NEXCOM International Co., Ltd.

Intelligent Platform & Services Business Unit

Digital Signage Platform

NDiS V1000

User Manual

NEXCOM International Co., Ltd.
Published May 2020

www.nexcom.com

Contents

Preface

Chapter 1: Product Introduction

Chapter 2: Jumpers and Connectors

Chapter 3: System Setup

Chapter 4: BIOS Setup

PREFACE

Copyright

Disclaimer

The information in this document is subject to change without prior notice and does not represent commitment from NEXCOM International Co., Ltd. However, users may update their knowledge of any product in use by constantly checking its manual posted on our website: http://www.nexcom.com. NEXCOM shall not be liable for direct, indirect, special, incidental, or consequential damages arising out of the use of any product, nor for any infringements upon the rights of third parties, which may result from such use. Any implied warranties of merchantability or fitness for any particular purpose is also disclaimed.

Acknowledgements

NDiS V1000 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 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.

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.

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. The unit is intended only for use in a RESTRICTED ACCESS AREA for Standard 60950-1 used only.

18. ATTENTION: Risque d'explosion si la batterie est remplacée par un type incorrect. Mettre au rebus les batteries usagées selon les instructions.

    CAUTION: Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

19. The instructions shall require connection of the equipment protective earthing conductor to the installation protective earthing conductor (for example, by means of a power cord connected to a socket-outlet with earthing connection).

20. This product is intended to be supplied by a Listed (Certificate) power adapter, rated 12Vdc minimum, 10A minimum Tma 45 degree C minimum and altitude 2000m, if further assistance is needed, please contact NEXCOM International Co., Ltd. further information.

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.

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 NDiS V1000 package that you received is complete. Your package should have all the items listed in the following table.

Item	Part Number	Description	Qty
1	6013301292X00	EPE	2
2	60111A0499X00	Inner Box	1
3	6012200062X00	PE Zipper Bag	1
4	6012200052X00	PE Zipper Bag No. 8	1
5	7400120025X00	Power Adapter	1
6	602DCD1631X00	Manual Driver DVD	1

Ordering Information

The following below provides ordering information for NDiS V1000.

NDiS V1000 (P/N: 10W00100000X4)
AMD V1605B Quad Processor Multi-Display Embedded Computer

Chapter 1: Product Introduction

NDiS V1000

Overview

Key Features

- Onboard AMD V1605B APU processor
- Graphics operating at up to 1.1 GHz
- Dual DDR4 SO-DIMM, up to 32G
- Support 4 x HDMI 2.0 for video wall application
- Support M.2 M Key, 2280/2242 size storage device
- 4 x USB 3.0 support
- M.2 E key slot for optional Wi-Fi module
- 1 x Onboard TPM 2.0 IC

Hardware Specifications

CPU Support
- AMD Ryzen™ Embedded V1605B, TDP 15W

Graphics
- AMD Radeon™ Vega 8

Main Memory
- 2 x 260-pin SO-DIMM socket, support up to DDR4 2400/2666MHz, non-ECC, un-buffered memory up to 32GB

I/O Interface-Front
- 1 x Storage active LED
- 1 x Power button
- 1 x COM (support RS232/422/485)

I/O Interface-Rear
- 2 x Antenna holes
- 4 x USB 3.0
- 4 x HDMI 2.0 with resolution up to 4096 x 2160 @ 60Hz
- 2 x RJ45 with LEDs for Gigabit LAN (Intel® I211-AT)
- 1 x +12V DC-in Jack (4-pin)
- 1 x Audio line-out

Internal I/O
- 3 x RS232 via box header
- 2 x USB 2.0 pin header
- GPIO connector

Expansion
- 1 x M.2 E key 2230, support optional Wi-Fi module

Storage
- 1 x M.2 M key 2242/2280 optional SATA 3.0 SSD

Power Supply
- 1 x External 12+/-5% VDC, 120W input, DC jack connector 4-pin

Environment
- Operating temperature: 0°C to 40°C
- Storage temperature: -20°C to 80°C
- Humidity: 95% (non-condensing)

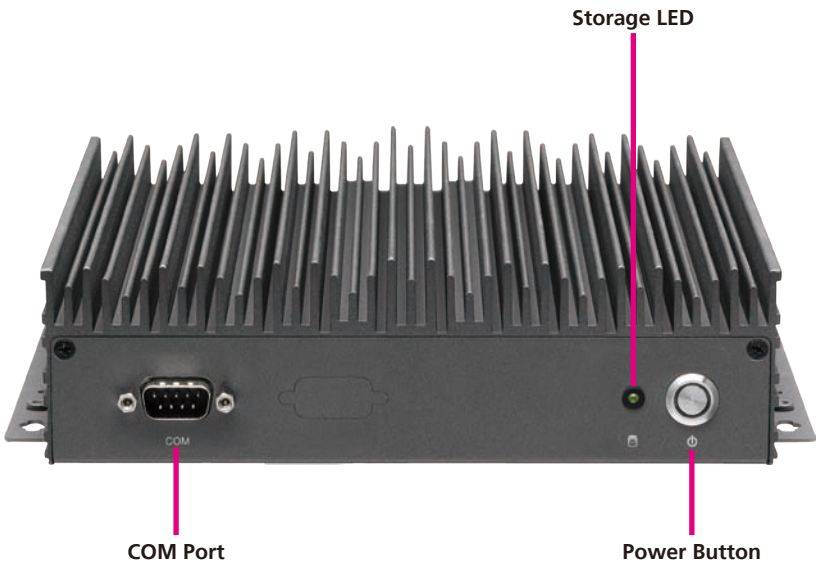
Certification
- CE (EMC EN55032 + EN55024)
- FCC Class A (EMI part 15B)
- LVD

Dimensions
- 190mm (L) x 200mm (W) x 54.4mm (H)

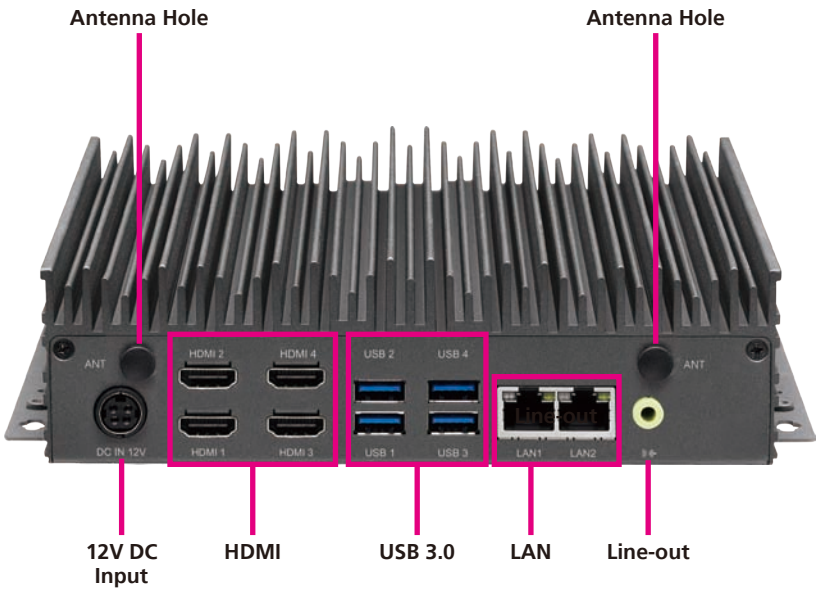
Operating System Support
- Windows 10 64-bit/Linux 4.1

Physical Features

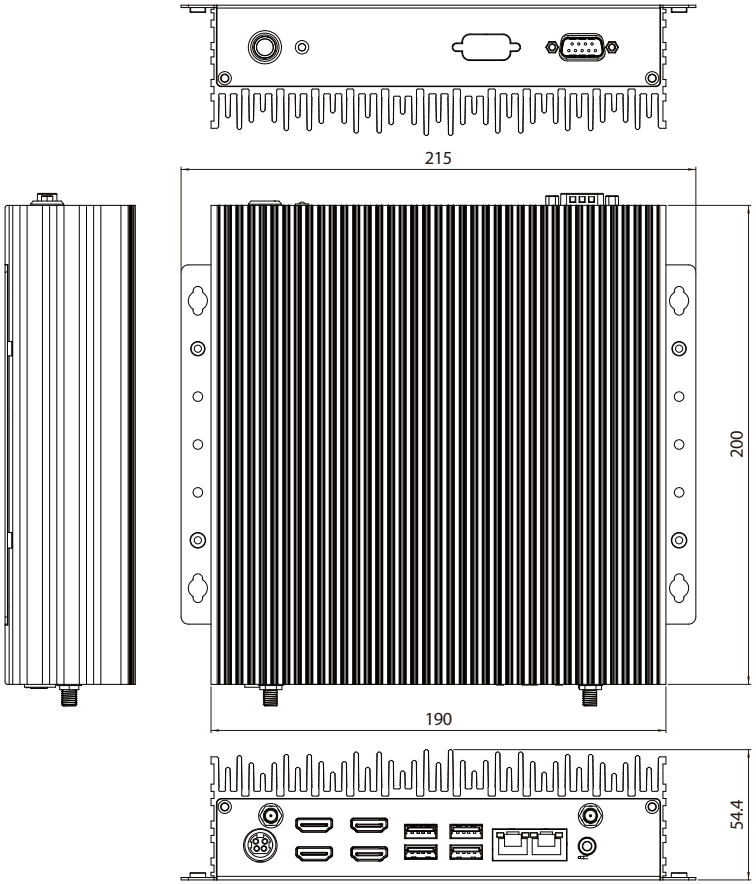
Front Panel



Rear Panel



Mechanical Dimensions



Chapter 2: Jumpers and Connectors

This chapter describes how to set the jumpers and connectors on the NDiS V1000 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:

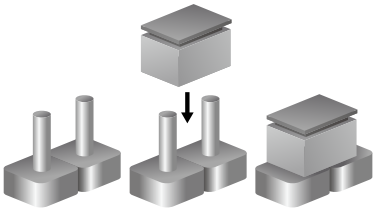
- Always disconnect the unit from the power outlet whenever you are working inside the case.
- If possible, wear a grounded wrist strap when you are working inside the computer case. Alternatively, discharge any static electricity by touching the bare metal chassis of the unit case, or the bare metal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

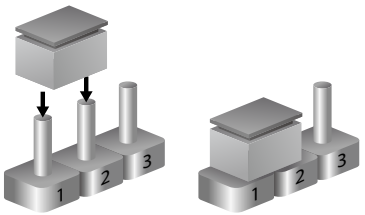
A jumper is the simplest kind of electric switch. It consists of two metal pins and a cap. When setting the jumpers, ensure that the jumper caps are placed on the correct pins. When the jumper cap is placed on both pins, the jumper is short. If you remove the jumper cap, or place the jumper cap on just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

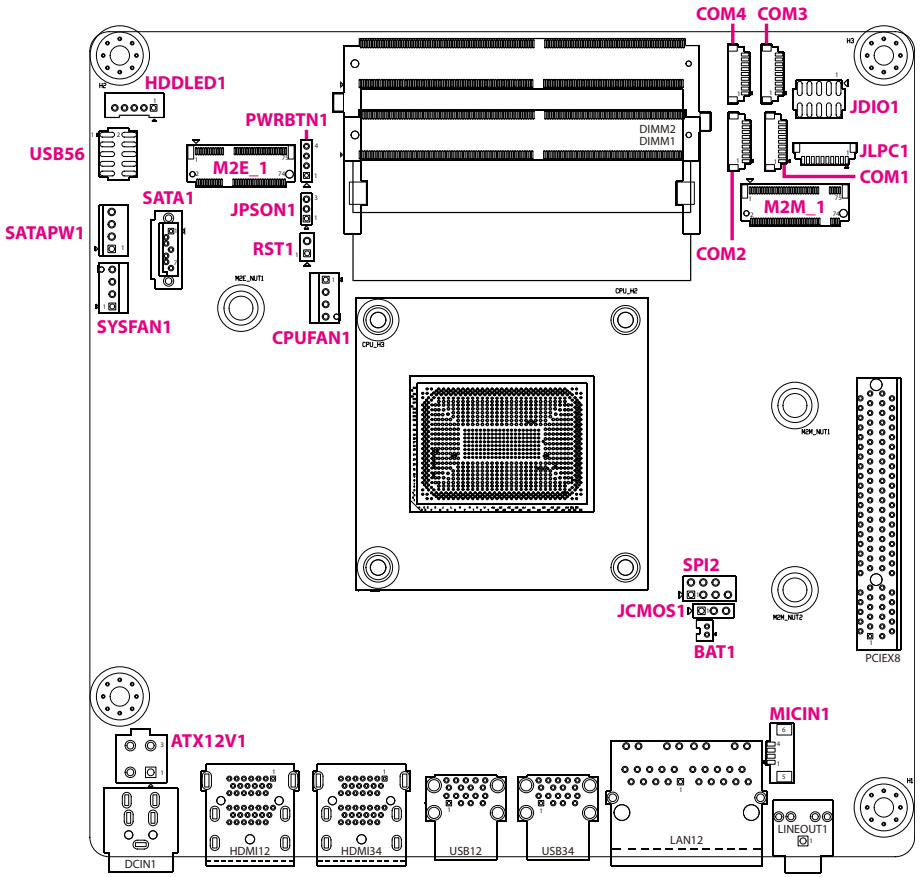


Three-Pin Jumpers: Pins 1 and 2 are Short



Locations of the Jumpers and Connectors

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



Jumpers

AT/ATX Power Type Selection

Connector type: 1x3 3-pin header
Connector location: JPSON1

Pin	Settings
1-2 On	ATX Mode (Default)
2-3 On	AT Mode

Pin	Definition
1	PANSWIN#_ATX
2	PANSWIN# (APU)
3	N110716305 (AT mode)

Clear CMOS

Connector type: 1x3 3-pin header
Connector location: JCMOS1

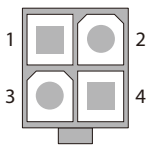
Pin	Settings
1-2 On	Normal (Default)
2-3 On	CMOS Clear

Pin	Definition
1	+VBAT_VOUT
2	+VDDBT_RTC_R
3	GND

Internal Connectors

4-pin ATX Power Connector

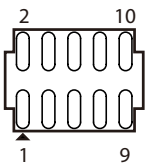
Connector type: 2x2 Aux power connector
Connector location: ATX12V1



Pin	Definition
1	GND
2	GND
3	Power
4	Power

USB 2.0 Header

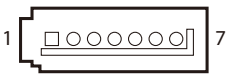
Connector type: 2x5 5-pin header
Connector location: USB56



Pin	Definition	Pin	Definition
1	+5VSB	2	GND
3	USB-	4	GND
5	USB+	6	USB+
7	GND	8	USB-
9	GND	10	+5VSB

SATA 3.0 Connector

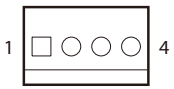
Connector type: Standard Serial ATA 7P (1.27mm, SATA-M-180)
Connector location: SATA1



Pin	Definition	Pin	Definition
1	GND	2	SATA_TX_C_P1
3	SATA_TX_C_N1	4	GND
5	SATA_RX_C_N1	6	SATA_RX_C_P1
7	GND		

SATA Power Connector

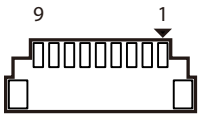
Connector type: 1x4 4-pin header
Connector location: SATAPW1



Pin	Definition
1	+12V
2	GND
3	GND
4	+5V

Serial COM Port Connectors

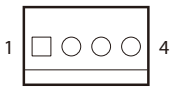
Connector type: 1x9 9-pin header
Connector location: COM1, COM2, COM3 and COM4



Pin	Definition	Pin	Definition
1	DCD#	2	RXD
3	TXD	4	DTR#
5	GND	6	DSR#
7	RTS#	8	CTS#
9	RI#		

CPU Fan Connector

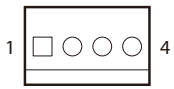
Connector type: 1x4 4-pin header
Connector location: CPUFAN1



Pin	Definition
1	GND
2	CPU_FAN_PWR
3	CPU_FAN_PWMIN
4	CPU_FAN_PWMOUT

System Fan Connector

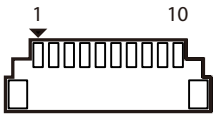
Connector type: 1x4 4-pin header
Connector location: SYSFAN1



Pin	Definition
1	GND
2	SYS_FAN_PWR
3	SYS_FAN_PWMIN
4	SYS_FAN_PWMOUT

LPC Debug Connector

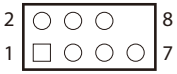
Connector type: 1x9 9-pin header
Connector location: JLPC1



Pin	Definition	Pin	Definition
1	GND	2	LPC_RST#
3	CK_33M_LPC	4	LPC_FRAME#
5	LPC_AD3	6	LPC_AD2
7	LPC_AD1	8	LPC_AD0
9	LPC_SERIRQ	10	+3.3V

SPI Header

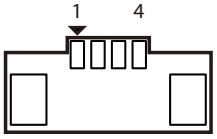
Connector type: 2x4 8-pin header
Connector location: SPI2



Pin	Definition	Pin	Definition
1	+3.3VSB	2	GND
3	CS1#	4	CLK
5	MISO	6	MOSI
7	HOLD#		

Mic-in Header

Connector type: 1x4 4-pin header
Connector location: MICIN1



Pin	Definition
1	MIC1L
2	AGND
3	MIC1-JD
4	MIC1R

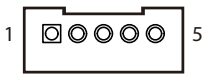
Power Button Header

Connector type: 1x4 4-pin header
Connector location: PWRBTN1

Pin	Definition
1	SUS_LED+
2	SUS_LED-
3	PWRBTN_IN#
4	GND

HDD LED Header

Connector type: 1x5 5-pin header
Connector location: HDDLED1



Pin	Definition	Pin	Definition
1	SATALED-	2	HDDLED+
3	NC	4	NC
5	NC		

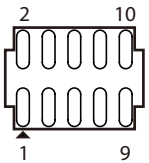
Battery Connector

Connector type: 1x2 2-pin header
Connector location: BAT1

Pin	Definition
1	+VBAT
2	GND

DI/DO Connector

Connector type: 2x5 5-pin header
Connector location: JDIO1



Pin	Definition	Pin	Definition
1	+5V	2	GND
3	SIO_IN0	4	SIO_OUT0
5	SIO_IN1	6	SIO_OUT1
7	SIO_IN2	8	SIO_OUT2
9	SIO_IN3	10	SIO_OUT3

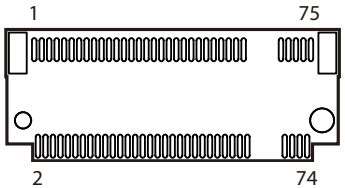
System Reset

Connector type: 1x2 2-pin header
Connector location: RST1

Pin	Definition
1	GND
2	System Reset

M.2 Connector (M-key)

Connector location: M2M_1

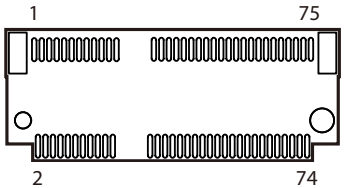


Pin	Definition	Pin	Definition
1	GND	2	3p3V_1
3	GND	4	3p3V_2
5	NC	6	NC
7	NC	8	NC
9	GND	10	M2_LED#
11	NC	12	3p3V_3
13	NC	14	3p3V_4
15	GND	16	3p3V_5
17	NC	18	3p3V_6
19	NC	20	NC
21	GND	22	NC
23	NC	24	NC
25	NC	26	NC
27	GND	28	NC
29	PCIE_M2_RX_N2	30	NC
31	PCIE_M2_RX_P2	32	NC
33	GND	34	NC
35	PCIE_M2_TX_C_N2	36	NC

Pin	Definition	Pin	Definition
37	PCIE_M2_TX_C_P2	38	TP13
39	GND	40	NC
41	SATA_PE_RX_N0	42	NC
43	SATA_PE_RX_P0	44	TP14
45	GND	46	NC
47	SATA_PE_TX_N0	48	NC
49	SATA_PE_TX_P0	50	PERST_M2#
51	GND	52	M2_CLKREQ#
53	CK_100M_M2_N	54	PCIE_WAKE#
55	CK_100M_M2_P	56	NC
57	GND	58	NC
Mechanical Key (Key M)			
67	NC	68	M2_SUSCLK
69	M2_SSD_PEDET	70	3p3V_7
71	GND	72	3p3V_8
73	GND	74	3p3V_9
75	GND		

M.2 Connector (E-key)

Connector location: M2E_1



Pin	Definition	Pin	Definition
1	GND	2	3p3V_1
3	USB+	4	3p3V_2
5	USB-	6	NC
7	GND	8	NC
9	NC	10	NC
11	NC	12	NC
13	NC	14	NC
15	NC	16	NC
17	NC	18	GND
19	NC	20	NC
21	NC	22	NC
23	NC		
Mechanical Key (Key E)			
		32	NC
33	GND	34	NC
35	PCIE_M2_TX_C_P3	36	NC
37	PCIE_M2_TX_C_N3	38	NC
39	GND	40	NC

Pin	Definition	Pin	Definition
41	PCIE_M2_RX_C_P3	42	NC
43	PCIE_M2_RX_C_N3	44	NC
45	GND	46	NC
47	CK_100M_M2_E_P	48	NC
49	CK_100M_M2_E_N	50	M2_SUSCLK
51	GND	52	PLTRST_M2E#
53	M2_E_CLKREQ#	54	M2E_WDISABLE2
55	PCIE_WAKE#	56	M2E_WDISABLE1
57	GND	58	NC
59	NC	60	NC
61	NC	62	NC
63	GND	64	NC
65	NC	66	NC
67	NC	68	NC
69	GND	70	NC
71	NC	72	3p3V_3
73	NC	74	3p3V_4
75	GND		

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, front and rear sides are used to secure the cover to the chassis. Remove these screws and put them in a safe place for later use.

Bottom

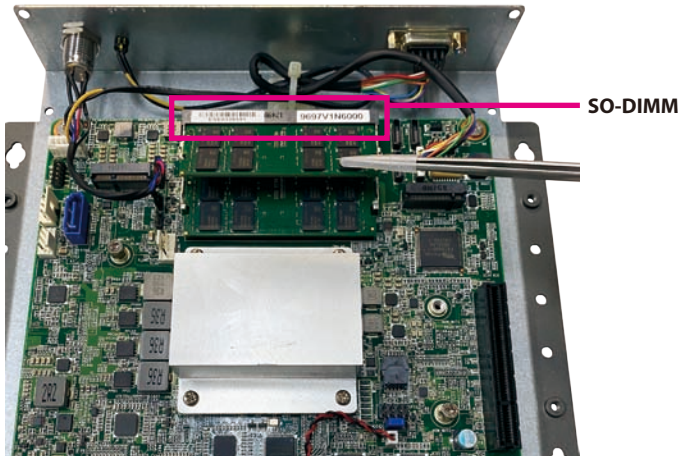
Front

Rear

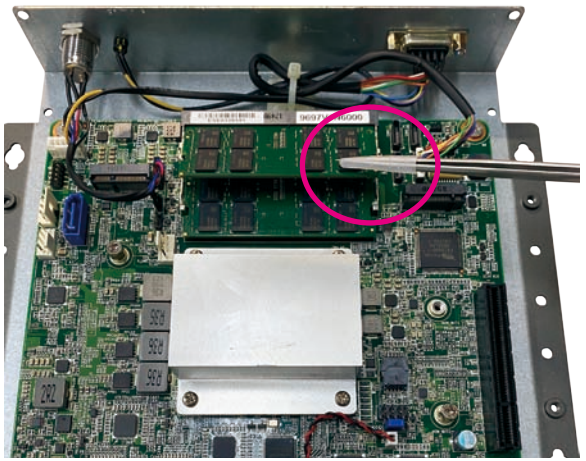
2. With the screws removed, lift up the cover and remove it from the chassis.

Installing a SO-DIMM Memory Module

1. Locate the SO-DIMM socket.

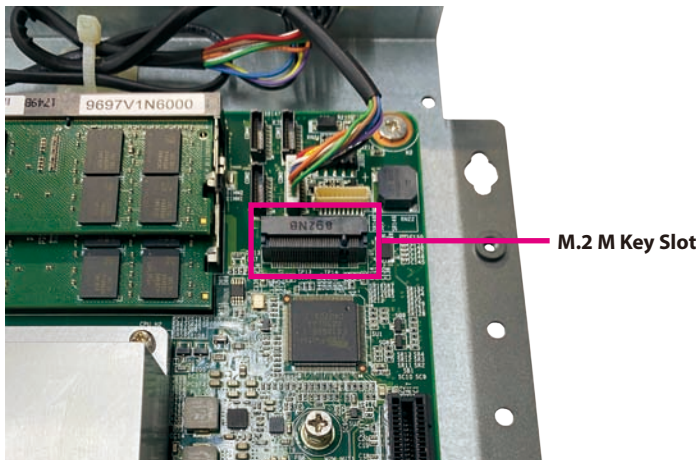


2. Insert the module into the socket at a 30-degree angle. Then push the module down until the clips on both sides of the socket lock into position. You will hear a distinctive "click" sound, indicating the module is correctly locked into position.



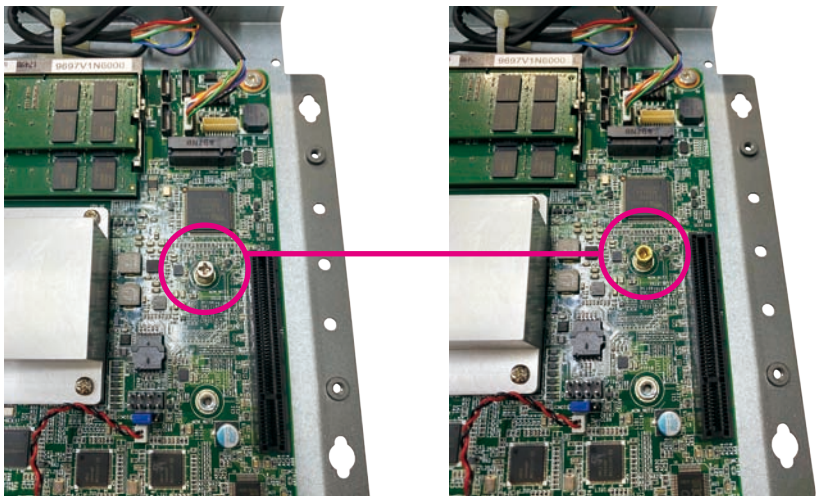
Installing an M.2 Storage Module (M Key 2240 & 2280)

1. Locate the M.2 M key slot on the board.

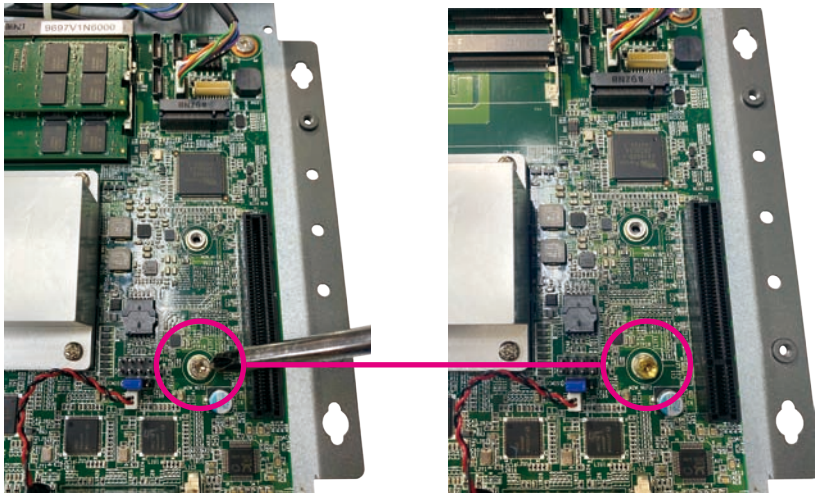


2. Remove the screw on the board and replace it with a copper standoff. Store the screw in a safe place for later use.

M.2 2240



M.2 2280



3. Insert the M.2 module into the M.2 slot at a 45-degree angle until the gold-plated connector on the edge of the module completely disappears into the slot.

M.2 2240

M.2 2280

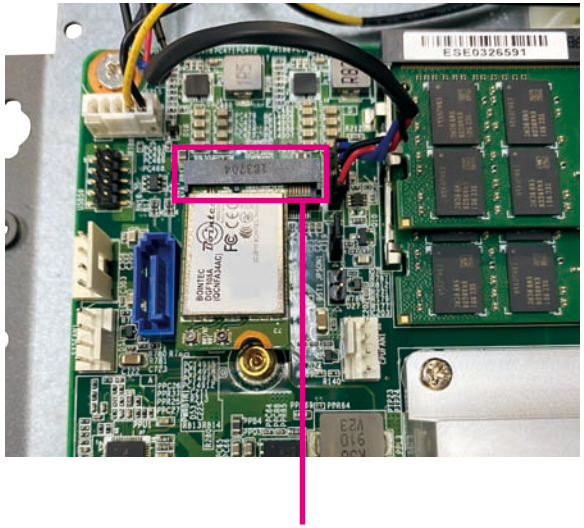
4. Push the module down and secure it with the screw removed in step 2.

M.2 2240

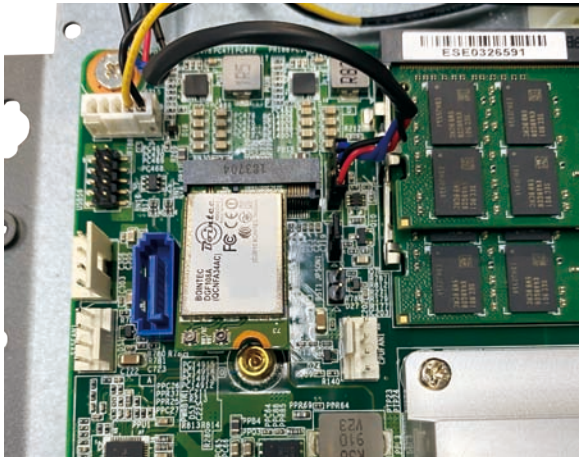
M.2 2280

Installing an M.2 Wi-Fi

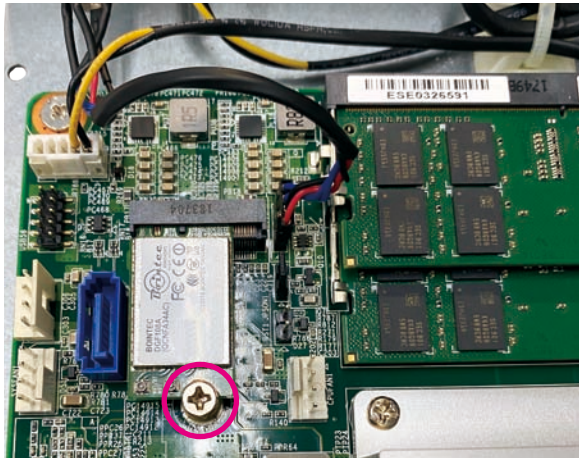
1. Locate the M.2 E key slot on the board.



2. Insert the Wi-Fi/BT module into the M.2 slot at a 45-degree angle until the gold-plated connector on the edge of the module completely disappears inside the slot.



3. Push the module down and then secure it with the mounting screw.



Wall Mount Installation

Note: The bottom cover of the system also serves as the wall mount bracket. Before wall mounting the system, please ensure the top cover is secured with 8 screws.

1. Align the M4 mounting holes on the chassis cover to the desired installation location. Then mount the system by fastening 4 screws through the mounting holes.

Chapter 4: BIOS Setup

This chapter describes how to use the BIOS setup program for NDiS V1000. 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 

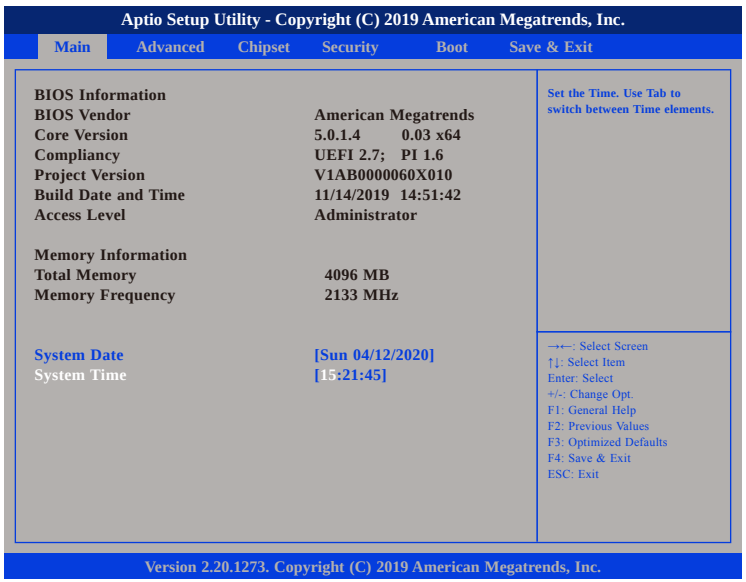
.

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 1998 to 9999.

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.

SHA-1 PCR Bank
Enables or disables SHA-1 PCR Bank.

SHA256 PCR Bank
Enables or disables SHA256 PCR Bank.

Pending operation
Schedules an operation for the security device.

ACPI Settings

This section is used to configure ACPI settings.

Enable ACPI Auto Configuration
Enables or Disables BIOS ACPI Auto Configuration.

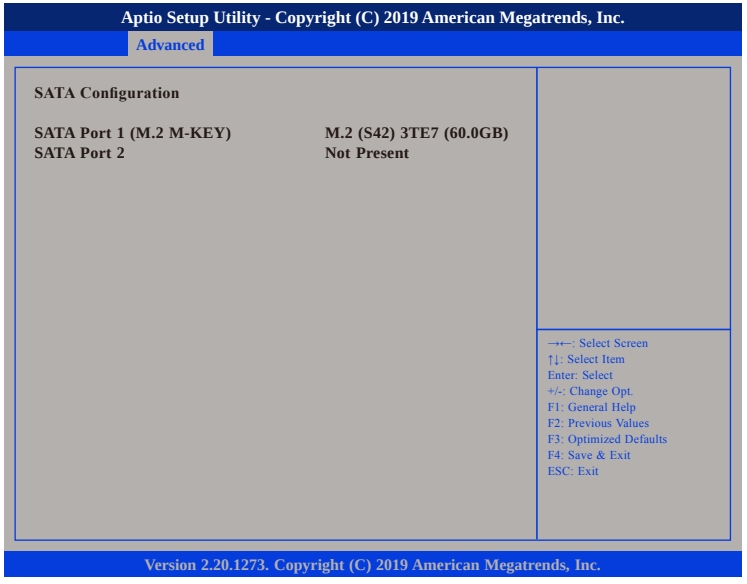
Enable Hibernation
Enables or disables system ability to hibernate (OS/S4 Sleep State). This option may not be effective with some operating systems.

ACPI Sleep State
Select the highest ACPI sleep state the system will enter when the suspend button is pressed. The options are Suspend Disabled and S3 (Suspend to RAM).

Lock Legacy Resources
Enables or disables lock of legacy resources

SATA Configuration

This section displays information on the connected SATA devices.



SATA Port 1 (M.2 M-KEY) and SATA Port 2
Displays what type of device is connected to SATA port 1 and port 2.

F81866 Super IO Configuration

This section is used to configure the I/O functions supported by the onboard Super I/O chip.

Super IO Chip

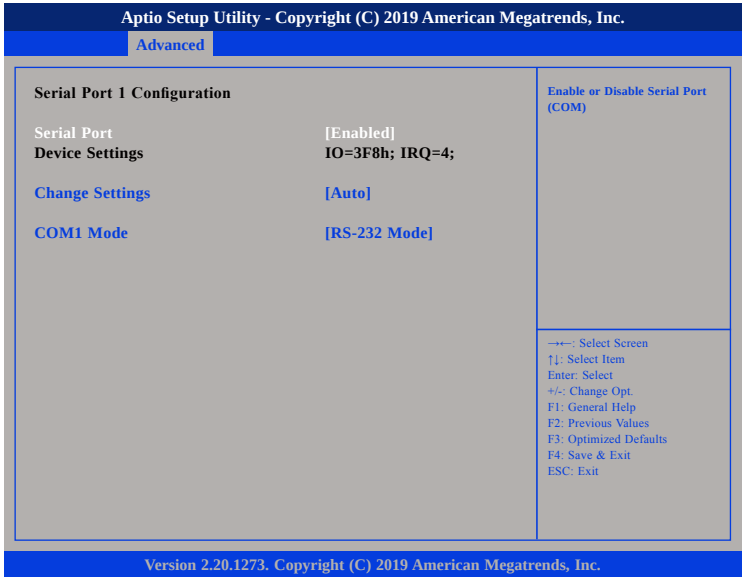
Displays the Super I/O chip used on the board.

Wake On Ring

Enables or disables the wake on ring function.

Serial Port 1 Configuration

This section is used to configure serial port 1.



Serial Port

Enables or disables the serial port.

Change Settings

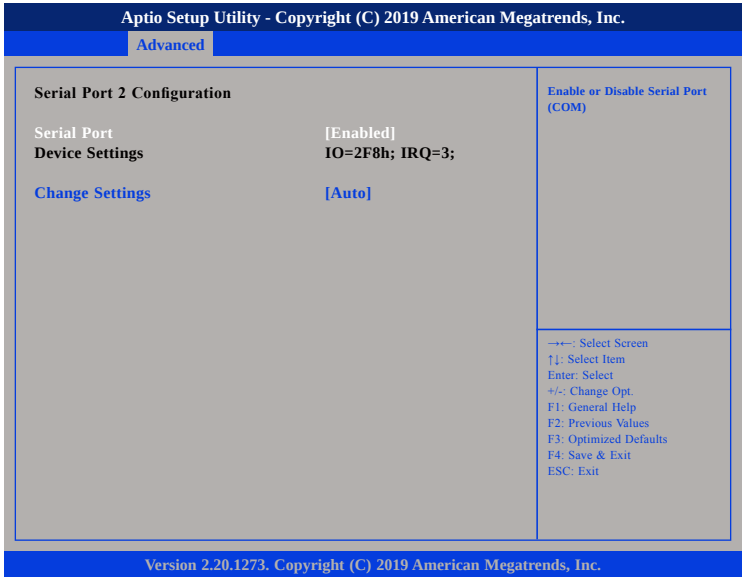
Selects an optimal setting for the Super IO device.

COM1 Mode

Configures the transmission mode of COM1.

Serial Port 2 Configuration

This section is used to configure serial port 2.



Serial Port

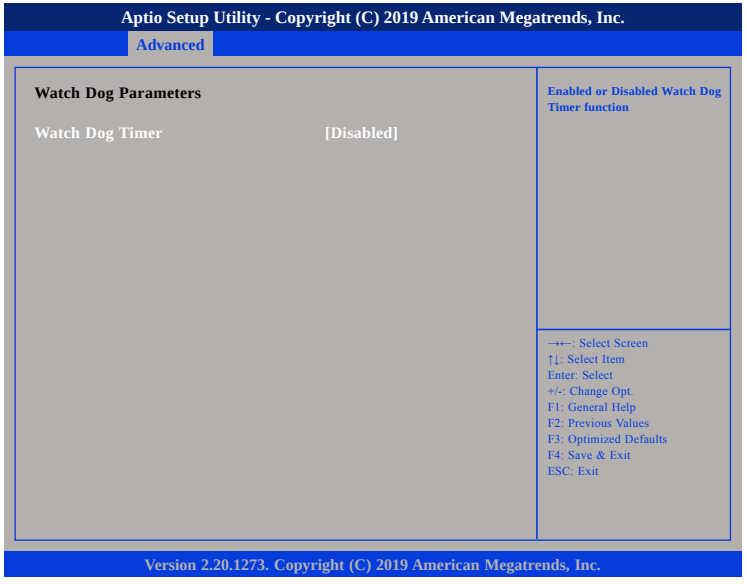
Enables or disables the serial port.

Change Settings

Selects an optimal setting for the Super IO device.

Watch Dog Configuration

This section is used to configure the watchdog timer.

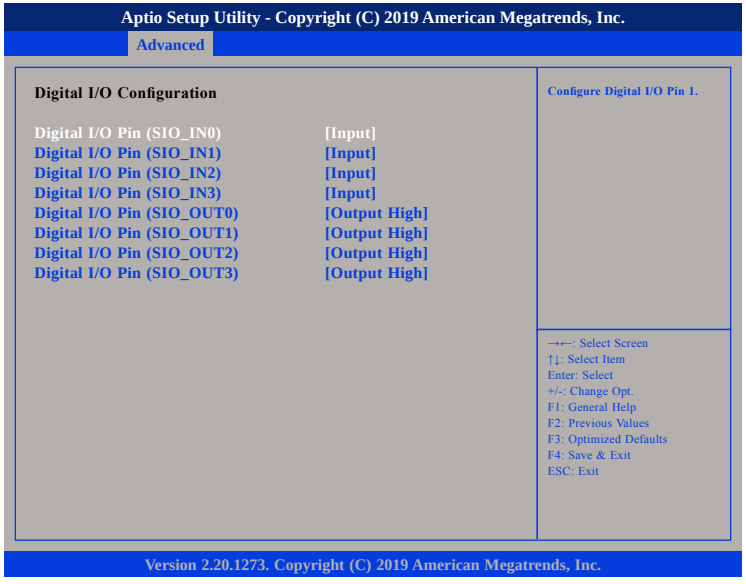


Watch Dog Timer

Enables or disables the watchdog timer function.

Digital I/O Configuration

This section is used to configure the digital input and output signals.

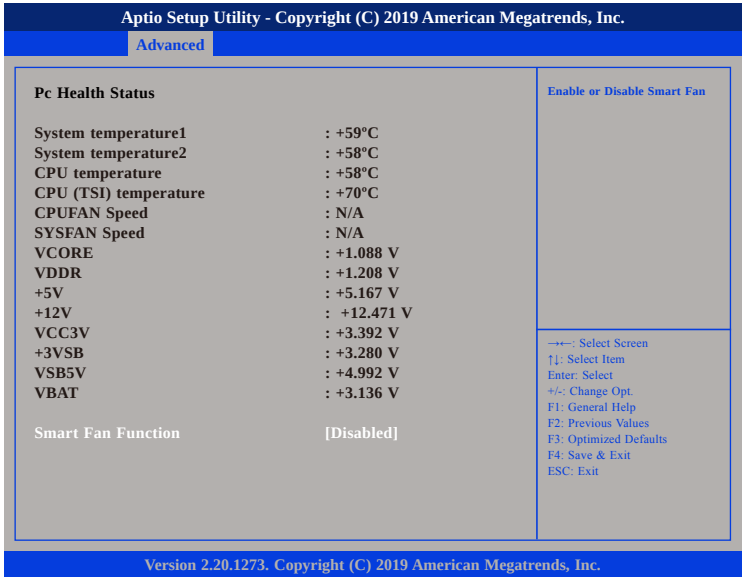


Digital I/O (SIO_IN0) to Digital I/O (SIO_OUT3)

Configures digital I/O pin 1 to pin 8 as input, output high or output low.

Hardware Monitor

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



Smart Fan Function

Enables or disables the smart fan function.

System temperature1 and System temperature2

Detects and displays the current temperature of the system.

CPU temperature

Detects and displays the current CPU temperature.

CPU (TSI) temperature
Detects and displays the current CPU temperature from TSI.

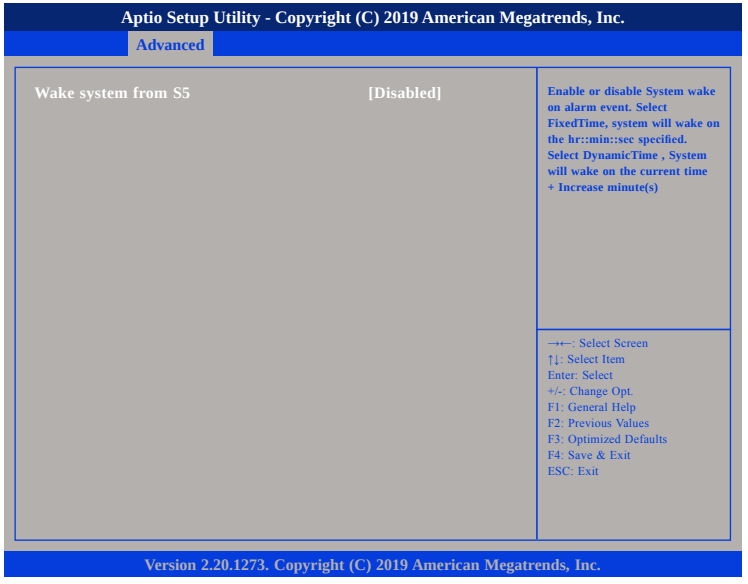
CPUFAN Speed
Detects and displays the current CPU fan speed.

SYSFAN Speed
Detects and displays the current system fan speed.

VCORE to VBAT
Detects and displays the output voltages.

S5 RTC Wake Settings

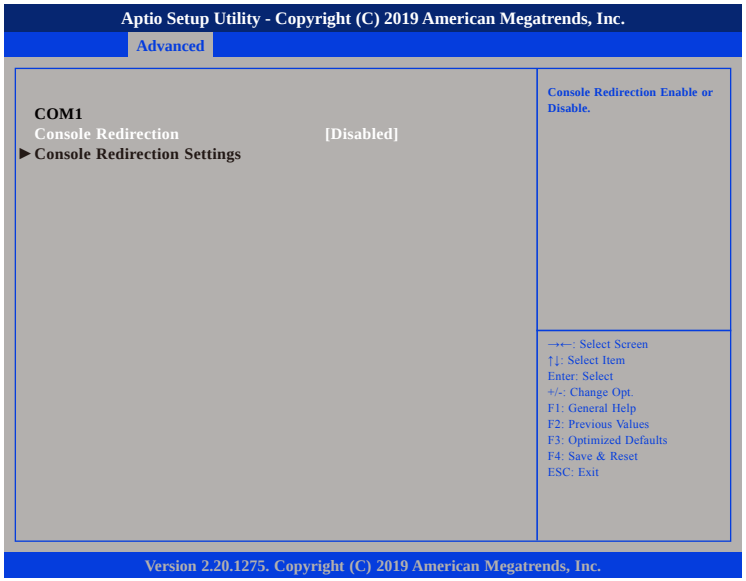
This section is used to configure the system to wake from S5 using RTC alarm.



Wake system from S5
Enables or disables system wake on alarm event. When FixedTime is selected, system will wake on the hr::min::sec specified. When DynamicTime is selected, system will wake on the current time + Increase minute(s).

Serial Port Console Redirection

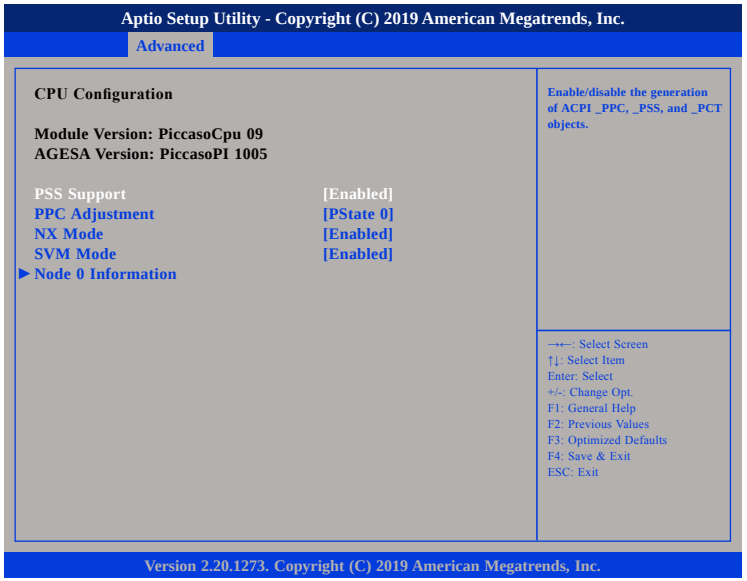
This section is used to configure the serial port that will be used for console redirection.



Console Redirection
Enables or disables console redirection for COM1.

CPU Configuration

This section is used to configure CPU parameters.



PSS Support
Enables or disables the generation of ACPI _PPC, _PSS, and _PCT objects.

PPC Adjustment
Adjusts the _PPC object settings.

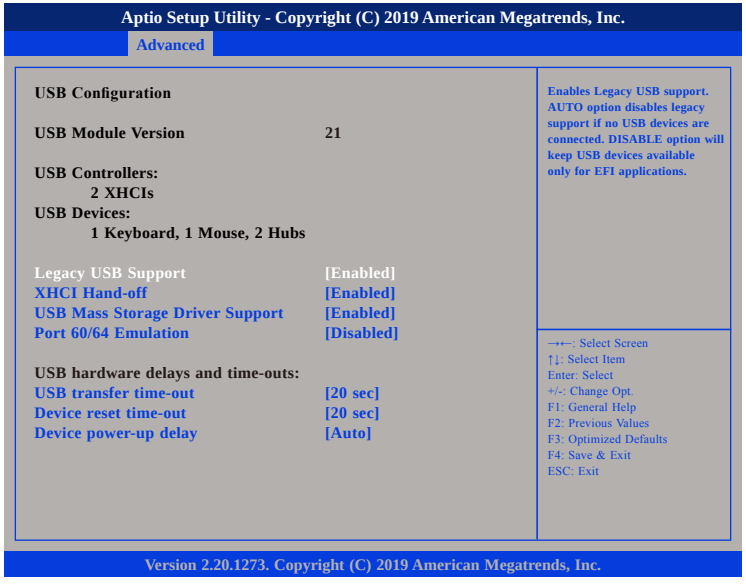
NX Mode
Enables or disables the No-execute page protection function.

SVM Mode
Enables or disables the CPU virtualization function.

Node 0 Information
Enters the menu for viewing memory information related to node 0.

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.

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

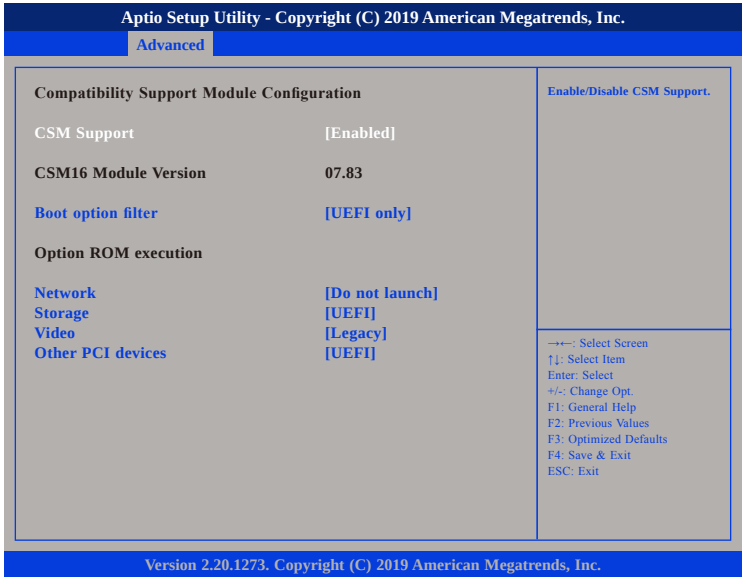
Selects the USB mass storage device's start unit command timeout.

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.

CSM Configuration

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



CSM Support

Enables or disables Compatibility Support Module (CSM).

Boot option filter

This option filters which devices the system can boot to.

Network

Controls the execution of UEFI and Legacy Network OpROM.

Storage

Controls the execution of UEFI and Legacy Storage OpROM.

Video

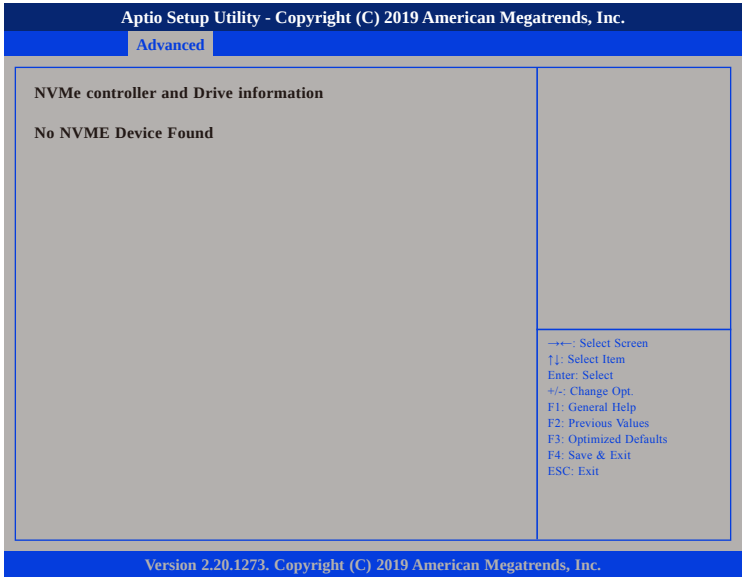
Controls the execution of UEFI and Legacy Video OpROM.

Other PCI Devices

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

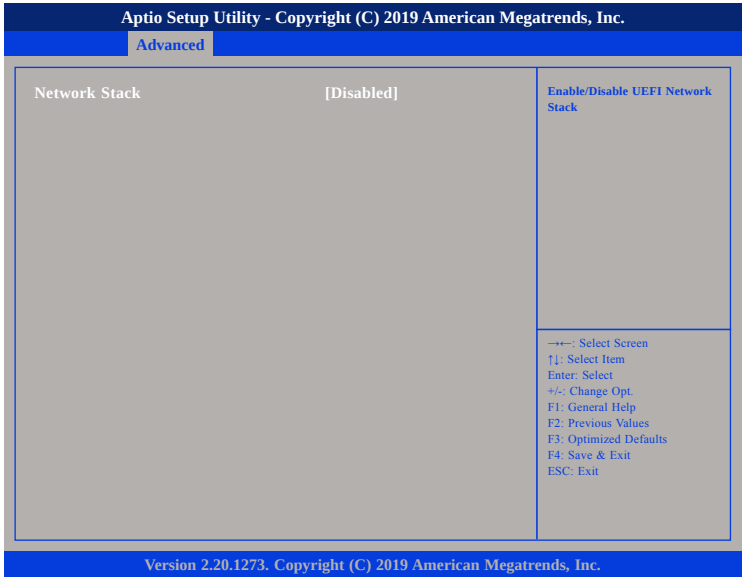
NVMe Configuration

This section is used to display information on the NVMe devices installed.



Network Stack

This section is used to configure the network stack.

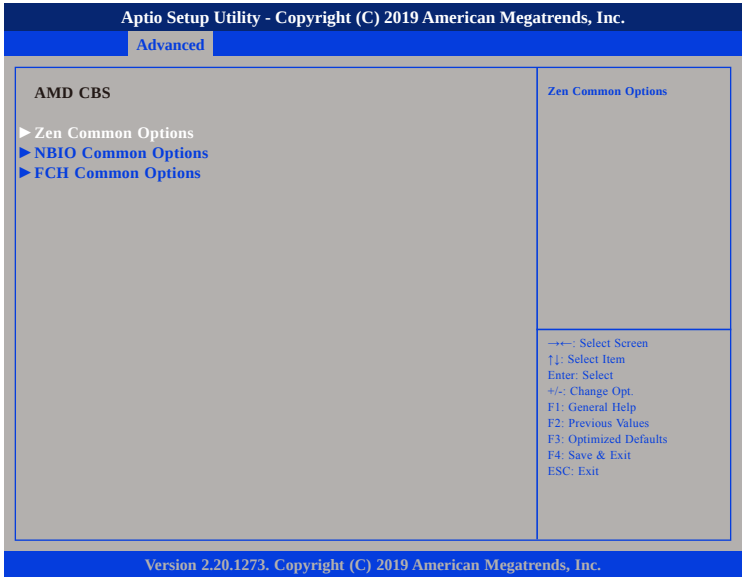


Network Stack

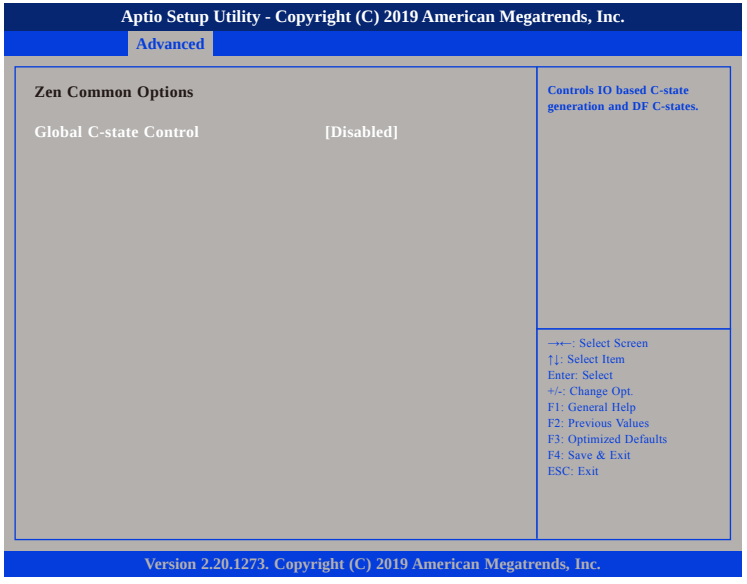
Enables or disables UEFI network stack.

AMD CBS

This section is used to access AMD CBS settings .



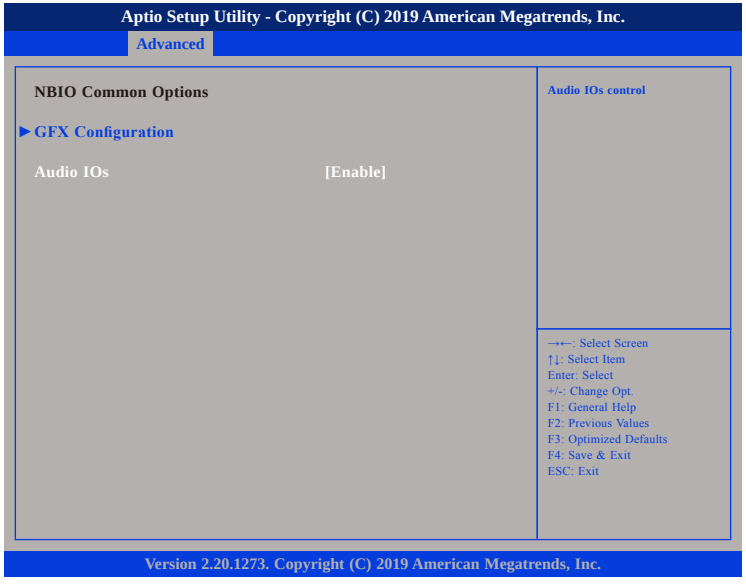
Zen Common Options



Global C-state Control

Controls IO based C-state generation and DF C-states.

NBIO Common Options



Audio IOs

Enables or disables Audio IOs.

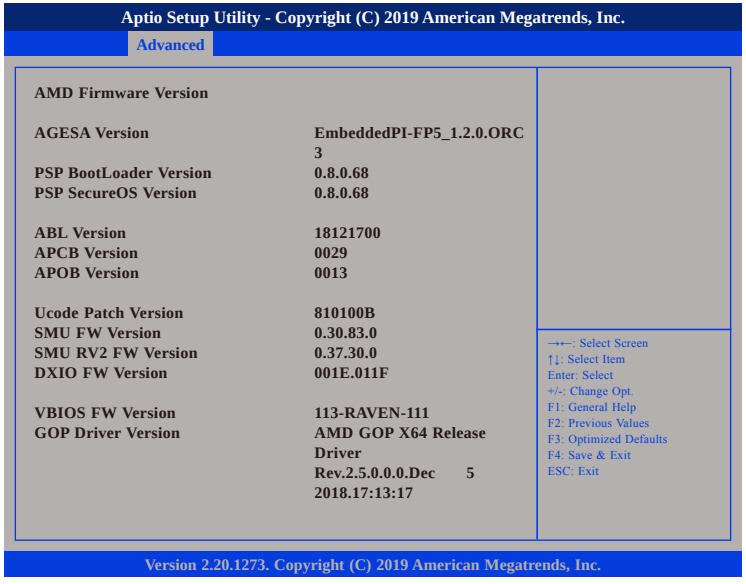
FCH Common Options

Restore AC Power Loss

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

AMD PBS

This section displays information about the AMD firmware version.



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.

South Bridge and North Bridge
South Bridge and North Bridge parameters.

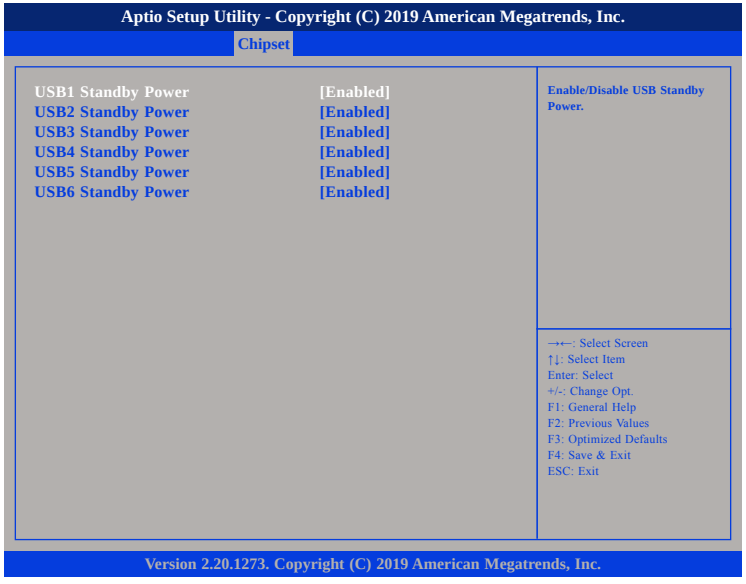
Platform Misc Configuration
Platform Misc Configuration settings.

South Bridge

SB USB Configuration
Enters the SB USB Configuration submenu.

SB SATA Configuration
Enters the SB SATA Configuration submenu.

SB USB Configuration

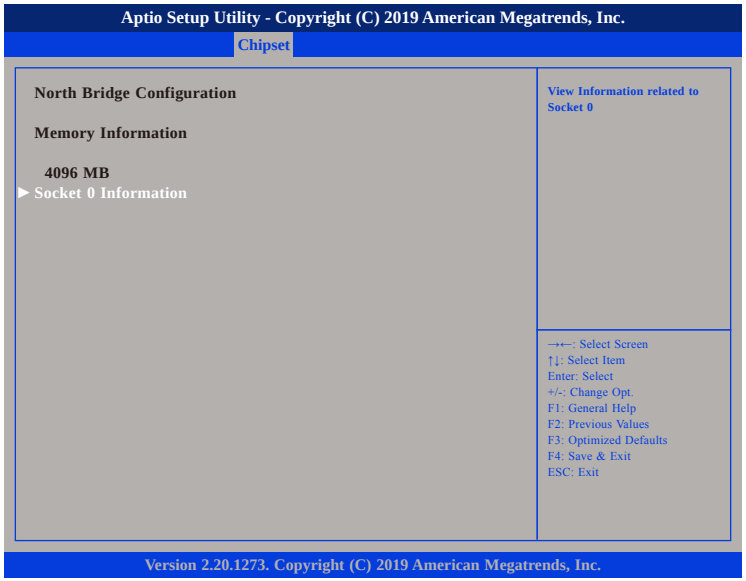


USB1 Standby Power to USB6 Standby Power
Enables or disables standby power for USB1 to USB6.

SB SATA Configuration

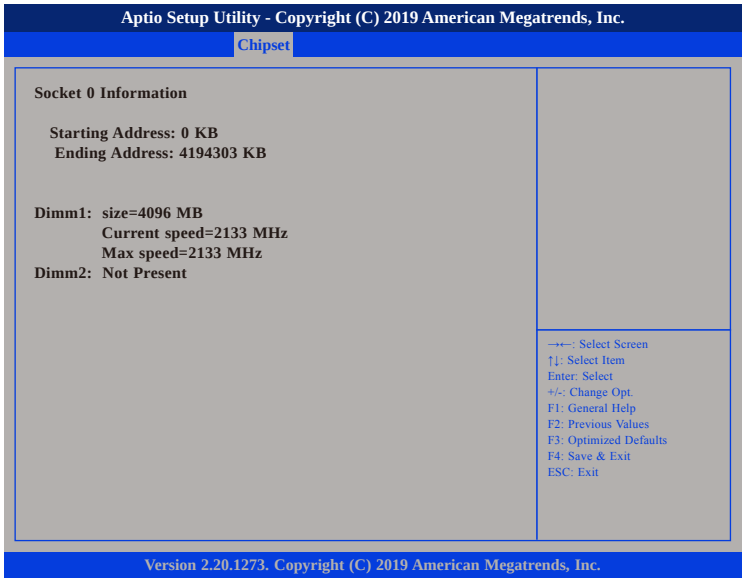
SATA Power On Port 1 and SATA Power On Port 2
Configures the power option for SATA port 1 and port 2.

North Bridge



Socket 0 Information
Enters the Socket 0 Information submenu.

Socket 0 Information



Displays information of Socket 0 and information of the memory installed in DIMM1 and DIMM2.

Platform Misc Configuration

Display Device Select
Select the display device that will be activated during POST.

PCIe x8 Slot
Enables or disables the PCIe x8 slot.

ASPM Mode Control
Configures the active-state power management (ASPM) mode.

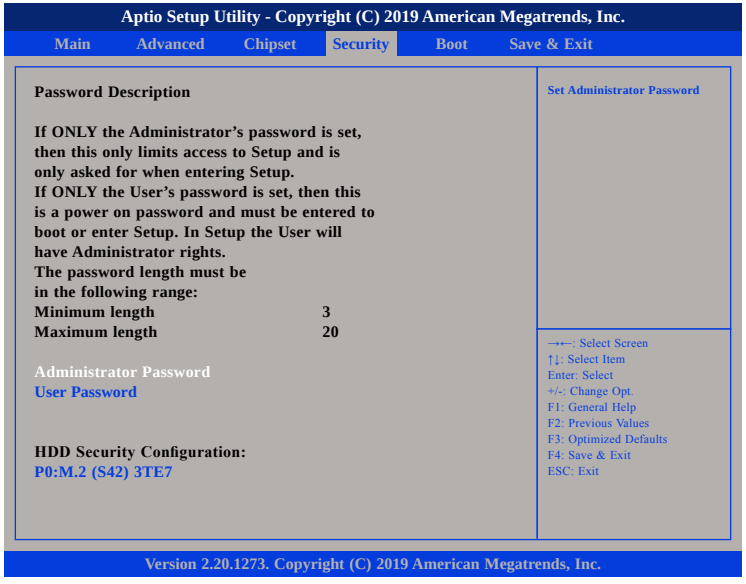
PCIe LAN1 Controller and PCIe LAN2 Controller
Enables or disables LAN1 and LAN2 controller.

LAN1 PXE OpROM and LAN2 PXE OpROM
Enables or disables boot option for LAN1 and LAN2 controller.

PCIe M.2 M-key Slot
Enables or disables the M.2 M-key slot.

PCIE Wake
Enables or disables PCIe to wake the system from S5.

Security



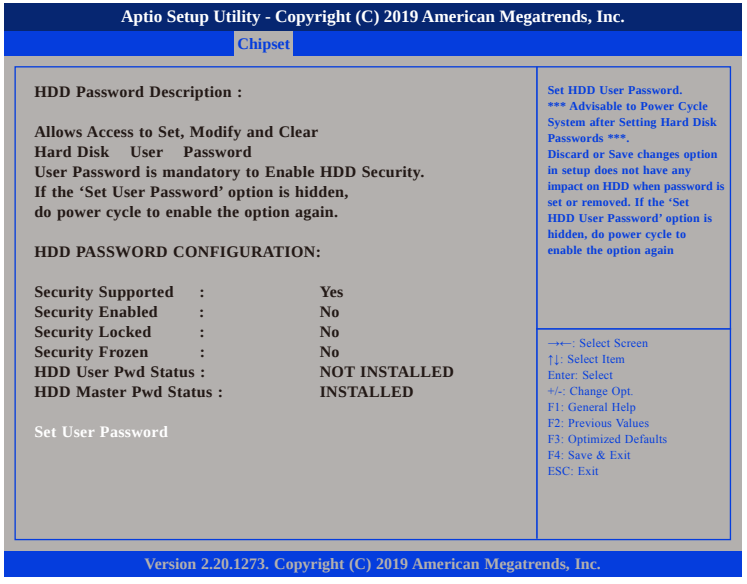
Administrator Password

Select this to reconfigure the administrator's password.

User Password

Select this to reconfigure the user's password.

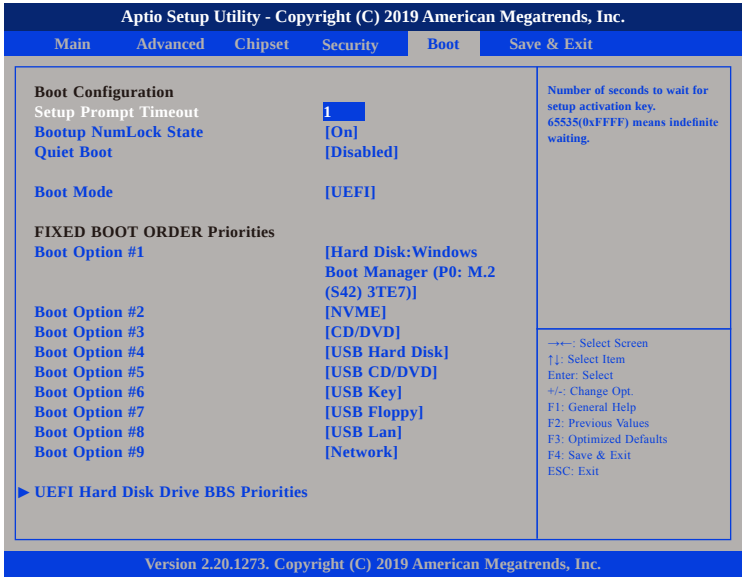
HDD Security Configuration



Set User Password

Select this to configure the HDD user security password.

Boot



Setup Prompt Timeout

Selects the number of seconds to wait for the setup activation key. 65535(0xFFFF) denotes 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.

Boot Mode

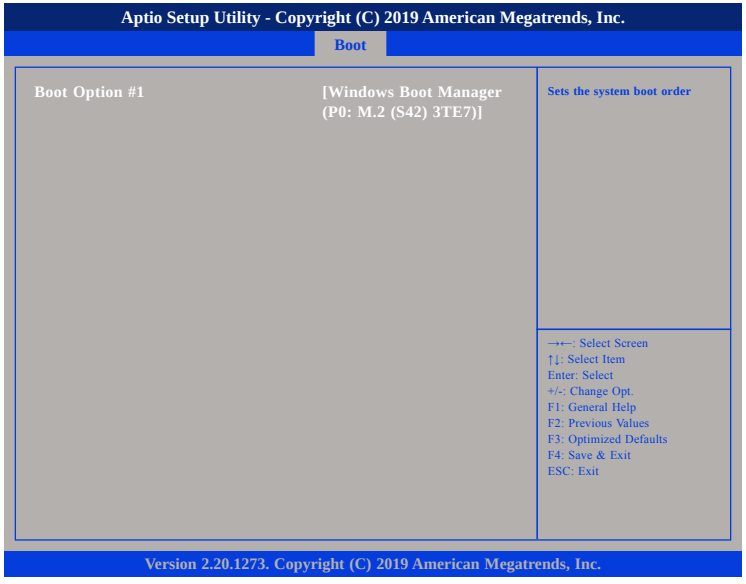
Configures the boot mode option.

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.

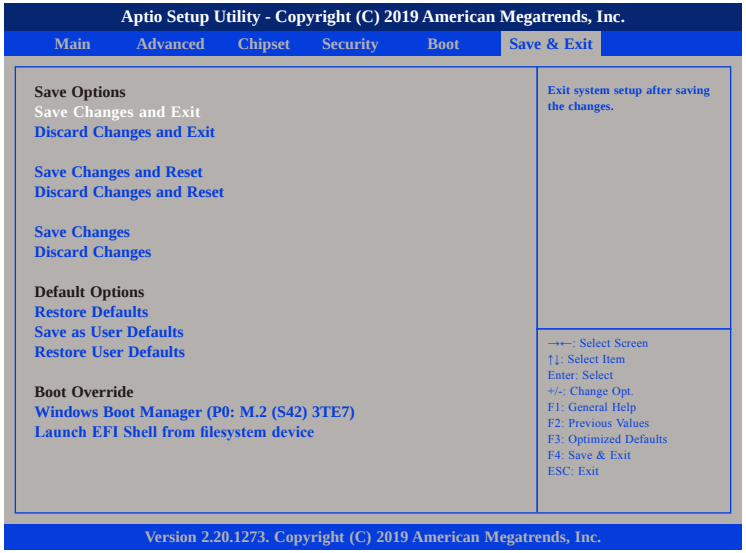
UEFI Hard Disk Drive BBS Priorities

Boot Option #1



Sets the system boot order.

Save & Exit



Save Changes and Exit
To save the changes and exit the Setup utility, 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 Exit
To exit the Setup utility without saving the changes, 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.

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.

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

Discard Changes
To discard the changes, select this field then press <Enter>. A dialog box will appear. Confirm by selecting Yes to discard all changes made and restore the previously saved settings.

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

Save as User Defaults
To use the current configurations as user default settings for the BIOS, select this field then press <Enter>. A dialog box will appear. Confirm by selecting Yes.

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

Boot Override
To bypass the boot sequence from the Boot Option List and boot from a particular device, select the desired device and press <Enter>.

Launch EFI Shell From Filesystem Device
To launch EFI shell from a filesystem device, select this field and press <Enter>.