Intel® Carrier Grade Server NSI2U Hardware Reference Guide

Thank you for buying an Intel® Server System. The following information will help you use and maintain your Intel® Network Security Server System NSI2U.

This Guide is for technically qualified service persons. Expanded installation instructions and complete product information are available in the Intel® Network Security Server System NSI2U User Guide.

These guides and other supporting documents are located on the web at
http://support.intel.com/support/motherboards/server/nsi2u/manual.htm

If you are not familiar with ESD (Electrostatic Discharge) procedures used during system integration, please go to the web at
http://support.intel.com/support/motherboards/server/nsi2u/manual.htm

Warning

Read all caution and safety statements in this document before performing any of the instructions. Also see the *Intel® Server Board and Server Chassis Safety Information* document at:
http://support.intel.com/support/motherboards/server/safecert.htm for complete safety information.

Warning

Installation and service of this product to be performed only by qualified service personnel to avoid risk of injury from electrical shock or energy hazard.

Caution

Observe normal ESD [Electrostatic Discharge] procedures during system integration to avoid possible damage to server board and/or other components.

Tools Required

Minimum Hardware Requirements

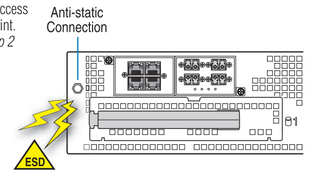
To avoid integration difficulties and possible board damage, your system must meet the following minimum requirements:

- **Processor:** Minimum of one Intel® Xeon™ processor with 2 MB cache support.
- **Memory:** Minimum of two 256 MB (512 MB), DDR2-400/533-compliant Registered ECC SDRAM 240-pin gold DIMMs.
- **AC Power:** 600W with 1.2A of 5V standby current.

1 Ground Strap Attachment Location

You must remove the bezel to access the ground strap attachment point. *If the bezel is installed, see Step 2 at right.*

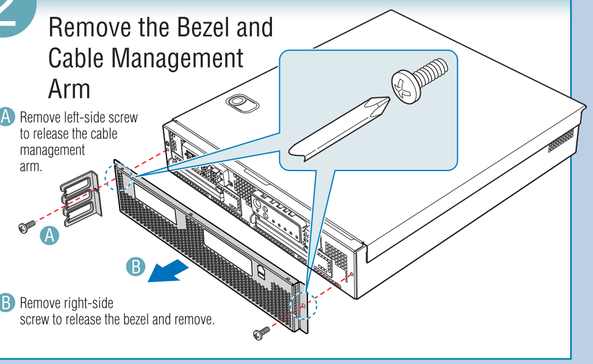
Attach ground strap to anti-static connection point.



2 Remove the Bezel and Cable Management Arm

A Remove left-side screw to release the cable management arm.

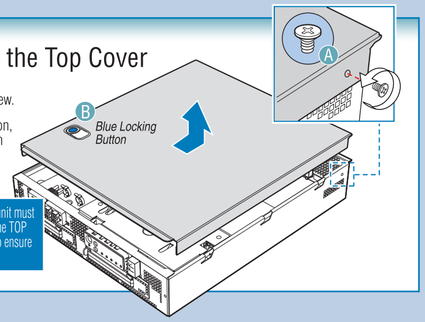
B Remove right-side screw to release the bezel and remove.



3 Removing the Top Cover

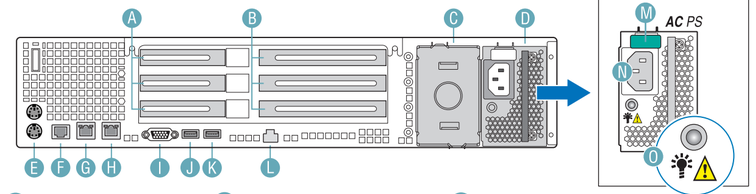
A Remove the shipping screw.

B Push **BLUE** locking button, slide cover rearward, then lift up and remove.

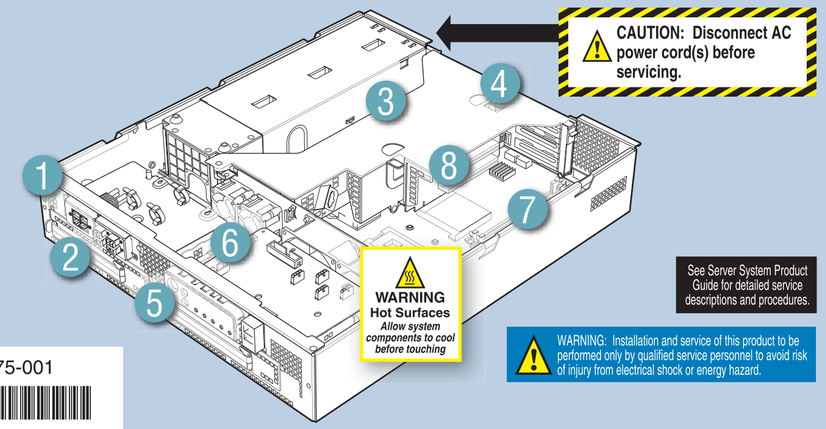


CAUTION: This unit must be operated with the TOP COVER installed to ensure proper cooling.

4 Back Panel Controls and Features



A PCI Card Slots *(low-profile)*
B PCI Card Slots *(full-height)*
C Power Supply Blank
D Power Supply *(hot-swap if two power supplies are installed)*
E PS/2 Mouse/Keyboard Connectors
F Rear Serial Port
G RJ45 NIC 1 Connector
H RJ45 NIC 2 Connector
I Video Connector
J USB 0
K USB 1
L Server Management Port
M PS Release Lever
N AC Power IN
O PS Status LED



See Server System Product Guide for detailed service descriptions and procedures.

WARNING: Installation and service of this product to be performed only by qualified service personnel to avoid risk of injury from electrical shock or energy hazard.

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5 Front Panel Controls and Features

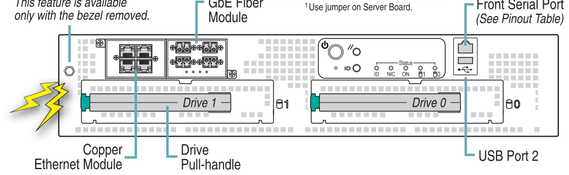
A Power Switch
B Reset Switch
C NMI Switch
D ID Switch
E ID LED
F NIC Activity LED
G Status LED
H HDD1 Activity
I HDD0 Activity

Fault LED	Functional Description of Fault LED when Continuously Lit
Critical	A critical system fault is an error or event that is detected by the system with a fatal impact to the system. The system cannot continue to operate. The front panel critical alarm relay will be engaged.
Major	A major system fault is an error or event that is detected by the system that has discernable impact to system operation. The system can continue to operate, but in a "degraded" fashion (reduced performance or loss of non-fatal feature reduction). The front panel major alarm relay will be engaged.
Minor	A minor system fault is an error or event that is detected by the system but has little impact to actual system operation. The front panel minor alarm relay will be engaged.
Power	A power system fault is a power supply error or event that is detected by the system. The front panel power alarm relay will be engaged.

Serial Port Connector Pinout

Pin	Description	Pin	Description
1	RTS	5	RIA
2	DTR	6	RXD
3	TXD	7	DSR/DCD[1]
4	GND	8	CTS

[1]Use jumper on Server Board.



6 Servicing the Hard Disk Drives

Remove the Bezel and Top Cover

See Steps 2 and 3 above ...

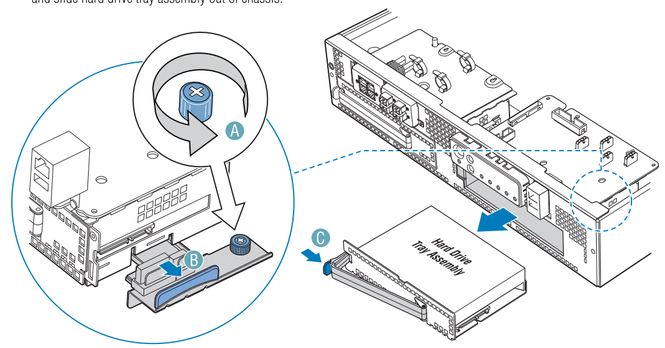
Remove the Hard Drive Tray

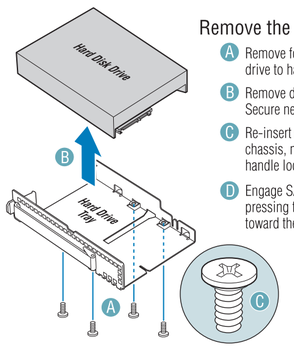
CAUTION: Hard disk drives are **NOT hot-swap.** See your Intel® Network Security Server System NSI2U User Guide for detailed hard disk drive service procedures.

A Unscrew the **BLUE** thumbscrew.

B Push on the **BLUE** touchpoint to disengage the SATA connector bracket from the SATA drive. *Note: It is not necessary to disconnect SATA data and power cables to remove the drive carrier from the chassis.*

C Press the **BLUE** tab on the drive latch, pull handle outward to disengage drive tray, and slide hard drive tray assembly out of chassis.





Remove the Hard Drive

A Remove four screws securing drive to hard drive tray.

B Remove drive and insert new drive. Secure new drive with four screws.

C Re-insert drive tray assembly into chassis, making sure **BLUE** latch handle locks into place.

D Engage SATA connector bracket by pressing the BLUE touchpoint toward the drive connectors.

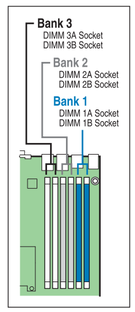
7 Installing Memory

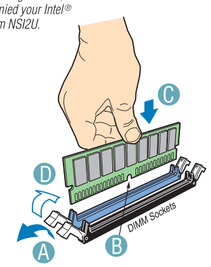
Memory Type: Minimum of two 256 MB, DDR2-400/533 compliant Registered ECC or non-ECC, SPD SDRAM 240-pin gold DIMMs.

Notes and Cautions: Bank 1 (DIMM1A and DIMM1B) must be fully populated before populating Bank 2 (DIMM2A and DIMM2B). Memory must be populated in pairs.

The DIMM size, speed and vendor must be the same within a bank. However, the DIMM size can vary between banks. For example, Bank 1 can use two 256 MB DIMMs and Bank 2 can use two 512 MB DIMMs.

Note: For additional memory configurations, see the User Guide on the CD that accompanied your Intel® Network Security Server System NSI2U.





Observe normal ESD precautions when installing DIMMs.

To Install DIMMs:

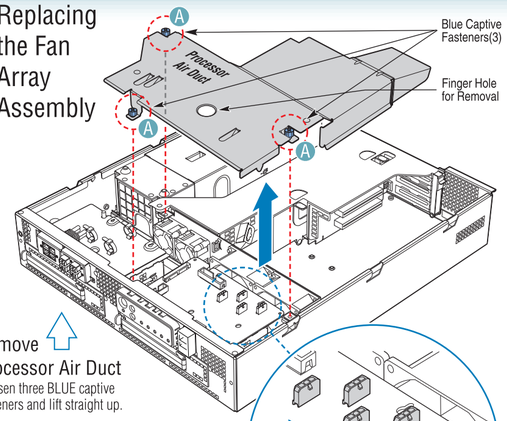
A Open both DIMM socket levers.

B Note location of alignment notch.

C Insert DIMM making sure the connector edge of the DIMM aligns correctly with the slot.

D Push down firmly on the DIMM until it snaps into place and both levers close.

8 Replacing the Fan Array Assembly



A. Remove Processor Air Duct
Loosen three BLUE captive fasteners and lift straight up.

B. Disconnect Four Fan Cables
Squeeze the latch on each of the four fan cable connectors to disconnect from the front panel I/O board.

C. Remove the Fan Module
Loosen the single BLUE captive fastener and lift straight up.

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