NEXCOM International Co., Ltd.

Intelligent Platform & Services Business Unit

Visual Edge Computer

NDiS B363

User Manual

NEXCOM International Co., Ltd.
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PREFACE

Copyright

Disclaimer

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Acknowledgements

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. HCP series products (Blade Server) which are manufactured by NEXCOM are covered by a three year warranty period.

NEXCOM Return Merchandise Authorization (RMA)

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

Repair Service Charges for Out-of-Warranty Products

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

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System Level

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

Board Level

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

Warnings

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

Cautions

- Electrostatic discharge (ESD) can damage system components. Do the described procedures only at an ESD workstation. If no such station is available, you can provide some ESD protection by wearing an antistatic wrist strap and attaching it to a metal part of the computer chassis.
- Proper grounding is essential to protect against electrical surges and ensure stable operation. Always connect the grounding wire.

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, please verify the contents of the product package. The items included are listed in the table below.

Item	Part Number	Name	Qty
1	10W00B36303X0 or	NDiS B363-265U	1
	10W00B36302X0 or	NDiS B363-255U	
	10W00B36301X0 or	NDiS B363-235U	
	10W00B36300X0	NDiS B363-225U	
2	50311F0144X00	I HEAD SCREW LONG FEI: M3x4mm NI NYLOK	1
3	5040430536X00	M.2 EXTEND NUT BRACKET for 5G/LTE module	1
4	5060200570X00	Thermal pad: 30x20x3mm for WiFi module	1
5	5060200596X00	Thermal pad: 40x30x3mm for 5G/LTE module	1
6	5060200720X00	Thermal pad: 60x20x3mm for SSD and RAM	3
7	5060200706X00	Thermal pad 60x20x2mm between DIMM1 and DIMM2 RAM	1

Ordering Information

Refer to the lists below for the ordering information.

NDiS B363-265U (P/N:10W00B36303X0)

Duro Edge Computer, Core™ Ultra 7 Processor 265U

NDiS B363-255U (P/N:10W00B36302X0)

Duro Edge Computer, Core™ Ultra 7 Processor 255U

NDiS B363-235U (P/N:10W00B36301X0)

Duro Edge Computer, Core™ Ultra 5 Processor 235U

NDiS B363-225U (P/N:10W00B36300X0)

Duro Edge Computer, Core™ Ultra 5 Processor 225U

Chapter 1: Product Introduction

Overview

Digital transformation continues to evolve in 2025. Thus NDiS B363 Duro Edge Computer, powered by Intel® Core™ Ultra 7 or 5 processor which embed with a dedicated NPU for AI inference. By optimizing workloads across CPU, GPU, and NPU leading to achieve up to 22.5 TOPS of AI computing power while minimizing energy consumption. Dual HDMI® 2.0 ports, stunning visuals are guaranteed. Diverse I/O interfaces to enable a broad spectrum of AI applications. Designed to withstand extreme temperatures from -20°C to 60°C, NDiS B363 is perfect for semi-outdoor application such as self-service kiosks, Smart beverage station, smart recycling machine and intelligent parking system.

Key Features

- Intel® Core™ Ultra U Processor Series
- Support Intel® AMT technology (Intel Ultra7 265U and Intel Ultra 5 235U only)
- 2 x DDR5 SO-DIMM, up to 96GB
- 2 x HDMI® 2.0 output, up to 4096x2160@60Hz
- Dual Intel® LAN ports
- 1 x USB 3.2 Gen 1x1 and 3 x USB 2.0
- TPM 2.0 on board for security
- 1 x M.2 Key B 3052/2242 for optional 5G/LTE module
- 1 x M.2 Key E 2230 for optional Wi-Fi module
- 1 x M.2 Key M 2280 for optional SSD
- Support +12V-24V DC power input

Physical Features

Rear Panel

1. Grounding
2. Antenna hole
3. Line out
4. COM port
5. LAN1, 1GbE RJ45 port
6. LAN2, 2.5GbE RJ45 port
7. USB 2.0 Type-A
8. USB 3.2 Type-A
9. HDMI® 1.4
10. Power button
11. DC In 12V-24V

Front Panel

Hardware Specifications

CPU Support

- Intel® Core Ultra 7, Arrow Lake 265U, 12-core/5.3GHz, TDP 15W
- Intel® Core Ultra 7, Arrow Lake 255U, 12-core/5.2GHz, TDP 15W
- Intel® Core Ultra 5, Arrow Lake 235U, 12-core/4.9GHz, TDP 15W
- Intel® Core Ultra 5, Arrow Lake 225U, 12-core/4.8GHz, TDP 15W

* Only 265U and 235U support Intel® AMT

Main Memory

- 2 x DDR5 SO-DIMM, up to 96GB

Graphics & Display

- Intel® Graphics
- 2 x HDMI® 2.0, up to 4096x2160@60Hz

Storage

- 1 x M.2 2280 Key M (PCIe x4 NVME/SATA), supports optional storage module

Expansion

- 1 x M.2 Key E 2230 for optional Wi-Fi module
- 1 x M.2 Key B 3052/2242 for optional 5G/LTE module (PCIe 3.0 x1, USB 3.2, USB 2.0)

I/O Interface-Rear

- 1 x Power button with LED
- 2 x HDMI® 2.0, up to 4096x2160@60Hz
- 1 x 2.5GbE RJ45 port, Intel® i226
- 1 x 1GbE RJ45 port, Intel® I219
- 1 x USB 3.2 Gen 1x1, Type-A
- 3 x USB 2.0
- +12V-24V DC In

I/O Interface-Front

- 1 x Line out
- 2 x COM Port, supports RS-232/RS-422/RS-485
- 3 x Antenna hole

I/O Interface-Internal

- 2 x 6-pin header for 4 x USB 2.0 port
- 4 x 9-pin header for COM port RS-232 (Reserved)
- 1 x 10-pin header for GPIO, 4 x DI, 4 x DO
- 1 x 4-pin header for 2W/4Ω speaker out
- 1 x 9-pin header for Mic in and Line out
- 1 x 2-pin header for Reset

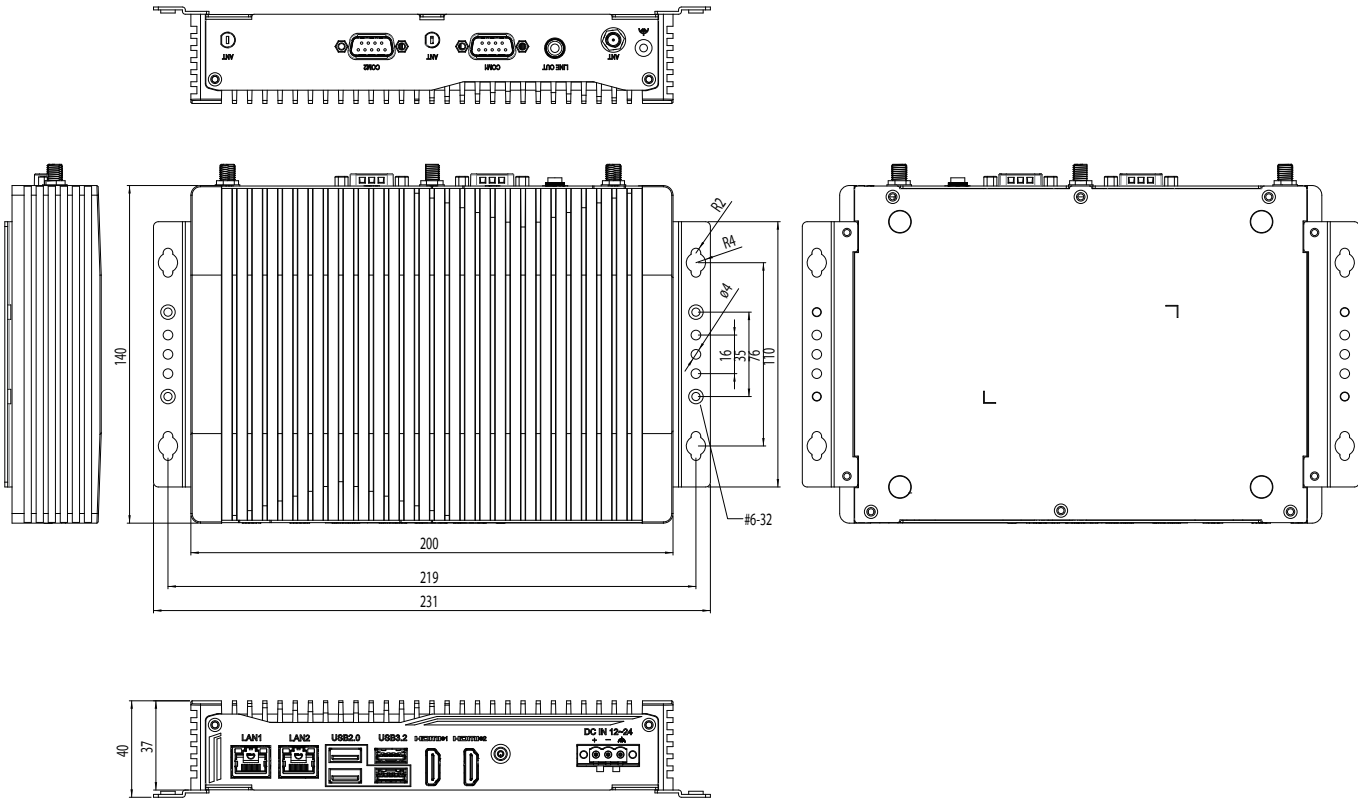
Mechanical & Dimension

- System Unit
  - Dimension: 200mm (W) x 140mm (D) x 37mm (H) w/o bracket
  - Net weight: 1.26 kgs/Unit
- Package Carton
  - Dimension: 300mm (W) x 270mm (D) x 205mm (H)
  - Gross weight : 2.54 kg (1 unit/per carton)

Environment

- Operating temperature:
  - Ambient with air flow:-20°C~55°C (Core Ultra 7-265U & 255U)
  - Ambient with air flow: -20°C ~60°C (Core Ultra 5-235U & 225U
  - Storage temperature: -20°C~80°C
- Relative humidity: 0%~90% (non-condensing)
- Shock protection: 50G peak acceleration, 11ms according to IEC 60068-2-27
- Vibration protection
  - Random: 2Grms@5~500Hz, IEC 60068-2-64
  - Sinusoidal: 2G@5~500Hz, IEC 60068-2-6

Mechanical Dimensions



Chapter 2: Jumpers and Connectors

This chapter describes how to set the jumpers and connectors on the NDiS B363 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:

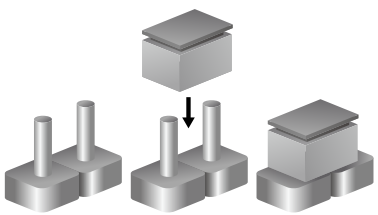
- Always disconnect the unit from the power outlet whenever you are working inside the case.
- If possible, wear a grounded wrist strap when you are working inside the computer case. Alternatively, discharge any static electricity by touching the bare metal chassis of the unit case, or the bare metal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

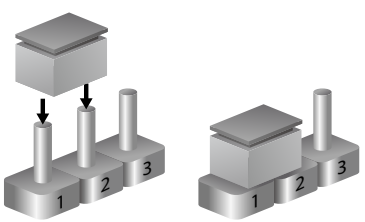
A jumper is the simplest kind of electric switch. It consists of two metal pins and a cap. When setting the jumpers, ensure that the jumper caps are placed on the correct pins. When the jumper cap is placed on both pins, the jumper is short. If you remove the jumper cap, or place the jumper cap on just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

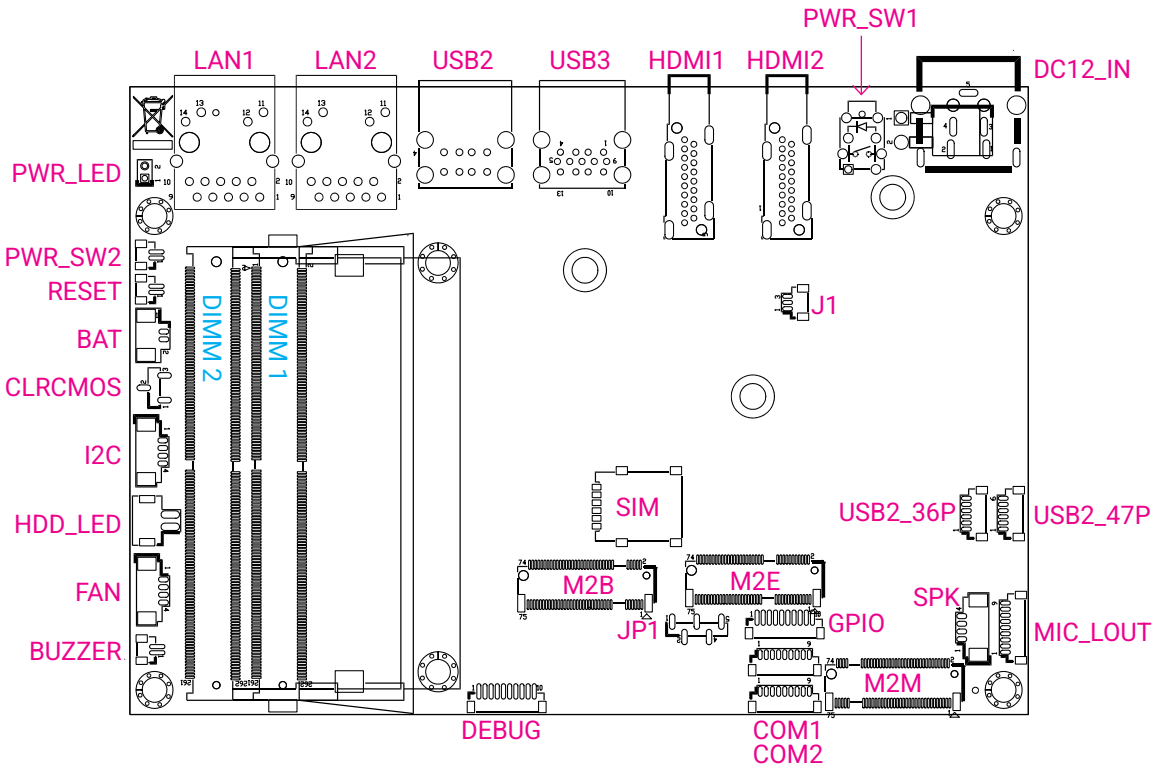


System Motherboard Overview

This chapter describes the location and pin assignments of the jumpers and connectors, providing detailed information to help users understand their roles and functions within the motherboard. Refer to the figure below for detailed information on pin settings and definitions marked in pink. Note that the illustrations shown in this chapter are not to scale and are for reference only.

Location of Jumpers and Connectors on the Motherboard

Top View



Jumpers Settings

Clear CMOS

Connector location: CLRCMOS

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

COM2 RI Pin Function Select

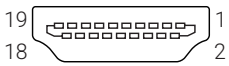
Connector location: JP1

Pin	Settings
1-2 On	COM2 RI Pin is Ring (default)
2-3 On	COM2 RI Pin is +5V
4-5 On	COM2 RI Pin is +12V

External I/O

HDMI®

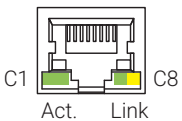
Connector type: HDMI® 2.0
Connector location: HDMI1, HDMI2



Pin	Definition	Pin	Definition
1	TX2P	2	GND
3	TX2N	4	TX1P
5	GND	6	TX1N
7	TX0P	8	GND
9	TX0N	10	CLK_P
11	GND	12	CLK_N
13	NC	14	NC
15	SCL	16	SDA
17	GND	18	+5V
19	HPD		
MH1	CGND	MH2	CGND
MH3	CGND	MH4	CGND
NH1	N.C.	NH2	N.C.

LAN

Connector type: RJ45 port with LEDs
Connector location: LAN1, LAN2

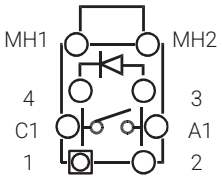


Pin	Definition	Pin	Definition
1	MDI0P	2	MDI0N
3	MDI1P	4	MDI1N
5	TCT	6	TCTG
7	MDI2P	8	MDI2N
9	MDI3P	10	MDI3N
11	LED_ACT_POWER	12	LED_ACT#
13	LED_LINK100M#	14	LED_LINK2.5G#
MH1	CGND	MH2	CGND
NH1	NC	NH2	NC

Act.	Status	Link	Status
Blinking green	Data activity	Steady Green	1/2.5GbE link
Off	No activity	Steady Orange	100MbE link
		Off	10MbE/Off link

Power Button

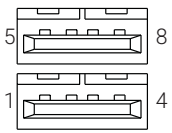
Connector location: PWR_SW1



Pin	Definition
1	SWITCH_NODE_A
2	SWITCH_NODE_B
3	SWITCH_NODE_B
4	SWITCH_NODE_A
C1	LED-
A1	LED+
MH1	N.C.
MH2	N.C.

Dual USB 2.0

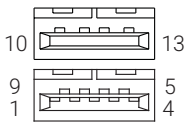
Connector type: USB 2.0 Type-A
Connector location: USB2



Pin	Definition	Pin	Definition
1	+5V	2	USB2_D1-
3	USB2_D1+	4	GND
5	+5V	6	USB2_D2-
7	USB2_D2+	8	GND
MH1	CGND	MH2	CGND
MH3	CGND	MH4	CGND

USB Combo

Connector type: USB 3.2 Gen 1x1 (lower) + USB 2.0 Type-A (upper)
Connector location: USB3



Pin	Definition	Pin	Definition
1	+5V	2	USB2_D0-
3	USB2_D0+	4	GND
5	USB3_RX-	6	USB3_RX+
7	GND	8	USB3_TX-
9	USB3_TX+	10	+5V
11	USB2_D1-	12	USB2_D1+
13	GND		
MH1	CGND	MH2	CGND
MH3	CGND	MH4	CGND

Internal I/O

RTC Battery Connector

Connector location: BAT

Pin	Definition
1	GND
2	+VBAT

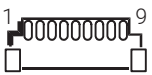
Buzzer

Connector location: Buzzer

Pin	Definition
1	BUZZER-
2	BUZZER+

COM Port

Connector protocal: RS-232/422/485
Connector location: COM1, COM2

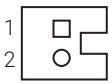


Pin	RS-232	RS-422	RS-485
1	RI#		
2	CTS#		
3	RTS#		
4	DSR#		
5	GND		
6	DTR#	RX-	
7	TXD#	RX+	
8	RXD#	TX+	D+
9	DCD#	TX-	D-

To configure the COM port protocol, refer to the BIOS chapter.

DC Input

Connector location: DC12V_IN



Pin	Definition
1	GND
2	+12V

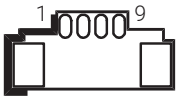
Debug Port

Connector location: DEBUG

Pin	Definition	Pin	Definition
1	GND	2	PLTRST#
3	ESPI_CLK	4	ESPI_CS#
5	ESPI_IO3	6	ESPI_IO2
7	ESPI_IO1	8	ESPI_IO0
9	ESPI_RST#	10	+3.3VSB

CPU Fan

Connector location: FAN



Pin	Definition	Pin	Definition
1	GND	2	+12V
3	FAN SPEED DETECT	4	FAN SPEED CONTROL

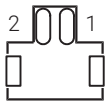
GPIO

Connector location: GPIO

Pin	Definition	Pin	Definition
1	+5V	2	GND
3	GPO0	4	GPO1
5	GPO2	6	GPO3
7	GPI0	8	GPI1
9	GPI2	10	GPI3

Storage LED

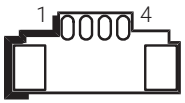
Description: M.2 and SATA storage status LED
Connector location: HDD_LED



Pin	Definition
1	LED+
2	LED-

I2C

Connector location: I2C



Pin	Definition	Pin	Definition
1	GND	2	I2C_DAT
3	I2C_CLK	4	+5V

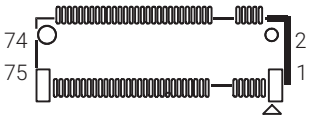
Firmware Upgrade

Connector location: J1 (debug only)

Pin	Definition
1	SMB_SCL
2	SMB_DAT
3	GND

M.2 Key B

Connector form factor: M.2 Key B 3042/3052
Connector interface: PCIe x1, USB 3.2, USB 2.0
Connector location: M2B

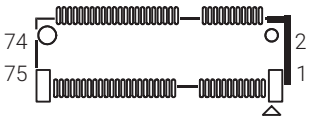


Pin	Definition	Pin	Definition
1	CONFIG3	2	3.3V
3	GND	4	3.3V
5	GND	6	POWER_OFF#
7	USB2_P	8	W_DISABLE1#
9	USB2_N	10	LED#
11	GND		
Key			
		20	PCIe/USB Select Pin
21	CONFIG0	22	NC
23	NC	24	NC
25	NC	26	W_DISABLE2#
27	GND	28	NC
29	USB3_RXN	30	UIM_RESET
31	USB3_RXP	32	UIM_CLK
33	GND	34	UIM_DATA
35	USB3_TXN	36	UIM_PWR
37	USB3_TXP	38	NC
39	GND	40	NC

Pin	Definition	Pin	Definition
41	PCIE_RXN	42	NC
43	PCIE_RXP	44	NC
45	GND	46	NC
47	PCIE_TXN	48	NC
49	PCIE_TXP	50	PCIE_RST# (3.3V)
51	GND	52	PCIE_CLKREQ#
53	REFCLKN	54	PCIE_WAKE#
55	REFCLKP	56	NC
57	GND	58	NC
59	NC	60	NC
61	NC	62	NC
63	NC	64	NC
65	NC	66	NC
67	LTE_RST# (1.8V)	68	SUS_CLK
69	CONFIG1	70	3.3V
71	GND	72	3.3V
73	GND	74	3.3V
75	CONFIG2		

M.2 Key E

Connector form factor: M.2 Key E 2230
Connector interface: PCIe x1, USB 2.0
Connector location: M2E

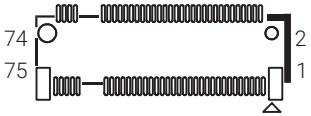


Pin	Definition	Pin	Definition
1	GND	2	3.3V_1
3	USB_D+	4	3.3V_2
5	USB_D-	6	LED1#
7	GND2	8	PCM_CLK
9	SDIO_CLK	10	PCM_SYNC
11	SDIO_CMD	12	PCM_IN
13	SDIO_DATA0	14	PCM_OUT
15	SDIO_DATA1	16	LED2#
17	SDIO_DATA2	18	GND3
19	SDIO_DATA3	20	UART_WAKE#
21	SDIO_WAKE#	22	UART_RXD
23	SDIO_RESET#		
Key			
		32	UART_TXD
33	GND4	34	UART_CTS
35	PETP0	36	UART_RTS
37	PETN0	38	RESERVED_1
39	GND5	40	RESERVED_2

Pin	Definition	Pin	Definition
41	PERP0	42	RESERVED_3
43	PERN0	44	COEX3
45	GND6	46	COEX2
47	REFCLKP0	48	COEX1
49	REFCLKN0	50	SUSCLK
51	GND7	52	PERST0#
53	CLKREQ0#	54	W_DISABLE2#
55	PEWAKE0#	56	W_DISABLE1#
57	GND8	58	I2C_DATA
59	PETP1	60	I2C_CLK
61	PETN1	62	ALERT#
63	GND9	64	RESERVED
65	PERP1	66	UIM_SWP
67	PERN1	68	UIM_POWER_SNK
69	GND10	70	UIM_POWER_SRC
71	PEFCLKP1	72	3.3V_3
73	PEFCLKN1	74	3.3V_4
75	GND11		

M.2 Key M

Connector form factor: M.2 Key M 2280
Connector interface: PCIe x4, SATA
Connector location: M2M



Pin	Definition	Pin	Definition
1	GND	2	VCC3
3	GND	4	VCC3
5	PCIE_RX3N	6	NC
7	PCIE_RX3P	8	NC
9	GND	10	LED#
11	PCIE_TX3N	12	VCC3
13	PCIE_TX3P	14	VCC3
15	GND	16	VCC3
17	PCIE_RX2N	18	VCC3
19	PCIE_RX2P	20	NC
21	GND	22	NC
23	PCIE_TX2N	24	NC
25	PCIE_TX2P	26	NC
27	GND	28	NC
29	PCIE_RX1N	30	NC
31	PCIE_RX1P	32	NC
33	GND	34	NC
35	PCIE_TX1N	36	NC

Pin	Definition	Pin	Definition
37	PCIE_TX1P	38	DEVSLP
39	GND	40	NC
41	SATA_RXP (PCIE_RX0P)	42	NC
43	SATA_RXN (PCIE_RX0N)	44	NC
45	GND	46	NC
47	SATA_TXN (PCIE_TX0N)	48	NC
49	SATA_TXP (PCIE_TX0P)	50	PERST#
51	GND	52	PECLKREQ#
53	REFCLKN	54	PEWAKE#
55	REFCLKP	56	NC
57	GND	58	NC
Key			
67	NC	68	SUSCLK
69	PEDET	70	VCC3
71	GND	72	VCC3
73	GND	74	VCC3
75	GND		

Audio

Connector application: MIC in, Line out
Connector location: MIC_LOUT

Pin	Definition	Pin	Definition
1	LINE_OUT_R	2	LINE_JD
3	AGND	4	LINE_OUT_L
5	AGND	6	MIC_IN_R
7	MIC_JD	8	MIC_IN_L
9	AGND		

Power LED (Optional)

Connector location: PWR_LED

Pin	Definition
1	LED+
2	LED-

Power Button 2 Header

Connector location: PWR_SW2

Pin	Definition
1	GND
2	PWRBTN#

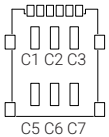
Reset Header

Connector location: RESET

Pin	Definition
1	GND
2	RESET#

SIM Card

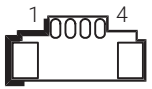
SIM form factor: nano-SIM
Connector location: SIM



Pin	Definition	Pin	Definition
C1	VCC	C2	RST
C3	CLK		
C5	GND	C6	VPP
C7	I/O		

Speaker

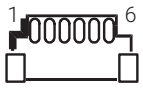
Connector functionality: Internal speaker with audio amplifier
Connector location: SPK



Pin	Definition	Pin	Definition
1	L+	2	L-
3	R+	4	R-

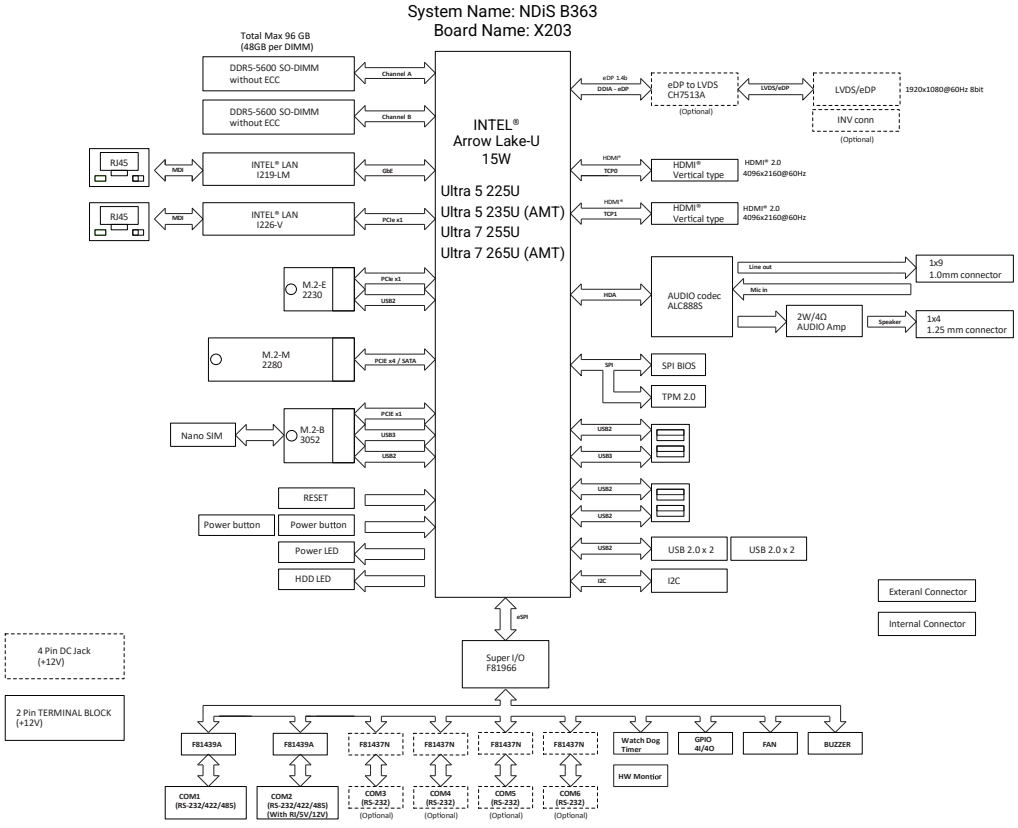
USB 2.0

Connector type: Dual USB port header
Connector location: USB2_36P, USB2_47P



Pin	Definition	Pin	Definition
1	GND	2	USB_A-
3	USB_A+	4	USB_B-
5	USB_B+	6	+5V

Block Diagram



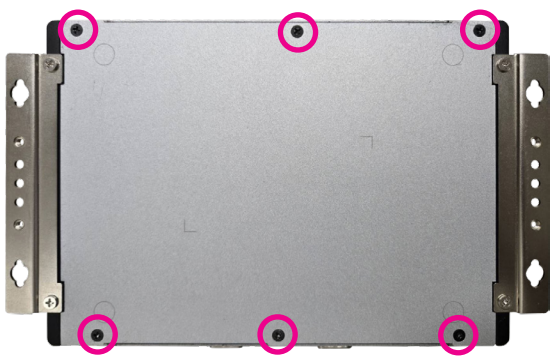
Chapter 3: System Setup

The product photos in this chapter are part of a product series. Instructional images may vary and might not precisely match your unit, but the procedures and functionality are consistent.

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.

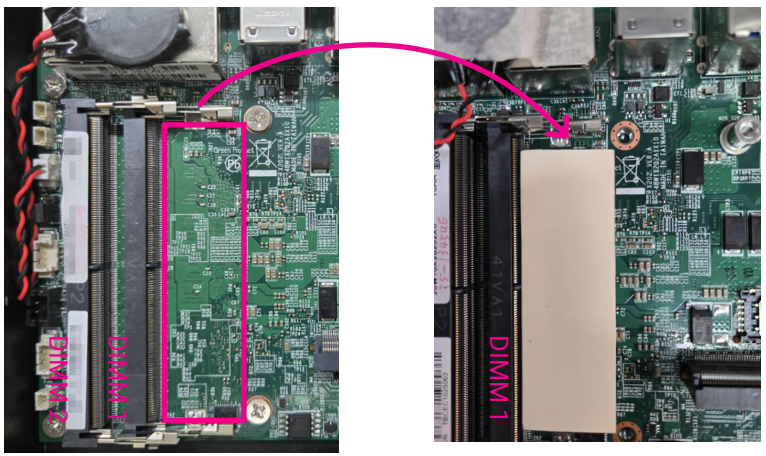
1. The screws on bottom are used to secure the cover to the chassis. Remove the screws marked in pink in the image below, and put them in a safe place for later use.



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

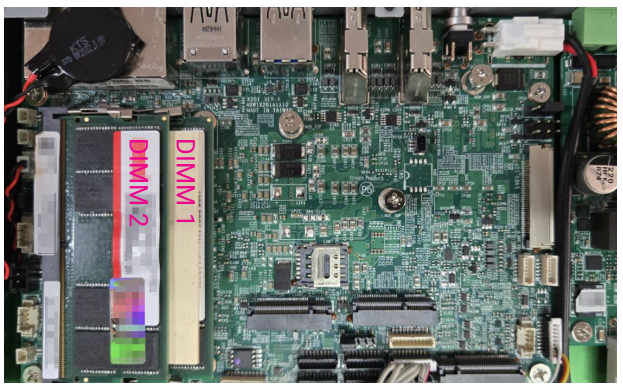
Installing SO-DIMM Memory Modules

1. Locate the SO-DIMM socket on the motherboard. Then, attach the 3mm-thick thermal pad (PN: 5060200720X00) to the bottom of the socket marked in pink in the image below.



2. Insert the module into the DIMM 1 socket at an approximately 30 degrees angle. The ejector tabs at the ends of the socket will automatically snap into the locked position to hold the module in place.

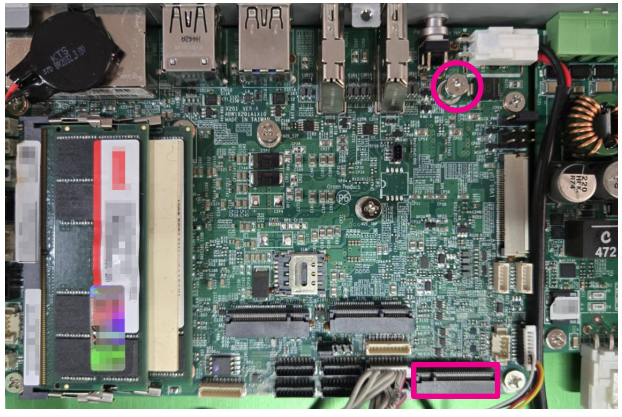
1. Apply the 2mm-thick thermal pad (PN: 5060200706X00) to the memory module in the DIMM1 slot. Then, if required, follow the previous step to install the second memory module in the DIMM2 slot.



1. If there is only a single memory module required, please install it in DIMM 2.
2. It's recommended that you install memory modules of the same brand, speed, and capacity if you want to plug them into both of the slots.
3. The total supported memory is up to 96GB.
4. For more information on applying the thermal pads, refer to the installation instructions provided in this section.

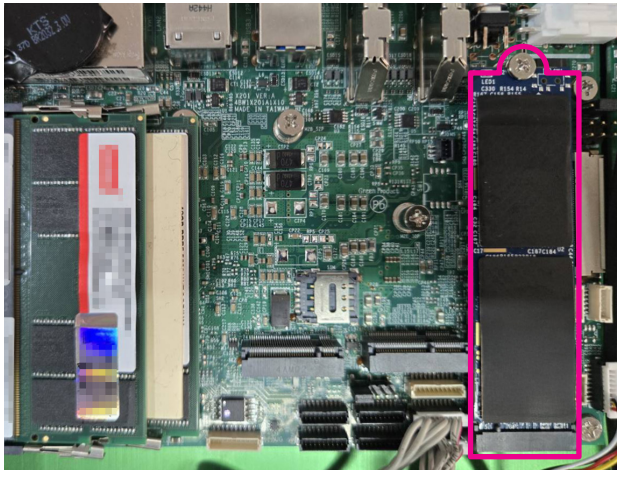
Installing an M.2 Storage Module (Key M 2280)

1. Locate the M.2 Key M slot and remove the screws on the board.



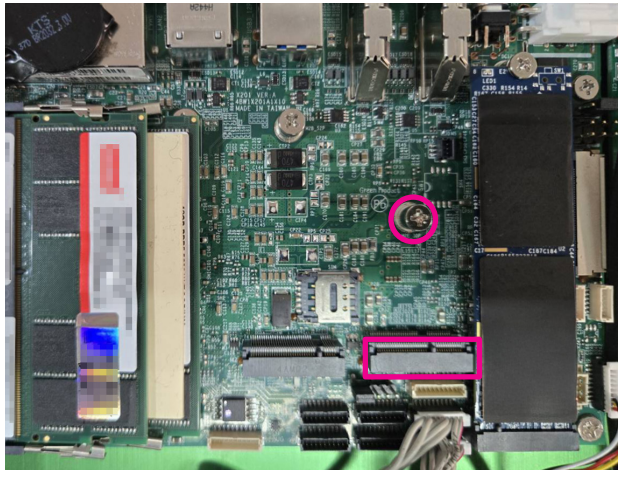
2. Insert the M.2 module into the M.2 slot at a 45-degree angle until the gold-plated connector on the edge of the module completely disappears into the slot.

3. Push the module down and secure it with the screw that was removed from step 1.



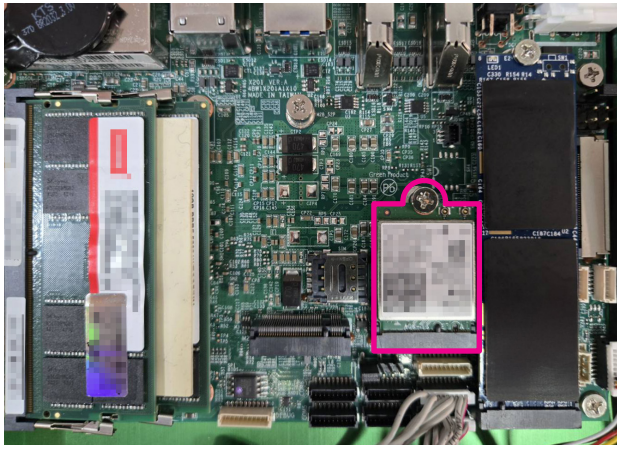
Installing an M.2 Wi-Fi Module (Key E 2230)

1. Locate the M.2 Key E slot and remove the screws on the motherboard.



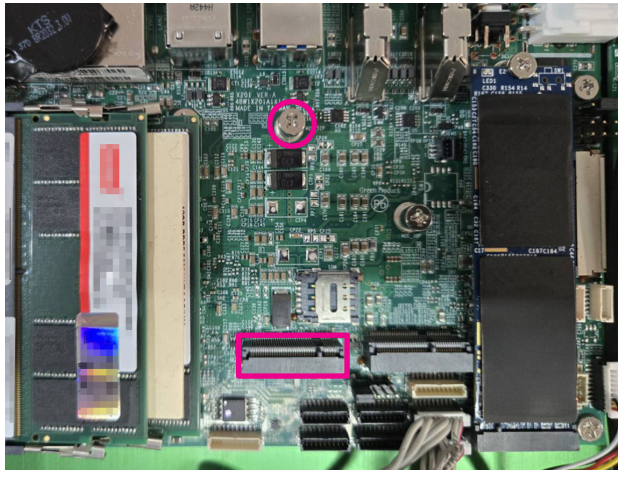
2. Insert the M.2 module into the M.2 slot at a 45-degree angle until the gold-plated connector on the edge of the module completely disappears into the slot.

3. Push the module down and secure it with the screw that was removed from step 1.

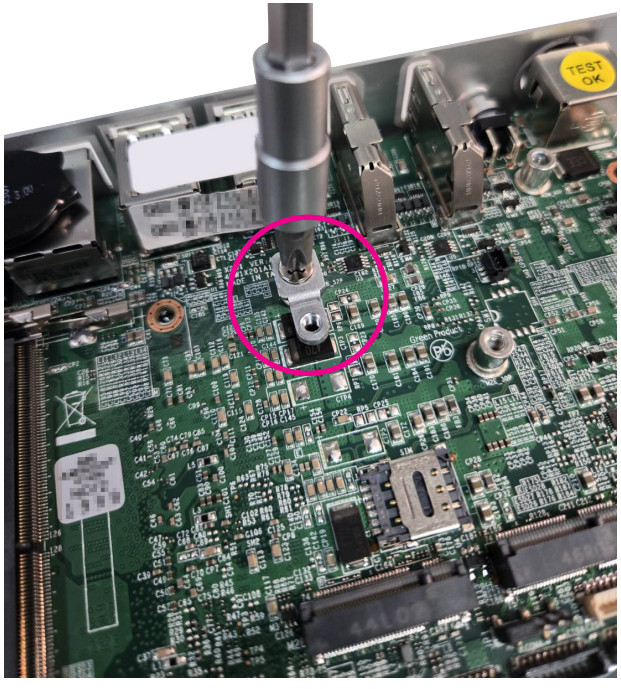


Installing an M.2 5G/LTE Module (Key B 3052/2242)

1. Locate the M.2 Key B slot and remove the screws on the motherboard.

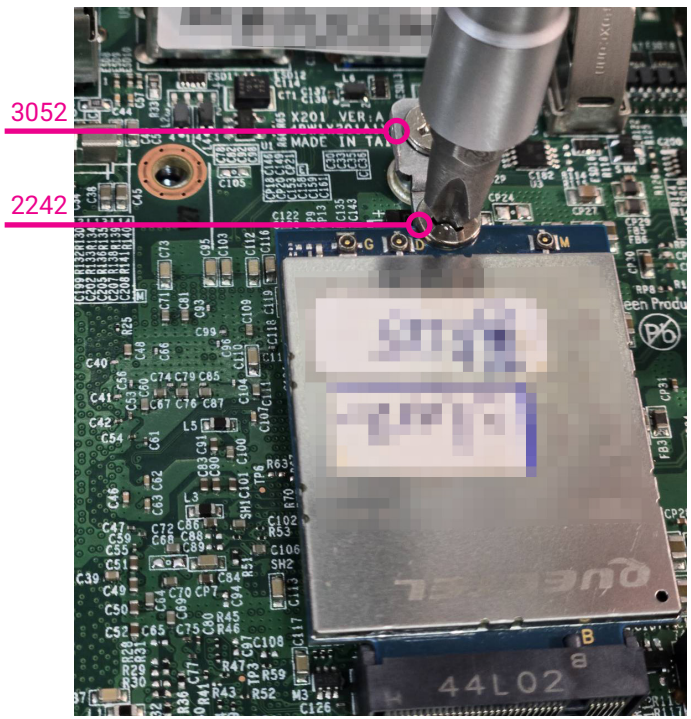


2. For a 2242 module, retrieve the M.2 extension nut bracket from the accessory box and secure it using the screw removed in Step 1. If the module's form factor is 3052, skip this step.



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.

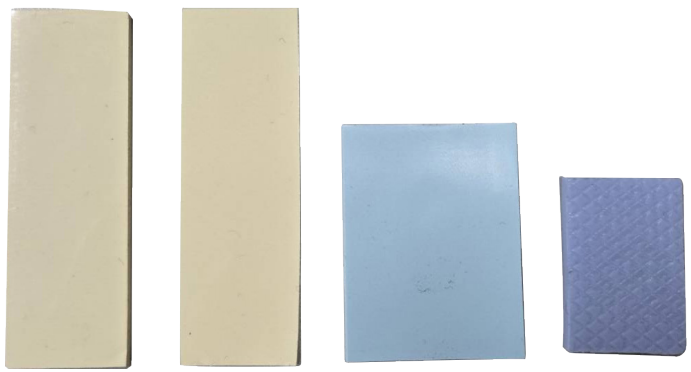
4. Tighten the module. For a 2242 form factor, use an additional screw from the accessory box. For a 3052 form factor, use the screw removed in Step 1.



Installing the Thermal Pad for the Modules

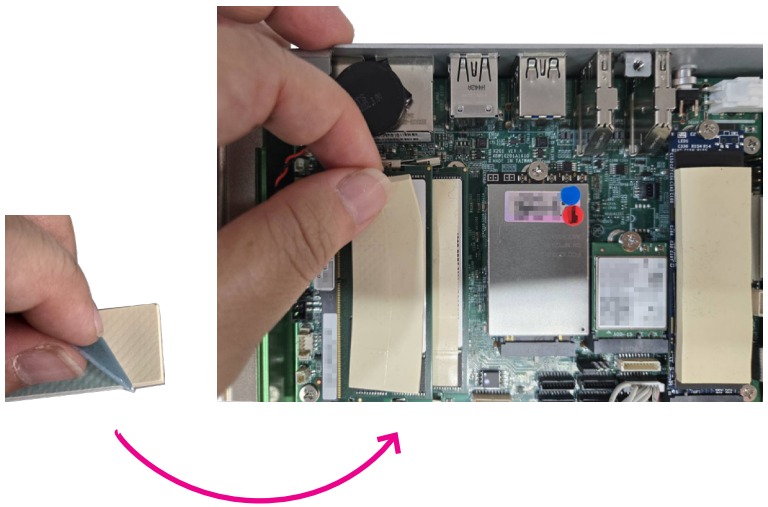
1. Upon successful completion of the modules installation outlined in the previous section, adhere the thermal pads according to the instructions in this section prior to chassis assembly.

2. Check the thermal pads in the accessory box.

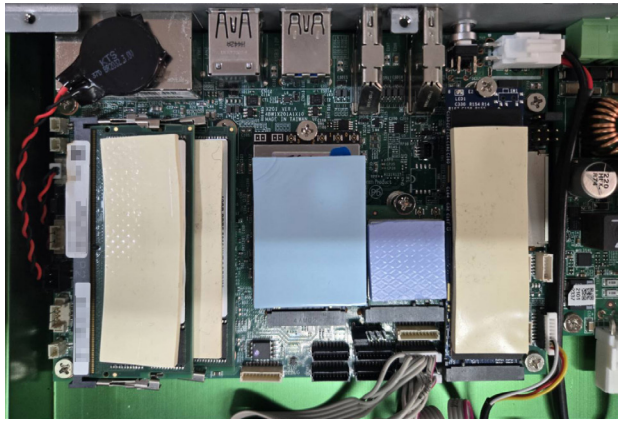


*Apply the 2 mm thermal pad (PN: 5060200706X00) to the memory module in the DIMM1 slot, and the 3 mm thermal pads (PN: 5060200720X00) to the memory module in the DIMM2 slot, the storage module, and the motherboard surface beneath the DIMM1 slot.

3. Peel off the film attached to the thermal pad and apply it to the DRAM modules.



4. Follow the same procedure to apply the remaining thermal pads to the communication and storage modules.



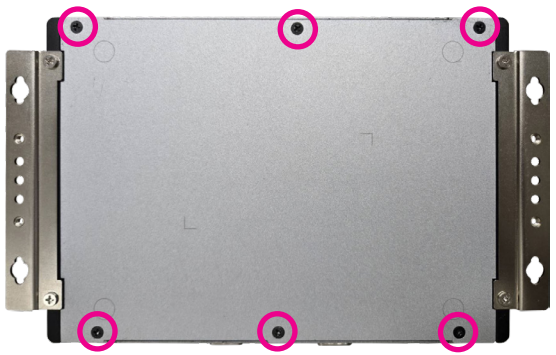
Memory(s) 5G/LTE Wi-Fi SSD

5. Refer to the next section for instructions on covering the bottom chassis.

Assembling the Bottom Cover

1. Make sure the bottom cover is facing the right direction.

2. Secure the bottom cover to the chassis firmly with the 6 screws (indicated in pink below).



Wall mounting instruction

To mount the system on to a wall or some other surface using the two mounting brackets, please follow the steps below.

1. Drill holes in the intended installation surface.

2. Align the mounting holes in the sides of the mounting brackets with the predrilled holes in the mounting surface.

3. Insert four retention screws, two in each bracket to secure the system to the wall.

Specification of the wall mount screw:
Round Head Screw w/ Spring+Flat Washer Long Fei:P3x6L P3x6 iso/SW6x0.5 NI

Chapter 4: BIOS Setup

This chapter describes how to use the BIOS setup program for the NDiS B363. 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 Web site 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.

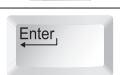
Scrolls backward through the values or options of the highlighted field.

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 

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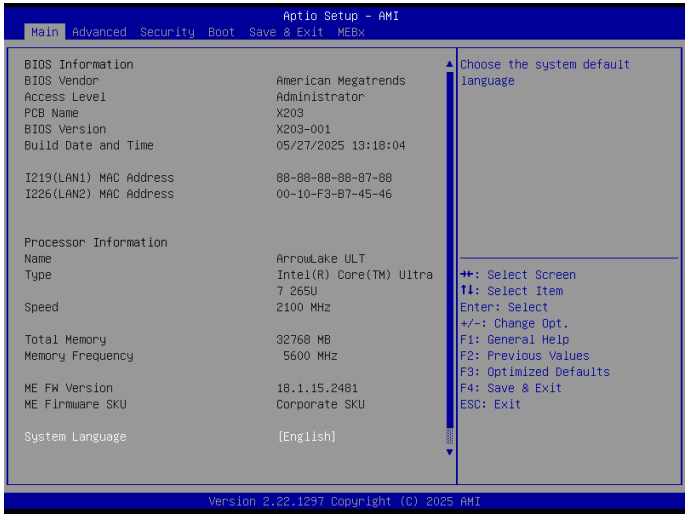
BIOS Setup Utility

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 i nd 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.



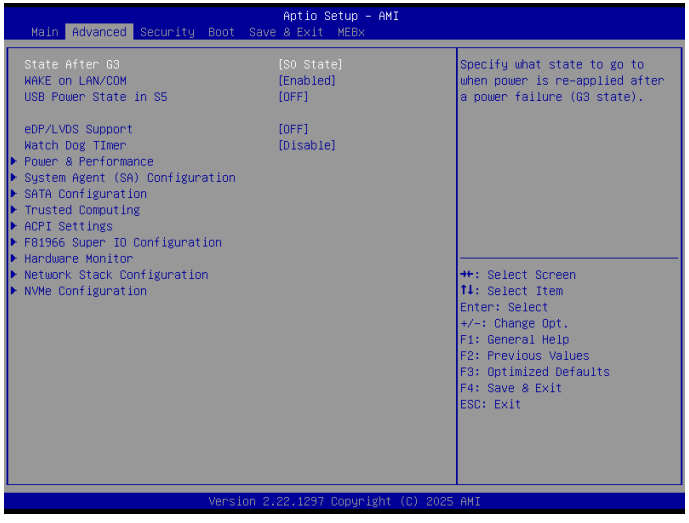
System Language

Choose the system default language.

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.



State After G3
Specify what state to go to when power is re-applied after a power failure (G3 State).

WAKE on LAN/COM
Enable or disable the integrate LAN & COM port RI to wake the system.

USB Power State in S5
Select USB power state in S5.

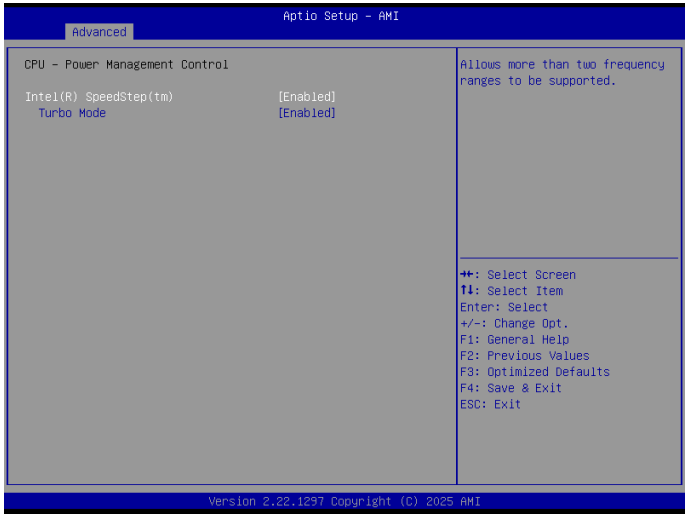
Watch Dog Timer
Enable or disable the Watch Dog Timer function.

Power & Performance

CPU - Power Management Control

Press <Enter> to open the CPU - Power Management Control submenu.

CPU - Power Management Control



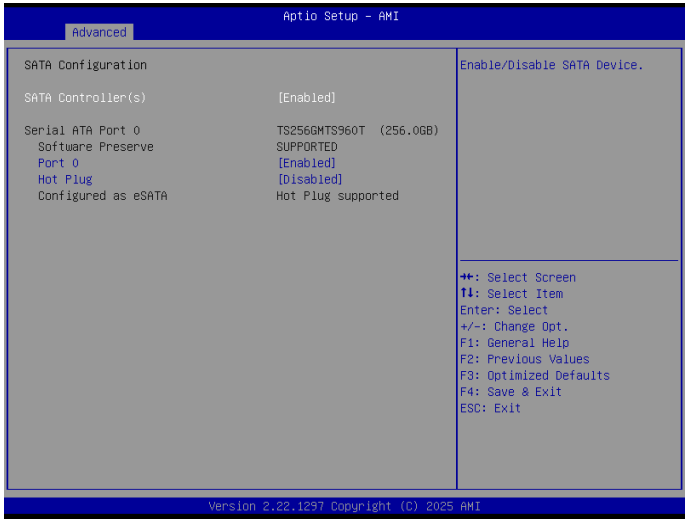
Intel(R) SpeedStep(tm)

Allows more than two frequency rangers to be supported.

Turbo Mode

Enable or disable processor turbo mode. By default, it's enabled.

SATA Configuration

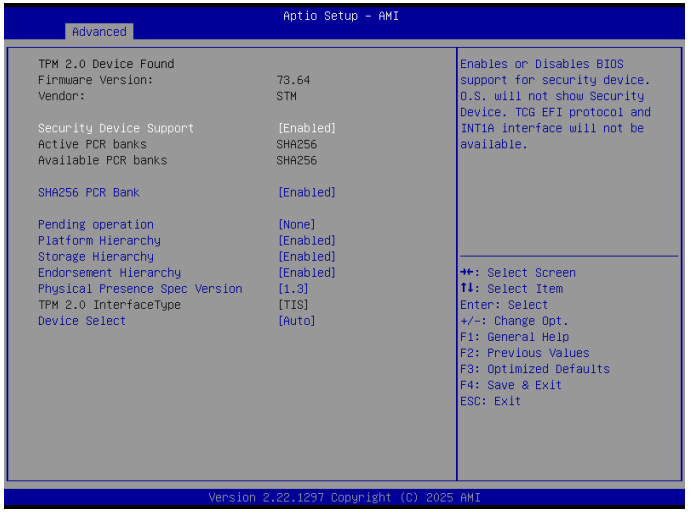


SATA Controller(s)
Enable or disable SATA device.

Port 0
Enable or disable SATA port.

Hot Plug
Enable or disable hot plugging feature.

Trusted Computing



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

SHA256 PCR Bank
Enable or disable SHA256 PCR Bank.

Pending operation
Schedule an operation for the security device.

Platform Hierarchy
Enable or disable platform hierarchy.

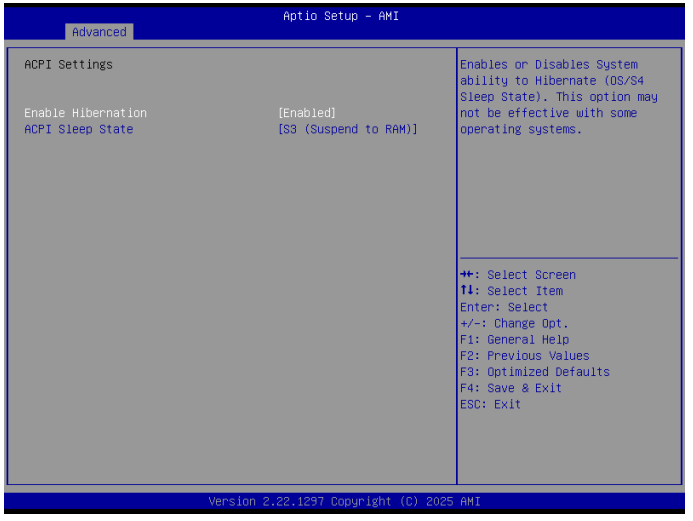
Storage Hierarchy
Enable or disable storage hierarchy.

Endorsement Hierarchy
Enable or disable endorsement hierarchy.

Physical Presence Spec Version
Configure the physical presence spec version.

Device Select
TPM 1.2 will restrict support to TPM 1.2 devices. TPM 2.0 will restrict support to TPM 2.0 devices. Auto will support both TPM 1.2 and 2.0 devices with the default set to TPM 2.0 devices if not found, and TPM 1.2 devices will be enumerated.

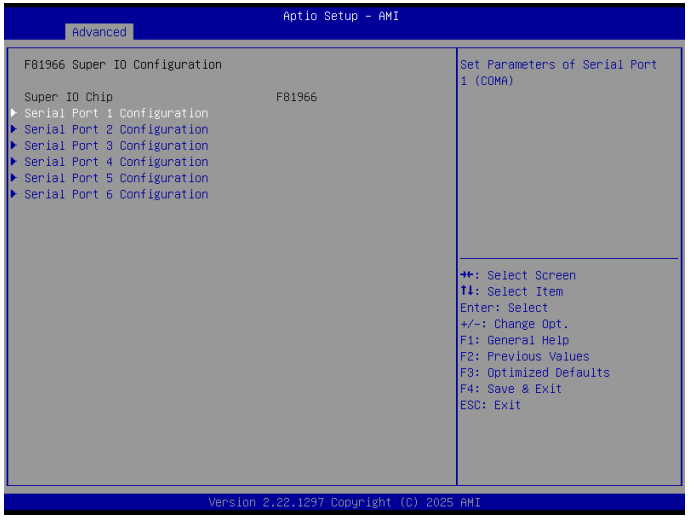
ACPI Settings



Enable Hibernation
Enable or disable system ability to hibernate (OS/S4 sleep state). This option may not be effective with some operation systems.

ACPI Sleep State
Select the highest ACPI sleep state the system will enter when the suspend button is pressed.

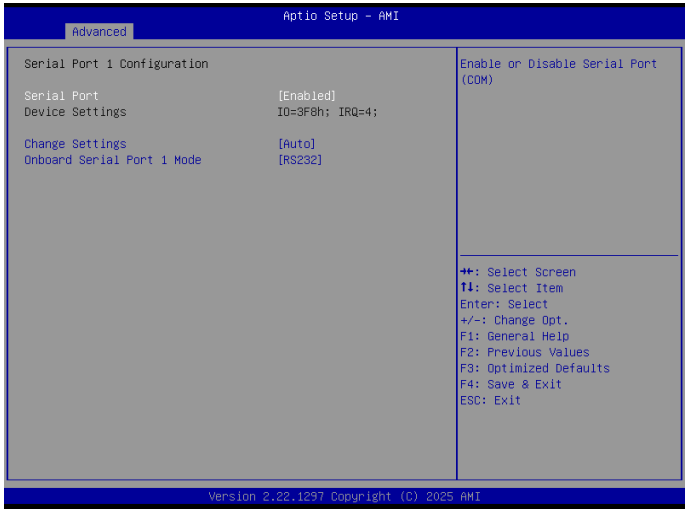
F81966 Super IO Configuration



Serial Port 1/2/3/4/5/6 Configuration

Press <Enter> to open the serial port 1/2/3/4/5/6 submenu.

Serial Port 1/2/3/4/5/6 Configuration



Serial Port 1/2/3/4/5/6

Enable or disable the serial port.

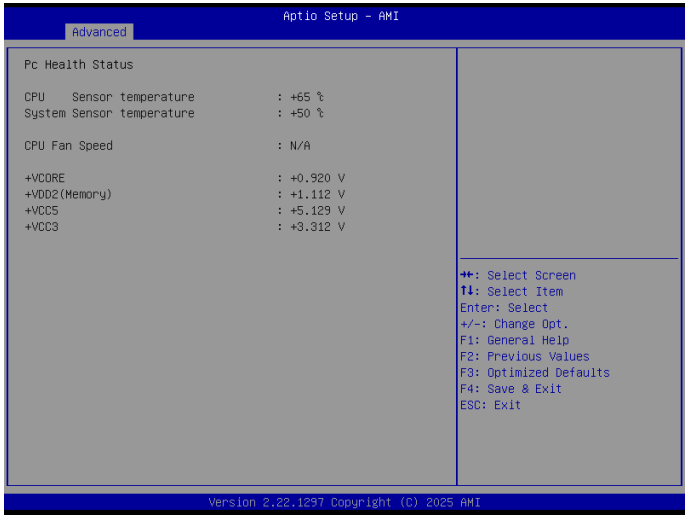
Change Settings

Select an optimal setting for the Super IO device.

Onboard Serial Port 1/2 Mode

This field is used to configure the mode of serial port 1 as RS-232, RS4-22, or RS-485.

Hardware Monitor



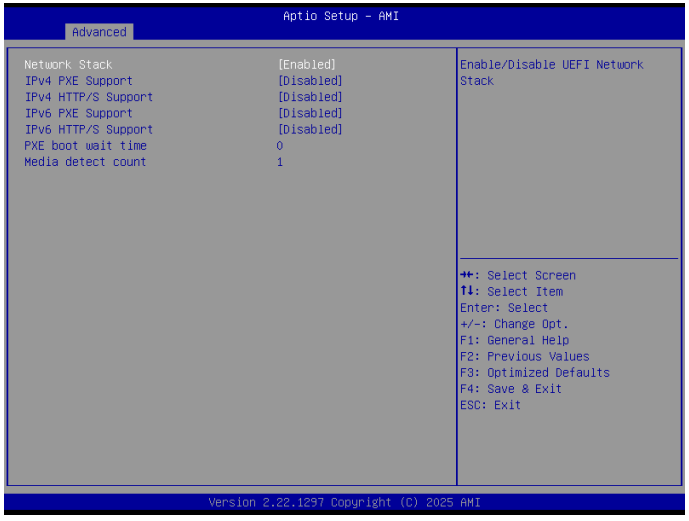
CPU Sensor Temp
Detect and display the current CPU temperature.

System Sensor Temperature
Detect and display the internal temperature of the system.

CPU Fan Speed
Detect and display the current CPU fan speed.

VCORE
Detect the CPU internal kernel voltage.

Network Stack Configuration



Network Stack
Enable or disable UEFI network stack.

IPv4 PXE Support
Enable or disable IPv4 PXE support. If disabled, the IPv4 boot option will not be created.

IPv4 HTTP Support
Enable or disable IPv4 HTTP support.

IPv6 PXE Support
Enable or disable IPv6 PXE support. If disabled, the IPv6 boot option will not be created.

IPv6 HTTP Support
Enable or disable Ipv6 HTTP support.

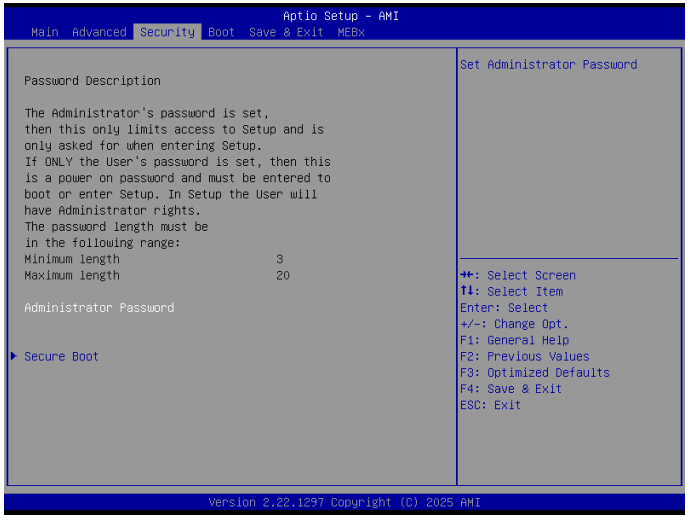
PXE boot wait time
Configure the wait time to press the ESC key to abort the PXE boot.

Media detect count
Configure the number of times the media will be checked.

NVMe Configuration

NVMe Device
When an NVMe device is connected, its model name will appear. Press <Enter> to open the submenu.

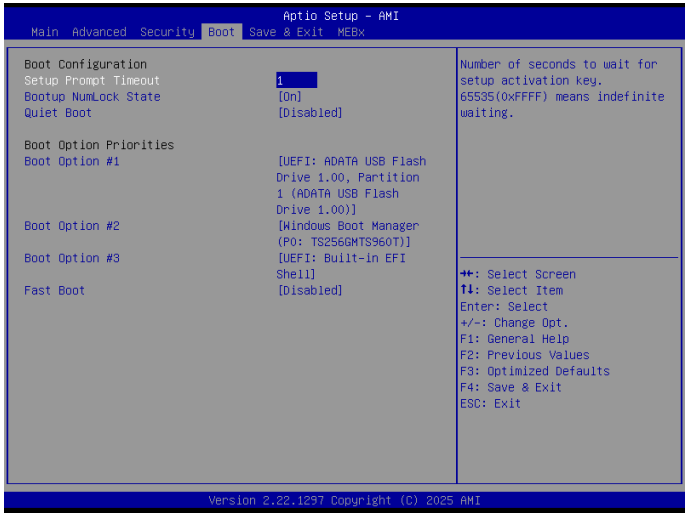
Security



Administrator Password
Select this to reconfigure the administrator's password.

Secure Boot
Press <Enter> to open the Secure Boot submenu.

Boot



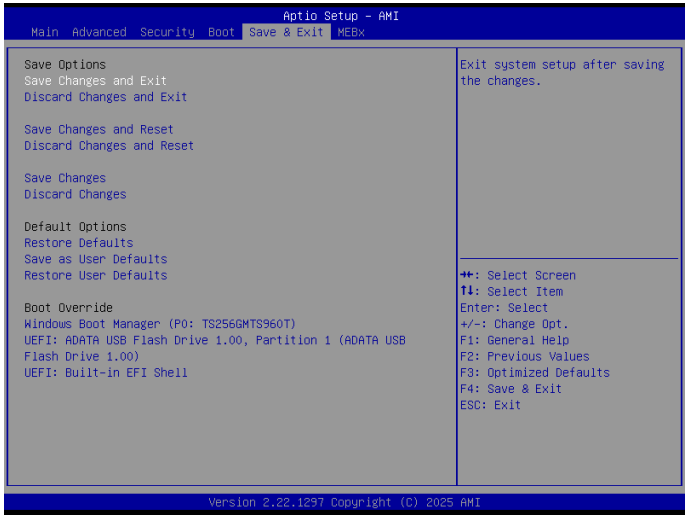
Setup Prompt Timeout
Number of seconds to wait for setup activation key. 65535(0xFFFF) menas indefinite waiting.

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
Enables or disables the quiet boot function.

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

Save & Exit



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

Discard Changes and Exit
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 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 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>