



TB116-AN

Storage Server Barebone

User's Manual

CONTENTS

PREFACE	i
SAFETY INSTRUCTIONS	ii
CHAPTER OVERVIEW	iv
Chapter 1. Product Features	1
1.1 Box Contents.....	1
1.2 Specifications	2
1.3 Features.....	3
Chapter 2. Hardware Setup	6
2.1 Central Processing Unit (CPU)	6
2.2 System Memory	10
2.3 Removing and Installing the Top Cover	13
2.4 Removing and Installing Hard Disk Drive	14
2.5 Removing and Installing the Fan Module	17
2.6 Removing and Installing the Power Supply Unit Module.....	18
2.7 Removing and Installing the PCIe Card.....	19
2.8 Removing and Installing the Tool-less Blade Slide	20
Chapter 3. Motherboard Settings	23
3.1 Motherboard Block Diagram	23
3.2 Motherboard Layout	24
3.3 Motherboard Content List.....	25
3.4 Internal Connectors/Jumpers	26
3.5 LEDs.....	38
Chapter 4. BIOS Configuration Settings	41
4.1 Updating BIOS.....	43
Chapter 5. BMC Configuration Settings	45
5.1 Method 1 (Use the BIOS setup)	45
5.2 Method 2 (Use a Dos Tool - Syscheck)	48
5.3 Connect to BMC	50
5.4 Updating BMC Firmware	54
Chapter 6. Technical Support	55



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PREFACE

Copyright

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Trademarks

All products and trade names used in this document are trademarks or registered trademarks of their respective holders.

Changes

The material in this document is for information purposes only and is subject to change without notice.

Warning

A shielded-type power cord is required in order to meet FCC emission limits and also to prevent interference to the nearby radio and television reception. It is essential that only the supplied power cord be used. Use only shielded cables to connect I/O devices to this equipment. You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

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SAFETY INSTRUCTIONS

Before getting started, please read the following important cautions:

- All cautions and warnings on the equipment or in the manuals should be noted.
- Most electronic components are sensitive to electrical static discharge. Therefore, be sure to ground yourself at all times when installing the internal components.
- Use a grounding wrist strap and place all electronic components in static-shielded devices. Grounding wrist straps can be purchased in any electronic supply store.
- Be sure to turn off the power and then disconnect the power cords from your system before performing any installation or servicing. A sudden surge of power could damage sensitive electronic components.
- Do not open the system's top cover. If opening the cover for maintenance is a must, only a trained technician should do so. Integrated circuits on computer boards are sensitive to static electricity. Before handling a board or integrated circuit, touch an unpainted portion of the system unit chassis for a few seconds. This will help to discharge any static electricity on your body.
- Place this equipment on a stable surface when install. A drop or fall could cause injury.
- Please keep this equipment away from humidity.
- Carefully mount the equipment into the rack, in such manner, that it won't be hazardous due to uneven mechanical loading.
- This equipment is to be installed for operation in an environment with maximum ambient temperature below 35°C.
- The openings on the enclosure are for air convection to protect the equipment from overheating. **DO NOT COVER THE OPENINGS.**
- Never pour any liquid into ventilation openings. This could cause fire or electrical shock.
- Make sure the voltage of the power source is within the specification on the label when connecting the equipment to the power outlet. The current load and output power of loads shall be within the specification.
- This equipment must be connected to reliable grounding before using. Pay special attention to power supplied other than direct connections, e.g. using of power strips.

- Place the power cord out of the way of foot traffic. Do not place anything over the power cord. The power cord must be rated for the product, voltage and current marked on the product's electrical ratings label. The voltage and current rating of the cord should be greater than the voltage and current rating marked on the product.
- If the equipment is not used for a long time, disconnect the equipment from mains to avoid being damaged by transient over-voltage.
- Never open the equipment. For safety reasons, only qualified service personnel should open the equipment.
- If one of the following situations arise, the equipment should be checked by service personnel:
 1. The power cord or plug is damaged.
 2. Liquid has penetrated the equipment.
 3. The equipment has been exposed to moisture.
 4. The equipment does not work well or will not work according to its user manual.
 5. The equipment has been dropped and/or damaged.
 6. The equipment has obvious signs of breakage.
 7. Please disconnect this equipment from the AC outlet before cleaning. Do not use liquid or detergent for cleaning. The use of a moisture sheet or cloth is recommended for cleaning.
- Module and drive bays must not be empty. They must have a dummy cover.
 1. Equipment intended for installation in Restricted Access Location.
 2. The product installation position less than 1 m in height from the supporting surface.
 3. The product don't support redundant function under 180 voltage AC inlet.

Product features and specifications are subject to change without notice.

CAUTION :

**RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.
DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.
AFTER PERFORMING ANY INSTALLATION OR SERVICING, MAKE SURE THE
ENCLOSURE ARE LOCK AND SCREW IN POSITION, TURN ON THE POWER.**

CHAPTER OVERVIEW

Chapter 1 Product Features

TB116-AN is a flexible storage server barebone that is specifically designed to accommodate diverse corporations and enterprises for managing heavy workloads and multiple applications.

Chapter 2 Hardware Setup

This chapter displays an easy installation guide for assembling the hardware in this product. Utmost caution for proceeding to set up the hardware is highly advised. Most of the components are highly fragile and vulnerable to exterior influence. Do not endanger the device by placing the device in an unstable environment.

Chapter 3 Motherboard Settings

This chapter elaborates the overall layout of the motherboard that had been designed for the the server, which include multifarious connectors, jumpers, and LED descriptions. These descriptions assist in configuring various settings in the motherboard.

Chapter 4 BIOS Configuration Settings

This chapter introduces the key features of BIOS, including the descriptions and option keys for various functions. These details provide users to maintain and configure input/output devices.

Chapter 5 BMC Configuration Settings

This chapter illustrates the diverse functions of IPMI BMC, including the details on logging into the web page and assorted definitions. These descriptions are helpful in configuring various functions through Web GUI without entering the BIOS setup. For more information about BMC configurations, please refer to IPMI BMC (Aspeed2400) User's Manual for a more detailed description.

Chapter 6 Technical Support

For more information or suggestion, please verify and contact the nearest AIC corporation representative in your district or visit the AIC website. It is our pleasure to provide the best service for our customers.

Document Release History

Release Date	Version	Update Content
May, 2017	1	User's Manual release to public
August, 2018	2	1. Gramnar Errors 2. Add Chapter Overview

Chapter 1. Product Features

TB116-AN is a high density storage server that includes a mother board, a chassis, power supply, fan and backplane. For more information about our product, please visit our website at <http://www.aicipc.com/en/index>.

Before removing the subsystem from the shipping carton, visually inspect the physical condition of the shipping carton. Exterior damage to the shipping carton may indicate that the contents of the carton are damaged. If any damage is found, do not remove the components; contact the dealer where the subsystem was purchased for further instructions. Before continuing, first unpack the subsystem and verify that the number of components in the shipping carton is accurate and in good condition.

1.1 Box Contents

This product contains the components listed below.

Please confirm the number and the condition of the components before installation.

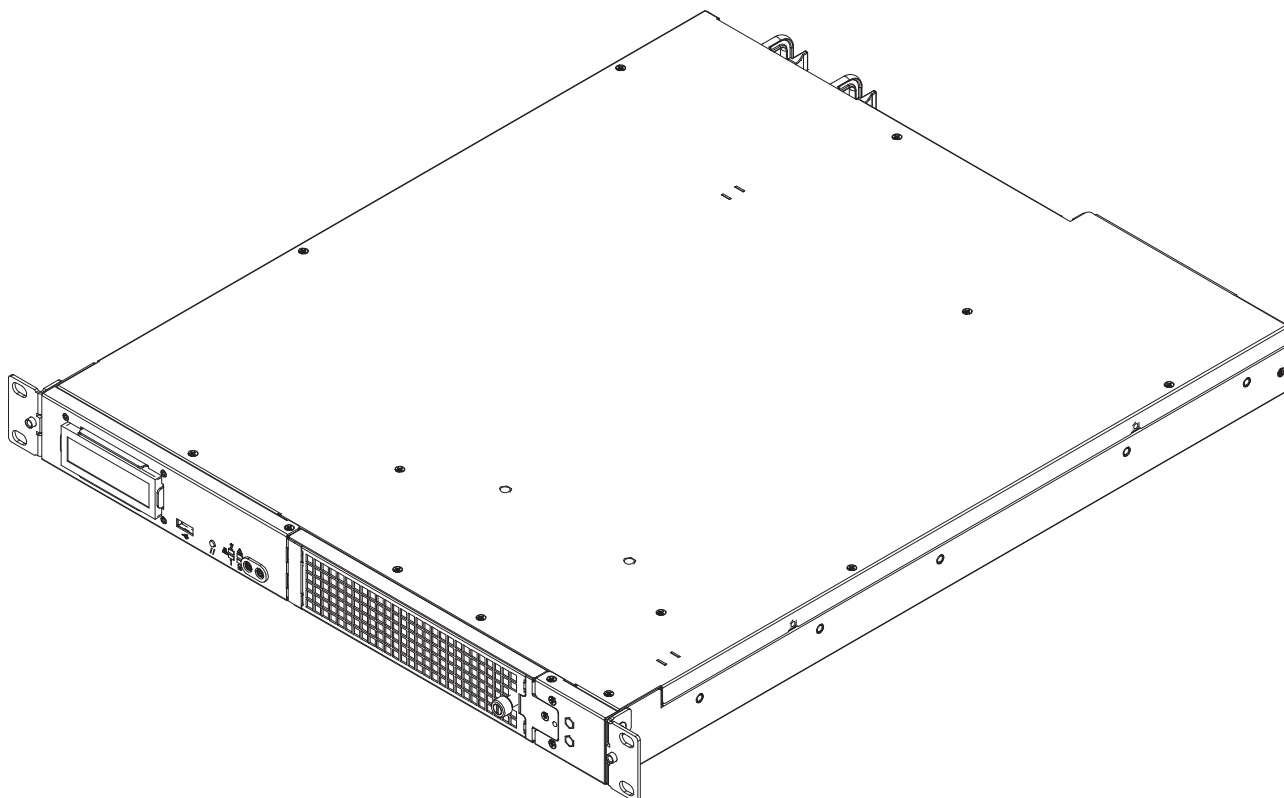
- Enclosure
(includes power supply, fan & HDD tray)
- Power cord (vary per region)
- **28"** Slide rail x 1 set (optional)

1.2 Specifications

Dimensions (W x D x H)	mm : 438 x 541.8 x 44.4		System BIOS System BIOS On-board Devices	BIOS Type	<ul style="list-style-type: none"> • Insyde BIOS code base • SPI (Serial Peripheral Interface) FLASH Interface 	
	inches : 17.2 x 21.3 x 1.75			BIOS Features	<ul style="list-style-type: none"> • ACPI1.0/2.0/3.0 • PXE 2.0 • WOL • AC loss recovery • IPMI KCS interface • SMBIOS 2.0 • Serial console redirection • BIOS Boot Specification • BIOS Recovery Mode • SRIOV 	
Motherboard	AIC Server Board Antlia			SATA	<ul style="list-style-type: none"> • Built-in SATA RAID controller on Intel® C236 PCH • 8 x SATA3 ports + 1 x M.2 	
Processor	Processor Support	One Intel® Xeon® Processor E3-1200 v5/v6 Product Family, 6th/7th Generation Intel® Core™ i3 Processor, or Intel® Pentium® or Celeron® Processor		IPMI	<ul style="list-style-type: none"> • Aspeed AST2400 Advanced PCIe Graphics & Remote Management Processor • Baseboard Management Controller • Intelligent Platform Management Interface 2.0 (IPMI 2.0) • iKVM, Media Redirection, IPMI over LAN, Serial over LAN • SMASH Support 	
	Bus Speeds/D	MI - 5 GT/s				
	Socket Type	Socket H3 (FCLGA1151)				
Chipset Support	<ul style="list-style-type: none"> • Intel® C236 PCH • Intel® i350-AM2 			Graphics	<ul style="list-style-type: none"> • Aspeed AST2400 Advanced PCIe Graphics & Remote Management Processor • 2D Video Graphic Adapter with PCIe bus interface • 1920x1200@60Hz 32bpp 	
System Memory	4 DIMM slots support up to 64 GB of memory DDR4 1866/2133 ECC UDIMM 2 Memory channels					
Front Panel	<ul style="list-style-type: none"> • Power on/off • System ID • System reset • NMI • USB 2.0 Type A connector 					
LEDs	<ul style="list-style-type: none"> • Power • System ID • System management alert • Drive activity • Network activity 					
Drive Bays	Internal3	.2"/2.5"2				
Expansion Slots	PCIe 3.0	2 x8				
Riser Card (included)	PSG-RC-AR1U-20-XXX (PSG Code: PE1U03)	1U Gold-finger PCIe x16 to 2 PCIe x8 riser				

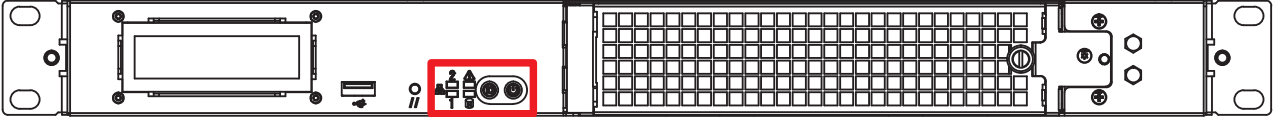
1.3 Features








TB116-AN is a reliable 1U storage server barebone with 10 hard drive disk bays that supports two Intel® Xeon® Scalable processors. This barebone consists of a Intel® Lewisburg C620 series Chipset, onboard baseboard management controller for system management and IPMI control and hot swap redundant fans.



Front Panel

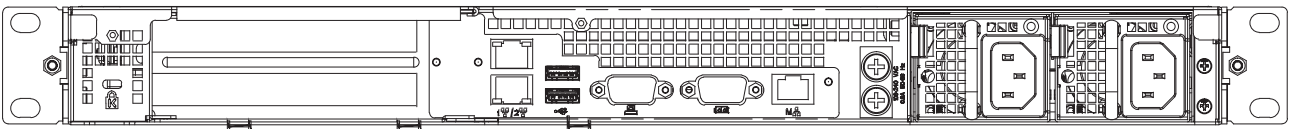
TB116-AN provides 2 system buttons (Power & Reset) and 3 LED indicators (System power, System hard drive disk activity, Service ID).



	Power On/Off
	System Power LED
	LAN 1 LED
	LAN 2 LED
	System HDD Activity LED
	Service ID LED On/Off
	System Reset

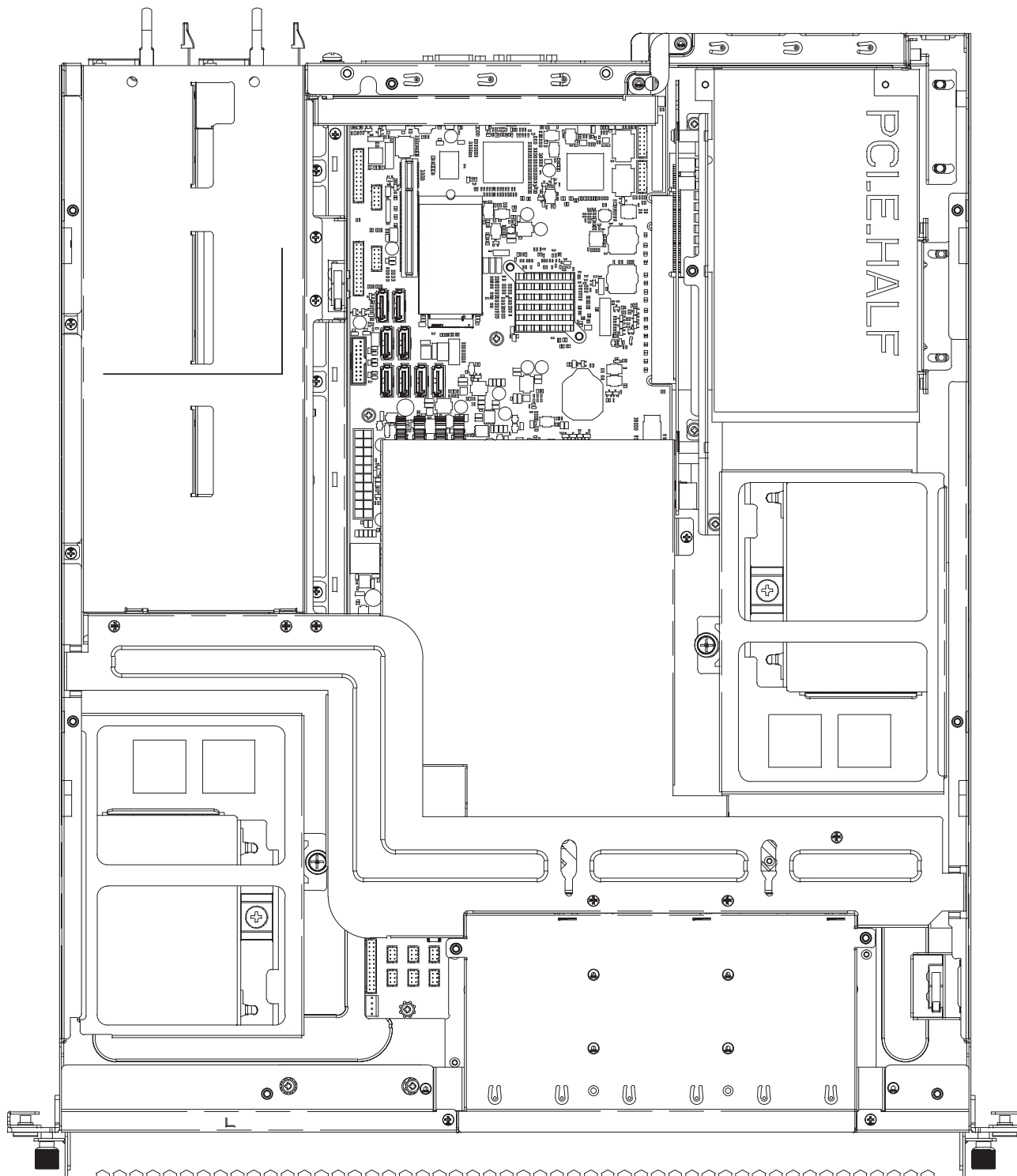
Rear Panel

TB116-AN provides 3 LAN ports (GbE RJ45 x 1, 10G SFP+ x 2), 2 USB 3.0 double stack Type A, 1 VGA port and 1 DB-9 COM-port.



Major Components

TB116-AN provides 650W 1+1 redundant power supply (Optional 750W/850W 1+1 redundant power supply) and 5 x 40 x 56 mm dual rotor fans.



Chapter 2. Hardware Setup

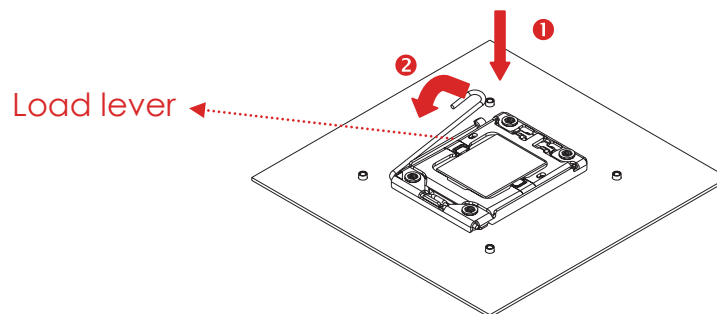
2.1 Central Processing Unit (CPU)

CAUTION : WHEN UNPACKING A PROCESSOR, HOLD THE PROCESSOR ONLY BY ITS EDGES TO AVOID TOUCHING THE CONTACTS..

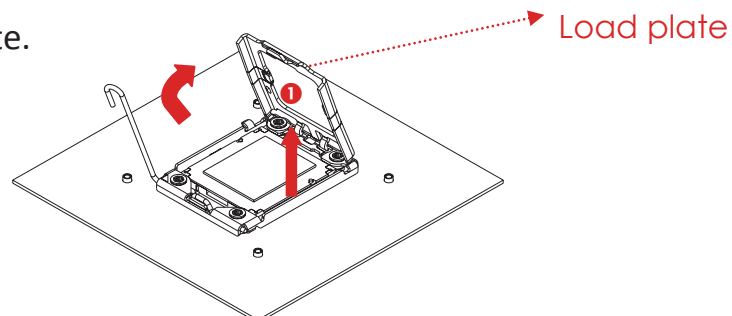


2.1.1 Installing the CPU

1. Press the load lever to release the load plate.

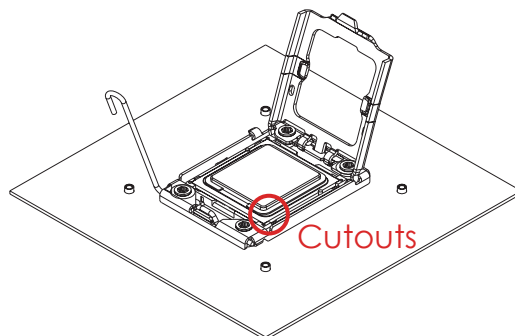


2. Lift the load plate.



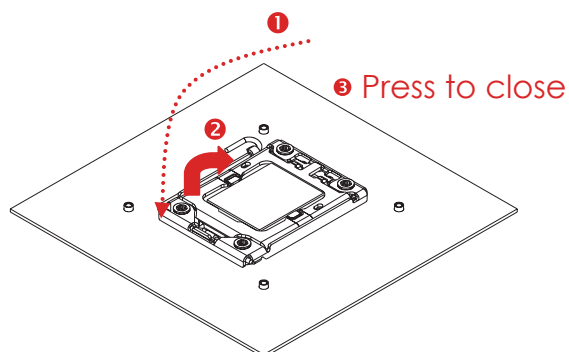
3. Remove the processor protective cover from CPU socket.

4. Align the processor cutouts against the socket notches.



CAUTION: THE PINS OF THE PROCESSOR SOCKET ARE VULNERABLE AND EASILY SUSCEPTIBLE TO DAMAGE IF FINGERS OR ANY FOREIGN OBJECTS ARE PRESSED AGAINST THEM. PLEASE KEEP THE SOCKET PROTECTIVE COVER ON WHEN PROCESSOR IS NOT INSTALLED.

5. Close the load plate & load lever.

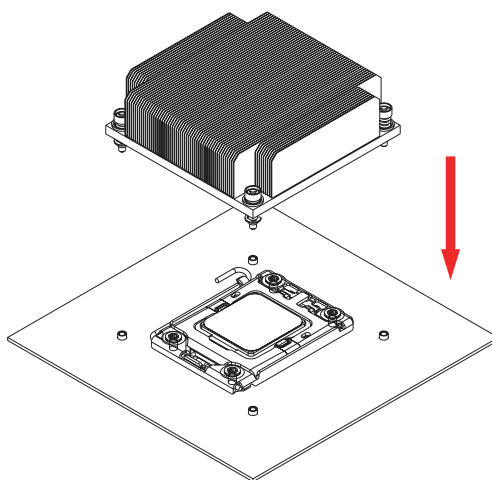


2.1.2 Installing the CPU Heatsink

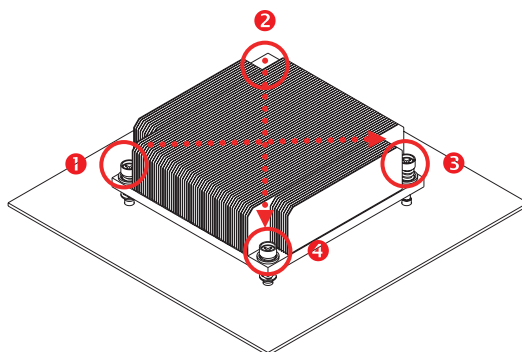
NOTE: APPLY THERMAL PASTE TO THE BOTTOM OF HEATSINK AND SPREAD IN AN EVEN THIN LAYER BEFORE INSTALLING THE HEATSINK.

To install the CPU heatsink:

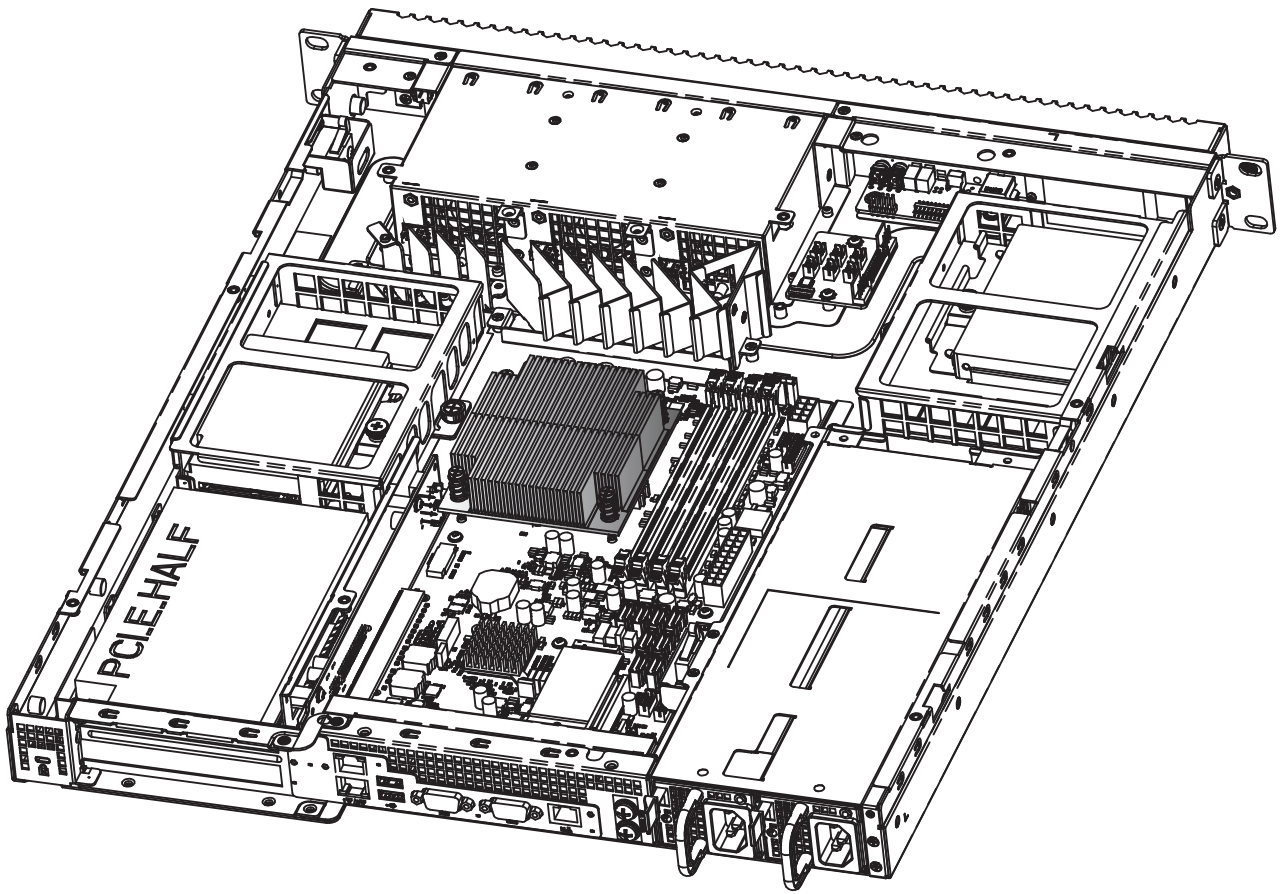
1. Place the heatsink on top of the CPU, ensuring that the four fasteners match the holes on the motherboard.



2. Tighten the four screws in a diagonal sequence, a couple of turns at a time, until all four screws are secure and the heatsink is securely fastened to the chassis.

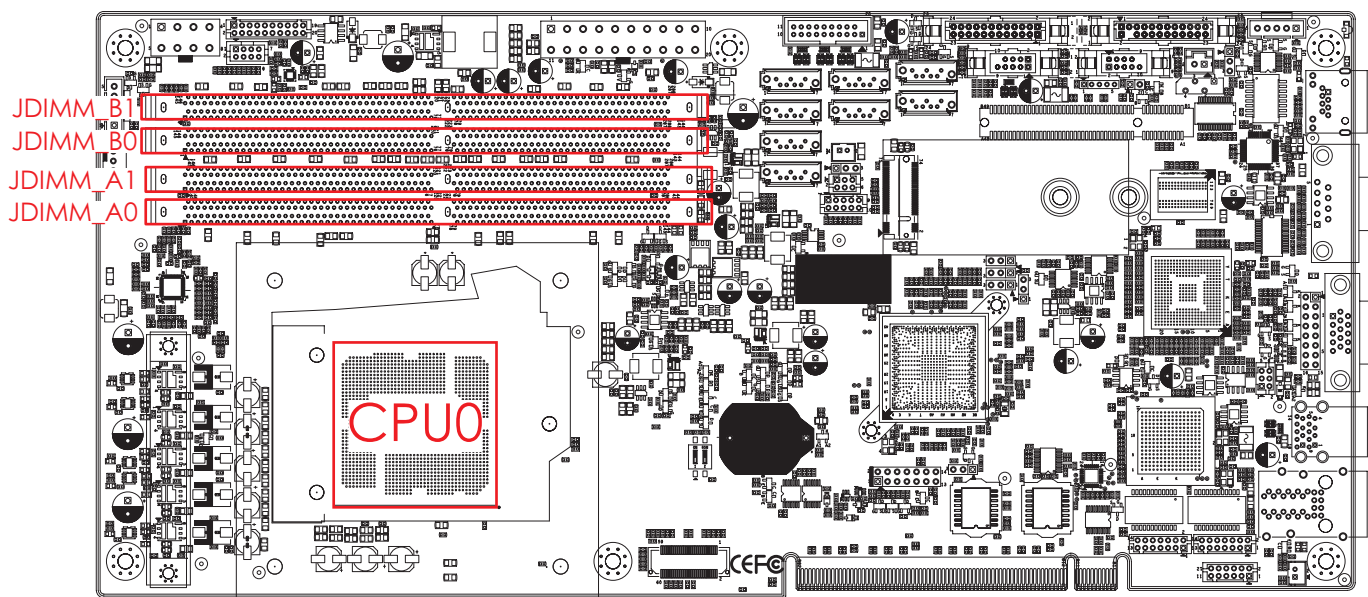


2.1.3 Heatsink Location

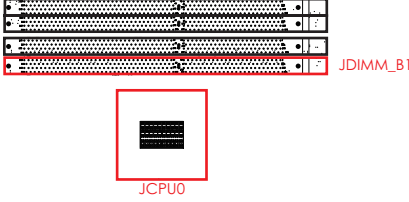
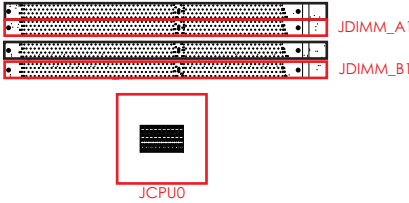
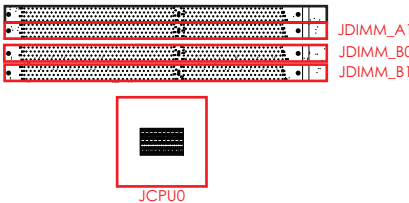
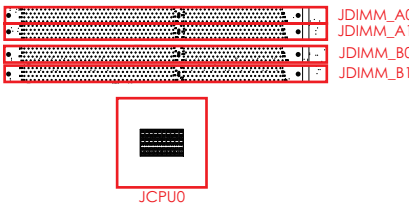


2.2 System Memory

This server board supports up to four DDR4 1866/2133 Non-ECC UDIMM and ECC UDIMM Memory.

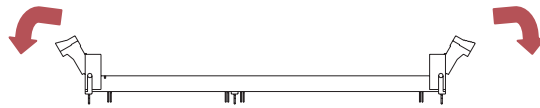


2.2.1 Populate DIMMs in the following order:

DIMM Number	DIMM arrangement	
	CHA	CHB
1 DIMMs	 <p>JDIMM_B1</p>	JDIMM_B1
2 DIMMs	 <p>JDIMM_A1 JDIMM_B1</p>	JDIMM_A1 JDIMM_B1
3 DIMMs	 <p>JDIMM_A1 JDIMM_B0 JDIMM_B1</p>	JDIMM_A1 JDIMM_B1 JDIMM_B0
4 DIMMs	 <p>JDIMM_A0 JDIMM_A1 JDIMM_B0 JDIMM_B1</p>	JDIMM_A1 JDIMM_B1 JDIMM_A0 JDIMM_B0

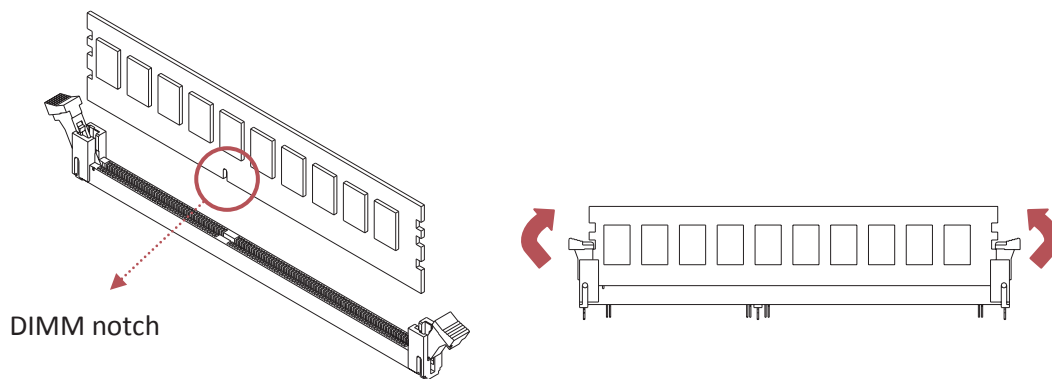
2.2.2 DIMM Installation Procedure

Unlock a DIMM socket by pressing the retaining clips outward.



Insert module vertically and press down until it snaps into place.

NOTE: DIMM NOTCH AND SOCKET BUMP MUST ALIGN AS SHOWN.



2.3 Removing and Installing the Top Cover

2.3.1 Installing the top cover

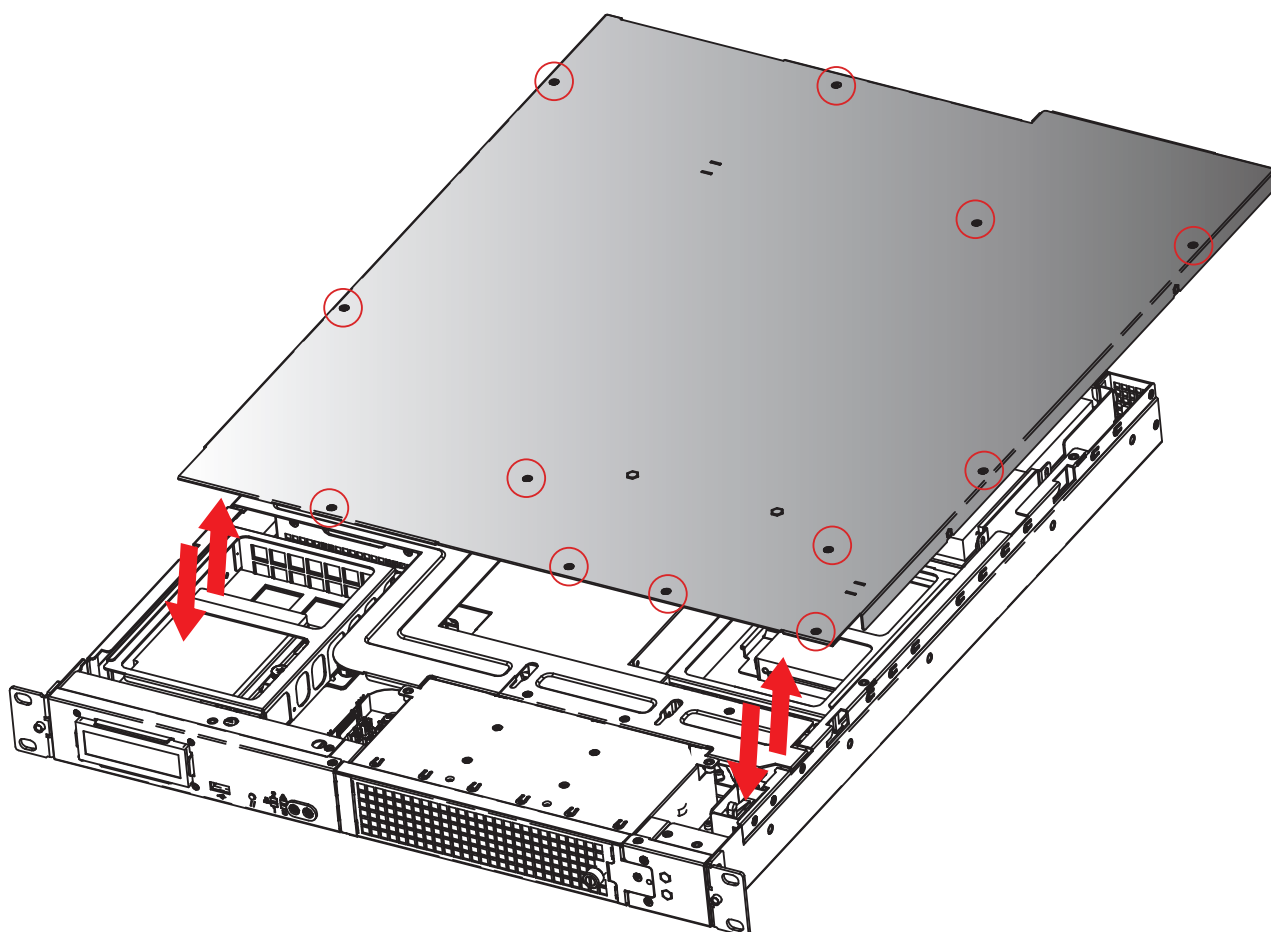
Step 1 Position the top cover onto the enclosure and push horizontally towards the front panel.

Step 2 Secure the screw x 12.

2.3.2 Removing the top cover

Step 1 Press the release button on both sides of the enclosure.

Step 2 Pull in a horizontal direction away from the front panel and lift upward.



2.4 Removing and Installing Hard Disk Drive

2.5" hard disk drive tray

2.4.1 Installing the 2.5" hard disk tray

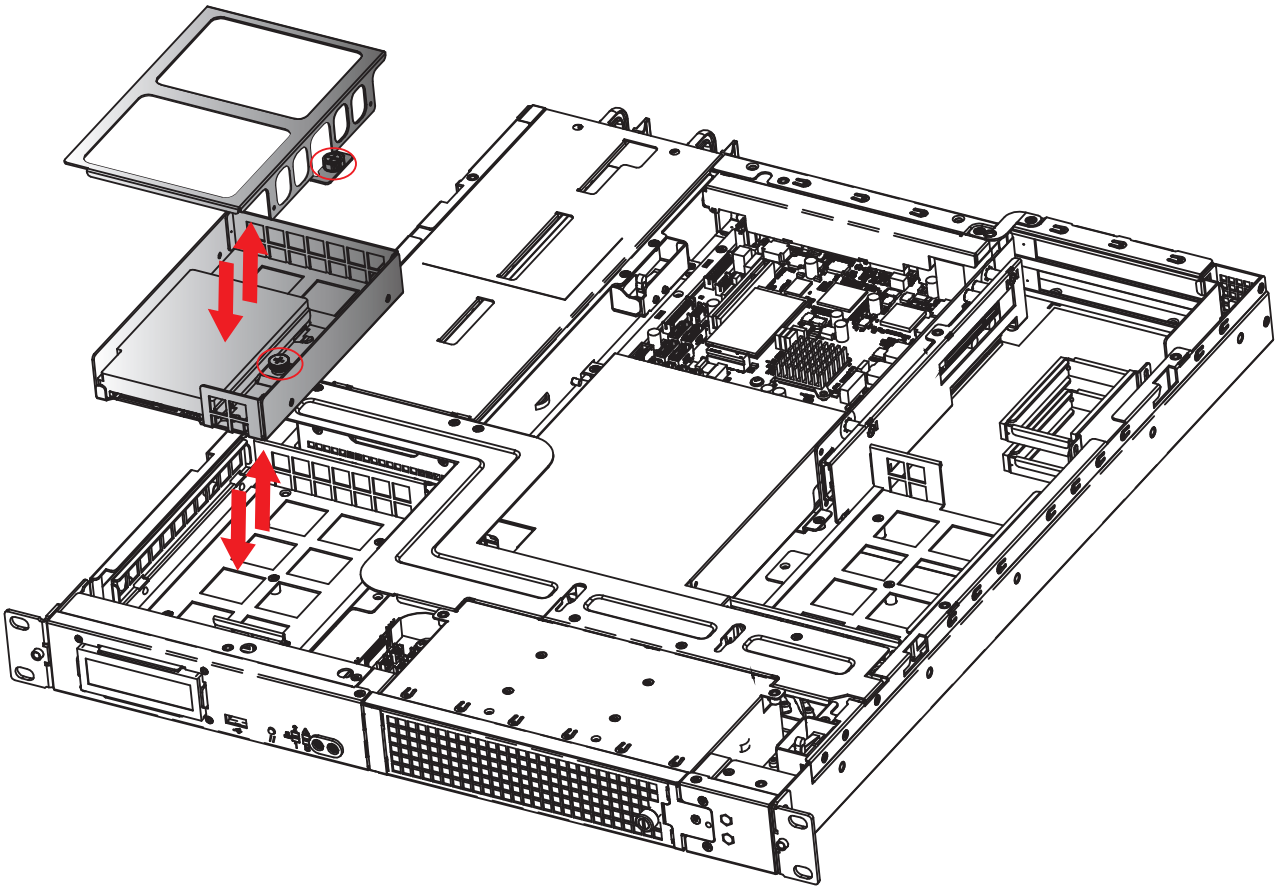
Step 1 Position the tray onto the server board and secure the thumb screw on the tray.

Step 2 Position the tray cover on top of the tray and secure the thumb screw on tray cover.

2.4.2 Removing the 2.5" hard disk drive tray

Step 1 Remove the tray cover on top of the tray and loosen the thumb screw that is installed on the cover

Step 2 Remove the tray onto the server board and loosen the thumb screw that is installed on the tray.



2.5" hard disk drive

2.4.3 Installing the 2.5" hard disk into the tray

Step 1 Position the hard disk drive into the tray.

Step 2 Position the bracket next to the tray. Make certain to align the thumb screw with the screw hole on the tray.

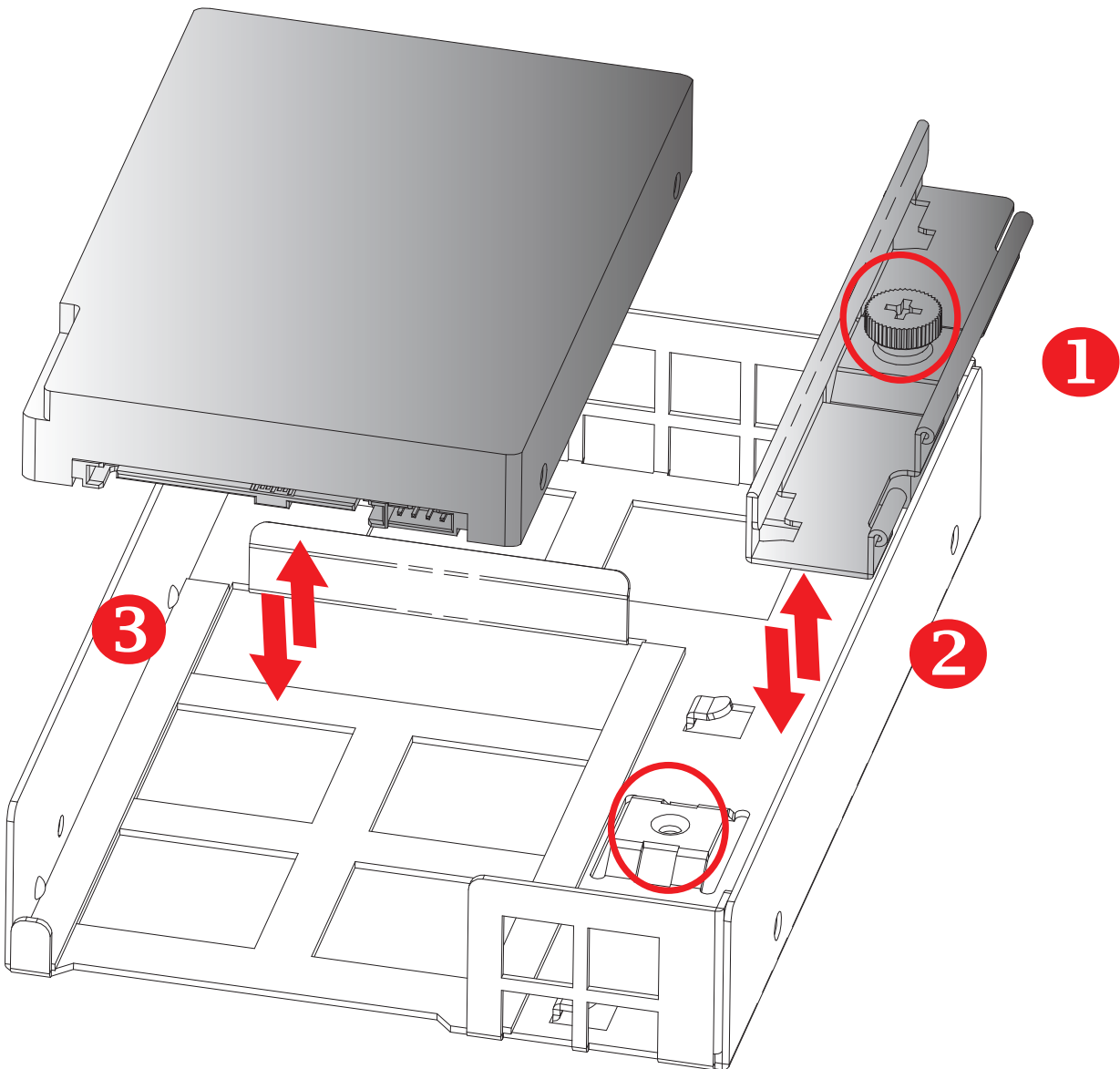
Step 3 Secure the thumb screw to complete installation.

2.4.4 Removing the 2.5" hard disk drive into the tray

Step 1 Loosen the thumb screw on the bracket.

Step 2 Remove the bracket.

Step 3 Pull the hard disk drive out of the enclosure.



Removal procedure

3.5" hard disk drive

2.4.5 Installing the 3.5" hard disk drive

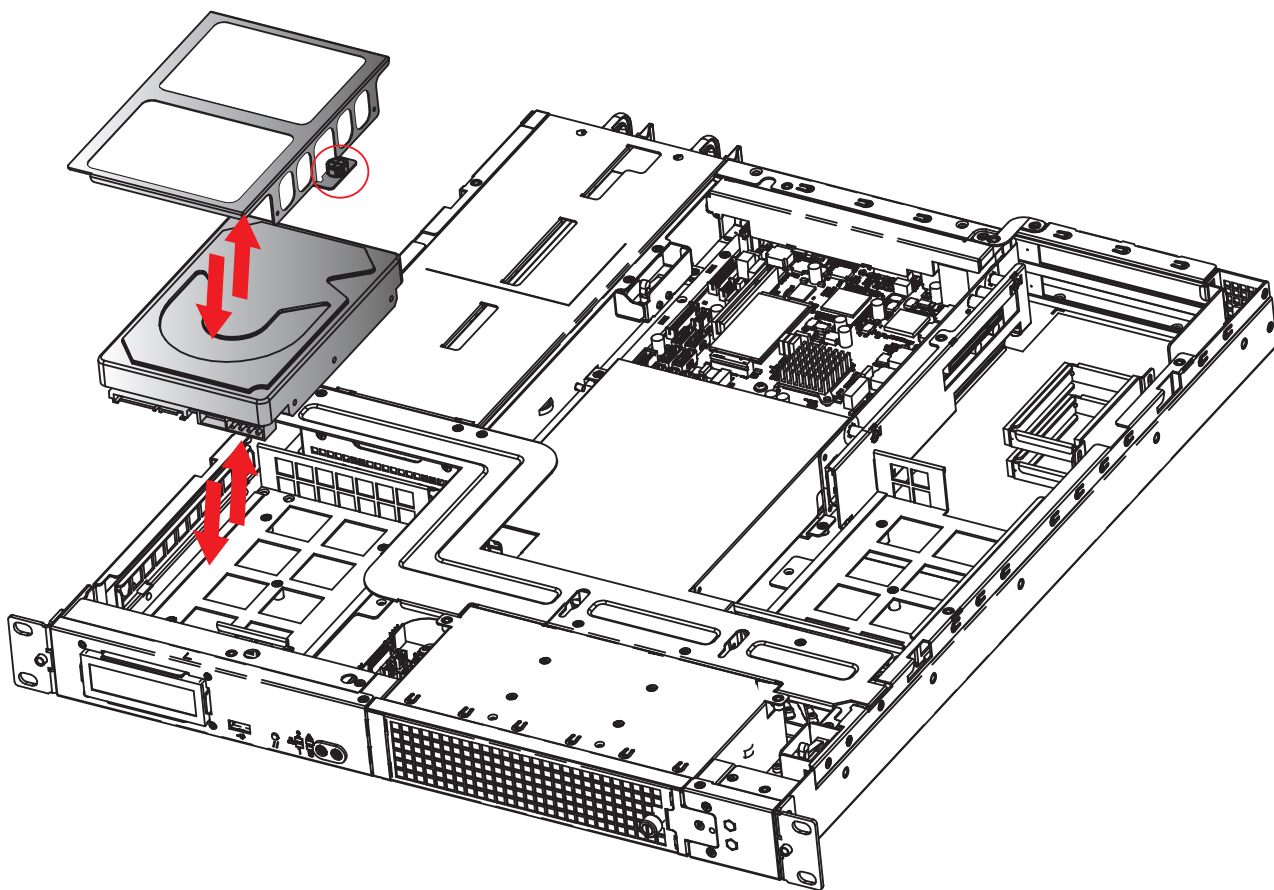
Step 1 Position the hard disk drive into the tray.

Step 2 Position the tray cover on top of the tray and secure the thumb screw on tray cover to complete installation.

2.4.6 Removing the 3.5" hard disk drive

Step 1 Remove the tray cover on top of the tray and loosen the thumb screw that is installed on the cover.

Step 2 Remove the hard disk drive.



2.5 Removing and Installing the Fan Module

2.5.1 Installing the fan module

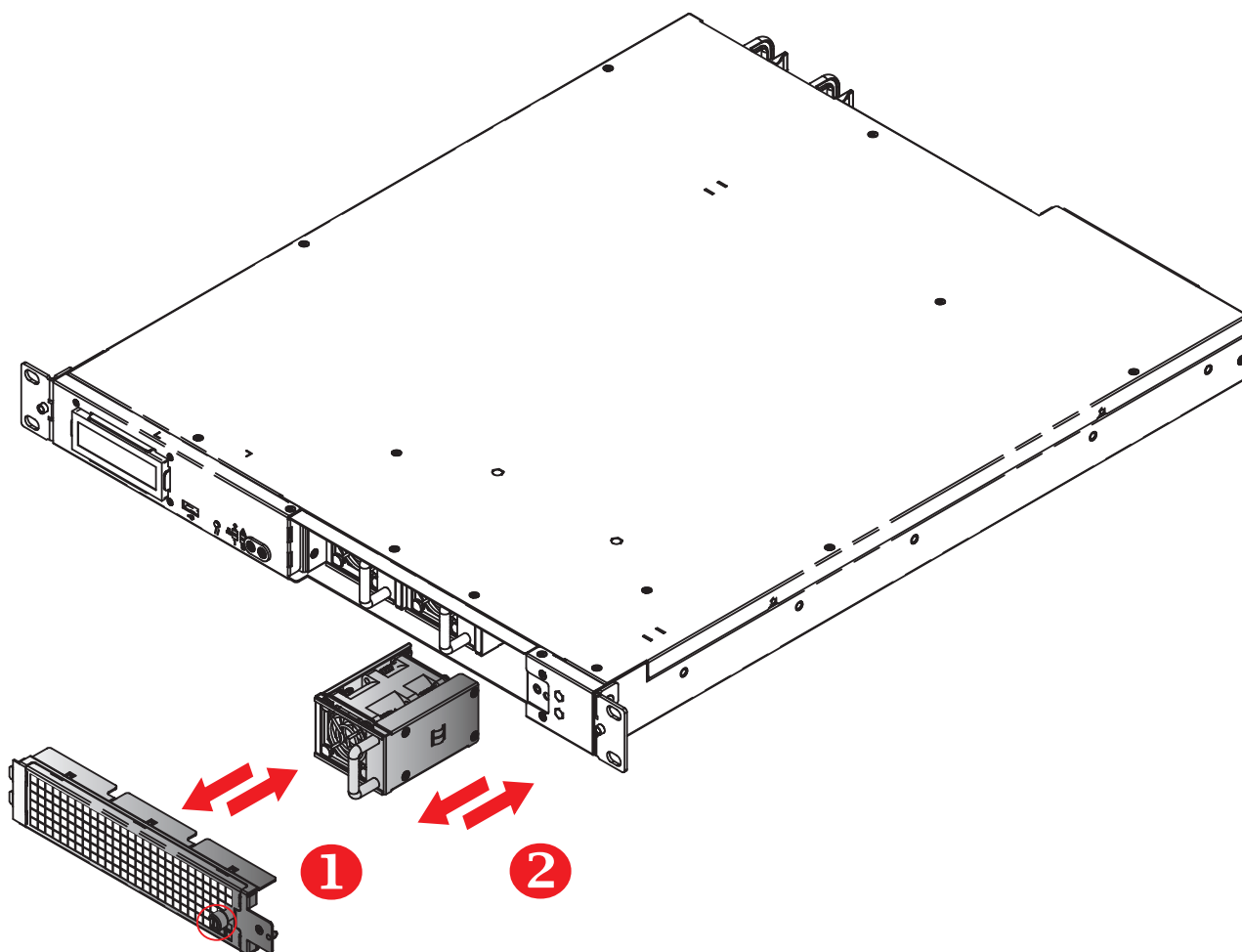
Step 1 Loosen the screw and remove the bracket from the rear panel.

Step 2 Pull the handle on the fan module.

2.5.2 Removing the fan module

Step 1 Loosen the screw and remove the bracket from the rear panel.

Step 2 Pull the handle on the fan module.



2.6 Removing and Installing the Power Supply Unit Module

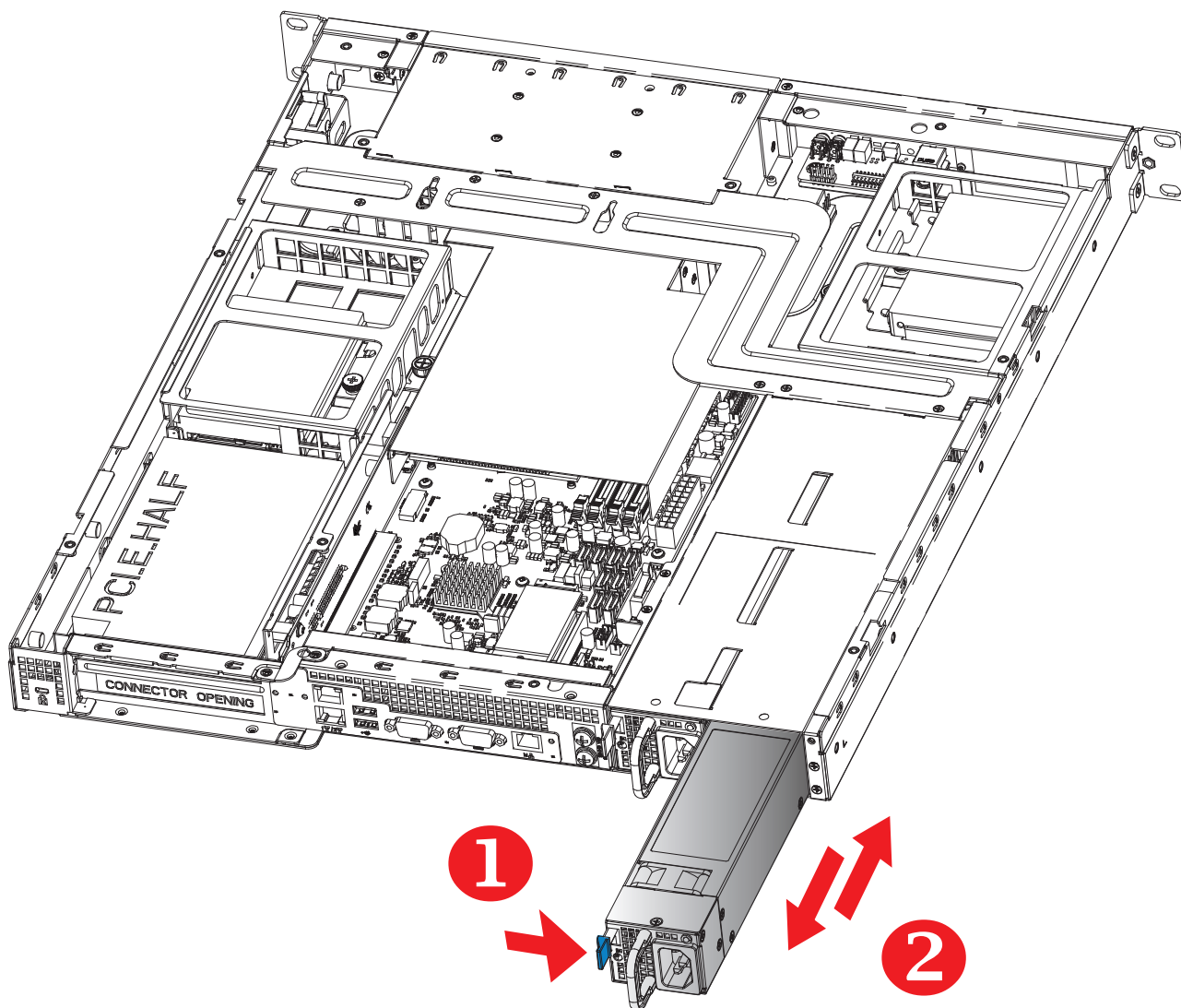
2.6.1 Installing the power supply unit module

Push the tray handle on the power supply module to install.

2.6.2 Removing the power supply unit module

Step 1 Push the latch inward and hold the tray handle.

Step 2 Pull the tray handle.



2.7 Removing and Installing the PCIe Card

2.7.1 Installing the PCIe card

Step 1 Position the PCIe card into the enclosure. Make certain to slide the gold finger into the appropriate slot on the side.

Step 2 Position the bracket A onto the enclosure and secure the screw x 2.

Step 3 Position bracket B onto the enclosure and secure the screw x 2.

Step 4 Secure the screw x 1 on the PCIe card.

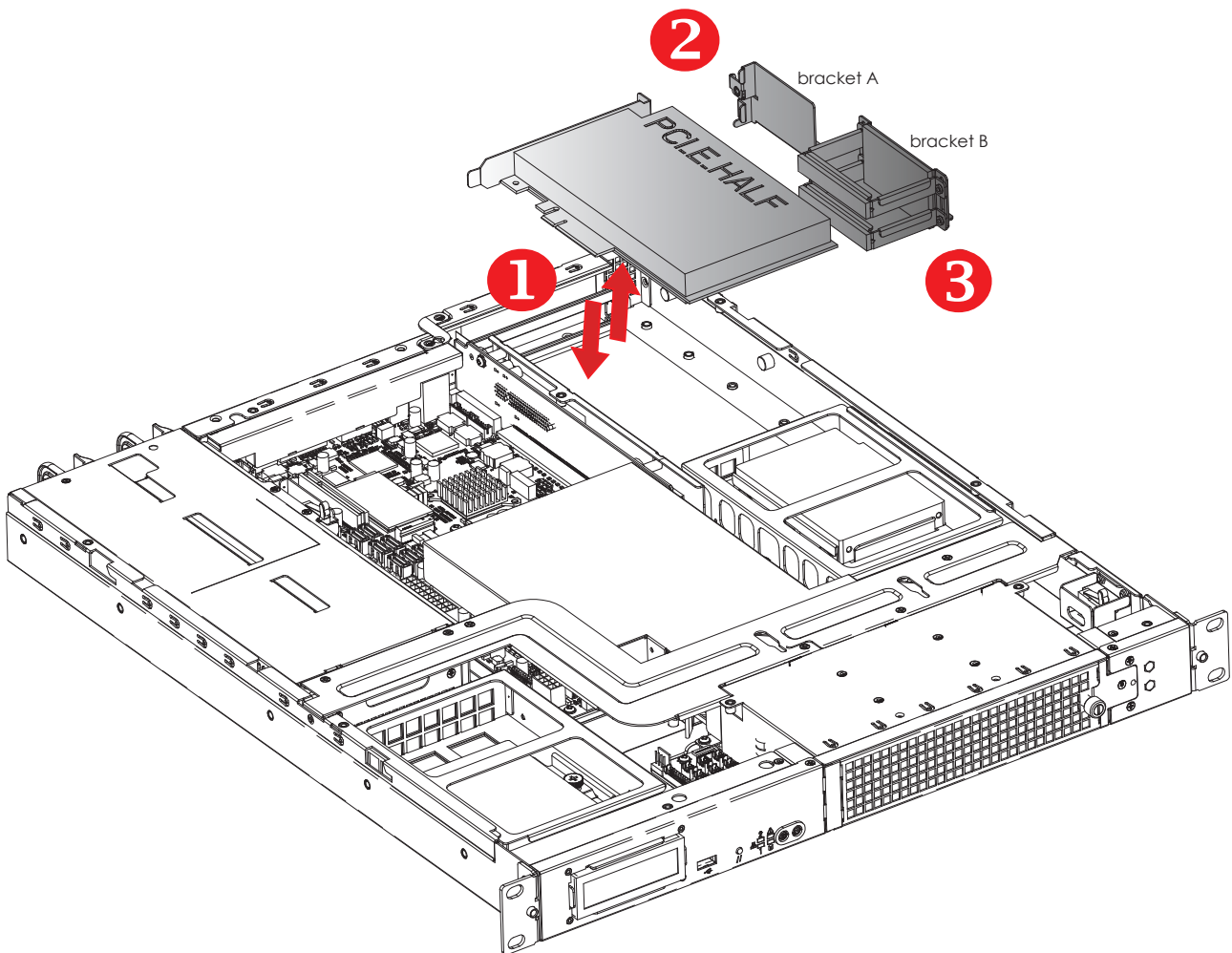
2.7.2 Removing the PSU module

Step 1 Loosen the screw x 2 on bracket B and remove bracket B.

Step 2 Loosen the screw x 2 on bracket A and remove bracket A.

Step 3 Loosen the screw on the PCIe card.

Step 4 Slide the PCIe card away from the slot to remove.

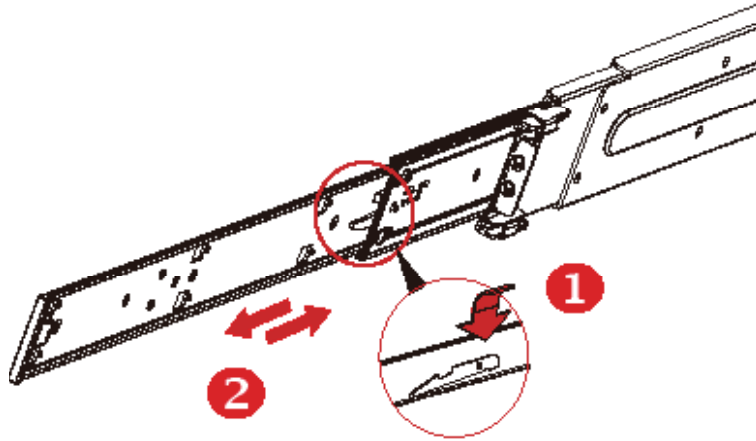


2.8 Removing and Installing the Tool-less Blade Slide

2.8.1 Pulling out the inner slide rail

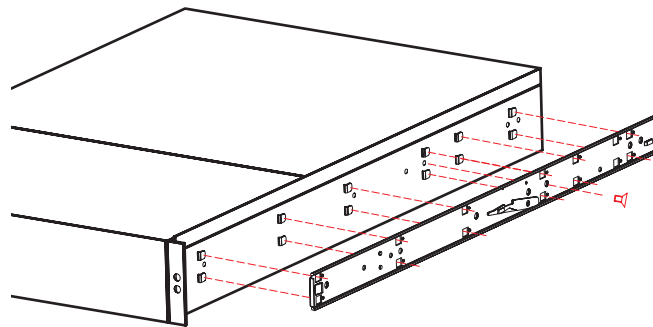
Step 1 Press the trigger downward to release the inner side rail.

Step 2 Pull the inner rail out of the blade slide.



2.8.2 Installing the inner slide rail to the enclosure

Align the rectangular holes on the inner side of the chassis with the bayonets on the side of chassis. Secure the inner chassis with the screws from the standard screw kit after the bayonets go through the holes and are accurately positioned.

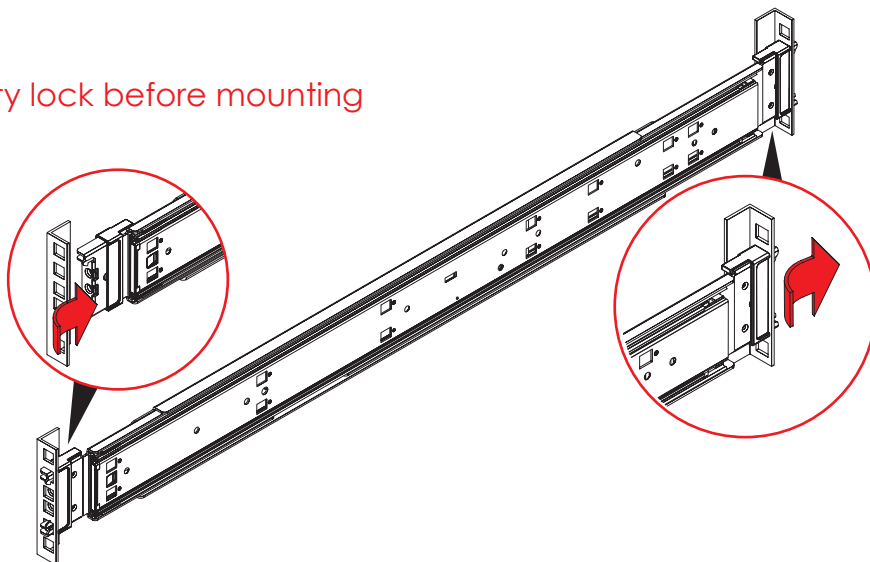


Bayonet on chassis shall be pre-formed as per the recommended dimension and location.

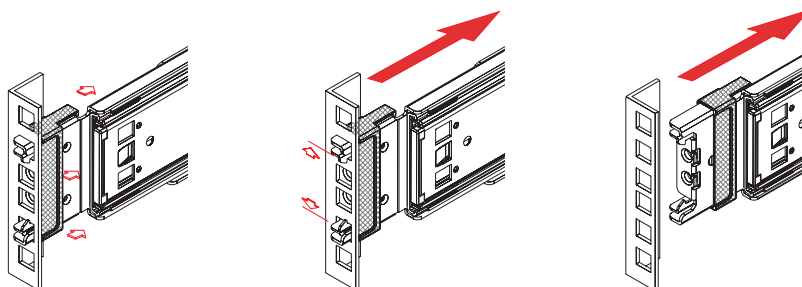
2.8.3 Installing the outer cabinet to the slide rail

Insert the stag into the upper and lower square holes on rail from the back of rail. Push the safety lock forward to secure the bracket. Be certain to check if the safety lock is in disengaged position before mounting the brackets.

Release safety lock before mounting



Push the safety lock forward to secure

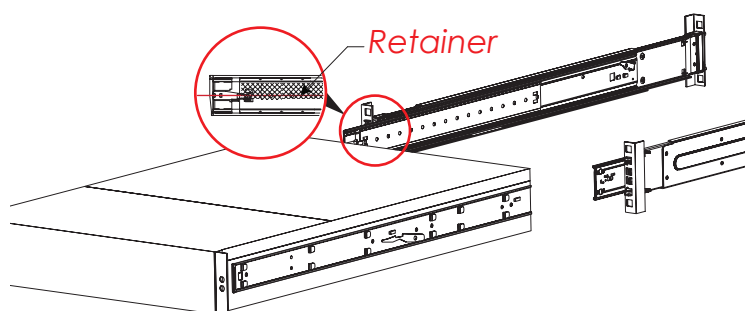


2.8.4 Installing the chassis into the cabinet

Insert the inner side of chassis into the cabinet. Check if the ball retainer is fully opened before installation. It may cause catastrophic damage to the chassis if ball retainer is not in fully open position while mounting the chassis. While pushing the chassis back into the cabinet, release the slide from locking position by pressing the trigger downward.

NOTE :

VERY IMPORTANT- IT REQUIRES AT LEAST 2 PEOPLE TO INSTALL THE CHASSIS FOR SAFETY PUROPOSE.



2.9.5 Removing the blade slide

Step 1 Refer to 2.9.4 to remove the chassis from the cabinet.

Step 2 Refer to 2.9.3 to remove the outer cabinet from the slide rail.

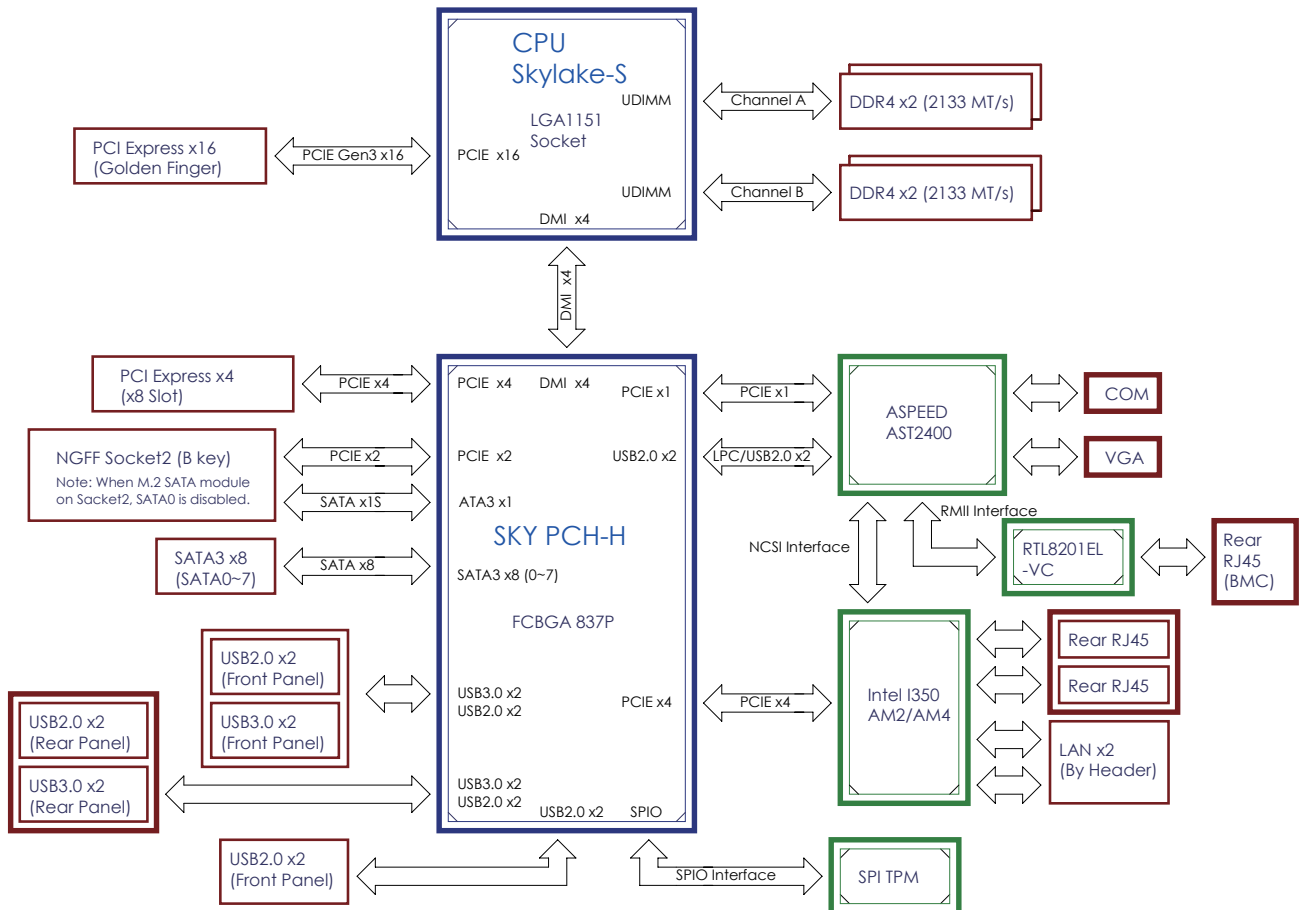
Step 3 Refer to 2.9.2 to remove the inner side rail from the enclosure.

Step 4 Refer to 2.9.1 to push the inner slide rail into the blade slide.

Chapter 3. Motherboard Settings

This section describes the jumpers, internal connectors, and internal LEDs setting on Antlia motherboard. Motherboard important jumper settings are listed below.

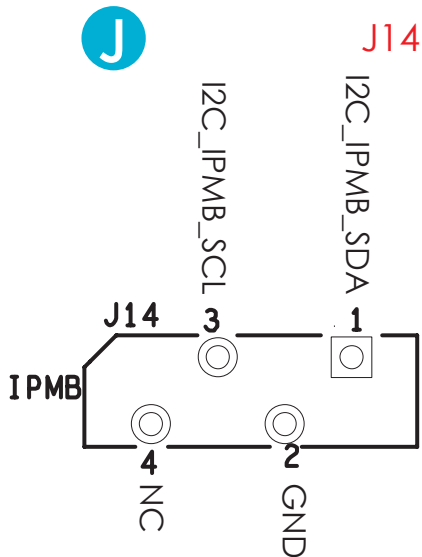
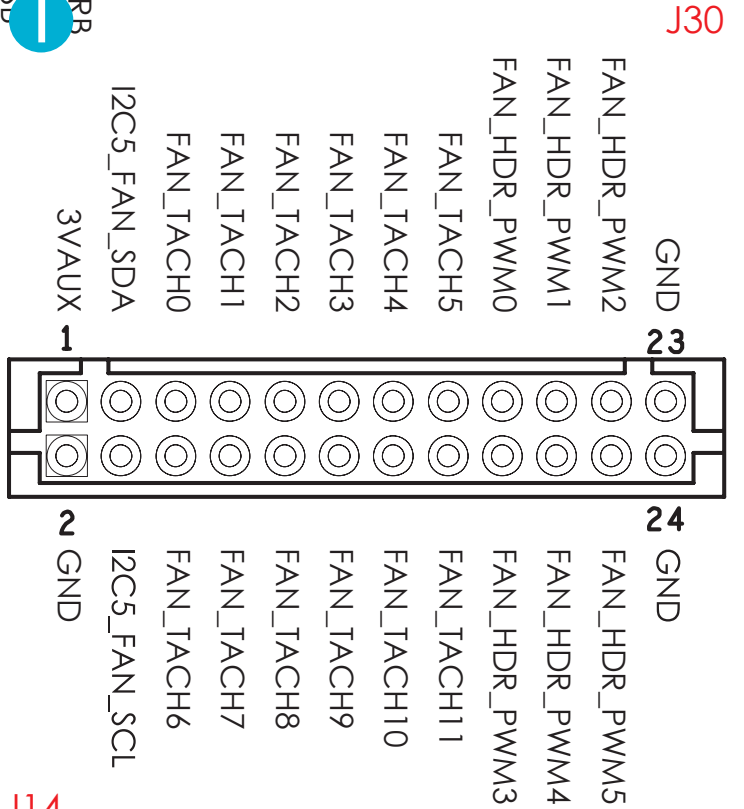
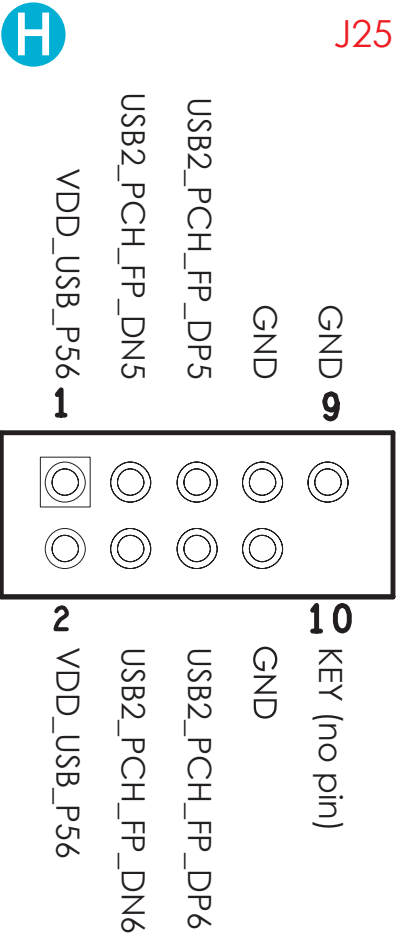
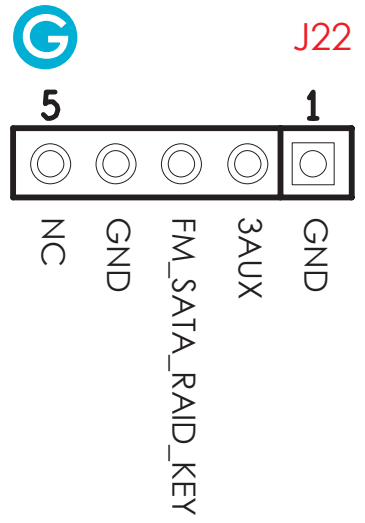
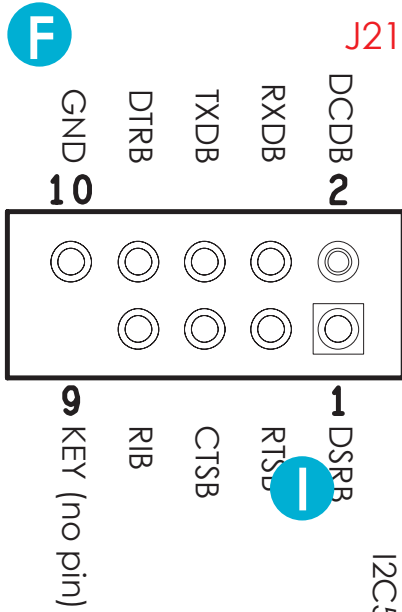
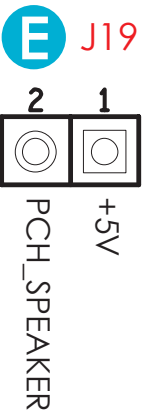
3.1 Motherboard Block Diagram



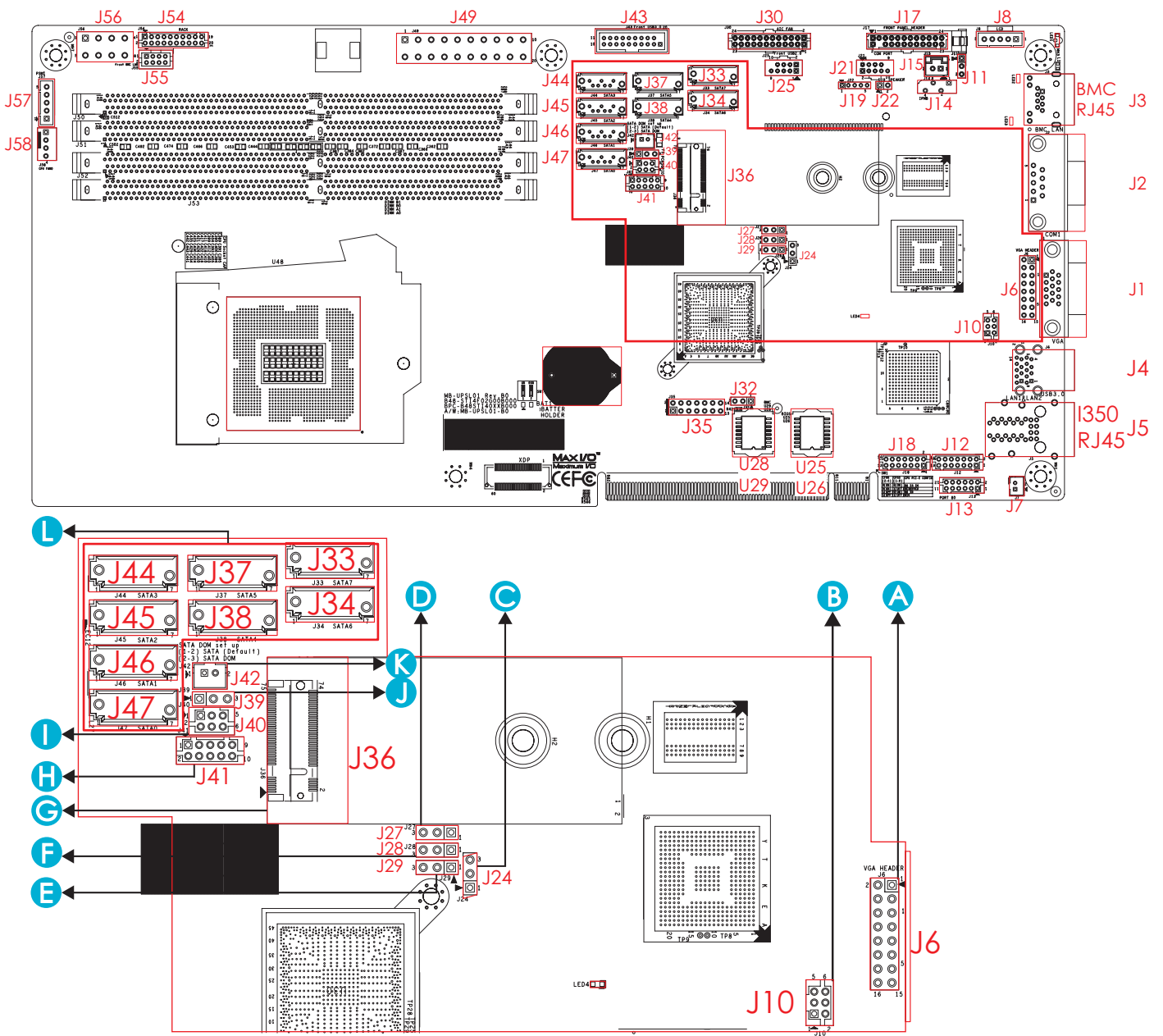
3.3 Motherboard Content List

No.	Connector Function	Location	No.	Connector Function	Location
1	DIMM Slots	J50, J51, J52, J53	20	Serial ATA	J47, J46, J45, J44, J38, J37, J34, J33
2	CPU Socket	U48	21	SATA DOM Set up header	J39
3	Battery Holder	BAT1	22	SATA DOM Power	J42
4	VGA	J6	23	Strap & Setup header	J35
5	Chassis Intrusion Header	J7	24	NGFF Connector (Serial ATA/PCIEx2)	J36
6	LCD Header	J8	25	PCH SGPIO	J40
7	BMC External GPIO	J10	26	PCH External GPIO	J41
8	BMC Debug Header	J11	27	Power Supply Connector input	J49
9	INTEL I350 AM4 Header	J12、J18	28	Power Supply Connector input	J56
10	Debug port80 header	J13	29	AIC OPEN RACK header	J54
11	Aquila power switch	J15	30	AIC OPEN RACK LAN Box Header	J55
12	SSI Front Panel header	J17	31	PSMI Header	J57
13	Speaker header	J19	32	CPU0 FAN0 connector	J58
14	COM Port header	J21	33	Host SPI Socket	U26
15	Debug Port	J22	34	SPI Socket	U28、U29
16	Front USB2.0 and USB3.0 header	J25	35	Watchdog REBOOT Jumper	J24
17	Front USB2.0 and USB3.0 header	J43	36	CMOS Clear Jumper	J32
18	PCH SMBUS header	J27、J28、J29	37	IPMB Header	J14
19	AIC FAN Header	J30			

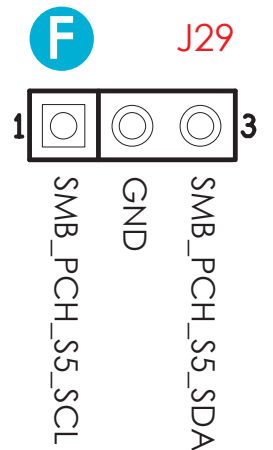
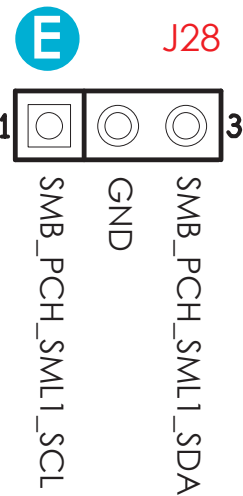
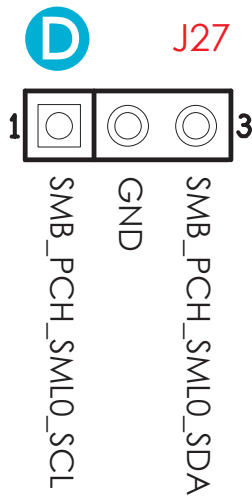
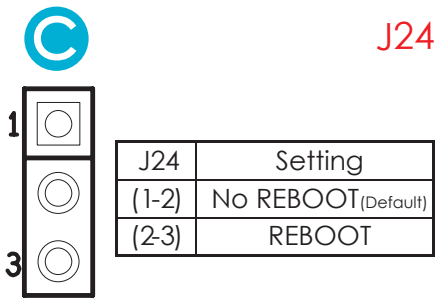
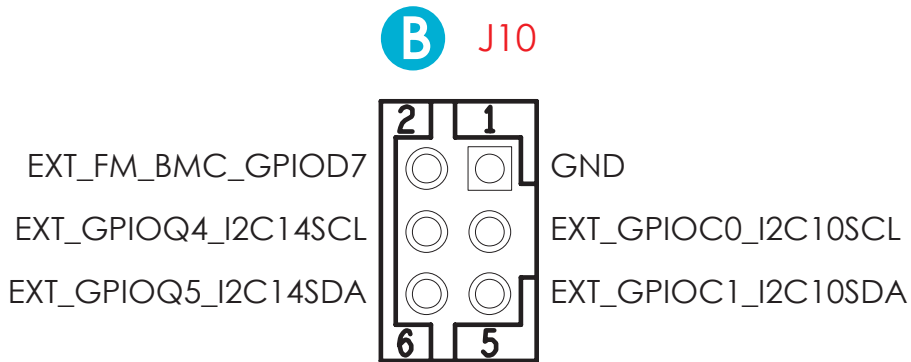
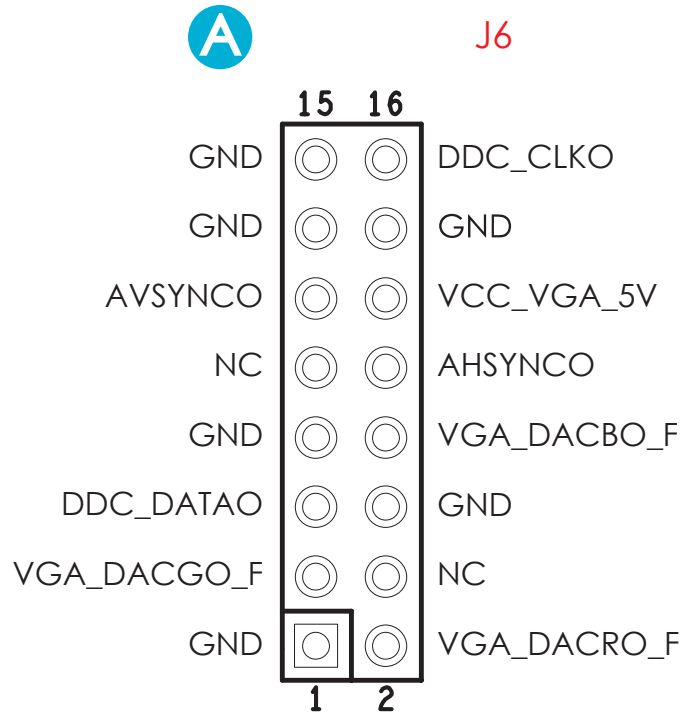
Internal Connectors/Jumpers



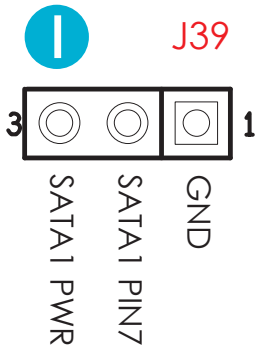
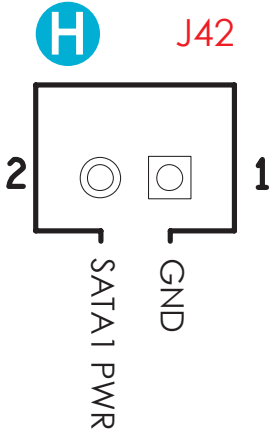
Internal Connectors/Jumpers



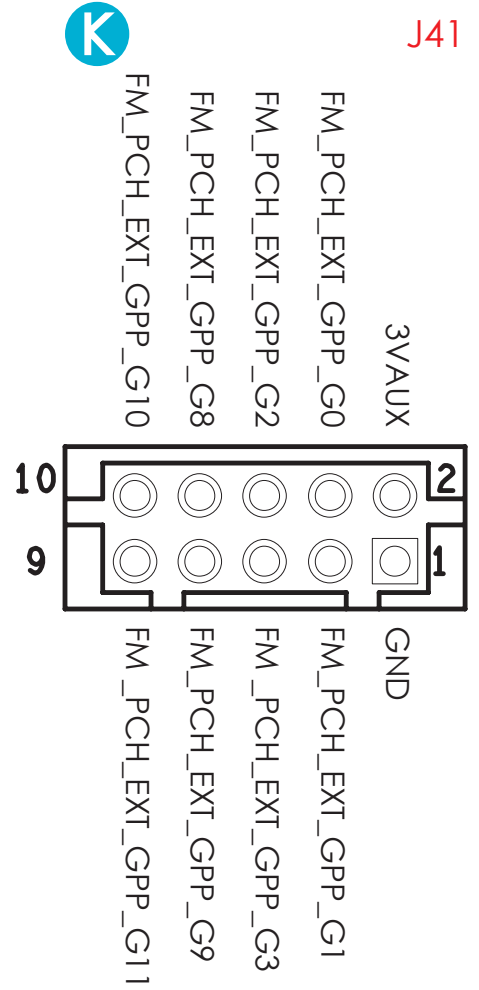
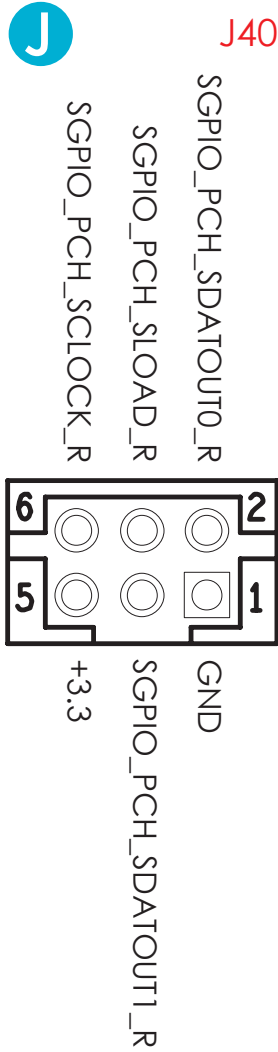
Internal Connectors/Jumpers



Internal Connectors/Jumpers

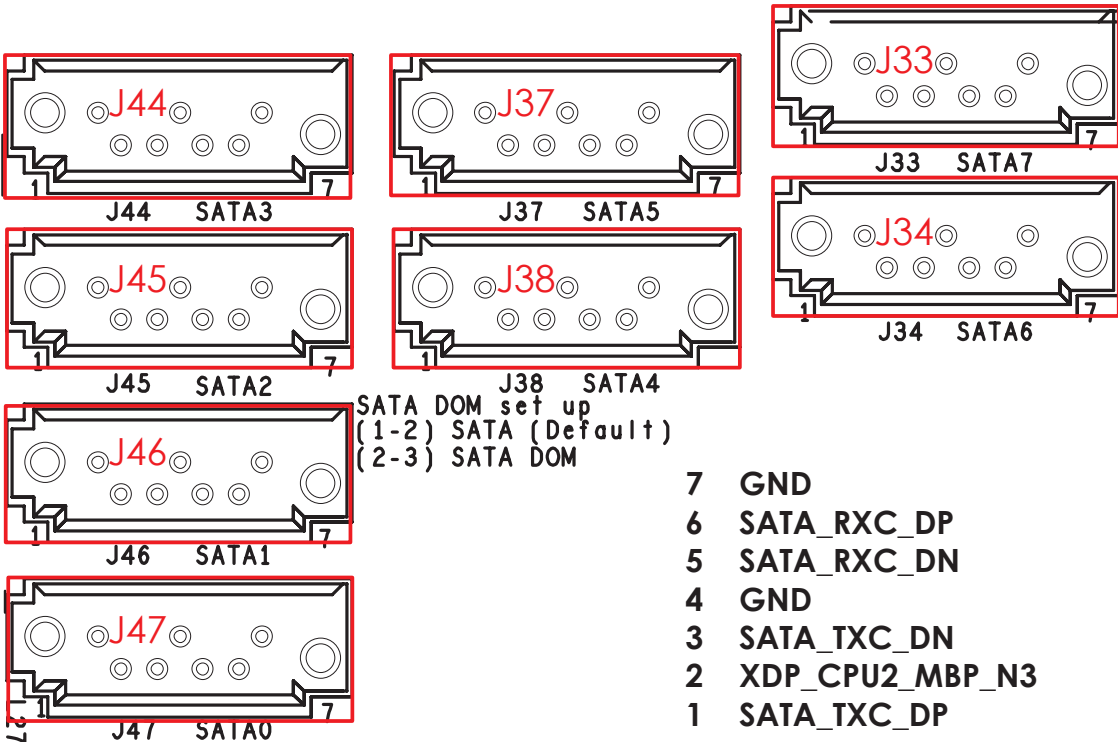


J39	Setting
(1-2)	SATA1 pin7 GND (Default)
(2-3)	SATA1 pin7 +5V (For SATA DOM with pin7 + 5V)

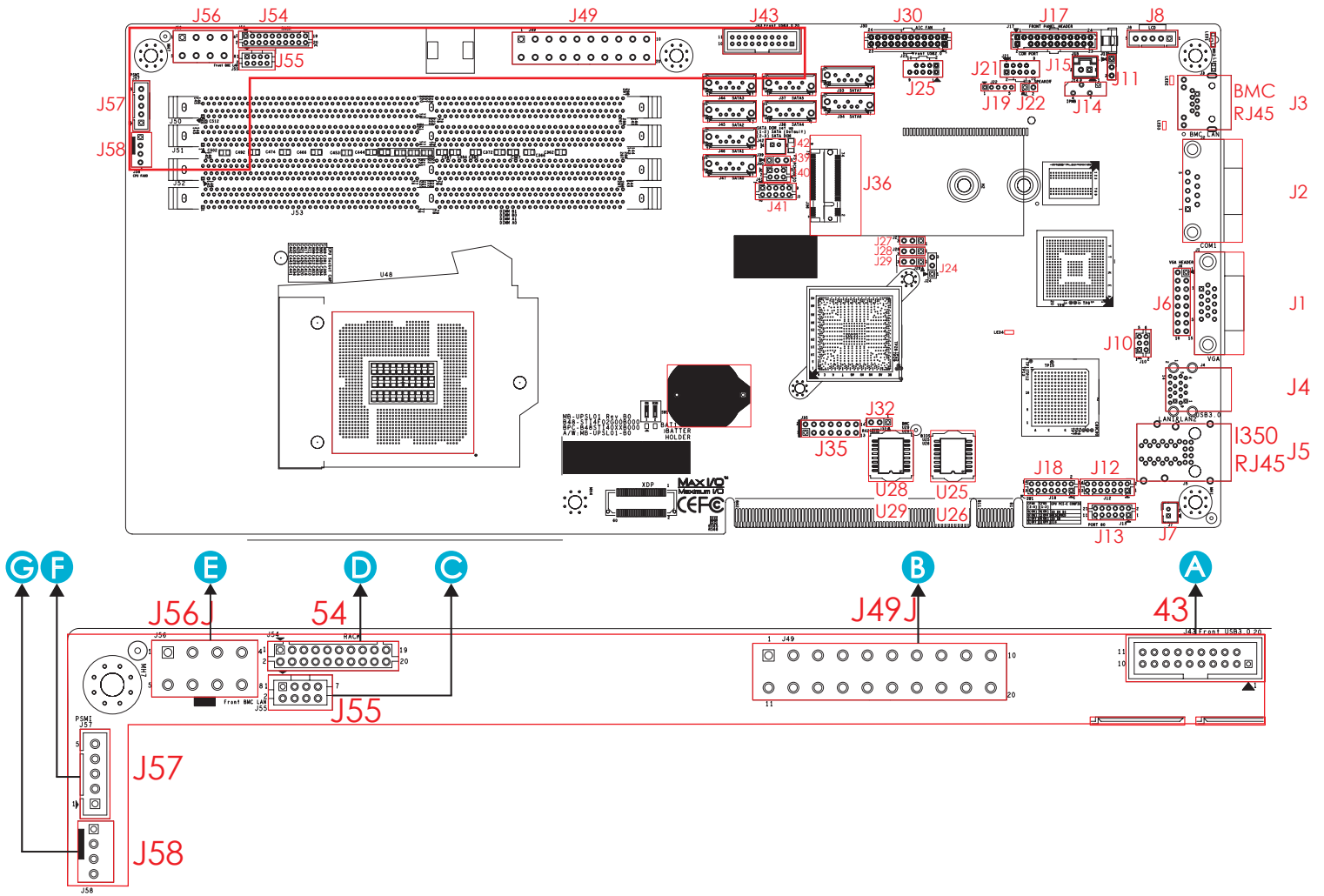


L

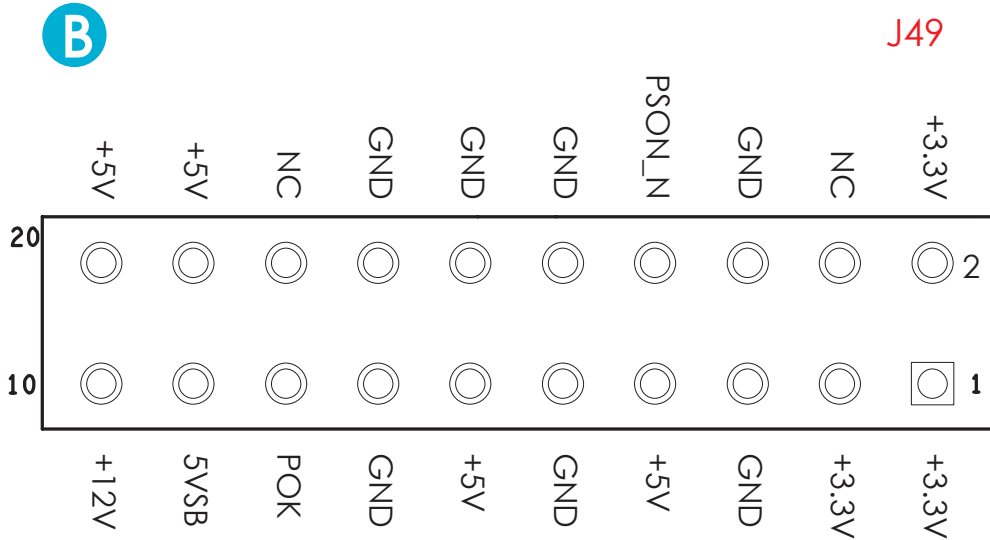
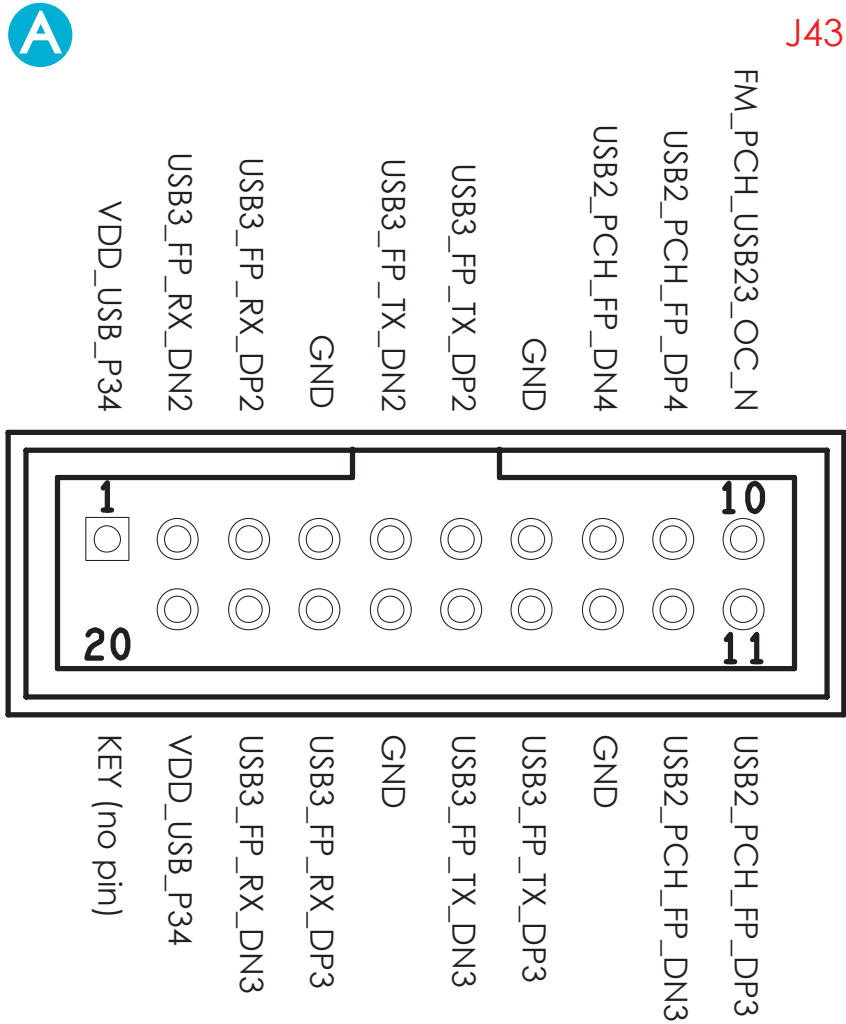
J33 J34 J37 J38 J44 J45 J46 J47



Internal Connectors/Jumpers

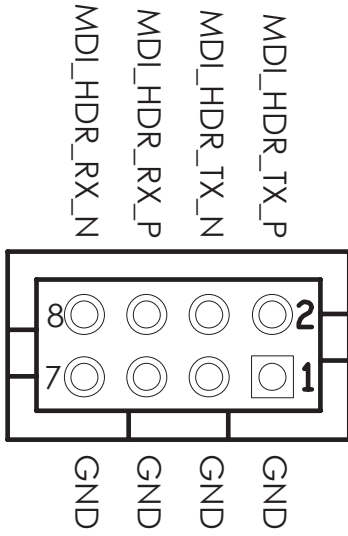


Internal Connectors/Jumpers

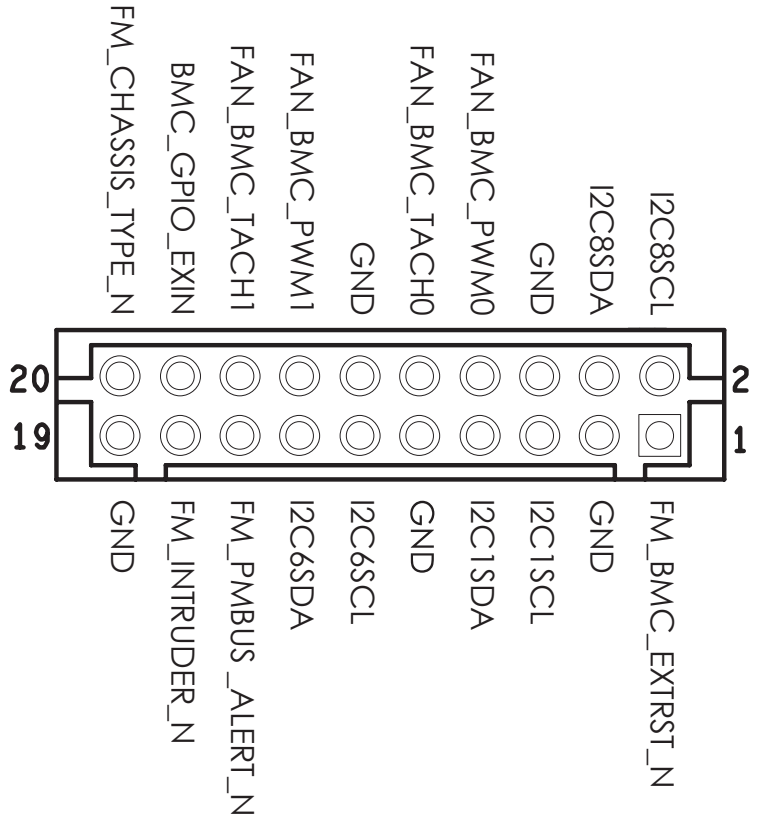


Internal Connectors/Jumpers

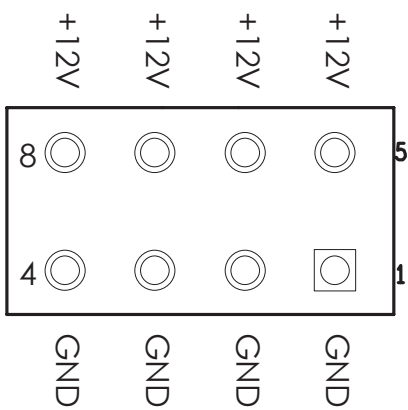
C J55



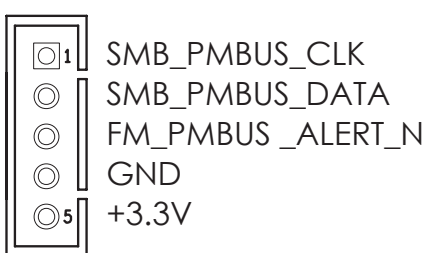
D J54



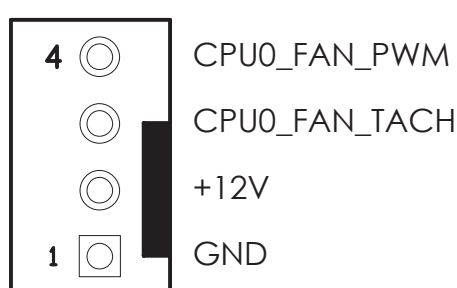
E J56



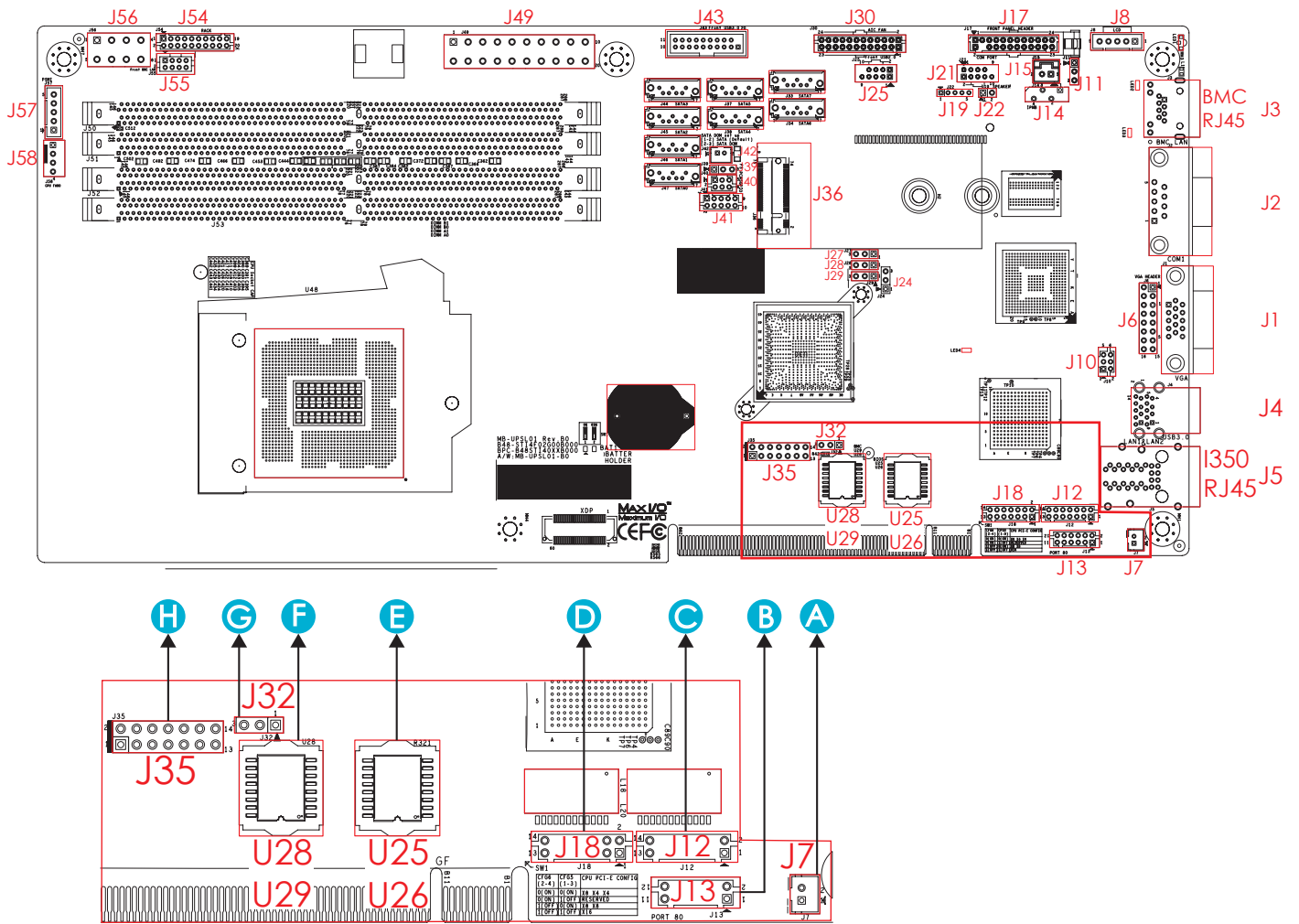
F J57



G J58

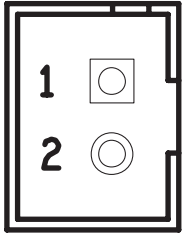


Internal Connectors/Jumpers



Internal Connectors/Jumpers

A

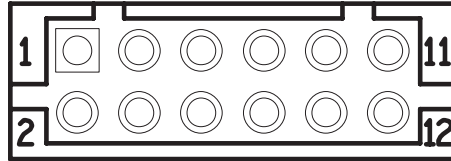


+12V
GND

Pin1-2	Setting
Short	Case Open
Open	Normal (Default)

J7

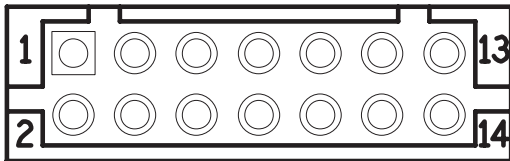
B



LPC_HDR_LAD0
+3.3V
LPC_HDR_LAD3
RST_HDR_PLTRST_N
LPC_HDR_LFRAME_N
CK_24M_LPC0
GND
LPC_HDR_LAD1
LPC_HDR_LAD2
+5V
NC
GND

J13

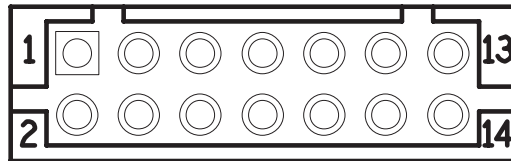
C



LED_LAN3_LINK_R_N
LED_LAN3_ACT_R_N
GND
LED_LAN3_100_R_N
LED_LAN3_1000_R_N
GND
MX_LAN3_P0
MX_LAN3_N3
MX_LAN3_P3
MX_LAN3_N2
MX_LAN3_P2
MX_LAN3_N1
MX_LAN3_P1
MX_LAN3_N0

J12

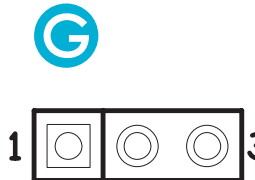
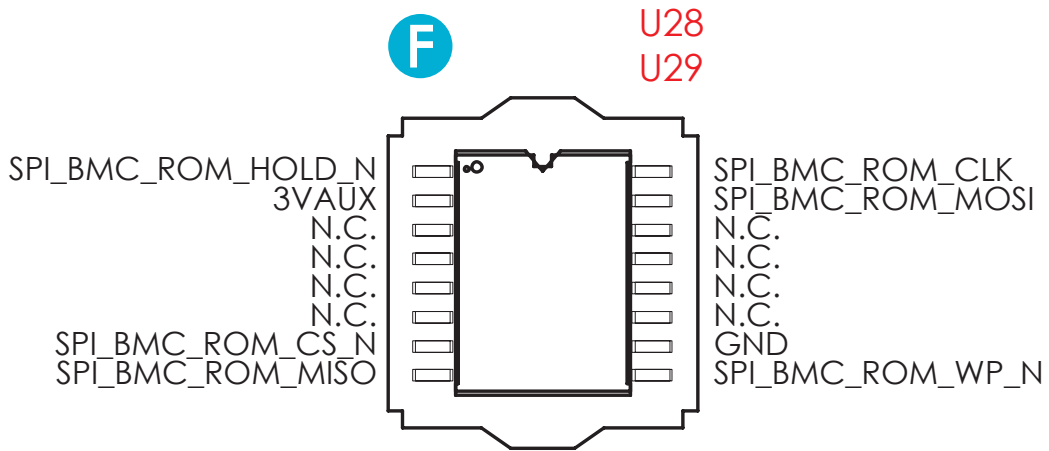
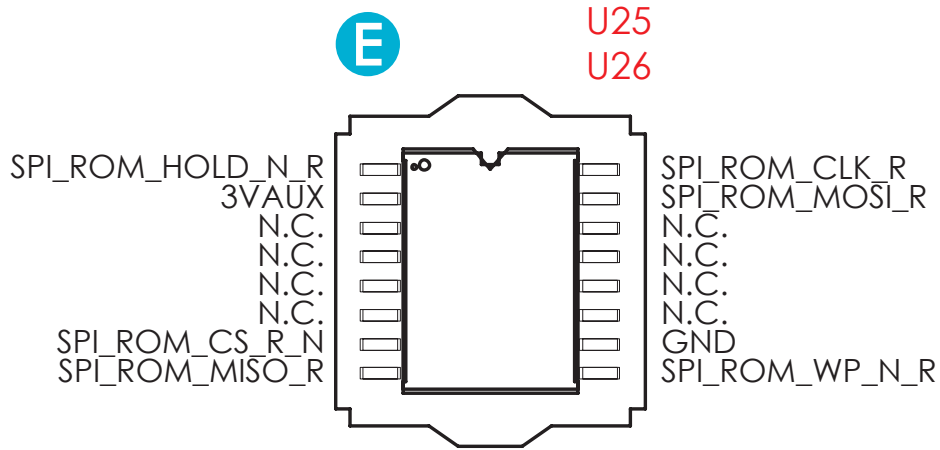
D



LED_LAN4_LINK_R_N
LED_LAN4_ACT_R_N
GND
LED_LAN4_100_R_N
LED_LAN4_1000_R_N
GND
MX_LAN4_P0
MX_LAN4_N3
MX_LAN4_P3
MX_LAN4_N2
MX_LAN4_P2
MX_LAN4_N1
MX_LAN4_P1
MX_LAN4_N0

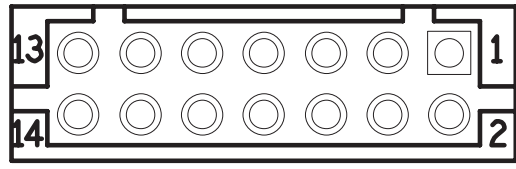
J18

Internal Connectors/Jumpers



J32

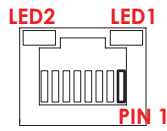
J32	Setting
(1-2)	Normal(Default)
(2-3)	Clear CMOS



H J35

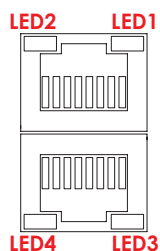
J35	Setting
(1-2)	SWAP OVERRIDE STRAP (FM_PCH_SPKR) Open: SWAP Disable <Default> Close: SWAP Enable
(3-4)	Flash Descriptor Security Override Open: Normal <Default> Close: Override
(5-6)	BIOS advance functions Open: Normal <Default> Close: BIOS core tree execution
(7-8)	REST BMC HADER Open: Normal <Default> Close: BMC SRST Enable
(9-10)	BMC EXT REST Open: Normal <Default> Close: BMC Ext REST Enable
(11-12)	ME FIRMWARE UPDATE Open: Normal <Default> Close: ME force update
(13-14)	Password Clear Jumper Open: Normal <Default> Close: Password clear

3.5.2 BMC LAN Definition



Description		Left LED(LED2) (Activity)	Left LED(LED1) (Activity)
No Link		OFF	OFF
Linked at 10 Mbps	Link	Green	Green
	Active	Blinking Green	Blinking Green
Linked at 100 Mbps	Link	Green	Green
	Active	Blinking Green	Blinking Green

3.5.3 RJ45 LED Definition



RJ45 LED Definition (For AIC STD)

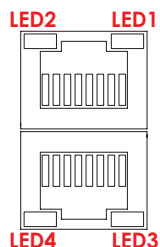
Description		Left LED (LED4, LED2,) ((Link/Activity))	Right LED (LED3, LED1,) (Speed)
No Link		OFF	OFF
Linked at 10 Mbps	Link	Green	OFF
	Active	Blinking Green	OFF
Linked at 100 Mbps	Link	Green	Green
	Active	Blinking Green	Green
Linked at 1000 Mbps	Link	Green	Yellow
	Active	Blinking Green	Yellow

RJ45 LED Definition (Only for Blue Coat)

Description		Right LED (LED4, LED2,) (Speed)	Left LED (LED3, LED1,) ((Link/Activity))
No Link		OFF	OFF
Linked at 10 Mbps	Link	OFF	Green
	Active	OFF	Blinking Green
Linked at 100 Mbps	Link	Green	Green
	Active	Green	Blinking Green
Linked at 1000 Mbps	Link	Yellow	Green
	Active	Yellow	Blinking Green

Chapter 4. BIOS Configuration Settings

3.5.3 RJ45 LED Definition



RJ45 LED Definition (For AIC STD)

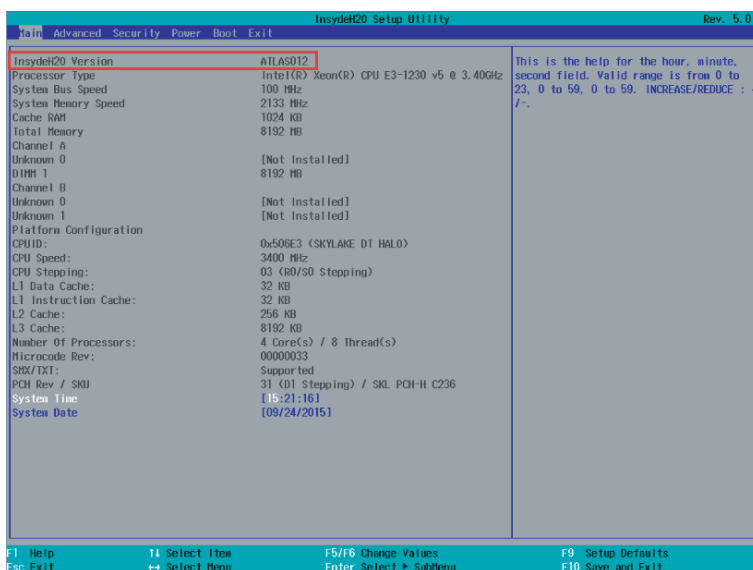
Description		Left LED (LED4, LED2,) ((Link/Activity))	Right LED (LED3, LED1,) (Speed)
No Link		OFF	OFF
Linked at 10 Mbps	Link	Green	OFF
	Active	Blinking Green	OFF
Linked at 100 Mbps	Link	Green	Green
	Active	Blinking Green	Green
Linked at 1000 Mbps	Link	Green	Yellow
	Active	Blinking Green	Yellow

RJ45 LED Definition (Only for Blue Coat)

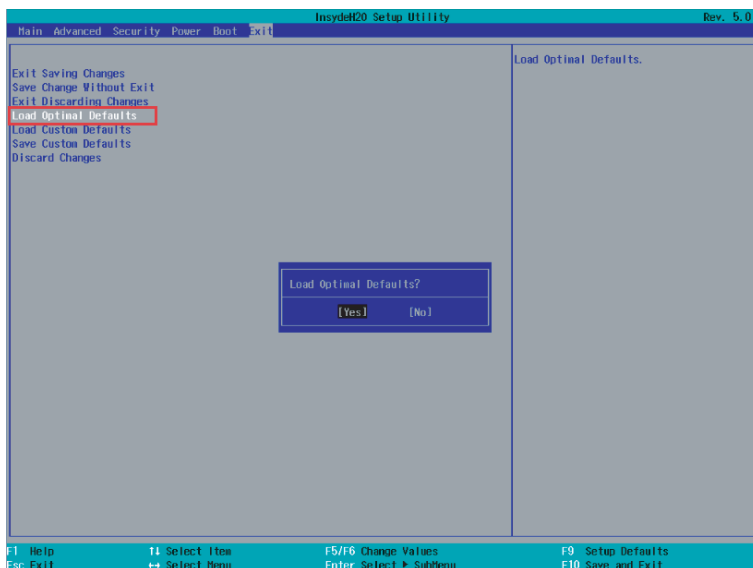
Description		Right LED (LED4, LED2,) (Speed)	Left LED (LED3, LED1,) ((Link/Activity))
No Link		OFF	OFF
Linked at 10 Mbps	Link	OFF	Green
	Active	OFF	Blinking Green
Linked at 100 Mbps	Link	Green	Green
	Active	Green	Blinking Green
Linked at 1000 Mbps	Link	Yellow	Green
	Active	Yellow	Blinking Green

Chapter 4 BIOS Configuration Settings

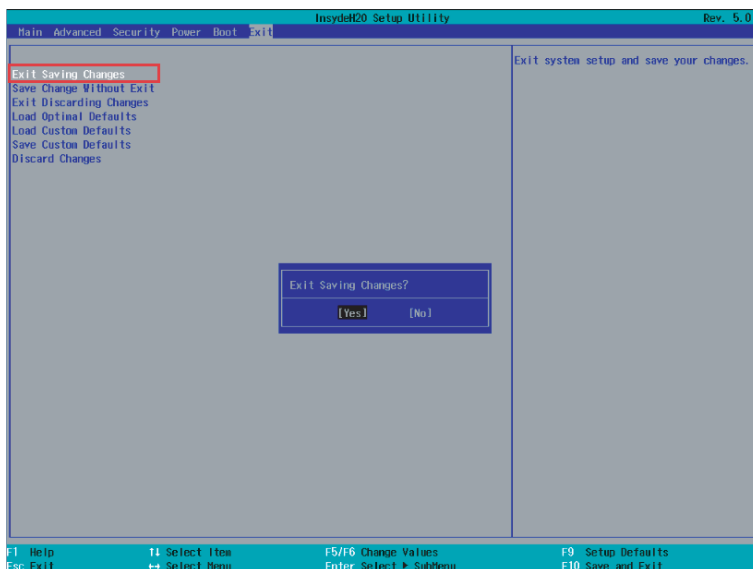
Identify the BIOS Version.



Load Optimal Default setting.



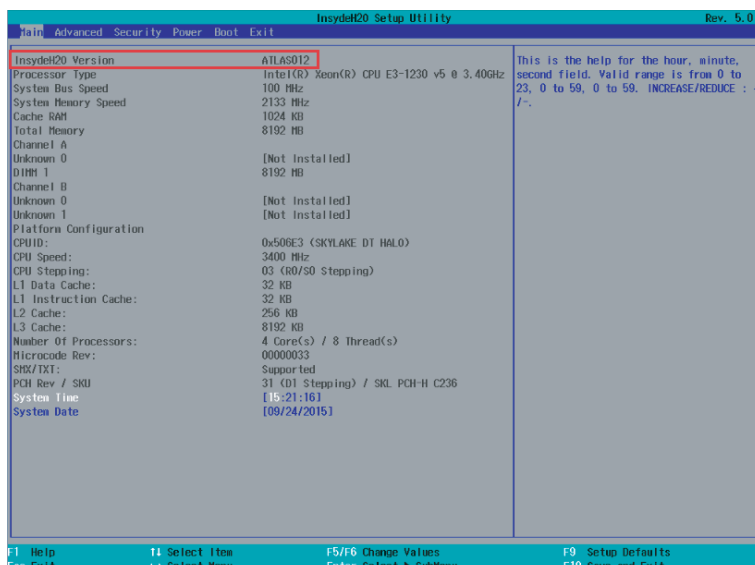
Save the setting and exit the BIOS setup utility.



4.1 Updating BIOS

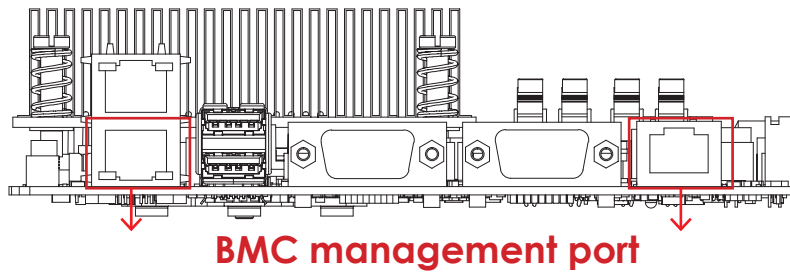
Important Notes:

To identify the current BIOS version, please check out on BIOS setup.



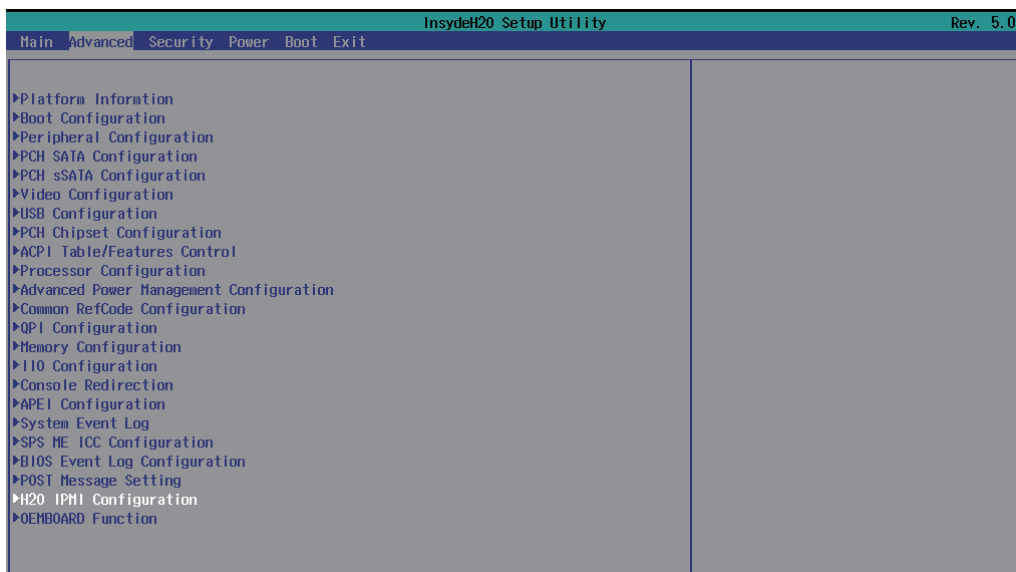
Chapter 5. BMC Configuration Settings

Insert Ethernet LAN cable into the BMC LAN port. There are two methods to setup BMC IP:



5.1 Method 1 (Use the BIOS setup)

1. BIOS SETUP → Server Mgmt → BMC network configuration → Configuration Address source → Static



Chapter 5 BMC Configuration Settings

InsydeH20 Setup Utility Rev. 5.0

Advanced

H20 IPMI Configuration		BMC Configuration page. This page contains BMC related settings.
IPMI Support	<Enabled>	
System Interface Type	KCS	
IPMI Base Address for OS	CA2/CA3	
IPMI Base Address for POST	CA2/CA3	
IPMI Base Address for SHM	CA2/CA3	
BMC Status	OK	
BMC Firmware Version	4.10	
IPMI Specification Version	2.0	
BMC MAC Address	00:15:B2:11:22:33	
BMC status for wait bmc response	<Enabled>	
BMC Warmup Time	[90]	
ACPI SPMI Table	<Enabled>	
Boot Option Support	<Disabled>	
Set BIOS version to BMC	<Disabled>	
▶BMC Configuration		
▶SDR List		
Execute H20 IPMI Utility		

InsydeH20 Setup Utility Rev. 5.0

Advanced

BMC Configuration		DHCP: BMC IPv4 settings will be configured automatically by DHCP. Static: BMC IPv4 settings will be configured manually
Watchdog Timer Support	<Disabled>	
Watchdog Timer Timeout	[5]	
Watchdog Timer Action	<Hard Reset>	
Power Cycle Time Support	<Disabled>	
Power Cycle Time	[10]	
Power Button	<Enabled>	
Reset Button	<Enabled>	
NMI Button	<Enabled>	
Lan Port Configuration	<Dedicated>	
LAN Channel Number	[1]	
IPv4 Source	<Static>	
IPv4 IP Address	192.168.1.34	
IPv4 Subnet Mask	0.0.0.0	
IPv4 Gateway Address	0.0.0.0	
IPv6 Mode	<Disabled>	
IPv6 AutoConfig	<Enabled>	
IPv6 Prefix Length	[0]	
IPv6 IP Address	0:0:0:0:0:0:0:0	
IPv6 Gateway Address	0:0:0:0:0:0:0:0	

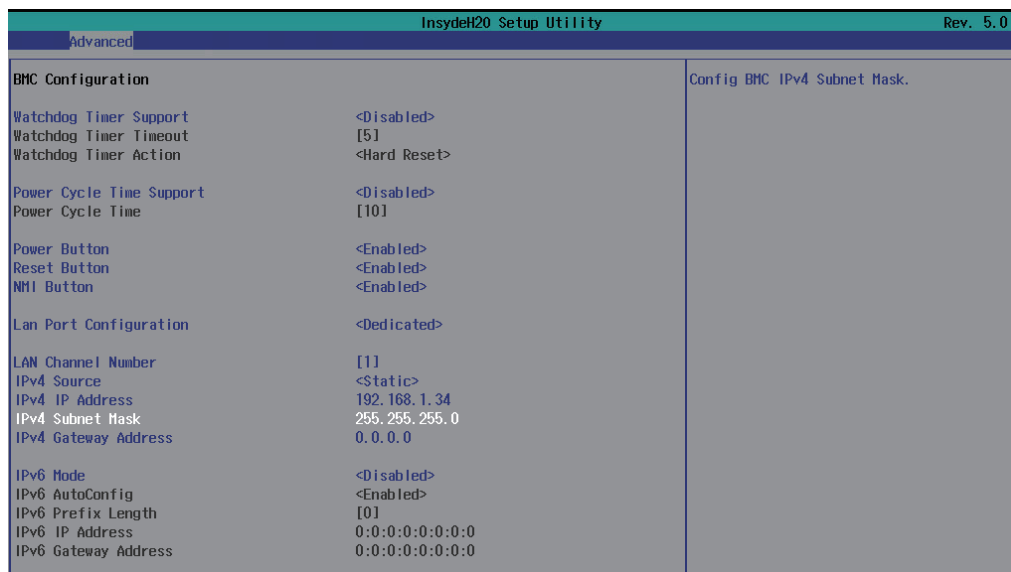
2. Input IP address. Set static IP.

InsydeH20 Setup Utility Rev. 5.0

Advanced

BMC Configuration		Config BMC IPv4 IP Address.
Watchdog Timer Support	<Disabled>	
Watchdog Timer Timeout	[5]	
Watchdog Timer Action	<Hard Reset>	
Power Cycle Time Support	<Disabled>	
Power Cycle Time	[10]	
Power Button	<Enabled>	
Reset Button	<Enabled>	
NMI Button	<Enabled>	
Lan Port Configuration	<Dedicated>	
LAN Channel Number	[1]	
IPv4 Source	<Static>	
IPv4 IP Address	192.168.1.34	
IPv4 Subnet Mask	0.0.0.0	
IPv4 Gateway Address	0.0.0.0	
IPv6 Mode	<Disabled>	
IPv6 AutoConfig	<Enabled>	
IPv6 Prefix Length	[0]	
IPv6 IP Address	0:0:0:0:0:0:0:0	
IPv6 Gateway Address	0:0:0:0:0:0:0:0	

3. Input subnet mask address.



5.2 Method 2 (Use a Dos Tool - Syscheck)

1. Type : sc -lanset.

```
C:\>sc -lanset
syscheck version 1.2.3
```

2. Modify IP setting.

```
C:\>sc -lanset
syscheck version 1.2.3
-----
-lanset          Set LAN configuration
Internet Protocal Please input 1 or 2
                 1 :Static IP enable
                 2 :DHCP enable
IP               IP       :192.168.0.2
Submask         Submask  :255.255.255.0
Gateway        Gateway  :192.168.0.254
-----

Present LAN Configuration:
DHCP           : disable
Static IP:     enable
IP             : 192.168. 22. 22
Submask       : 255.255.255. 0
Gateway       : 0. 0. 0. 0
Do you want to Modify? (Y or y to Modify / any key to Exit)
y

Internet Protocal
(1 :Static IP enable / 2 :DHCP enable)
(Please input 1 or 2):1
```

NOTE: TYPE 1 FOR SELECTING STATIC IP MODE OR TYPE 2 FOR SELECTING DHCP MODE.

3. Input the IP address.

```

                 1 :Static IP enable
                 2 :DHCP enable
IP               IP       :192.168.0.2
Submask         Submask  :255.255.255.0
Gateway        Gateway  :192.168.0.254
-----

Present LAN Configuration:
DHCP           : disable
Static IP:     enable
IP             : 192.168. 22. 22
Submask       : 255.255.255. 0
Gateway       : 0. 0. 0. 0
Do you want to Modify? (Y or y to Modify / any key to Exit)
y

Internet Protocal
(1 :Static IP enable / 2 :DHCP enable)
(Please input 1 or 2):1
                Check DHCP: 1

Modify IP address?
(Y or y to Modify / any key to Check Next) y
IP             : 192.168.22.22_
```

4. Input the submask address.

Below IP address is an example using a default IP setting. User is allowed to change the IP address for realistic use.

```
-----  
Present LAN Configuration:  
DHCP      : disable  
Static IP: enable  
IP        : 192.168.22.22  
Submask   : 255.255.255.0  
Gateway   : 0.0.0.0  
Do you want to Modify? (Y or y to Modify / any key to Exit)  
y  
  
Internet Protocal  
(1 :Static IP enable / 2 :DHCP enable)  
(Please input 1 or 2):1  
          Check DHCP: 1  
  
Modify IP address?  
(Y or y to Modify / any key to Check Next) y  
IP        : 192.168.22.22  
          The IP Address: 192.168.22.22 is valid  
  
Modify Submask address?  
(Y or y to Modify / any key to Check Next) y  
Submask   : 255.255.255.0
```

5. Finish the BMC IP configuration.

```
Do you want to Modify? (Y or y to Modify / any key to Exit)  
y  
  
Internet Protocal  
(1 :Static IP enable / 2 :DHCP enable)  
(Please input 1 or 2):1  
          Check DHCP: 1  
  
Modify IP address?  
(Y or y to Modify / any key to Check Next) y  
IP        : 192.168.22.22  
          The IP Address: 192.168.22.22 is valid  
  
Modify Submask address?  
(Y or y to Modify / any key to Check Next) y  
Submask   : 255.255.255.0  
          The Submask: 255.255.255.0 is valid  
  
Modify Gateway address?  
(Y or y to Modify / any key to Exit) +  
          Completed.  
  
C:\>
```

NOTE: TYPE SC.EXE -LANGET COMMAND TO OBTAIN BMC IP AND MAC ADDRESS.

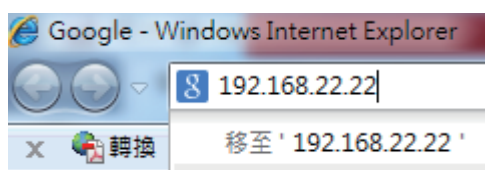
```
C:\>sc -langet  
syscheck version 1.2.3  
-----  
IP          : 192.168.22.22  
Submask    : 255.255.255.0  
Gateway    : 0.0.0.0  
MAC        : 00-15-B2-A1-29-27  
DHCP       : disable  
Static IP  : enable  
  
C:\>
```

5.3 Connect to BMC

NOTE: THIS FEATURE WORKS WITH JAVA 6 RUNTIME INSTALLED CONSOLE ENVIRONMENT.

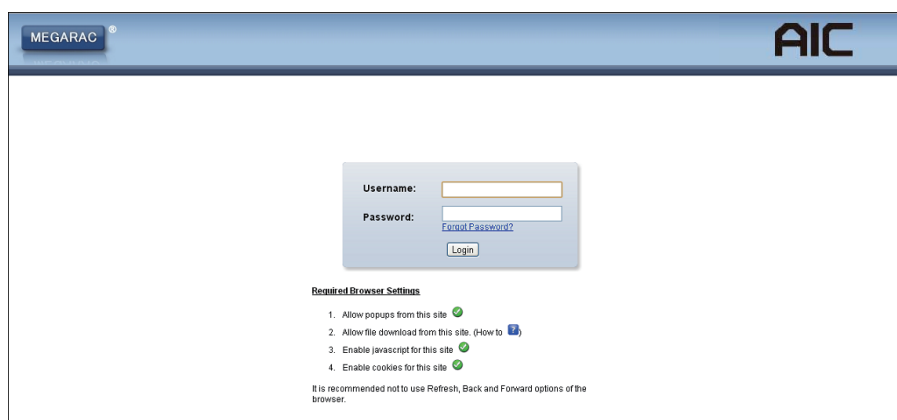
The below IP address is an example using default IP setting. The IP address is configurable.

1. Open the browser then type default BMC IP address: 192.168.22.22



2. Use the default user name and password for first-time login to BMC WEB GUI.

Field:	Default
UserName:	admin
Password:	admin



NOTE: THE DEFAULT USER NAME AND PASSWORD ARE IN LOWER-CASE CHARACTERS.

NOTE: USERS WHO LOGIN WITH THE ADMIN USER NAME AND PASSWORD WILL HAVE FULL ADMINISTRATIVE POWER. THE ADMIN PASSWORD CAN BE CHANGED AFTER LOGIN.

3. Dashboard

The dashboard provides overall information about the device and remote server. It includes sections for Device Information, Network Information, Remote Control, Sensor Monitoring, and Event Logs.

Device Information
 Firmware Revision: 1.3.13232
 Firmware Build Time: Oct 16 2012 15:31:57 CST

Network Information (Edit)
 MAC Address: 00:15:B2:A2:77:8E
 V4 Network Mode: DHCP
 IPv4 Address: 192.168.0.118
 V6 Network Mode: DHCP
 IPv6 Address: ::

Remote Control [Launch]

Sensor Monitoring

Status	Sensor	Reading	
●	Temp_1	Not Available	🔊
●	Temp_5	Not Available	🔊
●	Chas_IntrusionZ@	Not Available	🔊
●	Voltage_VCC	Not Available	🔊
●	Fan_1	Not Available	🔊
●	Fan_2	Not Available	🔊
●	Temp_3	Not Available	🔊
●	Temp_4	Not Available	🔊
●	Voltage_2.5V	Not Available	🔊
●	Voltage_5V	Not Available	🔊
●	Voltage1_12V	Not Available	🔊
●	Temp_2	Not Available	🔊

Event Logs Free Space (100%)

4. Server Health - Sensor Readings:

The Sensor Readings page displays information for 12 sensors. A dropdown menu is set to 'All Sensors'. The sensor count is 12 sensors.

Sensor Name	Status	Current Reading
Temp_1	Normal	Not Available
Temp_5	Normal	Not Available
Chas_IntrusionZ@	All deasserted	Not Available
Voltage_VCC	Normal	Not Available
Fan_1	Normal	Not Available
Fan_2	Normal	Not Available
Temp_3	Normal	Not Available
Temp_4	Normal	Not Available
Voltage_2.5V	Normal	Not Available
Voltage_5V	Normal	Not Available
Voltage1_12V	Normal	Not Available
Temp_2	Normal	Not Available

Temp_1: Not Available NORMAL

Thresholds for this sensor Live Widget Off | On

Lower Non-Recoverable (LNR): 0	Upper Non-Recoverable (UNR): 40
Lower Critical (LC): 18	Upper Critical (UC): 35
Lower Non-Critical (LNC): 25	Upper Non-Critical (UNC): 30

Graphical View of this sensor's events

LNR	(0)
LC	(0)
LNC	(0)
UNR	(0)
UC	(0)

5. Configuration

Refer to AIC BMC User Guide for more information on AIC BMC.

The screenshot shows the AIC BMC Configuration page. The 'Configuration' menu is open, highlighting 'Active Directory'. The 'Active Directory Settings' section indicates that Active Directory is currently disabled. Below this, a table lists configured Role Groups:

Role Group ID	Group Name	Group Domain	Group Privilege
1	~	~	~
2	~	~	~
3	~	~	~
4	~	~	~
5	~	~	~

Buttons for 'Add Role Group', 'Modify Role Group', and 'Delete Role Group' are visible at the bottom of the table.

Mouse Mode setting:

The screenshot shows the 'Mouse Mode Settings' page. It states that redirection console mouse mode settings can be modified here. The current mode is set to 'ABSOLUTE'.

The current Mouse Mode is ABSOLUTE.

- Set Mode to Absolute (Recommended when server OS is Windows)
- Set Mode to Relative (Recommended when server OS is Linux)

'Save' and 'Reset' buttons are located at the bottom right of the page.

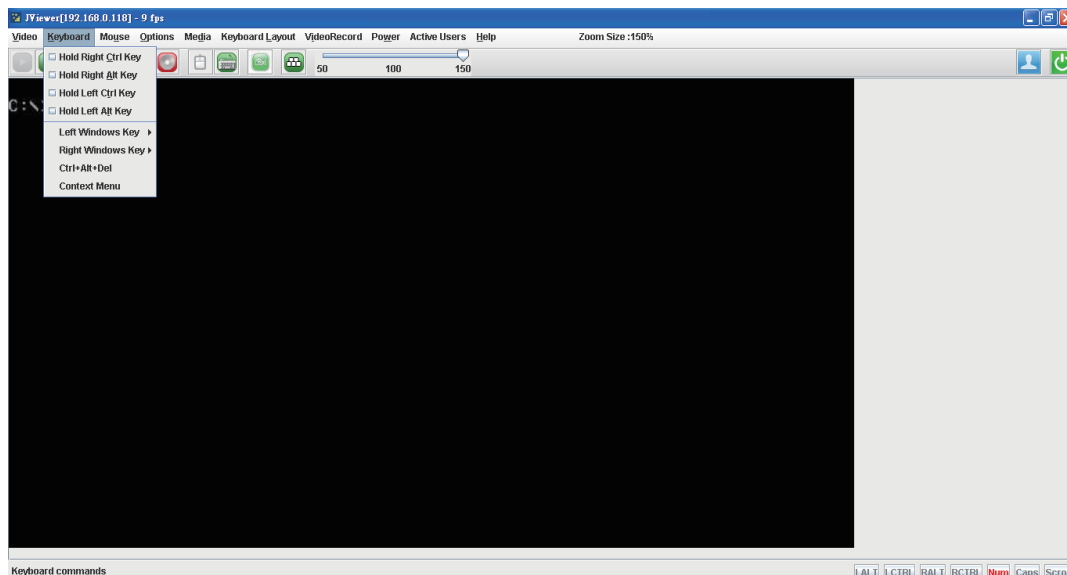
For Windows OS environment, set mode to absolute.

For Linux OS environment, set mode to relative

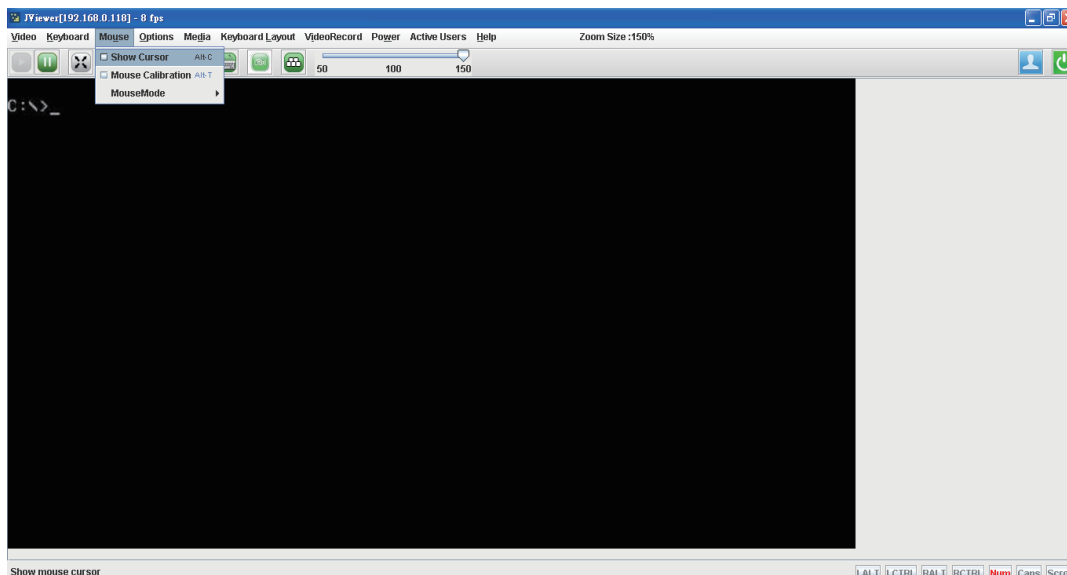
6. Remote Control:



Environmental setting:



Press "ALT+C" for local and remote OS mouse control switching.



5.4 Updating BMC Firmware

1. Boot to the DOS (MS-DOS or Free DOS is workable).
2. Enter BMC firmware directory [XXXXXZYY]; XXXXX: project name ;
YY: firmware version; Z: Identify character, C for official, B for Beta.
3. Execute a.bat batch file to update the BMC firmware.

Example:

```
A:>cd SB301C01
```

```
A:\ SB301C01>a.bat
```

This is just an example. The latest BMC firmware version is available from the FAE or AIC website.

4. After updating the BMC firmware, please turn off and then turn on the system.

NOTES:

1. DO NOT USE EMM386 IN DOS ENVIRONMENT WHEN UPDATING FIRMWARE OR YOU WILL GET A FAIL.
2. IN SOME CRITICAL CONDITION, AFTER UPDATING BMC FIRMWARE OR CONFIG FILE, YOU MIGHT NEED TO UNPLUG AC POWER CORD 5 SECONDS AND THEN PLUG AC POWER CORD TO RESET BMC, THEN UPDATED NEW FUNCTION CAN WORK PROPERLY.

Chapter 6. Technical Support



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