



NEXCOM International Co., Ltd.

Network and Communication Solutions

Network Security Appliance

NSA 7145

User Manual

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PREFACE

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Acknowledgements

NSA 7145 is a trademark 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 A 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 A 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 in 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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NEXCOM will charge for out-of-warranty products in two categories, one is basic diagnostic fee and another is component (product) fee.

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.

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.

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Package Contents

Before continuing, verify that the NSA 7145 package that you received is complete. Your package should have all the items listed in the following table.

Item	Part Number	Name	Description	Qty
1	6023309081X00	Cable EDI:232091081804-RS	COM Port. DB9 Female to RJ45 8P8C L:1800mm	1
2	6012200053X00	PE Zipper Bag #3	100x70mm, w/China RoHS Symbol	1
3	6012200052X00	PE Zipper Bag #8	170x240mm, w/China RoHS Symbol	1
4	5044440031X00	Rubber Foot Kang Yang:RF20-5-4P	19.8x18x5.0mm	4
5	5040150001X00	NSA 7135 AL Handle VER:A PANADVANCE	78x58x8mm	1
6	50311F0512X00	F Head Screw Long Fei:F2.5x6L ISO Black+Nylok	F2.5x6L ISO Black+Nylok	8
7	50311F0162X00	Round Head Screw GW/Washer Long Fei	P4x8 iso/w NI	1
8	50311F0110X00	Flat Head Screw Long Fei:F3x5ISO+NYLOK NIGP	F3x5 NI Nylok	8
9	50311F0100X00	Round Head Screw w/Spring+Flat Washer Long Fei:P3x6L	P3x6 iso/SW6x0.5 NI	1
10	19S00714500X0	NSA 7145 ASSY		1

Ordering Information

The following information below provides ordering information for NSA 7145.

Barebone

NSA 7145 (P/N: 10S00714500X0)

2U Intel® Xeon® PCH C621, with LCM, 2 swappable 2.5" HDD tray, 3 swappable system fans, 8 LAN module (NI/ NX series) bays, 700W PSU

LAN Modules

Model	P/N	Interface	Type	Port Number	Bypass/Segment	Expansion Slot	Location Slot
NX 140F	10S20140F01X0	XL710-BM1	PCIe x8	4 SFP+	None	None	All Slot
NX 142F	10S20142F01X0	XL710-BM1	PCIe x8	4 SFP+	2 bypass	None	All Slot
NX 142F-LR	10S20142F03X0	XL710-BM1	PCIe x8	4 SFP+	2 bypass	None	All Slot
NX 120F	10S20120F00X0	X710-BM2	PCIe x8	2 SFP+	None	None	All Slot
NI 140F	10SK000NI02X0	i350AM4x1	PCIe x8	4 SFP	None	None	All Slot
NI 180F	10S10180F01X0	i350AM4x2	PCIe x8	8 SFP	None	None	All Slot
NI 142C	10SK000NI03X0	i350AM4x1	PCIe x8	4 Copper	2 bypass	None	All Slot
NI 180C	10S10180C01X0	i350AM4x2	PCIe x8	8 Copper	None	None	All Slot
NI 184C	10S10184C01X0	i350AM4x2	PCIe x8	8 Copper	4 bypass	None	All Slot
NI 142F	10S10142F01X0	i350AM4x1	PCIe x8	4 SFP	2 bypass	None	All Slot
NI 121F	10S10121F01X0	i350AM2x1	PCIe x8	2 SFP	1 bypass	None	All Slot
NI 140C	10S10140C01X0	i350AM4x1	PCIe x8	4 Copper	None	None	All Slot
NV 120F	10S50120F01X0	XXV710-AM2	PCIe x8	2 QSFP	None	None	All Slot
NC220Q28M	10S30022002X0	MT27708A0-FDCF-CE	PCIe x16	2 QSFP28	None	None	1,2/ 3,4/ 5,6/ 7,8

CHAPTER 1: PRODUCT INTRODUCTION

Overview



Key Features

- Dual Intel® Xeon® Scalable Processor family
- Support processor-FPGA solution
- Support up to 512GB of DDR4 2133/ 2400/ 2666 ECC & REG memory
- Up to 8 slots for PCIe LAN modules
- 2x 2.5" SATA/ SAS HDD (Swappable)
- CRPS (1 + 1) redundant power supply
- Support BMC with IPMI 2.0 and out-of-band management
- Optional TPM 1.2/ 2.0 module

Hardware Specifications

Main Board

- NSB 7145
- Dual Intel® Xeon® processor scalable family
- Support 9.6 GT/s QPI speed
- Intel® C621

LAN Features

- Swappable LAN modules
- Support Intel® i350/ Intel® XL710 Copper/Fiber ports
- Support 10/100/1000/10G link speed
- LAN Bypass: ** please see LAN module list information

I/O Interface-Front

- Support 2 x 20 characters LCD module, SIO interface
- Power status/ HDD status/ GPIO status/ system failure status LEDs
- 2 x 2.5" HDD swappable bays
- 8 x LAN module bays
- 2 x USB 3.0 ports
- 1 x micro USB type console port
- 1 x RJ45 type console port
- 2 x Management LAN ports

I/O Interface-Rear

- 3 x Swappable system FANs
- 1 x Power button switch
- 1 x VGA Port
- 2 x USB 2.0 ports

Main Memory

- 16 x 284-pin DDR4 2133/ 2400/ 2666 DIMM sockets, up to 512GB ECC & REG SDRAM

Devices

- 1 x on-board CFast socket

Power Input

- 700W 1+1 CRPS redundant power supply

Chassis Dimensions

- Chassis dimension: 438 mm x 570 mm x 88 mm
- Carton dimension: 774 mm x 636 mm x 293 mm

Weight

- Without packing: 19kg
- With packing: 25kg

Environment

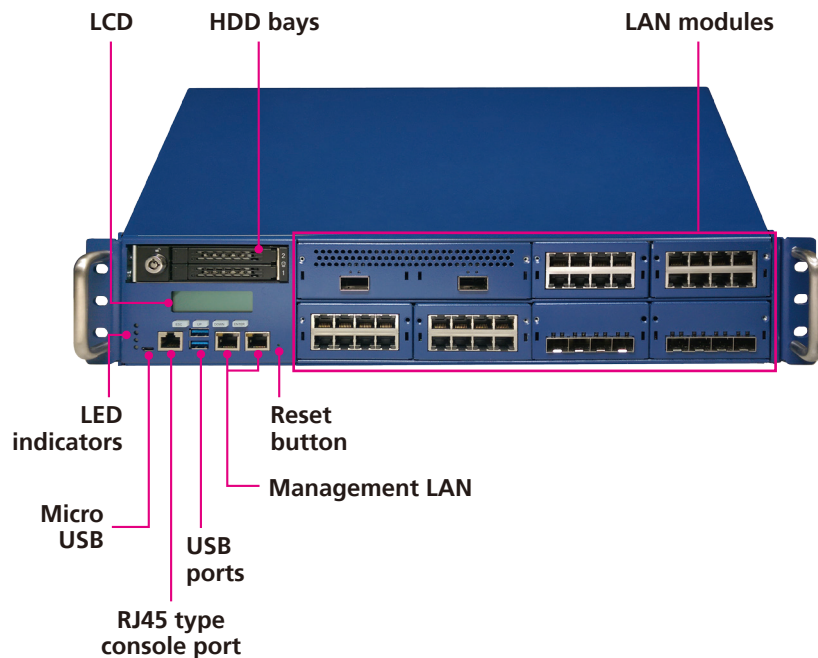
- Operating temperature: 0°C~40°C
- Storage temperature: -20°C~75°C
- Relative humidity: 10%~90% non-condensing

Certifications

- CE approval
- FCC Class A
- UL

Knowing Your NSA 7145

Front Panel



LCD

2x20 characters LCD module, SIO interface.

HDD Bays

Two 2.5" HDD swappable bays for installing HDDs.

LED Indicators

Indicates the power status, system failure status, hard drive and GPIO activity of the system.

RJ45/Micro USB Type Console Serial Port

Used to connect console devices with RJ45/Micro USB type connection.

USB Ports

Used to connect USB 3.0/2.0/1.1 devices.

Management LAN Ports

Two LAN ports used for managing the system.

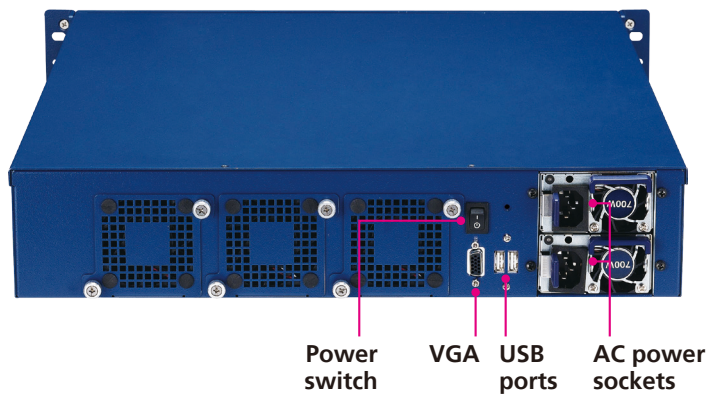
Reset Button

Press to restart the system.

LAN Modules

Eight LAN module bays.

Rear Panel



Power Switch

Press to power-on or power-off the system.

VGA

Used to connect an analog VGA monitor.

USB Ports

Used to connect USB 2.0/1.1 devices.

AC Power Sockets

Dual redundant power supply sockets, plug an AC power cord here before turning on the system.

CHAPTER 2: JUMPERS AND CONNECTORS

This chapter describes how to set the jumpers and connectors on the NSA 7145 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:

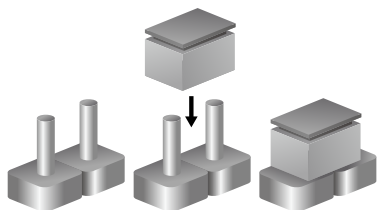
- Always disconnect the unit from the power outlet whenever you are working inside the case.
- If possible, wear a grounded wrist strap when you are working inside the computer case. Alternatively, discharge any static electricity by touching the bare metal chassis of the unit case, or the bare metal 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

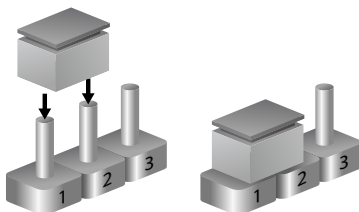
A jumper is the simplest kind of electric switch. It consists of two metal pins and a cap. When setting the jumpers, ensure that the jumper caps are placed on the correct pins. When the jumper cap is placed on both pins, the jumper is short. If you remove the jumper cap, or place the jumper cap on just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

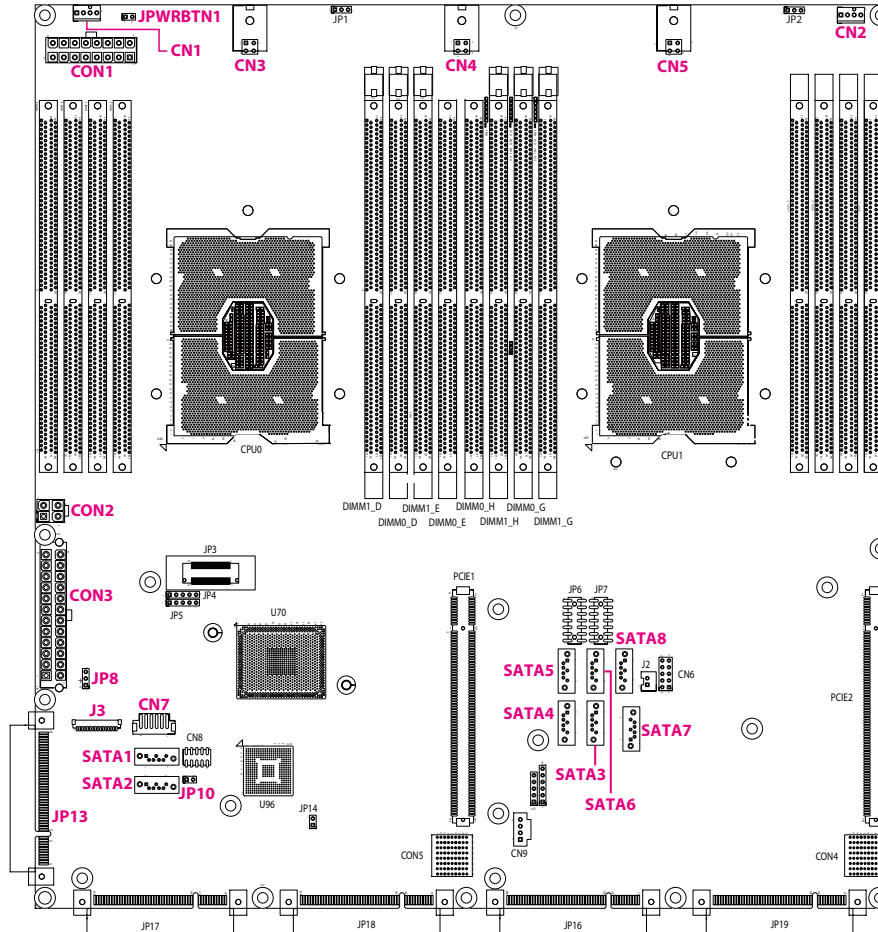


Three-Pin Jumpers: Pins 1 and 2 are Short



Locations of the Jumpers and Connectors

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



Jumper

RTC Clear

Connector type: 1x3 3-pin header

Connector location: JP8



Pin	Function
1-2 On	Normal
2-3 On	Clear CMOS

1-2 On: default

Pin	Definition
1	NC
2	RST_RTCRST_N
3	GND

Internal Connectors

Power Button Header

Connector type: 1x2 2-pin header

Connector location: JPWRBTN1

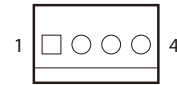


Pin	Definition
1	PWRBTN
2	GND

CPU Fan Connectors

Connector type: 1x4 4-pin Wafer

Connector location: CN1 and CN2



Pin	Definition	Pin	Definition
1	GND	2	P12V
3	TACH	4	PWM

System Fan Connectors

Connector type: 2x2 4-pin header

Connector location: CN3, CN4 and CN5



Pin	Definition	Pin	Definition
1	GND	2	TACH
3	PWM	4	P12V

Console

Connector type: 1x2 2-pin header

Connector location: JP10

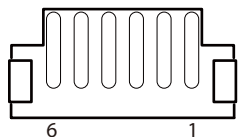


Pin	Definition
1	BMC_COM_SW
2	GND

USB 2.0 Connectors

Connector type: 1x6 6-pin header

Connector location: CN7

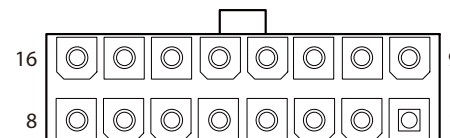


Pin	Definition	Pin	Definition
1	P5V	2	USB2N3
3	USB2P3	4	USB2N4
5	USB2P4	6	GND

Internal Power Connector

Connector type: 2x8 16-pin header

Connector location: CON1

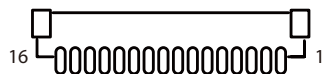


Pin	Definition	Pin	Definition
1	P12V	2	P12V
3	P12V	4	P12V
5	P12V	6	P12V
7	P12V	8	P12V
9	GND	10	GND
11	GND	12	GND
13	GND	14	GND
15	GND	16	GND

VGA Connector

Connector type: 1x16 16-pin header

Connector location: J3

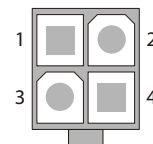


Pin	Definition	Pin	Definition
1	DACROA_B	2	DACGOA_B
3	DACBOA_B	4	NC
5	Chassis_GND	6	Chassis_GND
7	Chassis_GND	8	Chassis_GND
9	VGA_VCC	10	Chassis_GND
11	NC	12	DDC_DATAO_B
13	AHSYNCO_B	14	AVSYNCO_B
15	DDC_CLKO_B	16	NC

ATX 12V Internal Power Connector

Connector type: 2x2 4-pin header

Connector location: CON2

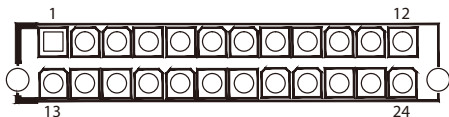


Pin	Definition	Pin	Definition
1	GND	2	GND
3	P12V	4	P12V

Internal Power Connector

Connector type: 2x12 24-pin header

Connector location: CON3

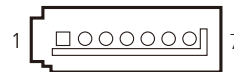


Pin	Definition	Pin	Definition
1	+3.3V	2	+3.3V
3	GND	4	+5V
5	GND	6	+5V
7	GND	8	PW-OK
9	+5VSB	10	+12V
11	+12V	12	+3.3V
13	+3.3V	14	-12V
15	GND	16	PS-ON
17	GND	18	GND
19	GND	20	RES/-5V
21	+5V	22	+5V
23	+5V	24	GND

SATA Connectors

Connector type: Standard Serial ATA 7P (1.27mm, SATA-M-180)

Connector location: SATA1 to SATA8

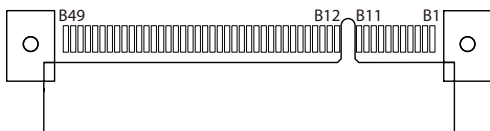


Pin	Definition	Pin	Definition
1	GND	2	SATA6G_P5_TX_DP
3	SATA6G_P5_TX_DN	4	GND
5	SATA6G_P5_RX_DN	6	SATA6G_P5_RX_DP
7	GND		

Front I/O Connector

Connector type: 1x49 49-pin header

Connector location: JP13



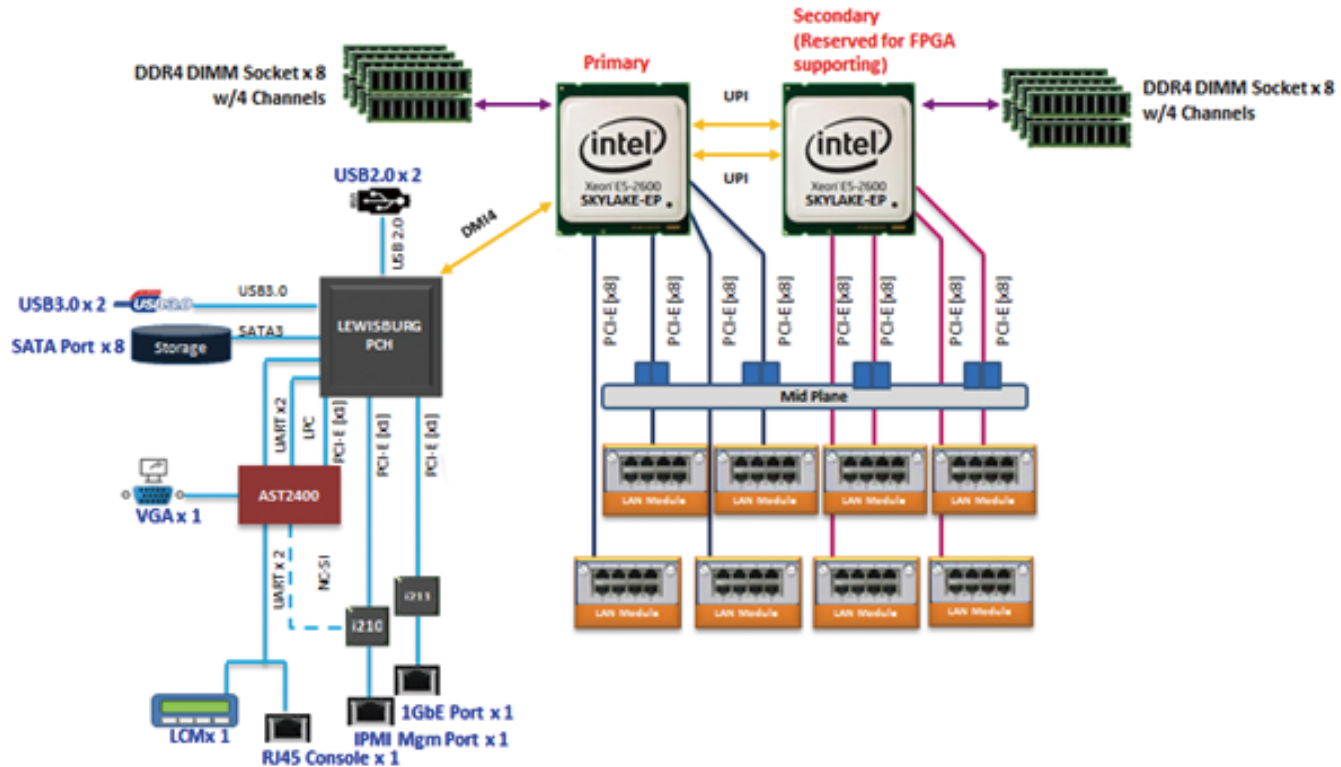
Pin	Definition	Pin	Definition
A1	GND	A2	COM1_TXD
A3	COM1_RXD	A4	NC
A5	IBMC_LCM_LED_KR	A6	IBMC_LCM_LED_KG
A7	IBMC_LCM_TXD	A8	IBMC_LCM_RXD
A9	P5V	A10	GND
A11	P5V	A12	P5V
A13	GND	A14	GND
A15	CONSOLE_VBUS	A16	SP_TXD1_R
A17	SP_RXD1_R	A18	GND
A19	NC	A20	NC
A21	GND	A22	STATUS1_LED_P
A23	STATUS2_LED_P	A24	LED_STATUS1_C

Pin	Definition	Pin	Definition
A25	LED_STATUS2_C	A26	GND
A27	GND	A28	USB3_P01_ESD_RXN
A29	USB3_P01_ESD_RXP	A30	GND
A31	USB3_P01_ESD_TXN	A32	USB3_P01_ESD_TXP
A33	GND	A34	USB2_P01_ESD_DN
A35	USB2_P01_ESD_DP	A36	GND
A37	P5V_USB_P01	A38	P5V_USB_P01
A39	GND	A40	USB3_P02_ESD_RXN
A41	USB3_P02_ESD_RXP	A42	GND
A43	USB3_P02_ESD_TXN	A44	USB3_P02_ESD_TXP
A45	GND	A46	USB2_P02_ESD_DN
A47	USB2_P02_ESD_DP	A48	GND
A49	GND		

Pin	Definition	Pin	Definition
B1	GND	B2	PHYA_MXP0
B3	PHYA_MXN0	B4	GND
B5	PHYA_MXP1	B6	PHYA_MXN1
B7	GND	B8	PHYA_MXP2
B9	PHYA_MXN2	B10	GND
B11	GND	B12	PHY_MXP3
B13	PHY_MXN3	B14	GND
B15	LANA_LED_LINK100_N	B16	LANA_LED_LINK1G_N
B17	LANA_LED_ACT_N	B18	GND
B19	GND	B20	P3V3_AUX
B21	P3V3_AUX	B22	GND
B23	PHYB_MXP0_1	B24	PHYB_MXN0_1

Pin	Definition	Pin	Definition
B25	GND	B26	PHYB_MXP1_1
B27	PHYB_MXN1_1	B28	GND
B29	PHYB_MXP2_1	B30	PHYB_MXN2_1
B31	GND	B32	PHYB_MXP3_1
B33	PHYB_MXN3_1	B34	GND
B35	LANB_LED_LINK100_N_1	B36	LANB_LED_LINK1G_N_1
B37	LANB_LED_ACT_N_1	B38	GND
B39	LED_PWR+	B40	LED_ERR+
B41	LED_STBY+	B42	LED_HDD+
B43	GND	B44	LED_PWR-
B45	LED_ERR-	B46	LED_STBY-
B47	LED_HDD-	B48	GND
B49	FP_RST_BTN_N		

Block Diagram



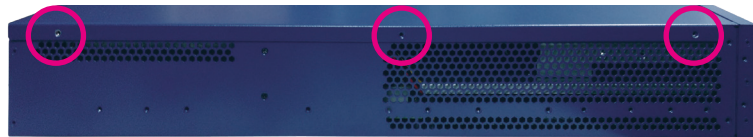
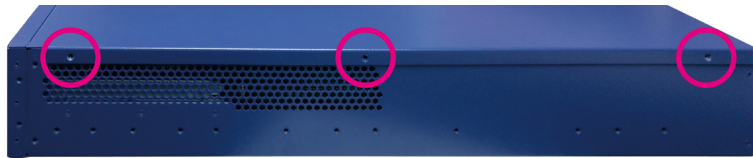
CHAPTER 3: SYSTEM SETUP

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. The screws on the bottom and sides are used to secure the cover to the chassis. Remove these screws and put them in a safe place for later use.

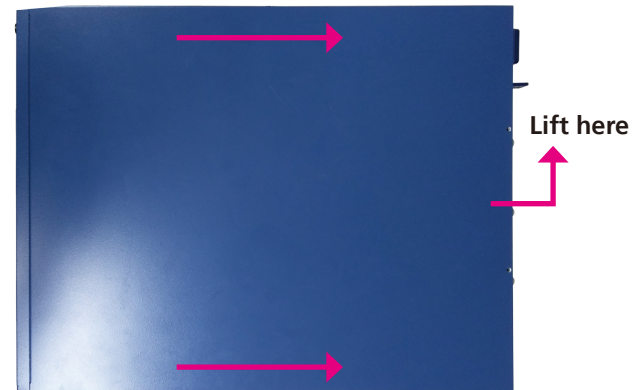


Screws on the sides



Screws on the top

2. With the screws removed, gently slide the cover outwards and then lift up the cover to remove it.

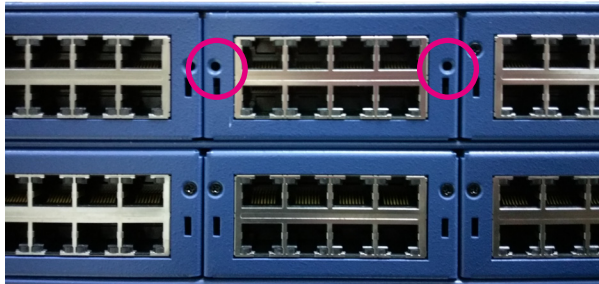


Installing a LAN Module

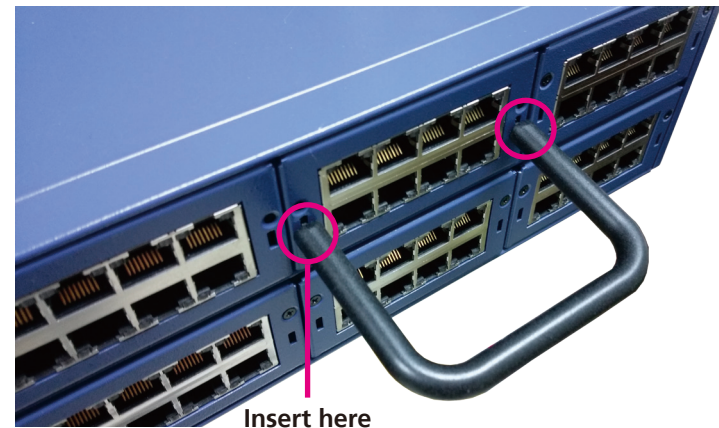


Please correctly follow the below instructions and noted items to avoid making unnecessary damages. Make sure the power supply is switched off and disconnected from the power sources before replacing or adding LAN modules to prevent electric shock or system damage.

1. Remove the screw on the LAN module then put them in a safe place for later use.



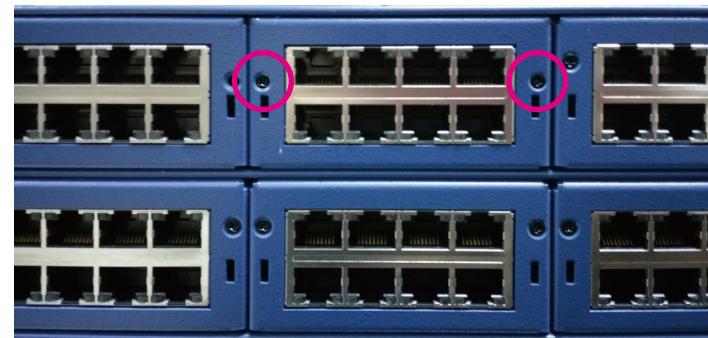
2. Use the handle provided, and insert the handle into the two holes on the LAN module.



3. Once the handle is firmly secured in position, pull the handle outwards to remove the LAN module.



4. Insert the new LAN module into the slot and secure the module with screws.

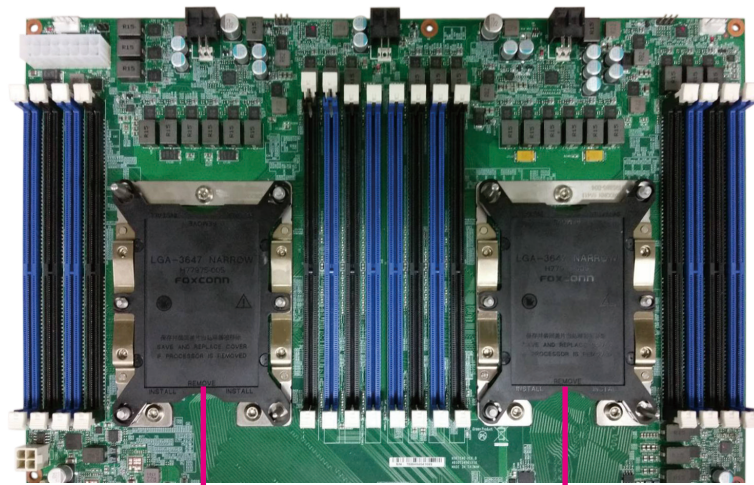
**Important:**

Before using Optical fiber for transferring data, make sure you have connected an approved Optical Transceiver Module. User needs to install appropriate and UL approved Laser Class I Transceivers, rated 3.3Vdc, max. 1W.

Installation Sequence of CPU and Memory

CPU Installation

When installing a CPU into the system, please install it into socket CPU 0 first as depicted below.

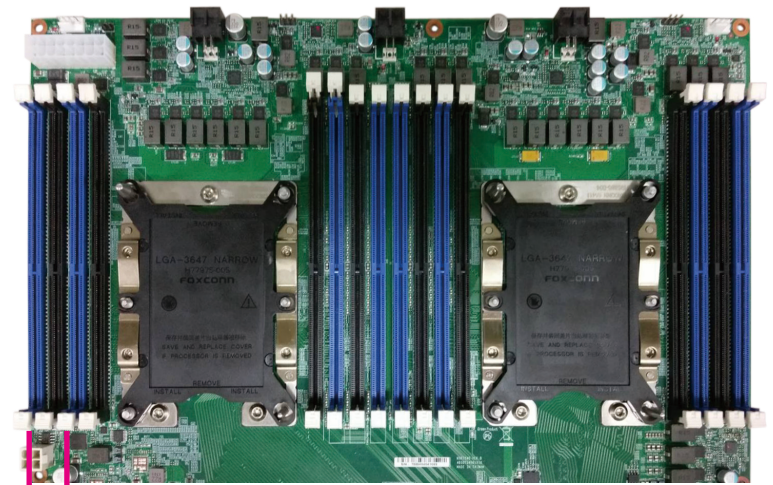


Socket CPU 0

Socket CPU 1

Memory Installation

When installing memory modules into the system, please install the first and second memory module into the memory slots in the numerical sequence as depicted below.



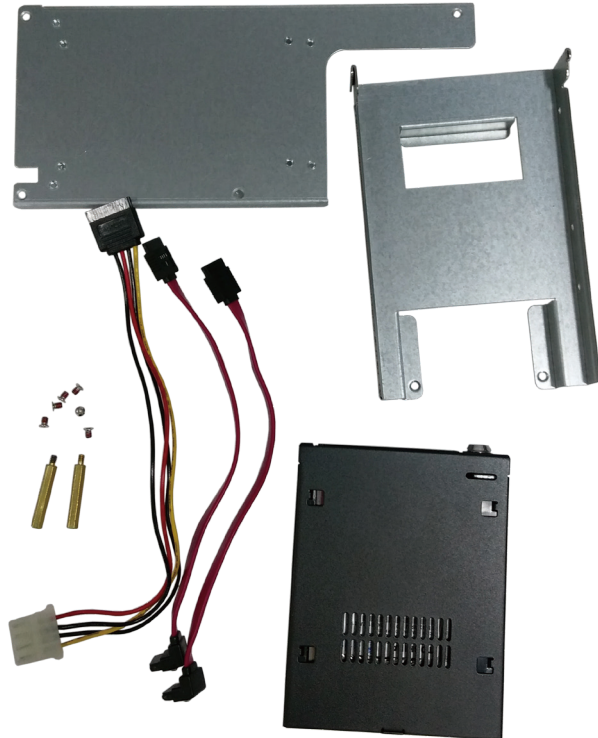
2 1



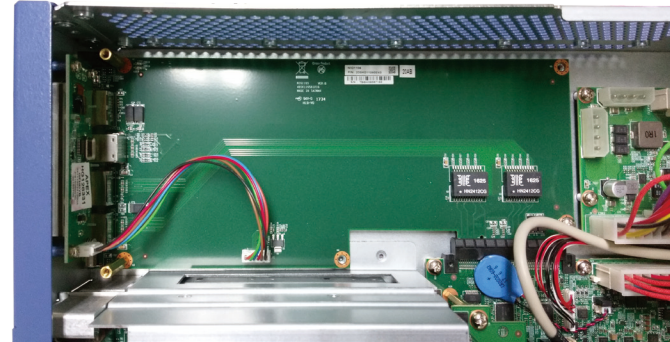
Note: The system may not boot if the first memory module is not installed in slot 1 labeled above.

Assembling the 2.5" Removable Drive Bay

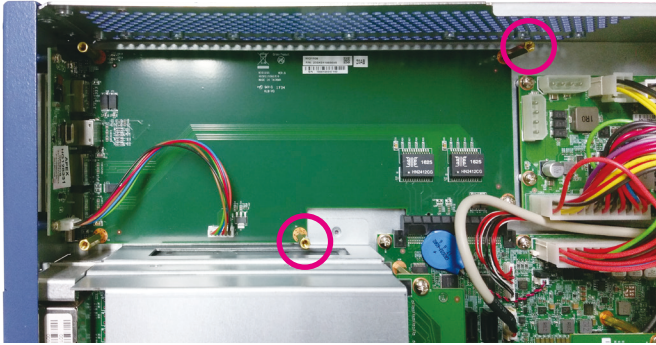
The 2.5" removable drive bay kit contains the parts pictured below:



1. Locate the installation location for the drive bay kit.



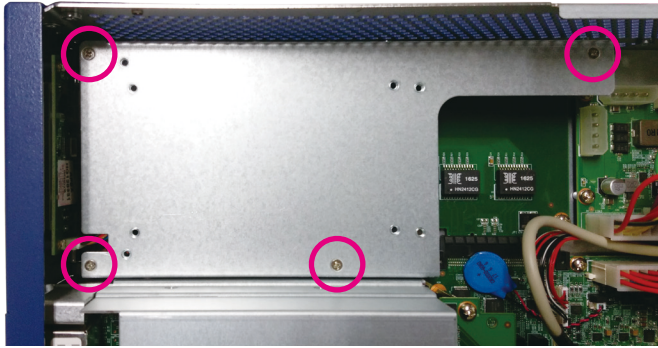
2. Install the two copper standoffs to the location circled below.



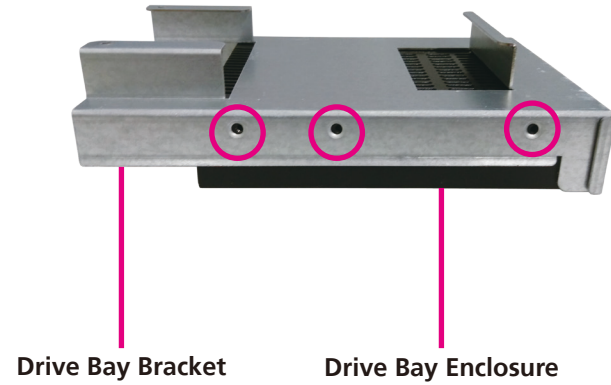
3. Align the mounting holes on the base plate to the copper standoffs.



4. Secure the base plate to the standoffs with screws.



5. Align the mounting holes on the drive bay enclosure to the mounting holes on the drive bay bracket.

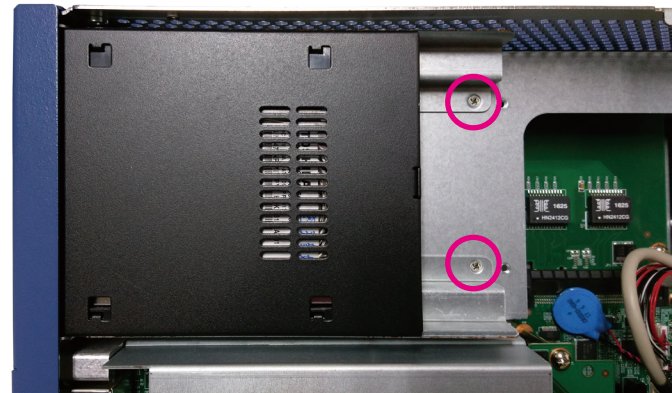
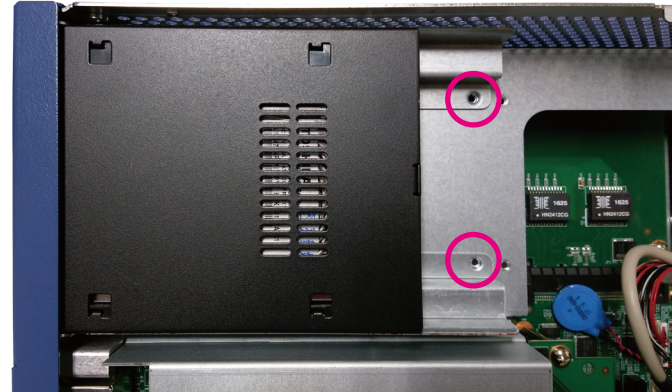


6. Secure the drive bay enclosure to the bracket with screws.

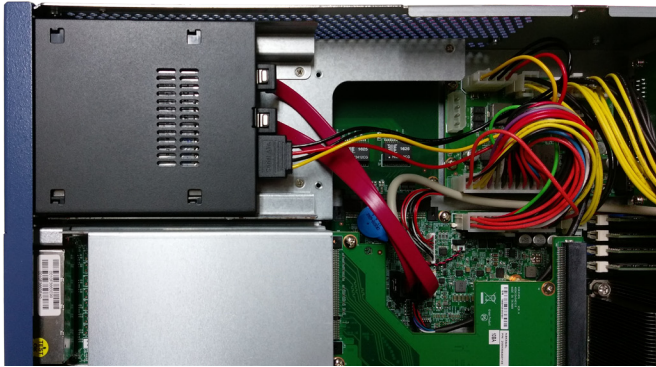


7. Repeat step 6 for securing the screws on the other side of the bracket.

8. Fix the drive bay bracket to the base plate with screws.

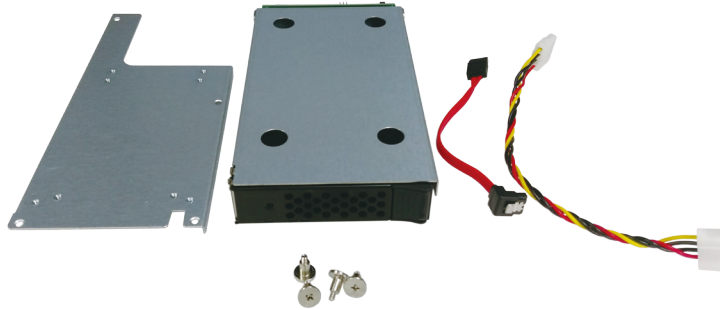


9. Connect the SATA data and power cables to the respective connectors on the board and the other ends of the cables to the connectors on the drive bay enclosure.

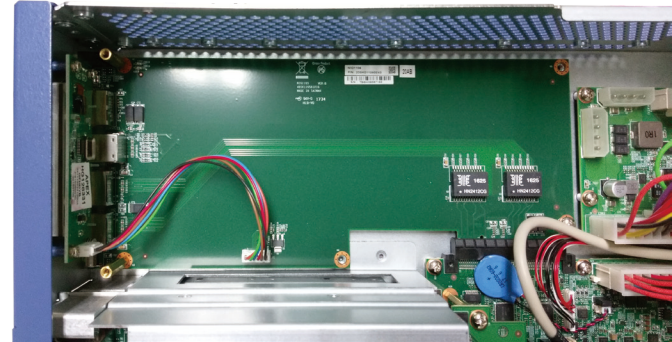


Assembling the 3.5" Removable Drive Bay

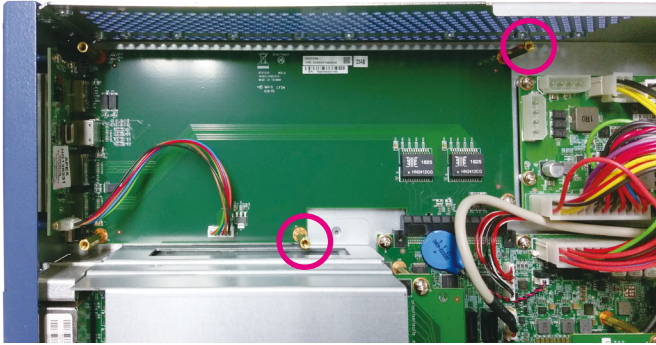
The 3.5" removable drive bay kit contains the parts pictured below:



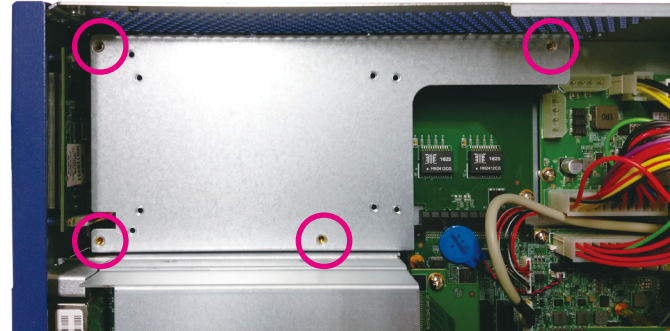
1. Locate the installation location for the drive bay kit.



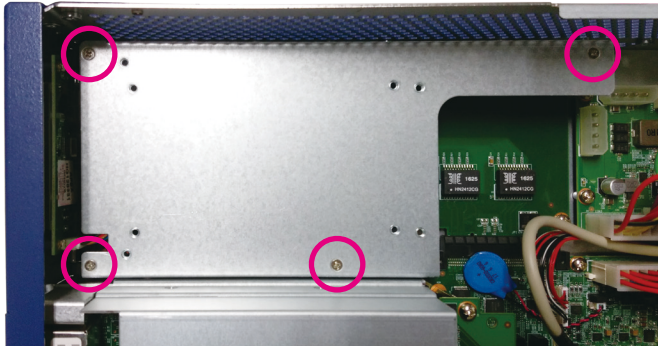
2. Install the two copper standoffs to the location circled below.



3. Align the mounting holes on the base plate to the copper standoffs.



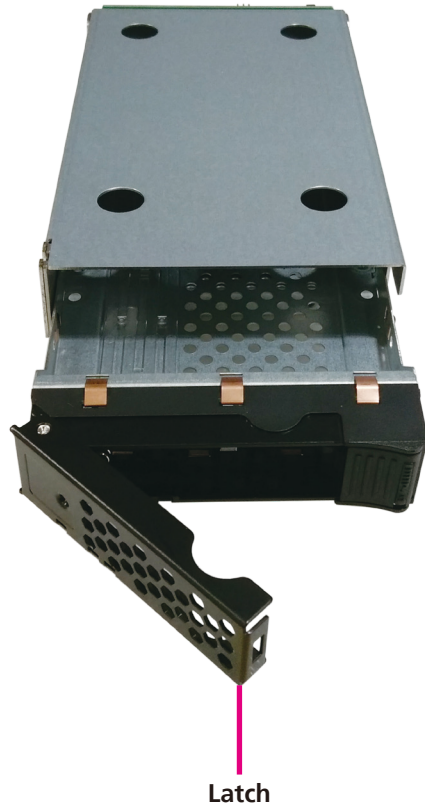
4. Secure the base plate to the standoffs with screws.



5. Push the eject button on the HDD drive tray to release the latch.



6. Grab on the latch and pull the drive tray out gently.

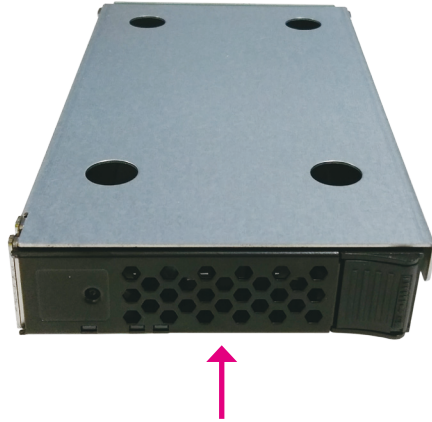


7. Place the SATA drive onto the tray and align the mounting holes on the drive with the mounting holes on the tray, then secure the drive in place with screws.

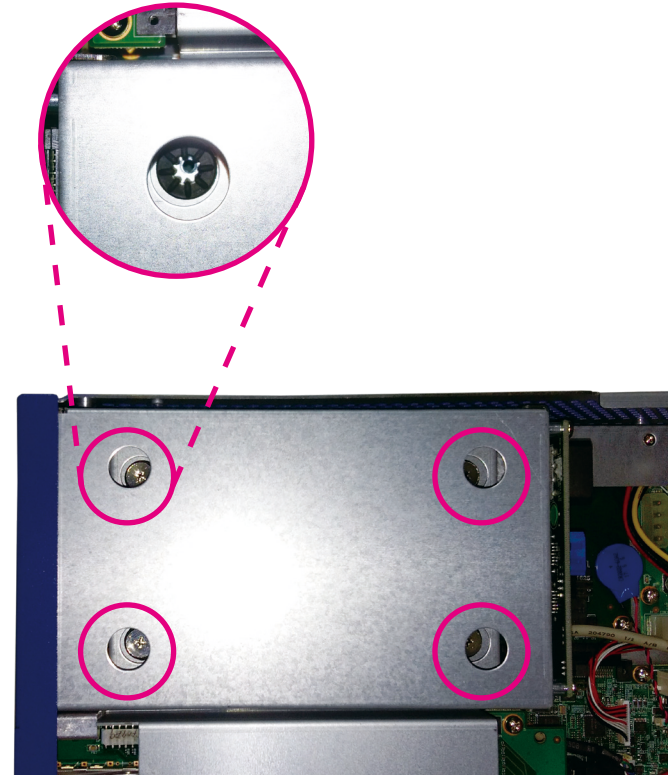


8. Repeat step 7 for securing the screws on the other side of the HDD tray.

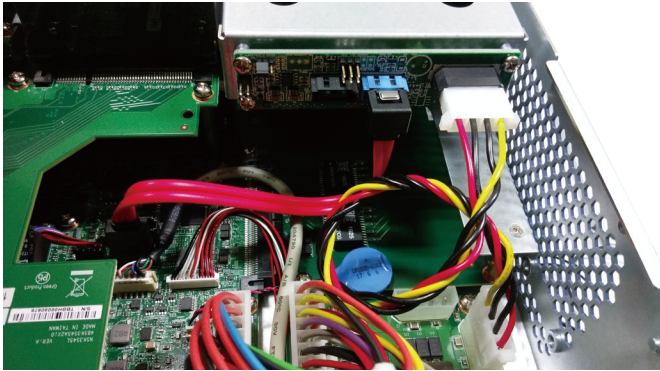
9. Slide the tray back into the drive bay enclosure, and push firmly until you hear a distinctive click sound.



10. Fix the drive bay enclosure to the base plate with screws.



11. Connect the SATA data and power cables to the respective connectors on the board and the other ends of the cables to the connectors on the drive bay enclosure.



CHAPTER 4: BIOS SETUP

This chapter describes how to use the BIOS setup program for NSA 7145. 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  allows you to enter Setup.


Legends

Key	Function
	Moves the highlight left or right to select a menu.
	Moves the highlight up or down between sub-menu 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  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 2005 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.

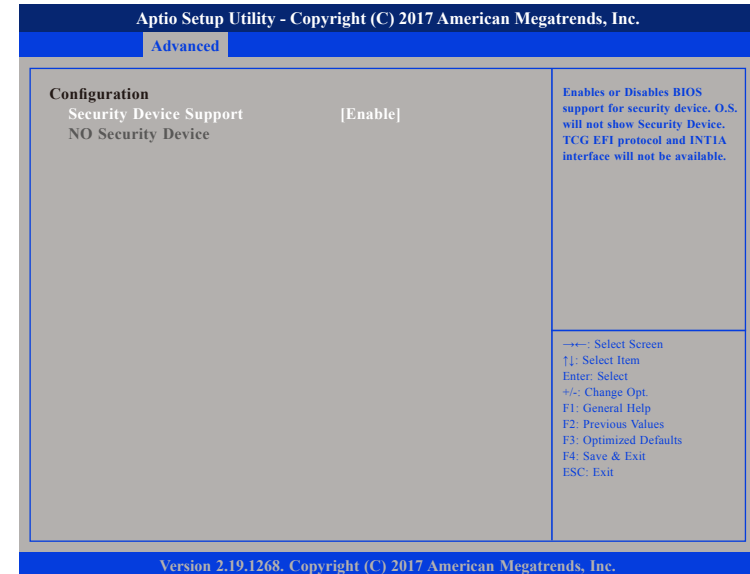


Setting incorrect field values may cause the system to malfunction.



Trusted Computing

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

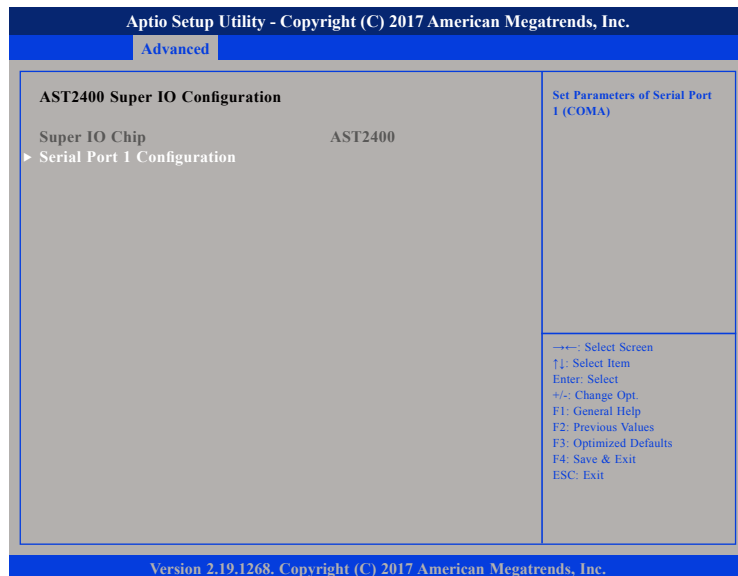


Security Device Support

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.

AST2400 Super IO Configuration

This section is used to configure the serial port.



Super IO Chip

Displays the Super I/O chip used on the board.

Serial Port 1 Configuration

Configuration settings for serial port 1.

Serial Port 1 Configuration

This section is used to configure serial port 1.



Serial Port

Enables or disables the serial port.

Change Settings

Selects an optimal setting for the Super IO device.

Hardware Monitor

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

Aptio Setup Utility - Copyright (C) 2017 American Megatrends, Inc.

Advanced

Pc Health Status

P12V_SCALED	+11.40 V
P3V3_AUX_SCALED	+3.30 V
P5V_AUX_SCALED	+4.95 V
P1V05_PCH_AUX	+1.06 V
PVNN_PCH_AUX	+0.90 V
VCC_CPU0_SCALED	+1.79 V
VCC_CPU1_SCALED	+1.77 V
PVDDQ_ABC	+1.23 V
PVDDQ_DEF	+1.24 V
PVDDQ_GHJ	+1.24 V
PVDDQ_KLM	+1.24 V
P3V_VBAT	+2.84 V
SYS_FAN1_TP	0 RPM
SYS_FAN2_TP	0 RPM
SYS_FAN3_TP	0 RPM
CPU_FAN0_TP	4100 RPM

←→: Select Screen
↑↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit

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P12V_SCALED to CPU_FAN0_TP

Detects and displays the output voltages and fan speeds.

Aptio Setup Utility - Copyright (C) 2017 American Megatrends, Inc.

Advanced

Pc Health Status

PVNN_PCH_AUX	+0.90 V
VCC_CPU0_SCALED	+1.79 V
VCC_CPU1_SCALED	+1.77 V
PVDDQ_ABC	+1.23 V
PVDDQ_DEF	+1.24 V
PVDDQ_GHJ	+1.24 V
PVDDQ_KLM	+1.24 V
P3V_VBAT	+2.84 V
SYS_FAN1_TP	0 RPM
SYS_FAN2_TP	0 RPM
SYS_FAN3_TP	0 RPM
CPU_FAN0_TP	4100 RPM
CPU_FAN1_TP	2200 RPM
SMB_TMP0	32 C
SMB_TMP1	31 C
PECL_IBMC	56 C
PECL_IBMC2	44 C
PSU0_VOL	+0.10 V

←→: Select Screen
↑↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit

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PVNN_PCH_AUX to PSU0_VOL

Detects and displays the output voltages and fan speeds.

Serial Port Console Redirection

This section is used to configure the serial port that will be used for console redirection.

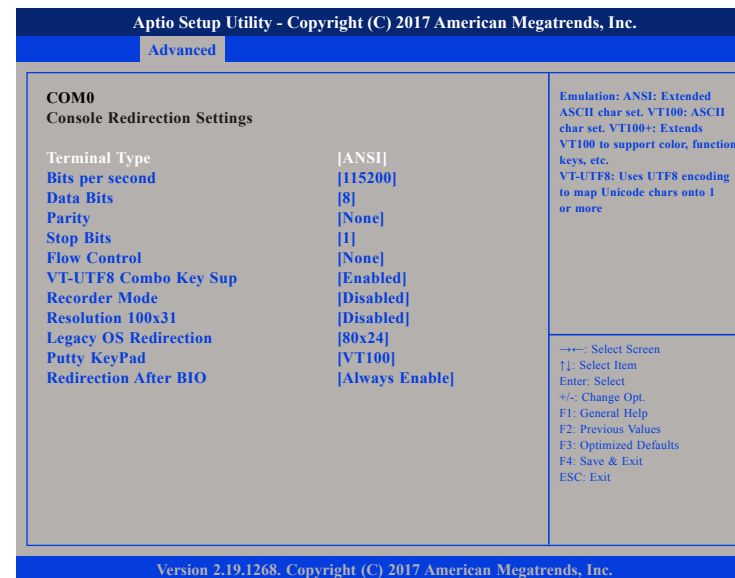


Console Redirection (COM0/EMS)

Enables or disables console redirection for COM0/EMS.

Console Redirection Settings (COM0)

Specifies how the host computer and the remote computer (which the user is using) will exchange data. Both computers should have the same or compatible settings.



Terminal Type

ANSI Extended ASCII character set.

VT100 ASCII character set.

VT100+ Extends VT100 to support color, function keys, etc.

VT-UTF8 Uses UTF8 encoding to map Unicode characters onto 1 or more bytes.

Bits Per Second

Selects the serial port transmission speed. The speed must match the other side. Long or noisy lines may require a lower speed.

Data Bits

The options are 7 and 8.

Parity

A parity bit can be sent with the data bits to detect some transmission errors.

Even Parity bit is 0 if the number of 1's in the data bits is even.

Odd Parity bit is 0 if number of 1's in the data bits is odd.

Stop Bits

Stop bits indicate the end of a serial data packet. (A start bit indicates the beginning). The standard setting is 1 stop bit. Communication with slow devices may require more than 1 stop bit.

Flow Control

Flow control can prevent data loss from buffer overflow. When sending data and the receiving buffers are full, a "stop" signal can be sent to stop the data flow.

VT-UTF8 Combo Key Support

Enables or disables VT-UTF8 combo key support.

Recorder Mode

When this field is enabled, only text will be sent. This is to capture the terminal data.

Resolution 100x31

Enables or disables extended terminal resolution.

Legacy OS Redirection

Selects the number of rows and columns that support redirection.

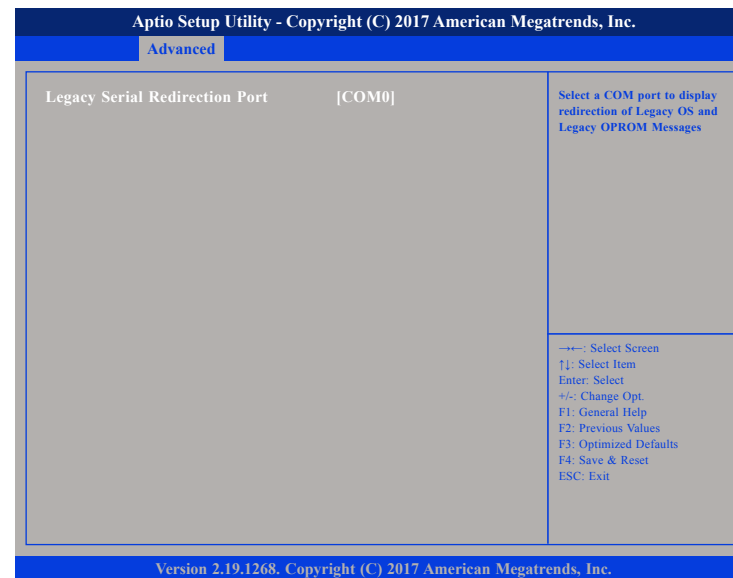
Putty KeyPad

Selects the Putty keyboard emulation type.

Redirection After BIOS POST

Enables or disables redirection after BIOS POST.

Legacy Console Redirection Settings



Legacy Serial Redirection Port

Configures the COM port to display redirection of legacy OS and legacy OPROM messages.

Serial Port for Out-of-Band Management / Windows EMS

Aptio Setup Utility - Copyright (C) 2017 American Megatrends, Inc.		
Advanced		
Out-of-Band Mgmt Port	COM0	VT-UTF8 is the preferred terminal type for out-of-band management. The next best choice is VT100+ and then VT100. See above, in Console Redirection Settings
Terminal Type	[VT-UTF8]	
Bits per second	[115200]	
Flow Control	[None]	
Data Bits	8	
Parity	None	←→: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Stop Bits	1	
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Flow Control

Flow control can prevent data loss from buffer overflow. When sending data and the receiving buffers are full, a “stop” signal can be sent to stop the data flow.

Terminal Type

- ANSI Extended ASCII character set.
- VT100 ASCII character set.
- VT100+ Extends VT100 to support color, function keys, etc.
- VT-UTF8 Uses UTF8 encoding to map Unicode characters onto 1 or more bytes.

Bits per second

Selects the serial port transmission speed. The speed must match the other side. Long or noisy lines may require a lower speed.

PCI Subsystem Settings

This section is used to configure the PCI.



Above 4G Decoding

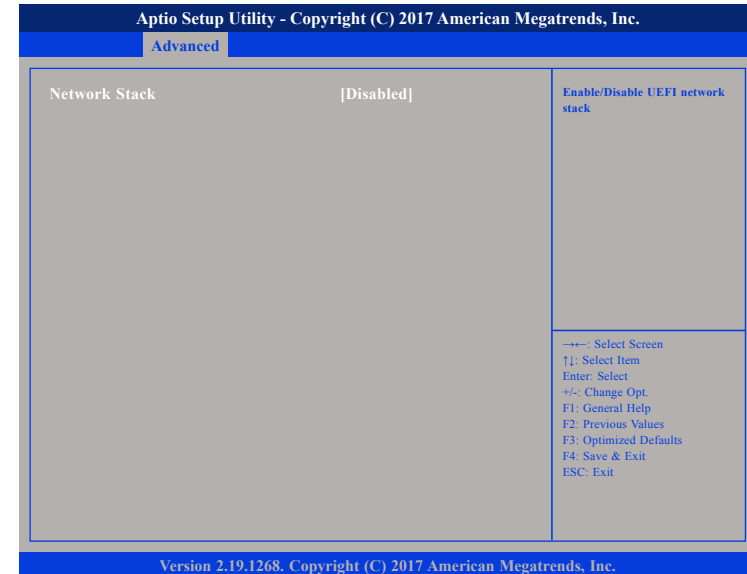
Enables or disables decoding of 64-bit devices in 4G address space. (Only if the system supports 64-bit PCI decoding.)

SR-IOV Support

Enables or disables SR-IOV support.

Network Stack Configuration

This section is used to configure the network stack.



Network Stack

Enables or disables UEFI network stack.

CSM Configuration

This section is used to configure the compatibility support module features.



CSM Support

This field is used to enable or disable CSM support, if Auto option is selected, based on OS, CSM will be enabled or disabled automatically.

GateA20 Active

Upon Request GA20 can be disabled using BIOS services.
 Always Do not allow disabling of GA20; this option is useful when any RT code is executed above 1MB.

Option ROM Messages

This field is used to set display mode for Option ROM. The options are Force BIOS and Keep Current.

INT19 Trap Response

Allows Option ROMs to trap Interrupt 19 when enabled.

Immediate Execute the trap right away.
 Postponed Execute the trap during legacy boot.

Network

Controls the execution of UEFI and Legacy PXE OpROM.

Storage

Controls the execution of UEFI and Legacy Storage OpROM.

Video

Controls the execution of UEFI and Legacy Video OpROM.

Other PCI Devices

Configures the OpROM execution policy for devices other than Network, Storage or Video.

USB Configuration

This section is used to configure the USB.



Legacy USB Support

Enable Enables Legacy USB.

Auto Disables support for Legacy when no USB devices are connected.

Disable Keeps USB devices available only for EFI applications.

XHCI Hand-off

This is a workaround for OSs that does not support XHCI hand-off. The XHCI ownership change should be claimed by the XHCI driver.

USB Mass Storage Driver Support

Enables or disables USB mass storage device driver support.

Port 60/64 Emulation

Enables I/O port 60h/64h emulation support. This should be enabled for complete USB keyboard legacy support for non-USB aware OS.

USB Transfer Time-out

The time-out value for control, bulk, and Interrupt transfers.

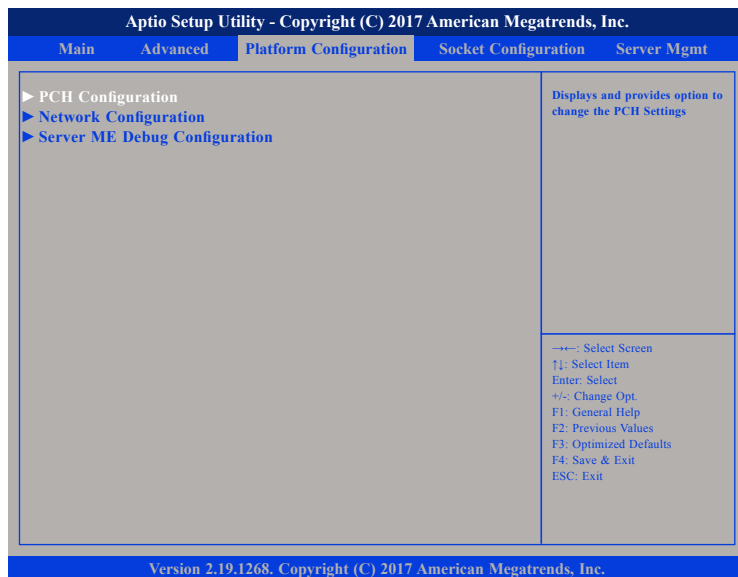
Device Reset Time-out

Selects the USB mass storage device's start unit command timeout.

Device Power-up Delay

Maximum time the value will take before it properly reports itself to the Host Controller. "Auto" uses default value: for a Root port it is 100 ms, for a Hub port the delay is taken from Hub descriptor.

Platform Configuration



PCH Configuration

Enters the PCH Configuration submenu.

Network Configuration

Enters the Network Configuration submenu.

Server ME Debug Configuration

Enters the Server ME Debug Configuration submenu.

PCH Configuration



PCH Devices

Enters the PCH Devices submenu.

PCI Express Configuration

Enters the PCI Express Configuration submenu.

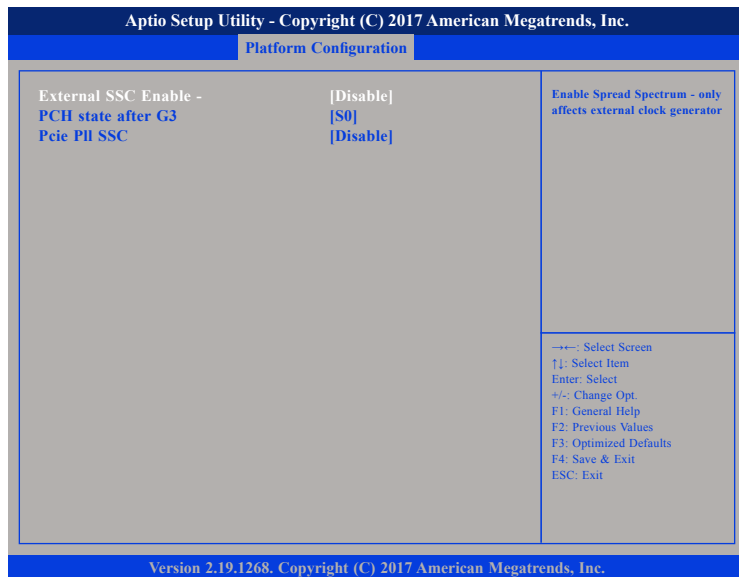
PCH SATA Configuration

Enters the PCH SATA Configuration submenu.

USB Configuration

Enters the USB Configuration submenu.

PCH Devices



External SSC Enable

Enables or disables spread spectrum clock. Only affects external clock generator.

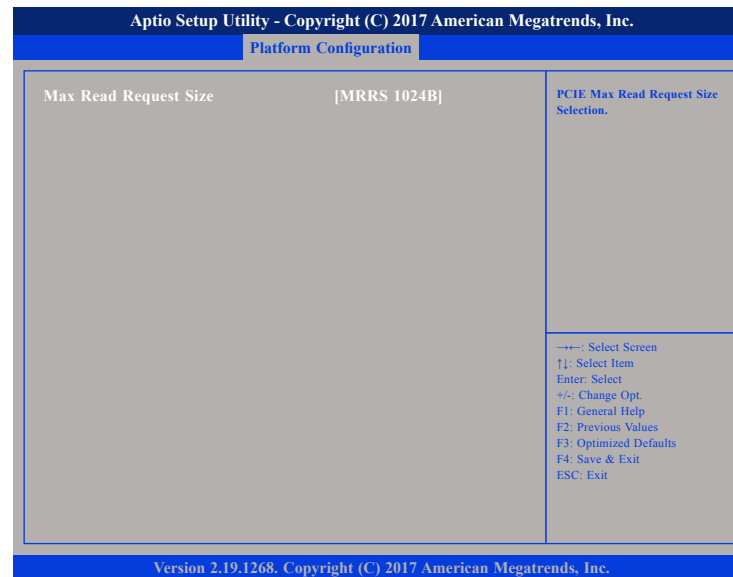
PCH state after G3

Configures the PCH state after G3.

Pcie Pll SSC

Enables or disables PCIe Phase Locked Loop for spread spectrum clock.

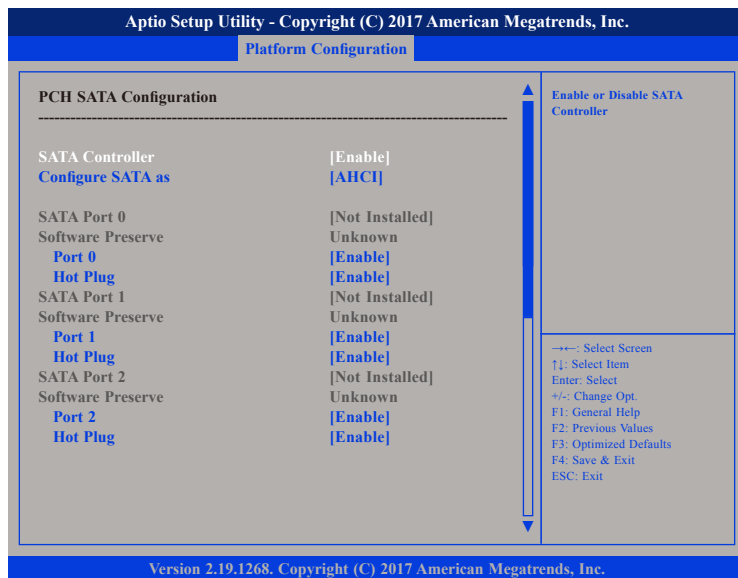
PCI Express Configuration



Max Read Request Size

Configures the PCIe max read request size.

PCH SATA Configuration



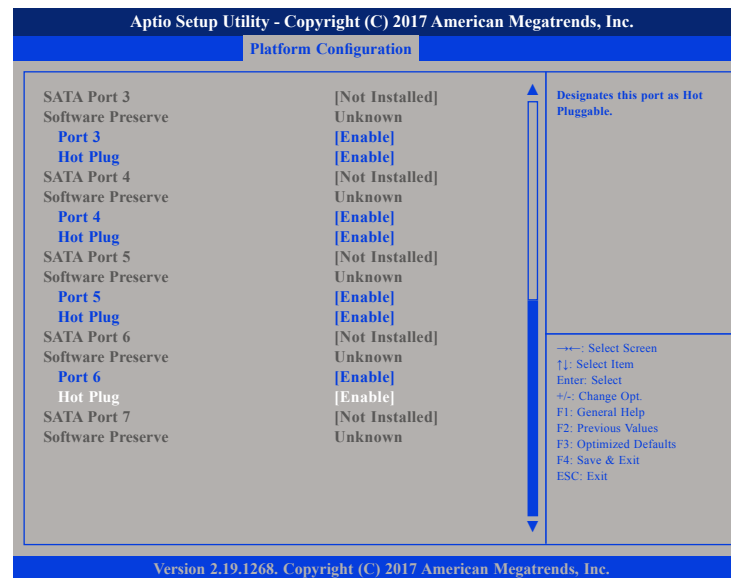
SATA Controller(s)

Enables or disables the SATA controller.

Configure SATA as

Configures the SATA 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 0 to Port 6

Enables or disables SATA port 0 to port 6.

Hot Plug

Enables or disables hot plugging feature on SATA port 0 to port 6.

USB Configuration (PCH)



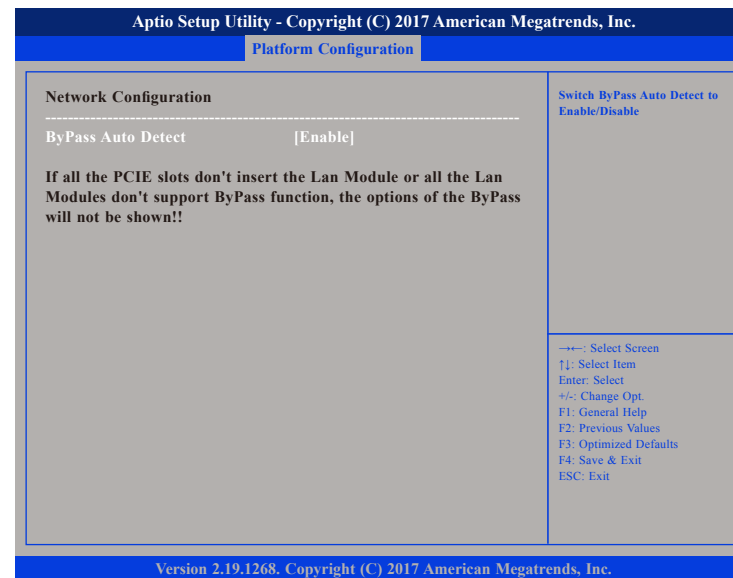
XHCI Manual Mode

Enables or disables XHCI manual mode.

USB Per-Connector Disable

Provides the option to enable or disable each USB connector.

Network Configuration



ByPass Auto Detect

Enables or disables automatic LAN Bypass function.

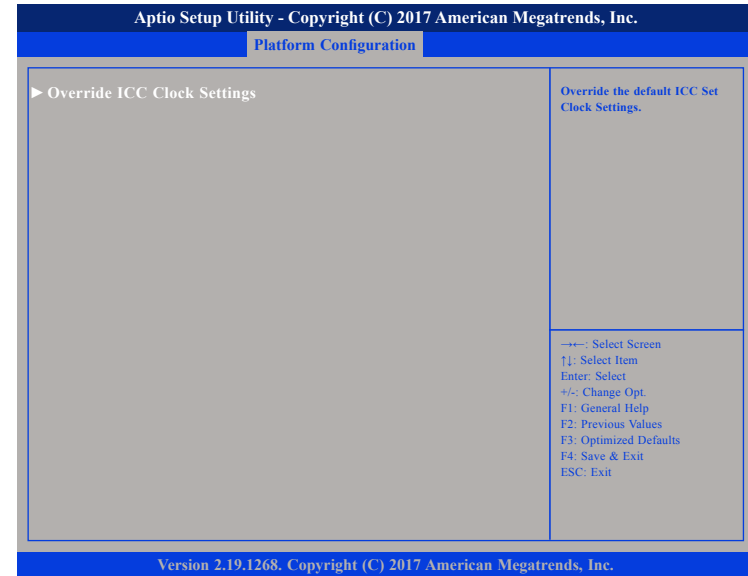
Server ME Debug Configuration



Server ME General Configuration

Enters the Server ME General Configuration submenu.

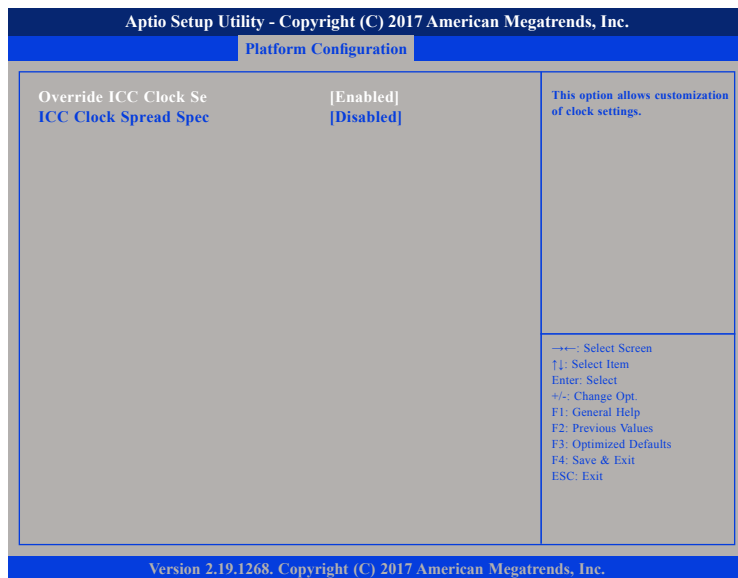
Server ME General Configuration



Override ICC Clock Settings

Enters the Override ICC Clock Settings submenu.

Override ICC Clock Settings



Override ICC Clock Settings

Provides the option to allow customization of clock settings.

ICC Clock Spread Spectrum

Enables or disables ICC Clock Spread Spectrum.

Socket Configuration



Processor Configuration

Enters the Processor Configuration submenu.

Common RefCode Configuration

Enters the Common RefCode Configuration submenu.

UPI Configuration and Memory Configuration

Enters the UPI Configuration and Memory Configuration submenu.

IIO Configuration and Advanced Power Management Configuration

Enters the IIO Configuration and Advanced Power Management Configuration submenu.

Processor Configuration

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Socket Configuration

Processor Configuration

Change Per-Socket Settings

Per-Socket Configuration

	Socket 0	Socket 1
Processor BSP Revisio	50654 - SKX H0	
Processor Socket	Socket 0	Socket 1
Processor ID	00050654*	00050654
Processor Frequency	2.500GHz	2.500GHz
Processor Max Ratio	19AH	19AH
Processor Min Ratio	0AH	0AH
Microcode Revision	02000026	
L1 Cache RAM	64KB	64KB
L2 Cache RAM	1024KB	1024KB
L3 Cache RAM	39424KB	39424KB
Processor 0 Version	Intel (R) Xeon (R) Platinum 8180 CPU @ 2.50GHz	
Processor 1 Version	Intel (R) Xeon (R) Platinum 8180 CPU @ 2.50GHz	

← Select Screen
 ↑ Select Item
 Enter: Select
 +/- Change Opt.
 F1: General Help
 F2: Previous Values
 F3: Optimized Defaults
 F4: Save & Exit
 ESC: Exit

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Hyper-Threading [ALL]

Enables or disables hyper-threading technology.

Hardware Prefetcher

Enables or disables the MLC streamer prefetcher.

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Socket Configuration

	Socket 0	Socket 1
Processor Socket	Socket 0	Socket 1
Processor ID	00050654*	00050654
Processor Frequency	2.500GHz	2.500GHz
Processor Max Ratio	19AH	19AH
Processor Min Ratio	0AH	0AH
Microcode Revision	02000026	
L1 Cache RAM	64KB	64KB
L2 Cache RAM	1024KB	1024KB
L3 Cache RAM	39424KB	39424KB
Processor 0 Version	Intel (R) Xeon (R) Platinum 8180 CPU @ 2.50GHz	
Processor 1 Version	Intel (R) Xeon (R) Platinum 8180 CPU @ 2.50GHz	

← Select Screen
 ↑ Select Item
 Enter: Select
 +/- Change Opt.
 F1: General Help
 F2: Previous Values
 F3: Optimized Defaults
 F4: Save & Exit
 ESC: Exit

Enable/disable extended APIC support
 Hyper-Threading [ALL] [Disable]
 Hardware Prefetcher [Disable]
 Adjacent Cache Prefetcher [Enable]
 Extended APIC [Disable]

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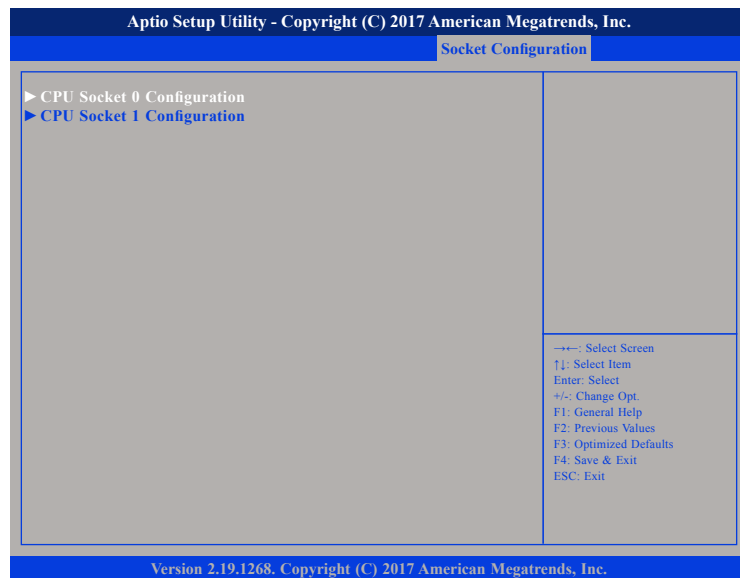
Adjacent Cache Prefetcher

Enables or disables prefetching of adjacent cache lines.

Extended APIC

Enables or disables extended APIC support.

Per-Socket Configuration



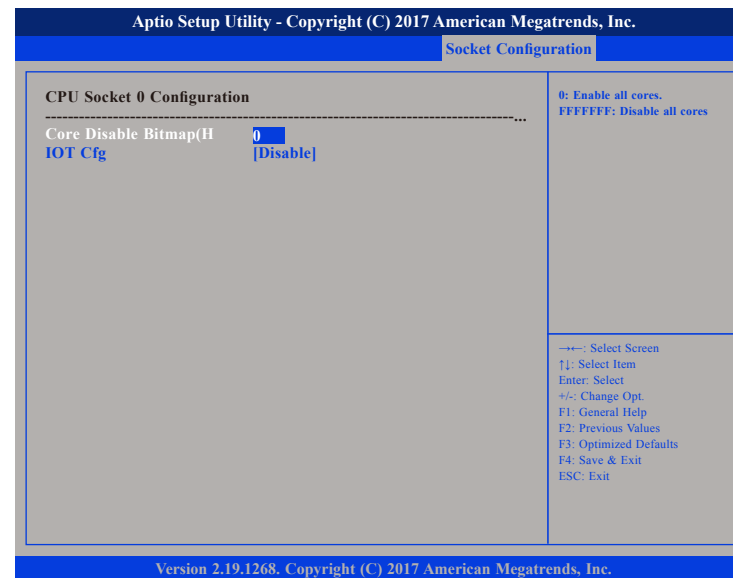
CPU Socket 0 Configuration

Processor settings for the CPU on socket 0.

CPU Socket 1 Configuration

Processor settings for the CPU on socket 1.

CPU Socket 0 Configuration



Cores Disable Bitmap

Provides the option to enable or disable all cores. 0 means enable all cores. FFFFFFFF means disable all cores.

IOT Cfg

Enables or disables IOT Cfg.

CPU Socket 1 Configuration

Aptio Setup Utility - Copyright (C) 2017 American Megatrends, Inc.	
Socket Configuration	
CPU Socket 1 Configuration ----- Core Disable Bitmap(H) 0 IOT Cfg [Disable]	
0: Enable all cores. FFFFFFFF: Disable all cores	
→←: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit	
Version 2.19.1268. Copyright (C) 2017 American Megatrends, Inc.	

Cores Disable Bitmap

Provides the option to enable or disable all cores. 0 means enable all cores. FFFFFFFF means disable all cores.

IOT Cfg

Enables or disables IOT Cfg.

Common RefCode Configuration

Aptio Setup Utility - Copyright (C) 2017 American Megatrends, Inc.	
Socket Configuration	
Common RefCode Configuration ----- Isoc [Disable] Numa [Enable]	
Isoc: Disable,Enable	
→←: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit	
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Isoc

Enables or disables Isochronous support.

Numa

Enables or disables Non-Uniform Memory Access support.

UPI Configuration



UPI General Configuration

Enters the UPI General Configuration submenu.

UPI Per Socket Configuration

Enters the UPI Per Socket Configuration submenu.

UPI General Configuration



UPI Status

Displays information on the current UPI configuration.

Link Speed Mode

Configures the link speed mode.

Link Frequency Select

Configures the UPI frequency.

UPI Per Socket Configuration



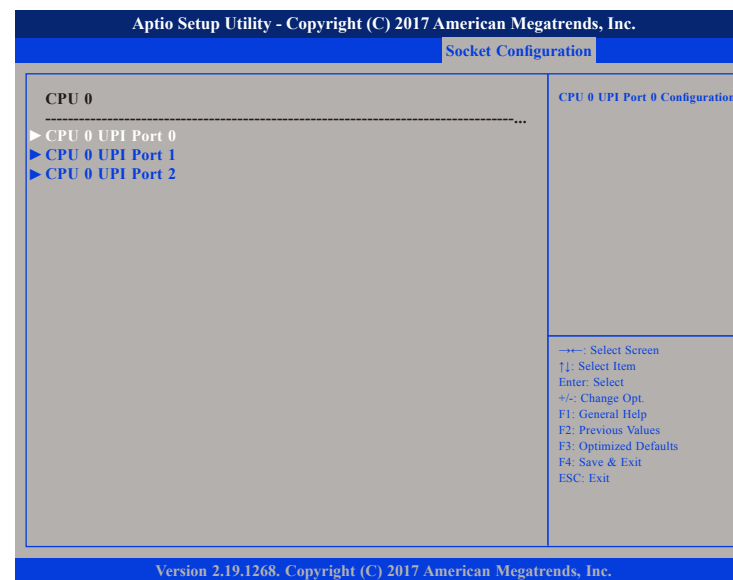
CPU 0

Enters the CPU 0 submenu.

CPU 1

Enters the CPU 1 submenu.

UPI Per Socket Configuration CPU 0



CPU 0 UPI Port 0

Enters the CPU 0 UPI Port 0 configuration submenu.

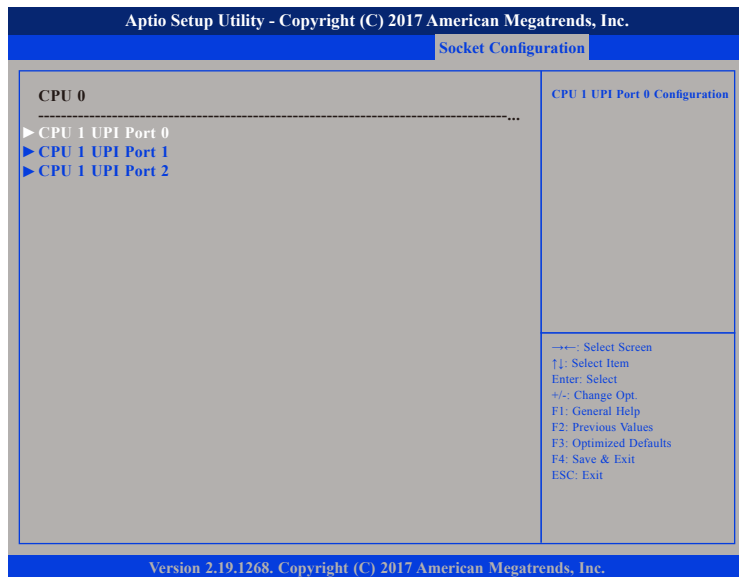
CPU 0 UPI Port 1

Enters the CPU 0 UPI Port 1 configuration submenu.

CPU 0 UPI Port 2

Enters the CPU 0 UPI Port 1 configuration submenu.

UPI Per Socket Configuration CPU 1



CPU 1 UPI Port 0

Enters the CPU 1 UPI Port 0 configuration submenu.

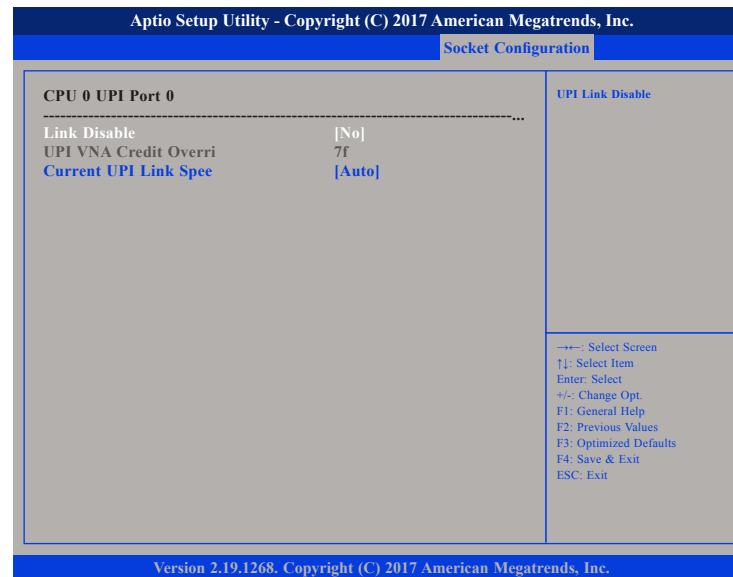
CPU 1 UPI Port 1

Enters the CPU 1 UPI Port 1 configuration submenu.

CPU 1 UPI Port 2

Enters the CPU 1 UPI Port 1 configuration submenu.

CPU 0 UPI Port 0



Link Disable

Enables or disables the UPI link.

Current UPI Link Speed

Configures the current UPI link speed.

CPU 0 UPI Port 1

Aptio Setup Utility - Copyright (C) 2017 American Megatrends, Inc.	
Socket Configuration	
CPU 0 UPI Port 1	
Link Disable	[No]
UPI VNA Credit Overri	7f
Current UPI Link Spee	[Auto]
UPI Link Disable ---+--- Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit	
Version 2.19.1268. Copyright (C) 2017 American Megatrends, Inc.	

Link Disable

Enables or disables the UPI link.

Current UPI Link Speed

Configures the current UPI link speed.

CPU 0 UPI Port 2

Aptio Setup Utility - Copyright (C) 2017 American Megatrends, Inc.	
Socket Configuration	
CPU 0 UPI Port 2	
Link Disable	[No]
UPI VNA Credit Overri	7f
Current UPI Link Spee	[Auto]
UPI Link Disable ---+--- Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit	
Version 2.19.1268. Copyright (C) 2017 American Megatrends, Inc.	

Link Disable

Enables or disables the UPI link.

Current UPI Link Speed

Configures the current UPI link speed.

CPU 1 UPI Port 0

Aptio Setup Utility - Copyright (C) 2017 American Megatrends, Inc.	
Socket Configuration	
CPU 1 UPI Port 0	
Link Disable	[No]
UPI VNA Credit Overri	7f
Current UPI Link Spee	[Auto]
UPI Link Disable ---+--- Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit	
Version 2.19.1268. Copyright (C) 2017 American Megatrends, Inc.	

Link Disable

Enables or disables the UPI link.

Current UPI Link Speed

Configures the current UPI link speed.

CPU 1 UPI Port 1

Aptio Setup Utility - Copyright (C) 2017 American Megatrends, Inc.	
Socket Configuration	
CPU 1 UPI Port 1	
Link Disable	[No]
UPI VNA Credit Overri	7f
Current UPI Link Spee	[Auto]
UPI Link Disable ---+--- Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit	
Version 2.19.1268. Copyright (C) 2017 American Megatrends, Inc.	

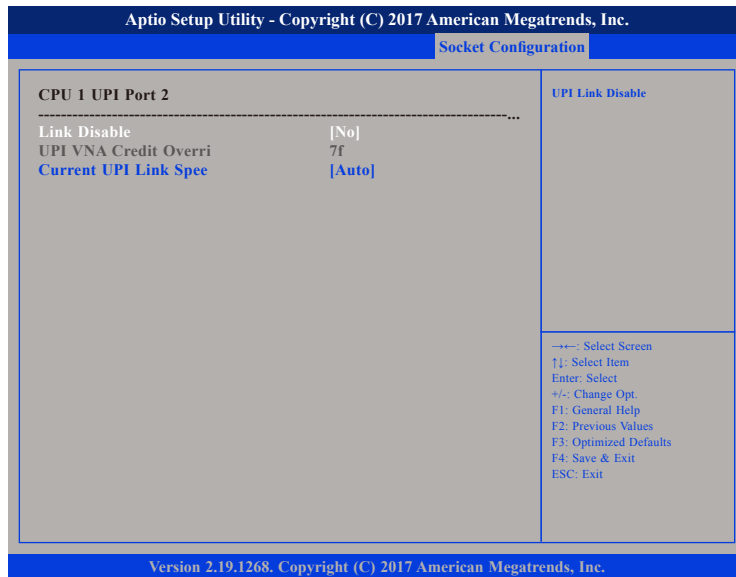
Link Disable

Enables or disables the UPI link.

Current UPI Link Speed

Configures the current UPI link speed.

CPU 1 UPI Port 2



Link Disable

Enables or disables the UPI link.

Current UPI Link Speed

Configures the current UPI link speed.

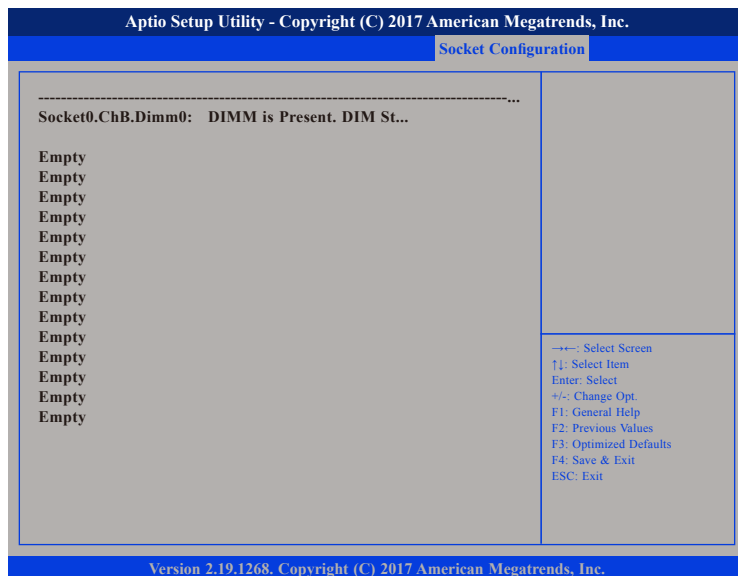
Memory Configuration



Memory Frequency

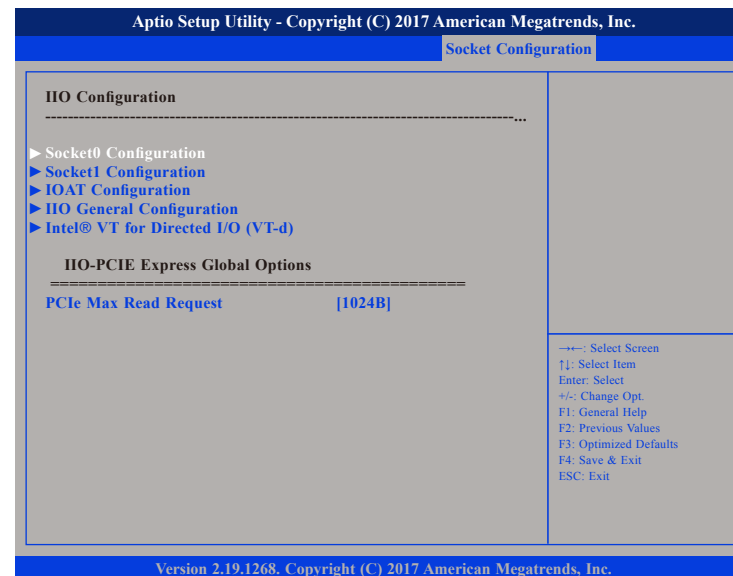
Configures the maximum frequency of the memory. Do not select Reserved.

Memory Topology



Detects and displays the information on the memory installed.

I/O Configuration



Socket0 Configuration and Socket1 Configuration

Enters the Socket0 and Socket1 Configuration submenu.

IOAT Configuration

Enters the IOAT Configuration submenu.

I/O General Configuration

Enters the I/O General Configuration submenu.

Intel® VT for Directed I/O (VT-d)

Enters the Intel® VT for Directed I/O (VT-d) submenu.

Socket0 Configuration

Aptio Setup Utility - Copyright (C) 2017 American Megatrends, Inc.		
Socket Configuration		
IOU0 (IIO PCIe Br1)	[Auto]	Selects PCIe port Bifurcation for selected slot(s)
IOU1 (IIO PCIe Br2)	[Auto]	
IOU2 (IIO PCIe Br3)	[Auto]	
▶ Socket 0 PCIeBr0D00F0 - Port 0/DMI		
▶ Socket 0 PCIeBr1D00F0 - Port 1A		
▶ Socket 0 PCIeBr1D02F0 - Port 1C		
▶ Socket 0 PCIeBr2D00F0 - Port 2A		
▶ Socket 0 PCIeBr2D02F0 - Port 2C		
▶ Socket 0 PCIeBr3D00F0 - Port 3A		
▶ Socket 0 PCIeBr3D02F0 - Port 3C		
IIO0 Redriver Control	[Auto Detect]	
		→←: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
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IOU0 (IIO PCIe Br1)

Port Bifurcation settings for IOU 0.

IOU1 (IIO PCIe Br2)

Port Bifurcation settings for IOU 1.

IOU2 (IIO PCIe Br3)

Port Bifurcation settings for IOU 2.

IIO0 Redriver Control

Configures the redriver options for IIO0.

Socket 0 PCIeBr0D00F0 - Port 0/DMI

Aptio Setup Utility - Copyright (C) 2017 American Megatrends, Inc.		
Socket Configuration		
Socket 0 PCIeBr0D00F0 - Port 0/DMI		Choose Link Speed for this PCIe port
Link Speed	[Auto]	
Override Max Link Wid	[Auto]	
PCI-E Port DeEmphasis	[-6.0 dB]	
PCI-E Port Link Statu	Linked as x4	
PCI-E Port Link Max	Max Width x4	
PCI-E Port Link Speed	Gen 3 (8.0 GT/s)	
PCI-E Port Max Payloa	[256B]	
		→←: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.19.1268. Copyright (C) 2017 American Megatrends, Inc.		

Link Speed

Configures the link speed for the PCIe port.

Override Max Link Width

Configures the link speed to override the max link width set by bifurcation.

PCI-E Port DeEmphasis

Configures the de-emphasis control for the PCIe port.

PCI-E Port Max Payload

Configures the PCIe port maximum payload size.

Socket 0 PcieBr1D00F0 - Port 1A

Aptio Setup Utility - Copyright (C) 2017 American Megatrends, Inc.

Socket Configuration

Socket 0 PcieBr1D00F0 - Port 1A

In auto mode the BIOS will remove the EXP port if there is no device or errors on that device and the device is not HP capable. Disable is used to disable the port and hide its CFG space.

PCI-E Port	[Enable]
Link Speed	[Auto]
Override Max Link Wid	[Auto]
PCI-E Port DeEmphasis	[-6.0 dB]
PCI-E Port Link Statu	Link Did Not Train
PCI-E Port Link Max	Max Width x8
PCI-E Port Link Speed	Link Did Not Train
PCI-E Port Max Payloa	[256B]

←→: Select Screen
↑↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit

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PCI-E Port

Enables or disables the PCIe port. In auto mode the BIOS will remove the EXP port if there is no device or errors on that device and the device is not HP capable. Disable is used to disable the port and hide its CFG space.

Link Speed

Configures the link speed for the PCIe port.

Override Max Link Width

Configures the link speed to override the max link width set by bifurcation.

PCI-E Port DeEmphasis

Configures the de-emphasis control for the PCIe port.

PCI-E Port Max Payload

Configures the PCIe port maximum payload size.

Socket 0 PcieBr1D02F0 - Port 1C

Aptio Setup Utility - Copyright (C) 2017 American Megatrends, Inc.

Socket Configuration

Socket 0 PcieBr1D02F0 - Port 1C

In auto mode the BIOS will remove the EXP port if there is no device or errors on that device and the device is not HP capable. Disable is used to disable the port and hide its CFG space.

PCI-E Port	[Enable]
Link Speed	[Auto]
Override Max Link Wid	[Auto]
PCI-E Port DeEmphasis	[-6.0 dB]
PCI-E Port Link Statu	Link Did Not Train
PCI-E Port Link Max	Max Width x8
PCI-E Port Link Speed	Link Did Not Train
PCI-E Port Max Payloa	[256B]

←→: Select Screen
↑↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit

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PCI-E Port

Enables or disables the PCIe port. In auto mode the BIOS will remove the EXP port if there is no device or errors on that device and the device is not HP capable. Disable is used to disable the port and hide its CFG space.

Link Speed

Configures the link speed for the PCIe port.

Override Max Link Width

Configures the link speed to override the max link width set by bifurcation.

PCI-E Port DeEmphasis

Configures the de-emphasis control for the PCIe port.

PCI-E Port Max Payload

Configures the PCIe port maximum payload size.

Socket 0 PcieBr2D00F0 - Port 2A

Aptio Setup Utility - Copyright (C) 2017 American Megatrends, Inc.

Socket Configuration

Socket 0 PcieBr2D00F0 - Port 2A

In auto mode the BIOS will remove the EXP port if there is no device or errors on that device and the device is not HP capable. Disable is used to disable the port and hide its CFG space.

PCI-E Port	[Enable]
Link Speed	[Auto]
Override Max Link Wid	[Auto]
PCI-E Port DeEmphasis	[-6.0 dB]
PCI-E Port Link Statu	Link Did Not Train
PCI-E Port Link Max	Max Width x8
PCI-E Port Link Speed	Link Did Not Train
PCI-E Port Max Payloa	[256B]

←→: Select Screen
↑↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit

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PCI-E Port

Enables or disables the PCIe port. In auto mode the BIOS will remove the EXP port if there is no device or errors on that device and the device is not HP capable. Disable is used to disable the port and hide its CFG space.

Link Speed

Configures the link speed for the PCIe port.

Override Max Link Width

Configures the link speed to override the max link width set by bifurcation.

PCI-E Port DeEmphasis

Configures the de-emphasis control for the PCIe port.

PCI-E Port Max Payload

Configures the PCIe port maximum payload size.

Socket 0 PcieBr2D02F0 - Port 2C

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Socket Configuration

Socket 0 PcieBr2D02F0 - Port 2C

In auto mode the BIOS will remove the EXP port if there is no device or errors on that device and the device is not HP capable. Disable is used to disable the port and hide its CFG space.

PCI-E Port	[Enable]
Link Speed	[Auto]
Override Max Link Wid	[Auto]
PCI-E Port DeEmphasis	[-6.0 dB]
PCI-E Port Link Statu	Link Did Not Train
PCI-E Port Link Max	Max Width x8
PCI-E Port Link Speed	Link Did Not Train
PCI-E Port Max Payloa	[256B]

←→: Select Screen
↑↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit

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PCI-E Port

Enables or disables the PCIe port. In auto mode the BIOS will remove the EXP port if there is no device or errors on that device and the device is not HP capable. Disable is used to disable the port and hide its CFG space.

Link Speed

Configures the link speed for the PCIe port.

Override Max Link Width

Configures the link speed to override the max link width set by bifurcation.

PCI-E Port DeEmphasis

Configures the de-emphasis control for the PCIe port.

PCI-E Port Max Payload

Configures the PCIe port maximum payload size.

Socket 0 PcieBr3D00F0 - Port 3A

Aptio Setup Utility - Copyright (C) 2017 American Megatrends, Inc.	
Socket Configuration	
Socket 0 PcieBr3D00F0 - Port 3A	
PCI-E Port Link Speed Override Max Link Wid PCI-E Port DeEmphasis PCI-E Port Link Statu PCI-E Port Link Max PCI-E Port Link Speed PCI-E Port Max Payloa	[Enable] [Auto] [Auto] [-6.0 dB] Linked as x1 Max Width x8 Gen 3 (8.0 GT/s) [256B]
In auto mode the BIOS will remove the EXP port if there is no device or errors on that device and the device is not HP capable. Disable is used to disable the port and hide its CFG space.	
→←: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit	
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PCI-E Port

Enables or disables the PCIe port. In auto mode the BIOS will remove the EXP port if there is no device or errors on that device and the device is not HP capable. Disable is used to disable the port and hide its CFG space.

Link Speed

Configures the link speed for the PCIe port.

Override Max Link Width

Configures the link speed to override the max link width set by bifurcation.

PCI-E Port DeEmphasis

Configures the de-emphasis control for the PCIe port.

PCI-E Port Max Payload

Configures the PCIe port maximum payload size.

Socket 0 PcieBr3D02F0 - Port 3C

Aptio Setup Utility - Copyright (C) 2017 American Megatrends, Inc.	
Socket Configuration	
Socket 0 PcieBr3D02F0 - Port 3C	
PCI-E Port Link Speed Override Max Link Wid PCI-E Port DeEmphasis PCI-E Port Link Statu PCI-E Port Link Max PCI-E Port Link Speed PCI-E Port Max Payloa	[Enable] [Auto] [Auto] [-6.0 dB] Link Did Not Train Max Width x8 Link Did Not Train [256B]
In auto mode the BIOS will remove the EXP port if there is no device or errors on that device and the device is not HP capable. Disable is used to disable the port and hide its CFG space.	
→←: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit	
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PCI-E Port

Enables or disables the PCIe port. In auto mode the BIOS will remove the EXP port if there is no device or errors on that device and the device is not HP capable. Disable is used to disable the port and hide its CFG space.

Link Speed

Configures the link speed for the PCIe port.

Override Max Link Width

Configures the link speed to override the max link width set by bifurcation.

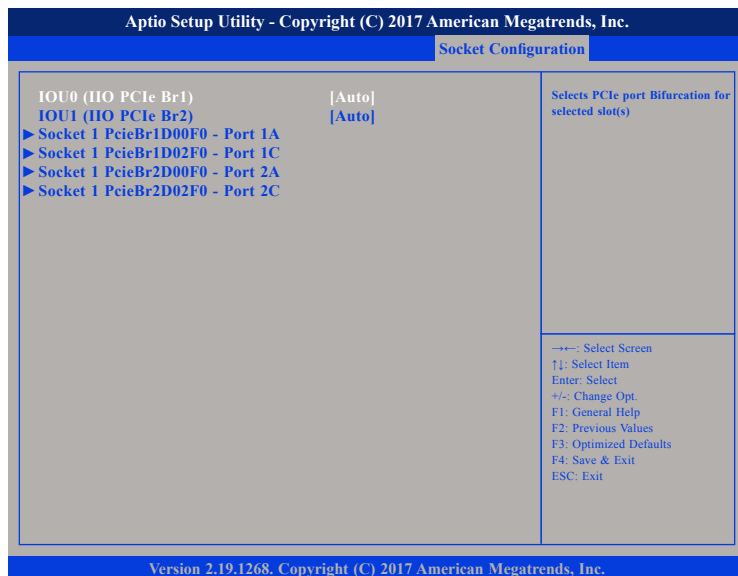
PCI-E Port DeEmphasis

Configures the de-emphasis control for the PCIe port.

PCI-E Port Max Payload

Configures the PCIe port maximum payload size.

Socket1 Configuration



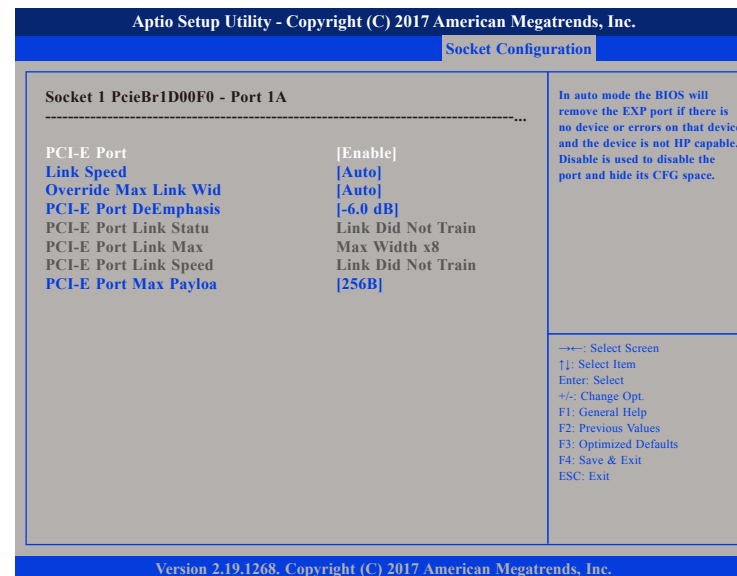
IOU0 (IIO PCIe Br1)

Port Bifurcation settings for IOU 0.

IOU1 (IIO PCIe Br2)

Port Bifurcation settings for IOU 1.

Socket 1 PCIe Br1D00F0 - Port 1A



PCI-E Port

Enables or disables the PCIe port. In auto mode the BIOS will remove the EXP port if there is no device or errors on that device and the device is not HP capable. Disable is used to disable the port and hide its CFG space.

Link Speed

Configures the link speed for the PCIe port.

Override Max Link Width

Configures the link speed to override the max link width set by bifurcation.

PCI-E Port DeEmphasis

Configures the de-emphasis control for the PCIe port.

PCI-E Port Max Payload

Configures the PCIe port maximum payload size.

Socket 1 PcieBr1D02F0 - Port 1C

Aptio Setup Utility - Copyright (C) 2017 American Megatrends, Inc.	
Socket Configuration	
Socket 1 PcieBr1D02F0 - Port 1C	
PCI-E Port Link Speed Override Max Link Wid PCI-E Port DeEmphasis PCI-E Port Link Statu PCI-E Port Link Max PCI-E Port Link Speed PCI-E Port Max Payloa	[Enable] [Auto] [Auto] [-6.0 dB] Link Did Not Train Max Width x8 Link Did Not Train [256B]
In auto mode the BIOS will remove the EXP port if there is no device or errors on that device and the device is not HP capable. Disable is used to disable the port and hide its CFG space.	
--- Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit	
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PCI-E Port

Enables or disables the PCIe port. In auto mode the BIOS will remove the EXP port if there is no device or errors on that device and the device is not HP capable. Disable is used to disable the port and hide its CFG space.

Link Speed

Configures the link speed for the PCIe port.

Override Max Link Width

Configures the link speed to override the max link width set by bifurcation.

PCI-E Port DeEmphasis

Configures the de-emphasis control for the PCIe port.

PCI-E Port Max Payload

Configures the PCIe port maximum payload size.

Socket 1 PcieBr2D00F0 - Port 2A

Aptio Setup Utility - Copyright (C) 2017 American Megatrends, Inc.	
Socket Configuration	
Socket 1 PcieBr2D00F0 - Port 2A	
PCI-E Port Link Speed Override Max Link Wid PCI-E Port DeEmphasis PCI-E Port Link Statu PCI-E Port Link Max PCI-E Port Link Speed PCI-E Port Max Payloa	[Enable] [Auto] [Auto] [-6.0 dB] Link Did Not Train Max Width x8 Link Did Not Train [256B]
In auto mode the BIOS will remove the EXP port if there is no device or errors on that device and the device is not HP capable. Disable is used to disable the port and hide its CFG space.	
--- Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit	
Version 2.19.1268. Copyright (C) 2017 American Megatrends, Inc.	

PCI-E Port

Enables or disables the PCIe port. In auto mode the BIOS will remove the EXP port if there is no device or errors on that device and the device is not HP capable. Disable is used to disable the port and hide its CFG space.

Link Speed

Configures the link speed for the PCIe port.

Override Max Link Width

Configures the link speed to override the max link width set by bifurcation.

PCI-E Port DeEmphasis

Configures the de-emphasis control for the PCIe port.

PCI-E Port Max Payload

Configures the PCIe port maximum payload size.

Socket 1 PcieBr2D02F0 - Port 2C



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Socket Configuration

Socket 1 PcieBr2D02F0 - Port 2C

PCI-E Port	[Enable]
Link Speed	[Auto]
Override Max Link Wid	[Auto]
PCI-E Port DeEmphasis	[-6.0 dB]
PCI-E Port Link Statu	Link Did Not Train
PCI-E Port Link Max	Max Width x8
PCI-E Port Link Speed	Link Did Not Train
PCI-E Port Max Payloa	[256B]

In auto mode the BIOS will remove the EXP port if there is no device or errors on that device and the device is not HP capable. Disable is used to disable the port and hide its CFG space.

→←: Select Screen
↑↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit

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PCI-E Port

Enables or disables the PCIe port. In auto mode the BIOS will remove the EXP port if there is no device or errors on that device and the device is not HP capable. Disable is used to disable the port and hide its CFG space.

Link Speed

Configures the link speed for the PCIe port.

Override Max Link Width

Configures the link speed to override the max link width set by bifurcation.

PCI-E Port DeEmphasis

Configures the de-emphasis control for the PCIe port.

PCI-E Port Max Payload

Configures the PCIe port maximum payload size.

IIO Configuration



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Socket Configuration

▶ Sck0 IOAT Config
▶ Sck1 IOAT Config

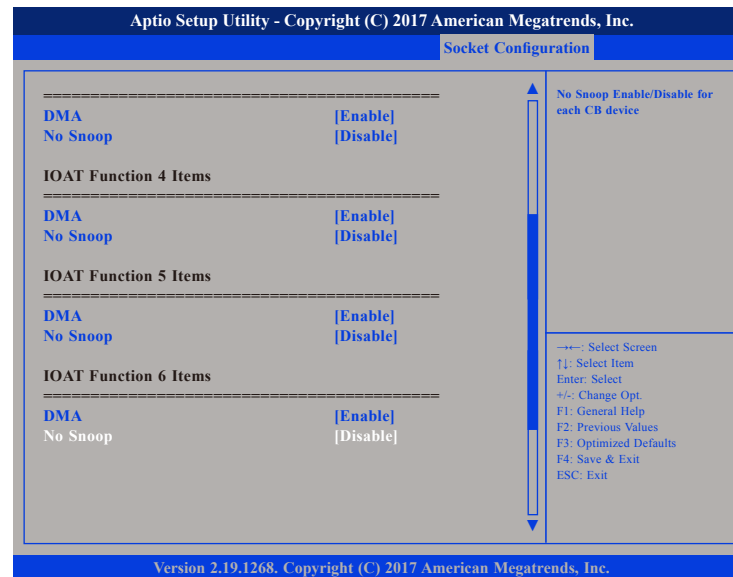
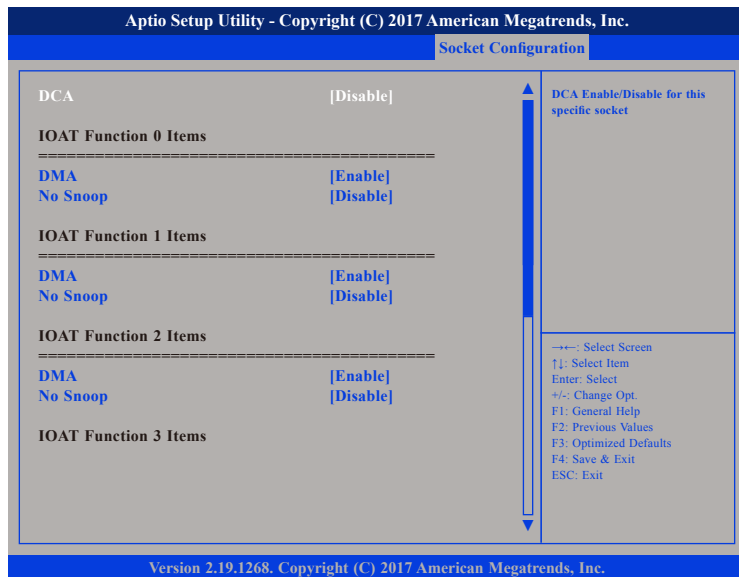
→←: Select Screen
↑↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit

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Sck0 IOAT Config and Sck1 IOAT Config

Enters the Socket0 and Socket1 IOAT Configuration submenu.

Sck0 IOAT Config

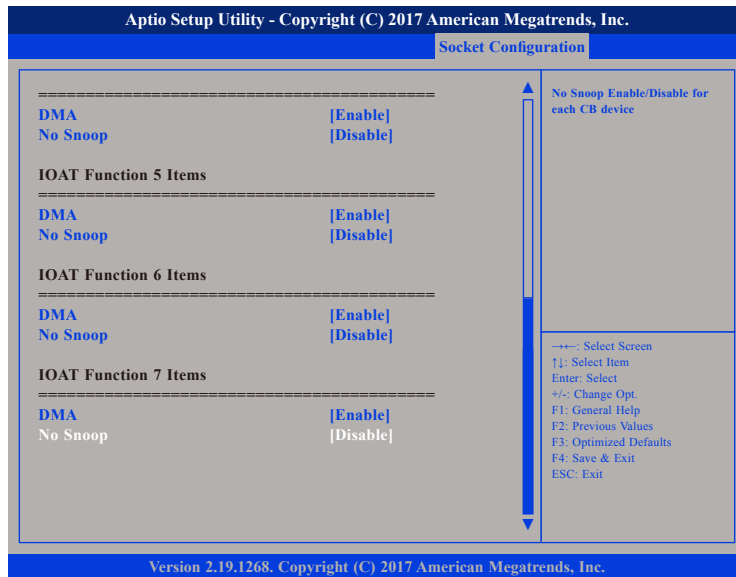


DCA
Enables or disables DCA for this specific socket.

DMA
Enables or disables DMA.

No Snoop
Enables or disables No Snoop function for each CB device.

Sck0 IOAT Config Cont.

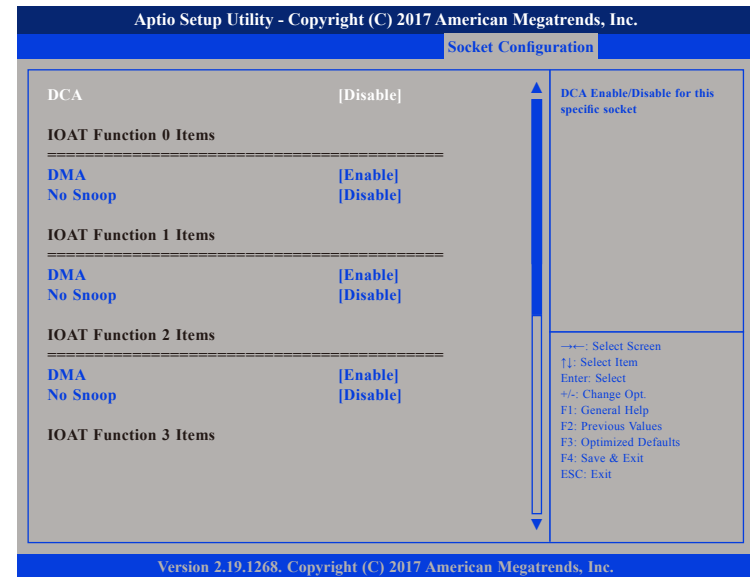


DCA
Enables or disables DCA for this specific socket.

DMA
Enables or disables DMA.

No Snoop
Enables or disables No Snoop function for each CB device.

Sck1 IOAT Config

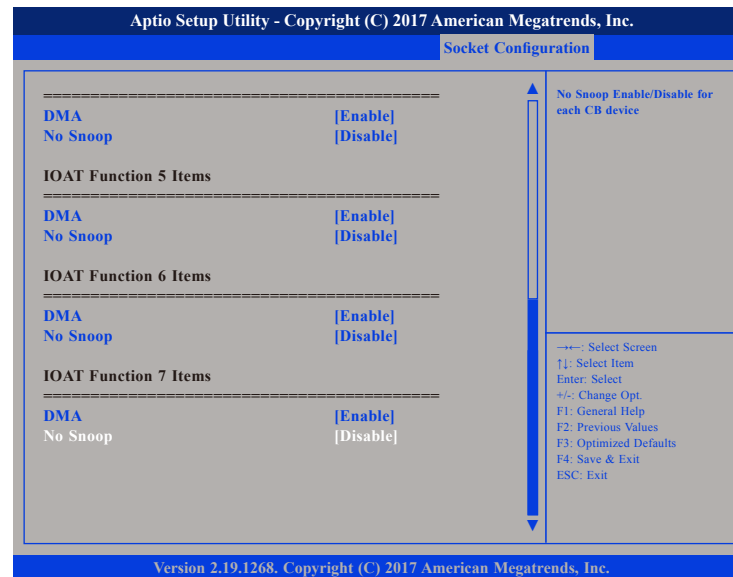
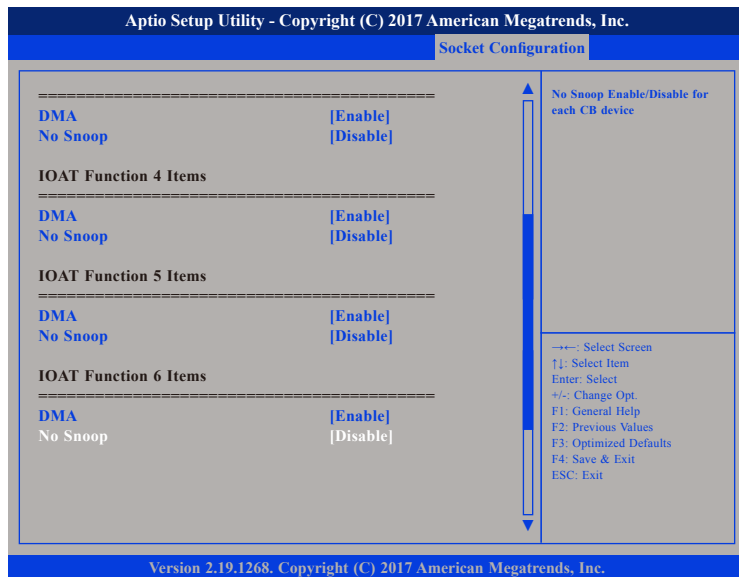


DCA
Enables or disables DCA for this specific socket.

DMA
Enables or disables DMA.

No Snoop
Enables or disables No Snoop function for each CB device.

Sck1 IOAT Config Cont.

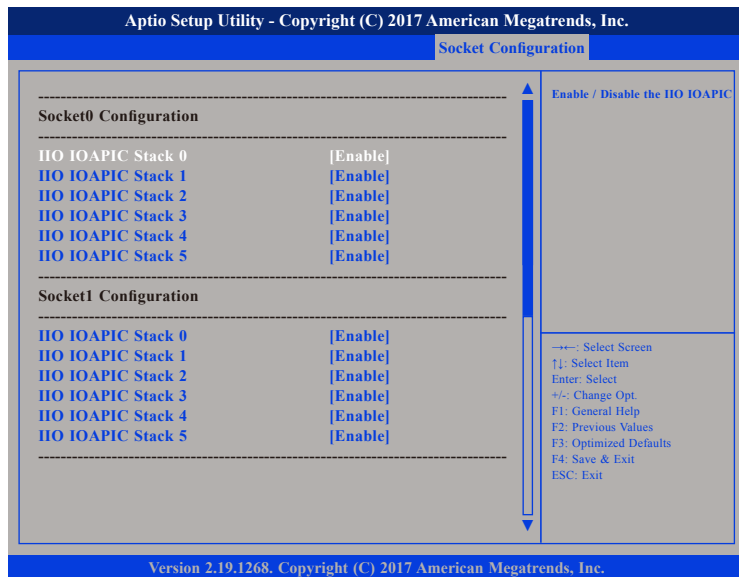


DCA
Enables or disables DCA for this specific socket.

DMA
Enables or disables DMA.

No Snoop
Enables or disables No Snoop function for each CB device.

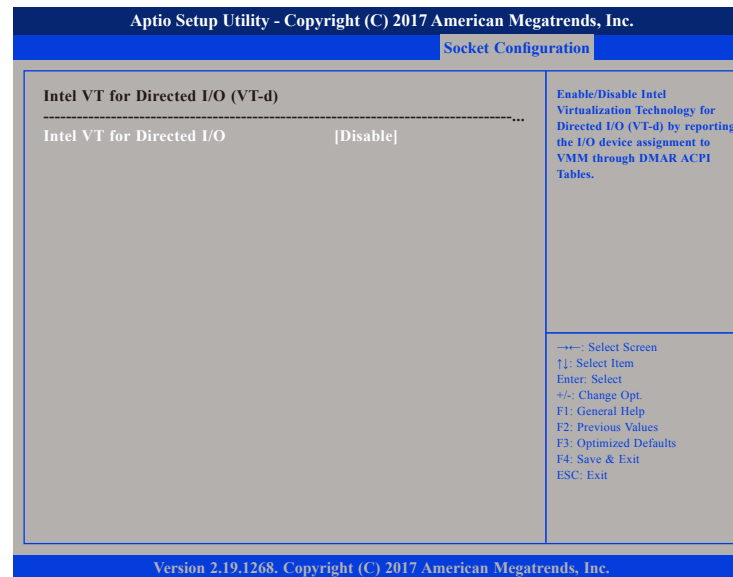
Sck1 IOAT Config



IIO IOAPIC Stack 0 to IIO IOAPIC Stack 5

Enables or disables I/O Advanced Power Interface Configuration (IIOAPIC) for Stack 0 to Stack 5 of Socket 0 and Socket 1.

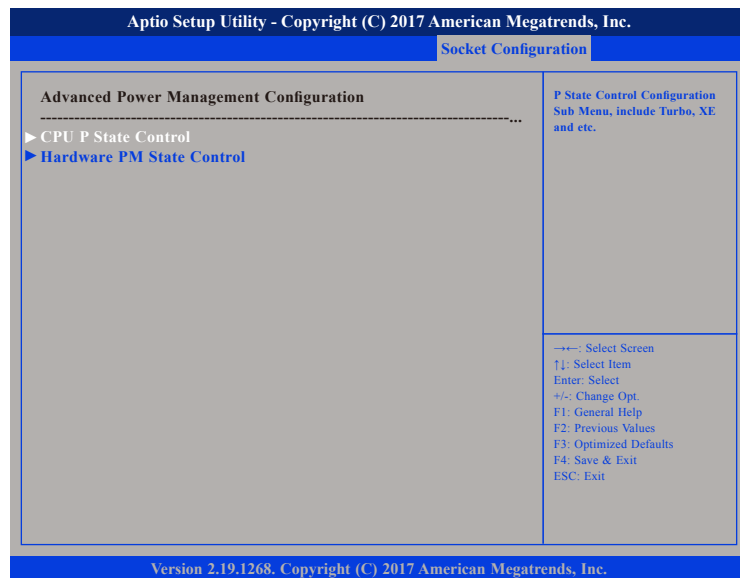
Intel® VT for Directed I/O (VT-d)



Intel VT for Directed I/O

Enables or disables Intel® Virtualization Technology for Directed I/O (VT-d) by reporting the I/O device assignment to VMM through DMAR ACPI tables.

Advanced Power Management Configuration



CPU P State Control

Enters the CPU P State Control submenu.

Hardware PM State Control

Enters the Hardware PM State Control submenu.

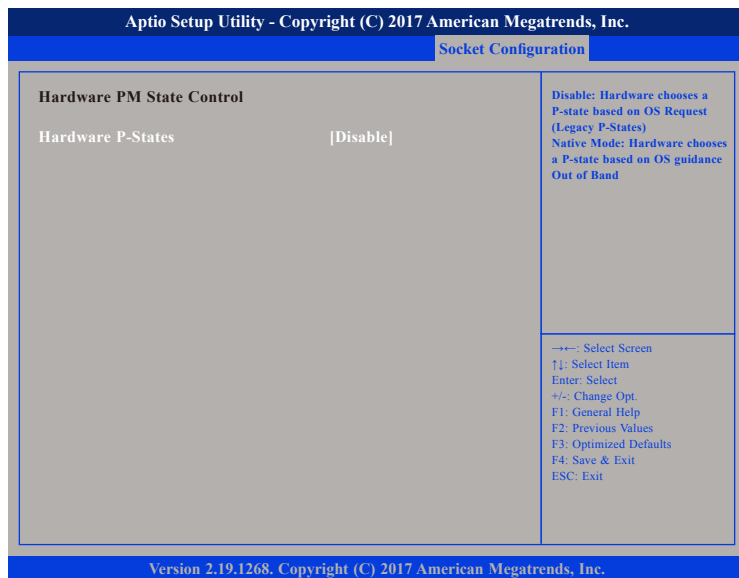
CPU P State Control



SpeedStep (Pstates)

Enables or disables Intel® SpeedStep technology.

Hardware PM State Control



Hardware P-States

- Disable Hardware chooses a P-state based on OS Request. (Legacy P-States).
- Native Mode Hardware chooses a P-state based on OS guidance.
- Out of Band Mode Hardware autonomously chooses a P-state (no OS guidance).

Server Mgmt



BMC Support

Enables or disables interfaces to communicate with BMC.

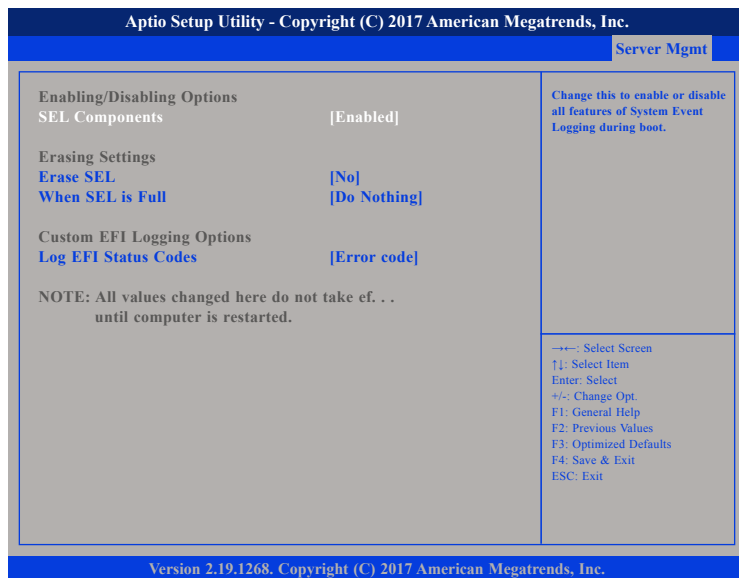
RJ45 Console Port

Configures the RJ45 console port mode.

BMC Warm Reset

To perform a BMC warm reset, select this field then press <Enter>.

System Event Log



SEL Components

Enables or disables all the features of system event logging during boot.

Erase SEL

Configures the options for erasing SEL.

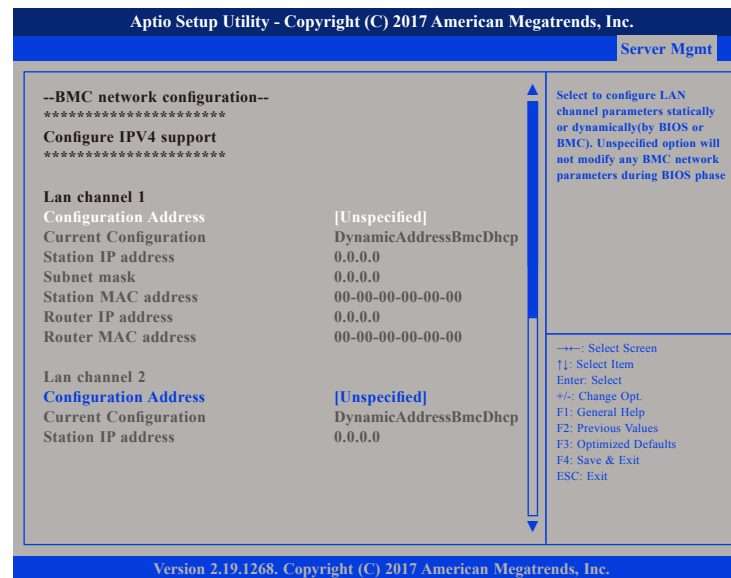
When SEL is Full

Configures the action to perform when SEL is full.

Log EFI Status Codes

Configures the options for logging EFI status codes.

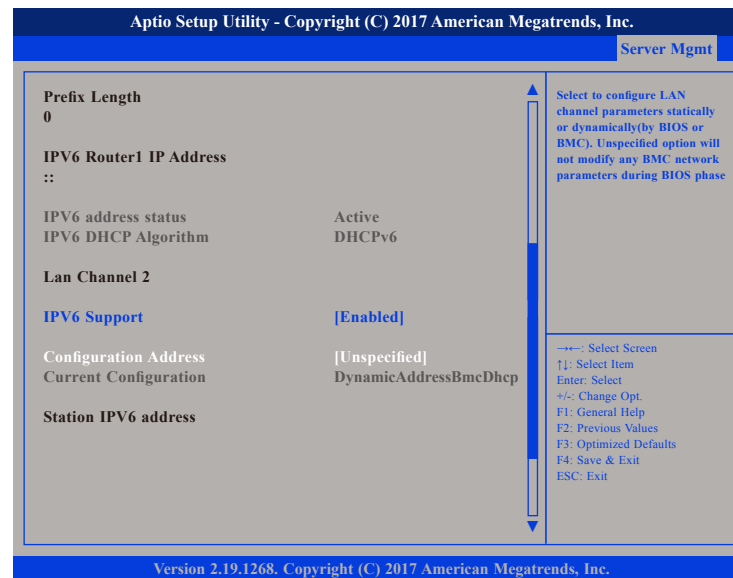
BMC Network Configuration



Configuration Address

Select to configure LAN channel parameters statically or dynamically (by BIOS or BMC). Unspecified option will not modify any BMC network parameters during BIOS phase.

BMC Network Configuration Cont.



IPv6 Support (LAN Channel 1)

Enables or disables IPv6 support for LAN channel 1.

BMC Network Configuration Cont.



IPV6 Support (LAN Channel 2)

Enables or disables IPv6 support for LAN channel 2.

BMC User Settings



Add User

Option to add a user.

Delete User

Option to delete a user.

Change User Settings

Option to change user settings.

Add User

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Server Mgmt	
BMC Add User Details User Name User Password Channel No 0 User Privilege Limit [Reserved]	Enter BMC User Name →←: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.19.1268. Copyright (C) 2017 American Megatrends, Inc.	

User Name and User Password

Configures the login username and password of the BMC user account.

Channel No and User Privilege Limit

Configures the BMC channel number and account access rights.

Delete User

Aptio Setup Utility - Copyright (C) 2017 American Megatrends, Inc.	
Server Mgmt	
BMC Delete User Details User Name User Password	Enter BMC User Name →←: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.19.1268. Copyright (C) 2017 American Megatrends, Inc.	

User Name and User Password

Specify the login username and password of the BMC user account to delete.

Change User Setting

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Server Mgmt	
BMC Change User Settings	Enter BMC User Name
User Name	
User Password	
User	[Disable]
Change User Password	
Channel No	0
User Privilege Limit	[Reserved]
	→←: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
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User Name and User Password

Enter the login username and password of the BMC user account that needs to be changed.

User

Enables or disables this account.

Change User Password

Reconfigures a new password for the account.

Channel No and User Privilege Limit

Reconfigures the BMC channel number and account access rights.

Security

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Security	Boot Save & Exit
Password Description	Set Administrator Password
<p>If ONLY the Administrator's password is set, then this only limits access to Setup and is only asked for when entering Setup. The password length must be in the following range:</p> <p>Minimum length 3</p> <p>Maximum length 20</p> <p>Administrator Password</p>	
	→←: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
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Administrator Password

Select this to reconfigure the administrator's password.

Boot

Aptio Setup Utility - Copyright (C) 2017 American Megatrends, Inc.		
Security	Boot	Save & Exit
Boot Configuration		
Setup Prompt Timeout	[1]	Number of seconds to wait for setup activation key. 65535(0xFFFF) means indefinite waiting.
Bootup NumLock State	[On]	
Quiet Boot	[Disabled]	
AMI Virtual Devices		
AMI Virtual Devices	[Disabled]	
Boot mode select	[LEGACY]	
FIXED BOOT ORDER Priorities		
Boot Option #1	[Hard Disk]	→←: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Boot Option #2	[CD/DVD]	
Boot Option #3	[USB Hard Disk]	
Boot Option #4	[USB CD/DVD]	
Boot Option #5	[USB Key:KingstonDat...]	
Boot Option #6	[USB Floppy]	
Boot Option #7	[USB Lan]	
Boot Option #8	[Network]	
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Setup Prompt Timeout

Configures the number of seconds to wait for setup activation key. 65535 (0xFFFF) means indefinite waiting.

Bootup NumLock State

This allows you to determine the default state of the numeric keypad. By default, the system boots up with NumLock on wherein the function of the numeric keypad is the number keys. When set to Off, the function of the numeric keypad is the arrow keys.

Quiet Boot

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

AMI Virtual Devices

Enables or disables AMI virtual devices.

Boot Mode Select

Configures the boot mode option.

Fixed Boot Order 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.

Save & Exit



Save Changes and Reset

To save the changes and reset, select this field then press <Enter>. A dialog box will appear. Confirm by selecting Yes.

Discard Changes and Reset

To exit the Setup utility and reset without saving the changes, select this field then press <Enter>. You may be prompted to confirm again before exiting.

Restore Defaults

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

Launch EFI Shell from Filesystem Device

To launch EFI shell from a filesystem device, select this field and press <Enter>.