a reference, pay close attention to the safety instructions. You must adhere to the assembly instructions in this guide to ensure and maintain compliance with existing product certifications and approvals. Use only the described, regulated components specified in this guide. Use of other products / components will void the UL listing and other regulatory approvals of the product and will most likely result in noncompliance with product regulations in the region(s) in which the product is sold.

System power on/off: The power button DOES NOT turn off the system AC power. To remove power from system, you must unplug the AC power cord from the wall outlet. Make sure the AC power cord is unplugged before you open the chassis, add, or remove any components.

Hazardous conditions, devices and cables: Hazardous electrical conditions may be present on power, telephone, and communication cables. Turn off the server and disconnect the power cord, telecommunications systems, networks, and modems attached to the server before opening it. Otherwise, personal injury or equipment damage can result.

Electrostatic discharge (ESD) and ESD protection: ESD can damage disk drives, boards, and other parts. We recommend that you perform all procedures in this chapter only at an ESD workstation. If one is not available, provide some ESD protection by wearing an antistatic wrist strap attached to chassis ground any unpainted metal surface on your server when handling parts.

ESD and handling boards: Always handle boards carefully. They can be extremely sensitive to ESD. Hold boards only by their edges. After removing a board from its protective wrapper or from the server, place the board component side up on a grounded, static free surface. Use a conductive foam pad if available but not the board wrapper. Do not slide board over any surface.

Installing or removing jumpers: A jumper is a small plastic encased conductor that slips over two jumper pins. Some jumpers have a small tab on top that you can grip with your fingertips or with a pair of fine needle nosed pliers. If your jumpers do not have such a tab, take care when using needle nosed pliers to remove or install a jumper; grip the narrow sides of the jumper with the pliers, never the wide sides. Gripping the wide sides can damage the contacts inside the jumper, causing intermittent problems with the function controlled by that jumper. Take care to grip with, but not squeeze, the pliers or other tool you use to remove a jumper, or you may bend or break the pins on the board.

Contents

Safety Information	iii
Important Safety Instructions	iii
Wichtige Sicherheitshinweise	iii
Consignes de sécurité	iii
Instrucciones de seguridad importantes	iii
Warnings.....	iv
Rail Kit Install Guide	1
Kit Contents	1
Rail Kit Installation Instructions	1
Prepare System	1
Prepare Rack	2
Install System in Rack	7
Complete Setup	7

Rail Kit Install Guide

The Intel® Modular Server System MFSYS25 is designed to support cabinets that are 19 inches (483 mm) wide by up to 36 inches (914 mm) deep. A set of rack mounting rails is provided in this kit and will accommodate either square or round hole rack-mounting methods.

Kit Contents

Rail Kit Installation Instructions

Rail Kit (AXXMFRAIL)

Item	Quantity
Rail	2
Install Guide	1

Prepare System

Warning: *Lifting the system and attaching it to the rack is a three-person operation. Remove all modules from the system prior to lifting system into rack. This includes all compute server modules, all power supply modules, all Ethernet switch modules, all storage controllers and the management module. Use of a mechanical assist is required if modules are not removed.*

1. Read all caution and safety statements listed in this document before performing any of the steps. See the *Intel® Server Boards and Server Chassis Safety Information* document at <http://support.intel.com/support/motherboards/server/sb/cs-010770.htm> for a complete listing of all caution and safety statements.

Caution: *Before performing any maintenance on the system, back up the data.*

2. Turn off all peripheral devices connected to the system. Turn off the system.
3. Disconnect the power cord(s).

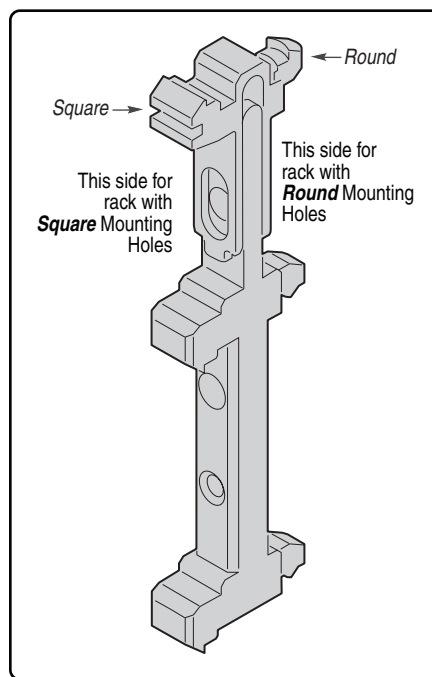
Prepare Rack

Setting the Multi-pin Adapters for Rack Type

The multi-pin adapters allow the rack rails to be used in racks that have either square or round mounting holes.

Note: *The rack rails ship with the multi-pin adapters set for square holes. If your rack has square mounting holes, skip this section.*

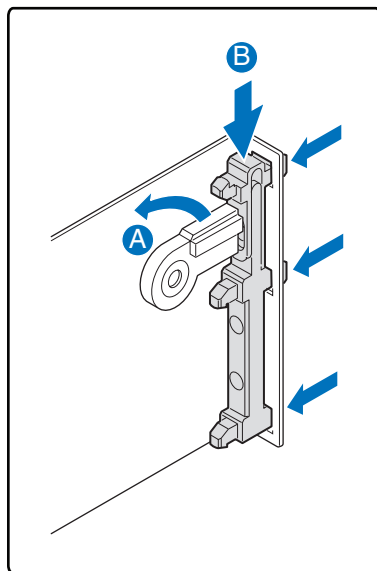
4. On each rack rail, reverse the multi-pin adapter position so that it matches the appropriate rack mounting hole type for your rack.



AF002462

Figure 1. Pictorial View of Multi-pin Adapter

5. To set for round mounting holes, remove the multi-pin adapter by rotating the swivel lock up (see letter “A” in the following figure). Press and hold the top (floating) mounting pin downward (see letter “B”) while extracting the middle and bottom pins from the multi-pin bracket.

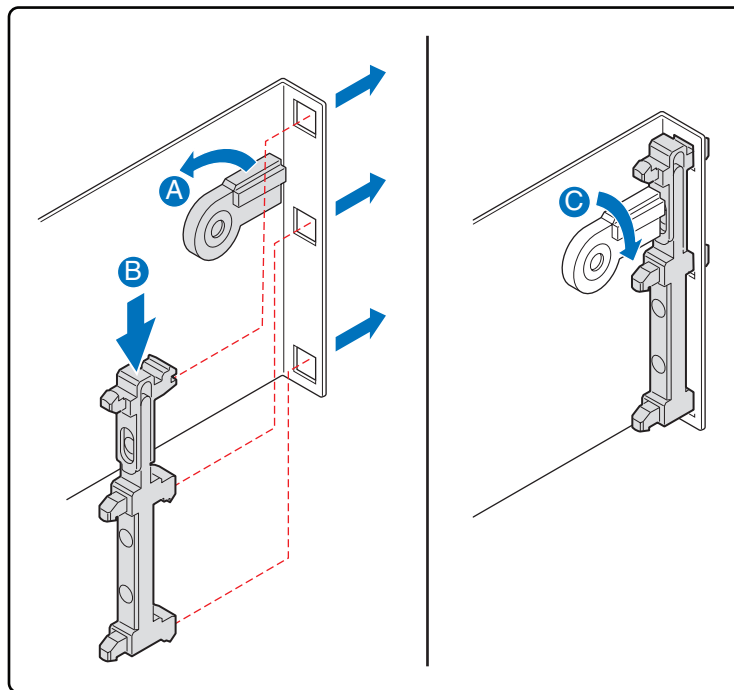


AF002463

Figure 2. Removing Multi-pin Adapter from Multi-pin Bracket

6. Set the multi-pin adapter for round mounting holes (see Figure 1).

7. Ensure the swivel lock is up (see letter “A” in the following figure). Re-install the multi-pin adapter into the multi-pin bracket by placing the bottom mounting pin fully in the bracket. Press and hold the top (floating) pin (see letter “B”) while pushing the adapter into the bracket. Ensure that all three mounting pins on the multi-pin adapter are fully engaged in the multi-pin bracket. The multi-pin adapter must be fully locked into the bracket. Use the swivel lock to lock the multi-pin adapter in place (see letter “C”).



AF002464

Figure 3. Setting Multi-pin Adapter in Multi-pin Bracket

8. Repeat the previous three steps for both ends of each rack rail.

Installing Rack Rails into Rack

- For all four rack uprights, determine the vertical position in the rack at which the rack rails are to be installed. The top-most mounting hole for a particular rack unit (RU) mounting position is typically identified by a mark or hole.

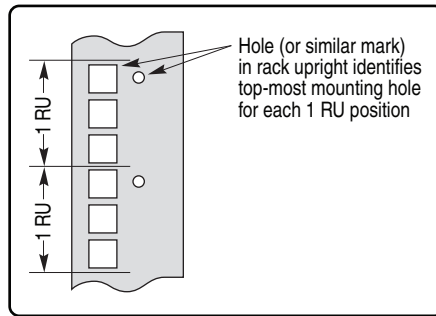


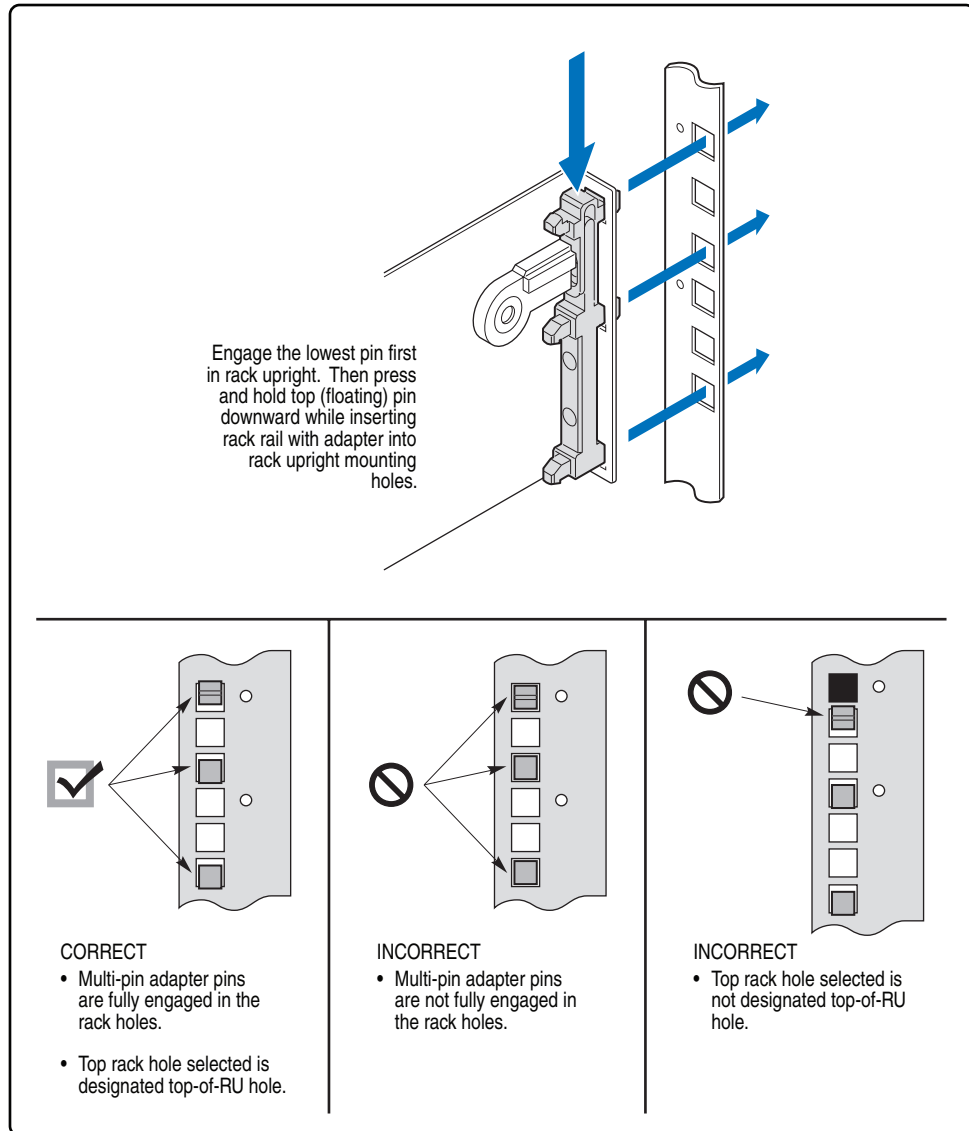
Figure 4. Determining Vertical Position in Rack

Caution: *If rack rail is mounted in holes which are not vertically aligned from front to back, the rack rail may be damaged and rack mounting will not be secure.*

- Noting the holes determined in the previous step, align the left rack rail with its rear mounting holes.

Note: *Rack rails and multi-pin adapters occupy exactly 3 RU. The lowest point on an adapter is eight (8) holes lower than the top-most mounting hole.*

- Hold the rack rail in the desired rack-mounting position. Engage the lowest pin in its hole on the rack upright. At the rear of the rack rail, press and hold the top (floating) pin downward while pushing the rack rail and adapter into the rack upright holes.



AF002466

Figure 5. Attaching Rack Rail to Multi-pin Bracket

12. Ensure the proper mounting holes on each rack upright are selected. Repeat the previous step for the front mounting position of the rack rail. Ensure the rack rail is level.
13. Repeat Steps 10-12 for the right rack rail, ensuring that it is parallel and level with the left rack rail.

Install System in Rack

Warning: Lifting the system and attaching it to the rack is a three-person operation. Remove all modules from the system prior to lifting system into rack. This includes all compute server modules, all power supply modules, all Ethernet switch modules, all storage controllers and the management module. Use of a mechanical assist is required if modules are not removed.

14. Lift and align system with the mounted rack rails.

Note: If handles are installed, the rear handles **MUST BE** removed prior to setting the system on the rack rails to avoid interference of the handles with the rack.

15. Slide the system onto the rack rails.

Note: The front handles **MUST BE** removed prior to sliding the system into the rack and securing the front chassis tabs to the rack.

16. Secure the system to the rack by tightening the captive fasteners on the front of the system flanges. These captive fasteners also engage the rails.

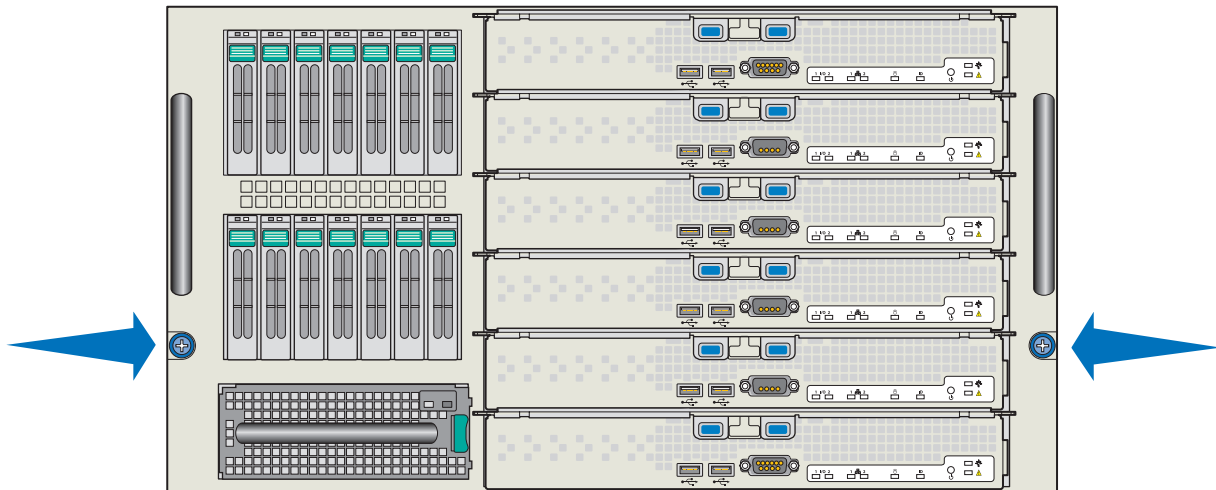


Figure 6. Tightening Captive Fasteners

Complete Setup

17. Re-install all modules and controllers that were removed.

18. Reconnect all peripheral devices and the power cord(s). Power up the system.

