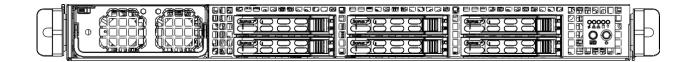
# NEC SX-Aurora TSUBASA A300-2



**USER'S GUIDE** 

Revision 1.0c

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Guide Revision 1.0

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## **Preface**

## **About this Guide**

This Guide is written for professional system integrators and PC technicians. It provides information for the installation and use of the SX-Aurora TSUBASA A300-2. Installation and maintenance should be performed by experienced technicians only.

Please refer to the A300-2 server specifications page on our website for updates on supported memory, processors and operating systems (<a href="http://www.nec.com/en/global/prod/hpc/aurora/document/">http://www.nec.com/en/global/prod/hpc/aurora/document/</a>).

## **Notes**

For your system to work properly, please follow the links below to download all necessary drivers/utilities and the user's guide for your server.

- NEC product manuals: <a href="http://www.nec.com/en/global/prod/hpc/aurora/document/">http://www.nec.com/en/global/prod/hpc/aurora/document/</a>
- Product safety info: http://www.nec.com/en/global/prod/hpc/aurora/document/safety\_information.pdf

This Guide may be periodically updated without notice. Please check the NEC website for possible updates to the manual revision level.

## **Warnings**

Special attention should be given to the following symbols used in this guide.



**Warning!** Indicates important information given to prevent equipment/property damage or personal injury.



Warning! Indicates high voltage may be encountered when performing a procedure.

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# **Chapter 1**

## Introduction

## 1.1 Overview

This chapter provides a brief outline of the functions and features of SX-Aurora TSUBASA A300-2.

## 1.2 Unpacking the System

Inspect the box the SX-Aurora TSUBASA A300-2 was shipped in and note if it was damaged in any way. If any equipment appears damaged, please file a damage claim with the carrier who delivered it.

Decide on a suitable location for the rack unit that will hold the server. It should be situated in a clean, dust-free area that is well ventilated. Avoid areas where heat, electrical noise and electromagnetic fields are generated. It will also require a grounded AC power outlet nearby. Be sure to read the precautions and considerations noted in Appendix B.

# 1.3 System Features

The following table provides you with an overview of the main features of the SX-Aurora TSUBASA A300-2.

| System Features   |
|---|
| Motherboard   |
| Supermicro X11SPG-TF  |
| Chassis   |
| Supermicro SC118GTS-1K43BP  |
| CPU   |
| Supports single Intel Xeon 6148/6126/4108 (Socket P0-LGA3647) processor |
| Socket Type   |
| Socket P0-LGA3647   |
| Memory  |
| 48GB or 96GB  |
| Chipset   |
| PCH C621  |
| PCIe Cards  |
| Up to two Vector Engine 1.0 cards                                       |
| Up to one InfiniBand HCA card  Hard Drives                              |
| One 2.5" hard drive   |
| Power   |
| Single 1400W power supply   |
| Form Factor   |
| 1U rackmount  |
| Dimensions  |
| (WxHxD) 17.2 x 1.7 x 28.5 in. (437 x 43 x 724 mm)                       |
| Host Server   |
| A300-2-VH   |

## 1.4 Server Chassis Features

## Control Panel

The switches and LEDs located on the control panel are described below.

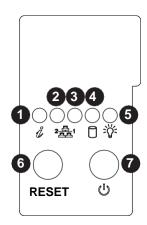


Figure 1-1. Control Panel View

|      | Control Panel Features |   |  |  |  |
|------|------------------------|---|--|--|--|
| Item | Feature                | Description   |  |  |  |
| 1    | Information LED        | See the table below for the status shown by this LED.   |  |  |  |
| 2    | NIC2 LED               | Indicates network activity on LAN port 2 when flashing  |  |  |  |
| 3    | NIC1 LED               | Indicates network activity on LAN port 1 when flashing  |  |  |  |
| 4    | HDD LED                | Indicates activity on a hard drive when flashing.   |  |  |  |
| 5    | Power LED              | Indicates power is being supplied to the system power supply. This LED should normally be illuminated when the system is operating.   |  |  |  |
| 6    | RESET Button           | HW reset.   |  |  |  |
| 7    | Power Button           | The main power button is used to apply or remove power from the power supply to the server. Turning off system power with this button removes the main power but maintains standby power. To perform many maintenance tasks, you must also unplug system before servicing |  |  |  |

| Information LED          |   |  |  |
|--------------------------|---|--|--|
| Status                   | Description   |  |  |
| Continuously on and red  | An overheat condition has occurred. (This may be caused by cable congestion.)                 |  |  |
| Blinking red (1 Hz)      | Fan failure: check for an inoperative fan.  |  |  |
| Blinking red (0.25 Hz)   | Power failure: check for an inoperative power supply.   |  |  |
| Solid blue               | Local UID has been activated. Use this function to locate the server in a rack environment.   |  |  |
| Blinking blue (300 msec) | Remote UID has been activated. Use this function to locate the server from a remote location. |  |  |

## > Front Features

The chassis is a 1U rack mount chassis. See the illustration below for the features included on the front of the chassis.

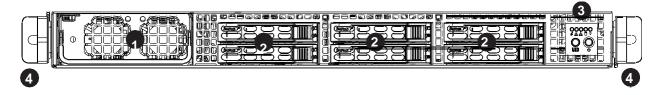


Figure 1-2. Chassis Front View

|      | Front Chassis Features |  |  |  |  |
|------|------------------------|--|--|--|--|
| Item | Feature                | Description  |  |  |  |
| 1    | Power Supply           | 1400W power supply   |  |  |  |
| 2    | Drive Carriers         | Hot-swap 2.5" hard disk drive carriers                         |  |  |  |
| 3    | Control Panel          | Front control panel with LEDs and buttons (see preceding page) |  |  |  |
| 4    | Rack Ear Brackets      | Attaches server chassis to the rack                            |  |  |  |

## > Rear Features

The illustration below shows the features included on the rear of the chassis.

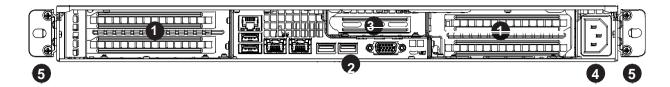


Figure 1-3. Chassis Rear View

|      | Rear Chassis Features    |   |  |  |  |
|------|--------------------------|---|--|--|--|
| Item | Feature                  | Description   |  |  |  |
| 1    | Vector Engine Card Slots | Slots for Vector Engine Cards ( left side, and right side)      |  |  |  |
| 2    | I/O Backpanel            | Rear I/O ports (see Section 1.6 for full details)               |  |  |  |
| 3    | PCI Card Slot            | Slot for one expansion card (requires pre-installed riser card) |  |  |  |
| 4    | Power Supply             | AC power connection   |  |  |  |
| 5    | Rack Ear Brackets        | Attaches server chassis to the rack                             |  |  |  |

## 1.5 System Block Diagram

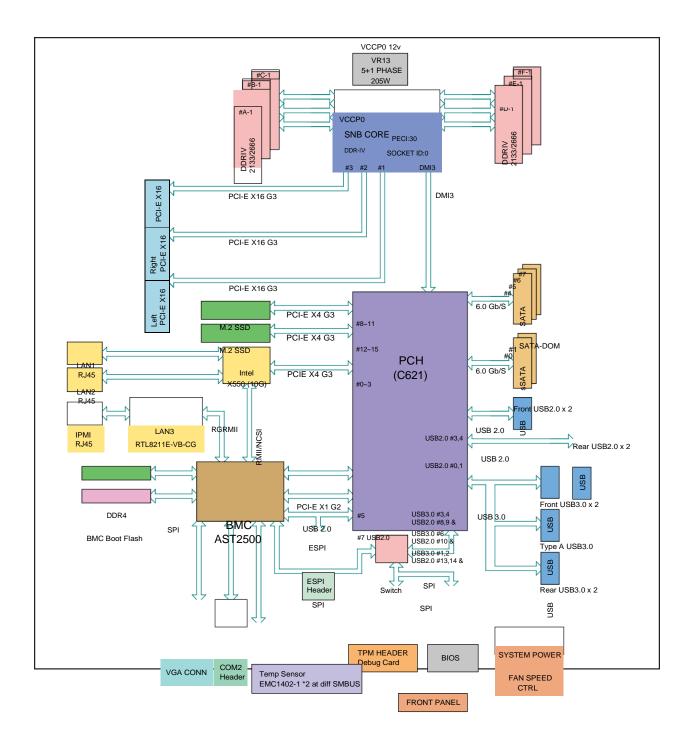


Figure 1-4. Intel PCH C621 Chipset: System Block Diagram

**Note:** This is a general block diagram and may not exactly represent the features on your motherboard. See the Setciton 1.3 System Features for the actual specifications of your motherboard.

## 1.6 Ports

#### > I/O Ports

See the figure below for the locations and descriptions of the various I/O ports on the rear of the motherboard.

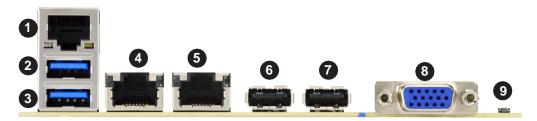


Figure 1-5. Rear I/O Ports

|   | Rear I/O Ports                    |    |      |             |                  |
|---|-----------------------------------|----|------|-------------|------------------|
| No. Description No. Description No. Description |                                   |    |      | Description |                  |
| 1.  | Dedicated IPMI LAN                | 4. | LAN1 | 7.          | USB1             |
| 2.  | 2. USB5 (3.0) 5. LAN2 8. VGA Port |    |      |             | VGA Port         |
| 3.  | USB4 (3.0)                        | 6. | USB0 | 9.          | UID Switch / LED |

#### > VGA Port

A video (VGA) port is located next to USB1 on the I/O back panel. Refer to the board layout below for the location.

## > LAN Ports

Two Gigabit Ethernet ports (LAN1, LAN2) are located on the I/O back panel. In addition, a dedicated IPMI LAN is located above USB4/5. All of these ports accept RJ45 cables. Please refer to the LED Indicator section for LAN LED information.

## > Universal Serial Bus (USB) Ports

There are two USB 2.0 ports (USB0, USB1) and two USB 3.0 ports (USB4/5) located on the I/O back panel. The motherboard also has one front access USB 2.0 header (USB2/3) and one front access USB 3.0 header (USB6/7). The USB8 header is USB 3.0 Type A. The onboard headers can be used to provide front side USB access with a cable (not included).

| Back Panel USB 0/1 (2.0)<br>Pin Definitions |                                 |   |        |  |  |  |
|---|---------------------------------|---|--------|--|--|--|
| Pin#  | Pin# Definition Pin# Definition |   |        |  |  |  |
| 1   | +5V                             | 5 | +5V    |  |  |  |
| 2   | USB_N                           | 6 | USB_N  |  |  |  |
| 3   | USB_P                           | 7 | USB_P  |  |  |  |
| 4   | Ground                          | 8 | Ground |  |  |  |

| Back Panel USB 6/7 (3.0)<br>Pin Definitions |            |      |            |  |
|---|------------|------|------------|--|
| Pin#  | Definition | Pin# | Definition |  |
| A1  | VBUS       | B1   | Power      |  |
| A2  | D-         | B2   | USB_N      |  |
| А3  | D+         | В3   | USB_P      |  |
| A4  | GND        | B4   | GND        |  |
| A5  | Stda_SSRX- | B5   | USB3_RN    |  |
| A6  | Stda_SSRX+ | B6   | USB3_RP    |  |
| A7  | GND        | B7   | GND        |  |
| A8  | Stda_SSTX- | B8   | USB3_TN    |  |
| A9  | Stda_SSTX+ | B9   | USB3_TP    |  |

| Front Panel USB 2/3, 4/5 (2.0)<br>Pin Definitions |                                 |    |        |  |  |  |
|---|---------------------------------|----|--------|--|--|--|
| Pin#  | Pin# Definition Pin# Definition |    |        |  |  |  |
| 1   | +5V                             | 2  | +5V    |  |  |  |
| 3   | USB_N                           | 4  | USB_N  |  |  |  |
| 5   | USB_P 6 USB_P                   |    |        |  |  |  |
| 7   | Ground                          | 8  | Ground |  |  |  |
| 9   | Key                             | 10 | NC     |  |  |  |

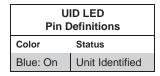
|      | Front Panel USB 8/9 (3.0) Pin Definitions |      |            |  |  |  |
|------|---|------|------------|--|--|--|
| Pin# | Definition                                | Pin# | Definition |  |  |  |
| 1    | VBUS                                      | 19   | Power      |  |  |  |
| 2    | Stda_SSRX-                                | 18   | USB3_RN    |  |  |  |
| 3    | Stda_SSRX+                                | 17   | USB3_RP    |  |  |  |
| 4    | GND                                       | 16   | GND        |  |  |  |
| 5    | Stda_SSTX-                                | 15   | USB3_TN    |  |  |  |
| 6    | Stda_SSTX+                                | 14   | USB3_TP    |  |  |  |
| 7    | GND                                       | 13   | GND        |  |  |  |
| 8    | D-  | 12   | USB_N      |  |  |  |
| 9    | D+  | 11   | USB_P      |  |  |  |
| 10   |   | х    |            |  |  |  |

| Type A USB 10 (3.0)<br>Pin Definitions |        |   |       |  |  |
|--|--------|---|-------|--|--|
| Pin# Definition Pin# Definition        |        |   |       |  |  |
| 1                                      | VBUS   | 5 | SSRX- |  |  |
| 2                                      | USB_N  | 6 | SSRX+ |  |  |
| 3                                      | USB_P  | 7 | GND   |  |  |
| 4                                      | Ground | 8 | SSTX- |  |  |
|  |        | 9 | SSTX+ |  |  |

## Unit Identifier Switch/UID LED Indicator

A Unit Identifier (UID) switch and an LED Indicator are located on the motherboard. The UID switch is located at UID SW, which is next to the VGA port on the back panel. The UID LED is located next to the UID switch. When you press the UID switch, the UID LED will be turned on. Press the UID switch again to turn off the LED indicator. The UID Indicator provides easy identification of a system unit that may be in need of service.

|                 | UID Switch<br>Pin Definitions |  |  |
|-----------------|-------------------------------|--|--|
| Pin# Definition |                               |  |  |
| 1               | Ground                        |  |  |
| 2               | Ground                        |  |  |
| 3               | Button In                     |  |  |
| 4               | Button In                     |  |  |



## 1.7 LED Indicators

#### > LAN LEDs

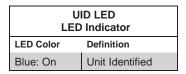
Two LAN ports (LAN 1 and LAN 2) are located on the I/O back panel of the motherboard. Each Ethernet LAN port has two LEDs. The green LED indicates activity, while the other Link LED may be green, amber, or off to indicate the speed of the connection. Refer to the tables below for more information.

| LAN1/2 Activity LED (Right)<br>LED State |          |            |  |  |
|--|----------|------------|--|--|
| Color                                    | Status   | Definition |  |  |
| Green                                    | Flashing | Active     |  |  |

| LAN1/2 Link LED (Left)<br>LED State |            |  |
|-------------------------------------|------------|--|
| LED Color                           | Definition |  |
| Green                               | 10Gbps     |  |
| Yellow/Amber                        | 1Gbps      |  |

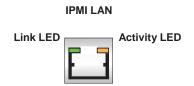
#### Unit ID LED

A rear UID LED indicator (LE1) is located near the UID switch on the I/O back panel. This UID indicator provides easy identification of a system unit that may need service.



## > IPMI LAN LEDS

In addition to LAN1 and LAN2, an IPMI LAN is also located on the I/O back panel. The amber LED on the right indicates activity, while the green LED on the left indicates the speed of the connection. Refer to the table below for more information.



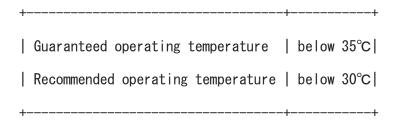
| IPMI LAN LEDs              |                              |                   |  |  |
|----------------------------|------------------------------|-------------------|--|--|
| LED Color/State Definition |                              | Definition        |  |  |
| Link (Left)                | Green: Solid<br>Amber: Solid | 100 Mbps<br>1Gbps |  |  |
| Activity (Right)           | Amber: Blinking              | Active            |  |  |

## 1.8 Environmental specifications

## Environment temperature

Please keep environment temperature at 30°C or lower to avoid throttling and performance degradation when SX-Aurora TSUBASA server is operating.

SX-Aurora TSUBASA server has thermal throttling function to protect the LSI mounted on Vector Engine card (VE card) from heat damage and to keep working. If VE LSI temperature exceeds a certain temperature, the VE reduces instruction execution rate in order to suppress heat production.



## How to confirm the throttling occurrence history

SX-Aurora TSUBASA server records throttling history. By checking VE card log, it can be confirmed if throttling happened or not. The steps are described as bellow;

If throttling occurs, please keep enough intake/exhaust space around the server to provide enough airflow and keep the room temperature at 30°C or lower.

☐ For users and programmers (without root privileges)

- Set a value "DETAIL" to the environment variable "VE\_PROGINF" when you run a program.
- It doesn't affect program performance at all.

If throttling occurs, Power Throttling (sec) and Thermal Throttling (sec) show values more than 0.000000. (Please check the lines marked with the token "\*".)

| Ex) bash   |             |                  |                                       |
|--|-------------|------------------|---------------------------------------|
| \$ export VE_PROGINF=DET   | AIL         |                  |                                       |
| \$ /opt/nec/ve/bin/ve_exec ./a   | .out        |                  |                                       |
|  |             |                  |                                       |
| (standard output)  |             |                  |                                       |
| ******* Program Information  | ) *******   |                  |                                       |
| Real Time (sec)  | :           | 192.360841       |                                       |
| User Time (sec)  | :           | 1534.571764      |                                       |
| (skip)   |             |                  |                                       |
| Power Throttling (sec)   | :           | 0.000000         | *                                     |
| Thermal Throttling (sec)   | :           | 0.000000         | *                                     |
| Max Active Threads   | :           | 8                |                                       |
| Available CPU Cores  | :           | 8                |                                       |
| Please access to "PROGINF, find details about PROGINF.  □For system administrators |             |                  | on Aurora Forum web site, and you can |
| Login to the Vector Host   |             |                  |                                       |
| 2. Execute the following cor   | mmands      |                  |                                       |
| \$ su  |             |                  | 《change to super user》                |
| Input the password of root   |             |                  |                                       |
| # grep 'Environmental Warnir   | ng detectir | ng' /var/log/mes | sages*                                |
| (If throttling occurs, message   | s like the  | one described b  | elow come out.)                       |
| /var/log/messages-20190630<br>Environmental Warning detec                          |             | 5:27:18 a_serve  | er ve_monitor: VE_MMM4033007: VE0     |

# **Chapter 2**

## Server Installation

## 2.1 Overview

This chapter provides advice and instructions for mounting your system in a server rack.

## 2.2 Preparing for Setup

The box in which the system was shipped should include the rackmount hardware needed to install it into the rack. Please read this section in its entirety before you begin the installation.

## Choosing a Setup Location

- The system should be situated in a clean, dust-free area that is well ventilated. Avoid areas where heat, electrical noise and electromagnetic fields are generated.
- Leave enough clearance in front of the rack so that you can open the front door completely (~25 inches) and approximately 30 inches of clearance in the back of the rack to allow sufficient space for airflow and access when servicing.
- This product should be installed only in a Restricted Access Location (dedicated equipment rooms, service closets, etc.).

#### Rack Precautions

- Ensure that the leveling jacks on the bottom of the rack are extended to the floor so that the full weight of the rack rests on them.
- In single rack installations, stabilizers should be attached to the rack. In multiple rack installations, the racks should be coupled together.

- Always make sure the rack is stable before extending a server or other component from the rack.
- You should extend only one server or component at a time extending two or more simultaneously may cause the rack to become unstable.

#### Server Precautions

- Review the electrical and general safety precautions in Appendix B.
- Determine the placement of each component in the rack before you install the rails.
- Install the heaviest server components at the bottom of the rack first and then work your way up.
- Use a regulating uninterruptible power supply (UPS) to protect the server from power surges and voltage spikes and to keep your system operating in case of a power failure.
- Allow any drives and power supply modules to cool before touching them.
- When not servicing, always keep the front door of the rack and all covers/panels on the servers closed to maintain proper cooling.

## > Rack Mounting Considerations

## Ambient Operating Temperature

If installed in a closed or multi-unit rack assembly, the ambient operating temperature of the rack environment may be greater than the room's ambient temperature. Therefore, consideration should be given to installing the equipment in an environment compatible with the manufacturer's maximum rated ambient temperature (TMRA).

#### Airflow

Equipment should be mounted into a rack so that the amount of airflow required for safe operation is not compromised.

#### Mechanical Loading

Equipment should be mounted into a rack so that a hazardous condition does not arise due to uneven mechanical loading.

## Circuit Overloading

Consideration should be given to the connection of the equipment to the power supply circuitry and the effect that any possible overloading of circuits might have on overcurrent protection and power supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

#### Reliable Ground

A reliable ground must be maintained at all times. To ensure this, the rack itself should be grounded. Particular attention should be given to power supply connections other than the direct connections to the branch circuit (i.e. the use of power strips, etc.).



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.

## 2.3 Installing the Rails

There are a variety of rack units on the market, which may require a slightly different assembly procedure.

The following is a basic guideline for installing the system into a rack with the rack mounting hardware provided. You should also refer to the installation instructions that came with the specific rack you are using. Only trained and qualified personnel should be allowed to install, replace, or service this equipment.

## Identifying the Sections of the Rack Rails

The chassis package includes two sets of rack rails, one set for the right side of the chassis and one for the left. Each set consists of an inner rail that is fixed directly to the chassis and an outer rail that attaches to the rack.

The inner rails are pre-attached and do not interfere with normal use of the chassis if you decide not to install it into a rack.

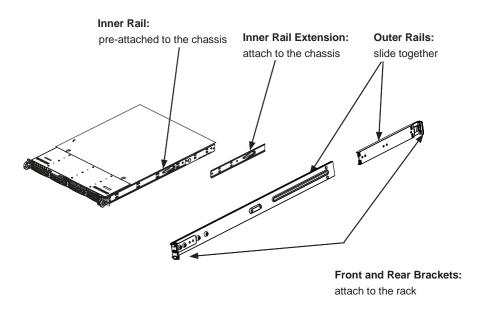


Figure 2-1. Identifying the Sections of the Rack Rails



Slide rail mounted equipment is not to be used as a shelf or a work space.



**Warning:** do not pick up the server with the front handles. They are designed to pull the system from a rack only.

## Installing the Optional Inner Rail Extensions

Attaching the optional inner rail extensions allows you to pull the server farther out of the rack. Do not put downward force on the chassis when it is fully extended.

#### Installing the Inner Rail Extensions

- 1. Place the inner rail extensions at the side of the chassis. Align the holes of the inner rail extension with the hooks on the side of the chassis. Make sure the extension faces outward like the inner rail.
- 2. Slide the extension toward the front of the chassis and under the hooks until the quick release bracket snaps into place, securing the extension to the chassis.
- 3. If desired, you can install a screw to further secure the extension to the chassis.
- 4. Repeat for the other inner rail extension.

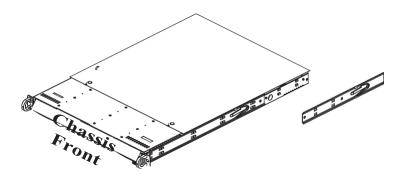


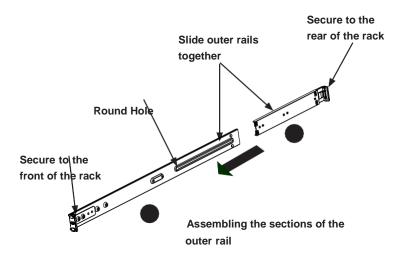
Figure 2-2. Installing the Optional Inner Rail Extensions

## Assembling the Outer Rails

Each outer rail comes in two sections that must be assembled before mounting onto the rack.

#### Assembling the Outer Rails

- 1. Identify the left and right outer rails by examining the ends, which bend outward. Match the left front outer rail with the left rear outer rail and the same for the right rails.
- 2. Align the round post in the rear rail (B) with the round hole at the end of the slot in the front rail (A), and slide the front section into the rear section.



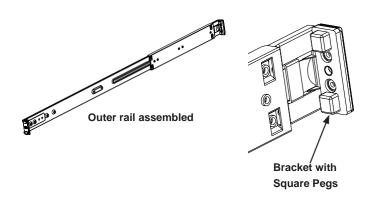


Figure 2-3. Assembling the Outer Rails

## Installing the Outer Rails onto the Rack

Each end of the assembled outer rail includes a bracket with square pegs to fit into your rack holes. If you have an older rack with round holes, these brackets must be removed, and you must use screws to secure the rail to the rack.

#### **Outer Rail Installation**

- 1. Align the square pegs on the front end of the rail with the square holes on the front of the rack (C). Push the rail into the rack until the quick release bracket snaps into place, securing the rail to the rack. Keep the rail horizontal.
- 2. Adjust the rail to reach just past the full depth of your rack.
- 3. Align the square pegs on the rear end of the rail to the holes on the rack (D) and push the rail into the rack until the quick release bracket snaps into place, securing the rail to the rack.
- 4. Repeat the procedure for the other outer rail assembly.

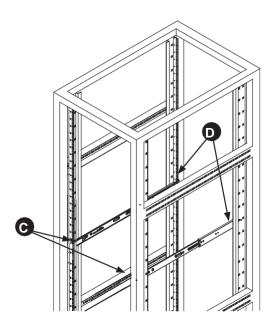


Figure 2-4. Installing the Outer Rails to the Rack

Note: Figure is for illustrative purposes only. Always install servers to the bottom of a rack first.



**Warning:** Stability hazard. The rack stabilizing mechanism must be in place, or the rack must be bolted to the floor before you slide the unit out for servicing. Failure to stabilize the rack can cause the rack to tip over.

## Sliding the Chassis onto the Rack Rails

#### Installing the Chassis into a Rack

- 1. Align the chassis rails with the front of the rack rails.
- 2. Slide the chassis rails into the rack rails, keeping the pressure even on both sides. The spring latch engages when the chassis is part way in. Push the server completely into the rack.
- 3. (Optional) Insert and tighten the thumbscrews that hold the front of the server to the rack.

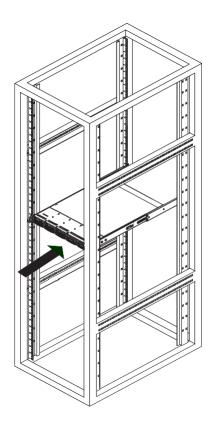


Figure 2-5. Installing the Server into a Rack

**Note:** Figure is for illustrative purposes only. Always install servers to the bottom of a rack first.

**Note:** Confirmation of the installation of this equipment is confirmed with a universal pitch rack. (EIA-310D)

# **Chapter 3**

# **Maintenance and BIOS Setting**

## 3.1 Overview

About maintenance and BIOS setting, only trained and qualified personnel of NEC system should be allowed to install, replace, or service this equipment.

# **Appendix A**

## **BIOS Codes**

## A.1 BIOS Error POST (Beep) Codes

During the POST (Power-On Self-Test) routines, which are performed each time the system is powered on, errors may occur.

**Non-fatal errors** are those which, in most cases, allow the system to continue the boot-up process. The error messages normally appear on the screen.

**Fatal errors** are those which will not allow the system to continue the boot-up procedure. If a fatal error occurs, you should consult with your system manufacturer for possible repairs.

These fatal errors are usually communicated through a series of audible beeps. The table shown below lists some common errors and their corresponding beep codes encountered by users.

| BIOS Beep (POST) Codes |                                 |  |  |  |
|------------------------|---------------------------------|--|--|--|
| Beep Code              | Error Message                   | Description                                  |  |  |
| 1 beep                 | Refresh                         | Circuits have been reset (Ready to power up) |  |  |
| 5 short, 1 long        | Memory error                    | No memory detected in system                 |  |  |
| 5 long, 2 short        | Display memory read/write error | Video adapter missing or with faulty memory  |  |  |
| 1 long continuous      | System OH                       | System overheat condition                    |  |  |

## **Appendix B**

# Standardized Warning Statements for AC Systems

## **B.1 About Standardized Warning Statements**

The following statements are industry standard warnings, provided to warn the user of situations which have the potential for bodily injury. Should you have questions or experience difficulty, contact NEC's Technical Support department for assistance. Only certified technicians should attempt to install or configure components.

These warnings may also be found on our website at <a href="http://www.nec.com/en/global/prod/hpc/aurora/document/safety\_information.pdf">http://www.nec.com/en/global/prod/hpc/aurora/document/safety\_information.pdf</a>

## 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.

#### 警告の定義

この警告サインは危険を意味します。 人身事故につながる可能性がありますので、いずれの機器でも動作させる前に、 電気回路に含まれる危険性に注意して、標準的な事故防止策に精通して下さい。

#### 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.

## 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.

#### Circuit Breaker



**Warning!** This product relies on the building's installation for short-circuit (overcurrent) protection. Ensure that the protective device is rated not greater than: 250 V, 20 A.

サーキット・ブレーカー

この製品は、短絡(過電流)保護装置がある建物での設置を前提としています。 保護装置の定格が250 V、20 Aを超えないことを確認下さい。

#### Warnung

Dieses Produkt ist darauf angewiesen, dass im Gebäude ein Kurzschluss- bzw. Überstromschutz installiert ist. Stellen Sie sicher, dass der Nennwert der Schutzvorrichtung nicht mehr als: 250 V, 20 A beträgt.

#### Attention

Pour ce qui est de la protection contre les courts-circuits (surtension), ce produit dépend de l'installation électrique du local. Vérifiez que le courant nominal du dispositif de protection n'est pas supérieur à :250 V, 20 A.

## Equipment Installation



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

## 機器の設置

トレーニングを受け認定された人だけがこの装置の設置、交換、またはサービスを許可されています。

#### Warnung

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

#### Attention

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

#### Restricted Area



**Warning!** This unit is intended for installation in restricted access areas. A restricted access area can be accessed only through the use of a special tool, lock and key, or other means of security. (This warning does not apply to workstations).

#### アクセス制限区域

このユニットは、アクセス制限区域に設置されることを想定しています。

アクセス制限区域は、特別なツール、鍵と錠前、その他のセキュリティの手段を用いてのみ出入りが可能 です。

#### Warnung

Diese Einheit ist zur Installation in Bereichen mit beschränktem Zutritt vorgesehen. Der Zutritt zu derartigen Bereichen ist nur mit einem Spezialwerkzeug, Schloss und Schlüssel oder einer sonstigen Sicherheitsvorkehrung möglich.

#### Attention

Cet appareil doit être installée dans des zones d'accès réservés. L'accès à une zone d'accès réservé n'est possible qu'en utilisant un outil spécial, un mécanisme de verrouillage et une clé, ou tout autre moyen de sécurité.

## Redundant Power Supplies



**Warning!** This unit might have more than one power supply connection. All connections must be removed to de-energize the unit.

#### 冗長電源装置

このユニットは複数の電源装置が接続されている場合があります。 ユニットの電源を切るためには、すべての接続を取り外さなければなりません。

#### Warnung

Dieses Gerät kann mehr als eine Stromzufuhr haben. Um sicherzustellen, dass der Einheit kein trom zugeführt wird, müssen alle Verbindungen entfernt werden.

#### Attention

Cette unité peut avoir plus d'une connexion d'alimentation. Pour supprimer toute tension et tout courant électrique de l'unité, toutes les connexions d'alimentation doivent être débranchées.

## Comply with Local and National Electrical Codes



**Warning!** Installation of the equipment must comply with local and national electrical codes.

地方および国の電気規格に準拠

機器の取り付けはその地方および国の電気規格に準拠する必要があります。

#### Warnung

Die Installation der Geräte muss den Sicherheitsstandards entsprechen.

#### Attention

L'équipement doit être installé conformément aux normes électriques nationales et locales.

## Product Disposal



**Warning!** Ultimate disposal of this product should be handled according to all national laws and regulations.

## 製品の廃棄

この製品を廃棄処分する場合、国の関係する全ての法律・条例に従い処理する必要があります。

#### Warnung

Die Entsorgung dieses Produkts sollte gemäß allen Bestimmungen und Gesetzen des Landes erfolgen.

#### 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.

## Power Cable and AC Adapter



**Warning!** When installing the product, use the provided or designated connection cables, power cables and AC adaptors. Using any other cables and adaptors could cause a malfunction or a fire. Electrical Appliance and Material Safety Law prohibits the use of UL or CSA -certified cables (that have UL/CSA shown on the code) for any other electrical devices than products designated by NEC only.

#### 電源コードとACアダプタ

製品を設置する場合、提供または指定および購入された接続ケーブル、電源コードとACアダプタを該当する地域の条例や安全基準に適合するコードサイズやプラグと共に使用下さい。他のケーブルやアダプタを使用すると故障や火災の原因になることがあります。

電 気 用 品 安 全 法 は 、 UL ま た は CSA 認 定 の ケー ブ ル (UL/CSA マーク が コードに 表 記)を NECが指定する製品以外に使用することを禁止しています。

### Warnung

Nutzen Sie beim Installieren des Produkts ausschließlich die von uns zur Verfügung gestellten Verbindungskabeln, Stromkabeln und/oder Adapater, die Ihre örtlichen Sicherheitsstandards einhalten. Der Gebrauch von anderen Kabeln und Adapter können Fehlfunktionen oder Feuer verursachen. Die Richtlinien untersagen das Nutzen von UL oder CAS zertifizierten Kabeln (mit UL/CSA gekennzeichnet), an Geräten oder Produkten die nicht mit NEC gekennzeichnet sind.

#### Attention

Lors de l'installation du produit, utilisez les cables de connection fournis ou désigné ou achetez des cables, cables de puissance et adaptateurs respectant les normes locales et les conditions de securite y compris les tailles de cables et les prises electriques appropries. L'utilisation d'autres cables et adaptateurs peut provoquer un dysfonctionnement ou un incendie. Appareils électroménagers et la Loi sur la Sécurité Matériel interdit l'utilisation de câbles certifies- UL ou CSA (qui ont UL ou CSA indiqué sur le code) pour tous les autres appareils électriques sauf les produits désignés par NEC seulement.