NEXCOM International Co., Ltd.

Intelligent Digital Security

Video Intelligent Surveillance

NViS 6308 Series

User Manual

NEXCOM International Co., Ltd.
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PREFACE

Copyright

Disclaimer

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Acknowledgements

NViS 6308 and NViS 6308R are trademarks of NEXCOM International Co., Ltd. All other product names mentioned herein are registered trademarks of their respective owners.

Regulatory Compliance Statements

This section provides the FCC compliance statement for Class B devices and describes how to keep the system CE compliant.

Declaration of Conformity

FCC

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

CE

The product(s) described in this manual complies with all applicable European Union (CE) directives if it has a CE marking. For computer systems to remain CE compliant, only CE-compliant parts may be used. Maintaining CE compliance also requires proper cable and cabling techniques.

RoHS Compliance

NEXCOM RoHS Environmental Policy and Status Update

NEXCOM is a global citizen for building the digital infrastructure. We are committed to providing green products and services, which are compliant with European Union RoHS (Restriction on Use of Hazardous Substance in Electronic Equipment) directive 2011/65/EU, to be your trusted green partner and to protect our environment.

RoHS restricts the use of Lead (Pb) < 0.1% or 1,000ppm, Mercury (Hg) < 0.1% or 1,000ppm, Cadmium (Cd) < 0.01% or 100ppm, Hexavalent Chromium (Cr6+) < 0.1% or 1,000ppm, Polybrominated biphenyls (PBB) < 0.1% or 1,000ppm, and Polybrominated diphenyl Ethers (PBDE) < 0.1% or 1,000ppm.

In order to meet the RoHS compliant directives, NEXCOM has established an engineering and manufacturing task force to implement the introduction of green products. The task force will ensure that we follow the standard NEXCOM development procedure and that all the new RoHS components and new manufacturing processes maintain the highest industry quality levels for which NEXCOM are renowned.

The model selection criteria will be based on market demand. Vendors and suppliers will ensure that all designed components will be RoHS compliant.

How to recognize NEXCOM RoHS Products?

For existing products where there are non-RoHS and RoHS versions, the suffix "(LF)" will be added to the compliant product name.

All new product models launched after January 2013 will be RoHS compliant. They will use the usual NEXCOM naming convention.

Warranty and RMA

NEXCOM Warranty Period

NEXCOM manufactures products that are new or equivalent to new in accordance with industry standard. NEXCOM warrants that products will be free from defect in material and workmanship for 2 years, beginning on the date of invoice by NEXCOM. HCP series products (Blade Server) which are manufactured by NEXCOM are covered by a three year warranty period.

NEXCOM Return Merchandise Authorization (RMA)

- Customers shall enclose the "NEXCOM RMA Service Form" with the returned packages.
- Customers must collect all the information about the problems encountered and note anything abnormal or, print out any on-screen messages, and describe the problems on the "NEXCOM RMA Service Form" for the RMA number apply process.
- Customers can send back the faulty products with or without accessories (manuals, cable, etc.) and any components from the card, such as CPU and RAM. If the components were suspected as part of the problems, please note clearly which components are included. Otherwise, NEXCOM is not responsible for the devices/parts.
- Customers are responsible for the safe packaging of defective products, making sure it is durable enough to be resistant against further damage and deterioration during transportation. In case of damages occurred during transportation, the repair is treated as "Out of Warranty."
- Any products returned by NEXCOM to other locations besides the customers' site will bear an extra charge and will be billed to the customer.

Repair Service Charges for Out-of-Warranty Products

NEXCOM will charge for out-of-warranty products in two categories, one is basic diagnostic fee and another is component (product) fee.

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System Level

- Component fee: NEXCOM will only charge for main components such as SMD chip, BGA chip, etc. Passive components will be repaired for free, ex: resistor, capacitor.
- Items will be replaced with NEXCOM products if the original one cannot be repaired. Ex: motherboard, power supply, etc.
- Replace with 3rd party products if needed.
- If RMA goods can not be repaired, NEXCOM will return it to the customer without any charge.

Board Level

- Component fee: NEXCOM will only charge for main components, such as SMD chip, BGA chip, etc. Passive components will be repaired for free, ex: resistors, capacitors.
- If RMA goods can not be repaired, NEXCOM will return it to the customer without any charge.

Warnings

Read and adhere to all warnings, cautions, and notices in this guide and the documentation supplied with the chassis, power supply, and accessory modules. If the instructions for the chassis and power supply are inconsistent with these instructions or the instructions for accessory modules, contact the supplier to find out how you can ensure that your computer meets safety and regulatory requirements.

Cautions

Electrostatic discharge (ESD) can damage system components. Do the described procedures only at an ESD workstation. If no such station is available, you can provide some ESD protection by wearing an antistatic wrist strap and attaching it to a metal part of the computer chassis.

Safety Information

Before installing and using the device, note the following precautions:

- Read all instructions carefully.
- Do not place the unit on an unstable surface, cart, or stand.
- Follow all warnings and cautions in this manual.
- When replacing parts, ensure that your service technician uses parts specified by the manufacturer.
- Avoid using the system near water, in direct sunlight, or near a heating device.
- The load of the system unit does not solely rely for support from the rackmounts located on the sides. Firm support from the bottom is highly necessary in order to provide balance stability.
- The computer is provided with a battery-powered real-time clock circuit. There is a danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

Installation Recommendations

Ensure you have a stable, clean working environment. Dust and dirt can get into components and cause a malfunction. Use containers to keep small components separated.

Adequate lighting and proper tools can prevent you from accidentally damaging the internal components. Most of the procedures that follow require only a few simple tools, including the following:

- A Philips screwdriver
- A flat-tipped screwdriver
- A grounding strap
- An anti-static pad

Using your fingers can disconnect most of the connections. It is recommended that you do not use needle-nose pliers to disconnect connections as these can damage the soft metal or plastic parts of the connectors.

Safety Precautions

1. Read these safety instructions carefully.

2. Keep this User Manual for later reference.

3. Disconnect this equipment from any AC outlet before cleaning. Use a damp cloth. Do not use liquid or spray detergents for cleaning.

4. For plug-in equipment, the power outlet socket must be located near the equipment and must be easily accessible.

5. Keep this equipment away from humidity.

6. Put this equipment on a stable surface during installation. Dropping it or letting it fall may cause damage.

7. The openings on the enclosure are for air convection to protect the equipment from overheating. DO NOT COVER THE OPENINGS.

8. Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.

9. Place the power cord in a way so that people will not step on it. Do not place anything on top of the power cord. Use a power cord that has been approved for use with the product and that it matches the voltage and current marked on the product's electrical range label. The voltage and current rating of the cord must be greater than the voltage and current rating marked on the product.

10. All cautions and warnings on the equipment should be noted.

11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient overvoltage.

12. Never pour any liquid into an opening. This may cause fire or electrical shock.

13. Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.

14. If one of the following situations arises, get the equipment checked by service personnel:
    a. The power cord or plug is damaged.
    b. Liquid has penetrated into the equipment.
    c. The equipment has been exposed to moisture.
    d. The equipment does not work well, or you cannot get it to work according to the user's manual.
    e. The equipment has been dropped and damaged.
    f. The equipment has obvious signs of breakage.

15. Do not place heavy objects on the equipment.

16. The unit uses a three-wire ground cable which is equipped with a third pin to ground the unit and prevent electric shock. Do not defeat the purpose of this pin. If your outlet does not support this kind of plug, contact your electrician to replace your obsolete outlet.

17. CAUTION: DANGER OF EXPLOSION IF BATTERY IS INCORRECTLY REPLACED. REPLACE ONLY WITH THE SAME OR EQUIVALENT TYPE RECOMMENDED BY THE MANUFACTURER. DISCARD USED BATTERIES ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.

Technical Support and Assistance

1. For the most updated information of NEXCOM products, visit NEXCOM's website at www.nexcom.com.

2. For technical issues that require contacting our technical support team or sales representative, please have the following information ready before calling:
   - Product name and serial number
   - Detailed information of the peripheral devices
   - Detailed information of the installed software (operating system, version, application software, etc.)
   - A complete description of the problem
   - The exact wordings of the error messages

Warning!

1. Handling the unit: carry the unit with both hands and handle it with care.

2. Maintenance: to keep the unit clean, use only approved cleaning products or clean with a dry cloth.

3. CompactFlash: Turn off the unit's power before inserting or removing a CompactFlash storage card.

Conventions Used in this Manual

Warning:
Information about certain situations, which if not observed, can cause personal injury. This will prevent injury to yourself when performing a task.

Caution:
Information to avoid damaging components or losing data.

Note:
Provides additional information to complete a task easily.

Global Service Contact Information

Headquarters

NEXCOM International Co., Ltd.
9F, No. 920, Chung-Cheng Rd.,
ZhongHe District, New Taipei City, 23586,
Taiwan, R.O.C.
Tel: +886-2-8226-7786
Fax: +886-2-8226-7782
www.nexcom.com

Asia

Taiwan

NexAIoT Co., Ltd.

Taipei Office
13F, No.920, Chung-Cheng Rd.,
ZhongHe District,
New Taipei City, 23586, Taiwan, R.O.C.
Tel: +886-2-8226-7796
Fax: +886-2-8226-7792
Email: sales@nexcom.com.tw
www.nexcom.com.tw

NexAIoT Co., Ltd.

Taichung Office
16F, No.250, Sec. 2, Chongde Rd.,
Beitun Dist.,
Taichung City 406, R.O.C.
Tel: +886-4-2249-1179
Fax: +886-4-2249-1172
Email: sales@nexcom.com.tw
www.nexcom.com.tw

NexCOBOT Taiwan Co., Ltd.
13F, No.916, Chung-Cheng Rd.,
ZhongHe District,
New Taipei City, 23586, Taiwan, R.O.C.
Tel: +886-2-8226-7796
Fax: +886-2-8226-7792
Email: sales@nexcom.com.tw
www.nexcom.com.tw

GreenBase Technology Corp.
13F, No.922,Chung-Cheng Rd.,
Zhonghe Dist.,
New Taipei City, 23586, Taiwan, R.O.C.
Tel: +886-2-8226-7786
Fax: +886-2-8226-7900
Email:sales@nexcom.com.tw
www.nexcom.com.tw

China

NEXSEC Incorporated
Floor 5, No.4, No.7 fengxian middle Rd.,
(Beike Industrial Park), Haidian District,
Beijing, 100094, China
Tel: +86-10-5704-2680
Fax: +86-10-5704-2681
Email: sales@nexcom.cn
www.nexcom.cn

NEXCOM Shanghai
Room 603/604, Huiyinmingzun Plaza Bldg., 1,
No. 609, Yunlin East Rd.,
Shanghai, 200062, China
Tel: +86-21-5278-5868
Fax: +86-21-3251-6358
Email: sales@nexcom.cn
www.nexcom.cn

NEXCOM Surveillance Technology Corp.
Floor 5, Building C, ZhenHan Industrial Zone,
GanKeng Community, Buji Street,
LongGang District,
ShenZhen, 518112, China
Tel: +86-755-8364-7768
Fax: +86-755-8364-7738
Email: steveyang@nexcom.com.tw
www.nexcom.cn

NEXCOM United System Service
Room 603/604, Huiyinmingzun Plaza Bldg. 1,
No. 609, Yunlin East Rd.,
Shanghai, 200062, China
Tel: +86-21-5278-5868
Fax: +86-21-3251-6358
Email: renwang@nexcom.com.tw
www.nexcom.cn

NEXGOL
1st Floor, Building B4, Electronic 2nd Area,
(Phoenix Lake Industrial Park), Yongchuan Dist.,
Chongqing City, 402160, China
Tel: +86-23-4960-9080
Fax: +86-23-4966-5855
Email: sales@nexcobot.com
www.nexgol.com/NexGoL

Beijing NexGemo Technology Co.,Ltd.
5th Floor, Gemotech Building, No.1, Development Rd.,
Changping International Information Industry Base,
Changping District,
Beijing,102206, China
Tel: +86-10-8190-9399
Fax:+86-10-8190-9456

Japan
NEXCOM Japan
9F, Tamachi Hara Bldg.,
4-11-5, Shiba Minato-ku,
Tokyo, 108-0014, Japan
Tel: +81-3-5419-7830
Fax: +81-3-5419-7832
Email: sales@nexcom-jp.com
www.nexcom-jp.com

Europe
United Kingdom
NEXCOM EUROPE
10 Vincent Avenue,
Crownhill Business Centre,
Milton Keynes, Buckinghamshire
MK8 0AB, United Kingdom
Tel: +44-1908-267121
Fax: +44-1908-262042
Email: sales.uk@nexcom.eu
www.nexcom.eu

America
USA
NEXCOM USA
2883 Bayview Drive,
Fremont CA 94538, USA
Tel: +1-510-656-2248
Fax: +1-510-656-2158
Email: sales@nexcom.com
www.nexcom.com

Package Contents

Before continuing, verify that the NViS 6308 series package that you received is complete. Your package should have all the items listed in the following table.

NViS 6308

Item	Part Number	Name	Description	Qty
1	19C00630800X0	NViS 6308 SYS	NViS 6308 ASSY	1
2	5050200128X00	CPU Cooler	Intel LGA1156 CPU Cooler for NViB 6308_MB DELTA:FHSA9025B-1225	1
3	6012200085X00	PE Bag	800x600x0.06mm	1

NViS 6308R

Item	Part Number	Name	Description	Qty
1	19C00630801X0	NViS 6308R SYS	NViS 6308 ASSY	1
2	5050200128X00	CPU Cooler	Intel LGA1156 CPU Cooler for NViB 6308_MB DELTA:FHSA9025B-1225	1
3	6012200085X00	PE Bag	800x600x0.06mm	1

Ordering Information

The following information below provides ordering information for the NViS 6308 series.

NViS 6308 (P/N: 10C00630800X0)

2U, NVR with 7th Generation Intel® Core™ Processors Family

NViS 6308R (P/N: 10C00630801X0)

2U, NVR with 7th Generation Intel® Core™ Processors Family

Chapter 1: Product Introduction

Overview

Without Front Cover

With Front Cover (Front cover is optional component)

Key Features

- 400W Hot-swappable dual redundant power supply (NViS 6308R)
- 2U rackmount NVR with 1 x PCIe x16, 1 x PCIe x4, 1 x PCIe x1 slots available
- Support 7th Generation Intel® Core™ Processor Family
- 8 x 3.5” Hot-swappable HDD trays
- Triple display by 2 x HDMI + 1 x DVI-I
- 2 x Intel® Gigabit Ethernet/support Intel® AMT 11.0 for remote management
- 1 x M.2 (M-Key, 22x42mm) slot, support SATA 3.0

Hardware Specifications

Main Board

- NViB 6308

CPU Support

- Intel® Core™ i7-7700 Processor (8M Cache, up to 4.20 GHz, LGA1151)
- Intel® Core™ i5-7500 Processor (6M Cache, up to 3.80 GHz, LGA1151)
- Intel® Core™ i3-7101E Processor (3M Cache, up to 3.90 GHz, LGA1151)

Main Memory

- 4 x 288-pin dual channel long DIMMs, support DDR4 2400/2133MHz up to 64GB, non-ECC, un-buffered system memory

Platform Control Hub

- Intel® Q170 Chipset

I/O Interface-Front

- Power on/off switch
- HDD access/power status LEDs
- 2 x USB 2.0 ports

I/O Interface-Rear

- 10 x USB 3.0
- 1 x COM1 (RS232/422/485) DB9 male connector
- 1 x PS/2 Port
- 2 x RJ45 connectors with Intel® I219LM and i211-AT GbE
- 1 x Audio Jack (Line-in/Line-out/Mic-in)
- 2 x HDMI 1.4 connectors (resolution up to 4K@24Hz)
- 1 x DVI-I (resolution up to 1920x1200)

Expansion Slot

- 1 x M.2 slot (M-Key 22x42mm)
- 1 x PCIe x16, 1 x PCIe x4, 1 x PCIe x1
- 1 x TPM interface

Cooling System With Smart Fan Control

- 3 x 80mm fans for system cooling
- 1 x heatsink with fan for CPU cooling

Power Input

- 400W single industrial-grade power supply (NViS 6308)
- 400W hot-swappable dual redundant power supply (NViS 6308R)
- AC 100V to 240V

Dimensions

- 533.4mm (D) x 437mm (W) x 88.9mm (H)

Construction

- 2U rackmount, heavy-duty steel chassis

Environment

- Operating Temperature:
  Ambient with air flow: 0°C to 40°C
- Storage temperature: -20°C to 70°C
- Relative humidity: 10% to 90% (non-condensing)

Certifications

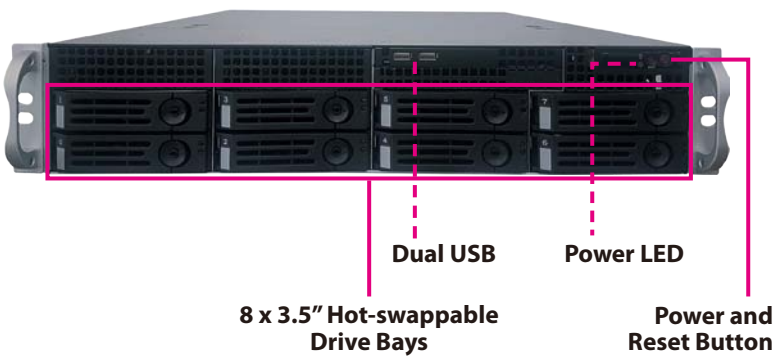
- CE approval
- FCC Class A

Knowing Your NViS 6308 Series

Front Panel

With Front Cover

Without Front Cover



Dual USB Ports

Two USB ports are located behind the front cover.

Power and Reset Button

Power and reset button are located behind the front cover. Press to power on or restart the device.

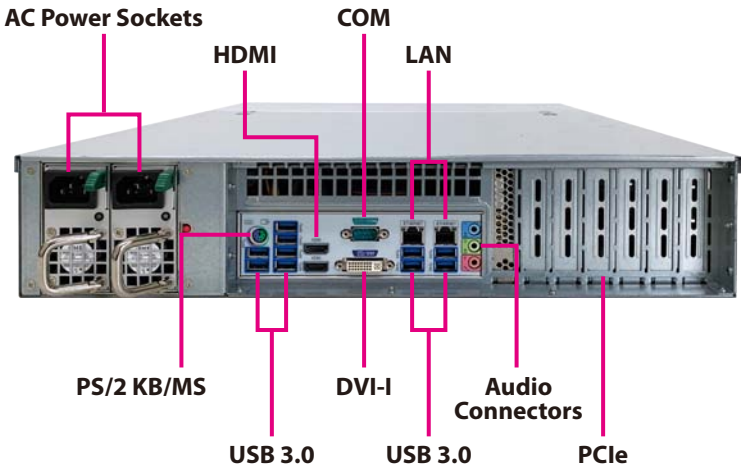
LED Indicators (Front Cover) and Power LED (Without Front Cover)

LEDs indicating the system's power status and hard drive activity.

8 x 3.5" Hot-swappable Drive Bays

Eight 3.5" SATA hot-swappable drive bays are located behind the front cover.

NViS 6308R Rear Panel



NViS 6308 Rear Panel

AC Power Sockets
Plug AC power cord here before turning on the system.
Hot-swappable dual redundant power supply: NViS 6308R
Single power supply: NViS 6308

AC Power Switch
Used to switch off or switch on the power supply.

PS/2 Keyboard/Mouse
Used to connect a PS/2 keyboard or a PS/2 mouse.

HDMI
Used to connect a high-definition display.

COM Port
Used to connect RS232/422/485 compatible devices.

LAN Ports
Dual Gigabit LAN ports to connect the system to a local area network.

USB 3.0 Ports
USB 3.0 ports to connect the system with USB 3.0/2.0 devices.

DVI-I
Used to connect a DVI-I interface monitor.

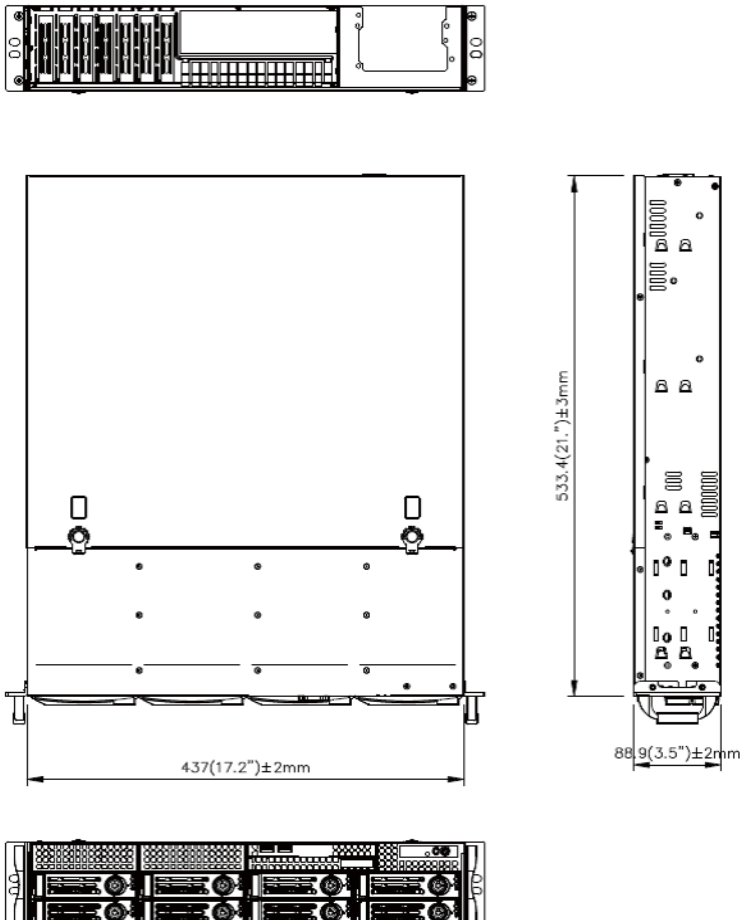
Audio Connectors
Line-in (Blue)
Line-in jack to connect audio devices.

Speaker-out (Green)
Speaker-out jack to connect speakers or headphones.

Mic-in (Red)
Mic-in jack to connect microphones.

PCIe Slots
Reserved openings used to install PCIe cards.

Mechanical Dimensions



Chapter 2: Jumpers and Connectors

This chapter describes how to set the jumpers and connectors on the NViS 6308 series motherboard.

Before You Begin

- Ensure you have a stable, clean working environment. Dust and dirt can get into components and cause a malfunction. Use containers to keep small components separated.
- Adequate lighting and proper tools can prevent you from accidentally damaging the internal components. Most of the procedures that follow require only a few simple tools, including the following:
  - A Philips screwdriver
  - A flat-tipped screwdriver
  - A set of jewelers screwdrivers
  - A grounding strap
  - An anti-static pad
- Using your fingers can disconnect most of the connections. It is recommended that you do not use needle-nosed pliers to disconnect connections as these can damage the soft metal or plastic parts of the connectors.
- Before working on internal components, make sure that the power is off. Ground yourself before touching any internal components, by touching a metal object. Static electricity can damage many of the electronic components. Humid environments tend to have less static electricity than dry environments. A grounding strap is warranted whenever danger of static electricity exists.

Precautions

Computer components and electronic circuit boards can be damaged by discharges of static electricity. Working on computers that are still connected to a power supply can be extremely dangerous.

Follow the guidelines below to avoid damage to your computer or yourself:

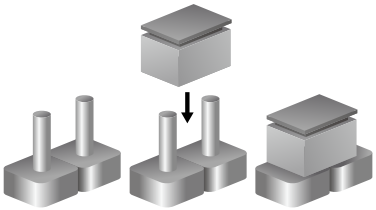
- Always disconnect the unit from the power outlet whenever you are working inside the case.
- If possible, wear a grounded wrist strap when you are working inside the computer case. Alternatively, discharge any static electricity by touching the bare metal chassis of the unit case, or the bare metal body of any other grounded appliance.
- Hold electronic circuit boards by the edges only. Do not touch the components on the board unless it is necessary to do so. Don't flex or stress the circuit board.
- Leave all components inside the static-proof packaging that they shipped with until they are ready for installation.
- Use correct screws and do not over tighten screws.

Jumper Settings

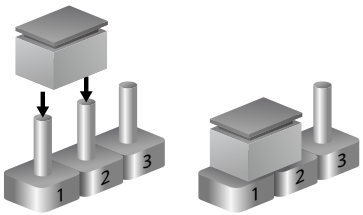
A jumper is the simplest kind of electric switch. It consists of two metal pins and a cap. When setting the jumpers, ensure that the jumper caps are placed on the correct pins. When the jumper cap is placed on both pins, the jumper is short. If you remove the jumper cap, or place the jumper cap on just one pin, the jumper is open.

Refer to the illustrations below for examples of what the 2-pin and 3-pin jumpers look like when they are short (on) and open (off).

Two-Pin Jumpers: Open (Left) and Short (Right)

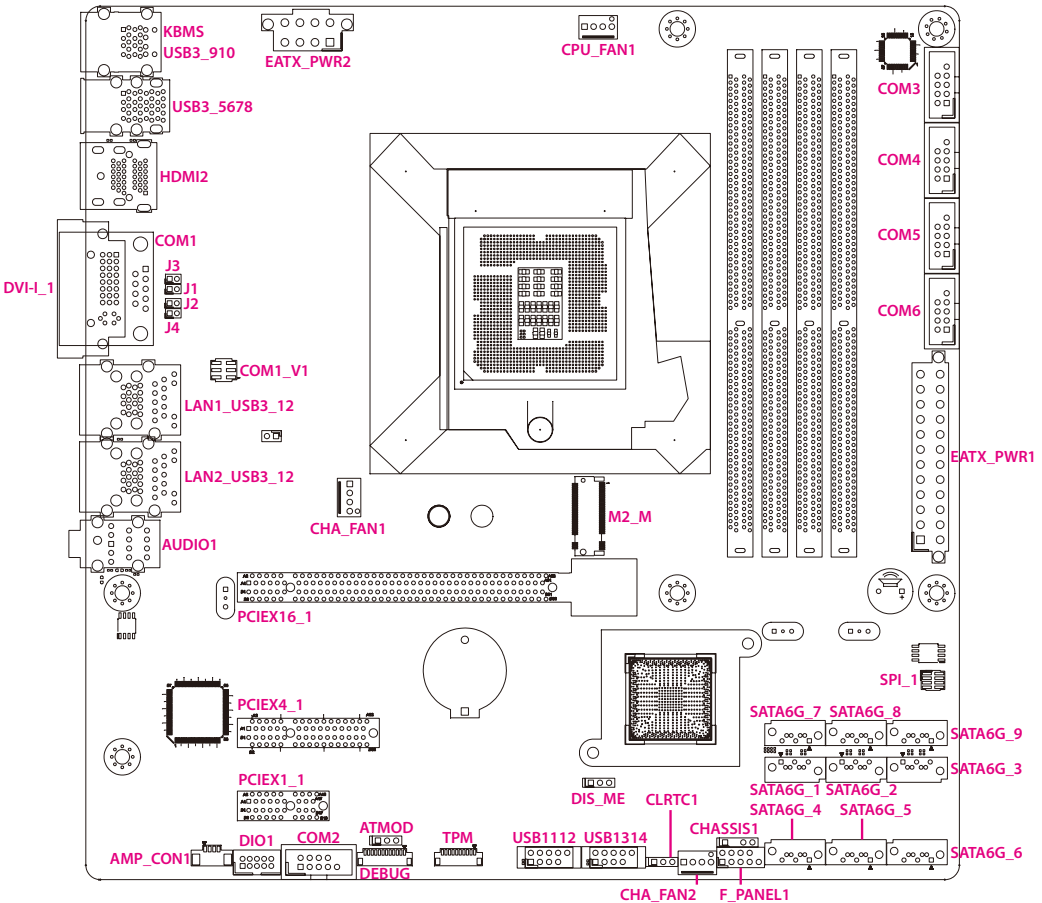


Three-Pin Jumpers: Pins 1 and 2 are Short



Locations of the Jumpers and Connectors

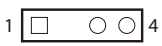
The figure below shows the location of the jumpers and connectors.



Jumpers

Chassis Intrusion

Connector type: 1x4 4-pin header
Connector location: CHASSIS1



Pin	Settings
1-2	Chassis Intruder - No Intruder
3-4	Chassis Intruder - Intruder

1-2 On: default

Clear CMOS

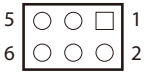
Connector type: 1x3 3-pin header
Connector location: CLRTC1

Pin	Settings
1-2	Protected
2-3	Clear CMOS

1-2 On: default

COM1 Ring/+5V/+12V Selection

Connector type: 2x3 6-pin header
Connector location: COM1_V1



Pin	Settings
1-2	+12V
3-4	+5V
5-6	Ring

5-6 On: default

AT & ATX Mode Selection

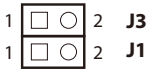
Connector type: 1x3 3-pin header
Connector location: ATMOD

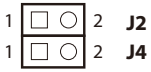
Pin	Settings
1-2	ATX Mode
2-3	AT Mode

1-2 On: default

RS422/485 Terminator

Connector type: 1x2 2-pin header
Connector location: J1, J2, J3 and J4





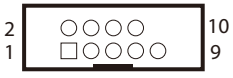
Pin	Settings
J1, J2, J3, J4 all off	Terminator Disable
J1, J2, J3, J4 all on	Terminator Enable

J1, J2, J3, J4 All Off: default

Connector Pin Definitions

COM2 to COM6 Internal Serial Port Connectors

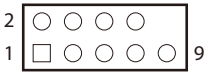
Connector type: 2x5 10-pin header
Connector location: COM3, COM4, COM5 and COM6



Pin	Definition	Pin	Definition
1	DCD#	2	RXD
3	TXD	4	DTR#
5	GND	6	DSR#
7	RTS#	8	CTS#
9	Ring	10	(NC)

Front Panel Connector

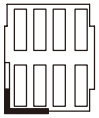
Connector type: 2x5 10-pin header
Connector location: F_PANEL1



Pin	Definition	Pin	Definition
1	HDLED+	2	PLED+
3	HDLED-	4	PLED-
5	GND	6	PWRBTN#
7	RSTCON#	8	GND
9	(NC)	10	(kill pin)

SPI Flash Programmable Connectors

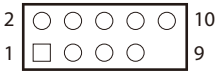
Connector type: 2x4 8-pin header
Connector location: SPI_1



Pin	Definition	Pin	Definition
1	+3V_SPI	2	GND
3	SPI_CS#	4	SPI_CLK
5	SPI_MISO	6	SPI_MOSI
7	(NC)	8	(NC)

Internal USB 2.0 Connectors

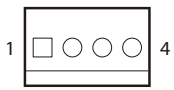
Connector type: 2x5 10-pin header
Connector location: USB1112 and USB1314



Pin	Definition	Pin	Definition
1	+5V	2	+5V
3	USB2_DN1	4	USB2_DN1
5	USB2_DP1	6	USB2_DP1
7	GND	8	GND
9	(kill pin)	10	(NC)

CPU and System Fan Connectors

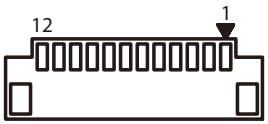
Connector type: 1x4 4-pin Wafer
Connector location: CPU_FAN1, CHA_FAN1 and CHA_FAN2



Pin	Definition
1	PWN
2	SENSE
3	VCC
4	GND

Debug Port Connector

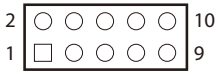
Connector type: 1x12 12-pin header
Connector location: DEBUG



Pin	Definition	Pin	Definition
1	LPC_AD0	2	LPC_AD1
3	LPC_AD2	4	LPC_AD3
5	+3.3V	6	LPC_FRAME#
7	PLTRST#	8	GND
9	CLK_33M_LPC	10	LPC_DRQ#0
11	LPC_DRQ#1	12	SERIRQ#

Digital I/O Connector

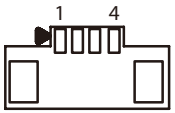
Connector type: 2x5 10-pin header
Connector location: DIO1



Pin	Definition	Pin	Definition
1	DIO_P#1	2	DIO_P#2
3	DIO_P#3	4	DIO_P#4
5	DIO_P#5	6	DIO_P#6
7	DIO_P#7	8	DIO_P#8
9	+5V	10	GND

Internal Speaker-out

Connector type: 1x4 4-pin header
Connector location: AMP_CON1



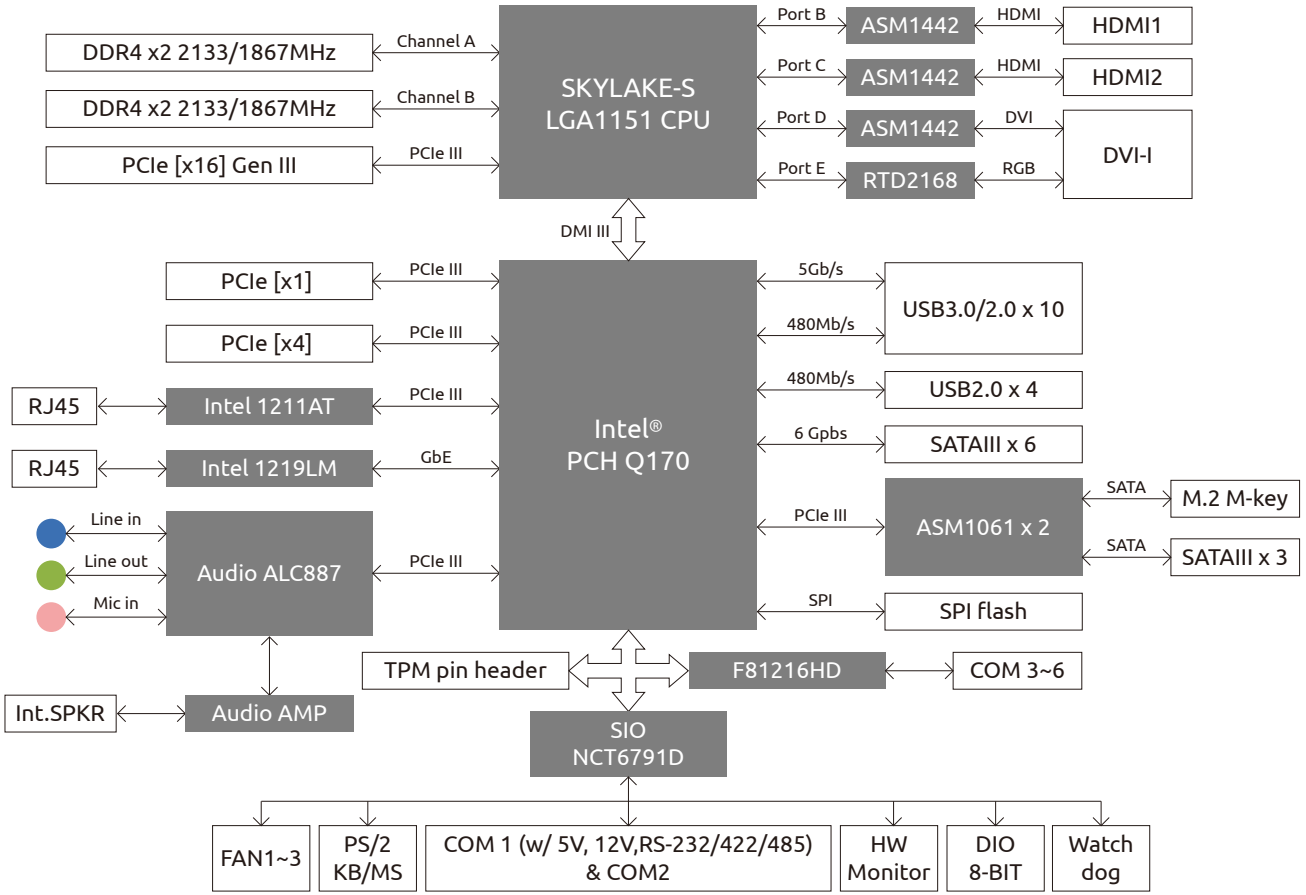
Pin	Definition
1	ROUTP
2	ROUTN
3	LOUTN
4	LOUTP

TPM Connector

Connector type: 1x10 10-pin header
Connector location: TPM

Pin	Definition	Pin	Definition
1	GND	2	RESET#
3	CLK	4	FRAME#
5	LAD3	6	LAD2
7	LAD1	8	LAD0
9	SERIRQ#	10	+3V

Block Diagram

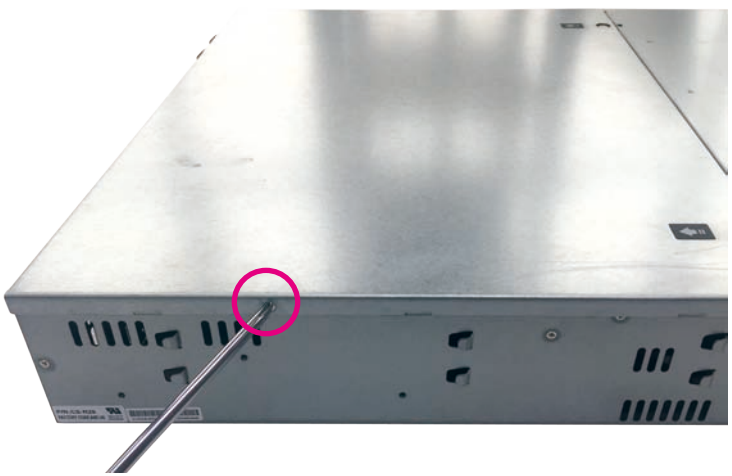


Chapter 3: System Setup

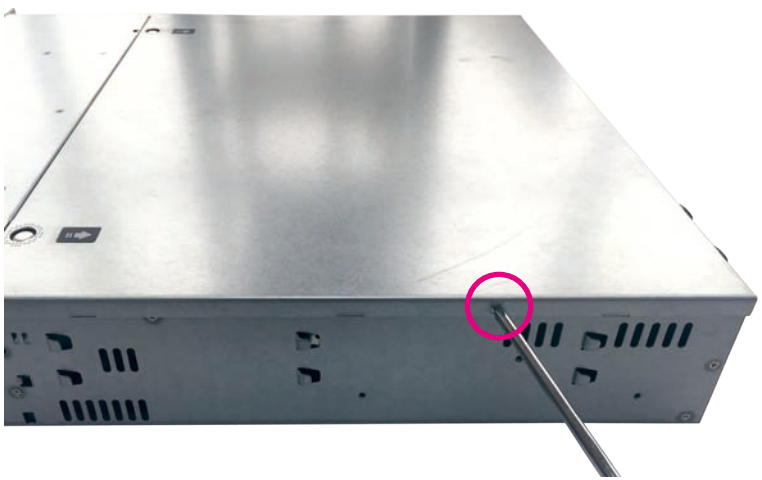
Removing the Chassis Cover

Prior to removing the chassis cover, make sure the unit's power is off and disconnected from the power sources to prevent electric shock or system damage.

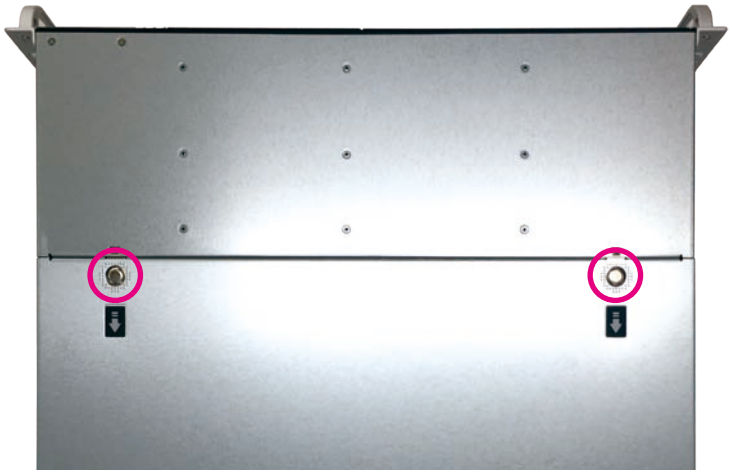
1. Remove the screw on the left side of the system.



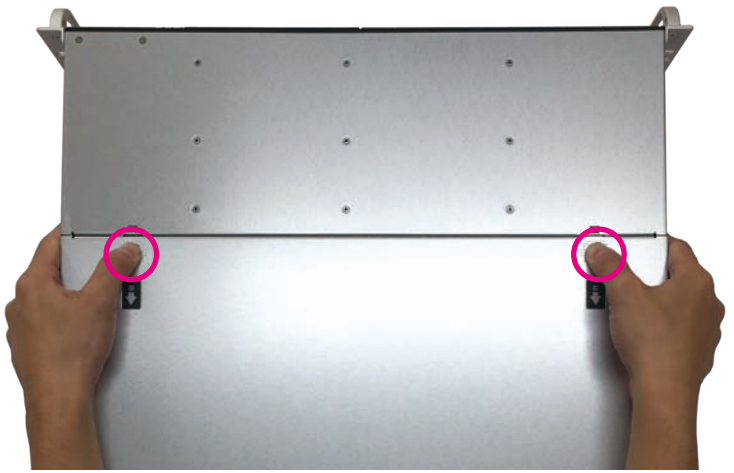
2. Remove the screw on the right side of the system.



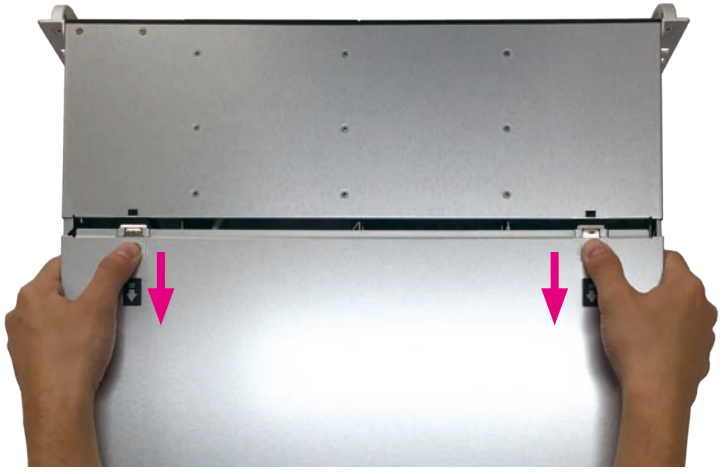
3. Locate the 2 buttons on the top side of the chassis cover.



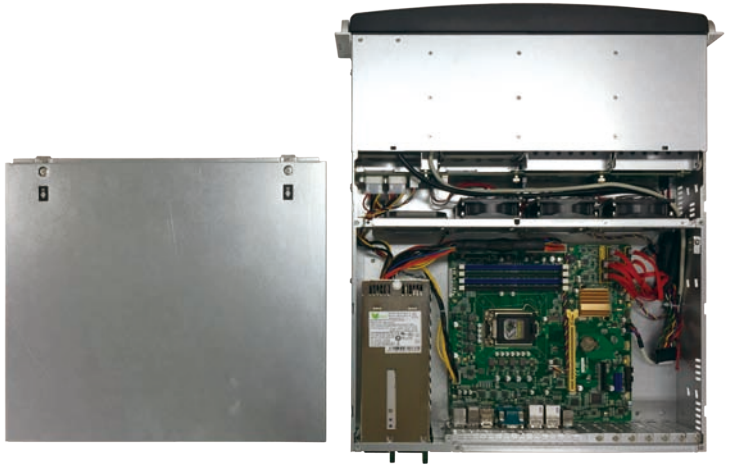
4. Press the 2 buttons on the top side of the chassis cover.



5. Gently slide the chassis cover in the direction of where the I/O connectors are located.



6. Remove the chassis cover.



Removing the Front Cover (Optional)

1. Take the key out of the accessory pack.

2. Locate the lock on the front side of the front cover.

3. Insert the key into the lock.

4. Turn the key towards the unlocked symbol.

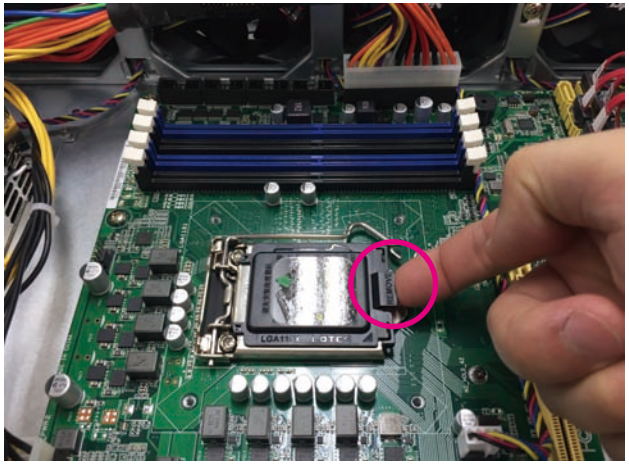
5. Press and hold down the push button next to the lock.

6. Pull the front cover outwards.

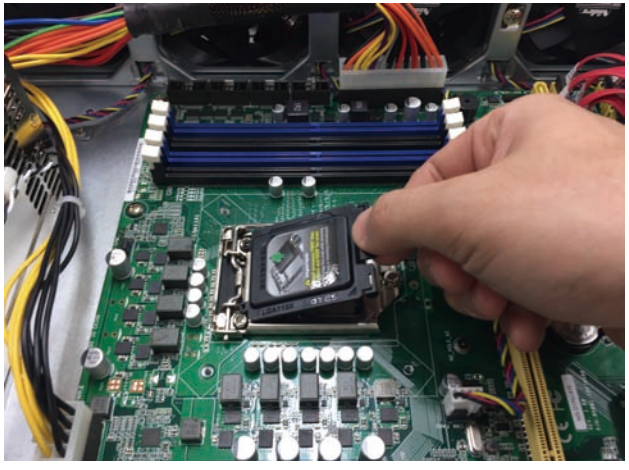
7. Remove the front cover from the system.

Installing a CPU

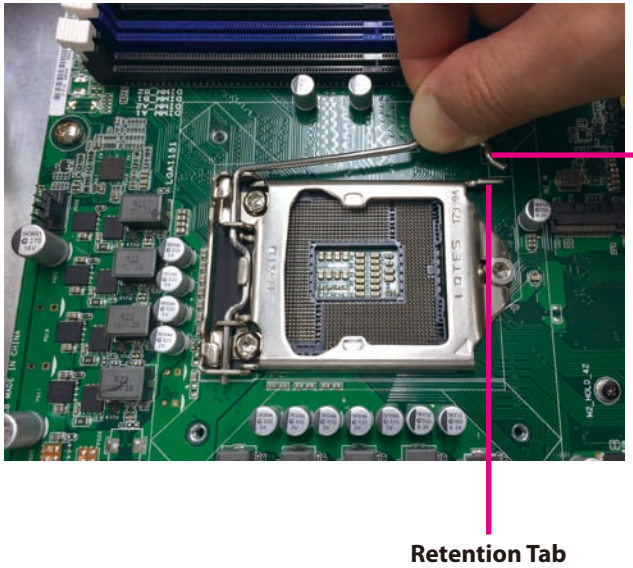
1. Locate the "REMOVE" grip on the protective cap installed on top of the CPU socket.



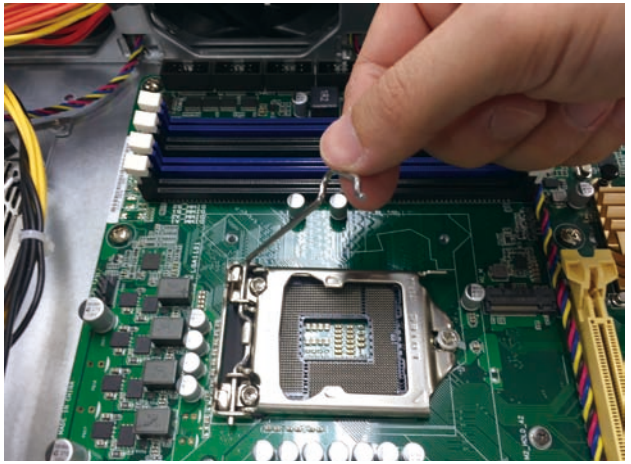
2. Using your fingertips, lift up the protective cap and remove it from the CPU socket.



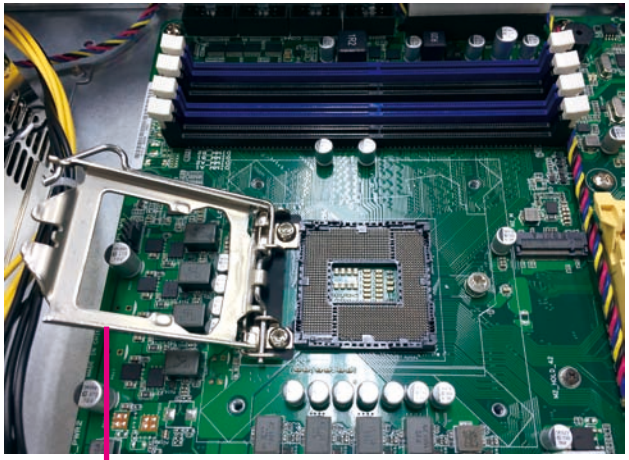
3. Unlock the socket by pushing the load lever down, moving it sideways until it is released from the retention tab; then lift the load lever up.



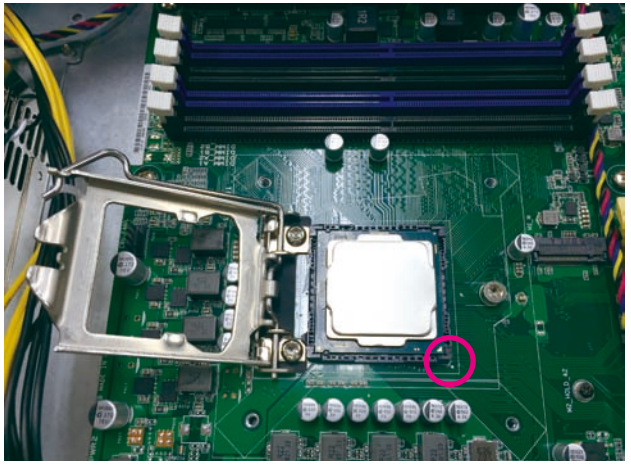
4. Lift the load lever up.



5. Lift the load plate up.



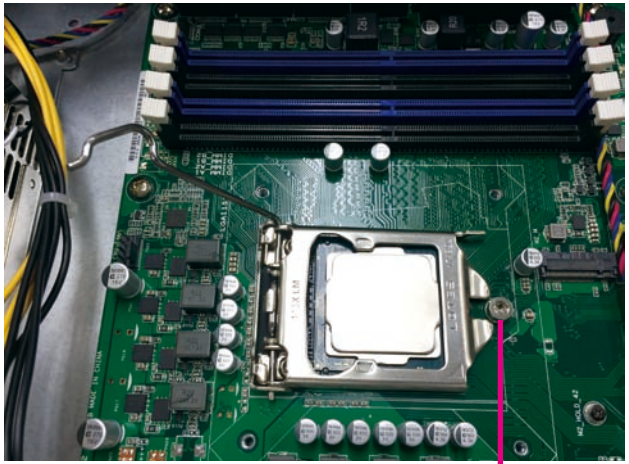
6. Insert the CPU into the socket. The triangular edge on the CPU must align with the corner of the CPU socket shown on the photo.



CAUTION!

- Handle the CPU by its edges and avoid touching the pins.
- The CPU will fit in only one orientation and can easily be inserted without exerting any force.

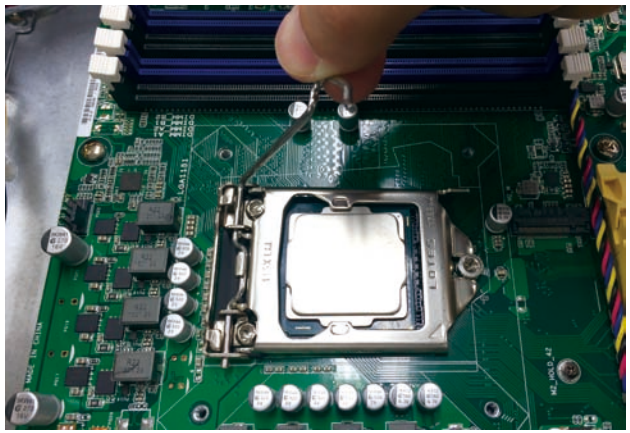
7. Close the load plate. While closing the load plate, make sure the front edge of the load plate slides under the retention knob.

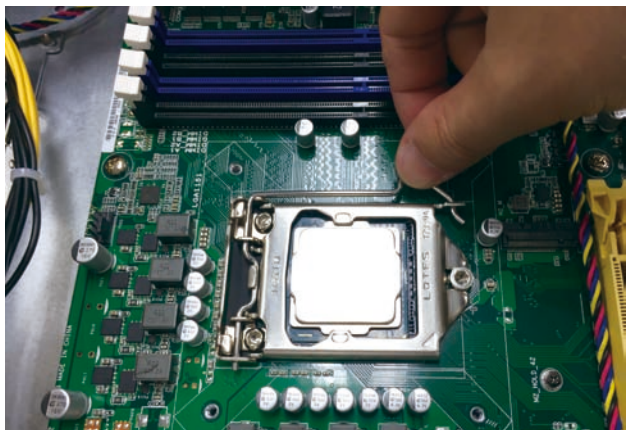


Retention Knob

Do not force the CPU into the socket. Forcing the CPU into the socket may bend the pins and damage the CPU.

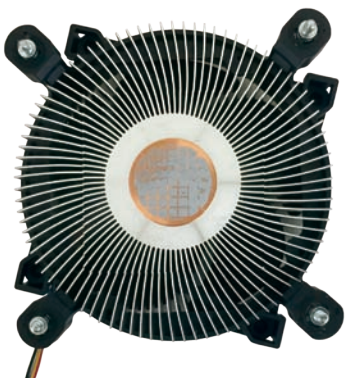
8. Push the load lever down and hook the load lever under the retention tab.





Installing a CPU Cooler

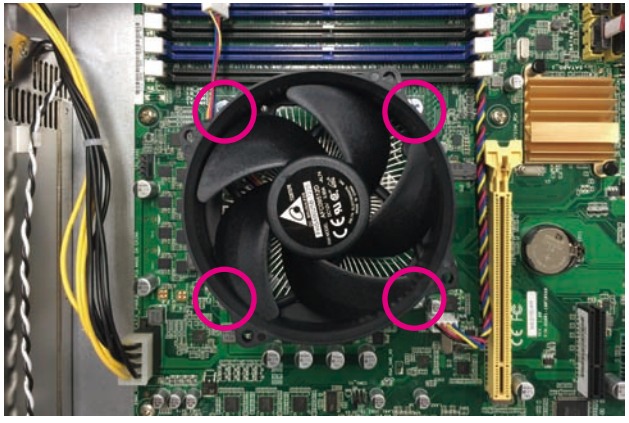
Top Side of CPU Cooler



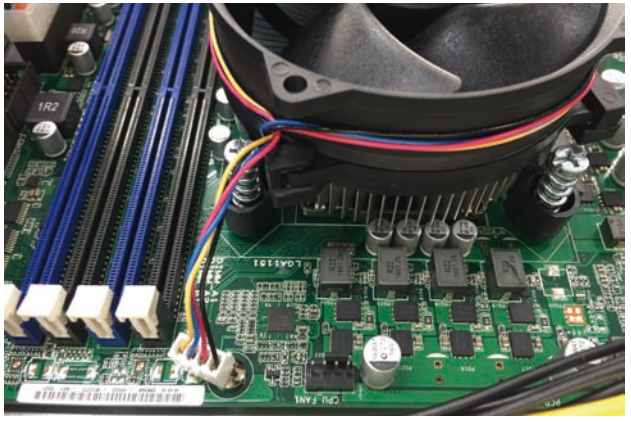
Bottom Side of CPU Cooler
(Please avoid touching the thermal paste)

1. Locate the CPU on the motherboard.

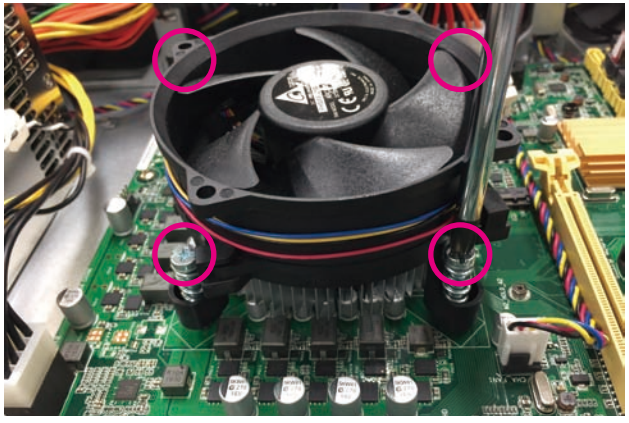
2. Place the CPU cooler on top of the CPU with the four mounting holes on the cooler aligned to the mounting holes on the motherboard.



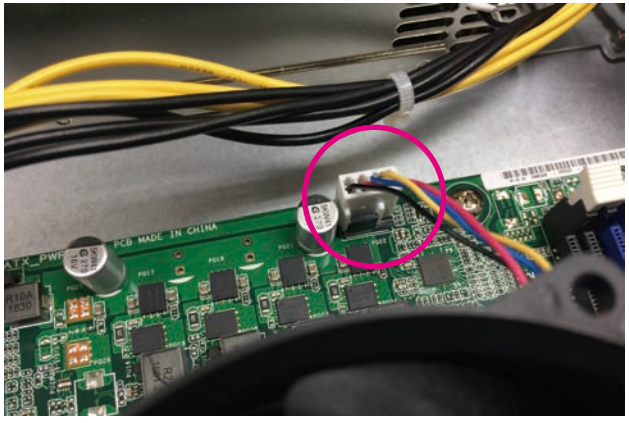
3. Wire the CPU fan cable to the direction of where the fan connector (FAN1) on the motherboard is located.



4. Secure the CPU cooler with four screws.



5. Plug the CPU fan cable to the fan connector (FAN1) on the motherboard.

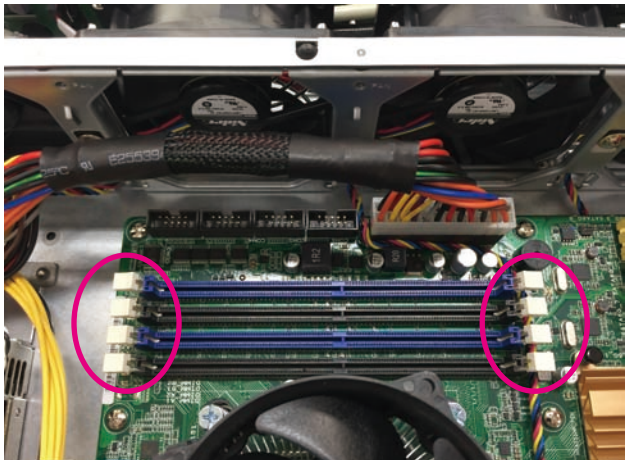


Installing SO-DIMM Memory Modules

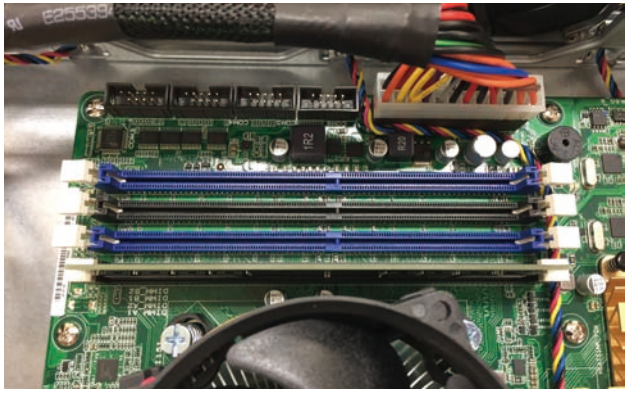
1. Locate the DIMM memory sockets.

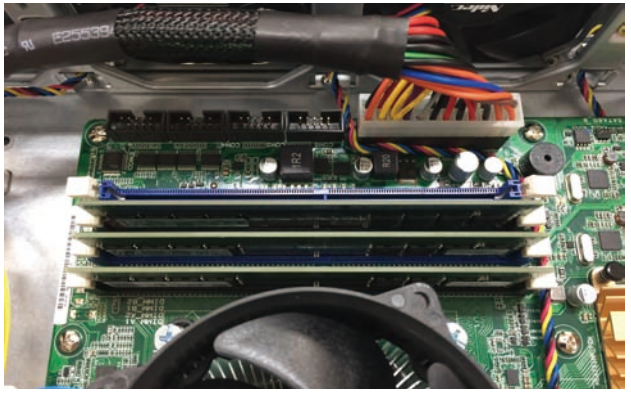
Memory Sockets

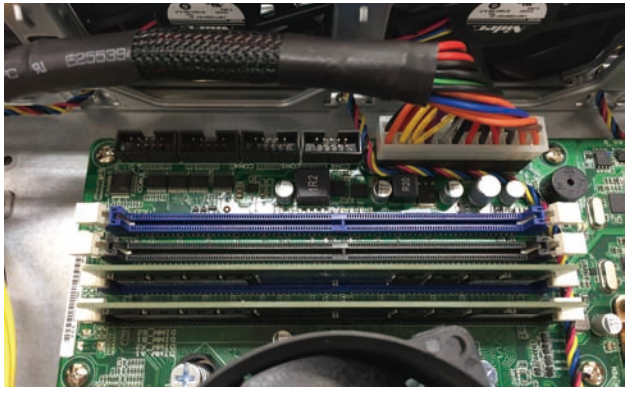
2. Release the locks on the DIMM memory sockets.

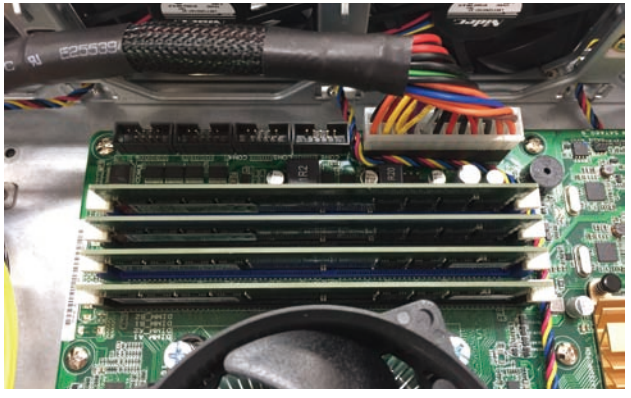


3. Insert the modules into the sockets at an 90 degree angle. Apply firm even pressure to each end of the modules until they slip into the sockets. Install the memory modules in the sequence shown in the following images.



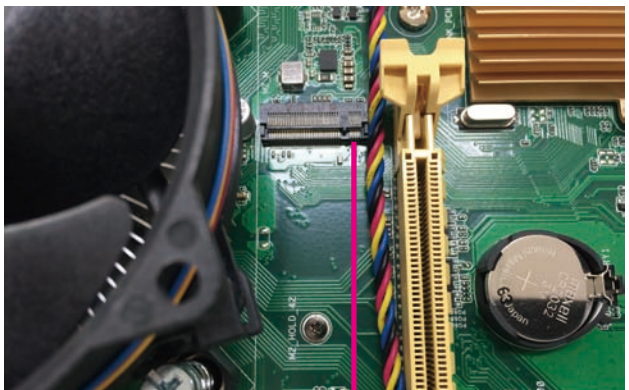






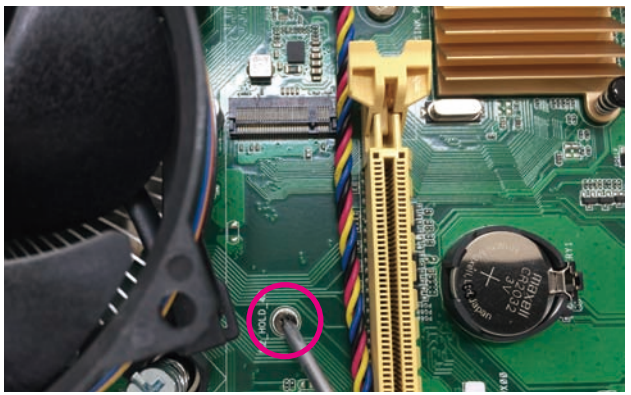
Installing an M.2 Card

1. Locate the M.2 socket on the motherboard.

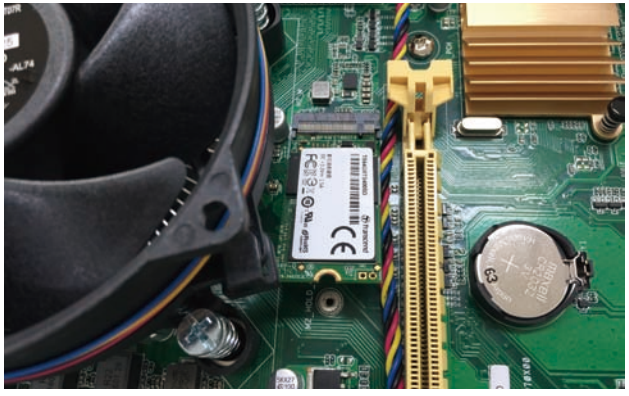


M.2 Socket

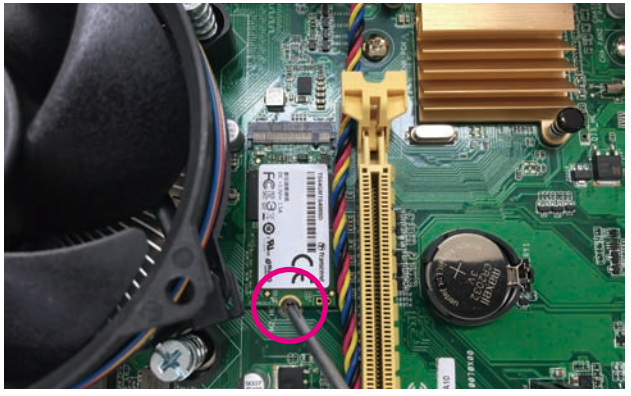
2. Remove the screw near the M.2 socket.



3. Insert the M.2 module into the M.2 socket.

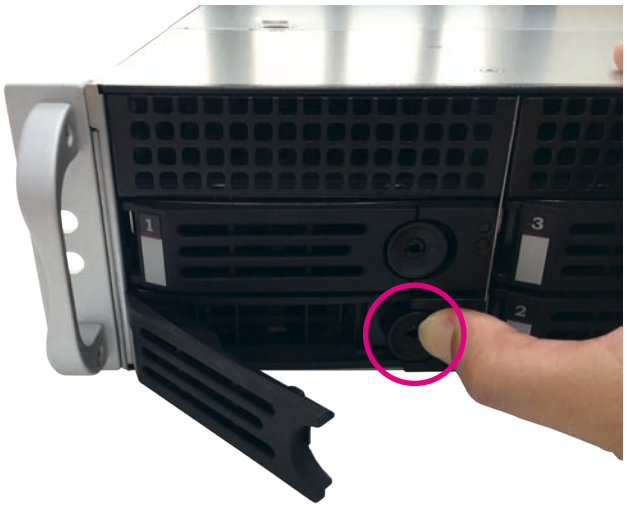


4. Secure the M.2 module with the screw.



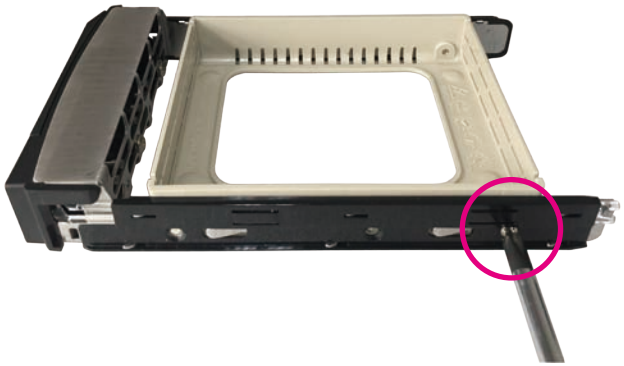
Installing a SATA Storage Drive (External)

1. Open the front panel cover and locate the storage drive tray. Press the push button on the drive tray towards right and the drive tray handle will pop out.



2. Grab the handle and gently slide out the storage drive tray.

3. Remove the screws securing the SSD/HDD plastic housing inside the storage drive tray.



4. Remove the SSD/HDD plastic housing from the storage drive tray.

5. Place the storage drive into the drive tray with the connector side facing outwards.

6. Align the mounting holes on the storage drive to the mounting holes on the drive tray, then secure the drive with four screws.

7. Press the push button on the drive tray towards right to release the drive tray handle.

8. Insert the drive tray back to the drive bay.

9. Push the drive tray handle back to its original position to complete.

Chapter 4: BIOS Setup

This chapter describes how to use the BIOS setup program for the NViS 6308 series. The BIOS screens provided in this chapter are for reference only and may change if the BIOS is updated in the future.

To check for the latest updates and revisions, visit the NEXCOM website at www.nexcom.com.tw.

About BIOS Setup

The BIOS (Basic Input and Output System) Setup program is a menu driven utility that enables you to make changes to the system configuration and tailor your system to suit your individual work needs. It is a ROM-based configuration utility that displays the system's configuration status and provides you with a tool to set system parameters.

These parameters are stored in non-volatile battery-backed-up CMOS RAM that saves this information even when the power is turned off. When the system is turned back on, the system is configured with the values found in CMOS.

With easy-to-use pull down menus, you can configure such items as:

- Hard drives, diskette drives, and peripherals
- Video display type and display options
- Password protection from unauthorized use
- Power management features

The settings made in the setup program affect how the computer performs. It is important, therefore, first to try to understand all the setup options, and second, to make settings appropriate for the way you use the computer.

When to Configure the BIOS

- This program should be executed under the following conditions:
- When changing the system configuration
- When a configuration error is detected by the system and you are prompted to make changes to the setup program
- When resetting the system clock
- When redefining the communication ports to prevent any conflicts
- When making changes to the Power Management configuration
- When changing the password or making other changes to the security setup

Normally, CMOS setup is needed when the system hardware is not consistent with the information contained in the CMOS RAM, whenever the CMOS RAM has lost power, or the system features need to be changed.

Default Configuration

Most of the configuration settings are either predefined according to the Load Optimal Defaults settings which are stored in the BIOS or are automatically detected and configured without requiring any actions. There are a few settings that you may need to change depending on your system configuration.

Entering Setup

When the system is powered on, the BIOS will enter the Power-On Self Test (POST) routines. These routines perform various diagnostic checks; if an error is encountered, the error will be reported in one of two different ways:

- If the error occurs before the display device is initialized, a series of beeps will be transmitted.
- If the error occurs after the display device is initialized, the screen will display the error message.

Powering on the computer and immediately pressing <Del> allows you to enter Setup.

Press the 

key to enter Setup:

Legends

Key	Function
	Moves the highlight left or right to select a menu.
	Moves the highlight up or down between sub-menus or fields.
	Exits the BIOS Setup Utility.
	Scrolls forward through the values or options of the highlighted field.
	Scrolls backward through the values or options of the highlighted field.
	Selects a field.
	Displays General Help.
	Load previous values.
	Load optimized default values.
	Saves and exits the Setup program.
	Press <Enter> to enter the highlighted sub-menu

Scroll Bar

When a scroll bar appears to the right of the setup screen, it indicates that there are more available fields not shown on the screen. Use the up and down arrow keys to scroll through all the available fields.

Submenu

When "▶" appears on the left of a particular field, it indicates that a submenu which contains additional options are available for that field. To display the submenu, move the highlight to that field and press 

.

BIOS Setup Utility

Once you enter the AMI BIOS Setup Utility, the Main Menu will appear on the screen. The main menu allows you to select from several setup functions and one exit. Use arrow keys to select among the items and press Enter to accept or enter the submenu.

Main

The Main menu is the first screen that you will see when you enter the BIOS Setup Utility.

System Date

The date format is <day>, <month>, <date>, <year>. Day displays a day, from Monday to Sunday. Month displays the month, from January to December. Date displays the date, from 1 to 31. Year displays the year, from 1999 to 2099.

System Time

The time format is <hour>, <minute>, <second>. The time is based on the 24-hour military-time clock. For example, 1 p.m. is 13:00:00. Hour displays hours from 00 to 23. Minute displays minutes from 00 to 59. Second displays seconds from 00 to 59.

Advanced

The Advanced menu allows you to configure your system for basic operation. Some entries are defaults required by the system board, while others, if enabled, will improve the performance of your system or let you set some features according to your preference.

Setting incorrect field values may cause the system to malfunction.

CPU Configuration

This section is used to view CPU status and configure CPU parameters.

Hyper-Threading

Enables or disables hyper-threading technology.

Intel® (VMX) Virtualization Technology

When this field is set to Enabled, the VMM can utilize the additional hardware capabilities provided by Vanderpool Technology.

Trusted Computing

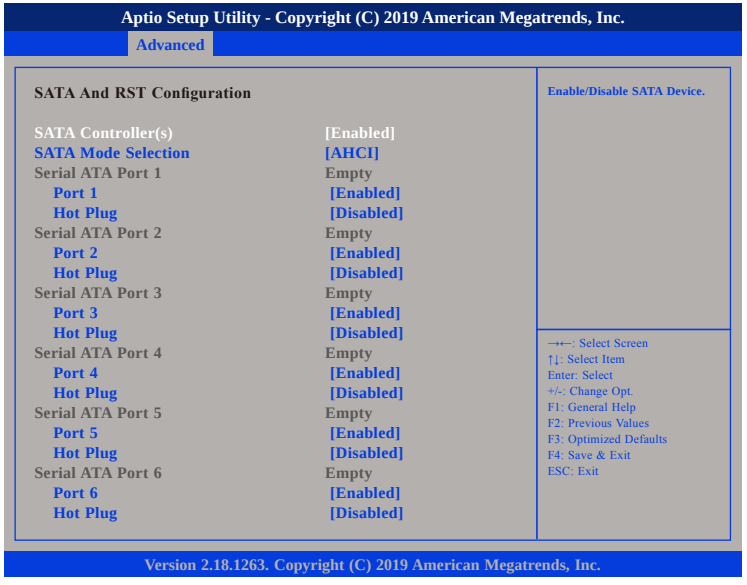
This section is used to configure Trusted Platform Module (TPM) settings.

Security Device Support

Enables or disables BIOS support for security device. O.S will not show Security Device. TCG EFI protocol and INT1A interface will not be available.

SATA Configuration

This section is used to configure the SATA device option settings.



SATA Controller(s)

Enables or disables SATA device.

SATA Mode Selection

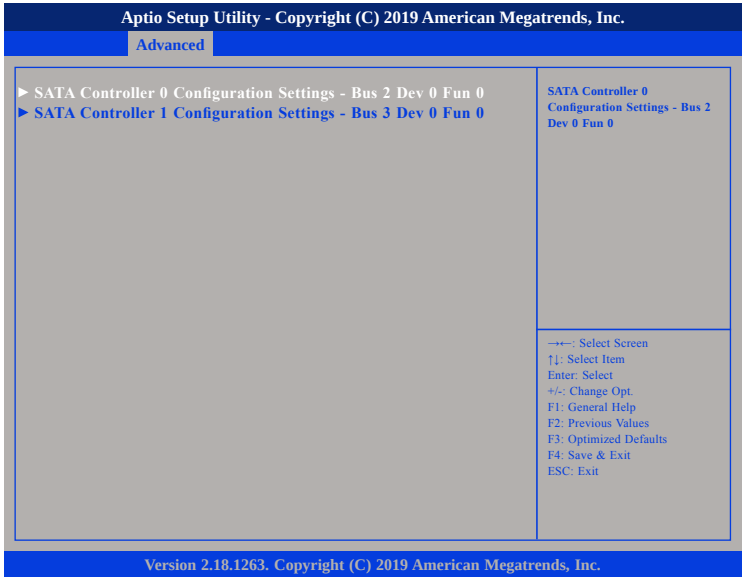
Configures the SATA as AHCI mode.

AHCI This option configures the Serial ATA drives to use AHCI (Advanced Host Controller Interface). AHCI allows the storage driver to enable the advanced Serial ATA features which will increase storage performance.

Port 1 to Port 6
Enables or disables SATA port 1 to port 6.

Hot Plug
Enables or disables hot plugging feature on SATA port 1 to port 6.

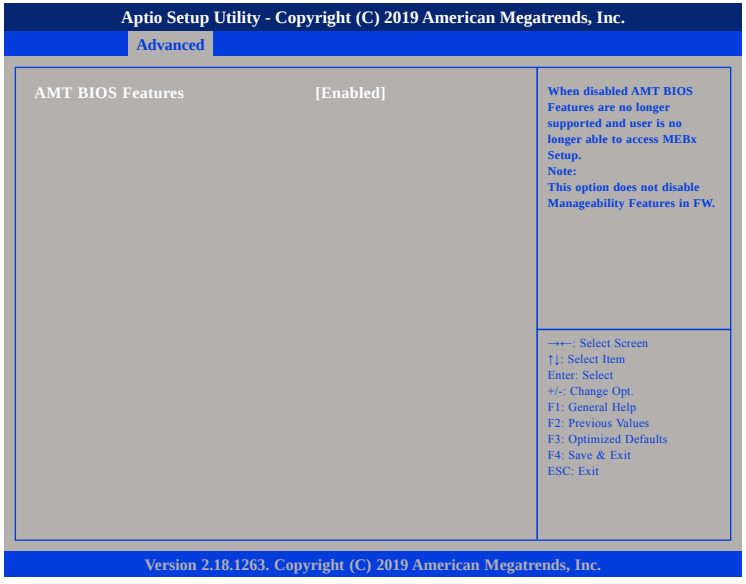
Offboard SATA Controller Configuration
This section is used to configure the SATA controller settings.



SATA Controller 0 & 1 Configuration Settings
Enters the SATA controller 0 and controller 1 configuration settings submenu.

AMT Configuration

This section is used to configure AMT settings.

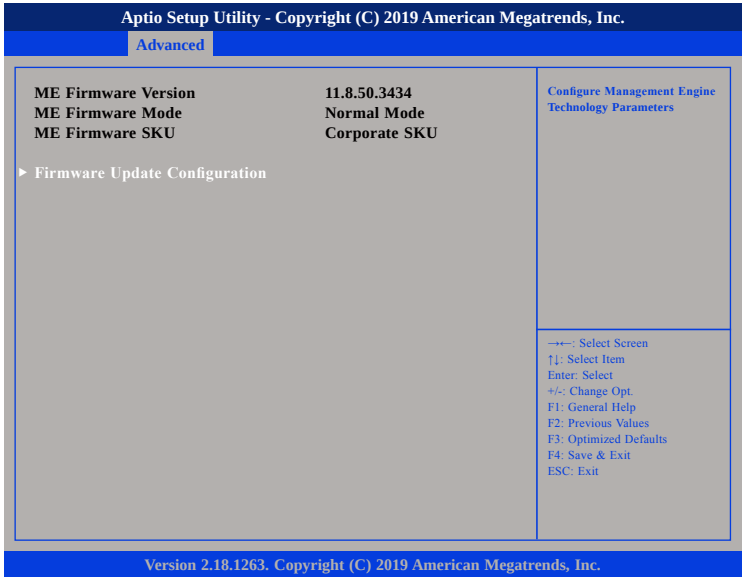


AMT BIOS Features

When disabled AMT BIOS Features are no longer supported and user is no longer able to access MEBx Setup. Please note that this option does not disable Manageability Features in FW.

PCH-FW Configuration

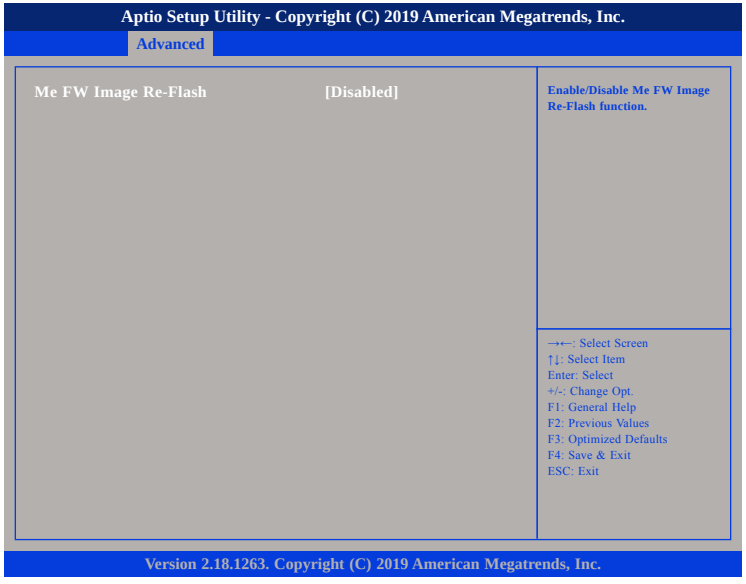
This section is used to configure the firmware update options.



Firmware Update Configuration

Enters the Firmware Update Configuration submenu.

Firmware Update Configuration



Me FW Image Re-Flash

Enables or disables the ME firmware image re-flash function.

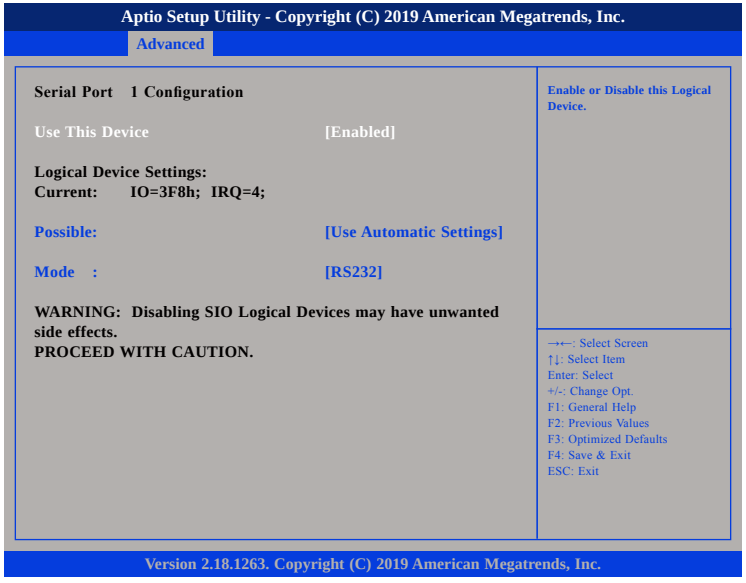
SIO Configuration

This section is used to configure the serial ports.

[*Active*] Serial Port 1 to [*Active*] Serial Port 6

Enters the submenu of [*Active*] Serial Port 1 to [*Active*] Serial Port 6.

[*Active*] Serial Port 1

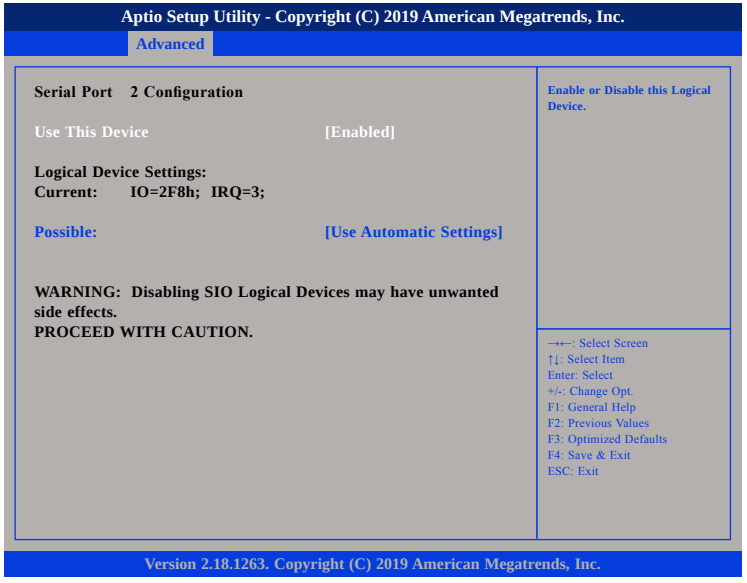


Use This Device
Enables or disables the serial port.

Possible:
Configures the base address for the serial port.

Mode
Configures the serial port mode to RS232, RS422 or RS485.

[*Active*] Serial Port 2



Use This Device
Enables or disables the serial port.

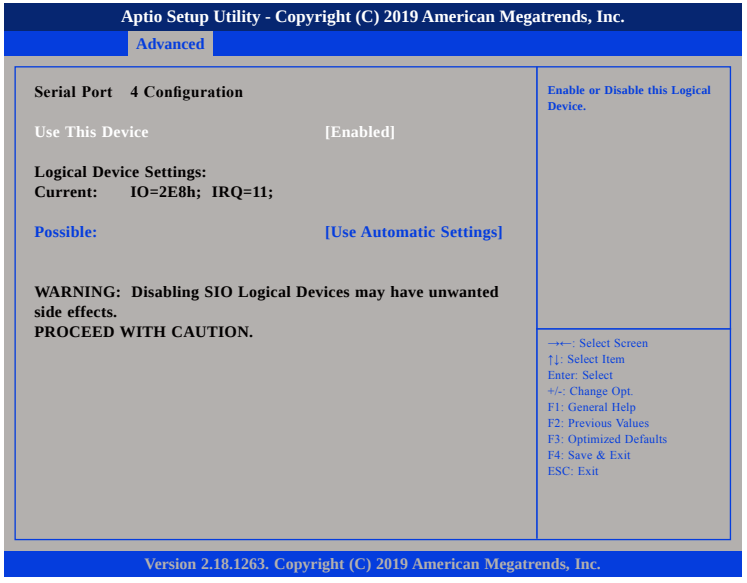
Possible:
Configures the base address for the serial port.

[*Active*] Serial Port 3

Use This Device
Enables or disables the serial port.

Possible:
Configures the base address for the serial port.

[*Active*] Serial Port 4



Use This Device
Enables or disables the serial port.

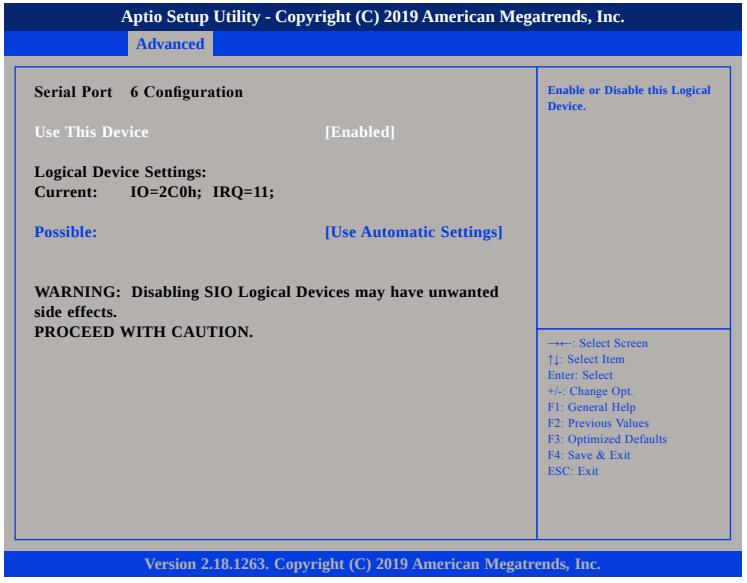
Possible:
Configures the base address for the serial port.

[*Active*] Serial Port 5

Use This Device
Enables or disables the serial port.

Possible:
Configures the base address for the serial port.

[*Active*] Serial Port 6

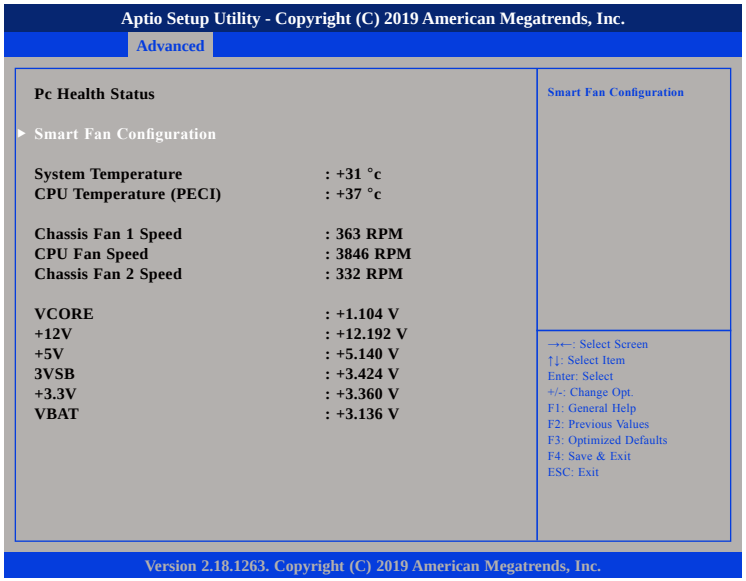


Use This Device
Enables or disables the serial port.

Possible:
Configures the base address for the serial port.

NCT6791D HW Monitor

This section is used to monitor hardware status such as temperature, fan speed and voltages.



System Temperature
Detects and displays the current system temperature.

CPU Temperature (PECI)
Detects and displays the current CPU temperature.

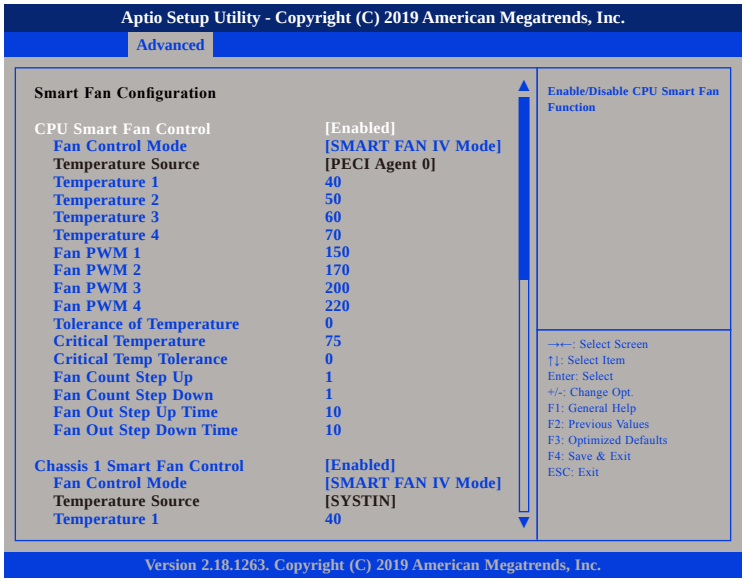
Chassis Fan 1 Speed
Detects and displays the current chassis fan 1 speed.

CPU Fan Speed
Detects and displays the current CPU fan speed.

Chassis Fan 2 Speed
Detects and displays the current chassis fan 2 speed.

VCORE to VBAT
Detects and displays the output voltages.

Smart Fan Configuration



CPU Smart Fan Control
Enables or disables CPU smart fan function.

Fan Control Mode (For CPU Fan)
Configures the fan mode of the CPU fan. The options are Manual Mode, Thermal Cruise Mode (automatic fan mode), Speed Cruise Mode and SMART FAN IV Mode.

Temperature Source (For CPU Fan and Chassis 1 Fan)
Selects the temperature source.

Temperature 1 to Temperature 4 (For CPU Fan)
Configures the temperature setting.

Fan PWM 1 to Fan PWM 4 (For CPU Fan)
Configures the amount of fan PWN for Smart Fan IV Mode.

Tolerance of Temperature (For CPU Fan)
Configures the tolerance of target temperature.

Critical Temperature (For CPU Fan)
Configures the time that Fan Out requires for reducing its value by one step.

Critical Temp Tolerance (For CPU Fan)
Configures the tolerance of critical temperature.

Fan Count Step Up and Step Down (For CPU Fan)
Configures the value for fan count step up and step down.

Fan Out Step Up Time and Step Down Time (For CPU Fan)
Configures the time that Fan Out requires for increasing (step up time) or reducing (step down time) its value by one step with an interval of 0.1 second.

Chassis 1 Smart Fan Control
Enables or disables chassis 1 smart fan function.

Fan Control Mode (For Chassis 1 Fan)
Configures the fan mode of the CPU fan. The options are Manual Mode, Thermal Cruise Mode (automatic fan mode), Speed Cruise Mode and SMART FAN IV Mode.

Temperature 1 to Temperature 4 (For Chassis 1 Fan)
Configures the temperature setting.

Fan PWM 1 to Fan PWM 4 (For Chassis 1 Fan)
Configures the amount of fan PWN for Smart Fan IV Mode.

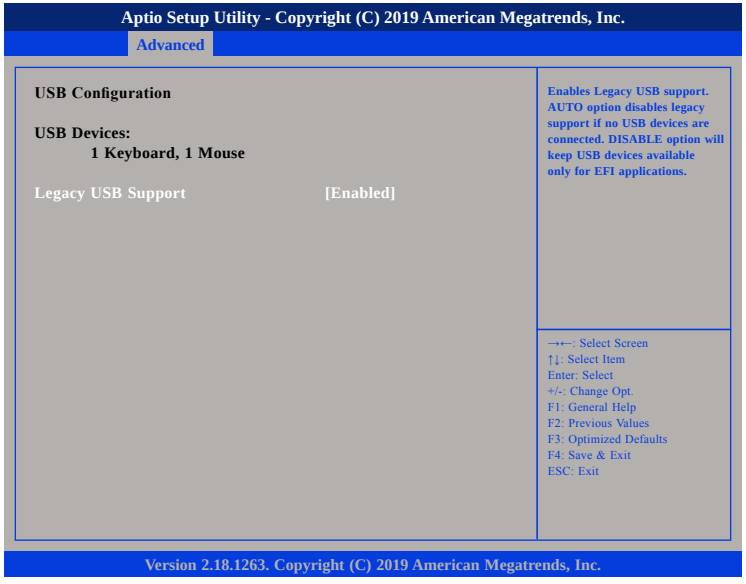
Tolerance of Temperature (For Chassis 1 Fan)
Configures the tolerance of target temperature.

Critical Temperature (For Chassis 1 Fan)
Configures the time that Fan Out requires for reducing its value by one step.

Critical Temp Tolerance (For Chassis 1 Fan)
Configures the tolerance of critical temperature.

USB Configuration

This section is used to configure USB parameters.

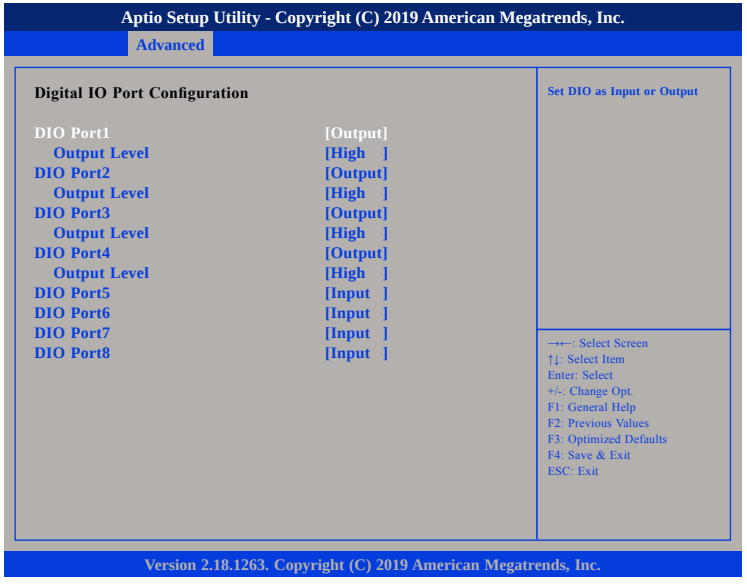


Legacy USB Support

Enabled Enables Legacy USB.
Auto Disables support for Legacy when no USB devices are connected.
Disabled Keeps USB devices available only for EFI applications.

Digital IO Port Configuration

This section is used to configure digital I/O port settings.



DIO Port1 to DIO Port8

Configures DIO port1 to port8 as input or output.

Output Level

Configures the output level as high or low.

Power Management

This section is used to configure the power management features.

Power Saving(ERP) Control
Enables or disables power saving mode function.

Restore AC Power Loss
Select the AC power state when power is re-applied after a power failure.

RTC wake system from S5
Enables or disables system wake up from S5.

Fixed Time: System will wake on the hr:min:sec specified.
Dynamic Time: System will wake on the current time + increase minute(s).

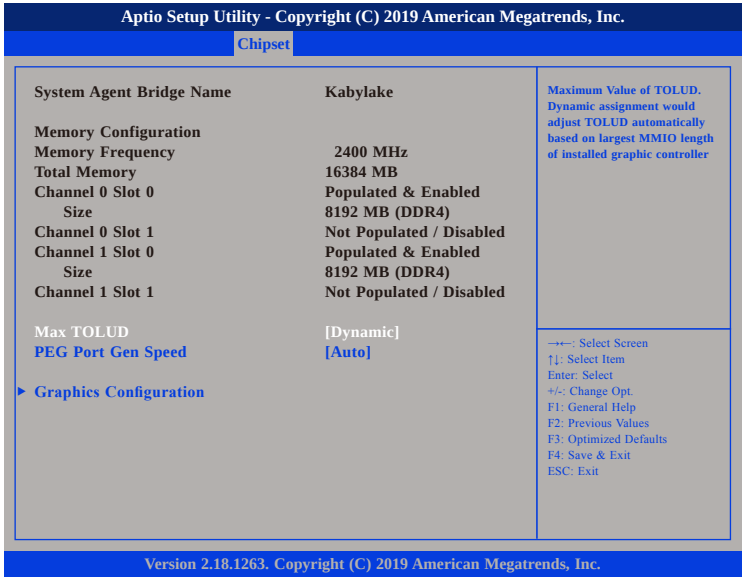
Chipset

This section gives you functions to configure the system based on the specific features of the chipset. The chipset manages bus speeds and access to system memory resources.

System Agent (SA) Configuration
System Agent (SA) parameters.

PCH-IO Configuration
PCH-IO parameters.

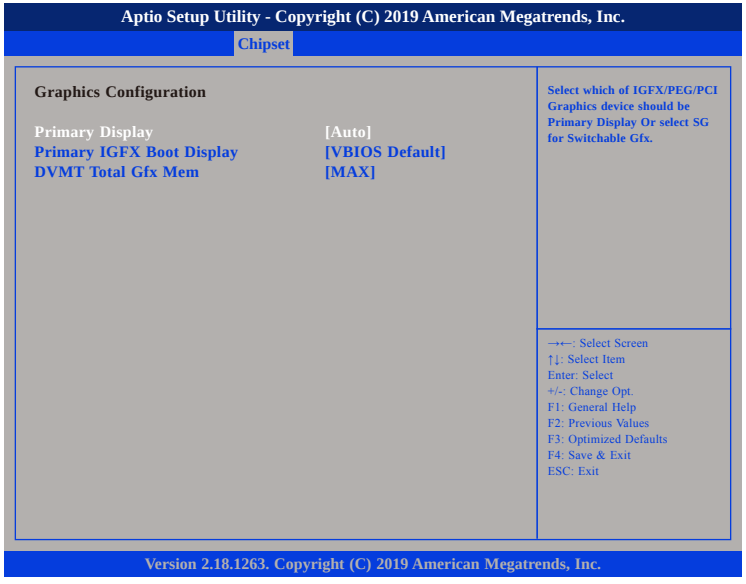
System Agent (SA) Configuration



Max TOLUD
Configures the maximum value of TOLUD.

PEG Port Gen Speed
Configures the link speed of the PEG device.

Graphics Configuration

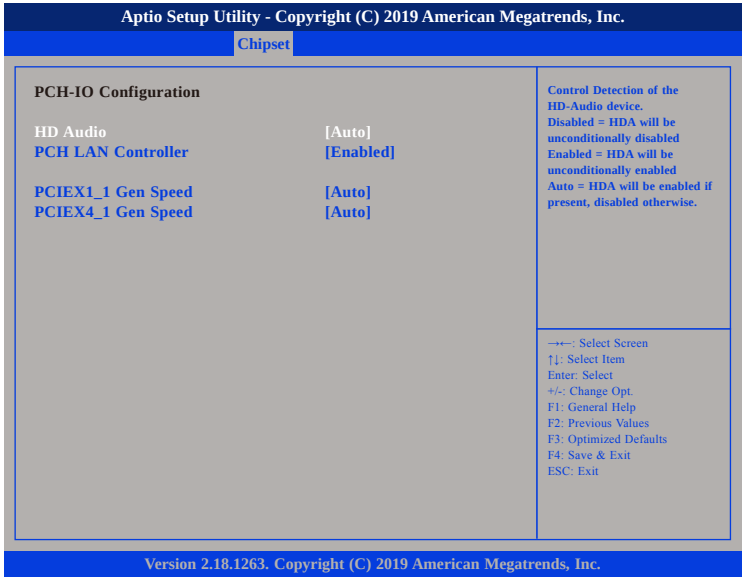


Primary Display
Select which IGFX/PEG/PCI graphics device should be the primary display or select SG for Switchable Gfx.

Primary IGFX Boot Display
Select the video device which will be activated during POST. Has no effect if external graphics is present. Secondary boot display selection will appear based on your selection. VGA modes will be supported only on primary display.

DVMT Total Gfx Mem
Select DVMT 5.0 Total Graphic Memory size used by the Internal Graphics Device.

PCH-IO Configuration



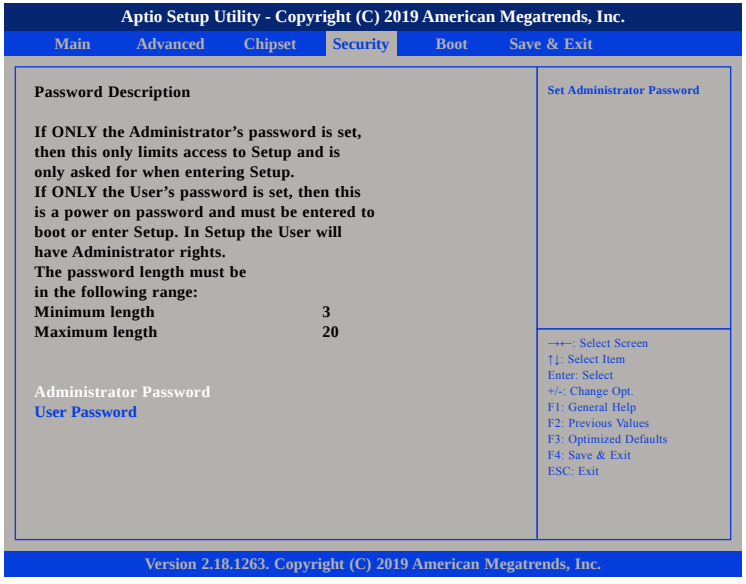
HD Audio
Control detection of the HD Audio device.

Disabled	HD Audio will be unconditionally disabled.
Enabled	HD Audio will be unconditionally enabled.
Auto	HD Audio will be enabled if present, disabled otherwise.

PCH LAN Controller
Enables or disables onboard NIC.

PCIEX1_1 and PCIEX4_1 Gen Speed
Configures the link speed of the PCIe x1 slot and PCIe x4 slot.

Security



Administrator Password

Select this to reconfigure the administrator's password.

User Password

Select this to reconfigure the user's password.

Boot

Quiet Boot

Enabled	Displays OEM logo instead of the POST messages.
Disabled	Displays normal POST messages.

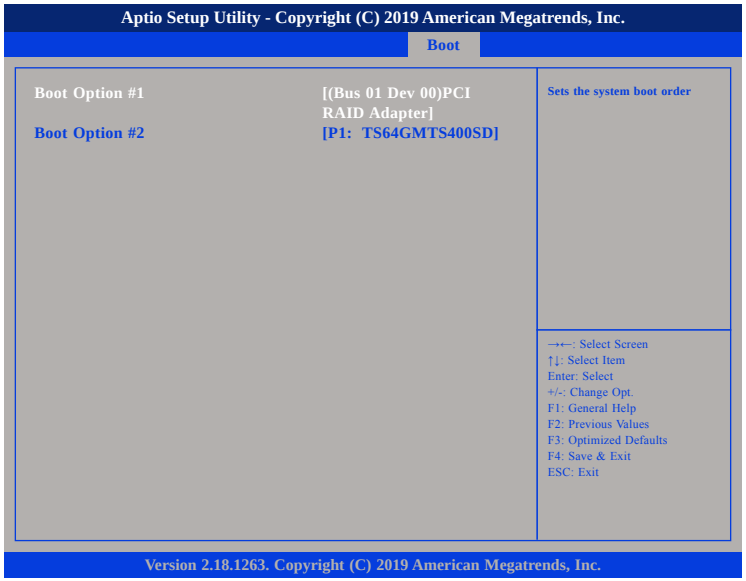
Launch PXE ROM

Controls the execution of UEFI and legacy PXE OpROM.

Boot Option Priorities

Adjust the boot sequence of the system. Boot Option #1 is the first boot device that the system will boot from, next will be #2 and so forth.

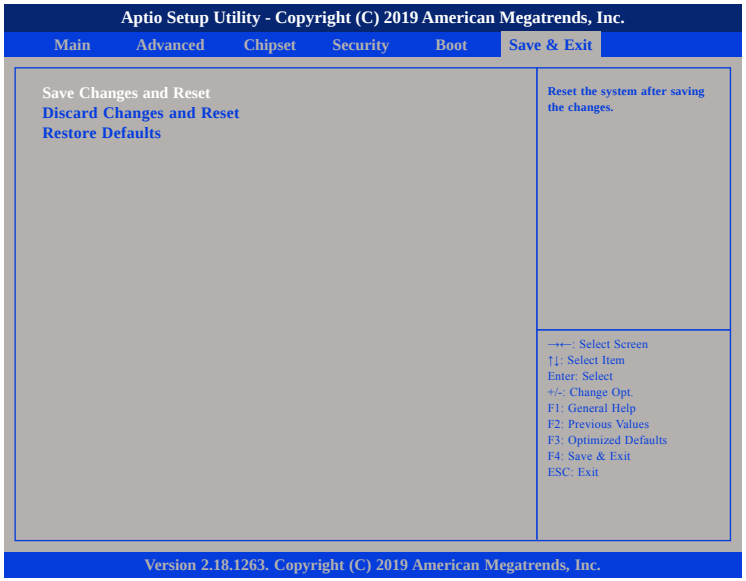
Hard Drive BBS Priorities



Boot Option #1
Sets the first legacy device to boot from.

Boot Option #2
Sets the second legacy device to boot from.

Save & Exit



Save Changes and Reset
To save the changes and restart the system, select this field then press <Enter>. A dialog box will appear. Confirm by selecting Yes. You can also press <F4> to save and exit Setup.

Discard Changes and Reset
To exit the Setup utility without saving the changes and restart the system, select this field then press <Enter>. You may be prompted to confirm again before exiting. You can also press <ESC> to exit without saving the changes.

Restore Defaults
To restore the BIOS to default settings, select this field then press <Enter>. A dialog box will appear. Confirm by selecting Yes.