IEI Integration Corp.

MODEL:
GRAND-SE Series

**Storage Server with AMD G-Series Processor,
Up to 16 GB DDR3L RAM, 3.5"/2.5" SATA 6Gb/s SSDs,
Four GbE, Rack Mount Chassis, RoHS**

User Manual

Rev. 1.00 – April 18, 2018

RoHS Lead Free

Revision

Date	Version	Changes
April 18, 2018	1.00	Initial release

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Manual Conventions

WARNING

Warnings appear where overlooked details may cause damage to the equipment or result in personal injury. Warnings should be taken seriously.

CAUTION

Cautionary messages should be heeded to help reduce the chance of losing data or damaging the product.

NOTE

These messages inform the reader of essential but non-critical information. These messages should be read carefully as any directions or instructions contained therein can help avoid making mistakes.

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1

Introduction

1.1 Overview

Figure 1-1: GRAND-SE Series Storage Server

The GRAND-SE series is equipped with a fast 64-bit AMD x86 quad-core 2.0 GHz processor with up to 16 GB of DDR3L memory, SATA 6Gb/s, and quad Gigabit LAN ports for lightning-fast multi-tasking performance with SSD cache support.

The GRAND-SE supports 2.5" or 3.5" drives, allowing for SATA 6Gb/s and SATA 3Gb/s hard drives and SSDs. Businesses can create the most cost-effective storage by implementing suitable drives based on their needs.

1.2 Features

The GRAND-SE has the following features

- Supports high-performance AMD G-Series quad-core processor
- Supports two DDR3L SO-DIMM modules with up to 16 GB DDR3L RAM
- Supports one PCIe 2.0 x4 slot for adding more functionality
- Four Gigabit ports
- Support 3.5"/2.5" SATA 6Gb/s HDDs/SSDs

1.3 Front Panel

GRAND-SE-04A series:

GRAND-SE-08B series:

GRAND-SE-12B series:

1	Power button	3	Drive status LED
2	LED Indicators: Status, LAN, expansion unit	4	USB 2.0 port

1.3.1 LED Indicator Specifications

The LED indicators of the GRAND-SE indicate the system status and information. The following table lists the LED indicator behavior. Note that the following information is applicable only when users have properly installed the hard drive, and connected the system to the power supply.

LED	Status	Description
System Status	Red	▪ The drive is invalid. ▪ The disk volume has reached its full capacity. ▪ The disk volume is about to reach its full capacity. ▪ The system fan is not functioning. ▪ An error occurred when accessing (read/write) the data. ▪ A bad sector is detected on the hard drive.
	Green	The system is ready.
	Off	All drives are in standby mode.
LAN	Orange	The disk data is being accessed from the network and a read/write error occurs during the process.
	Flashes orange	The system is being accessed from the network.
Expansion Unit	Green	An expansion card is installed.
	Off	No expansion card is installed.
Drive Status	Red	A hard disk drive read/write error occurs.
	Flashes green	The disk data is being accessed.
	Green	The hard disk drive can be accessed.

1.4 Rear Panel

GRAND-SE-04A:
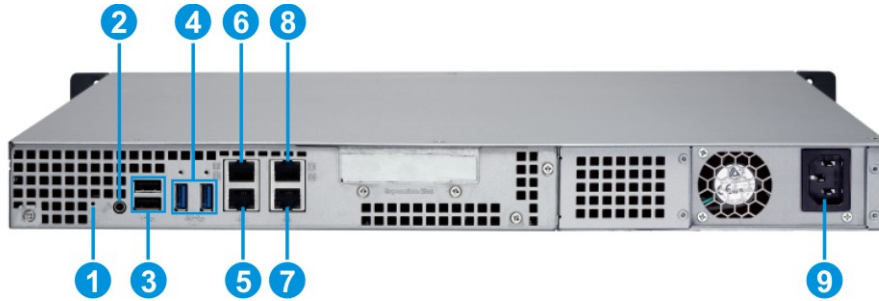
GRAND-SE-08B & GRAND-SE-12B:
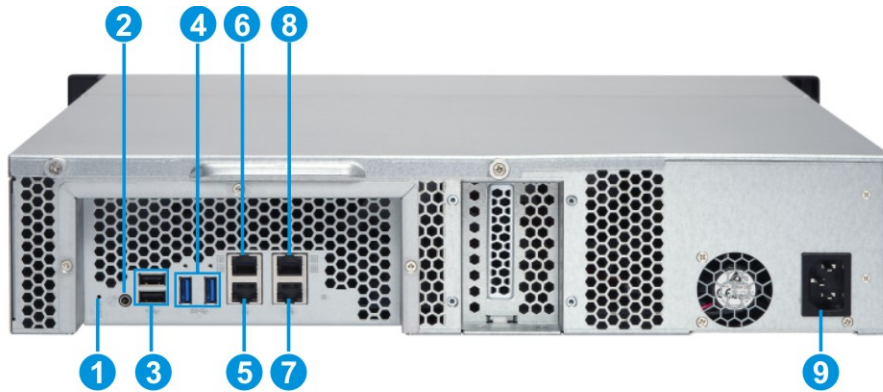
1	EC GPIO	6	Gigabit Ethernet port 1
2	Console port	7	Gigabit Ethernet port 4
3	USB 2.0 ports	8	Gigabit Ethernet port 3
4	USB 3.0 ports	9	Power port
5	Gigabit Ethernet port 2		

GRAND-SE-04A-RP:
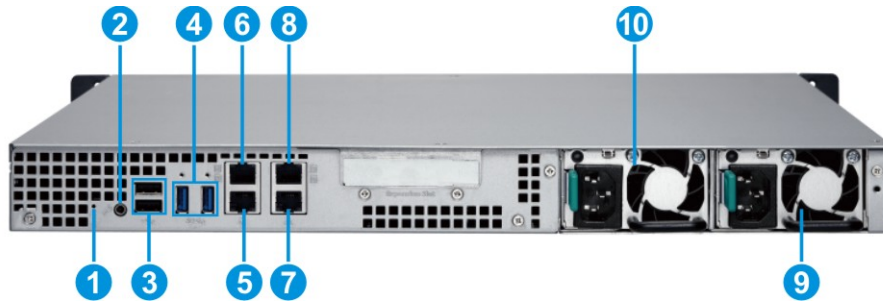
GRAND-SE-08B-RP & GRAND-SE-12B-RP:
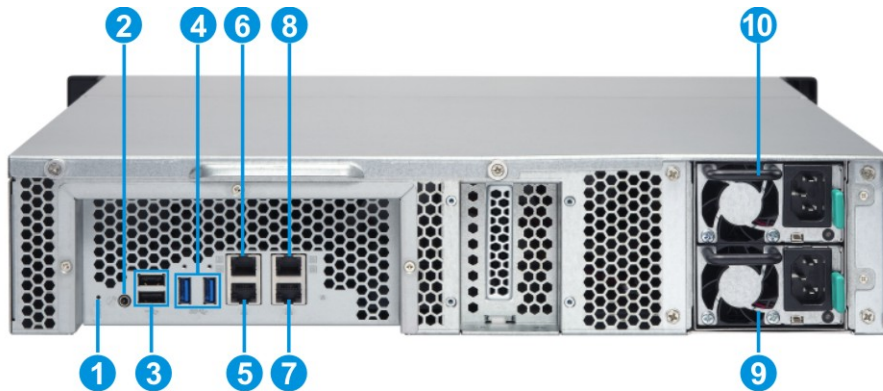
1	EC GPIO	**6**	Gigabit Ethernet port 1
2	Console port	**7**	Gigabit Ethernet port 4
3	USB 2.0 ports	**8**	Gigabit Ethernet port 3
4	USB 3.0 ports	**9**	Power supply unit 1
5	Gigabit Ethernet port 2	**10**	Power supply unit 2

1.5 Specifications

The specifications for the GRAND-SE are listed below.

	GRAND-SE-04A	GRAND-SE-08B	GRAND-SE-12B
CPU	AMD G-Series quad-core processor (64-bit,2.0 GHz)		
Memory	2 x DDR3L SO-DIMM, maximum 16 GB (2 x 8 GB) (For dual configuration, you must use a pair of identical DDR3L modules.)		
Max. HDD/SSD	4	8	12
HDD/SSD Type	3.5"/2.5" SATA 6Gb/s or 3Gb/s; hot-swappable		
USB	2 x USB 3.0 port 3 x USB 2.0 port	2 x USB 3.0 port 2 x USB 2.0 port	2 x USB 3.0 port 2 x USB 2.0 port
LAN	4 x Gigabit RJ-45 LAN port		
PCIe Slot	1 x PCIe Gen 2 x4		
LEDs	Status/Power, LAN, expansion unit, HDD		
Buttons	Power/Status button		
Form Factor	1U rack mount	2U rack mount	
Dimensions (HxWxD)	44 x 439 x 499 mm 1.73" x 17.28" x 19.65"	89 x 482 x 534 mm 3.5" x 18.97" x 21.02"	
Weight (Net/Gross)	7.63 / 11.60 kg 16.82 / 25.57 lb	11.02 / 19.26 kg 24.29 / 42.46 lb	16.14 / 19.41kg 35.58 / 41.84 lb
Power Supply	GRAND-SE-04A: 250W GRAND-SE-04A-RP: 2 x 250W	GRAND-SE-08B: 250W GRAND-SE-08B-RP: 2 x 250W	GRAND-SE-12B: 250W GRAND-SE-12B-RP: 2 x 250W
Operating Temperature	0 to 40° C (32 to 104° F)		
Relative Humidity	5% to 95% non-condensing, wet bulb: 27˚C		

Table 1-1: Specifications

Chapter

2

Unpacking

2.2 Packing List

![NOTE icon] **NOTE:**

If any of the components listed in the checklist below are missing, do not proceed with the installation. Contact the IEI reseller or vendor the GRAND-SE was purchased from or contact an IEI sales representative directly by sending an email to sales@ieiworld.com.

The GRAND-SE is shipped with the following components:

Quantity	Item	Image
2	Ethernet cable	
1 or 2	Power cord (Non-RP SKUs: one; RP SKUs: two)	
1	Screw pack for 2.5" HDD installation	
1	Screw pack for 3.5" HDD installation	

Table 2-1: Package List

2.3 Optional Items

The following are optional components which may be separately purchased:

Item and Part Number	Image
Dual-port 10GbE SFP+ network expansion card (**P/N**: LAN-10G2SF-MLX)	
Dual-port 10GBASE-T network expansion card (**P/N**: LAN-10G2T-X550)	
1-port 10GbE 10GBASE-T expansion card (**P/N**: LAN-10G1T-4010A)	
1-port 10GbE SFP+ expansion card (**P/N**: LAN-10G1SR)	
Dual-port Gigabit Network Expansion Card (**P/N**: LAN-1G2T-I210)	

Item and Part Number	Image
USB 3.1 Gen 2 10Gbps Type-A dual-port PCIe card (**P/N**: USB-U31A2P01)	
Rail kit for rackmout (**P/N**: RAIL-B02)	

Table 2-2: Optional Items

Chapter

3

Installation

3.1 Anti-static Precautions

WARNING:

Failure to take ESD precautions during the maintenance of the GRAND-SE may result in permanent damage to the GRAND-SE and severe injury to the user.

Electrostatic discharge (ESD) can cause serious damage to electronic components, including the WAFER series motherboard and the power module. (Dry climates are especially susceptible to ESD.) It is therefore critical that whenever the GRAND-SE is opened and any electrical component handled, the following anti-static precautions are strictly adhered to.

- **Wear an anti-static wristband**: Wearing a simple anti-static wristband can help to prevent ESD from damaging the board.
- **Self-grounding**: Before handling the board, touch any grounded conducting material. During the time the board is handled, frequently touch any conducting materials that are connected to the ground.
- **Use an anti-static pad**: When configuring the GRAND-SE, place it on an anti-static pad. This reduces the possibility of ESD damaging the GRAND-SE.

3.2 Installation Precautions

During installation, be aware of the precautions below:

- **Read the user manual**: The user manual provides a complete description of the GRAND-SE, installation instructions and configuration options.
- **DANGER! Disconnect Power**: Power to the GRAND-SE must be disconnected during the installation process. Failing to disconnect the power may cause severe injury to the body and/or damage to the system.
- **Qualified Personnel**: The GRAND-SE must be installed and operated only by trained and qualified personnel. Maintenance, upgrades, or repairs may

only be carried out by qualified personnel who are familiar with the associated dangers.

- **Air Circulation**: Make sure there is sufficient air circulation when installing the GRAND-SE. The GRAND-SE's cooling vents must not be obstructed by any objects. Blocking the vents can cause overheating of the GRAND-SE. Leave at least 5 cm of clearance around the GRAND-SE to prevent overheating.

- **Grounding**: The GRAND-SE should be properly grounded. The voltage feeds must not be overloaded. Adjust the cabling and provide external overcharge protection per the electrical values indicated on the label attached to the back of the GRAND-SE.

3.3 Memory Module Installation

The GRAND-SE has two memory slots and supports DDR3L SO-DIMMs. To install a memory module, follow the steps below:

Step 1: Turn off the GRAND-SE. Disconnect the power adaptor, network cable(s), and any other connectors or cables from the GRAND-SE.

Step 2: Put on an antistatic wrist strap to prevent electrostatic discharge. The crocodile clip should be connected to the ground.

Step 3: **GRAND-SE-04A series:** Loosen all the screws on the top of the system.
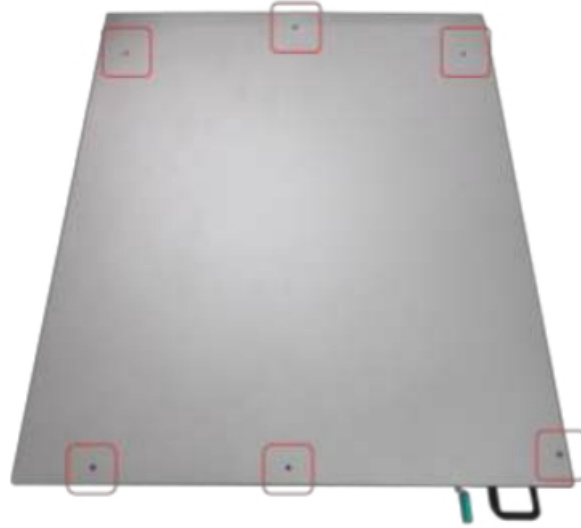
GRAND-SE-08B/12B series: Loosen the 2 screws on the rear of the system as shown below.

Step 4: Lift the cover to open the chassis.

Step 5: Grip a RAM on the edges to avoid touching contacts or circuitry on the module.

Step 6: Slide the memory module to the slot at a 45-degree angle (approximately).

Step 7: Press the memory module down. Make sure the memory module sits in properly

with the clips in place.

Step 8: Close the GRAND-SE cover and fasten the screws. Connect the power adaptor

and cables back to the GRAND-SE.

3.4 Expansion Card Installation

![WARNING icon] **WARNING!**

The following instructions should only be performed by an authorized and trained technician.

Strictly adhere to the instructions to install a network expansion card on the system. Failure to do so could result in injury to human body or death.

The GRAND-SE provides one PCIe x4 expansion slot so that users can add functionality to their system. To install expansion card, follow the steps below.

3.4.1 GRAND-SE-04A Series

Step 1: Turn off the GRAND-SE. Disconnect the power adaptor, network cable(s), and any other connectors or cables from the GRAND-SE.

Step 2: Before installing the expansion card, put on an antistatic wrist strap to prevent electrostatic discharge. The crocodile clip should be connected to the ground.

Step 3: Loosen all the screws on the top of the GRAND-SE-04A as shown below.

Step 4: Remove the top cover in both hands.

Step 5: Remove the screws as shown below.

Step 6: Loose the screw and remove the bracket.

Step 7: Insert an expansion card to the riser card module until it cannot go any further.

Then fasten the screw.

Step 8: Align the notch on the gold edge of the riser card with the notch in the PCIe slot.

Insert the riser card module to the PCIe slot until it cannot go any further.
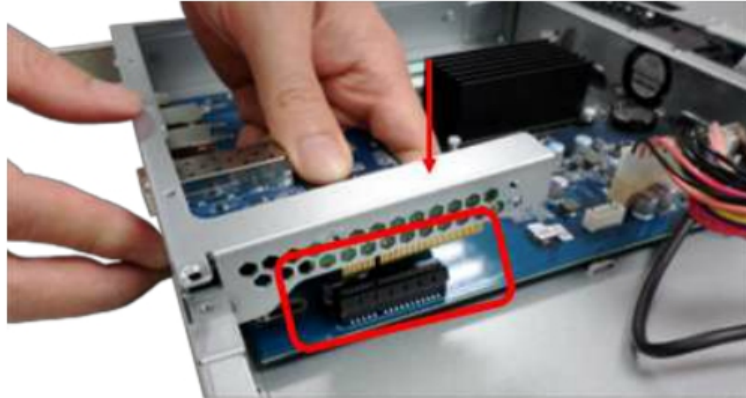
Step 9: Fasten the screws. Close the case cover and fasten the screws.

Step 10: Connect the power adaptor and cables to the GRAND-SE.

3.4.2 GRAND-SE-08B/12B Series

Step 1: Turn off the GRAND-SE. Disconnect the power adaptor, network cable(s), and any other connectors or cables from the GRAND-SE.

Step 2: Before installing the expansion card, put on an antistatic wrist strap to prevent electrostatic discharge. The crocodile clip should be connected to the ground.

Step 3: Loosen the two screws on the rear of the GRAND-SE-08B/12B as shown below.

Step 4: Hold the notch at the edge of the top cover. Remove the top cover in both hands.

Step 5: Loosen the screw and remove the expansion slot cover.

Step 6: Grasp the edge of the expansion card. Align the notch on the gold edge of the card with the notch in the PCIe slot. Insert the expansion card to the PCIe slot until it cannot go any further.
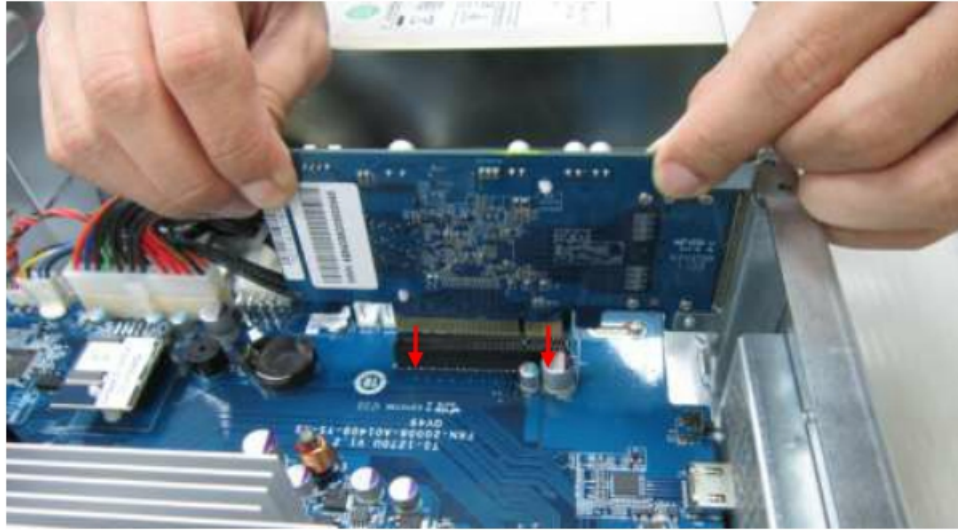
Step 7: Fasten the screws.

Step 8: Close the case cover and fasten the screws.

Step 9: Connect the power adaptor and cables to the GRAND-SE.

3.5 Hard Drive Installation

The GRAND-SE series is compatible with 2.5-inch/3.5-inch SATA hard drives.

![NOTE icon] **NOTE:**

Before installing hard drives, ensure the disk drives (HDDs/SSDs) that you use are compatible with the GRAND-SE.

3.5.1 Hard Drive Bay Numbering

GRAND-SE-04A bay numbering:

GRAND-SE-08B bay numbering:

GRAND-SE-12B bay numbering:
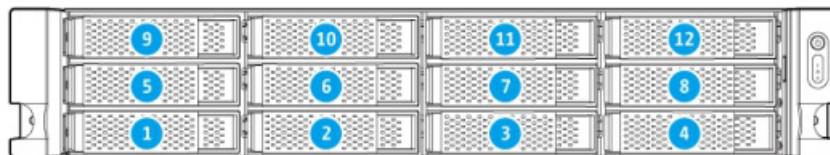
3.5.2 Installing Hard Drive

To install hard drives in GRAND-SE series, follow the steps below:

Step 1: Turn off the GRAND-SE.

Step 2: Pull the handle to release the tray and pull the tray out.
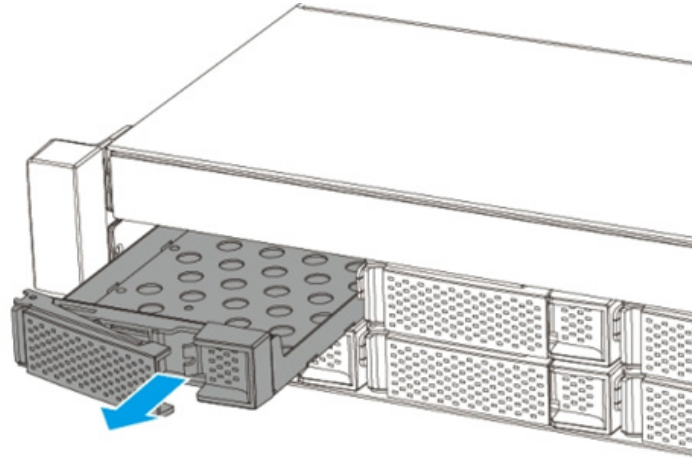
Step 3: Install a 3.5" or 2.5" disk drive on the drive tray.
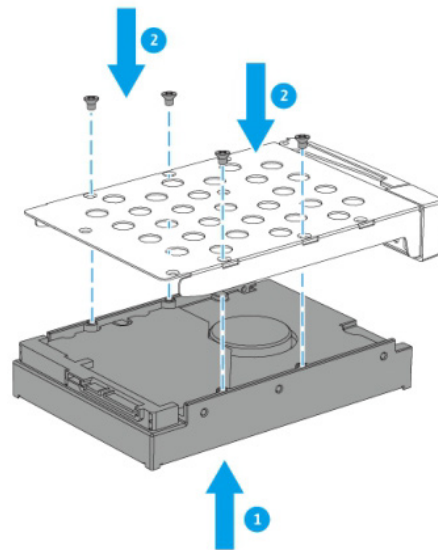
3.5" disk drive   **2.5" disk drive**
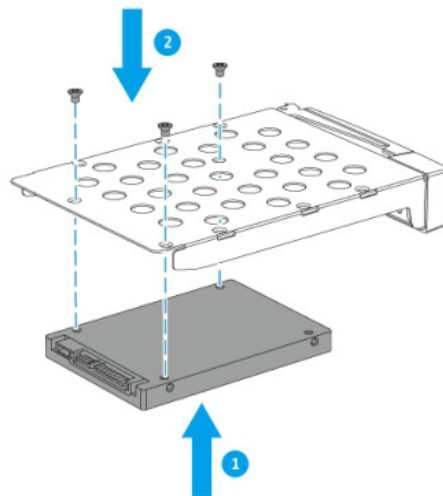
Step 4: **Load the drive tray into the drive bay.** Insert the tray into the bay. Push the

handle.
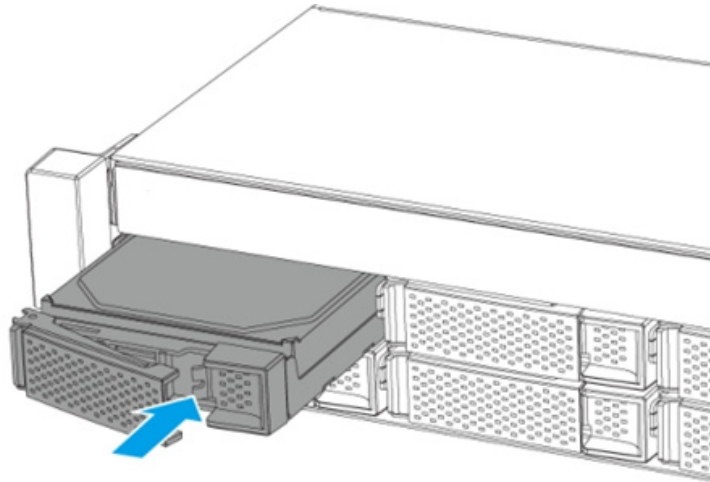
![WARNING icon] **WARNING:**

Users are strongly recommended to turn OFF the GRAND-SE before replacing
the hard drive to reduce the risk of electric shock.

![CAUTION icon] **CAUTION:**

IEI disclaims any responsibility for product damage/malfunction or data
loss/recovery due to misuse or improper installation of hard disks in any
occasions for any reasons.

3.6 Power-On Procedure

3.6.1 Installation Checklist

![Warning icon] **WARNING:**

Make sure a power supply with the correct input voltage is being fed into the system. Incorrect voltages applied to the system may cause damage to the internal electronic components and may also cause injury to the user.

To power on the GRAND-SE, please make sure of the following:

- The HDD/SSD is installed
- The LAN cable is connected
- The power cables are plugged in
- The system is securely mounted

3.6.2 Power-on Procedure

To power-on the GRAND-SE please follow the steps below:

Step 1: Connect the power source to the power input jack(s).
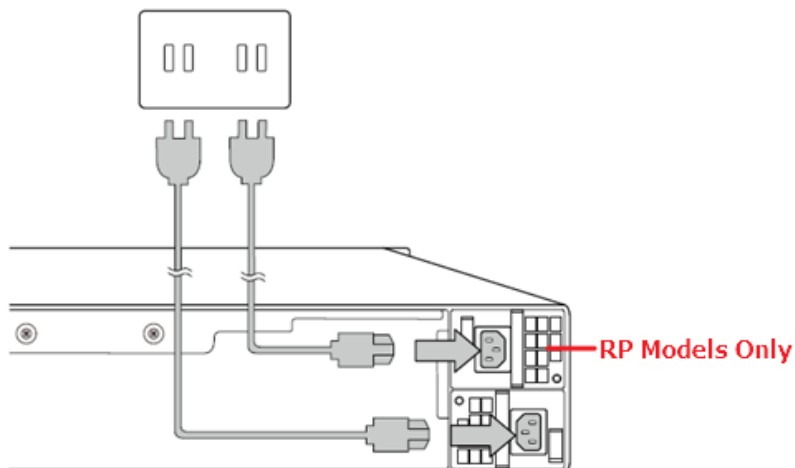
Figure 3-1: Power Connection

Step 2: Push the power button (**Figure 3-2**).
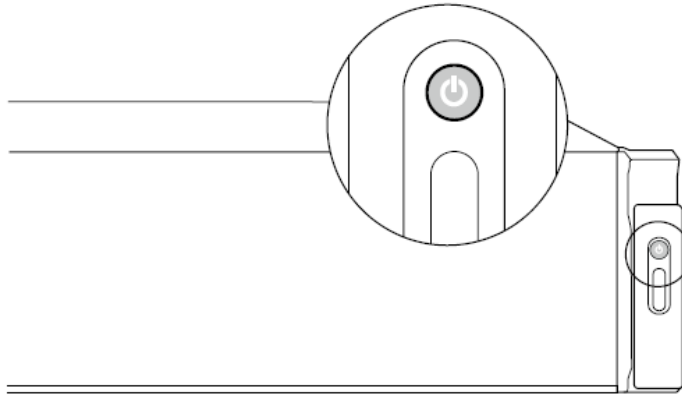
Figure 3-2: Power Button

Step 3: To turn off the GRAND-SE, press the power button for 1.5 seconds.

To force turn off, press the power button for 5 seconds.

Chapter

4

Maintenance

WARNING:

The following instructions should only be performed by an authorized and trained technician.

Before starting, please ensure that you turn off the GRAND-SE, disconnect the power adaptor, network cable(s), and also remove any other device/cable that is attached to the server.

Take Anti-Static precautions whenever maintenance is being carried out on the system components. Failure to take anti-static precautions can cause permanent system damage. For more details on anti-static precautions, please refer to **Section 3.1**.

4.1 Component Replacement Procedure

WARNING!

Users are not advised to attempt to repair or replace any internal or external components of the GRAND-SE storage server other than those listed below. If any other components fail or need replacement, contact the IEI reseller or vendor you purchased the GRAND-SE from or contact an IEI sales representative directly. To contact an IEI sales representative, please send an email to sales@ieiworld.com.

The industrial server components listed below can all be replaced if they fail:

- SO-DIMM module (see **Section 3.3**)
- Power supply unit

4.2 Power Supply Unit Replacement

To replace a failed power supply unit, please follow the steps below.

Step 1: Turn off the GRAND-SE. Disconnect the power adaptor, network cable(s), and any other connectors or cables from the GRAND-SE.

Step 2: Press the latch toward the handle and then pull the PSU out.
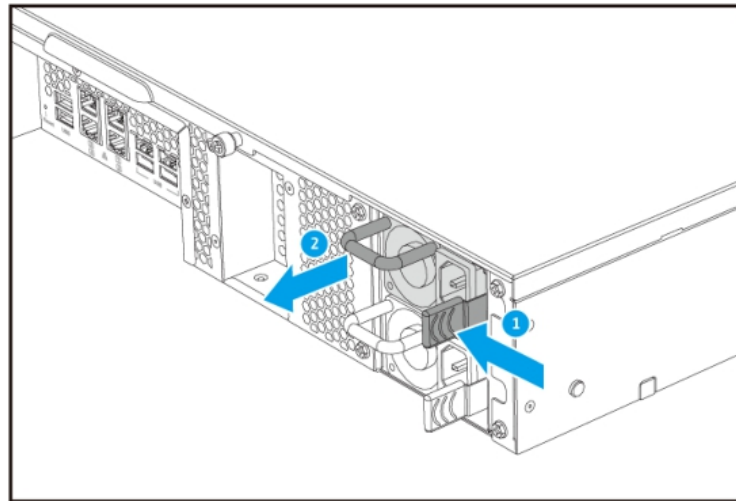
Step 3: Insert new power supply into the GRAND-SE.
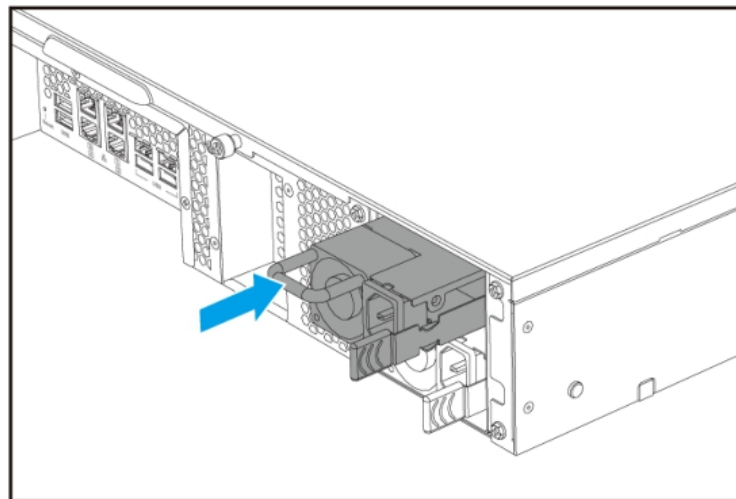
Step 4: Connect the power adaptor and cables to the GRAND-SE.

Step 5: Power on the system.

Chapter

5

Interface Connectors

5.1 Peripheral Interface Connectors

The GRAND-SE system motherboard comes with a number of peripheral interface connectors. The connector locations are shown in **Figure 5-1**. The connector pinouts for these connectors are listed in the following sections.
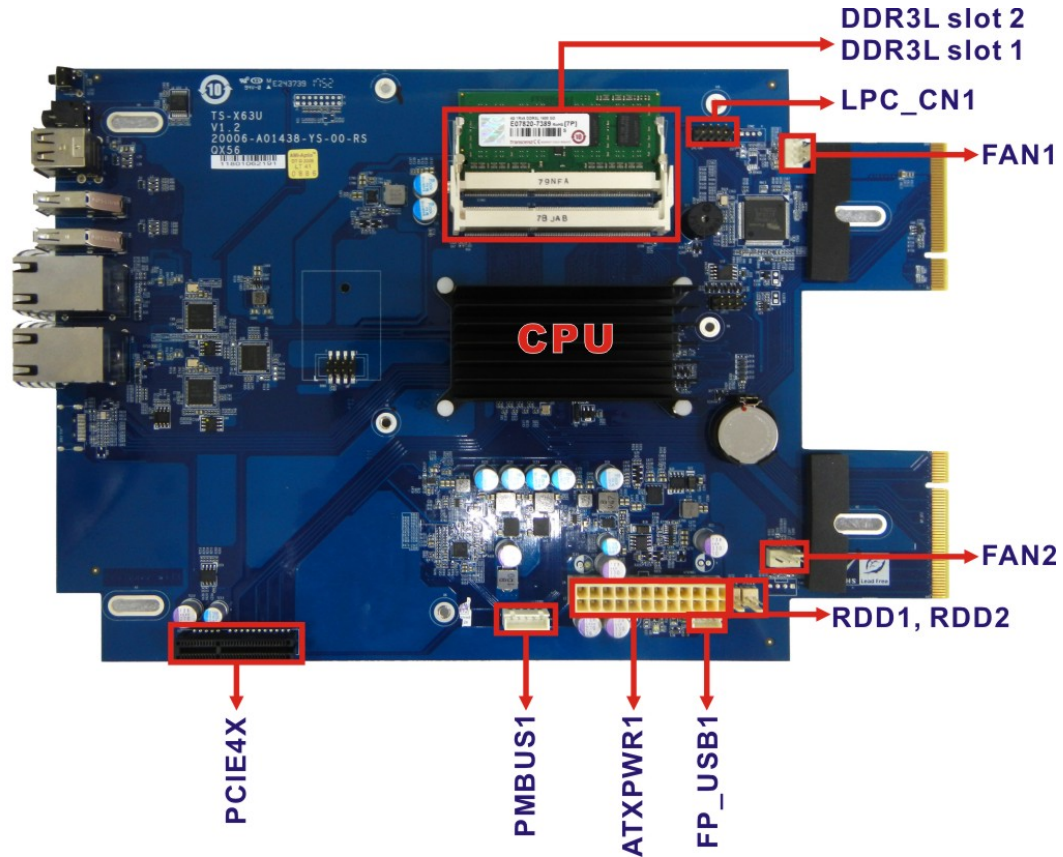
Figure 5-1: Jumper and Connector Locations

5.1.1 Fan Connector (FAN1, FAN2)

PIN NO.	DESCRIPTION	
1	GND	
2	+12V	
3	FANIO	
4	PWM	

Table 5-1: Fan Connector (FAN1, FAN2) Pinouts

5.1.2 ATX Power Connector (ATXPWR1)

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	+3.3V	13	+3.3V
2	+3.3V	14	NC
3	GND	15	GND
4	+5V	16	PS_ON
5	GND	17	GND
6	+5V	18	GND
7	GND	19	GND
8	Power good	20	NC
9	5VSB	21	+5V
10	+12V	22	+5V
11	+12V	23	+5V
12	+3.3V	24	GND
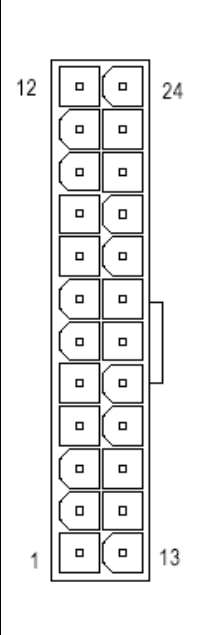
Table 5-2: ATX Power Connector (ATXPWR1) Pinouts

5.1.3 LPC Connector (LPC_CN1)

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	LPC_CLKOUT0_R	2	LPC_AD1_R
3	PLTRST#	4	LPC_AD0_R
5	LPC_FRAME#_R	6	+3.3V
7	LPC_AD3_R	8	GND
9	LPC_AD2_R	10	

Table 5-3: LPC Connector (LPC_CN1) Pinouts

5.1.4 RDD Connector (RDD1, RDD2)

PIN NO.	DESCRIPTION
1	PSUOK
2	GND

Table 5-4: RDD Connector (RDD1, RDD2) Pinouts

5.1.5 PSU PMBus Connector (PMBUS1)

PIN NO.	DESCRIPTION	
1	+3.3V	
2	GND	
3	NC	
4	PMBUS_DAT	
5	PMBUS_CLK	

Table 5-5: PSU PMBus Connector (PMBUS1) Pinouts

5.1.6 Front USB Connector (FP_USB1)
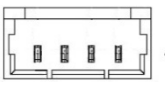
PIN NO.	DESCRIPTION	
1	VCCUSB	
2	USB-	
3	USBS+	
4	GND	

Table 5-6: Front USB Connector (FP_USB1) Pinouts

5.2 External Interface Panel Connectors

The table below lists the rear panel connectors on the motherboard. Pinouts of these connectors can be found in the following sections. Refer to **Section 1.4** for connector locations.

5.2.1 Ethernet Connectors

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION	
A1	LAN1_MDI0P	B1	LAN2_MDI0P	
A2	LAN1_MDI0N	B2	LAN2_MDI0N	
A3	LAN1_MDI1P	B3	LAN2_MDI1P	
A4	LAN1_MDI1N	B4	LAN2_MDI1N	
A5	LAN1_MDI2P	B5	LAN2_MDI2P	
A6	LAN1_MDI2N	B6	LAN2_MDI2N	
A7	LAN1_MDI3P	B7	LAN2_MDI3P	
A8	LAN1_MDI3N	B8	LAN2_MDI3N	
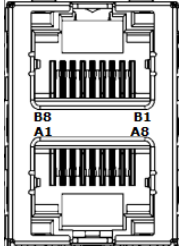
Table 5-7: Ethernet Connector Pinouts

5.2.2 USB 3.0 Connectors

PIN NO.	DESCRIPTION	
1	VCC	
2	USB_DATA-	
3	USB_DATA+	
4	GND	
5	USB3_RX-	
6	USB3_RX+	
7	GND	
8	USB3_TX-	
9	USB3_TX+	
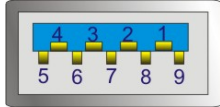
Table 5-8: USB 3.0 Connector Pinouts

5.2.3 USB 2.0 Connectors

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	VCC	5	VCC
2	USB_DATA-	6	USB_DATA-
3	USB_DATA+	7	USB_DATA+
4	GND	8	GND
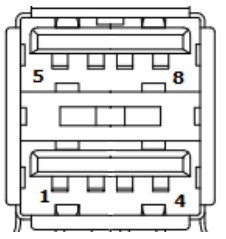
Table 5-9: USB 2.0 Connector Pinouts

5.2.4 Console Port

The console port supports COM signal.

PIN NO.	DESCRIPTION
1	GND
2	SIN1
3	SOUT1
4	NC
5	NC

Table 5-10: Console Port Pinouts

5.2.5 EC GPIO

PIN NO.	DESCRIPTION
1	GND
2	PE/GPIO60
3	GND
4	GND

Table 5-11: EC GPIO Pinouts

5.2.6 SATA Connector
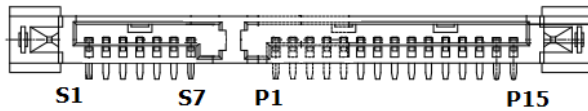
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
S1	GND	P1	NC
S2	SATA TX+	P2	NC
S3	SATA TX-	P3	NC
S4	GND	P4	GND
S5	SATA RX-	P5	GND
S6	SATA RX+	P6	GND
S7	GND	P7	+5V
		P8	+5V
		P9	+5V
		P10	GND
		P11	GND
		P12	GND
		P13	+12V
		P14	+12V
		P15	+12V

Table 5-12: SATA Connector Pinouts

Appendix

A

Regulatory Compliance

DECLARATION OF CONFORMITY $C \epsilon$

This equipment is in conformity with the following EU directives:

- EMC Directive 2004/108/EC
- Low-Voltage Directive 2006/95/EC
- RoHS II Directive 2011/65/EU

If the user modifies and/or install other devices in the equipment, the CE conformity declaration may no longer apply.

If this equipment has telecommunications functionality, it also complies with the requirements of the R&TTE Directive 1999/5/EC.

English
IEI Integration Corp declares that this equipment is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
Български [Bulgarian]
IEI Integration Corp. декла☐ира, че този оборудване е в съответствие със съществените изисквания и другите приложими правила на Директива 1999/5/EC.
Česky [Czech]
IEI Integration Corp tímto prohlašuje, že tento zařízení je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.
Dansk [Danish]
IEI Integration Corp erklærer herved, at følgende udstyr overholder de væsentlige krav o øvrige relevante krav i direktiv 1999/5/EF.
Deutsch [German]
IEI Integration Corp, erklärt dieses Gerät entspricht den grundlegenden Anforderungen und den weiteren entsprechenden Vorgaben der Richtlinie 1999/5/EU.
Eesti [Estonian]
IEI Integration Corp deklareerib seadme seadme vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.

Español [Spanish]
IEI Integration Corp declara que el equipo cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.

Ελληνική [Greek]
IEI Integration Corp ΔΗΛΩΝΕΙ ΟΤΙ ΕΞΟΠΛΙΣΜΟΣ ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.

Français [French]
IEI Integration Corp déclare que l'appareil est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.

Italiano [Italian]
IEI Integration Corp dichiara che questo apparecchio è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.

Latviski [Latvian]
IEI Integration Corp deklarē, ka iekārta atbilst būtiskajām prasībām un citiem ar to saistītajiem noteikumiem Direktīvas 1999/5/EK.

Lietuvių [Lithuanian]
IEI Integration Corp deklaruoja, kad šis įranga atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.

Nederlands [Dutch]
IEI Integration Corp dat het toestel toestel in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.

Malti [Maltese]
IEI Integration Corp jiddikjara li dan prodott jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Dirrettiva 1999/5/EC.

Magyar [Hungarian]
IEI Integration Corp nyilatkozom, hogy a berendezés megfelel a vonatkozó alapvetõ követelményeknek és az 1999/5/EC irányelv egyéb elõírásainak.

Polski [Polish]
IEI Integration Corp oświadcza, że wyrobu jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.

Português [Portuguese]
IEI Integration Corp declara que este equipamento est conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.

Româna [Romanian]
IEI Integration Corp declară că acest echipament este i☐conformitate cu cerinţele esenţiale şi cu celelalte prevederi relevante ale Directivei 1999/5/CE.
Slovensko [Slovenian]
IEI Integration Corp izjavlja, da je ta opreme v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.
Slovensky [Slovak]
IEI Integration Corp týmto vyhlasuje, že zariadenia spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.
Suomi [Finnish]
IEI Integration Corp vakuuttaa täten ☐ttä l☐itteet on dire☐tiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
Svenska [Swedish]
IEI Integration Corp förklarar att denna utrustningstyp står I överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.

FCC WARNING

This equipment complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Federal Communication Commission Interference Statement

This equipment has been assembled with components that comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Appendix

B

Safety Precautions

WARNING:

The precautions outlined in this chapter should be strictly followed. Failure to follow these precautions may result in permanent damage to the GRAND-SE.

B.1 Safety Precautions

Please follow the safety precautions outlined in the sections that follow:

B.1.1 General Safety Precautions

Please ensure the following safety precautions are adhered to at all times.

- *Follow the electrostatic precautions* outlined below whenever the GRAND-SE is opened.
- *Make sure the power is turned off and the power cord is disconnected* whenever the GRAND-SE is being installed, moved or modified.
- *Do not apply voltage levels that exceed the specified voltage range*. Doing so may cause fire and/or an electrical shock.
- *Electric shocks can occur* if the GRAND-SE chassis is opened when the GRAND-SE is running.
- *If considerable amounts of dust, water, or fluids enter the GRAND-SE*, turn off the power supply immediately, unplug the power cord, and contact the GRAND-SE vendor.
- **DO NOT**:
  o Drop the GRAND-SE against a hard surface.
  o In a site where the ambient temperature exceeds the rated temperature

B.1.2 Anti-static Precautions

> ⚠️ **WARNING:**
>
> Failure to take ESD precautions during the installation of the GRAND-SE may result in permanent damage to the GRAND-SE and severe injury to the user.

Electrostatic discharge (ESD) can cause serious damage to electronic components, including the GRAND-SE. Dry climates are especially susceptible to ESD. It is therefore critical that whenever the GRAND-SE is opened and any of the electrical components are handled, the following anti-static precautions are strictly adhered to.

- *Wear an anti-static wristband*: Wearing a simple anti-static wristband can help to prevent ESD from damaging any electrical component.
- *Self-grounding*: Before handling any electrical component, touch any grounded conducting material. During the time the electrical component is handled, frequently touch any conducting materials that are connected to the ground.
- *Use an anti-static pad*: When configuring or working with an electrical component, place it on an antic-static pad. This reduces the possibility of ESD damage.
- *Only handle the edges of the electrical component*: When handling the electrical component, hold the electrical component by its edges.

B.1.3 Product Disposal

⚠ **CAUTION:**

Risk of explosion if battery is replaced by and incorrect type. Only certified engineers should replace the on-board battery.

Dispose of used batteries according to instructions and local regulations.

- Outside the European Union - If you wish to dispose of used electrical and electronic products outside the European Union, please contact your local authority so as to comply with the correct disposal method.
- Within the European Union:
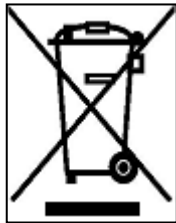
EU-wide legislation, as implemented in each Member State, requires that waste electrical and electronic products carrying the mark (left) must be disposed of separately from normal household waste. This includes monitors and electrical accessories, such as signal cables or power cords. When you need to dispose of your display products, please follow the guidance of your local authority, or ask the shop where you purchased the product. The mark on electrical and electronic products only applies to the current European Union Member States.

Please follow the national guidelines for electrical and electronic product disposal.

B.2 Maintenance and Cleaning Precautions

When maintaining or cleaning the GRAND-SE, please follow the guidelines below.

B.2.1 Maintenance and Cleaning

Prior to cleaning any part or component of the GRAND-SE, please read the details below.

- The interior of the GRAND-SE does not require cleaning. Keep fluids away from the GRAND-SE interior.

- Be cautious of all small removable components when vacuuming the GRAND-SE.
- Turn the GRAND-SE off before cleaning the GRAND-SE.
- Never drop any objects or liquids through the openings of the GRAND-SE.
- Be cautious of any possible allergic reactions to solvents or chemicals used when cleaning the GRAND-SE.
- Avoid eating, drinking and smoking within vicinity of the GRAND-SE.

B.2.2 Cleaning Tools

Some components in the GRAND-SE may only be cleaned using a product specifically designed for the purpose. In such case, the product will be explicitly mentioned in the cleaning tips. Below is a list of items to use when cleaning the GRAND-SE.

- *Cloth* – Although paper towels or tissues can be used, a soft, clean piece of cloth is recommended when cleaning the GRAND-SE.
- *Water or rubbing alcohol* – A cloth moistened with water or rubbing alcohol can be used to clean the GRAND-SE.
- *Using solvents* – The use of solvents is not recommended when cleaning the GRAND-SE as they may damage the plastic parts.
- *Vacuum cleaner* – Using a vacuum specifically designed for computers is one of the best methods of cleaning the GRAND-SE. Dust and dirt can restrict the airflow in the GRAND-SE and cause its circuitry to corrode.
- *Cotton swabs* - Cotton swaps moistened with rubbing alcohol or water are excellent tools for wiping hard to reach areas.
- *Foam swabs* - Whenever possible, it is best to use lint free swabs such as foam swabs for cleaning.

Appendix

C

Hazardous Materials Disclosure

The details provided in this appendix are to ensure that the product is compliant with the Peoples Republic of China (China) RoHS standards. The table below acknowledges the presences of small quantities of certain materials in the product, and is applicable to China RoHS only.

A label will be placed on each product to indicate the estimated "Environmentally Friendly Use Period" (EFUP). This is an estimate of the number of years that these substances would "not leak out or undergo abrupt change." This product may contain replaceable sub-assemblies/components which have a shorter EFUP such as batteries and lamps. These components will be separately marked.

Please refer to the following table.

Part Name	Toxic or Hazardous Substances and Elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (CR(VI))	Polybrominated Biphenyls (PBB)	Polybrominated Diphenyl Ethers (PBDE)
Housing	O	O	O	O	O	O
Display	O	O	O	O	O	O
Printed Circuit Board	O	O	O	O	O	O
Metal Fasteners	O	O	O	O	O	O
Cable Assembly	O	O	O	O	O	O
Fan Assembly	O	O	O	O	O	O
Power Supply Assemblies	O	O	O	O	O	O
Battery	O	O	O	O	O	O
O: This toxic or hazardous substance is contained in all of the homogeneous materials for the part is below the limit requirement in SJ/T11363-2006 (now replaced by GB/T 26572-2011).						
X: This toxic or hazardous substance is contained in at least one of the homogeneous materials for this part is above the limit requirement in SJ/T11363-2006 (now replaced by GB/T 26572-2011).						

此附件旨在确保本产品符合中国 RoHS 标准。以下表格标示此产品中某有毒物质的含量符合中国 RoHS 标准规定的限量要求。

本产品上会附有"环境友好使用期限"的标签，此期限是估算这些物质"不会有泄漏或突变"的年限。本产品可能包含有较短的环境友好使用期限的可替换元件，像是电池或灯管，这些元件将会单独标示出来。

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (CR(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
壳体	O	O	O	O	O	O
显示	O	O	O	O	O	O
印刷电路板	O	O	O	O	O	O
金属螺帽	O	O	O	O	O	O
电缆组装	O	O	O	O	O	O
风扇组装	O	O	O	O	O	O
电力供应组装	O	O	O	O	O	O
电池	O	O	O	O	O	O

O: 表示该有毒有害物质在该部件所有物质材料中的含量均在 SJ/T 11363-2006 (现由 GB/T 26572-2011 取代) 标准规定的限量要求以下。

X: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 SJ/T 11363-2006 (现由 GB/T 26572-2011 取代) 标准规定的限量要求。