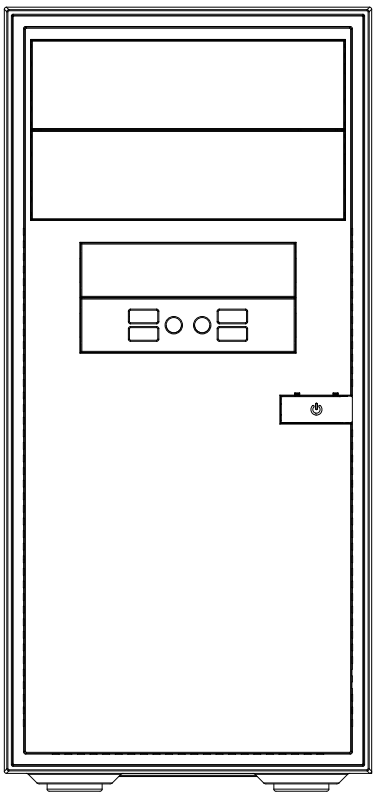
Desktop
5130DB-IL



USER'S MANUAL

Revision 1.0

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Manual Revision 1.0

Release Date: March 14, 2017

Preface

About this Manual

This manual is written for professional system integrators and PC technicians. It provides information for the installation and use of the 5130DB-IL. Installation and maintenance should be performed by experienced technicians only.

Please refer to the 5130DB-IL server specifications page on our website for updates on supported memory, processors and operating systems (http://www.supermicro.com).

Notes

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

- Supermicro product manuals: http://www.supermicro.com/support/manuals/
- Product drivers and utilities: ftp://ftp.supermicro.com
- Product safety info: http://www.supermicro.com/about/policies/safety_information.cfm

If you have any questions, please contact our support team at:
support@supermicro.com

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

Warnings

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

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

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

Contents

Chapter 1 Introduction

1.1 Overview....8
1.2 System Features....8
1.3 Chassis Features....10
Front Features....10
Rear Features....11
DisplayPort....12
HDMI Port....12
VESA® DisplayPort™....12
Back Panel High Definition Audio (HD Audio)....12
1.4 Motherboard Layout....13
Quick Reference Table....14
System Block Diagram....15

Chapter 2 Maintenance and Component Installation

2.1 Removing Power....16
2.2 Accessing the System....16
2.3 Installing Hard Drives....17
2.4 Removing and Installing the Front Bezel....20
2.5 Installing a Peripheral Device....21
2.6 Installing Expansion Cards....22
2.7 Installing the System Fan....23
2.7 Installing a Power Supply....24
2.8 Installing a Processor and Heatsink....25
Installing the Processor....25
Installing the Heatsink....27
Removing the Heatsink....28
2.9 Installing Memory....29
Memory Support....29
DIMM Installation....29
Removing Memory Modules....29
Memory Population Guidelines....30
2.10 Motherboard Battery....31

Chapter 3 Motherboard Connections

3.1 Power Connections 32
3.2 Headers and Connectors 33
Control Panel Header 36
3.3 Rear I/O Ports 38
DisplayPort 38
HDMI Port 38
VESA® DisplayPort™ 38
Back Panel High Definition Audio (HD Audio) 38
SPDIF OUT (JSPDIF_OUT) 38
USB (Universal Serial Bus) Ports 39
3.4 Jumpers 40
Explanation of Jumpers 40
3.5 LED Indicators 42

Chapter 4 Software

4.1 Driver Installation 43
4.2 SuperDoctor® 5 44

Chapter 5 BIOS

5.1 Introduction 45
Starting BIOS Setup Utility 45
5.2 System Information 46
How To Change the Configuration Data 46
5.3 CPU 47
5.4 Memory 54
5.5 Advanced 55
Boot Features 55
NCT6792D Super IO Configuration 57
Serial Port Console Redirection 58
Legacy Console Redirection 60
Legacy Console Redirection Settings 60
System Agent (SA) Configuration 61
PEG Port Configuration 62
PEG 0:1:0 62
PEG 0:1:1 62
PEG 0:1:2 63

Graphics Configuration....63
PCH-IO Configuration....66
SATA and RST Configuration....67
PCH FW Configuration....69
USB Configuration....70
PCIe/PCI/PnP Configuration....71
Option ROM Execution....71
PCIe/PCI/PnP Configuration....72
Security....73
Secure Boot....74
Key Management....75
5.6 Thermal and Fan....78
5.7 Save and Exit....80
5.8 BIOS Update....82
Appendix A BIOS Codes
Appendix B Standardized Warning Statements for AC Systems
Appendix C System Specifications
Appendix D UEFI BIOS Recovery Instructions

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Chapter 1

Introduction

1.1 Overview

The 5130DB-IL is a compact desktop system comprised of the DS3A-261B chassis and the C7B250-CB-ML single processor motherboard.

Refer to our website for information on operating systems that have been certified for use with the system (www.supermicro.com).

This chapter provides a brief outline of the functions and features.

1.2 System Features

The following table provides an overview of the main features of the 5130DB-IL.

System Features
Motherboard
C7B250-CB-ML
Chassis
Mini Tower, DS3A-261B
CPU
Supports a single Intel 6th/7th Gen Core i7/i5/i3, Pentium or Celeron processor in the LGA1151 format.
Socket Type
LGA1151
Chipset
Intel B250 Express
Memory
Supports up to 64 GB of unbuffered, non-ECC DDR4-2400 memory in four DIMM slots
Expansion Slots
One PCI-E 3.0 x16 slot One PCI-E 3.0 x4 slot One PCI-E 3.0 x1 slot One PCIe 3.0 x4 M.2 (supports 2280)
Drive Bays
Two 5.25" external drive bays, one 3.5" external drive bay, two internal fixed 3.5" drive bays, one internal fixed 2.5" drive bay
Fan
One rear 8-cm fan
Power
One 260W ATX power supply
Input/Output Ports
LAN: One Gigabit port USB: Six USB 3.0 ports, four USB 2.0 ports Display: one DisplayPort, one HDMI port, one DVI-D port Serial ATA: Six SATA3 (6Gbps) ports One rear COM port (header) Combo mouse/keyboard port 7.1 HD Audio
Dimensions
Width 6.89" (175mm), Height 14.65" (372mm), Depth 16.85" (428mm)

1.3 Chassis Features

Front Features

The DS3A-261B is a compact Mini Tower chassis. The front of the chassis includes a power on/off push-button and several LEDs as described below.

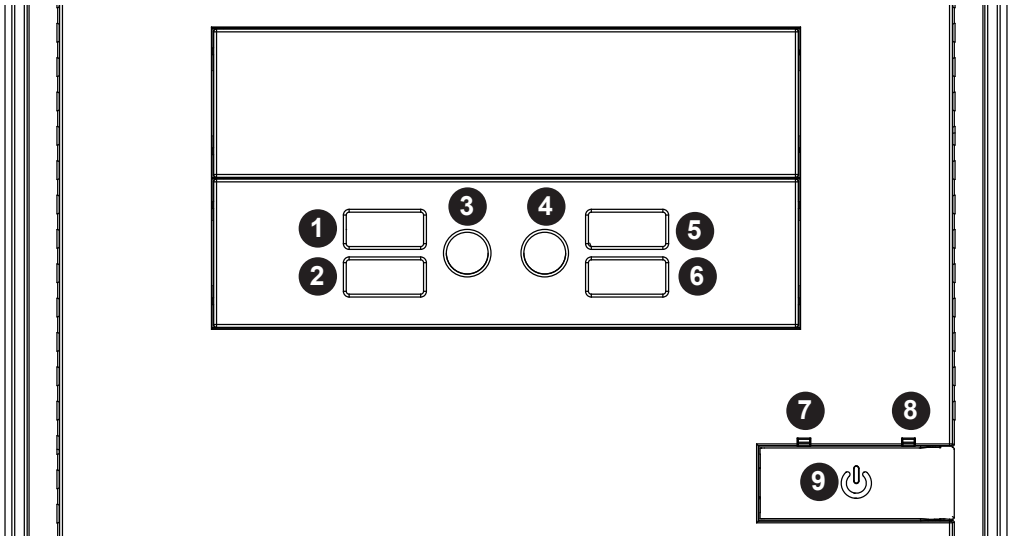


Figure 1-1. Chassis Front View

Front Chassis Features		
Item	**Feature**	**Description**
1	USB Port	USB 3.0 port
2	USB Port	USB 3.0 port
3	Mic	Microphone jack
4	Audio	Audio out jack
5	USB Port	USB 2.0 port
6	USB Port	USB 2.0 port
7	NIC LED	Indicates network activity when flashing
8	HDD LED	Indicates network activity when flashing
9	Power Button	This LED alerts the operator to several states, as noted in the table below.

Rear Features

Various input/output ports can be accessed at the rear of the chassis.

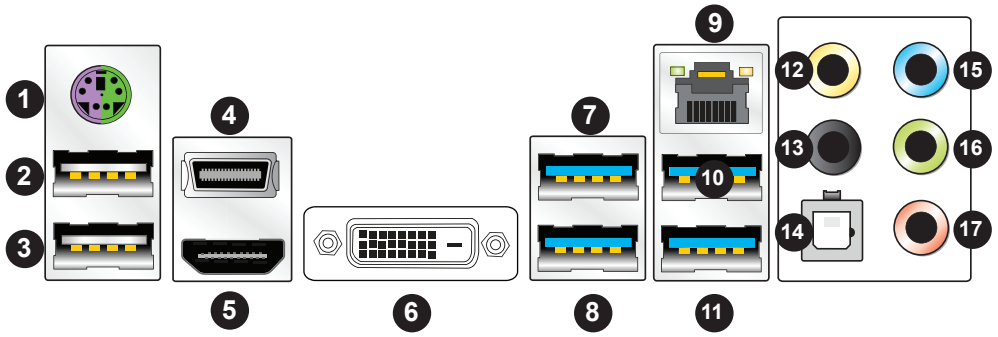


Figure 1-2. Rear I/O Ports

Rear I/O Ports					
#	**Description**	**#**	**Description**	**#**	**Description**
1.	PS2 Keyboard/Mouse Port	7	USB4 Port (USB 3.0)	13	Surround Out
2.	USB0 Port (USB 2.0)	8	USB5 Port (USB 3.0)	14	SPDIF Out
3	USB1 Port (USB 2.0)	9	RJ-45 Gb Ethernet Port	15	Line In
4	Display Port	10	USB6 Port (USB 3.0)	16	Line Out
5	HDMI Port	11	USB7 Port (USB 3.0)	17	Mic In
6.	DVI-D Port	12	Center/LFE Out		

Note: See Chapter 3 for pin definitions of the USB ports.

DisplayPort

DisplayPort, develped by the VESA consortium, delivers digital display and fast refresh rates. It can connect to virtually any display device using a DisplayPort adapter for devices such as VGA, DVI or HDMI.

HDMI Port

The HDMI (High-Definition Multimedia Interface) port is used to display both high definition video and digital sound through an HDMI-capable display, using the same (HDMI) cable.

VESA® DisplayPort™

DisplayPort, develped by the VESA consortium, delivers digital display at a fast refresh rate. It can connect to virtually any display device using a DisplayPort adapter for devices such as VGA, DVI or HDMI.

Back Panel High Definition Audio (HD Audio)

This motherboard features a 7.1+2 Channel High Definition Audio (HDA) codec that provides 10 DAC channels. The HD Audio connections simultaneously supports multiple-streaming 7.1 sound playback with two channels of independent stereo output through the front panel stereo out for front, rear, center and sub woofer speakers.

1.4 Motherboard Layout

Jumper, connector and LED locations are shown below with brief descriptions on the following page. Detailed descriptions are found in Chapter 3.

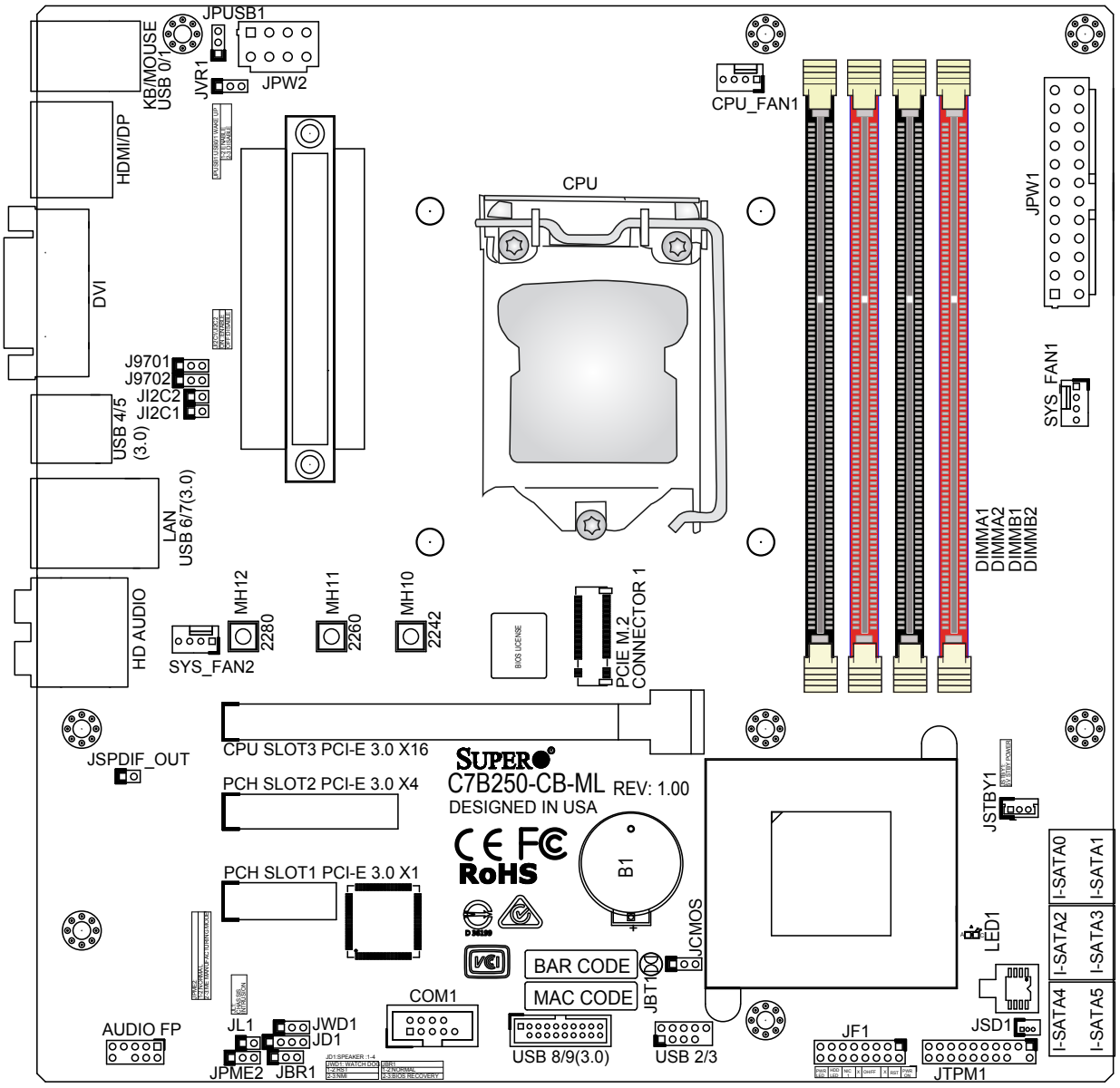


Figure 1-3. Motherboard Layout

- Jumpers and LED indicators not identified are used for testing only.
- "■" indicates the location of pin 1.

Quick Reference Table

Jumper	Description	Default Setting
JBR1	BIOS Recovery	Pins 1-2: (Normal)
JBT1	Clear CMOS	Short pads to clear CMOS
JCMOS	Clear CMOS	Pins 1-2: (Normal)
JI2C1/JI2C2	SMB to PCI-E Slots Enable/Disable	On: (Enabled)
JPME2	Intel® Manufacturing Mode	Pins 1-2: (Normal)
JPUSB1	USB Wake Up (Back Panel USB 0/1) Enable/Disable	Pins 1-2: (Enabled)
JWD1	Watch Dog Function Enable	Pins 1-2: (Reset)

LED	Description	Status
LED1	Power LED S3 Blink Function	Blinking Green: S3 function

Connector	Description
AUDIO FP	Front Panel Audio Header
BT1	Onboard Battery
COM1	COM1 Port Header
CPU_FAN1	CPU Fan Header
DVI	Digital Video Interface Port
HD AUDIO	Back Panel HD Audio Ports
HDMI/DP	High Definition Multimedia Interface/DispalyPort
I-SATA0~5	Intel® PCH SATA 3.0 Ports
JD1	Pin 1~4: External Speaker
JF1	Front Control Panel Header
JL1	Chassis Intrusion Header
JPW1	24-pin ATX Power Connector
JPW2	8-pin CPU Power Connector
JSD1	SATA DOM (Disk On Module) Power Connector
JSPDIF_OUT	Sony/Philips Digital Interface (S/PDIF) Out Header
JSTBY1	Standby Power Header
JTPM1	Trusted Platform Module (TPM) Header
KB/MOUSE	Keyboard/Mouse
LAN	RJ45 Gigabit Ethernet Port
PCIE M.2 CONNECTOR 1	PCI-E M.2 Connector
SYS_FAN1/SYS_FAN2	System Fan Headers
USB 0/1	Back Panel USB 2.0 Ports
USB 2/3	Front Panel Accessible USB 2.0 Header
USB 4/5, USB 6/7	Back Panel USB 3.0 Ports
USB 8/9	Front Panel Accessible USB 3.0 Header

System Block Diagram

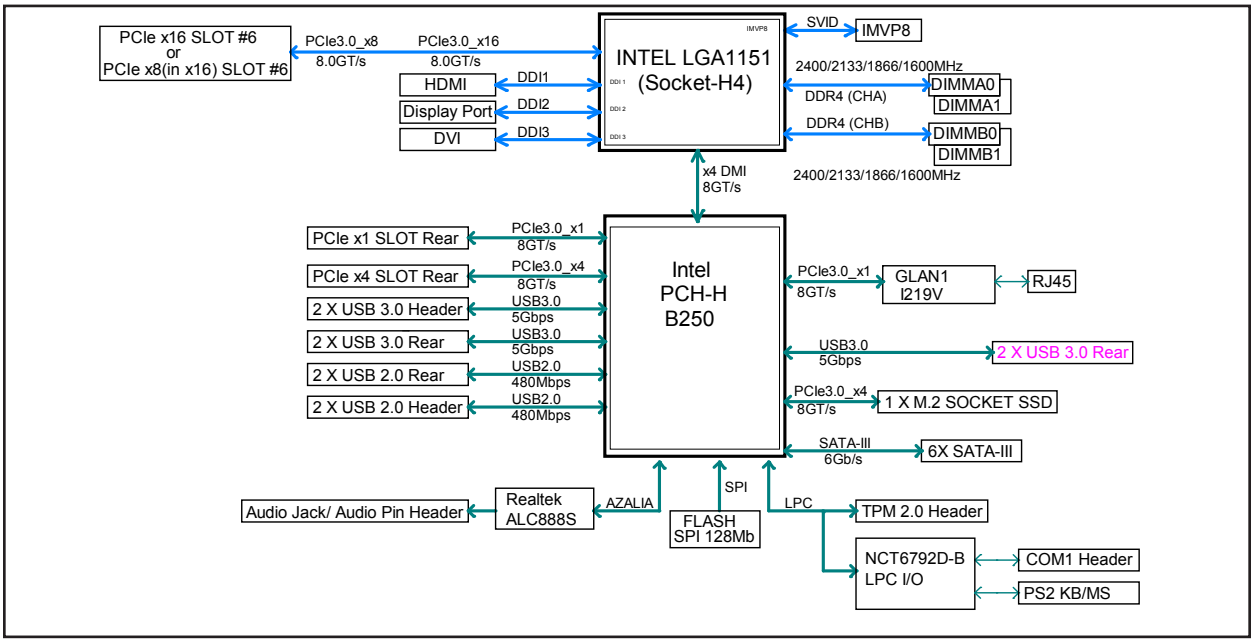


Figure 1-4. System Block Diagram

Note: This is a general block diagram and may not exactly represent the features on your motherboard.

Chapter 2

Maintenance and Component Installation

This chapter provides instructions on installing and replacing main system components. To prevent compatibility issues, only use components that match the specifications and/or part numbers given.

Installation or replacement of most components requires that power first be removed from the system. Please follow the procedures given in each section.

2.1 Removing Power

Use the following procedure to ensure that power has been removed from the system. This step is necessary when removing or installing non hot-swap components or when replacing a non-redundant power supply.

1. Use the operating system to power down the system.
2. After the system has completely shut-down, disconnect the AC power cord from the power source.
3. Disconnect the power cord from the chassis.

2.2 Accessing the System

The DS3A-261B features a removable top cover to access to the inside of the chassis.

Removing the Chassis Cover

1. Power down the system and remove the power cord from the rear of the power supply as described in Section 2.1.
2. Slide the release tab downward.
3. Grasp the cover and lift it off the chassis.

Caution: Except for short periods of time, do *not* operate the system without the cover in place. The chassis cover must be in place to allow proper airflow and prevent overheating.

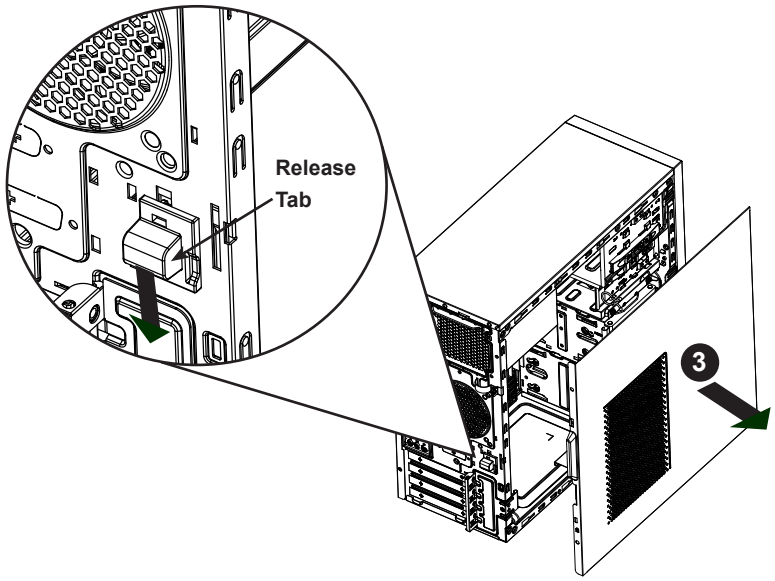


Figure 2-1. Removing the Chassis Cover

2.3 Installing Hard Drives

Removing and Installing Hard Drives

1. Power down the system and remove the power cord from the rear of the power supply as described in Section 2.1 and remove the chassis cover as described in Section 2.2.
2. Disconnect all of the cables from the hard drive.
3. Press the release tab on the side of the hard drive carrier that is to be removed from the hard drive bay.
4. Gently slide the hard drive carrier out of the hard drive bay.

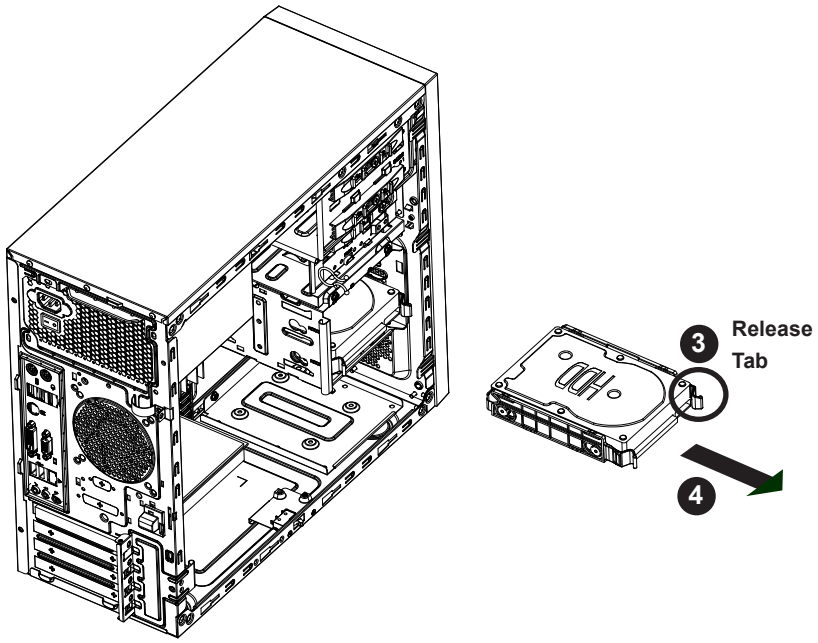


Figure 2-2. Removing a Hard Drive Carrier from the Chassis

5. If a hard drive or dummy drive is present, simultaneiously pull both sides of the hard drive carrier open and lift the drive out.

6. Insert the new hard drive into the hard drive carrier by simultaneously pulling both sides of the drive carrier open and placing the drive into the carrier.

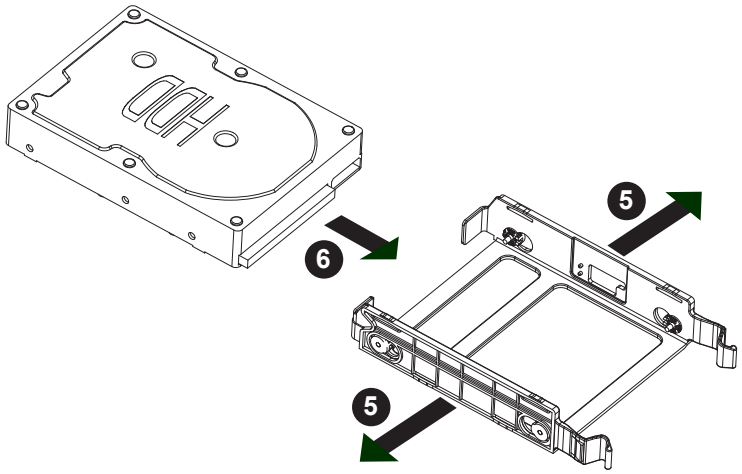


Figure 2-3. Removing a Hard Drive from a Hard Drive Carrier

7. Insert the hard drive carrier into the hard drive bay, sliding it towards the back of the the hard drive bay until it clicks into a locked position.

8. Connect the cables to the hard drives, plug the power cord into the rear of the power supply, replace the chassis cover and power up the system.

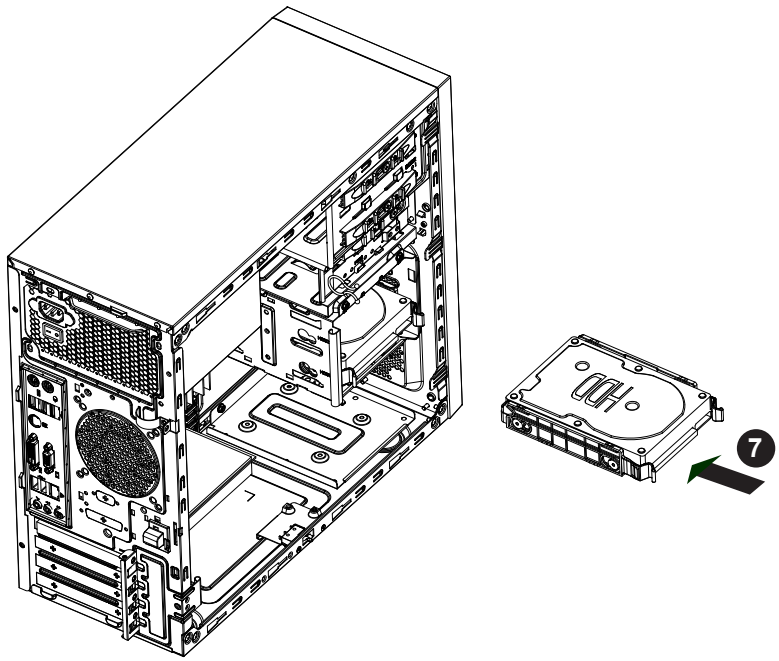


Figure 2-4. Installing the Hard Drive Carrier into the Hard Drive Bay

2.4 Removing and Installing the Front Bezel

Front Bezel Removal

1. Power down the system and remove the power cord from the rear of the power supply as described in Section 2.1 and remove the chassis cover as described in Section 2.2.
2. Remove the front bezel by pulling the release tabs outward, and then pulling the bezel off the front of the chassis.

Front Bezel Installation

1. Replace the chassis bezel by inserting the tabs on the right side of the bezel into their mounting holes on the chassis.
2. Close the bezel so that the release tabs click into their locked positions on the left side of the chassis.

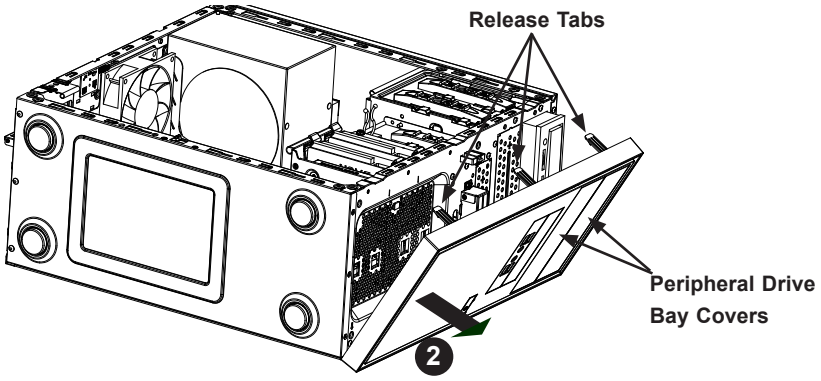


Figure 2-5. Removing the Front Bezel

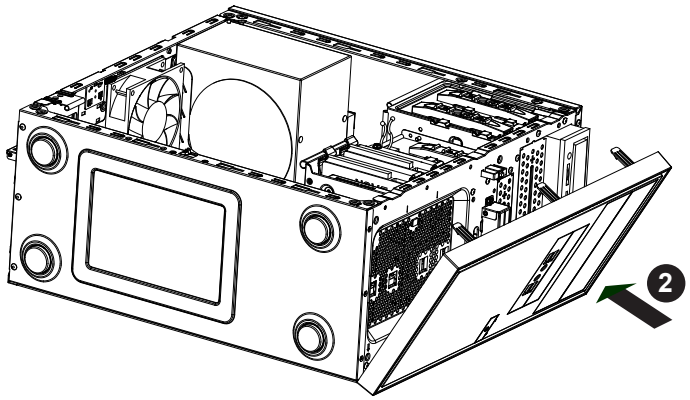


Figure 2-6. Installing the Front Bezel

2.5 Installing a Peripheral Device

The DS3A-261B chassis has two bays for optional peripheral devices, such as a DVD drive.

Installing a Peripheral Device

1. Power down the system and remove the power cord from the rear of the power supply as described in Section 2.1 and remove the chassis cover as described in Section 2.2.
2. Remove the front bezel as described in Section 2.4
3. Remove the peripheral drive bay's cover plate in the front bezel by pressing the cover plate release tab on the inside of the bezel in an inward direction to release the peripheral drive bay cover.
4. Replace the front bezel on the chassis as described in Section 2.4.
5. Slide the peripheral device through the opening in the front bezel into the chassis bay.
6. If desired, screws may be used where indicated below to secure the optical device into chassis.
7. Plug the power cord into the rear of the power supply, replace the chassis cover and power up the system.

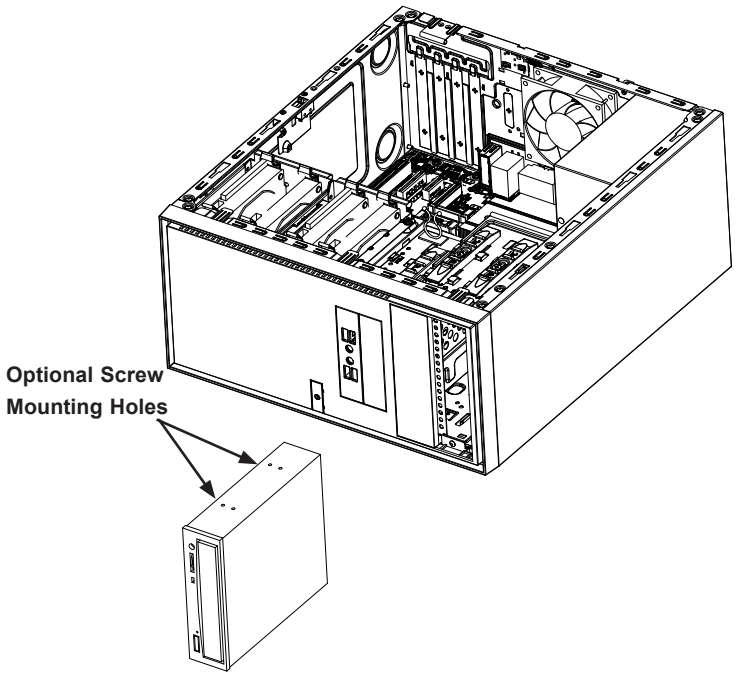


Figure 2-7. Installing a Peripheral Drive

2.6 Installing Expansion Cards

The DS3A-261B chassis includes four slots for expansion cards.

Installing Expansion Cards

1. Power down the system and remove the power cord from the rear of the power supply as described in Section 2.1 and remove the chassis cover as described in Section 2.2.
2. Pull back the release latch that holds the protective bracket over the PCI slots in the rear the chassis.
3. Remove the PCI slot covers from the PCI slots.
4. Slide the expansion card into its slot on the motherboard while simultaneously sliding its bracket into the PCI slot on the chassis.
5. Close the protective bracket over the tops of the expansion card brackets.
6. Plug the power cord into the rear of the power supply, replace the chassis cover and power up the system.

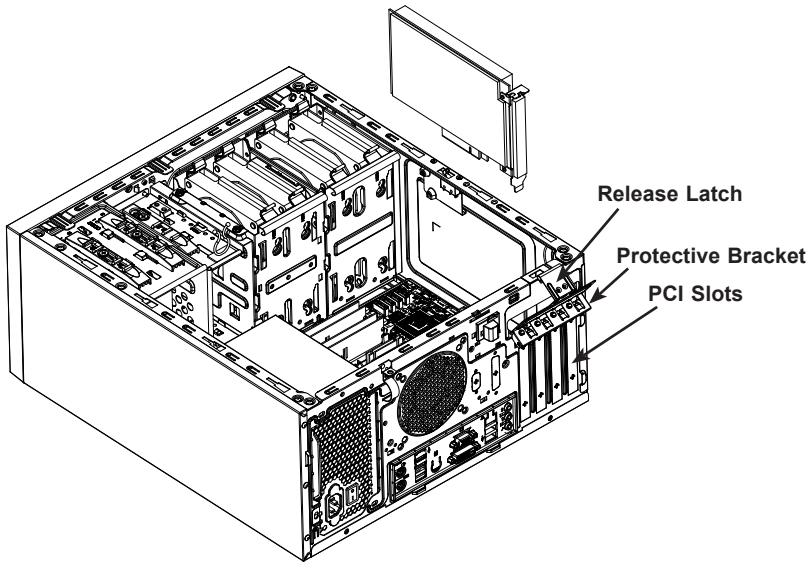


Figure 2-8. Installing an Expansion Card

2.7 Installing the System Fan

The DS3A-261B includes a rear system fan that provides cooling for the chassis. In the event that it becomes necessary to replace the fan, use the following instructions.

Caution: This is not a hot-swap fan. Four screws are required to install the system fan.

Installing the System Fan

1. Power down the system and remove the power cord from the rear of the power supply as described in Section 2.1 and remove the chassis cover as described in Section 2.2.
2. Place the system fan on top of the fan grill, aligning the mounting holes in the chassis with the mounting holes of the system fan.
3. Secure the fan with the four screws provided.
4. Connect the fan cable to the motherboard.
5. Plug the power cord into the rear of the power supply, replace the chassis cover and power up the system.

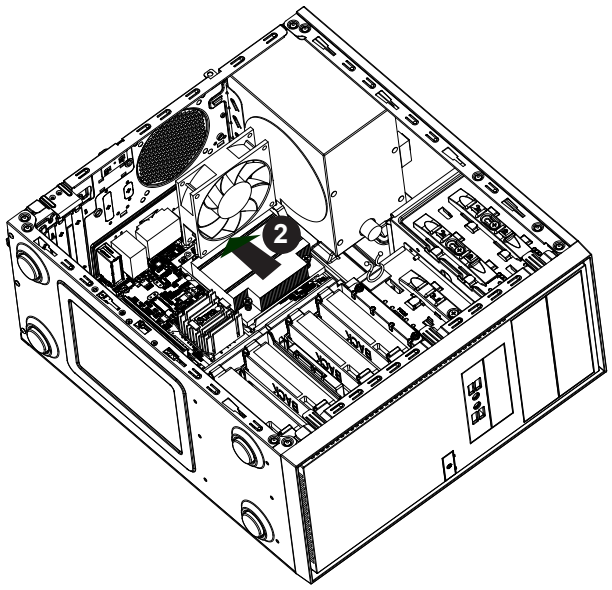


Figure 2-9. Installing the System Fan

2.7 Installing a Power Supply

The DS3A-261B has a single 260 Watt power supply, which is not a hot-swap unit..In the event the power module fails or it bcomes necessary to replace the power supply, follow the instructions below.

Changing the Power Supply

1. Power down the system and remove the power cord from the rear of the power supply as described in Section 2.1 and remove the chassis cover as described in Section 2.2.
2. Disconnect the motherboard cables from the power supply.
3. Remove the screws securing the power supply to the chassis, which are located on the rear of the chassis. Set these screws aside for later use.
4. Gently lift the power supply out of the chassis.
5. Replace the failed power supply with an identical power supply model.
6. Secure the new power supply using the screws previously set aside.
7. Plug the power cord into the rear of the power supply, replace the chassis cover and power up the system.Plug the power cord into the rear of the power supply, replace the chassis cover and power up the system.

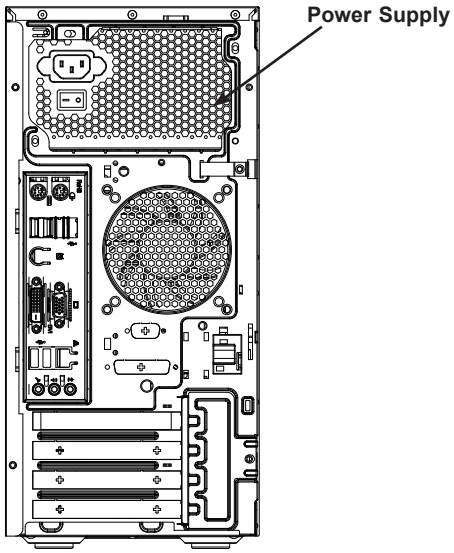


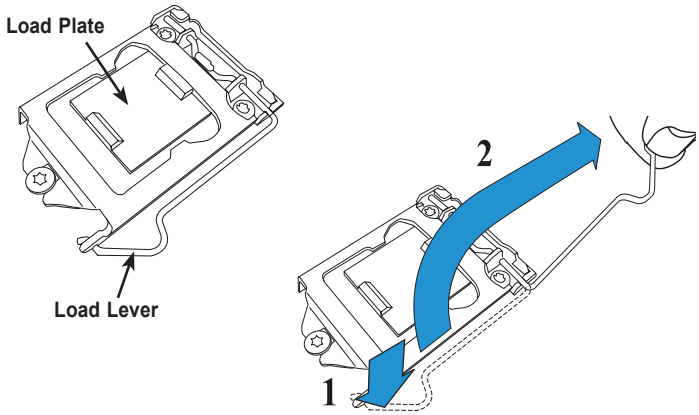
Figure 2-10. Replacing a Power Supply

2.8 Installing a Processor and Heatsink

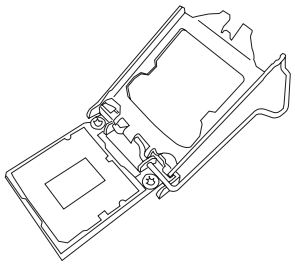
Installing the Processor

The 5130DB-IL supports a single Intel 6th/7th Gen Core i7/i5/i3, Pentium or Celeron processor in an LGA1151 socket.

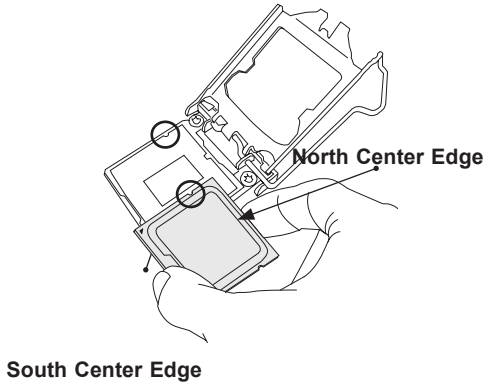
1. Press the load lever to release the load plate, which covers the CPU socket, from its locking position.



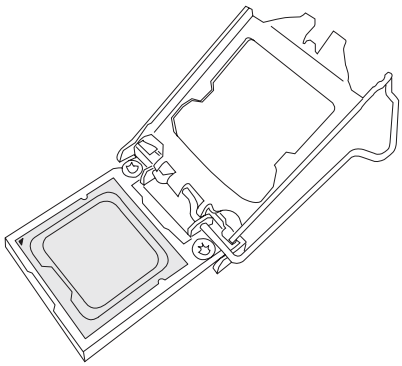
2. Gently lift the load lever to open the load plate. Remove the plastic cap.



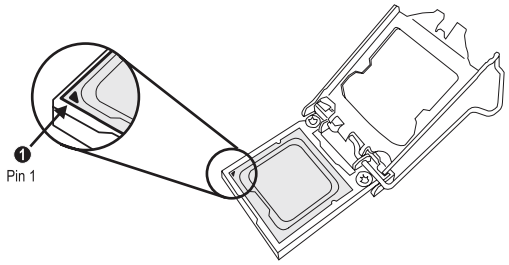
3. Use your thumb and your index finger to hold the CPU at the North center edge and the South center edge of the CPU.



4. Align the CPU key that is the semi-circle cutouts against the socket keys. Once it is aligned, carefully lower the CPU straight down into the socket. (Do not drop the CPU on the socket. Do not move the CPU horizontally or vertically.

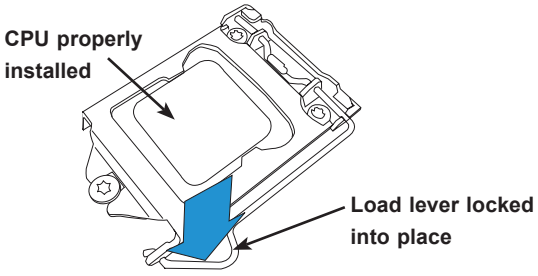


5. Do not rub the CPU against the surface or against any pins of the socket to avoid damaging the CPU or the socket.)



6. With the CPU inside the socket, inspect the four corners of the CPU to make sure that the CPU is properly installed.

7. Use your thumb to gently push the load lever down to the lever lock.



Warning: You can only install the CPU inside the socket in one direction. Make sure that it is properly inserted into the CPU socket before closing the load plate. If the load plate doesn't close properly, do not force it as it may damage your CPU. Instead, open the load plate again and double-check that the CPU is aligned properly.

Installing the Heatsink

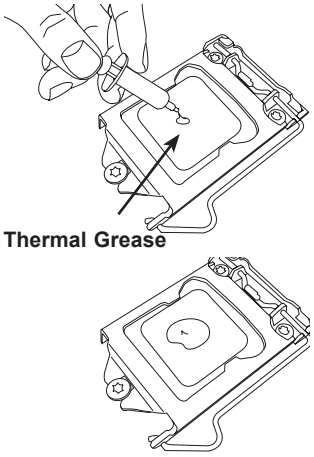
1. Locate the CPU fan connector on the motherboard.
2. Position the heatsink so that the heatsink fan wires are closest to the CPU fan connector and do not interfere with other components.
3. Inspect the CPU fan wires to make sure that they are routed through the bottom of the heatsink.
4. Remove the thin layer of protective film from the heatsink.

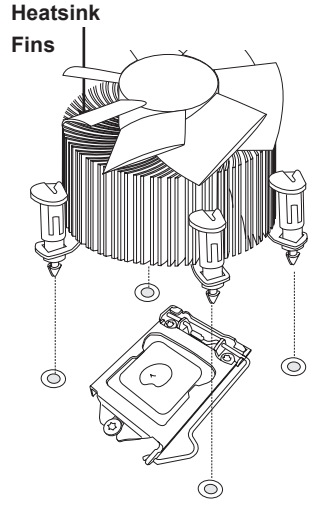
Warning: CPU overheating may occur if the protective film is not removed from the heatsink.

5. Apply the proper amount of thermal grease on the CPU.

Note: if your heatsink came with a thermal pad, please ignore this step.

6. If necessary, rearrange the wires to make sure that they are not pinched between the heatsink and the CPU. Also make sure to keep clearance between the fan wires and the fins of the heatsink.

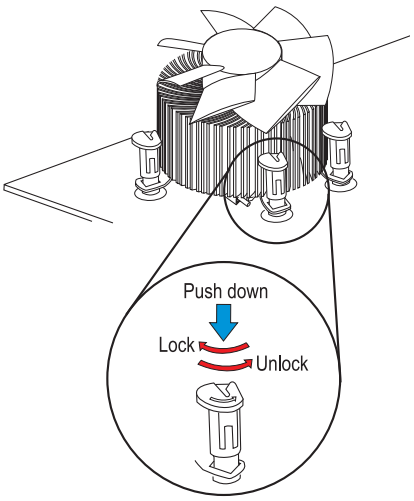




7. Align the four heatsink fasteners with the mounting holes on the motherboard. Gently push the pairs of diagonal fasteners (#1 & #2, and #3 & #4) into the mounting holes until you hear a click. Also, make sure to orient each fastener so that the narrow end of the groove is pointing outward.

8. Repeat Step 7 to insert all four heatsink fasteners into the mounting holes.

9. Once all four fasteners are securely inserted into the mounting holes, and the heatsink is properly installed on the motherboard, connect the heatsink fan wires to the CPU Fan connector.



Removing the Heatsink

Note: It is recommended that the heatsink not be removed. However, if necessary, please follow the instructions below to prevent damage to the CPU or other components.

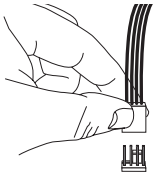
1. Unplug the power cord from the power supply.

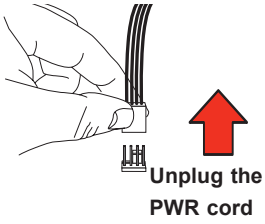
2. Disconnect the heatsink fan wires from the CPU fan header.

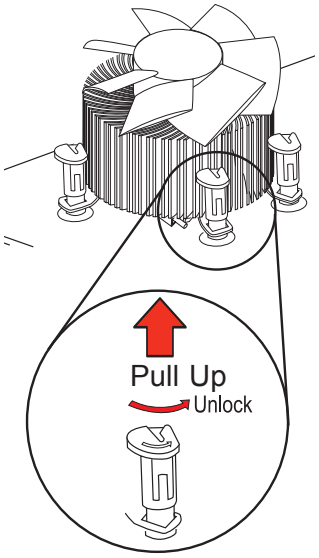
3. Use your finger tips to gently press on the fastener cap and turn it counterclockwise to make a 1/4 (900) turn, and pull the fastener upward to loosen it.

4. Repeat step 3 to loosen all fasteners from the mounting holes.

5. With all fasteners loosened, remove the heatsink from the CPU.







2.9 Installing Memory

Memory Support

The motherboard supports up to 64 GB of unbuffered, non-ECC DDR4-2400 memory in four DIMM slots. Two DIMMs should be installed at a time. Check the Supermicro website for a list of validated memory.

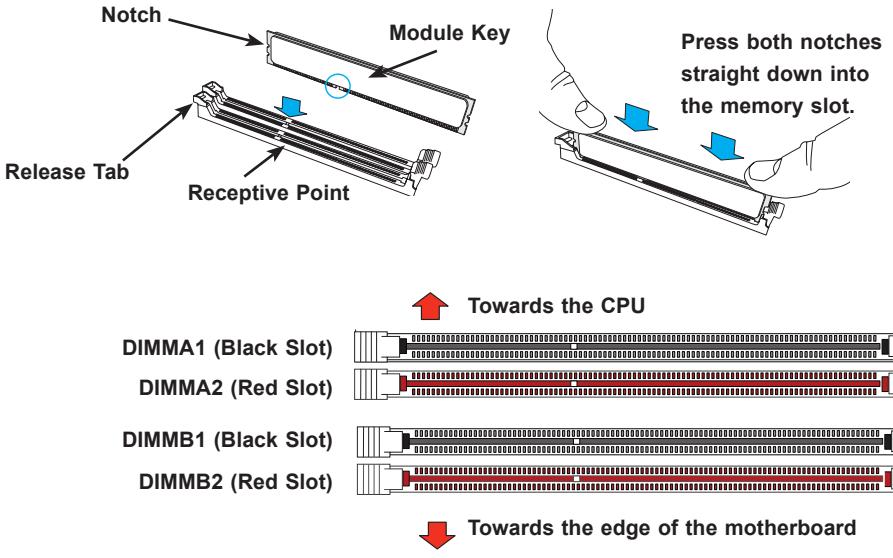
Caution: Exercise extreme care when installing or removing DIMM modules to prevent damage.

DIMM Installation

1. Insert the desired number of DIMMs into the memory slots, starting with DIMMB2 (see below for location). For the system to work properly, please use memory modules of the same type and speed.
2. Push the release tab on the DIMM slot outwards.
3. Align the DIMM key with the receptive point on the DIMM slot and align the notch on the end of the module with the receptive point on the end of the slot.
4. Press both ends of the module straight down into the slot until the DIMM snaps into place.
5. Push the release tab to the locked position to secure the DIMM in the slot.

Removing Memory Modules

Reverse the steps above to remove the DIMM modules from the motherboard.



Note: Be sure to use memory modules of the same type, same speed, same frequency on the same motherboard. Mixing of memory modules of different types and speeds is not allowed. Due to memory allocation to system devices, the amount of memory that remains available for operational use will be reduced when 4 GB of RAM is used. The reduction in memory availability is disproportional. See the following table for details.

Memory Population Guidelines

When installing DIMMs, the memory slots should be populated in the following order: DIMMA2 and DIMMB2, then DIMMA1, DIMMB1.

Always use DDR4 modules of the same size, type and speed.

Mixed DIMM speeds can be installed, however, all DIMMs will run at the speed of the slowest DIMM.

Possible System Memory Allocation & Availability		
System Device	**Size**	**Physical Memory Remaining/Available (4 GB Total System Memory)**
Firmware hub flash memory (System BIOS)	1 MB	3.99
Local APIC	4 KB	3.99
Area reserved for the chipset	2 MB	3.99
I/O APIC (4 KB)	4 KB	3.99
PCI Enumeration Area 1	256 MB	3.76
PCI Express (256 MB)	256 MB	3.51
PCI Enumeration Area 2 (if needed) Aligned on 256MB boundary	512 MB	3.01
VGA memory	16 MB	2.85
TSEG	1 MB	2.84
Memory available to OS and other applications		2.84

Recommended Population (Balanced)				
DIMMB2	**DIMMA2**	**DIMMB1**	**DIMMA1**	**Total System Memory**
4GB	4GB			8GB
4GB	4GB	4GB	4GB	16GB
8GB	8GB			16GB
8GB	8GB	8GB	8GB	32GB
16GB	16GB			32GB
16GB	16GB	16GB	16GB	64GB

2.10 Motherboard Battery

The motherboard uses non-volatile memory to retain system information when system power is removed. This memory is powered by a lithium battery residing on the motherboard.

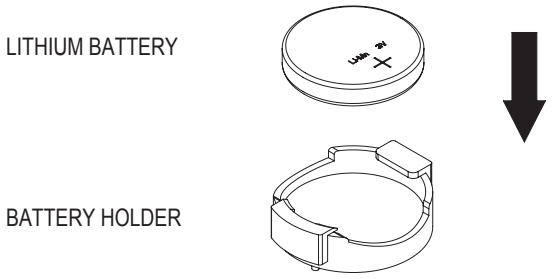


Figure 2-12. Installing the Onboard Battery

Replacing the Battery

1. Remove power from the system as described in section 2.1.
2. Push aside the small clamp that covers the edge of the battery. When the battery is released, lift it out of the holder.
3. To insert a new battery, slide one edge under the lip of the holder with the positive (+) side facing up. Then push the other side down until the clamp snaps over it.

Note: Handle used batteries carefully. Do not damage the battery in any way; a damaged battery may release hazardous materials into the environment. Do not discard a used battery in the garbage or a public landfill. Please comply with the regulations of your local hazardous waste management agency to dispose of your used battery properly.

Warning: There is a danger of explosion if the onboard battery is installed upside down (which reverses its polarities). This battery must be replaced only with the same or an equivalent type recommended by the manufacturer (CR2032).

Chapter 3

Motherboard Connections

This section describes the connections on the C7B250-CB-ML motherboard and provides pinout definitions. Note that depending on how the system is configured, not all connections are required. The LEDs on the motherboard are also described here A motherboard layout indicating component locations may be found in Chapter 1.

Please review the Safety Precautions in Appendix A before installing or removing components.

3.1 Power Connections

Main ATX Power Supply Connector

The primary power supply connector (JPW1) meets the ATX SSI EPS 12V specification.

ATX Power 24-pin Connector Pin Definitions			
Pin#	**Definition**	**Pin#**	**Definition**
13	+3.3V	1	+3.3V
14	-12V	2	+3.3V
15	COM	3	COM
16	PS_ON	4	+5V
17	COM	5	COM
18	COM	6	+5V
19	COM	7	COM
20	Res (NC)	8	PWR_OK
21	+5V	9	5VSB
22	+5V	10	+12V
23	+5V	11	+12V
24	COM	12	+3.3V

Required Connection

8-pin 12V Power Connector

JPV1 is the 12V DC power connector that provides an alternative single power source for special enclosure when the 24-pin ATX power is not in use.

+12V 8-pin Power Pin Definitions	
Pin#	**Definition**
1 - 4	Ground
5 - 8	+12V

Required Connection

3.2 Headers and Connectors

Fan Headers

There are three 4-pin fan headers on the motherboard. Although pin 4 is for PWM control, the fan in the 5130DB-IL does not utilize PWM (Pulse Width Modulation).

Fan Header Pin Definitions	
Pin#	**Definition**
1	Ground (Black)
2	+12V (Red)
3	Tachometer
4	PWM Control

External Speaker

The JD1 header is for the external speaker. If you wish to use an external speaker, connect its cable to pins 1-4.

External Speaker Connector Pin Definitions	
Pin Setting	**Definition**
Pins 1-4	Speaker

Disk-On-Module Power Connector

The Disk-On-Module (DOM) power connector at JSD1 provides 5V power to a solid-state DOM storage device connected to one of the SATA ports.

DOM Power Pin Definitions	
Pin#	**Definition**
1	5V
2	Ground
3	Ground

Standby Power

The Standby Power header is located at JSTBY1 on the motherboard.

Standby Power Pin Definitions	
Pin#	**Definition**
1	+5V Standby
2	Ground
3	Wake-up

TPM Header

The JTPM1 header is used to connect a Trusted Platform Module (TPM), which is available from a third-party vendor. A TPM is a security device that supports encryption and authentication in hard drives. It enables the motherboard to deny access if the TPM associated with the hard drive is not installed in the system. See the table below for pin definitions.

Trusted Platform Module Header Pin Definitions

Pin#	Definition	Pin#	Definition
1	LCLK	2	GND
3	LFRAME#	4	No Pin
5	LRESET#	6	+5V (X)
7	LAD3	8	LAD2
9	3.3V	10	LAD1
11	LAD0	12	GND
13	SMB_CLK4 (X)	14	SMB_DAT4 (X)
15	P3V3_STBY	16	SERIRQ
17	GND	18	GND
19	P3V3_STBY	20	LDRQ# (X)

Front Panel Audio Header

A 10-pin audio header located on the motherboard allows you to use the onboard sound chip (ALC1150) for audio function. Connect an audio cable (not included) to the this header to use this feature.

Audio Header Pin Definitions

Pin#	Definition	Pin#	Definition
1	Microphone_Left	2	Audio_Ground
3	Microphone_Right	4	Audio_Detect
5	Line_2_Right	6	Ground
7	Jack_Detect	8	Key
9	Line_2_Left	10	Ground

Chassis Intrusion

A Chassis Intrusion header is located at JL1 on the motherboard. Attach the appropriate cable from the chassis to the header to inform you when the chassis is opened.

Chassis Intrusion Pin Definitions

Pins	Definition
1	Intrusion Input
2	Ground

COM Port

One serial COM port header is provided on the motherboard.

SATA Ports

The motherboard has six SATA 3.0 ports (I-SATA0-5) that are supported by the Intel PCH.

M.2 Slot

M.2 is formerly known as Next Generation Form Factor (NGFF). The M.2 slot (designated PCIE M.2 Connector 1) is designed for internal mounting devices. The C7B250-CB-ML motherboard deploys the 2242/2280 M-key dedicated for SSD devices with the ulitmate performance capability in a PCI Express 3.0 x4 interface for native PCI-E SSD support.

USB (Universal Serial Bus) Ports

Four USB 3.0 ports (USB4, 5, 6 ,7) and two USB 2.0 ports (USB0, 1) are located on the I/O back panel. In addition, one USB 3.0 header for two ports (USB8/9) and one USB 2.0 header for two ports: (USB2/3) are located on the motherboard to provide front chassis access using USB cables (not included). See the tables below for pin definitions.

Front Panel USB (2.0) Header Pin Definitions

Pin#	Definition	Pin#	Definition
1	+5V	2	+5V
3	USB_PN2	4	USB_PN3
5	USB_PP2	6	USB_PP3
7	Ground	8	Ground

Front Panel USB (3.0/2.0) Pin Definitions

Pin#	Definition	Pin#	Definition
1	+VBUS	11	IntA_P2_D+
2	IntA_P1_SSRX-	12	IntA_P2_D-
3	IntA_P1_SSRX+	13	Ground
4	Ground	14	IntA_P2_SSRX-
5	IntA_P1_SSRX-	15	IntA_P2_SSRX+
6	IntA_P1_SSRX+	16	Ground
7	Ground	17	IntA_P1_SSRX+
8	IntA_P1_D-	18	IntA_P1_SSRX+
9	IntA_P1_D+	19	VBUS
10	Ground		

Back Panel USB (2.0/3.0) Pin Definitions

Pin#	Definition	Pin#	Definition
1	+5V	5	+5V
2	USB_PN1	6	USB_PN0
3	USB_PP1	7	USB_PP0
4	Ground	8	Ground

Control Panel Header

JF1 contains header pins for various control panel connections. See the figure below for the pin locations and definitions of the control panel buttons and LED indicators.

All JF1 wires have been bundled into a single cable to simplify this connection. Make sure the red wire plugs into pin 1 as marked on the motherboard. The other end connects to the control panel PCB board

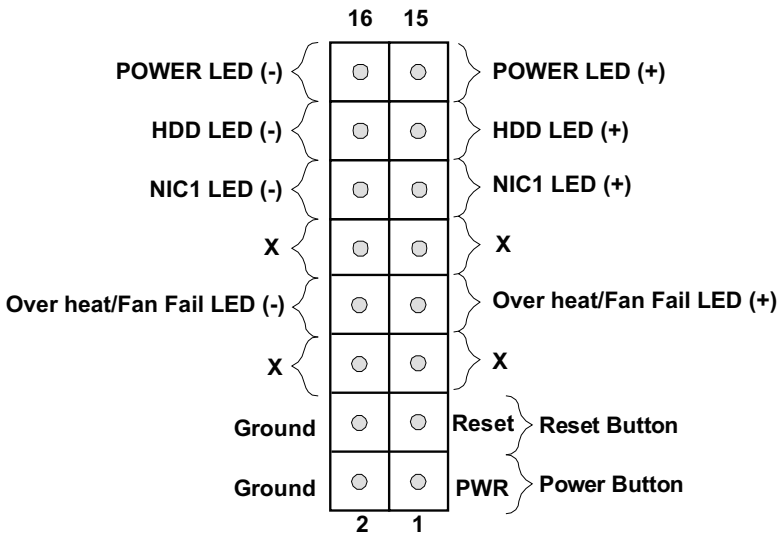


Figure 3-1. JF1: Control Panel Pins

Power Button

The Power Button connection is located on pins1 and 2 of JF1. Pressing this button will power on/off the system. The button can also be configured to function as a suspend button with a BIOS setting. To turn off the power in suspend mode, press the button for at least 4 seconds.

Power Button Pin Definitions (JF1)	
Pins	**Definition**
1	Signal
2	Ground

Reset Button

The Reset Button connection is located on pins 3 and 4 of JF1. Attach it to a hardware reset switch on the computer case to reset the system.

Reset Button Pin Definitions (JF1)	
Pins	**Definition**
3	Reset
4	Ground

Fan Fail

Connect an LED cable to Fan Fail connections on pins 7 and 8 of JF1 to provide warnings for chassis overheat/fan failure.

Fan Fail/Overheat Indicator Status	
Pin#	**Definition**
Off	Normal
On	Overheat
Flashing	Fan Fail

Fan Fail LED Pin Definitions (JF1)	
Pins	**Definition**
7	Vcc/Blue UID LED
8	Fan Fail LED

NIC1 (LAN)

The NIC (Network Interface Controller) LED connection for LAN port is located on pins 11 and 12 of JF1. This LED displays network activity on the LAN port.

LAN LED Pin Definitions (JF1)	
Pins	**Definition**
11	Vcc
12	Ground

HDD LED

The HDD LED connection is located on pins 13 and 14 of JF1. This LED indicates all HDD activity.

HDD LED Pin Definitions (JF1)	
Pins	**Definition**
13	+5V
14	HD Active

Power LED

The Power LED connection is located on pins 15 and 16 of JF1.

Power LED Pin Definitions (JF1)	
Pins	**Definition**
15	+5V
16	Power LED Active

3.3 Rear I/O Ports

See Section 1.3 for an illustration showing the rear I/O port locations.

DisplayPort

DisplayPort, develped by the VESA consortium, delivers digital display and fast refresh rates. It can connect to virtually any display device using a DisplayPort adapter for devices such as VGA, DVI or HDMI.

HDMI Port

The HDMI (High-Definition Multimedia Interface) port is used to display both high definition video and digital sound through an HDMI-capable display, using the same (HDMI) cable.

VESA® DisplayPort™

DisplayPort, develped by the VESA consortium, delivers digital display at a fast refresh rate. It can connect to virtually any display device using a DisplayPort adapter for devices such as VGA, DVI or HDMI.

Back Panel High Definition Audio (HD Audio)

This motherboard features a 7.1+2 Channel High Definition Audio (HDA) codec that provides 10 DAC channels. The HD Audio connections simultaneously supports multiple-streaming 7.1 sound playback with two channels of independent stereo output through the front panel stereo out for front, rear, center and subwoofer speakers.

SPDIF OUT (JSPDIF_OUT)

The SPDIF Out (JSPDIF_OUT) is used for digital audio output. You will also need the appropriate cable to use this feature.

USB (Universal Serial Bus) Ports

Four USB 3.0 ports (USB4, 5, 6 ,7) and two USB 2.0 ports (USB0, 1) are located on the I/O back panel. In addition, one USB 3.0 header for two ports (USB8/9) and one USB 2.0 header for two ports: (USB2/3) are located on the motherboard to provide front chassis access using USB cables (not included). See the tables below for pin definitions.

Front Panel USB (2.0) Header Pin Definitions

Pin#	Definition	Pin#	Definition
1	+5V	2	+5V
3	USB_PN2	4	USB_PN3
5	USB_PP2	6	USB_PP3
7	Ground	8	Ground

Front Panel USB (3.0/2.0) Pin Definitions

Pin#	Definition	Pin#	Definition
1	+VBUS	11	IntA_P2_D+
2	IntA_P1_SSRX-	12	IntA_P2_D-
3	IntA_P1_SSRX+	13	Ground
4	Ground	14	IntA_P2_SSRX-
5	IntA_P1_SSRX-	15	IntA_P2_SSRX+
6	IntA_P1_SSRX+	16	Ground
7	Ground	17	IntA_P1_SSRX+
8	IntA_P1_D-	18	IntA_P1_SSRX+
9	IntA_P1_D+	19	VBUS
10	Ground		

Back Panel USB (2.0/3.0) Pin Definitions

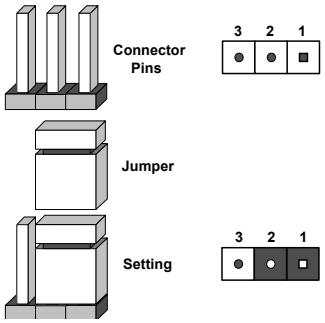
Pin#	Definition	Pin#	Definition
1	+5V	5	+5V
2	USB_PN1	6	USB_PN0
3	USB_PP1	7	USB_PP0
4	Ground	8	Ground

3.4 Jumpers

Explanation of Jumpers

To modify the operation of the motherboard, jumpers are used to choose between optional settings. Jumpers create shorts between two pins to change the function associated with it. Pin 1 is identified with a square solder pad on the printed circuit board. See the motherboard layout page for jumper locations.

Note: On a two-pin jumper, "Closed" means the jumper is on both pins and "Open" indicates the jumper is either on only one pin or has been completely removed.



CMOS Clear

JBT1 is used to clear CMOS, which will also clear any passwords. Instead of pins, this jumper consists of contact pads to prevent accidentally clearing the contents of CMOS.

To Clear CMOS


JBT1 contact pads

1. First power down the system and unplug the power cord(s).
2. Remove the cover of the chassis to access the motherboard.
3. Remove the onboard battery from the motherboard.
4. Short the CMOS pads with a metal object such as a small screwdriver for at least four seconds.
5. Replace the cover, reconnect the power cord(s) and power on the system.

Notes: Clearing CMOS will also clear all passwords.

Do not use the PW_ON connector to clear CMOS.

BIOS Recovery

The BIOS Recovery Jumper (JBR1) is a slide switch that is used to enable or disable the BIOS Recovery feature of the motherboard.

BIOS Recovery Jumper Settings	
Jumper Setting	**Definition**
Pins 1-2	Normal (Default)
Pins 2-3	BIOS Recovery

SMBus to PCI Slots

Jumpers JI²C1 and JI²C2 allow you to connect the System Management Bus (I²C) to the PCI-E/PCI slots. (JI²C1 controls the clock and JI²C2 controls the data). *Both jumpers must be set to the same setting.* The default setting is Enabled.

SMB to PCI-E Slots (JI²C1/JI²C2) Jumper Settings	
Jumper Setting	**Definition**
Pins 1-2	Enabled (Default)
Pins 2-3	Disabled

Watch Dog

JWD1 controls the Watch Dog function. Watch Dog is a monitor that can reboot the system when a software application hangs. Jumping pins 1-2 will cause Watch Dog to reset the system if an application hangs. Jumping pins 2-3 will generate a non-maskable interrupt signal for the application that hangs. Watch Dog must also be enabled in BIOS. The default setting is Reset. **Note:** When Watch Dog is enabled, the user must write their own application software to disable it.

Watch Dog Jumper Settings	
Jumper Setting	**Definition**
Pins 1-2	Reset (Default)
Pins 2-3	NMI
Open	Disabled

Manufacturing Mode Select

Close JPME2 to bypass SPI flash security and force the system to use the Manufacture Mode, which will allow you to flash the system firmware from a host server to modify system settings. The default setting is Normal.

Manufacturing Mode Jumper Settings	
Jumper Setting	**Definition**
Pins 1-2	Normal (Default)
Pins 2-3	Manufacturing Mode

USB Wakeup

Use jumper JPUSB to activate the "wake up" function of the USB ports by pressing a key on a USB keyboard or clicking the USB mouse. This jumper is used together with a USB Wake Up feature in the BIOS. Enable this jumper and the BIOS setting to use this feature.

USB Wakeup Jumper Settings	
Jumper Setting	**Definition**
Pins 1-2	Enabled
Pins 2-3	Disabled (Default)

3.5 LED Indicators

LAN Port LEDs

The Ethernet port has two LEDs. The Activity LED indicates network activity when flashing. The Link LED may be green, amber or off to indicate the speed of the connection.

LAN Port LEDs (Connection Speed Indicator)	
LED Color	**Definition**
Off	No Connection/10 Mb/s/100 Mb/s
Amber	1 Gb/s
Green	10 Gb/s

Onboard Power

LED1 is the onboard power LED. When on, the system is on. When blinking, the system is in S3 mode (Stand by, Susupend to RAM.

Onboard Power LED Indicator	
LED Color	**Definition**
Blinking Green	S3 Mode
On	System Power On
Off	System Off

Chapter 4

Software

This section describes the installation of drivers and management programs for the system.

4.1 Driver Installation

The Supermicro FTP site contains drivers and utilities for your system at ftp://ftp.supermicro.com. Some of these must be installed, such as the chipset driver.

After accessing the FTP site, go into the CDR_Images directory and locate the ISO file for your motherboard. Download this file to create a DVD of the drivers and utilities it contains. (You may also use a utility to extract the ISO file if preferred.)

After creating a DVD with the ISO files, insert the disk into the DVD drive on your system and the display shown in Figure 4-1 should appear.

Another option is to go to the Supermicro website at http://www.supermicro.com/products/. Find the product page for your motherboard here, where you may download individual drivers and utilities to your hard drive or a USB flash drive and install from there.

Note: To install the Windows OS, please refer to the instructions posted on our website at http://www.supermicro.com/support/manuals/.

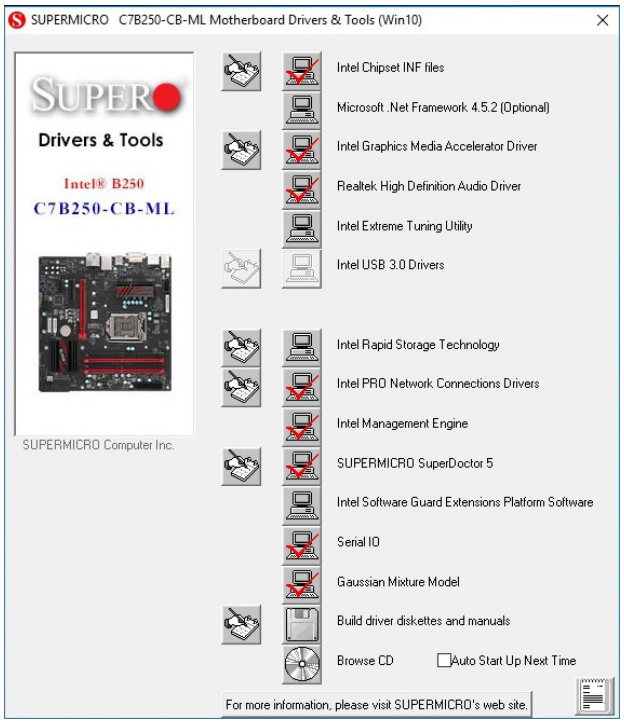


Figure 4-1. Driver & Tool Installation Screen

Note: Click the icons showing a hand writing on paper to view the readme files for each item. Click the computer icons to the right of these items to install each item (from top to the bottom) one at a time. After installing each item, you must re-boot the system before moving on to the next item on the list. The bottom icon with a CD on it allows you to view the entire contents.

4.2 SuperDoctor® 5

The Supermicro SuperDoctor 5 is a program that functions in a command-line or web-based interface for Windows and Linux operating systems. The program monitors such system health information as CPU temperature, system voltages, system power consumption, fan speed, and provides alerts via email or Simple Network Management Protocol (SNMP).

SuperDoctor 5 comes in local and remote management versions and can be used with Nagios to maximize your system monitoring needs. With SuperDoctor 5 Management Server (SSM Server), you can remotely control power on/off and reset chassis intrusion for multiple systems with SuperDoctor 5 or IPMI. SuperDoctor 5 Management Server monitors HTTP, FTP, and SMTP services to optimize the efficiency of your operation.

Note: The default User Name and Password for SuperDoctor 5 is ADMIN / ADMIN.

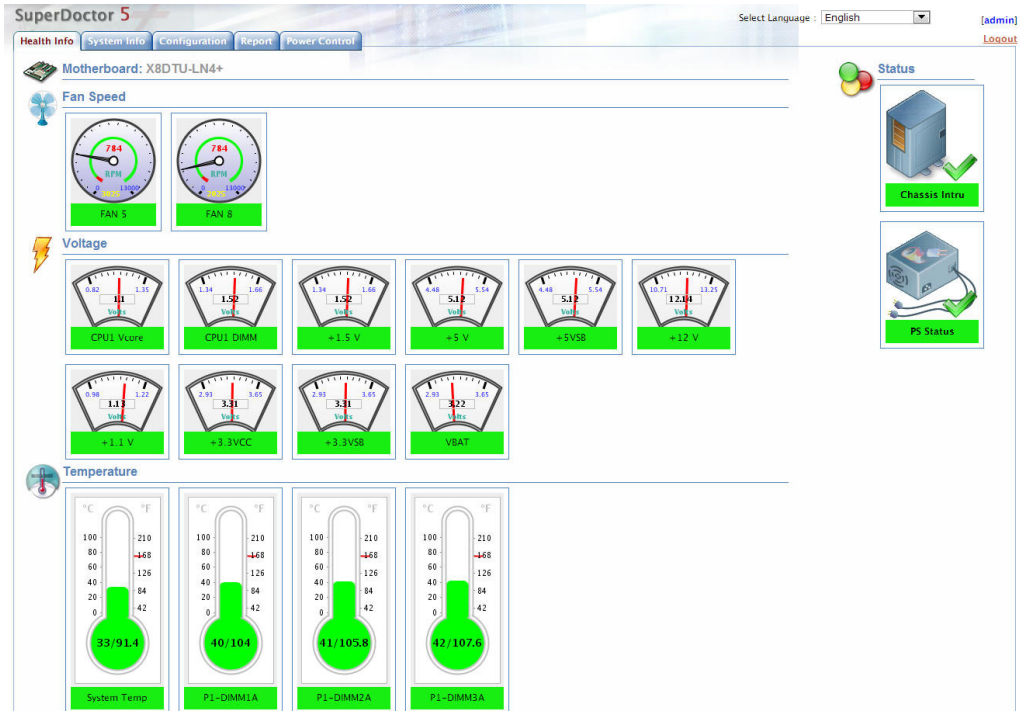


Figure 4-2. SuperDoctor 5 Interface Display Screen (Health Information)

Chapter 5

BIOS

5.1 Introduction

This chapter describes the AMI BIOS setup utility for the C7B250-CB-ML and provides the instructions on navigating the setup screens. The BIOS is stored in a Flash EEPROM and can be updated.

Note: Due to periodic changes to the BIOS, some settings may have been added or deleted since this manual was published. For AMI BIOS Recovery, please refer to the UEFI BIOS Recovery Instructions in Appendix D.

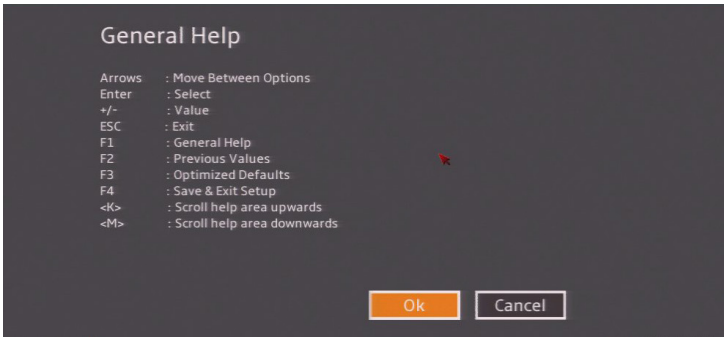
Starting BIOS Setup Utility

To enter the AMI BIOS setup utility, press the <Delete> key while the system is booting up.

Each BIOS menu option is described in this manual. The Main BIOS Setup screen has two main areas. The left area is for navigation, and the main area is the information section. The AMI BIOS GUI Setup Utility uses a mouse pointer navigation system similar to standard graphical user interfaces. Hover over and click an icon to select a section, click a down arrow to select from an options list. Icons that do not respond when the mouse pointer is hovering over them are not configurable.

You may press the <F1> on any screen under the Setup Section to see a list of Hot Keys that are available. Press <F12> to print the screen.

The keyboard's Escape key <ESC> cancels the current screen and will you back to the previous screen.



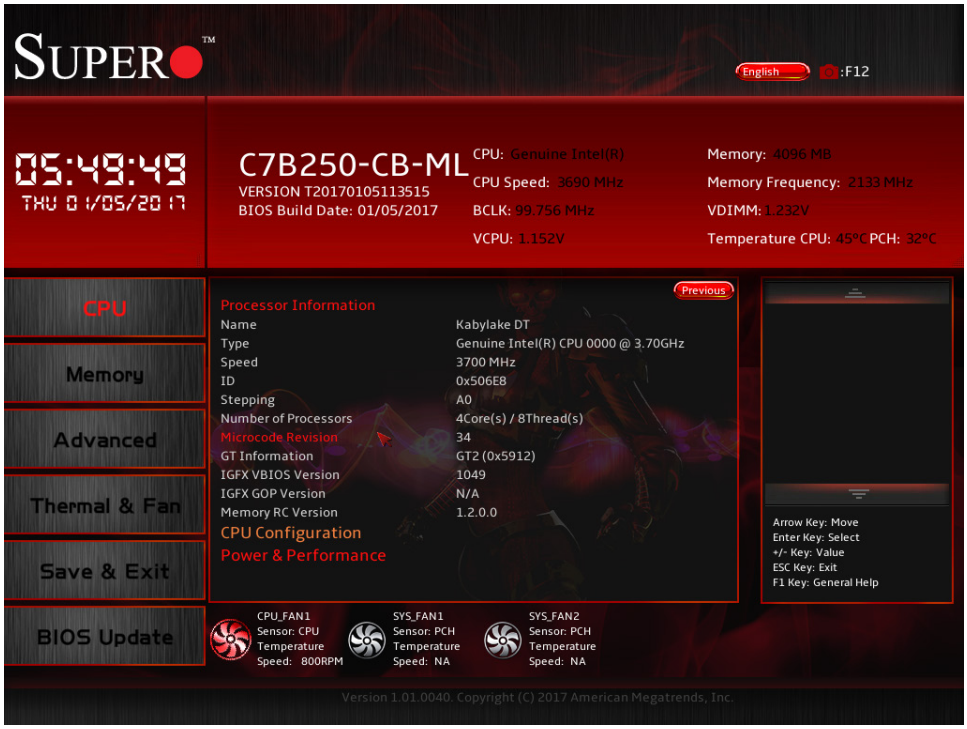
How To Change the Configuration Data

The configuration data that determines the system parameters may be changed by entering the AMI BIOS GUI Setup utility. This Setup utility can be accessed by pressing <Del> at the appropriate time during system boot.

Note: For the purposes of this manual, options that are printed in **Bold** are default settings.

5.2 System Information

The System Information Panel displays the motherboard configuration.



The following information is included in this section:

- Motherboard Model Name - C7B250-CB-ML.
- BIOS Version - this item displays the BIOS version number.
- Build Date and Time - displays the BIOS build date and time.
- CPU - displays the CPU type speed, stepping, etc
- CPU Fan Data - displays sensor type, temperature and speed.

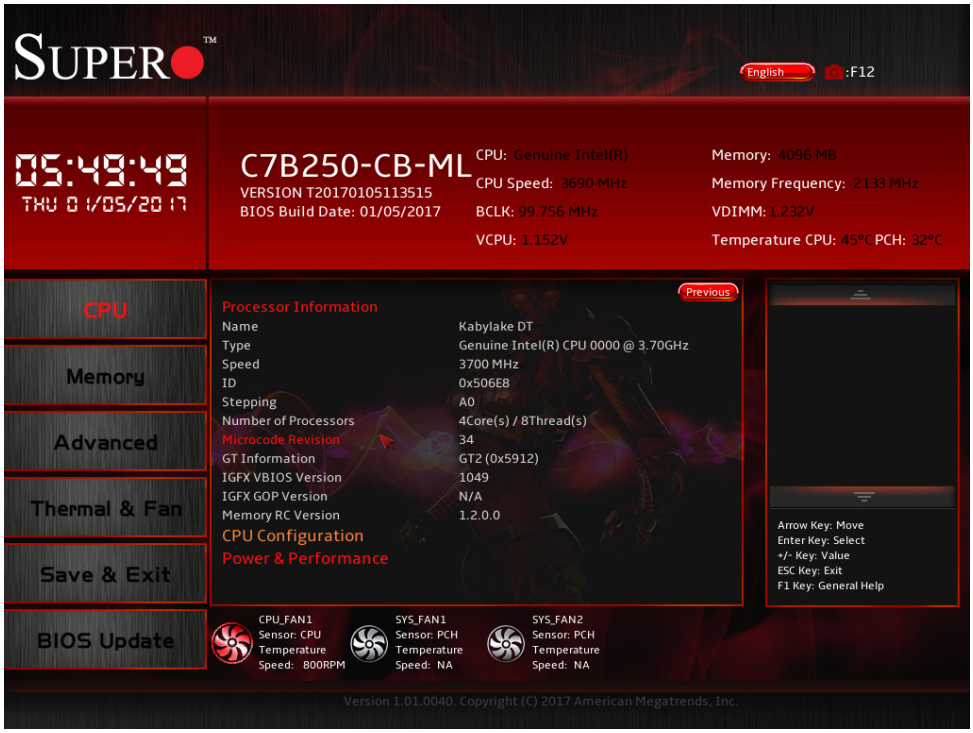
System Date

Click on the date to open the setup fields. This item sets and displays the system date. Click the up and down arrows to adjust the date.

System Time

Click on the time to open the setup fields. This item sets and displays the system time. Click the up and down arrows to adjust the system time.

5.3 CPU



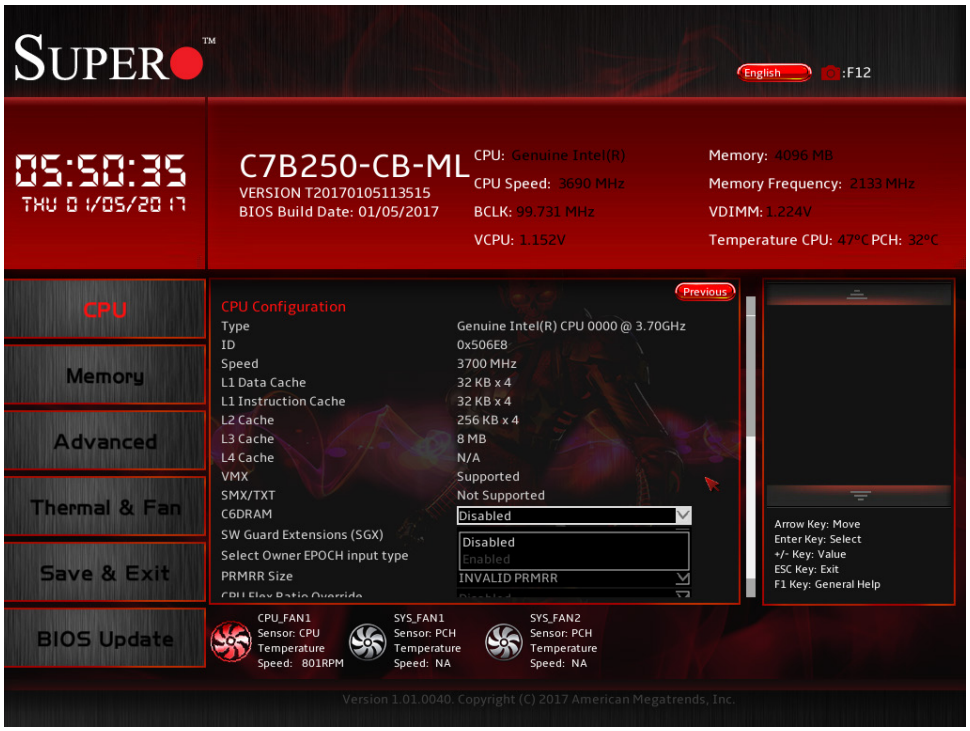
The following information is displayed in this section:

- Name - indicates the model name of the CPU.
- Type - indicates the brand, model name, model number of the CPU and its rated clock speed.
- Speed - this item shows the detected CPU speed.
- ID - displays the unique CPU ID.
- Stepping - displays the processor stepping.
- Number of Processors - displays the number of cores detected.
- Microcode Revision - displays the CPU's microcode patch version.

- GT Info - this item shows the processor's GT information.
- IGFX VBIOS Version - this item shows the Integrated Graphics VBIOS version.
- IGFX GOP Version - this item shows the Integrated Graphics VOP version.
- Memory RC Version - this item shows the memory RC version.

CPU Configuration

The following CPU information will be displayed:



- CPU Type - displays the CPU type.
- Type - indicates the brand, model name, model number of the CPU and its rated clock speed.
- ID - displays the unique CPU ID.
- Speed - this item shows the detected CPU speed.
- L1 Data Cache - indicates if Level 1 cache is supported.
- L1 Instruction Cache - displays if Level 1 instruction cache is supported.
- L2 Cache - indicates if Level 2 cache is supported.
- L3 Cache - displays whether Level 3 cache is supported or not.

- L4 Cache - indicates if Level 4 cache is supported.
- VMX - indicates if VMX is supported.
- SMX/TXT - indicates if SMX/TXT is supported.

SW Guard Extension (SGX)

Select Enabled to activate the Software Guard Extensions (SGX). The options are Enabled, Disabled, and **Software Controlled**. Please enable this option for SGX support.

CPU Flex Ratio Override

Select Enabled to activate CPU Flex Ratio programming. The options are Enabled and **Disabled**.

CPU Flex Ratio Settings

When CPU Flex Ratio Override is enabled, this sets the value for the CPU Flex Ratio. The default is **16**.

Hardware Prefetcher

(Available when supported by the CPU)

If set to Enabled, the hardware prefetcher will prefetch streams of data and instructions from the main memory to the L2 cache to improve CPU performance. The options are Disabled and **Enabled**.

Adjacent Cache Line Prefetch

(Available when supported by the CPU)

Select Enabled for the CPU to prefetch both cache lines for 128 bytes as comprised. Select Disabled for the CPU to prefetch both cache lines for 64 bytes. The options are Disabled and **Enabled**.

Intel® (VMX) Virtualization Technology

(Available when supported by the CPU)

Select Enabled to use the Intel Virtualization Technology to allow one platform to run multiple operating systems and applications in independent partitions, creating multiple "virtual" systems in one physical computer. The options are **Enabled** and Disabled.

Note: If there is any change to this setting, you will need to power off and reboot the system for the change to take effect. Please refer to Intel's website for detailed information.

Active Processor Cores

Use this feature to select the number of active processor cores. The options are **All**, 1, 2, 3 and 4. These options depend on how many cores are supported by the CPU.

Hyper-Threading

Select Enabled to support Intel Hyper-threading Technology to enhance CPU performance. The options are **Enabled** and Disabled.

BIST

Select Enabled to activate the Built-In Self Test (BIST) on reset. The options are Enabled and **Disabled**.

AES

Select Enable for Intel CPU Advanced Encryption Standard (AES) Instructions support to enhance data integrity. The options are **Enabled** and Disabled.

Machine Check

Select Enable to activate Machine Check. The options are **Enabled** and Disabled.

MonitorMWait

Select Enable to activate MonitorMWait. The options are **Enabled** and Disabled.

Intel® Trusted Executed Technology

Intel TXT (Trusted Execution Technology) helps protect against software-based attacks and ensures protection, confidentiality and integrity of data stored or created on the system. The options are Enabled and **Disabled**.

*If Intel Trusted Execution Technology is Enabled, the features Alias Check Request and DPR Memory Size are available for configuration.

Alias Check Request

Use this feature to set up Alias Check Request. The options are Enabled and Disabled.

Reset AUX Content

Use this feature to reset the TPM Auxiliary content. The options are yes or **no**.

CPU SMM Enhancement

SMM Code Access Check

SMM Code Access is a special operating mode that is used by the BIOS to handle power and hardware management functions. The options are **Disabled** and Enabled.

SMM Use Delay Indication

Enable SMM Use Delay Indication to check whether a thread will be delayed while entering SMM. The options are **Disabled** and Enabled.

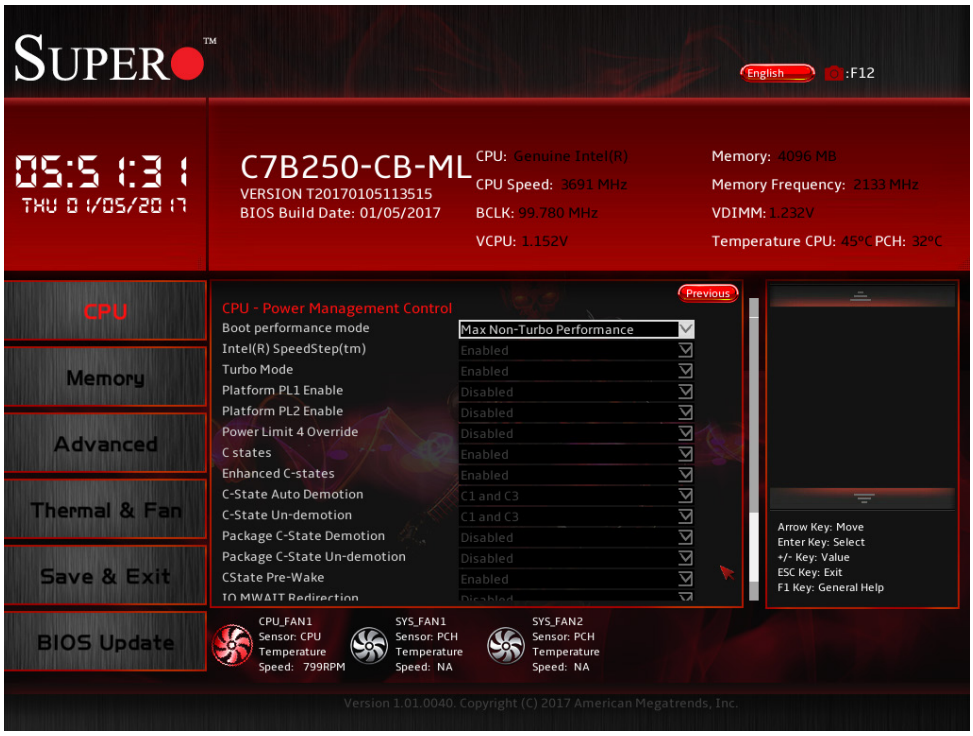
SMM Use Block Indication

Enable SMM Use Block Indication to check whether a thread is blocked from entering SMM. The options are **Disabled** and Enabled.

FCLK Frequency for Early Power On

Select the FCLK frequency for early power on. The options are Normal (800MHz), **1GHz** and 400MHz.

Power and Performance



CPU - Power Management Control

Boot Performance Mode

This option enables the selection of the default CPU performance during system boot. The options are **Max Non-Turbo Performance**, Max Battery, and Turbo Performance.

Intel(R) SpeedStep(tm)

Intel SpeedStep Technology allows the system to automatically adjust processor voltage and core frequency in an effort to reduce power consumption and heat dissipation. Please refer to Intel's website for detailed information. The options are Disabled and **Enabled**.

Turbo Mode

This feature allows processor cores to run faster than the frequency recommended by the manufacturer. The options are Disabled and **Enabled**.

Platform PL1 Enable

This option disables or enables the Platform Power Limit 1 programming. If this option is enabled, it activates the PL1 value to be used by the processor to limit the average power of the given time window. The options are **Disabled** and Enabled.

Platform PL2 Enable

This option disables or enables the Platform Power Limit 2 programming. If this option is enabled, it activates the PL1 value to be used by the processor to limit the average power of the given time window. The options are **Disabled** and Enabled.

Power Limit 4 Override

This feature disables or enables the Power Limit 4 Override. If this option is disabled, the BIOS will program the default values for Power Limit and Power Limit 4 Time Window. The options are **Disabled** and Enabled.

C states

C-States architecture, a processor power management platform developed by Intel, can further reduce power consumption from the basic C1 (Halt State) state that blocks clock cycles to the CPU. Select Enabled for CPU C Sates support. The options are Enabled and Disabled. If this feature is set to **Enabled**, the following items will display:

Enhanced C-states

(Available when "CPU C States" is set to Enabled)

Select Enabled to enable Enhanced C1 Power State to boost system performance. The options are **Enabled** and Disabled.

C-State Auto Demotion

When this item is enabled, the CPU will conditionally demote C State based on un-cored auto-demote information. The options are Disabled, C1, C3, and **C1 and C3**.

C-State Un-demotion

When this item is enabled, the CPU will conditionally undemote from demoted C3 or C1. The options are Disabled, C1, C3, and **C1 and C3**.

Package C-State Demotion

This item enables the Package C-State demotion. The options are **Disabled** and Enabled.

Package C-State Un-Demotion

When this item is enabled, the CPU will conditionally undemote from demoted Packaged Package C-State Un-Demotion. The options are **Disabled** and Enabled.

CState Pre-Wake

Use this option to enable or disable the C-State pre-wake. The options are **Enabled** and Disabled.

IO MWAIT Redirection

When enabled, this feature will map and send the IO read instructions to the IO registers. The options are **Disabled** and Enabled.

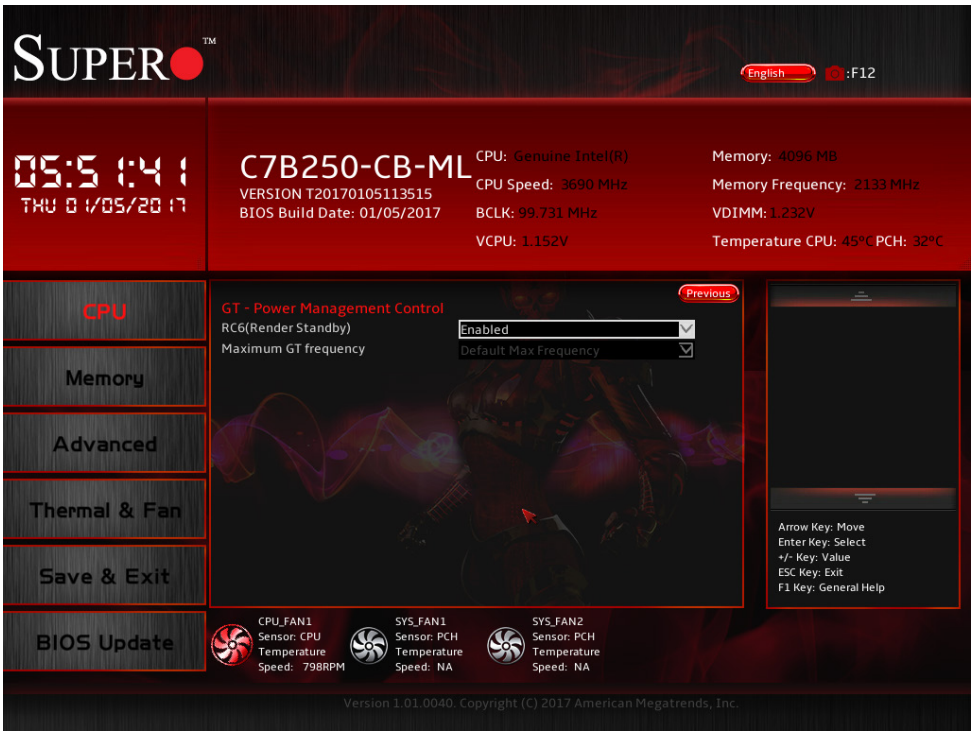
Package C State Limit

Select Auto for the AMI BIOS to automatically set the limit on the C-State package register. The options are C0, C2, C3, C6, C7, C7s, and **Auto**.

Package C State Workaround

Enable this feature to fix old HDDs that have problems entering the Package C State. The options are **Disabled** and Enabled.

GT-Power Management



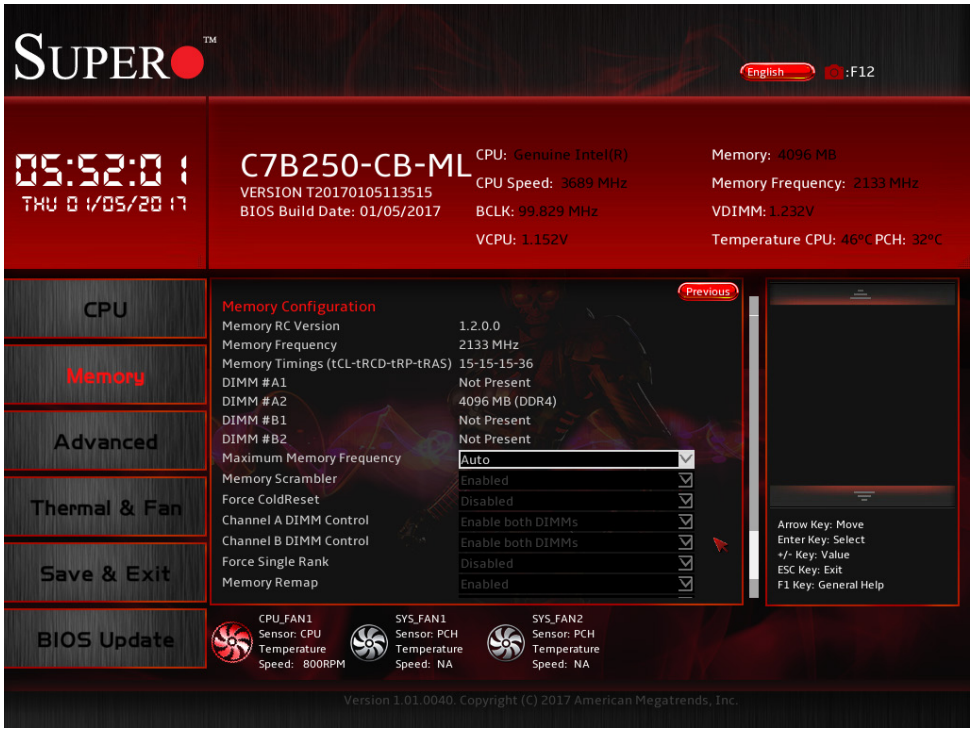
RC6 (Render Standby)

Use this feature enable Render Standby support. The options are **Enabled** and Disabled.

Maximum GT Frequency

This option is the Maximum GT Frequency as defined by the user. Choose between 300MHz (RPN) and 1200MHz (RP0). Any value beyond this range will be clipped to its min/max supported by the CPU. The options are **Default Max Frequency**, 100MHz through 1200MHz in increments of 50MHz.

5.4 Memory



The following information is displayed in this section:

- Memory RC Version
- Memory Frequency
- Memory Timings (tCL-tRCD-tRP-tRAS)
- DIMM#A1 ~ DIMM#B2

Maximum Memory Frequency

This option selects the type/speed of the installed memory. The options are 1333, 1600, 1867, 2133, 2400, 2667, 2933, and 3200. All values are in MHz. **Default speed is auto detected**.

Memory Scrambler

This feature enables or disables memory scrambler support for memory error correction. The settings are **Enabled** and Disabled.

Force ColdReset

Use this feature when ColdBoot is required during MRC execution. The settings are Enabled and **Disabled**.

Channel A DIMM Control

This feature enables or disables the selected Channel A DIMM slot(s). The settings are **Enable Both DIMMs**, Disable DIMM0, Disable DIMM1 and Disable Both DIMMs.

Channel B DIMM Control

This feature enables or disables the selected Channel B DIMM slot(s). The settings are **Enable Both DIMMs**, Disable DIMM0, Disable DIMM1 and Disable Both DIMMs.

Force Single Rank

When enabled, only Rank0 will be used in each DIMM. Settings are **Disabled** and Enabled.

Memory Remap

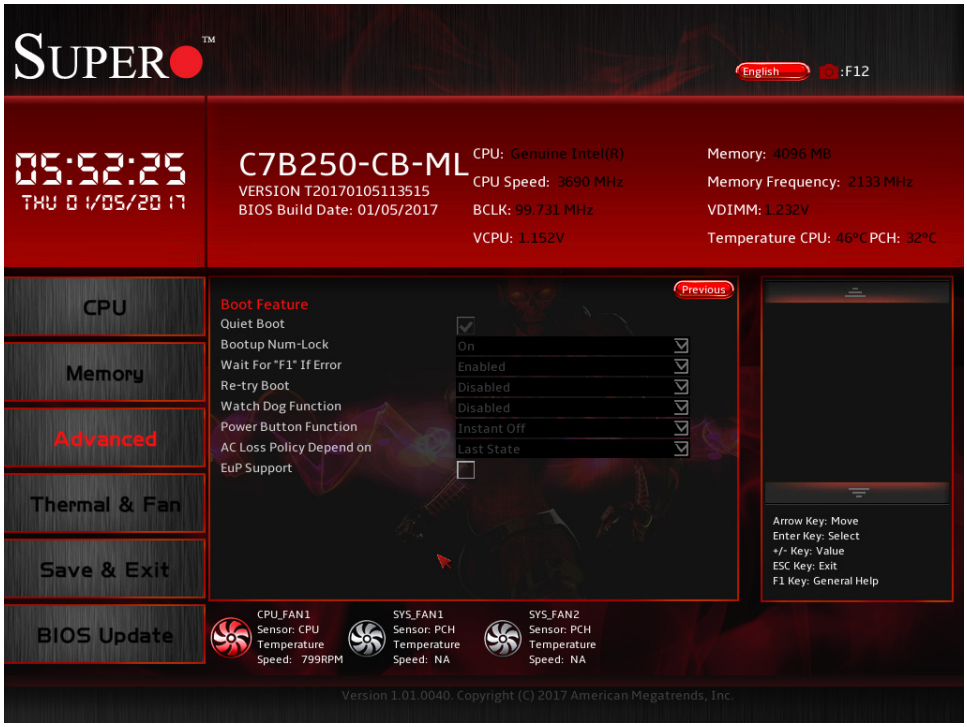
PCI memory resources will overlap with the total physical memory if 4GB of memory or above is installed on the motherboard. When this occurs, Enable this function to reallocate the overlapped physical memory to a location above the total physical memory to resolve the memory overlapping situation. The options are **Enabled** and Disabled.

MRC Fast Boot

This feature enables or disables fast path through MRC. The settings are **Enabled** and Disabled.

5.5 Advanced

Boot Features



Quiet Boot

Use this feature to select the screen display between the POST messages and the OEM logo upon bootup. Uncheck the box to display the POST messages. Check the box to display the OEM logo instead of the normal POST messages.

Bootup Num-Lock

Use this feature to set the Power-on state for the <Numlock> key. The options are Off and **On**.

Wait for "F1" If Error

Use this feature to force the system to wait until the 'F1' key is pressed if an error occurs. The options are Disabled and Enabled.

Re-try Boot

If this item is enabled, the BIOS will automatically reboot the system from a specified boot device after its initial boot failure. The options are **Disabled**, Legacy Boot, and EFI Boot.

Watch Dog Function

If enabled, the Watch Dog Timer will allow the system to reset or generate an NMI based on jumper settings when it has expired for more than 5 minutes. The options are **Disabled** and Enabled.

Power Button Function

This feature controls how the system shuts down when the power button is pressed. Select 4 Seconds Override for the user to power off the system after pressing and holding the power button for 4 seconds or longer. Select Instant Off to instantly power off the system as soon as the user presses the power button. The options are **Instant Off** and 4 Seconds Override.

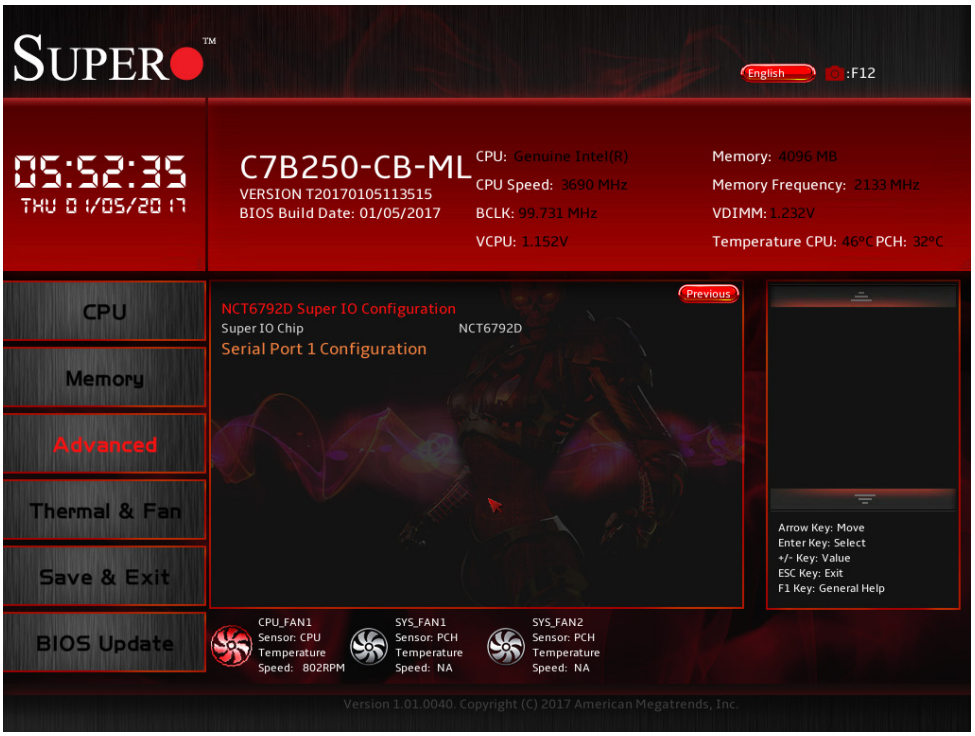
AC Loss Policy Depend On

Use this feature to set the power state after a power outage. Select Stay Off for the system power to remain off after a power loss. Select Power On for the system power to be turned on after a power loss. Select Last State to allow the system to resume its last power state before a power loss. The options are Stay Off, Power On, and **Last State**.

EuP Support

EuP, or Energy Using Product, is a European energy-saving specification that sets a standard on the maximum total power consumption on electrical products. Check the box to activate EUP support. The default is Unchecked (**Disabled**).

NCT6792D Super IO Configuration



SuperIO Chip NCT6792D

Serial Port 1 Configuration

Serial Port

This item will Enable or Disable Serial Port 1 (COM1). Place a tick mark on the box to enable Serial Port 1. The default is **Enabled**.

Device Settings

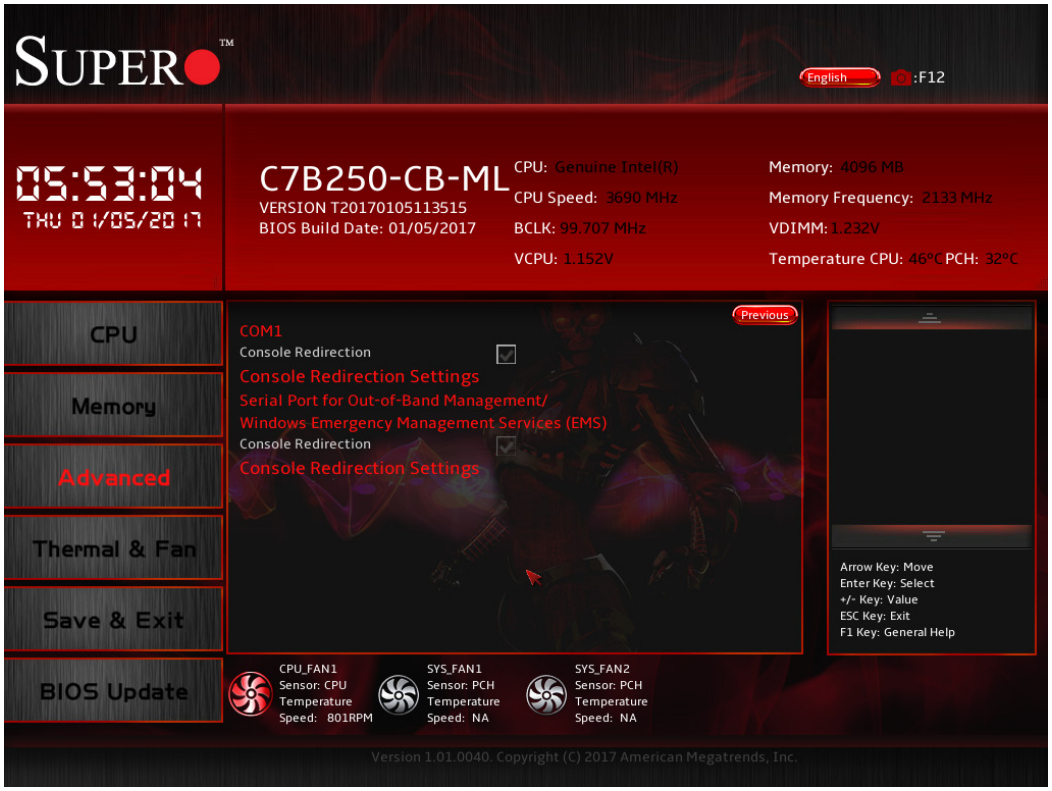
This item displays the current IRQ setting for Serial Port 1 (COM1).

Change Settings

This item configures the IRQ setting for Serial Port 1 (COM1).

The options for Serial Port 1 are **Auto**, IO=3F8h; IRQ=4, IO=3F8h; IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12, IO=2F8h; IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12), IO=3E8h; IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12 and IO=2E8h; IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12.

Serial Port Console Redirection



COM 1

Console Redirection

Select Enabled to enable COM Port 1 Console Redirection, which will allow a client machine to be connected to a host machine at a remote site for networking. The options are **Disabled** (unchecked) and Enabled (checked).

Note: If the item above set to Enabled, the following items will become available for configuration:

Console Redirection Settings

Terminal Type

This feature allows the user to select the target terminal emulation type for Console Redirection. Select VT100 to use the ASCII Character set. Select VT100+ to add color and function key support. Select ANSI to use the Extended ASCII Character Set. Select VT-UTF8 to use UTF8 encoding to map Unicode characters into one or more bytes. The options are **ANSI**, VT100, VT100+, and VT-UTF8.

Bits per second

Use this item to set the transmission speed for a serial port used in Console Redirection. Make sure that the same speed is used in the host computer and the client computer. A lower transmission speed may be required for long and busy lines. The options are 9600, 19200, 38400, 57600, and **115200** (bits per second).

Data Bits

Use this feature to set the data transmission size for Console Redirection. The options are 7 (Bits) and **8** (Bits).

Parity

A parity bit can be sent along with regular data bits to detect data transmission errors. Select Even if the parity bit is set to 0, and the number of 1's in data bits is even. Select Odd if the parity bit is set to 0, and the number of 1's in data bits is odd. Select None if you do not want to send a parity bit with your data bits in transmission. Select Mark to add a mark as a parity bit to be sent along with the data bits. Select Space to add a Space as a parity bit to be sent with your data bits. The options are **None**, Even, Odd, Mark and Space.

Stop Bits

A stop bit indicates the end of a serial data packet. Select 1 Stop Bit for standard serial data communication. Select 2 Stop Bits if slower devices are used. The options are **1** and 2.

Flow Control

Use this item to set the flow control for Console Redirection to prevent data loss caused by buffer overflow. Send a "Stop" signal to stop sending data when the receiving buffer is full. Send a "Start" signal to start sending data when the receiving buffer is empty. The options are **None** and Hardware RTS/CTS.

VT-UTF8 Combo Key Support

Select Enabled to enable VT-UTF8 Combination Key support for ANSI/VT100 terminals. The options are **Enabled** (checked) and Disabled (unchecked).

Recorder Mode

Select Enabled to capture the data displayed on a terminal and send it as text messages to a remote server. The options are Enabled (checked) and **Disabled** (unchecked).

Resolution 100x31

Select Enabled for extended-terminal resolution support. The options are **Enabled** (checked) and Disabled (unchecked).

Legacy OS Redirection Resolution

Use this item to select the number of rows and columns used in Console Redirection for legacy OS support. The options are **80x24** and 80x25.

Putty KeyPad

This feature selects Function Keys and KeyPad settings for Putty, which is a terminal emulator designed for the Windows OS. The options are **VT100**, LINUX, XTERMR6, SCO, ESCN, and VT400.

Redirection After BIOS POST

Use this feature to enable or disable legacy Console Redirection after BIOS POST. When the option-Bootloader is selected, legacy Console Redirection is disabled before booting the OS. When the option- Always Enable is selected, legacy Console Redirection remains enabled upon OS bootup. The options are **Always Enable** and Bootloader.

Legacy Console Redirection

Legacy Console Redirection Settings

Legacy Serial Redirection Port

Select a COM port for Legacy Serial Redirection. **The options are dependent on the available COM ports**.

Serial Port for Out-of-Band Management/Windows Emergency Management Services (EMS)

The submenu allows the user to configure Console Redirection settings to support Out-of-Band Serial Port management.

Console Redirection

Select Enabled to use a COM port selected by the user for EMS Console Redirection. The options are Enabled (checked) and **Disabled** (unchecked).

Note: If the item above set to Enabled, the following items will become available for user configuration:

Console Redirection Settings

Out-of-Band Mgmt Port

The feature selects a serial port in a client server to be used by the Windows Emergency Management Services (EMS) to communicate with a remote host server. **The options are dependent on the available COM ports**.

Terminal Type

Use this feature to select the target terminal emulation type for Console Redirection. Select VT100 to use the ASCII character set. Select VT100+ to add color and function key support. Select ANSI to use the extended ASCII character set. Select VT-UTF8 to use UTF8 encoding

to map Unicode characters into one or more bytes. The options are ANSI, VT100, VT100+, and **VT-UTF8**.

Bits per second

This item sets the transmission speed for a serial port used in Console Redirection. Make sure that the same speed is used in both host computer and the client computer. A lower transmission speed may be required for long and busy lines. The options are 9600, 19200, 57600, and **115200** (bits per second).

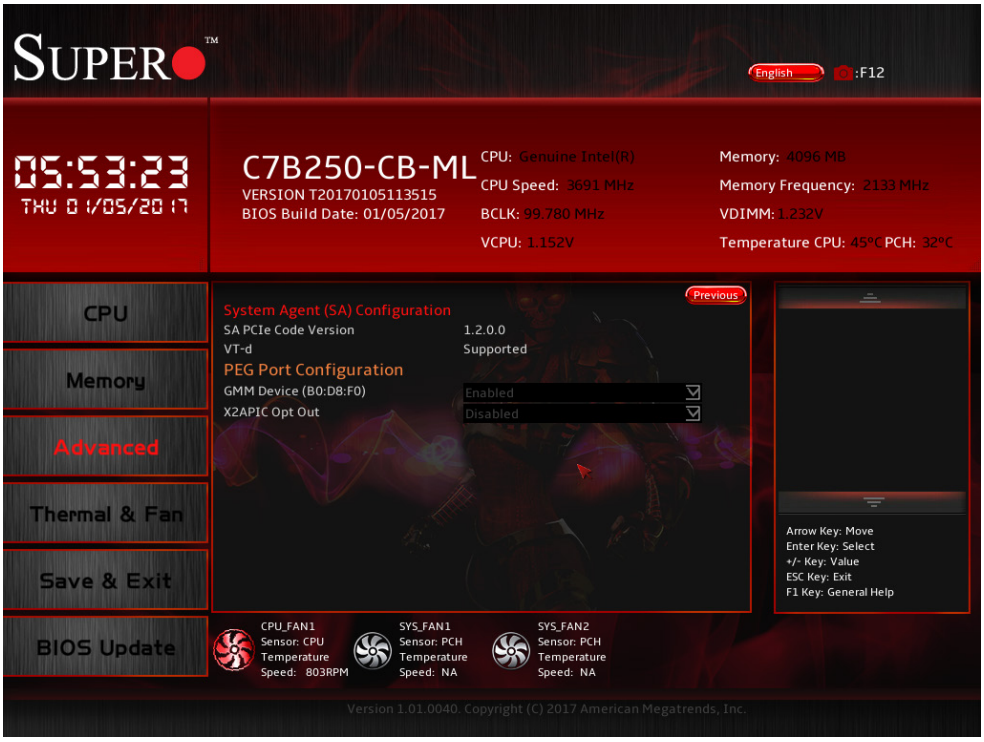
Flow Control

Use this item to set the flow control for Console Redirection to prevent data loss caused by buffer overflow. Send a "Stop" signal to stop data sending when the receiving buffer is full. Send a "Start" signal to start data sending when the receiving buffer is empty. The options are **None**, Hardware RTS/CTS, and Software Xon/Xoff.

The setting for each these features is displayed:

- Data Bits
- Parity
- Stop Bits

System Agent (SA) Configuration



The following will be displayed:

- SA PCIe Code Version
- VT-d Capability

PEG Port Configuration

PEG 0:1:0

Enable Root Port

Select Enable to activate the Root Port. The options are Disabled, Enabled, and **Auto**.

Max Link Speed

Select **Auto**, Gen1, Gen2, or Gen3 to set the PEG Max Link Speed.

PEG0 Slot Power Limit Value

This option sets the upper limit of the power supplied by the slot (in Watts). It is calculated by multiplying this value by the Slot Power Limit Scale. Valid range is from 0-255.

PEG0 Slot Power Limit Scale

This option sets the scale of the Slot Power Limit Value (above). The options are **1.0x**, 0.1x, 0.01x, and 0.001x.

PEG0 Physical Slot Number

This option sets the physical slot number attached to this port. The number has be globally unique within the chassis. Valid range is from 0-8191.

PEG 0:1:1

Enable Root Port

Select Enable to activate the Root Port. The options are Disabled, Enabled, and **Auto**.

Max Link Speed

Select **Auto**, Gen1, Gen2, or Gen3 to set the PEG Max Link Speed.

PEG1 Slot Power Limit Value

This option sets the upper limit of the power supplied by the slot (in Watts). It is calculated by multiplying this value by the Slot Power Limit Scale. Valid range is from 0-255.

PEG1 Slot Power Limit Scale

This option sets the scale of the Slot Power Limit Value (above). The options are **1.0x**, 0.1x, 0.01x, and 0.001x.

PEG1 Physical Slot Number

This option sets the physical slot number attached to this port. The number has be globally unique within the chassis. Valid range is from 0-8191.

PEG 0:1:2

Enable Root Port

Select Enable to activate the Root Port. The options are Disabled, Enabled, and **Auto**.

Max Link Speed

Select **Auto**, Gen1, Gen2, or Gen3 to set the PEG Max Link Speed.

PEG2 Slot Power Limit Value

This option sets the upper limit of the power supplied by the slot (in Watts). It is calculated by multiplying this value by the Slot Power Limit Scale. Valid range is from 0-255.

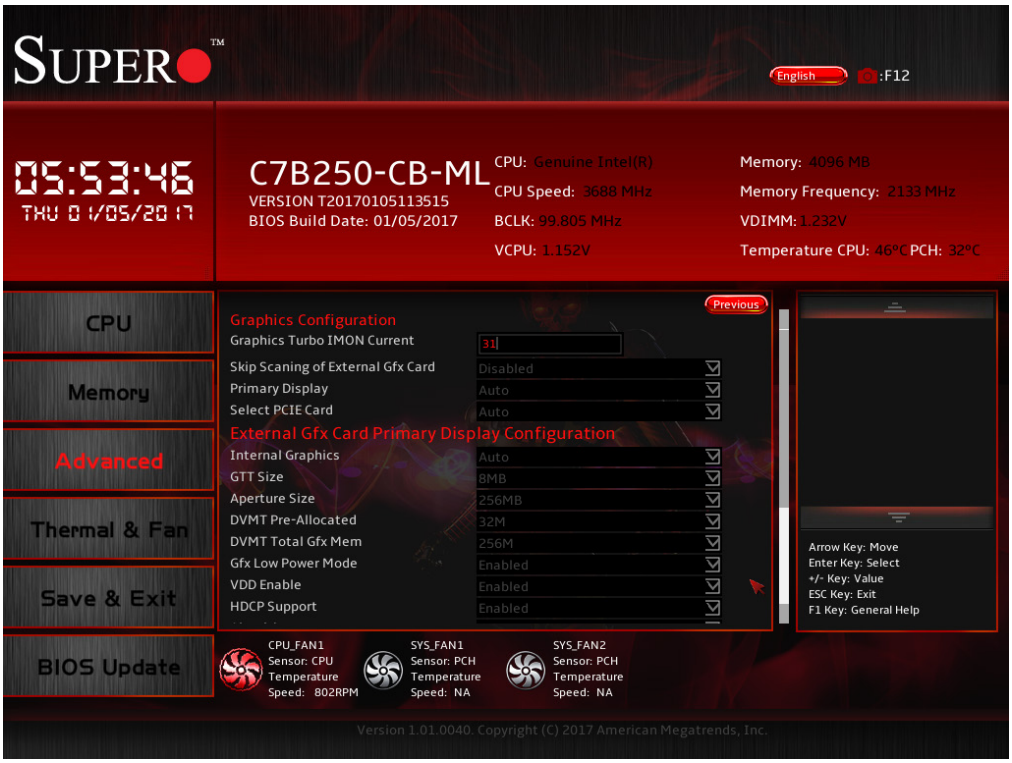
GMM Device (B0:D8:F0)

This feature will enable/disable the SA GMM device. The options are Disabled and **Enabled**.

X2APIC Opt Out

X2APIC, an extension of the XAPIC architecture, is designed to support 32-bit processor addressability. X2APIC enhances the performance of interrupt delivery. The options are **Disabled** and Enabled.

Graphics Configuration



Graphics Turbo IMON Current

Use this feature to set the limit on the current voltage regulator. Valid range is 14-31. Default is **31**.

Skip Scanning of External Gfx Card

Use this feature to scan for External Gfx Card on PEG and PCH PCIE Ports. If this feature is enabled, the system will not scan for a new card. The options are **Disabled** or Enabled.

Primary Display

Use this feature to select the graphics device to be used as the primary display. Select from IGFX/PEG/PCI or select SG for switchable GFX. The options are **Auto**, IGFX, PEG, PCIE and SG.

Select PCIE Card

Use this feature to select either Elk Creek 4, PEG Eval or **Auto** to use on the platform.

External Gfx Card Primary Display Configuration

Primary PEG

This feature allows the user to select the primary PCI Express Graphics (PEG) slot. The options are **Auto**, PEG11, and PEG12.

Primary PCIE

This feature allows the user to specify which graphics card to be used as the primary graphics card. The options are **Auto**, PCIE1, PCIE2, PCIE3, PCIE4, PCIE5, PCIE6, PCIE7, PCIE8, PCIE9, PCIE10, PCIE11, PCIE12, PCIE13, PCIE14, PCIE15, PCIE16, PCIE17, PCIE18, and PCIE19.

Internal Graphics

This item keeps the Internal Graphics Device (IGD) enabled, based on setup options. The options are **Auto**, Enabled, and Disabled.

GTT Size

Use this feature to set the memory size to be used by the graphics translation table (GTT). The options are 2MB, 4MB, and **8MB**.

Aperture Size

Use this feature to set the Aperture size, which is the size of system memory reserved by the BIOS for graphics device use. The options are 128MB, **256MB**, 512MB, 1024MB and 2048MB.

DVMT Pre-Allocated

Dynamic Video Memory Technology (DVMT) allows dynamic allocation of system memory to be used for video devices to ensure best use of available system memory based on the DVMT 5.0 platform. The options are 0M, 4M, 8M, 12M, 16M, 20M, 24M, 28M, **32M**, 32M/F7, 36M, 40M, 44M, 48M, 52M, 56M, and 60M.

DVMT Total Gfx Mem

Use this feature to set the total memory size to be used by internal graphics devices based on the DVMT 5.0 platform. The options are 128MB, **256MB**, and MAX.

Gfx Low Power Mode

Select Enabled to use the low power mode for internal graphics devices installed in a small form factor (SFF) computer. The options are **Enabled** and Disabled.

VDD Enable

Activating this feature will force VDD in the BIOS. The options are Disabled and **Enabled**.

HDCP Support

Activating this feature will enable HDCP (High-bandwidth Digital Content Protection) BIOS support. The options are Disabled and **Enabled**.

Algorithm

Select either **One-Time** or Periodic for HDCP re-encryption flow.

PM Support

Activating this feature will enable Power Management BIOS support. The options are Disabled and **Enabled**.

PAVP Enable

Use the feature to enable Protect Audio Video Path Mode. The options are **Enabled** and Disabled.

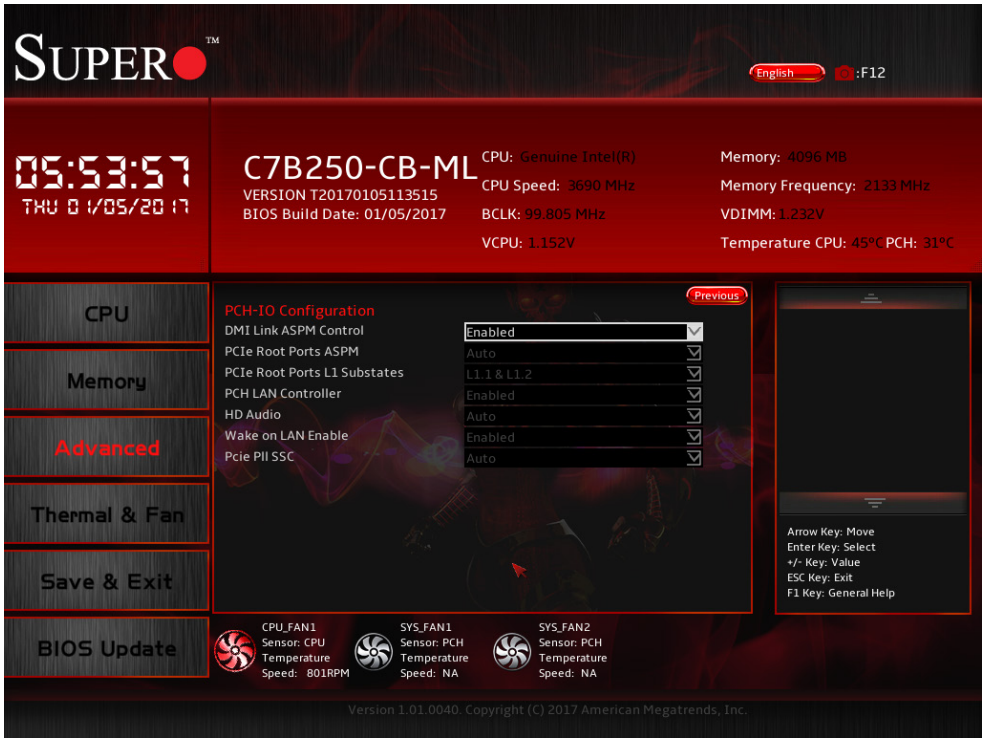
Cdynmax Clamping Enable

Enable this option to activate Cdynmas Clamping. The options are **Enabled** and Disabled.

Graphics Clock Frequency

Use this feature to set the internal graphics clock frequency. The options are 337.5MHz, 450MHz, 540MHz, and **675MHz**.

PCH-IO Configuration



DMI Link ASPM Control

Use this feature to set the ASPM (Active State Power Management) state on the SA (System Agent) side of the DMI Link. The options are **Enabled** and Disabled.

PCIe Root Ports ASPM

Use this feature to set the Active State Power Management (ASPM) to power manage the PCIe link during the various L states. The options are **Auto**, L0sL1, L1, L0s, and Disabled.

PCIe Root Ports L1 Substates

Use this feature to define which L1 substate to use. The options are Disabled, L1.1, L1.2, and **L1.1&L1.2**.

PCH LAN Controller

Use this feature to enable or disable the PCH LAN Controller. The options are Disabled and **Enabled**.

HD Audio

Use this feature to detect an HD Audio device. The options are Disabled, Enabled, and **Auto**.

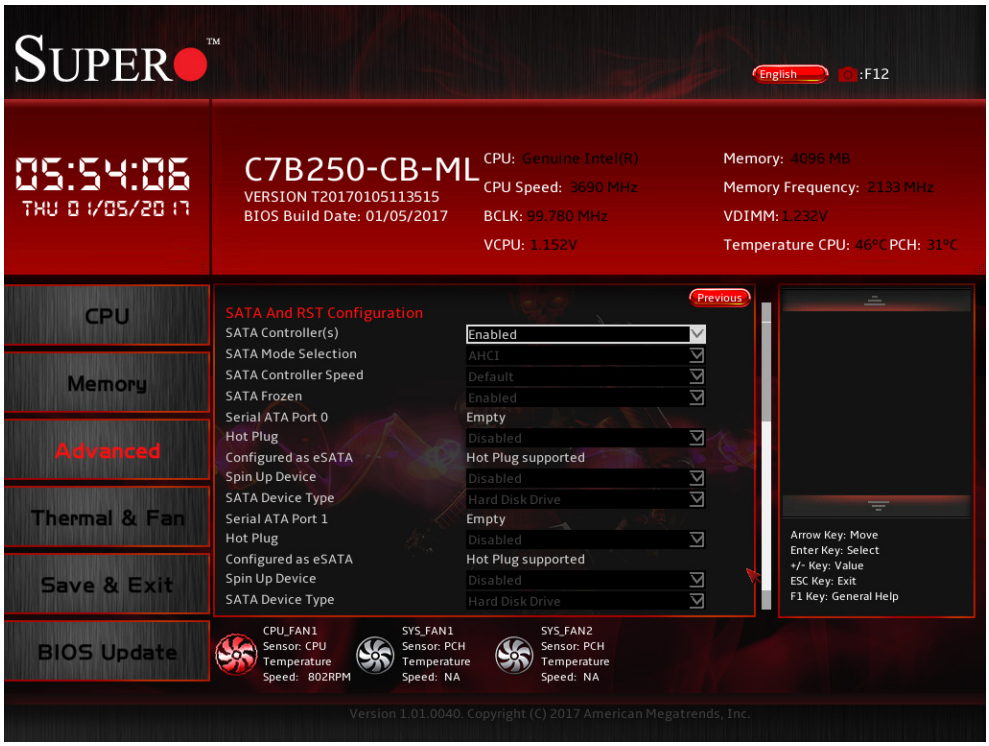
Wake on LAN Enable

Select Enabled to enable the capabiltiy to 'wake up' the system through the Ethernet port. The settings are **Enabled** and Disabled.

Pcie PII SSC

Use this feature to set the PCIE PII SSC percentage. Select Auto to keep the hardware default with no BIOS override. The range is from 0.0% to 2.0%.

SATA and RST Configuration



SATA Controllers

Select Disabled to disable the onboard SATA Controllers. The settings are **Enabled** and Disabled.

SATA Mode Selection

This item selects the mode for the installed SATA drives. The options are **AHCI** and Intel RST Premium.

SATA Controller Speed

Use this option to specify the maximum speed the SATA controller can support. The options are **Default**, Gen 1, Gen 2, and Gen 3.

SATA Frozen

Select Disabled to disable the Freeze Lock Security feature. The settings are **Enabled** and Disabled.

The remaining options in the section are similar across Serial ATA Ports 0 through 5.

Serial ATA Port

This item displays the detected SATA drive, if any.

Hot Plug

This feature designates the port specified for hot plugging. Set this item to Enabled for hot-plugging support, which will allow the user to replace a SATA disk drive without shutting down the system. The options are Enabled and **Disabled**.

Configured as eSATA

This item displays the eSATA status for the detected hard drive.

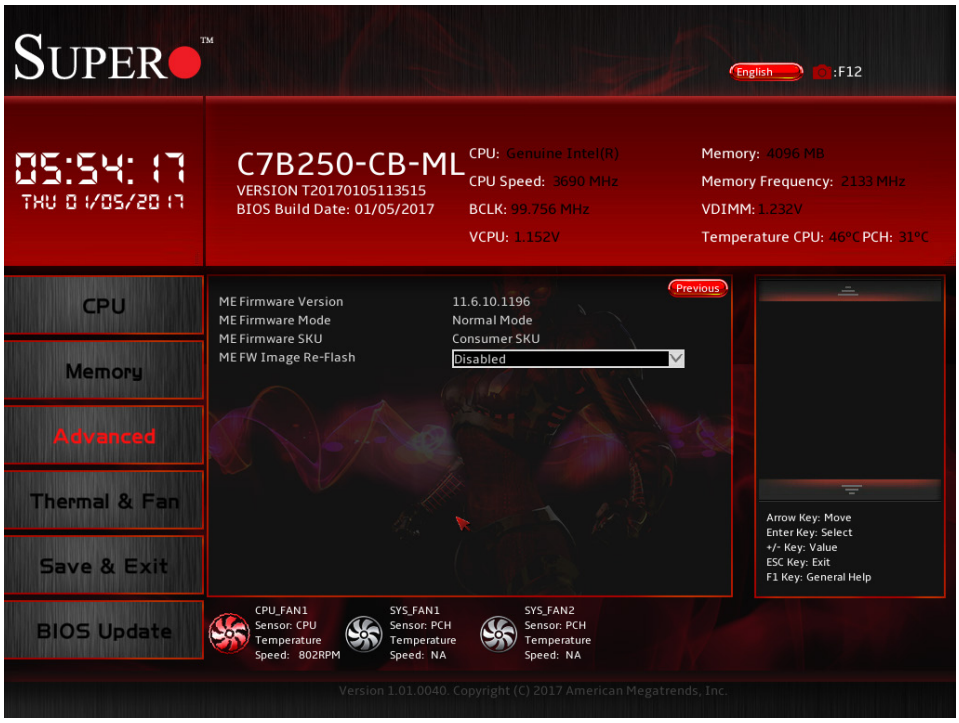
Spin Up Device

When this option is disabled, all drives will spin up at boot. When this option is enabled, it will perform Staggered Spin Up on any drive this option is activated. The settings are Enabled and **Disabled**.

SATA Device Type

Use this feature to identify the type of HDD that is connected to the SATA port. The options are Hard Disk Drive and Solid State Drive.

PCH FW Configuration

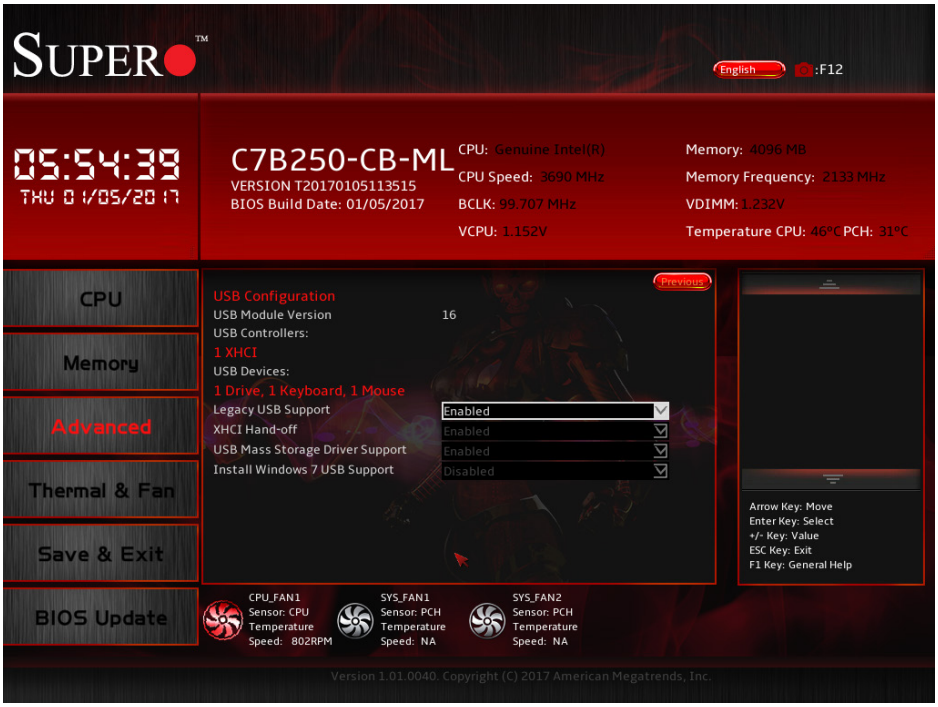


The following information is shown for the PCH Firmware.

- ME Firmware Version
- ME Firmware Mode
- ME Firmware SKU
- ME FW Image Re-Flash

This item will update the PCH Firmware from an image in a USB flash drive attached to a USB port. The options are Enabled and **Disabled**.

USB Configuration



The following information is shown for USB Configuration.

- USB Module Version
- USB Controllers
- USB Devices

Legacy USB Support

Select Enabled to support legacy USB devices. Select Auto to disable legacy support when legacy USB devices are not present. If Disable is selected, legacy USB devices will not be supported. The options are **Enabled**, Disabled, and Auto.

XHCI Hand-Off

This item is a work-around solution for operating systems that do not support XHCI (Extensible Host Controller Interface) hand-off. The XHCI ownership change should be claimed by the XHCI driver. The options are **Enabled** and Disabled.

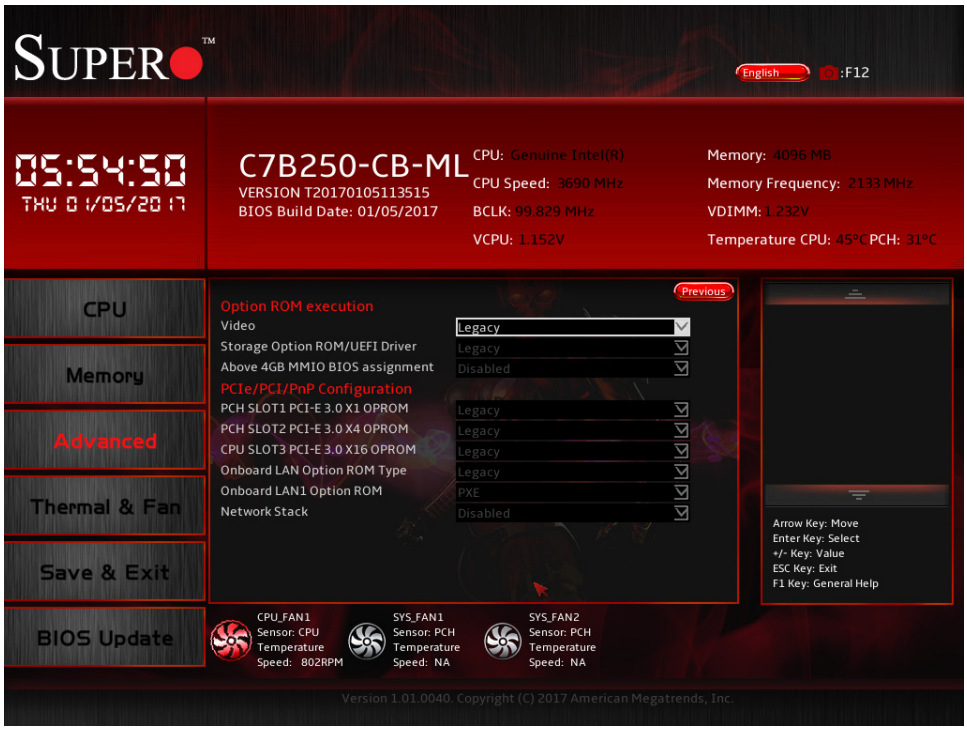
USB Mass Storage Driver Support

Select Enabled for USB mass storage device support. The options are Disabled and **Enabled**.

Install Windows 7 USB Support

Enable this feature to use the USB keyboard and mouse during the Windows 7 installation, since the native XHCI driver support is unavailable. Use a SATA optical drive such as a USB drive. USB CD/DVD drives are not supported. Disable this feature after the XHCI driver has been installed in Windows. The options are **Disabled** and Enabled.

PCIe/PCI/PnP Configuration



Option ROM Execution

Video

This feature controls which option ROM to execute for the Video device. The options are Do Not Launch, UEFI, and **Legacy**.

Storage Option ROM/UEFI Driver

This feature controls which option ROM to execute for the storage device. The options are Do Not Launch, UEFI, and **Legacy**.

Above 4GB MMIO BIOS Assignment

Select Enable for remapping of BIOS above 4GB. The options are Enabled and **Disabled**.

PCIe/PCI/PnP Configuration

PCH SLOT1 PCI-E 3.0 X1 OPROM,

PCH SLOT2 PCI-E 3.0 X4 OPROM

CPU SLOT3 PCI-E 3.0 X16 OPROM

Select Disabled to deactivate the selected slot, Legacy to activate the slot in legacy mode and EFI to activate the slot in EFI mode. The options are Disabled, **Legacy**, and EFI.

Onboard LAN Option ROM type

Use this feature to select the type of option ROM installed. The options are EFI and **Legacy**.

Onboard LAN1 Option ROM

Select PXE (Preboot Execution Environment) to boot the computer using a PXE device installed in a specified LAN port. Select Disabled to prevent system boot using a device installed in a LAN port. The options are Disabled and **PXE**.

Network Stack

Select Enabled to enable PXE (Preboot Execution Environment) or UEFI (Unified Extensible Firmware Interface) for network stack support. The options are Enabled and **Disabled**. If this feature is enabled, the two features below are available.

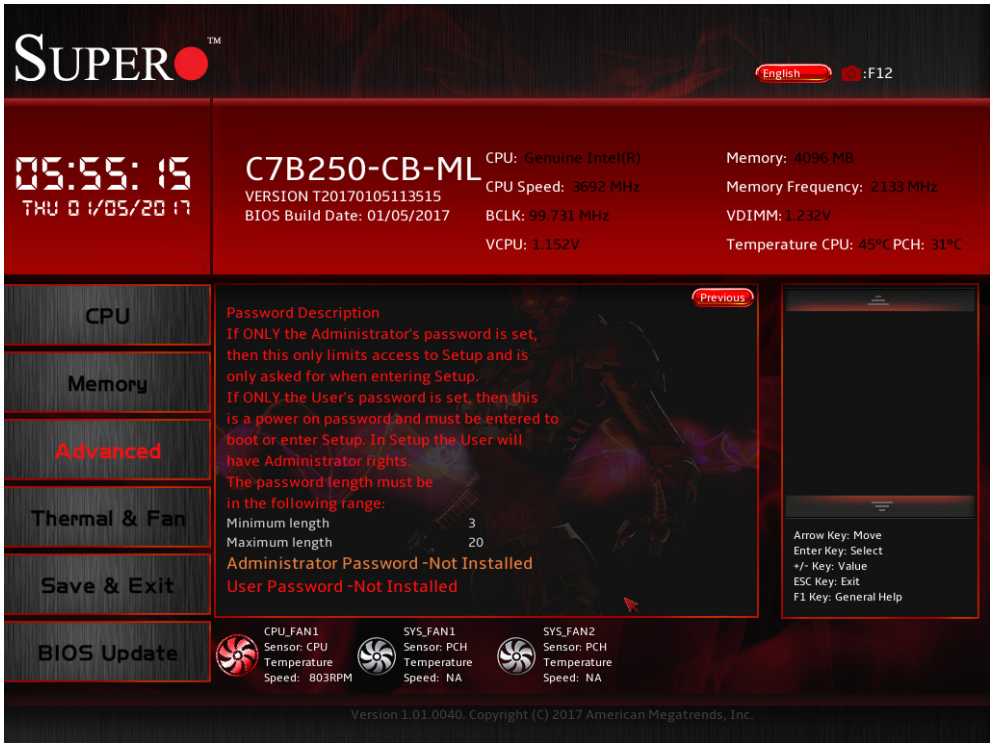
Ipv4 PXE Support

Select Enabled to enable Ipv4 PXE (Preboot Execution Environment) for boot support. If this feature is set to Disabled, Ipv4 PXE boot option will not be supported. The options are **Enabled** and Disabled.

Ipv6 PXE Support

Select Enabled to enable Ipv6 PXE (Preboot Execution Environment) for boot support. If this feature is set to Disabled, Ipv6 PXE boot option will not be supported. The options are Enabled and **Disabled**.

Security



This menu allows the user to configure the following security settings for the system.

- If the ONLY the Administrator's password is defined - this controls access to the BIOS setup only.
- If the ONLY the User's password is defined - this password will need to be entered upon each system boot, and will also have Administrator rights in the setup.
- Passwords must be at least 3 and up to 20 characters long.

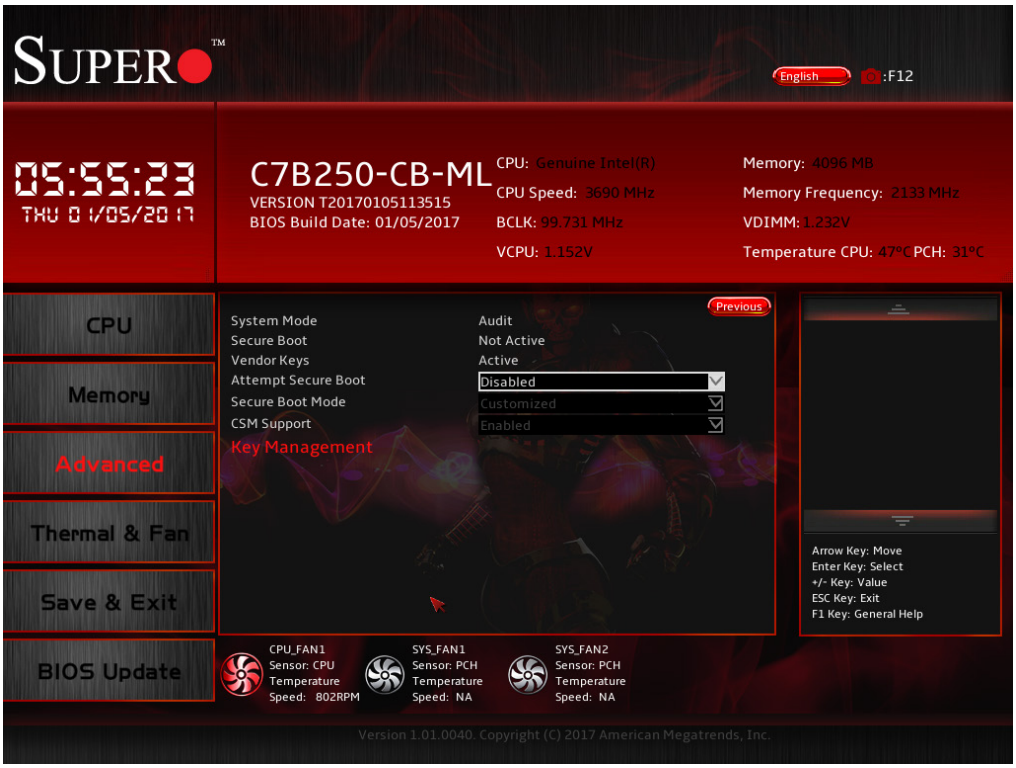
Administrator Password

Use this feature to set the Administrator Password which is required to enter the BIOS setup utility. The length of the password should be from 3 to 20 characters long.

User Password

Use this feature to set the User Password, which is required every time the system boots. The length of the password should be from 3 to 20 characters long.

Secure Boot



The following items will be displayed:

- System Mode
- Secure Boot
- Vendor Keys

Attempt Secure Boot

Select Enabled for Secure Boot flow control. This feature is available when the platform key (PK) is pre-registered, the platform operates in the user mode, and CSM is disabled in the Setup utility. The options are **Disabled** and Enabled.

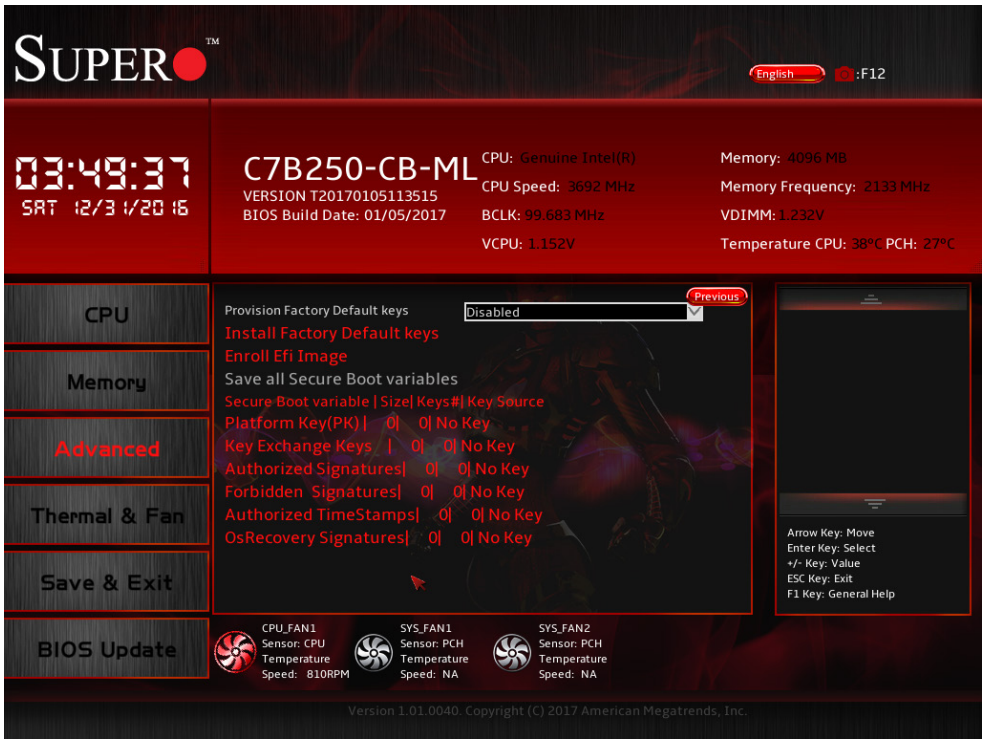
Secure Boot Mode

This feature allows selection of the Secure Boot Mode between Standard and Custom. Selecting Custom enables users to change the Image Execution Policy and manage Secure Boot Keys. The options are **Custom** and Standard.

CSM Support

Select enabled to support the Compatibility Support Module (CSM), which provides compatibility support for traditional legacy BIOS for system boot. The options are **Enabled** and Disabled.

Key Management



Provision Factory Default Keys

Allows provisioning the factory default secure boot keys when system is in setup mode. The options are **Disabled** and Enabled.

(if Secure Boot Mode is set to 'Custom')

Key Management allows experienced users to modify Secure Boot Variables.

Install Factory Default Keys

This option forces the system to install the factory default keys. Click Yes or No.

Enroll Efi Image

This option allows the image to run in Secure Boot Mode. Enroll SHA256 Hash Certificate of the image into the Authorized Signature Database.

Save All Secure Boot Variables

This option saves all revised Secure Boot settings.

Platform Key (PK)

This item uploads and installs a secure Platform Key. You may insert a factory default key or load from a file. The file formats accepted are: 1) Public Key Certificate

a. EFI Signature List

b. EFI CERT X509 (DER Encoded)

c. EFI CERT RSA2048 (bin)

d. EFI SERT SHA256 (bin)

2) EFI Time Based Authenticated Variable

When prompted, select "Yes" to load Factory Defaults or "No' to load from a file.

Delete Key Exchange Key

This item deletes a previously installed Key Exchange Key.

Key Exchange Keys

This item uploads and installs a Key Exchange Key. You may insert a factory default key or load from a file. When prompted, select "Yes" to load Factory Defaults or "No' to load from a file.

Append Key Exchange Key

This item uploads and adds a Key Exchange Key into the Key Management. You may insert a factory default key or load from a file. When prompted, select "Yes" to load Factory Defaults or "No' to load from a file.

Delete Authorized Signature

This item deletes a previously installed Authorized Signature.

Authorized Signatures

This item uploads and installs an Authorized Signature . You may insert a factory default key or load from a file. The file formats accepted are: 1) Public Key Certificate

a. EFI Signature List

b. EFI CERT X509 (DER Encoded)

c. EFI CERT RSA2048 (bin)

d. EFI SERT SHA256 (bin)

2) EFI Time Based Authenticated Variable

When prompted, select "Yes" to load Factory Defaults or "No' to load from a file.

Append Authorized Signature

This item uploads and adds an Authorized Signature into the Key Management. You may insert a factory default key or load from a file. When prompted, select "Yes" to load Factory Defaults or "No' to load from a file.

Delete Forbidden Signature

This item deletes a previously installed Forbidden Signature.

Forbidden Signatures

This item uploads and installs a Forbidden Signature . You may insert a factory default key or load from a file. The file formats accepted are: 1) Public Key Certificate

a. EFI Signature List

b. EFI CERT X509 (DER Encoded)

c. EFI CERT RSA2048 (bin)

d. EFI SERT SHA256 (bin)

2) EFI Time Based Authenticated Variable

When prompted, select "Yes" to load Factory Defaults or **"No"** to load from a file.

Append Forbidden Signature

This item uploads and adds an Forbidden Signature into the Key Management. You may insert a factory default key or load from a file. When prompted, select "Yes" to load Factory Defaults or "No' to load from a file.

Delete Authorized TimeStamps

This item deletes a previously installed Forbidden Signature.

Authorized TimeStamps

This item uploads and installs an Authorized Time Stamp . You may insert a factory default key or load from a file. The file formats accepted are: 1) Public Key Certificate

a. EFI Signature List

b. EFI CERT X509 (DER Encoded)

c. EFI CERT RSA2048 (bin)

d. EFI SERT SHA256 (bin)

2) EFI Time Based Authenticated Variable

When prompted, select "Yes" to load Factory Defaults or "No' to load from a file.

Append Authorized TimeStamp

This item uploads and adds an Authorized TimeStamp into the Key Management. You may insert a factory default key or load from a file. When prompted, select "Yes" to load Factory Defaults or "No' to load from a file.

Delete OSRecovery Signatures

This item deletes a previously installed OS Recovery Signature.

OsRecovery Signatures

This item uploads and installs an OSRecovery Signature . You may insert a factory default key or load from a file. The file formats accepted are: 1) Public Key Certificate

a. EFI Signature List

b. EFI CERT X509 (DER Encoded)

c. EFI CERT RSA2048 (bin)

d. EFI SERT SHA256 (bin)

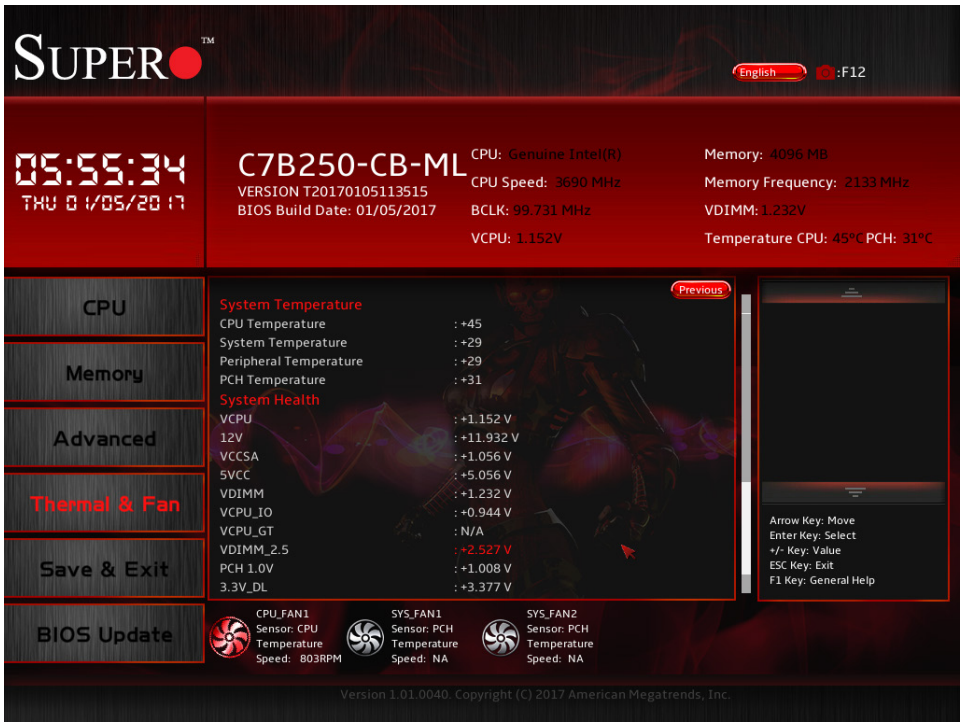
2) EFI Time Based Authenticated Variable

When prompted, select "Yes" to load Factory Defaults or "No' to load from a file.

Append OsRecovery Signature

This item uploads and adds an OSRecovery Signature into the Key Management. You may insert a factory default key or load from a file. When prompted, select "Yes" to load Factory Defaults or "No' to load from a file.

5.6 Thermal and Fan



System Temperature

The following items will be displayed:

- CPU Temperature - displays the CPU temperature detected by PECI.
- System Temperature - indicates the system internal temperature.

- Peripheral Temperature - displays the detected peripheral device temperature.
- PCH Temperature - indicates the detected PCH chip temperature.

System Health

The following items will be displayed (Voltage):

- VCPU
- 12V
- VCCSA
- 5VCC
- VDIMM
- VCPU_IO
- VCPU_GT
- VDIMM_2.5
- PCH 1.0V
- 3.3V_DL
- VSB
- 3.3VCC
- VBAT
- VCPU_STPLL

Fan Control

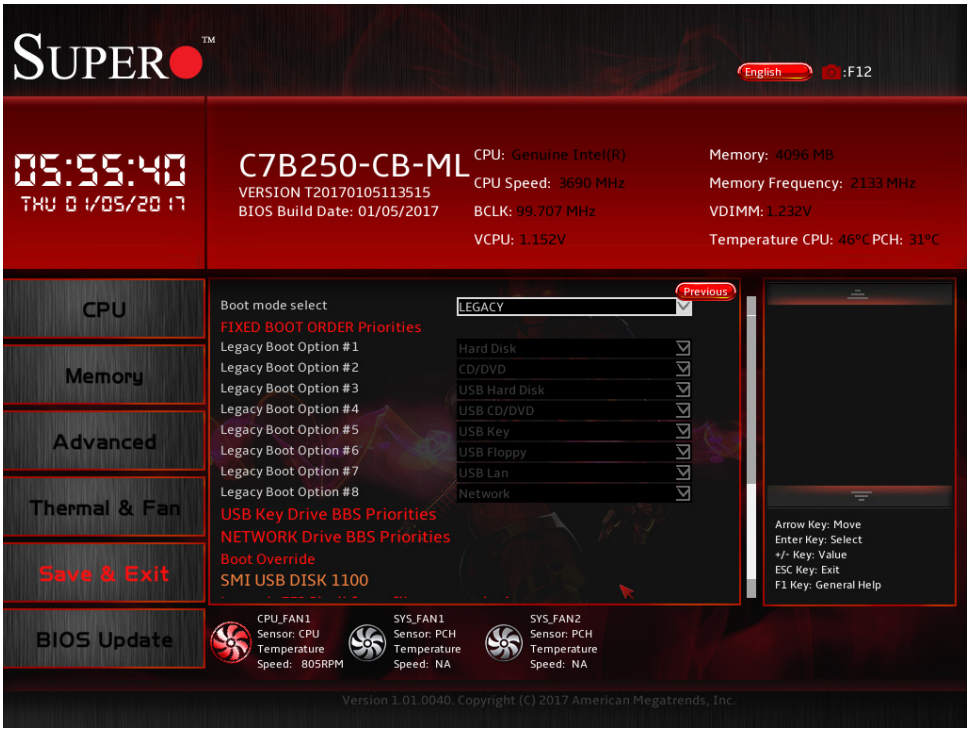
Fan Speed Control Mode

This feature allows the user to decide how the system controls the speeds of the onboard fans. The CPU temperature and the fan speed are correlative. When the CPU on-die temperature increases, the fan speed will also increase for effective system cooling. Select "Full Speed" to allow the onboard fans to run at full speed (of 100% Pulse Width Modulation Duty Cycle) for maximum cooling. This setting is recommended for special system configuration or debugging. Select "Stable" for the onboard fans to run at 50% of the Initial PWM Cycle in order to balance the needs between system cooling and power saving. This setting is recommended for regular

systems with normal hardware configurations. Select "Quiet" to optimize for minimal fan noise and Custom to enter user-specific settings. The options are **Quiet**, Stable, Full Speed and Customize.

When "Customize" is selected above, the settings for CPU_FAN1 Control, SYS FAN1/FAN2 Control will appear and can be configured.

5.7 Save and Exit



Boot Mode Select

Use this item to select the type of device to be used for system boot. The options are **Legacy**, UEFI, and Dual.

FIXED BOOT ORDER Priorities

This option prioritizes the order of bootable devices from which the system will boot. Choose an entry from top to bottom to select devices.

Legacy Boot Option #1~#8

The options are Hard Disk, CD/DVD, USB Hard Disk, USB CD/DVD, USB Key, USB Floppy, USB LAN, Network and Disabled.

USB Key Drive BBS Priorities

Use this feature to specify the Boot Device Priority sequence from available USB Key Drives. The options are **SMI USB DISK 110** and Disable.

NETWORK Drive BBS Priorities

Use this feature to specify the Boot Device Priority sequence from available Network Drives. The options are I**BA CL Slot 00FE v0110** and Disable.

Boot Override

Saves the specified boot override and resets the system, i.e., IBA CL Slot 00FE v0110. Select OK to activate, otherwise, click Cancel.

SMI USB DISK 1100

Launch EFI Shell from filesystem device

This option will attempt to launch the EFI Shell application (shell.efi) from one of the available file system devices. Select OK to activate, otherwise, click Cancel.

For the following options, select OK to initiate, otherwise, click Cancel.

Save Changes and Reset

This option will save the changes that have been made and will reboot the system.

Discard Changes and Reset

This option will save the changes that have been made and will reboot the system.

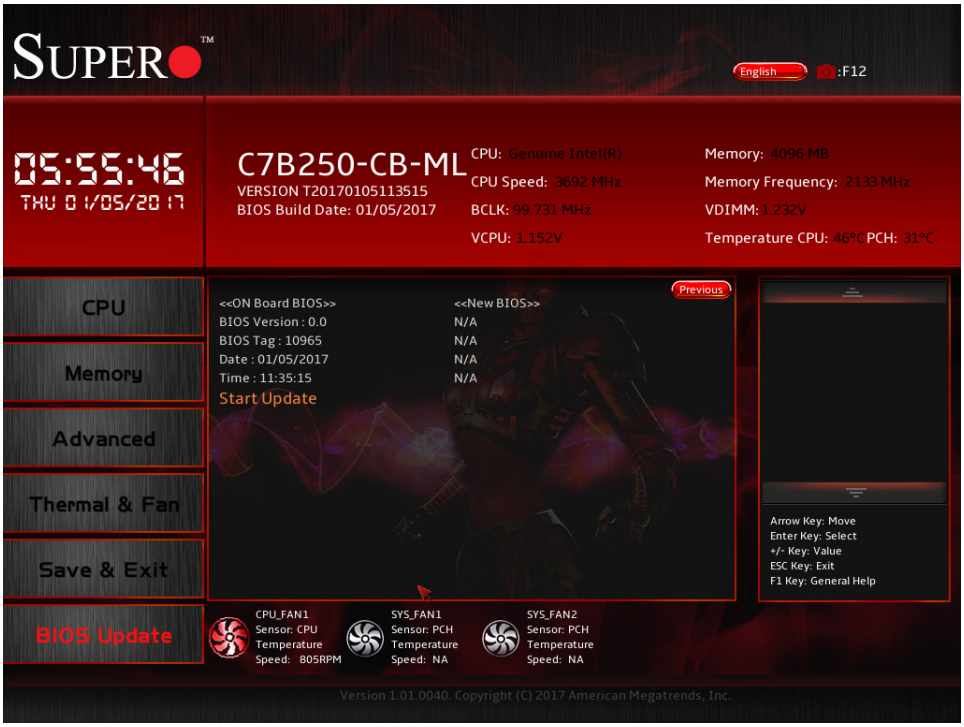
Save Changes

This option will save the changes but will remain in setup mode.

Discard Changes

This option will discard the changes but will remain in setup mode.

5.8 BIOS Update



The following items will be displayed:

- BIOS Version
- BIOS Tag
- Date
- Time

Start Update

Use this utility to prepare BIOS Update with ME.

1. Click "Start Update" enter the SuperFlash utility.
2. At the prompt, select "Yes" to reboot and configure the system to Flash mode. Select "No" to cancel and view the BIOS information.
3. After the system reboots to the flash mode, the system is ready to flash the BIOS. At the prompt, slect "OK" to continue.
4. Select "Select File" and then in the pop-up menu select "General USB Flash Disk 1.00."
5. Select the filename (i.e., "C7B250-CB-ML") in the pop-up menu.

6. Select "Start Flash" to flash the BIOS. A pop-up message will appear to show the progress of the BIOS flash.

7. If the flash is successful, a pop-up message will indicate the result. Select "OK" to complete the BIOS flash and to reboot the system. Go to the "SYSTEM INFORMATION - Motherboard" page in the BIOS Setup to check for the correct BIOS version.

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 numbers on the fatal error list (on the following page) correspond to the number of beeps for the corresponding error. All errors listed, with the exception of Beep Code 8, are fatal errors.

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 short	Display error	System display error
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 Supermicro's Technical Support department for assistance. Only certified technicians should attempt to install or configure components.

Read this appendix in its entirety before installing or configuring components in the Supermicro chassis.

These warnings may also be found on our website at http://www.supermicro.com/about/policies/safety_information.cfm.

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。

此警告符号代表危险。

您正处于可能受到严重伤害的工作环境中。在您使用设备开始工作之前，必须充分意识到触电的危险，并熟练掌握防止事故发生的标准工作程序。请根据每项警告结尾的声明号码找到此设备的安全性警告说明的翻译文本。

此警告符號代表危險。

您正處於可能身體可能會受損傷的工作環境中。在您使用任何設備之前，請注意觸電的危險，並且要熟悉預防事故發生的標準工作程序。請依照每一注意事項後的號碼找到相關的翻譯說明內容。

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.

INSTRUCCIONES IMPORTANTES DE SEGURIDAD

Este símbolo de aviso indica peligro. Existe riesgo para su integridad física. Antes de manipular cualquier equipo, considere los riesgos de la corriente eléctrica y familiarícese con los procedimientos estándar de prevención de accidentes. Al final de cada advertencia encontrará el número que le ayudará a encontrar el texto traducido en el apartado de traducciones que acompaña a este dispositivo.

GUARDE ESTAS INSTRUCCIONES.

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.

תקנון הצהרות אזהרה

הצהרות הבאות הן אזהרות על פי תקני התעשייה, על מנת להזהיר את המשתמש מפני חבלה פיזית אפשרית. במידה ויש שאלות או היתקלות בבעיה כלשהי, יש ליצור קשר עם מחלקת תמיכה טכנית של סופרמיקרו. טכנאים מוסמכים בלבד רשאים להתקין או להגדיר את הרכיבים.

יש לקרוא את הנספח במלואו לפני התקנת או הגדרת הרכיבים במארזי סופרמיקרו.

تحذير! هذا الرمز يعني خطر انك في حالة يمكن أن تتسبب في اصابة جسدية .
قبل أن تعمل على أي معدات،كن على علم بالمخاطر الناجمة عن الدوائر
الكهربائية
وكن على دراية بالممارسات الوقائية لمنع وقوع أي حوادث
استخدم رقم البيان المنصوص في نهاية كل تحذير للعثور ترجمتها

안전을 위한 주의사항

경고!

이 경고 기호는 위험이 있음을 알려 줍니다. 작업자의 신체에 부상을 야기 할 수 있는 상태에 있게 됩니다. 모든 장비에 대한 작업을 수행하기 전에 전기회로와 관련된 위험요소들을 확인하시고 사전에 사고를 방지할 수 있도록 표준 작업절차를 준수해 주시기 바랍니다.

해당 번역문을 찾기 위해 각 경고의 마지막 부분에 제공된 경고문 번호를 참조하십시오

BELANGRIJKE VEILIGHEIDSINSTRUCTIES

Dit waarschuwings symbool betekent gevaar. U verkeert in een situatie die lichamelijk letsel kan veroorzaken. Voordat u aan enige apparatuur gaat werken, dient u zich bewust te zijn van de bij een elektrische installatie betrokken risico's en dient u op de hoogte te zijn van de standaard procedures om ongelukken te voorkomen. Gebruik de nummers aan het eind van elke waarschuwing om deze te herleiden naar de desbetreffende locatie.

BEWAAR DEZE INSTRUCTIES

Installation Instructions

Warning! Read the installation instructions before connecting the system to the power source.

設置手順書

システムを電源に接続する前に、設置手順書をお読み下さい。

警告
将此系统连接电源前,请先阅读安装说明。

警告
將系統與電源連接前，請先閱讀安裝說明。

Warnung

Vor dem Anschließen des Systems an die Stromquelle die Installationsanweisungen lesen.

¡Advertencia!

Lea las instrucciones de instalación antes de conectar el sistema a la red de alimentación.

Attention

Avant de brancher le système sur la source d'alimentation, consulter les directives d'installation.

יש לקרוא את הוראות התקנה לפני חיבור המערכת למקור מתח.

اقر إرشادات التركيب قبل توصيل النظام إلى مصدر للطاقة

시스템을 전원에 연결하기 전에 설치 안내를 읽어주십시오.

Waarschuwing

Raadpleeg de installatie-instructies voordat u het systeem op de voedingsbron aansluit.

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。

警告

此产品的短路(过载电流)保护由建筑物的供电系统提供,确保短路保护设备的额定电流不大于250V,20A。

警告

此產品的短路(過載電流)保護由建築物的供電系統提供,確保短路保護設備的額定電流不大於250V,20A。

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.

¡Advertencia!

Este equipo utiliza el sistema de protección contra cortocircuitos (o sobrecorrientes) del edificio. Asegúrese de que el dispositivo de protección no sea superior a: 250 V, 20 A.

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.

מוצר זה מסתמך על הגנה המותקנת במבנים למניעת קצר חשמלי. יש לוודא כי המכשיר המגן מפני הקצר החשמלי הוא לא יותר מ-60VDC, 20A

هذا المنتج يعتمد على الحماية من الدوائر القصيرة التي تم تثبيتها في المبنى
تأكد من أن الجهاز الواقي لا يزيد عن: 20A, 250VDC

경고!

이 제품은 전원의 단락(과전류)방지에 대해서 전적으로 건물의 관련 설비에 의존합니다. 보호장치의 정격이 반드시 250V(볼트), 20A(암페어)를 초과하지 않도록 해야 합니다.

Waarschuwing

Dit product is afhankelijk van de kortsluitbeveiliging (overspanning) van uw electrische installatie. Controleer of het beveiligde aparaat niet groter gedimensioneerd is dan 250V, 20A.

Power Disconnection Warning

Warning! The system must be disconnected from all sources of power and the power cord removed from the power supply module(s) before accessing the chassis interior to install or remove system components.

電源切断の警告

システムコンポーネントの取り付けまたは取り外しのために、シャーシー内部にアクセスするには、

システムの電源はすべてのソースから切断され、電源コードは電源モジュールから取り外す必要があります。

警告

在你打开机箱并安装或移除内部器件前,必须将系统完全断电,并移除电源线。

警告

在您打開機殼安裝或移除內部元件前，必須將系統完全斷電，並移除電源線。

Warnung

Das System muss von allen Quellen der Energie und vom Netzanschlusskabel getrennt sein, das von den Spg.Versorgungsteilmodulen entfernt wird, bevor es auf den Chassisinnenraum zurückgreift, um Systemsbestandteile anzubringen oder zu entfernen.

¡Advertencia!

El sistema debe ser disconnected de todas las fuentes de energía y del cable eléctrico quitado de los módulos de fuente de alimentación antes de tener acceso el interior del chasis para instalar o para quitar componentes de sistema.

Attention

Le système doit être débranché de toutes les sources de puissance ainsi que de son cordon d'alimentation secteur avant d'accéder à l'intérieur du chassis pour installer ou enlever des composants de systéme.

אזהרה מפני ניתוק חשמלי

אזהרה!
יש לנתק את המערכת מכל מקורות החשמל ויש להסיר את כבל החשמלי מהספק לפני גישה לחלק הפנימי של המארז לצורך התקנת או הסרת רכיבים.

يجب فصل النظام من جميع مصادر الطاقة وإزالة سلك الكهرباء من وحدة امداد
الطاقة قبل
الوصول إلى المناطق الداخلية للهيكل لتثبيت أو إزالة مكونات الجهاز

경고!

시스템에 부품들을 장착하거나 제거하기 위해서는 섀시 내부에 접근하기 전에 반드시 전원 공급장치로부터 연결되어있는 모든 전원과 전기코드를 분리해주어야 합니다.

Waarschuwing

Voordat u toegang neemt tot het binnenwerk van de behuizing voor het installeren of verwijderen van systeem onderdelen, dient u alle spanningsbronnen en alle stroomkabels aangesloten op de voeding(en) van de behuizing te verwijderen

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。

警告

只有经过培训且具有资格的人员才能进行此设备的安装、更换和维修。

警告

只有經過受訓且具資格人員才可安裝、更換與維修此設備。

Warnung

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

¡Advertencia!

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

Attention

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

אזהרה !
צוות מוסמך בלבד רשאי להתקין, להחליף את הציוד או לתת שירות עבור הציוד.

يجب أن يسمح فقط للموظفين المؤهلين والمدربين لتركيب واستبدال أو خدمة هذا الجهاز

경고!

훈련을 받고 공인된 기술자만이 이 장비의 설치, 교체 또는 서비스를 수행할 수 있습니다.

Waarschuwing

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

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。

警告

此部件应安装在限制进出的场所，限制进出的场所指只能通过使用特殊工具、锁和钥匙或其它安全手段进出的场所。

警告

此裝置僅限安裝於進出管制區域，進出管制區域係指僅能以特殊工具、鎖頭及鑰匙或其他安全方式才能進入的區域。

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.

¡Advertencia!

Esta unidad ha sido diseñada para instalación en áreas de acceso restringido. Sólo puede obtenerse acceso a una de estas áreas mediante la utilización de una herramienta especial, cerradura con llave u otro medio de seguridad.

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.

אזור עם גישה מוגבלת

אזהרה !
יש להתקין את היחידה באזורים שיש בהם הגבלת גישה. הגישה ניתנת בעזרת כלי אבטחה בלבד (מפתח, מנעול וכד׳).

تم تخصيص هذه الوحدة لتركيبها في مناطق محظورة .
يمكن الوصول إلى منطقة محظورة فقط من خلال استخدام أداة خاصة،
قفل ومفتاح أو أي وسيلة أخرى للالأمان

경고!

이 장치는 접근이 제한된 구역에 설치하도록 되어있습니다. 특수도구, 잠금 장치 및 키, 또는 기타 보안 수단을 통해서만 접근 제한 구역에 들어갈 수 있습니다.

Waarschuwing

Dit apparaat is bedoeld voor installatie in gebieden met een beperkte toegang. Toegang tot dergelijke gebieden kunnen alleen verkregen worden door gebruik te maken van speciaal gereedschap, slot en sleutel of andere veiligheidsmaatregelen.

Battery Handling

Warning! There is the danger of explosion if the battery is replaced incorrectly. Replace the battery only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions

電池の取り扱い

電池交換が正しく行われなかった場合、破裂の危険性があります。交換する電池はメーカーが推奨する型、または同等のものを使用下さい。使用済電池は製造元の指示に従って処分して下さい。

警告

电池更换不当会有爆炸危险。请只使用同类电池或制造商推荐的功能相当的电池更换原有电池。请按制造商的说明处理废旧电池。

警告

電池更換不當會有爆炸危險。請使用製造商建議之相同或功能相當的電池更換原有電池。請按照製造商的說明指示處理廢棄舊電池。

Warnung

Bei Einsetzen einer falschen Batterie besteht Explosionsgefahr. Ersetzen Sie die Batterie nur durch den gleichen oder vom Hersteller empfohlenen Batterietyp. Entsorgen Sie die benutzten Batterien nach den Anweisungen des Herstellers.

Attention

Danger d'explosion si la pile n'est pas remplacée correctement. Ne la remplacer que par une pile de type semblable ou équivalent, recommandée par le fabricant. Jeter les piles usagées conformément aux instructions du fabricant.

¡Advertencia!

Existe peligro de explosión si la batería se reemplaza de manera incorrecta. Reemplazar la batería exclusivamente con el mismo tipo o el equivalente recomendado por el fabricante. Desechar las baterías gastadas según las instrucciones del fabricante.

אזהרה !

קיימת סכנת פיצוץ של הסוללה במידה והוחלפה בדרך לא תקינה. יש להחליף את הסוללה בסוג התואם מחברת יצרן מומלצת.

סילוק הסוללות המשומשות יש לבצע לפי הוראות היצרן.

هناك خطر من انفجار في حالة استبدال البطارية بطريقة غير صحيحة فعليك
استبدال البطارية
فقط بنفس النوع أو ما يعادلها كما أوصت به الشركة المصنعة
تخلص من البطاريات المستعملة وفقا لتعليمات الشركة الصانعة

경고!

배터리가 올바르게 교체되지 않으면 폭발의 위험이 있습니다. 기존 배터리와 동일하거나 제조사에서 권장하는 동등한 종류의 배터리로만 교체해야 합니다. 제조사의 안내에 따라 사용된 배터리를 처리하여 주십시오.

Waarschuwing

Er is ontploffingsgevaar indien de batterij verkeerd vervangen wordt. Vervang de batterij slechts met hetzelfde of een equivalent type die door de fabrikant aanbevolen wordt. Gebruikte batterijen dienen overeenkomstig fabrieksvoorschriften afgevoerd te worden.

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。

警告
此部件连接的电源可能不止一个，必须将所有电源断开才能停止给该部件供电。

警告
此裝置連接的電源可能不只一個，必須切斷所有電源才能停止對該裝置的供電。

Warnung

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

¡Advertencia!

Puede que esta unidad tenga más de una conexión para fuentes de alimentación. Para cortar por completo el suministro de energía, deben desconectarse todas las conexiones.

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.

אם קיים יותר מספק אחד

אזהרה!
ליחדה יש יותר מחיבור אחד של ספק. יש להסיר את כל החיבורים על מנת לרוקן את היחידה.

قد يكون لهذا الجهاز عدة اتصالات بوحدات امداد الطاقة.
يجب إزالة كافة الاتصالات لعزل الوحدة عن الكهرباء

경고!

이 장치에는 한 개 이상의 전원 공급 단자가 연결되어 있을 수 있습니다. 이 장치에 전원을 차단하기 위해서는 모든 연결 단자를 제거해야만 합니다.

Waarschuwing

Deze eenheid kan meer dan één stroomtoevoeraansluiting bevatten. Alle aansluitingen dienen verwijderd te worden om het apparaat stroomloos te maken.

Backplane Voltage

Warning! Hazardous voltage or energy is present on the backplane when the system is operating. Use caution when servicing.

バックプレーンの電圧

システムの稼働中は危険な電圧または電力が、バックプレーン上にかかっています。

修理する際には注意ください。

警告
当系统正在进行时，背板上有很危险的电压或能量，进行维修时务必小心。

警告
當系統正在進行時，背板上有危險的電壓或能量，進行維修時務必小心。

Warnung

Wenn das System in Betrieb ist, treten auf der Rückwandplatine gefährliche Spannungen oder Energien auf. Vorsicht bei der Wartung.

¡Advertencia!

Cuando el sistema está en funcionamiento, el voltaje del plano trasero es peligroso. Tenga cuidado cuando lo revise.

Attention

Lorsque le système est en fonctionnement, des tensions électriques circulent sur le fond de panier. Prendre des précautions lors de la maintenance.

מתח בפנל האחורי

אזהרה !
קיימת סכנת מתח בפנל האחורי בזמן תפעול המערכת. יש להיזהר במהלך העבודה.

هناك خطر من التيار الكهربائي أوالطاقة الموجودة على اللوحة
عندما يكون النظام يعمل كن حذرا عند خدمة هذا الجهاز

경고!

시스템이 동작 중일 때 후면판 (Backplane)에는 위험한 전압이나 에너지가 발생 합니다. 서비스 작업 시 주의하십시오.

Waarschuwing

Een gevaarlijke spanning of energie is aanwezig op de backplane wanneer het systeem in gebruik is. Voorzichtigheid is geboden tijdens het onderhoud.

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。

警告

设备安装必须符合本地与本国电气法规。

警告

設備安裝必須符合本地與本國電氣法規。

Warnung

Die Installation der Geräte muss den Sicherheitsstandards entsprechen.

¡Advertencia!

La instalacion del equipo debe cumplir con las normas de electricidad locales y nacionales.

Attention

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

תיאום חוקי החשמל הארצי

אזהרה !
התקנת הציוד חייבת להיות תואמת לחוקי החשמל המקומיים והארציים.

تركيب المعدات الكهربائية يجب أن يمتثل للقوانين المحلية والوطنية المتعلقة بالكهرباء

경고!
현 지역 및 국가의 전기 규정에 따라 장비를 설치해야 합니다.

Waarschuwing
Bij installatie van de apparatuur moet worden voldaan aan de lokale en nationale elektriciteitsvoorschriften.

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。

警告
本产品的废弃处理应根据所有国家的法律和规章进行。

警告
本產品的廢棄處理應根據所有國家的法律和規章進行。

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

¡Advertencia!
Al deshacerse por completo de este producto debe seguir todas las leyes y reglamentos nacionales.

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.

סילוק המוצר

אזהרה !
סילוק סופי של מוצר זה חייב להיות בהתאם להנחיות וחוקי המדינה.

عند التخلص النهائي من هذا المنتج ينبغي التعامل معه وفقا لجميع القوانين واللوائح الوطنية

경고!

이 제품은 해당 국가의 관련 법규 및 규정에 따라 폐기되어야 합니다.

Waarschuwing

De uiteindelijke verwijdering van dit product dient te geschieden in overeenstemming met alle nationale wetten en reglementen.

Hot Swap Fan Warning

Warning! Hazardous moving parts. Keep away from moving fan blades. The fans might still be turning when you remove the fan assembly from the chassis. Keep fingers, screwdrivers, and other objects away from the openings in the fan assembly's housing.

ファン・ホットスワップの警告

警告!回転部品に注意。運転中は回転部(羽根)に触れないでください。シャーシから冷却ファン装置を取り外した際、ファンがまだ回転している可能性があります。ファンの開口部に、指、ドライバー、およびその他のものを近づけないで下さい。

警告!

警告！危险的可移动性零件。请务必与转动的风扇叶片保持距离。 当您从机架移除风扇装置，风扇可能仍在转动。小心不要将手指、螺丝起子和其他物品太靠近风扇

警告

危險的可移動性零件。請務必與轉動的風扇葉片保持距離。 當您從機架移除風扇裝置，風扇可能仍在轉動。小心不要將手指、螺絲起子和其他物品太靠近風扇。

Warnung

Gefährlich Bewegende Teile. Von den bewegenden Lüfterblätter fern halten. Die Lüfter drehen sich u. U. noch, wenn die Lüfterbaugruppe aus dem Chassis genommen wird. Halten Sie Finger, Schraubendreher und andere Gegenstände von den Öffnungen des Lüftergehäuses entfernt.

¡Advertencia!

Riesgo de piezas móviles. Mantener alejado de las aspas del ventilador. Los ventiladores podran dar vuelta cuando usted quite ell montaje del ventilador del chasis. Mandtenga los dedos, los destornilladores y todos los objetos lejos de las aberturas del ventilador

Attention

Pieces mobiles dangereuses. Se tenir a l'ecart des lames du ventilateur Il est possible que les ventilateurs soient toujours en rotation lorsque vous retirerez le bloc ventilateur du châssis. Prenez garde à ce que doigts, tournevis et autres objets soient éloignés du logement du bloc ventilateur.

אזהרה !

חלקים נעים מסוכנים. התרחק מלהבי המאוורר בפעולהכאשר מסירים את חלקי המאוורר מהמארז, יתכן והמאוורים עדיין עובדים. יש להרחיק למרחק בטוח את האצבעות וכלי עבודה שונים מהפתחים בתוך המאוורר

تحذير! أجزاء متحركة خطرة. ابتعد عن شفرات المروحة المتحركة.من الممكن أن المراوح لا تزال تدورعند إزالة كتلة المروحة من الهيكل يجب إبقاء الأصابع ومفكات البراغي وغيرها من الأشياء بعيدا عن الفتحات في كتلة المروحة.

경고!

움직이는 위험한 부품. 회전하는 송풍 날개에 접근하지 마세요. 섀시로부터 팬 조립품을 제거할 때 팬은 여전히 회전하고 있을 수 있습니다. 팬 조림품 외관의 열려있는 부분들로부터 손가락 및 스크류드라이버, 다른 물체들이 가까이 하지 않도록 배치해 주십시오.

Waarschuwing

Gevaarlijk bewegende onderdelen. Houd voldoende afstand tot de bewegende ventilatorbladen. Het is mogelijk dat de ventilator nog draait tijdens het verwijderen van het ventilatorsamenstel uit het chassis. Houd uw vingers, schroevendraaiers en eventuele andere voorwerpen uit de buurt van de openingen in de ventilatorbehuizing.

Power Cable and AC Adapter

Warning! When installing the product, use the provided or designated connection or procure cables, power cables and AC adaptors complying with local codes and safety requirements including proper cord size and plug. 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 Supermicro only.

電源コードとACアダプター

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アダプターを 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/CSEマークがコードに表記)を Supermicroが指定する製品以外に使用することを禁止しています。

警告

安装此产品时,请使用本身提供的或指定的或采购的连接线,电源线和电源适配器，包含遵照当地法规和安全要求的合规的电源线尺寸和插头.使用其它线材或适配器可能会引起故障或火灾。除了Supermicro所指定的产品,电气用品和材料安全法律规定禁止
使用未经UL或CSA认证的线材。(线材上会显示UL/CSA符号)。

警告

安裝此產品時,請使用本身提供的或指定的或採購的連接線,電源線和電源適配器，包含遵照當地法規和安全要求的合規的電源線尺寸和插頭.使用其它線材或適配器可能會引起故障或火災。除了Supermicro所指定的產品,電氣用品和材料安全法律規定禁止
使用未經UL或CSA認證的線材。 (線材上會顯示UL/CSA符號)。

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 Supermicro gekennzeichnet sind.

¡Advertencia!

Cuando instale el producto, utilice la conexión provista o designada o procure cables, Cables de alimentación y adaptadores de CA que cumplan con los códigos locales y los requisitos de seguridad, incluyendo el tamaño adecuado del cable y el enchufe. El uso de otros cables y adaptadores podría causar un mal funcionamiento o un incendio. La Ley de Seguridad de Aparatos Eléctricos y de Materiales prohíbe El uso de cables certificados por UL o CSA (que tienen el certificado UL / CSA en el código) para cualquier otros dispositivos eléctricos que los productos designados únicamente por Supermicro.

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 Supermicro seulement.

ימאתמו םיילמשח םילבכ AC

הרהזא!

רשאכ םיניקתמ תא רצומה, יש להשתמש בכבלים, ספקים ומתאמים AC אשר נכרשו או הותאמו לצורך
הנקתהה, ואשר הותאמו לדרישות הבטיחות המקומיות, כולל מידה נכונה של הכבל והתקע . שימוש בכבל
או מתאם מסוג אחר, עלול לגרום לתקלה או קצר חשמלי. בהתאם לחוק השימוש במכשירי החשמל
וחוקי הבטיחות, קיים איסור להשתמש בכבלים המוסמכים ב- UL או ב-CSA (כאשר מופיע עליהם קוד של
UL/CSA) עבור כל מוצר חשמלי אחר, אלא רק במוצר אשר הותאם ע"י Supermicro בלבד.

عند تركيب المنتج، قم باستخدام التوصيلات المتوفرة أو المحددة أو قم بشراء الكابلات
الكهربائية ومحولات التيار المتردد مع الالتزام بقوانين ومتطلبات السلامة المحلية بما في ذلك
حجم الموصل والقابس السليم. استخدام أي كابلات ومحولات أخرى قد يتسبب في عطل أو حريق.
يحظر قانون السلامة للأجهزة الكهربائية والمعدات استخدام الكابلات المعتمدة من قبل UL و CSA
والتي تحمل علامة (UL/CSA) مع أي معدات أخرى غير المنتجات المعنية والمحددة من قبل Supermicro.

전원 케이블 및 AC 어댑터

경고! 제품을 설치할 때 현지 코드 및 적절한 굵기의 코드와 플러그를 포함한 안전 요구 사항을 준수하여 제공되거나 지정된 연결 혹은 구매 케이블, 전원 케이블 및 AC 어댑터를 사용하십시오.

다른 케이블이나 어댑터를 사용하면 오작동이나 화재가 발생할 수 있습니다. 전기 용품 안전법은 UL 또는 CSA 인증 케이블 (코드에 UL / CSA가 표시된 케이블)을 Supermicro 가 지정한 제품 이외의 전기 장치에 사용하는 것을 금지합니다.

Stroomkabel en AC-Adapter

Waarschuwing! Bij het aansluiten van het Product uitsluitend gebruik maken van de geleverde Kabels of een andere geschikte aan te schaffen Aansluitmethode, deze moet altijd voldoen aan de lokale voorschriften en veiligheidsnormen, inclusief de juiste kabeldikte en stekker. Het gebruik van niet geschikte Kabels en/of Adapters kan een storing of brand veroorzaken. Wetgeving voor Elektrische apparatuur en Materiaalveiligheid verbied het gebruik van UL of CSA -gecertificeerde Kabels (met UL/CSA in de code) voor elke andere toepassing dan de door Supermicro hiervoor beoogde Producten.

Appendix C

System Specifications

Processors

Single Intel 6th/7th Gen Core i7/i5/i3, Pentium or Celeron in an LGA1151 type socket
Note: Please refer to the motherboard specifications pages on our website for updates to supported processors.

Chipset

Intel B250 Express chipset

BIOS

128 Mb AMI® Flash ROM

Memory

Four 288-pin DIMM slots that can support up to 64 GB of 72-bit unbuffered, non-ECC DDR4-2400 SDRAM
Note: See the memory section in Chapter 5 for details and our website for updates to supported memory.

SATA Controller

On-chip (Intel B250 Express) controller

Hard Drives

Two 5.25" external hot-swap drive bays
One 3.5" external drive bay
Three internal fixed 3.5" drive bays
One internal fixed 2.5" drive bay

PCI Expansion Slots

One M.2 PCIe 2.0 x2, M Key 2242/2280
One PCIe 3.0 x16 slot
One PCIe 3.0 x4 slot
One PCIe 3.0 x1 slot

Motherboard

C7B250-CB-ML; Micro ATX form factor (9.6 x 9.6 in. / 244 x 244 mm.)

Chassis

DS3A-261B; Mini Tower, 14.65 x 6.89 x 16.85 in. / 372 x 175 x 428 mm. (H x W x D)

System Cooling

One rear 8-cm fan

Power Supply

Model: PWS-261-PQ (80+ Bronze certified)
AC Input Voltages: 100-240 VAC
Rated Input Current: 6A (100v) to 3A (240v)
Rated Input Frequency: 50-60 Hz
Rated Output Power: 260W
Rated Output Voltages: +5V (18A), +12V1 (10A), +12V2 (12A), +3.3V (10A), -12V (0.8A), +5Vsb (2A)

Operating Environment

Operating Temperature: 5º to 35º C (41º to 95º F)
Non-operating Temperature: -40º to 70º C (-40º to 158º F)
Operating Relative Humidity: 8% to 90% (non-condensing)
Non-operating Relative Humidity: 5% to 95% (non-condensing)

Regulatory Compliance

Electromagnetic Emissions: FCC Class B, EN 55022 Class B, EN 61000-3-2/3-3, CISPR 22 Class B
Electromagnetic Immunity: EN 55024/CISPR 24, (EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6, EN 61000-4-8, EN 61000-4-11)
Safety: CSA/EN/IEC/UL 60950-1 Compliant, UL or CSA Listed (USA and Canada), CE Marking (Europe)

Perchlorate Warning

California Best Management Practices Regulations for Perchlorate Materials: This Perchlorate warning applies only to products containing CR (Manganese Dioxide) Lithium coin cells. “Perchlorate Material-special handling may apply. See www.dtsc.ca.gov/hazardouswaste/perchlorate”

Appendix D

UEFI BIOS Recovery Instructions

Warning: Do not upgrade the BIOS unless your system has a BIOS-related issue. Flashing the wrong BIOS can cause irreparable damage to the system. In no event shall Supermicro be liable for direct, indirect, special, incidental, or consequential damages arising from a BIOS update. If you need to update the BIOS, do not shut down or reset the system while the BIOS is updating to avoid possible boot failure.

D.1 Overview to UEFI BIOS

The Unified Extensible Firmware Interface (UEFI) specification provides a software-based interface between the operating system and the platform firmware in the pre-boot environment. The UEFI specification supports an architecture-independent mechanism for add-on card initialization to allow the UEFI OS loader, which is stored in the add-on card, to boot up the system. UEFI offers a clean, hands-off control to a computer system at bootup.

D.2 Recovering the UEFI BIOS Image (Main BIOS Block)

A UEFI BIOS flash chip consists of a recovery BIOS block, which is comprised of two boot blocks and a main BIOS block (the main BIOS image). The boot block contains critical BIOS codes including memory detection and recovery codes for the user to flash a new BIOS image if the original main BIOS image is corrupted. When the system power is on, the boot block codes execute first. Then the main BIOS code will continue with system initialization and bootup.

Note: Follow the BIOS recovery instructions below when the main BIOS boot crashes.

D.3 Recovering the UEFI BIOS with a USB Device

This feature allows the user to recover a BIOS image using a USB device without the need of additional utilities. A device such as a USB flash drive or a USB CD/DVD ROM/RW can be used. A USB hard disk drive cannot be used for BIOS recovery at this time.

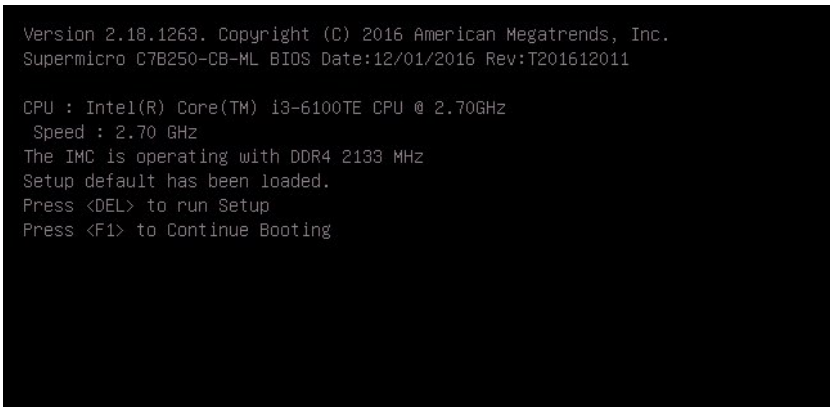
To perform UEFI BIOS recovery using an attached device, follow the instructions below.

1. Using a different system, copy the "Super.ROM" binary image file into the disc Root "\" directory of a USB device or a writeable CD/DVD.

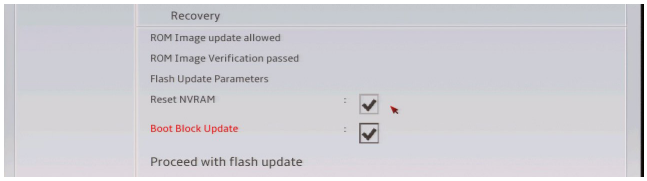
Note: If you cannot locate the "Super.ROM" file in your driver disk, visit our website at www.supermicro.com to download the BIOS image to a USB flash device and rename it "Super ROM".

2. Insert the USB device that contains the new BIOS image ("SUPER.ROM") into any available USB port. Be sure the file is saved in the very top (root) folder.

3. Set JBR1 on the motherboard to recovery mode and power on the system. If the screen appears as below, press <DEL> to continue.

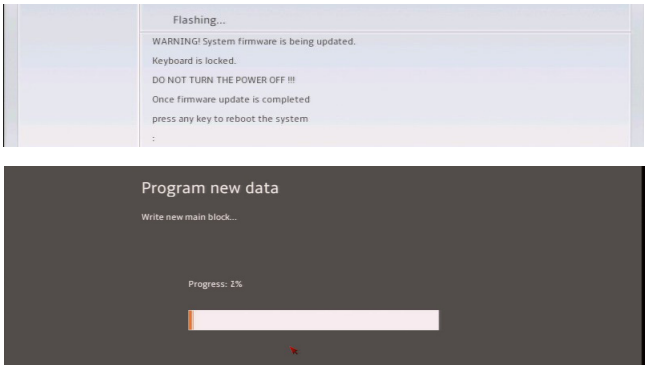


4. After locating the new BIOS binary image, the system will enter the BIOS Recovery menu as shown below.



Note: At this point, you may decide if you want to start the BIOS Recovery. If you decide to proceed with BIOS Recovery, follow the procedures below.

5. To continue with BIOS Recovery, select the item "Proceed with flash update." You will see the progress of BIOS Recovery as shown on the screens below.



Note: Do not interrupt the BIOS programming until it is complete.

6. After the BIOS Recovery process is complete, click OK to reboot the system.