MiTAC

MITAC DIGITAL TECHNOLOGY CORP.

MP2-10MTS Series

User Manual V1.0

Master Series Embedded System

Intel® Meteor Lake-U Core Ultra 7/5 Processors

Performance, Versatile, and Rugged & Reliable

PREFACE

Copyright Notice

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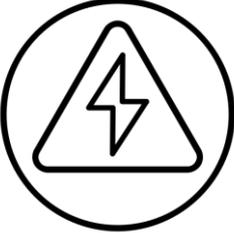
Disclaimer

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Declaration of Conformity

FCC	**FCC** This equipment has been tested and found to comply with the limits for a class "A" digital device, pursuant to part 15 of the 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 instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at him own expense.
CE	**CE** This equipment is in conformity with the requirement of the following EU legislations and harmonized standards. Product also complies with the Council directions.

Safety Information

	WARNING! / AVERTISSEMENT! Always completely disconnect the power cord from your chassis whenever you work with the hardware. Do not make connections while the power is on. Sensitive electronic components can be damaged by sudden power surges. Only experienced electronics personnel should open the PC chassis.
	CAUTION/ATTENTION Always ground yourself to remove any static charge before touching the CPU card. Modern electronic devices are very sensitive to static electric charges. As a safety precaution, use a grounding wrist strap at all times. Place all electronic components in a static-dissipative surface or static-shielded bag when they are not in the chassis.

Safety Precautions

For your safety, please carefully read all the safety instructions before using the device. All cautions and warnings on the equipment should be noted. Keep this user manual for future reference.

*Let service personnel to check the equipment in case any of the following problems appear:

- ■ The power cord or plug is damaged.
- ■ Liquid has penetrated into the equipment.
- ■ The equipment has been exposed to moisture.
- ■ The equipment does not work well or you cannot get it to work according to the user manual.
- ■ The equipment has been dropped and damaged.
- ■ The equipment has obvious signs of breakage on the surface.

部件名称 Part Name	有害物质 Hazardous Substances					
	铅(Pb)	汞(Hg)	镉(Cd)	六价铬 (Cr+6)	多溴联苯 (PBB)	多溴二苯 (PBDE)
印刷电路板 PCBA	X	O	O	O	O	O
金属部件 Metal Parts	X	O	O	O	O	O
电缆及电缆组 Cable and Cable Assemblies	X	O	O	O	O	O
其他外壳组件 Other Enclosure components	O	O	O	O	O	O
说明书 Manual	O	O	O	O	O	O

本表格依据SJ/T 11364的规定编制。

This table is prepared in accordance with the provisions of SJ/T 11364-2014.

○:表示该有害物质在该部件所有均质材料中的含量均在GB/T 26572规定的限量要求以下。

○: Indicates that the hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement of GB/T26572.

X: 表示该有害物质至少在该部件的某一均质材料中的含量超出GB/T 26572规定的限量要求。

X: Indicates that the hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement of GB/T26572.

在中国大陆销售的相应电子信息产品(EIP)都必须遵照中国大陆《电子信息产品污染控制标识要求》标准贴上环保使用期限(EFUP)标签。MiTAC 产品所采用的 EFUP 标签【请参阅实例，徽标内部的编号使用于制定产品】基于中国大陆的《电子信息产品环保使用期限通则》标准。

All Electronic Information Products (EIP) that are sold within Chinese Mainland must comply with the "Electronic Information Products Pollution Control Labeling Standard" of Chinese Mainland, marked with the Environmental Friendly Use Period (EFUP) logo. The number inside the EFUP logo that MiTAC uses (please refer to the photo) is based on the "Standard of Electronic Information Products Environmental Friendly Use Period" of Chinese Mainland.

Ordering Information

Model Number	CPU Model	AC Adaptor
MP2-10MTS-125U	Core Ultra 5 125U	w/o AC Adaptor
MP2-10MTS-155U	Core Ultra 7 155U	
MP2-10MTS-125U-AC	Core Ultra 5 125U	w/ 72W AC to DC Adaptor
MP2-10MTS-155U-AC	Core Ultra 7 155U	

Packing List

Item	Description	Q'ty
1	MP2-10MTS Embedded System	1
2	Quick Installation Guide (1 page)	1
3	Wall Mount Brackets (2 pcs in 1 set)	2
4	Screw Pack (For HDD and Wall Mount Bracket)	1
5	3-pin Terminal Block Power Connector (For DC Power Input)	1
6	2-pin Terminal Block Power Connector (For Remote Power Control)	1

Optional Xpansion Modules and Accessories

Model Number	Description
MS-01PON-S10-MP2 	802.3at PoE+ (Power budget 50W) Expansion Module for on board 4 x 2.5G LAN
MB-01DINVESA-MPB2 	Din-rail mount and VESA 75x75 holes transfer bracket + transfer plate kit (for MP2 and MB2 models only)
M2-02LAN-R10MP2 	Expansion Module with 2 x Intel i210-IT Giga LAN Port
M2-BM-KEY-HS-MP2 	Thermal kit for M.2 M key 2280 slot
MPE-072W24-3TUE	AC/DC 24V/3A, 72W 3PIN Terminal Block Power Adaptor with EU+US power cords
MPE-120W24-3TUE	AC/DC 24V/5A, 120W 3PIN Terminal Block Power Adaptor with EU+US power cords
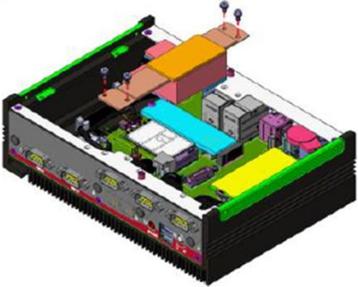
CONTENTS

INTRODUCTION

This chapter provides the MP2-10MTS Embedded
System product overview, including features,
hardware and mechanical specifications.

1

CHAPTER 1: INTRODUCTION

This chapter provides the MP2-10MTS Embedded System product overview, including features, hardware, mechanical specifications, and I/O placement.

1.1 Overview

MiTAC's MP2-10MTS embedded system represents the next generation of embedded technology, featuring the Intel® Meteor Lake-U Core Ultra 7/5 processors. These processors integrate an NPU and Iris Xe graphics engine, delivering exceptional AI inference performance. With outstanding graphics capabilities, robust processing power, OCP/OVP power protection, and an expandable design, this system offers versatile solutions for complex tasks and a wide range of applications.

1.2 Product Features

MP2-10MTS Embedded System offers the following features:

- Intel® Meteor Lake U Core™ Ultra 7 155U / Ultra 5 125U processors
- Outstanding graphic computing capability with Integrated 4 x Intel®Iris Xe graphics
- 1 x DDR5 SO-DIMM and support up to 48GB
- Supports Triple display for HDMI, DisplayPort, and Type-C (DP Alt Mode)
- 1 x 2.5" SSD/HDD slot
- 4 x Intel® i226-LM 2.5G LAN (Option: additional PoE+ support via MS-01PON-S10-MP2 or additional 2 x i210-IT LAN expansion via M2-02LAN-R10-MP2)
- 3 x USB 2.0, 4 x USB 3.2 Gen2, 1 x USB Type C, and 4 x COM
- 8V~26V wide voltage power input
- -40 ~ 60°C wide temperature
  *with 0.7m/s Air Flow (w/ Extended Temp. SSD/mSATA/RAM)

1.3 Hardware Specification

SYSTEM	
CPU	Intel® Meteor Lake-U Core™ Ultra 7 155U / Ultra 5 125U Processor
System Memory	DDR5 4800 MHz / 1 x 262-pin SO-DIMM / Max. 48GB (Non-ECC)
Graphics	Intel® Iris Xe Graphics
Display Interface	DisplayPort 1.2 / HDMI 1.4
Storage Slot	1 x 2.5" HDD/SSD bracket 1 x M.2 B Key 2242 SATA SSD Slot 1 x M.2 M Key 2280 NVMe/SATA SSD Slot
Ethernet	4 x Intel® I226-LM 2.5G LAN (Optional PoE Module) Additional 2 x Intel® I210-IT Giga LAN for Options
Audio	Realtek® ALC888S
I/O Chipset	Nuvoton NCT6126D
TPM	Nuvoton NPCT760AABYX TPM2.0
Expansion Slot	1 x M.2 2242/3042/3052 B Key (USB2.0/PCIeX1/SATAIII) 1x M.2 2280 M key (PCIe4.0 X4, SATAIII) 1 x M.2 2230 E key (PCIeX1, USB2.0)
Indicator	Power LED, HDD LED
FRONT I/O	3 x RS232 1 x RS232 / 422 / 485 8-bit GPIO in DB9 type 2 x USB 2.0 1 x Line-out HDD LED & Power LED Power Button 4 x SMA hole with rubber cap for wireless expansion
REAR I/O	4 x RJ-45 1 x USB Type C (Support PD15W, 5V/3A, DP Alt mode, USB3.2 Gen1) 4 x USB 3.2 Gen 2 (10 Gbps) 1 x USB 2.0 (integrated in the same blue type connector) 1 x HDMI 1.4 1 x DisplayPort 1.2 1 x 3-pin Terminal Block Power Input 1 x 2-pin Terminal Block Remote Power on / off 1 x Nano SIM slot with cover 2 x SMA hole with rubber cap for wireless expansion
Watchdog Timer	1~255 Steps by Software Program

POWER REQUIREMENT	
Power Input	8~26V Wide Range DC Input w/ Terminal Block Connectivity
MECHANICAL	
Thermal Design	Fanless
Mounting	Wall Mount / Side Mount
	75 mm x 75 mm VESA Holes & Din Rail Mount Combo Kit (Optional)
Dimension	8.3" x 5.9" x 2.5" (210 x 150 x 63 mm)
Material	Top cover: Aluminum Alloy , Bezel and chassis: Steel
ENVIRONMENTAL	
Operating	-40 ~ 60°C
Temperature	*with 0.7m/s Air Flow (w/ Extended Temp. SSD/mSATA/RAM)
Operating Humidity	10%~95% R/H (Non-condensing)
Vibration Resistance	Operating, 2 Grms, 5-500 Hz, 3 Axes
	(w/ SSD, according to IEC60068-2-64)
Shock Resistance	Operating, 50 Grms, Half-sine 11 ms Duration
	(w/ SSD, according to IEC60068-2-27)
Certification	EMC: CE & FCC
	Safety: compliant with LVD, EN62368-1
OS	
OS Support	Windows® 11 64-bit, Windows® 10 64-bit, Linux (support by request)

*Notes[1]: Installation in Restricted Access Location (RAL)
A restricted access location is a designated area within an incident area (High or Low temperature environment)
With authorized people can enter for a period of time and for a specific purpose.

1. *Access can only be gained by service people or by users who have been instructed about the reasons for the Restrictions applied to the location and about any precautions that shall be taken.*
2. *Access is through the use of a tool or lock and key, or other means of security, and is controlled by the authority Responsible for the location.*
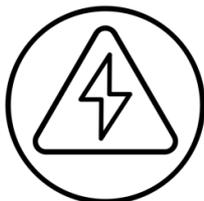
Notes[2]: Please make sure that the power consumption is in the spec of the power supply output capability from AC adaptor (72W or 120W). Please choose the suitable AC adaptor for your application.

AC/DC 24V/3A, 72W 3PIN Terminal Block Power Adaptor
AC/DC 24V/5A, 120W 3PIN Terminal Block Power Adaptor

Note[3]: The safety ambient operating temperature is 40 degree C if the external AC adapter model: EA10681V or EA11011M will be placed in the same high temperature area with the embedded system.

Note[4]: CAUTION - Lithium battery is included in this embedded system. Please do not puncture, mutilate, or dispose of battery in fire. There will be danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by manufacturer. Dispose of used battery according to manufacturer instructions and in accordance with your local regulations.

1.4 Mechanical Specification

■ Mechanical Dimension: 210 mm x 150 mm x 63 mm
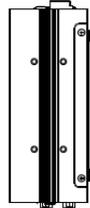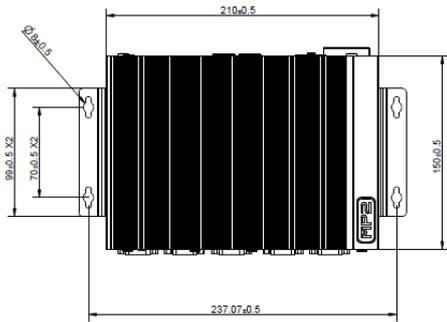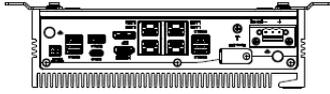
WALL MOUNT MODE
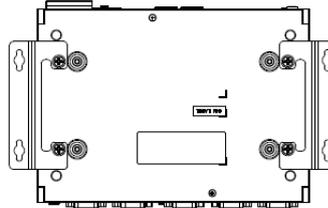
SIDE MOUNT MODE
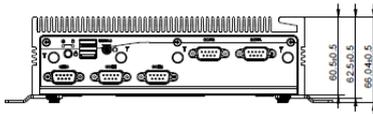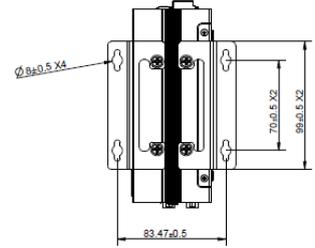
1.5 System I/O Placement

MP2-10MTS
- **Front I/O:**
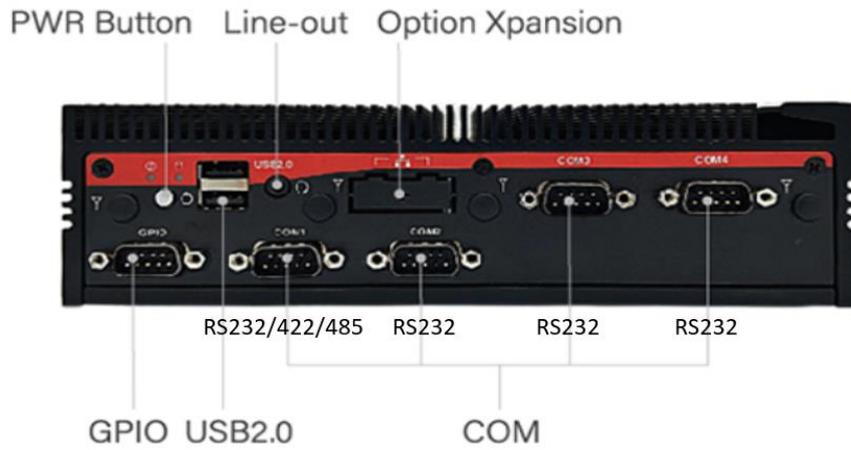
- **Rear I/O:**

DIP SWITCH SETTING AND PIN DEFINITION

2

This chapter provides information about how to set up the dip switch and use internal I/Os of MP2-10MTS Embedded System hardware.
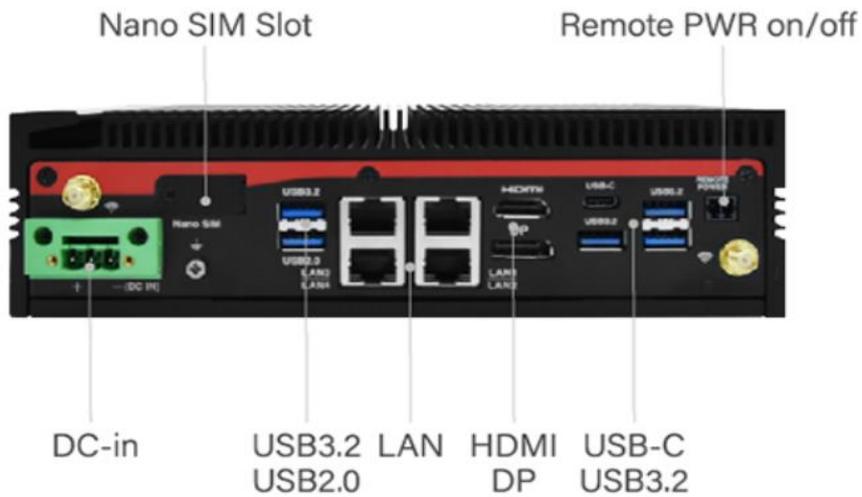
CHAPTER 2: DIP SWITCH SETTING AND PIN DEFINITION

This chapter provides information about how to set up the dip switch, and use internal I/Os of MP2-10MTS Embedded System hardware.

2.1 Jumper and Internal Connector Overall Placement

Top View
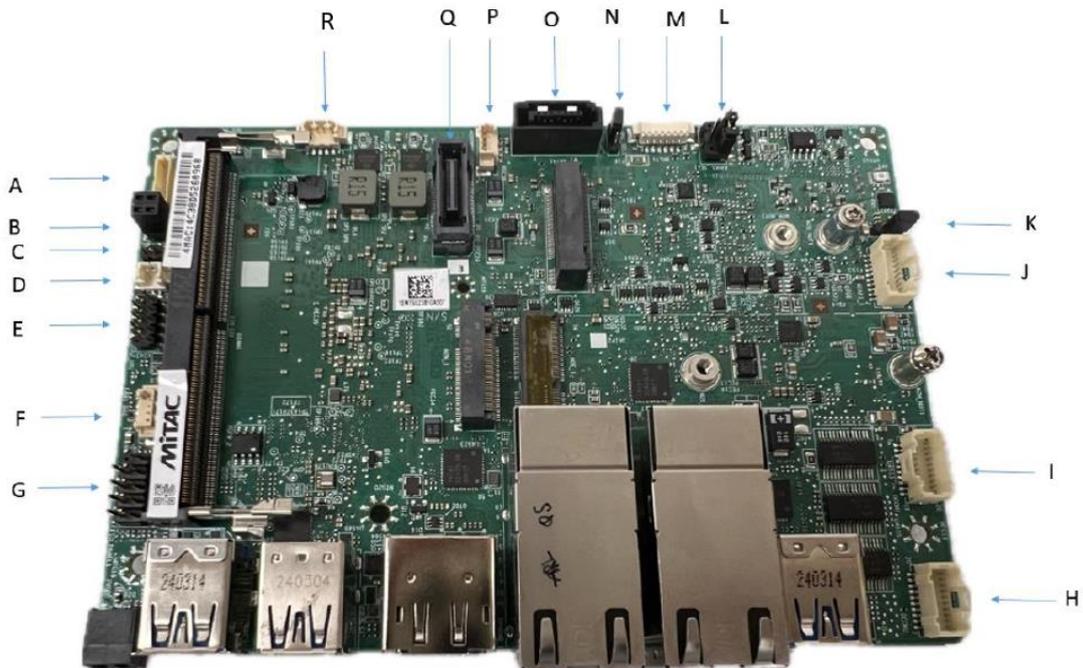
Bottom View

Item	Description
A	Front IO audio connector
B	Headphone type select header
C	CMOS header
D	RTC battery connector
E	USB 2.0 header
F	Fan connector
G	Front IO header
H	RS-232 header. (COM3+COM4)
I	RS-232 /422/485(COM1)+RS-232(COM2)connector
J	MiAPI connector
K	ATX mode header
L	Panel power header
M	Backlight connector
N	Backlight voltage select header
O	SATA connector
P	SATA power header
Q	POE power board connector
R	Speaker connector
S	DC-in header

2.2 Jumper Setting

CMOS Header (C)

CMOS Clear Header
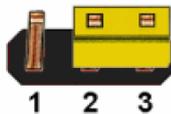
Vendor: Joint Tech
Model: A2015WV-03PN6BG1NY3L

CMOS Clear

1-2	Clear CMOS
2-3	Secured RTC Reset

ATX Mode Header (K)
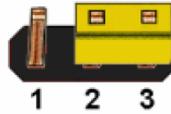
Vendor: Joint Tech
Model: A2015WV-03PN6BG1NY3L

AT/ATX mode	
1-2	AT Mode
2-3	NON-AT

Headphone type select header (B)

Vendor: SUPERIOR TECH
Model: PHED-SS004G1ABONE-B331

Pin	Signal Name	Description
1	MIC_R_JACK	Jumper default (1-2)
2	MIC2	Jumper default (1-2)
3	GND	Jumper default (3-4)
4	MIC_L_JACK	Jumper default (3-4)

2.3 Connector Pin Definition

■ **8-bit GPIO**
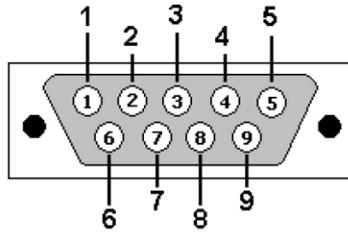
DB9	GPIO	DB9	GPIO
1	GP1	2	GP5
3	GP2	4	GP6
5	GP3	6	GP7
7	GP4	8	GP8
9	GND		

■ **COM#1(RS232/422/485) / COM#2~COM#4 (RS232)**
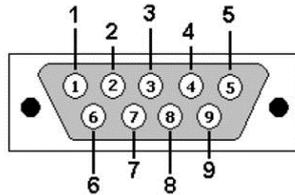
Pin No	RS-232	RS-422	RS-485
1	DCD	TX–	DATA–
2	RX	TX+	DATA+
3	RTX	RX+	NC
4	DTR	RX–	NC
5	GND	GND	GND
6	DSR	NC	NC
7	RTS	NC	NC
8	CTS	NC	NC
9	RI	NC	NC

■ 3-pin terminal block for DC Input

Pin	Signal
1	DC IN +8~26VIN
2	-
3	GND

■ 2-pin terminal block for remote power on/off
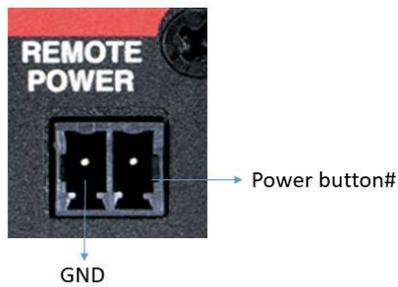
Vendor: 祥益精密（**XIAN YI**）
Model: HE-ECH350R-02PLWR

Pin	Signal Name	Description	Pin	Signal Name	Description
1	TB_PWRBT_N	Power button#	2	Ground	Ground

SYSTEM SETUP

This chapter provides information about how to set up the
MP2-10MTS Embedded System hardware installation.

3

CHAPTER 3: SYSTEM SETUP

This chapter provides information about how to set up the MP2-10MTS Embedded System hardware installation.

⚠️	Warning: The edge of MP2-10MTS aluminum extrusion fins is a little bit sharp. Please be careful when you move the unit, do the installation, and operate the embedded system!

MP2-10MTS — Quick Assembly Guide

Open Bottom Cover
1. Loosen 6 screws from Bottom cover as the dash line locations.
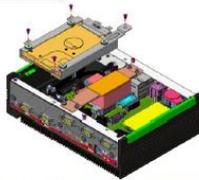
Release HDD Tray
2. Loosen 4 screws of HDD tray as arrow direction & pull out HDD tray.

Release M.2 Heatsink
3. Loosen 4 screws of M.2 heatsink as the dash line locations & pull out heatsink.

DRAM Maintenance
4. Install DIMM to MB on dash line area , **no need to disassemble HDD tray and M.2 heatsink.**

M.2 B-Key 4G/5G Card Installation
5. Install 4G/5G card on M.2 slot & plug in antenna IPEX header on 4G/5G card as arrow locations, then install the SIM card from rear IO.
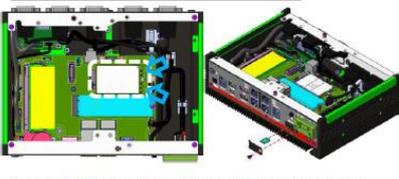
M.2 M-Key SSD Installation
6. Install M.2 SSD on M.2 slot on dash line area.
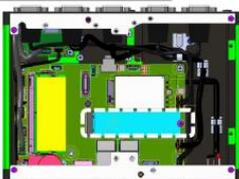
M.2 E-Key Wi-Fi Card Installation
7. Disassemble M.2 SSD, install Wi-Fi card on M.2 slot & plug in antenna IPEX header on Wi-Fi card as arrow locations, then assemble the M.2 SSD back.
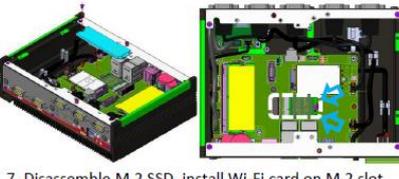
HDD Installation on Tray
8. Install HDD into HDD tray, pick up HDD screw kit from accessory and fixed as dash line locations.
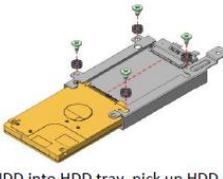
POE Module Installation
9. Install POE bracket to chassis, hex stud on MB and fixed as dash line locations then install POE module on MB and fixed as dash line locations.
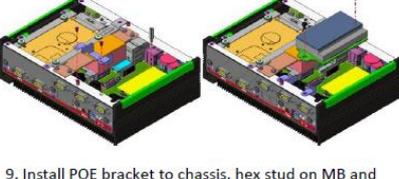
BIOS SETUP

This chapter provides information about how to set up BIOS and use BIOS menu items to adjust basic function settings.

4

CHAPTER 4: BIOS SETUP

This chapter provides information about how to set up BIOS and use BIOS menu items to adjust basic function settings.

4.1 Main Page

```
                              Aptio Setup - AMI
    Main  Advanced  Security  Boot  Save & Exit  MEBx

    BIOS Information                                    Set the Date. Use Tab to
    BIOS Vendor              American Megatrends         switch between Date elements.
    Core Version             5.32                        Default Ranges:
    Compliancy               UEFI 2.9; PI 1.7            Year: 1998-9999
    BIOS Version             D8950X02c                   Months: 1-12
    Build Date               09/09/2024                  Days: Dependent on month
                                                         Range of Years may vary.
    ME FW Version            18.0.5.2107

    Processor Information
    Intel(R) CoreTM Ultra 7 165U
    Microcode Revision       1C

    Total Memory             8192 MB                    →←: Select Screen
    Memory Frequency         5600 MHz                   ↑↓: Select Item
                                                         Enter: Select
    Serial ATA Port 0        Empty                      +/-: Change Opt.
    Serial ATA Port 1        Empty                      F1: General Help
                                                         F2: Previous Values
    System Date              [Mon 01/01/2024]           F3: Optimized Defaults
    System Time              [00:01:33]                 F4: Save & Reset
                                                         ESC: Exit

                        Version 2.22.1293 Copyright (C) 2024 AMI
```

Field Name	**BIOS Vendor**
Default Value	American Megatrends
Comment	This field is not selectable. There is no help text associated with it.

Field Name	**Core Version**
Default Value	5.32
Comment	This field is not selectable. There is no help text associated with it.

Field Name	**Compliancy**
Default Value	UEFI 2.9 ; PI 1.7
Comment	This field is not selectable. There is no help text associated with it.

Field Name	**BIOS Version**

Default Value	Display the version of the BIOS
Comment	This field is not selectable. There is no help text associated with it.

Field Name	**Build Date**
Default Value	Display build date of the BIOS
Comment	This field is not selectable. There is no help text associated with it.

Field Name	**ME FW Version**
Value	ME Firmware Version.
Comment	This field is not selectable. There is no help text associated with it.

Field Name	**Processor Information**
Value	Display the installed CPU brand.
Comment	This field is not selectable. There is no help text associated with it.

Field Name	**Microcode Revision**
Value	Display the CPU microcode revision.
Comment	This field is not selectable. There is no help text associated with it.

Field Name	**Total Memory**
Value	Display the installed memory size.
Comment	This field is not selectable. There is no help text associated with it.

Field Name	**Memory Frequency**
Value	Display the installed memory frequency.
Comment	This field is not selectable. There is no help text associated with it.

Field Name	**Serial ATA Port 0**
Value	Display the installed SATA device model/size.
Comment	This field is not selectable. There is no help text associated with it.

Field Name	**Serial ATA Port 1**
Value	Display the installed SATA device model/size.
Comment	This field is not selectable. There is no help text associated with it.

Field Name	**System Date**
Default Value	[Www mm/dd/yyyy]
Possible Value	Www : Mon/Tue/Wed/Thu/Fri/Sat/Sun mm : 1-12 dd : 1-31 yyyy : 1998-9999
Help	Set the Date. Use Tab to switch between Date elements. Default Ranges: Year : 1998-9999 Months : 1-12 Days : Dependent on month Range of Years may vary.

Field Name	**System Time**
Default Value	[hh :mm :ss]
Possible Value	hh : 0-23 mm : 0-59 ss : 0-59
Help	Set the Time. Use Tab to switch between Time elements.

4.2 Advanced Page

```
                              Aptio Setup – AMI
     Main  Advanced  Security  Boot  Save & Exit  MEBx

  ▶ Onboard Device                              Onboard Device Configuration
  ▶ CPU Configuration
  ▶ Trusted Computing
  ▶ SMART Settings
  ▶ Super IO Configuration
  ▶ Hardware Monitor
  ▶ S5 RTC Wake Settings
  ▶ Network Stack Configuration
  ▶ NVMe Configuration

  ▶ Intel(R) Rapid Storage Technology

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

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```

Field Name	**Onboard Device**
Help	Onboard Device Configuration.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**CPU Configuration**
Help	CPU Configuration Parameters.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**Trusted Computing**
Help	Trusted Computing Settings
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**SMART Settings**
Help	System SMART Settings
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**Super IO Configuration**
Help	System Super IO Chip Parameters.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**Hardware Monitor**
Help	Monitor hardware status
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**S5 RTC Wake Settings**
Help	Enable system to wake from S5 using RTC alarm
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**Network Stack Configuration**
Help	Network Stack Settings.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**NVMe Configuration**
Help	NVMe Device Options Settings
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	Intel(R) Rapid Storage Technology
Help	This Formset allows the user to manage RAID volumes on the Intel(R) RAID Controller
Comment	Press Enter when selected to go into the associated Sub-Menu.

4.2.1   Onboard Device

```
                              Aptio Setup - AMI
    ┌─────────────┐
    │  Advanced   │
    └─────────────┘

 LVDS/eDP Panel                    [Disabled]          LVDS/eDP Panel Enable/Disable
 Turbo Mode                        [Enabled]
 State After G3                    [S5 State]
 Wake on LAN Enable                [Enabled]
 HD Audio                          [Enabled]
 NPU Device (B0:D11:F0)            [Enabled]
 Enable VMD controller             [Disabled]




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




                       Version 2.22.1293 Copyright (C) 2024 AMI
```

Field Name	**LVDS/eDP Panel**
Default Value	[Disabled]
Possible Value	Enabled
	Disabled
Help	LVDS/eDP Panel Enable/Disable

Field Name	**Turbo Mode**
Default Value	[Enabled]
Possible Value	Enabled
	Disabled
Help	Enable/Disable processor Turbo Mode.

Field Name	**State After G3**
Default Value	[S5 State]
Possible Value	S0 State
	S5 State
Help	Specify what state to go to when power is re-applied after a power failure (G3 state).

Field Name	**Wake on LAN Enable**
Default Value	[Enabled]
Possible Value	Enabled
	Disabled
Help	Enable/Disable LAN to wake the system.

Field Name	HD Audio
Default Value	[Enabled]
Possible Value	Enabled
	Disabled
Help	Control Detection of the HD-Audio device.
	Disabled = HDA will be unconditionally disabled
	Enabled = HDA will be unconditionally enabled.

Field Name	NPU Device (B0:D11:F0)
Default Value	[Enabled]
Possible Value	Enabled
	Disabled
Help	Enable/Disable NPU (Neural Processing Unit) Device.

Field Name	Enable VMD controller
Default Value	[Disabled]
Possible Value	Enabled
	Disabled
Help	Enable/Disable to VMD controller

4.2.2 CPU Configuration

```
                          Aptio Setup - AMI
   ┌────────────┐
   │  Advanced  │
   └────────────┘

 CPU Configuration


    ID                          0xB0650
    Brand String                Genuine Intel(R) 0000
    VMX                         Supported








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




                   Version 2.22.1297 Copyright (C) 2025 AMI
```

```
                              Aptio Setup – AMI
       Advanced

    CPU Configuration                                    Enables utilization of
                                                         additional hardware
                                                         capabilities provided by Intel
    ID                          0xA06A4                  (R) Trusted Execution
    Brand String                Intel(R) CoreTM Ultra 5  Technology.
                                135U                     Changes require a full power
    VMX                         Supported                cycle to take effect.

    Intel Trusted Execution Technology   [Disable]


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




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```

Field Name	**ID**
Default Value	Displays CPU Signature
Comment	This field is not selectable. There is no help text associated with it.

Field Name	**Brand String**
Default Value	Displays the CPU brand string
Comment	This field is not selectable. There is no help text associated with it.

Field Name	**VMX**
Default Value	VMX Supported or Not
Comment	This field is not selectable. There is no help text associated with it.

4.2.3 Trusted Computing

```
                              Aptio Setup – AMI
    Advanced

    TPM 2.0 Device Found                               Enables or Disables BIOS
    Firmware Version:              700.19              support for security device.
    Vendor:                        INTC               O.S. will not show Security
                                                      Device. TCG EFI protocol and
    Security Device Support       [Enable]            INT1A interface will not be
    Pending operation             [None]              available.


                                                      ━━━━━━━━━━━━━━━━━━━━━━━━━━━
                                                      ↔: Select Screen
                                                      ↑↓: Select Item
                                                      Enter: Select
                                                      +/–: Change Opt.
                                                      F1: General Help
                                                      F2: Previous Values
                                                      F3: Optimized Defaults
                                                      F4: Save & Reset
                                                      ESC: Exit



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```

Field Name	**Firmware Version**
Default Value	TPM module version.
Comment	This field is not selectable. There is no help text associated with it.

Field Name	**Vendor**
Default Value	TPM module vendor name.
Comment	This field is not selectable. There is no help text associated with it.

Field Name	**Security Device Support**
Default Value	[Enable]
Possible Value	Enable Disable
Help	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.

Field Name	**Pending operation**
Default Value	[None]
Possible Value	None TPM Clear
Help	Schedule an Operation for the Security Device. NOTE: Your Computer will reboot during restart in order to change State of Security Device.

4.3 Trusted Computing SMART Settings

```
                            Aptio Setup – AMI
┌─────────────┐
│  Advanced   │
└─────────────┘

  SMART Settings                                      Run SMART Self Test on all
                                                      HDDs during POST.
  SMART Self Test                  [Disabled]




                                                      ──────────────────────────

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




                   Version 2.22.1293 Copyright (C) 2024 AMI
```
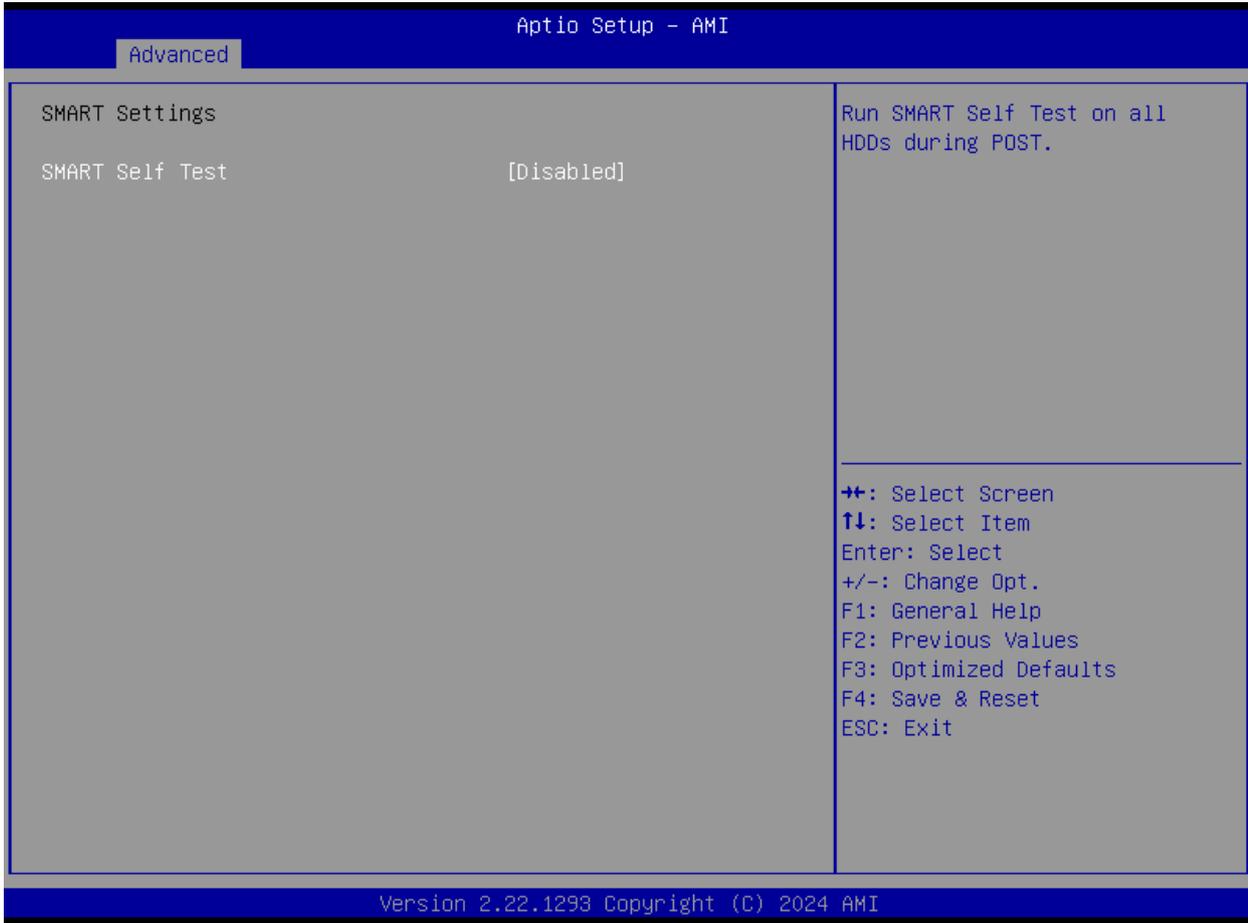
Field Name	**SMART Self Test**
Default Value	[Disabled]
Possible Value	Enabled
	Disabled
Help	Run SMART Self Test on all HDDs during POST.

4.4 Super IO Configuration

```
                              Aptio Setup - AMI
   Advanced

 Super IO Configuration                                    Set Parameters of Serial Port
                                                           1 (COMA)
 Super IO Chip                         NCT6126D
▶ Serial Port 1 Configuration
▶ Serial Port 2 Configuration
▶ Serial Port 3 Configuration
▶ Serial Port 4 Configuration




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


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```

Field Name	**Serial Port 1 Configuration**
Help	Set Parameters of Serial Port 1 (COMA)
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**Serial Port 2 Configuration**
Help	Set Parameters of Serial Port 2 (COMB)
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**Serial Port 3 Configuration**
Help	Set Parameters of Serial Port 3 (COMC)
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**Serial Port 4 Configuration**
Help	Set Parameters of Serial Port 4 (COMD)
Comment	Press Enter when selected to go into the associated Sub-Menu.

4.4.1 Serial Port 1 Configuration
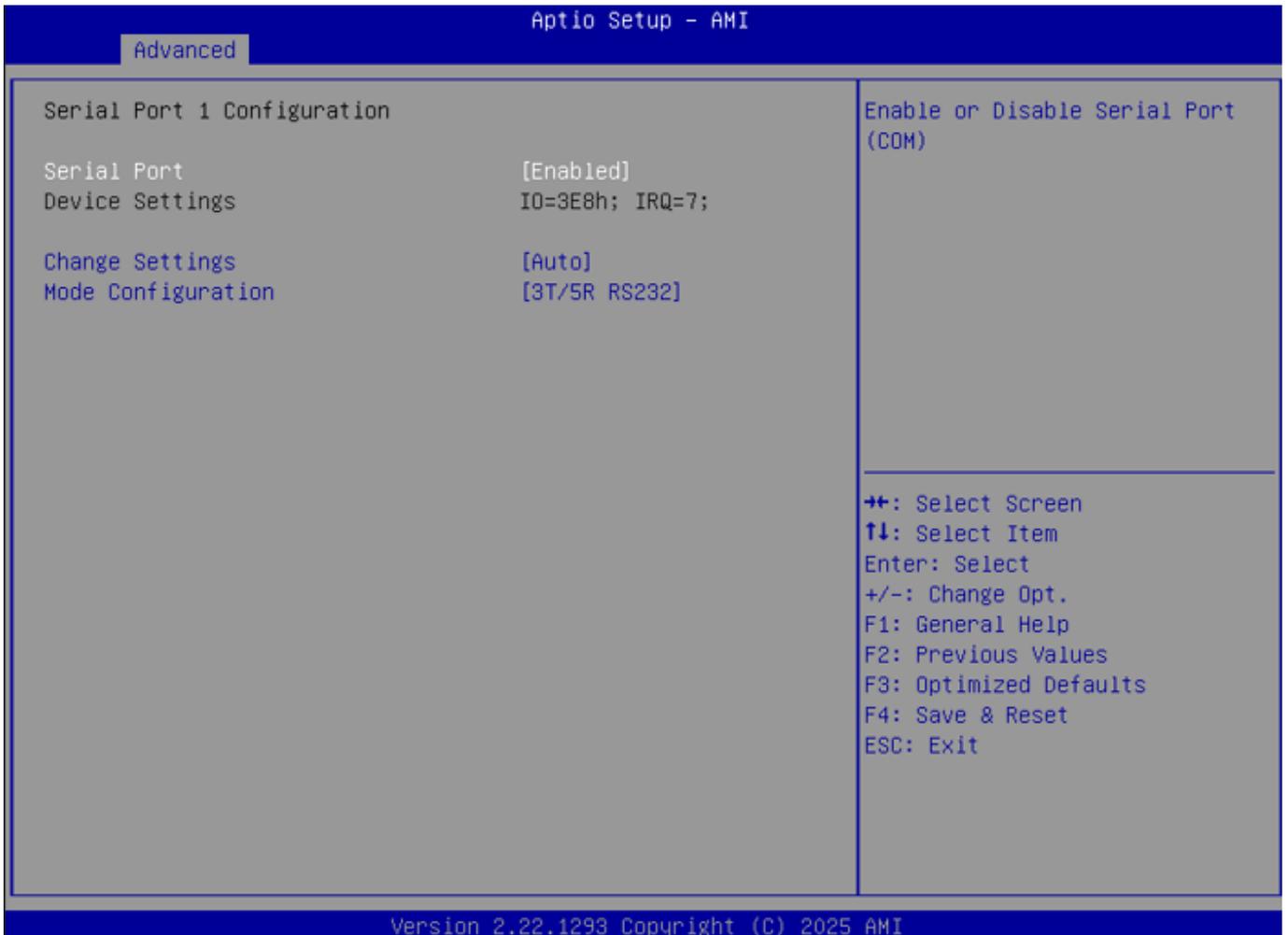
```
                              Aptio Setup - AMI
    Advanced

 Serial Port 1 Configuration                              Enable or Disable Serial Port
                                                          (COM)
 Serial Port                        [Enabled]
 Device Settings                    IO=3E8h; IRQ=7;

 Change Settings                    [Auto]
 Mode Configuration                 [3T/5R RS232]



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




                 Version 2.22.1293 Copyright (C) 2025 AMI
```

Field Name	Serial Port
Default Value	[Enabled]
Possible Value	Disabled Enabled
Help	Enable or Disable Serial Port(COM)

Field Name	Device Settings
Default Value	Device Super IO COM1 Address and IRQ.
Comment	This field is not selectable. There is no help text associated with it.

Field Name	Change Settings
Default Value	[Auto]
Possible Value	Auto; IO=3E8h;IRQ=7; IO=3E8h;IRQ=3,4,5,6,7,9,10,11,12; IO=2E8h;IRQ=3,4,5,6,7,9,10,11,12; IO=220h;IRQ=3,4,5,6,7,9,10,11,12; IO=228h;IRQ=3,4,5,6,7,9,10,11,12;
Help	Select an optimal settings for Super IO Device

Field Name	Mode Configuration
Default Value	[3T/5R RS232]
Possible Value	1T/1R RS422

	3T/5R RS232 1T/1R RS485 TX ENABLE Low Active 1T/1R RS422 with termination resistor 1T/1R RS485 with termination resistor TX ENABLE Low Active Disabled
Help	Configure serial port as RS232/RS422/RS485.

4.4.2 Serial Port 2 Configuration

```
                              Aptio Setup - AMI
    Advanced

 Serial Port 2 Configuration                              Enable or Disable Serial Port
                                                          (COM)
 Serial Port                      [Enabled]
 Device Settings                  IO=2E8h; IRQ=7;

 Change Settings                  [Auto]




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




                         Version 2.22.1293 Copyright (C) 2025 AMI
```

Field Name	Serial Port
Default Value	[Enabled]
Possible Value	Disabled
	Enabled
Help	Enable or Disable Serial Port(COM)

Field Name	Device Settings
Default Value	Device Super IO COM2 Address and IRQ.
Comment	This field is not selectable. There is no help text associated with it.

Field Name	Change Settings
Default Value	[Auto]
Possible Value	Auto;
	IO=2E8h;IRQ=7;
	IO=3E8h;IRQ=3,4,5,6,7,9,10,11,12;
	IO=2E8h;IRQ=3,4,5,6,7,9,10,11,12;
	IO=220h;IRQ=3,4,5,6,7,9,10,11,12;
	IO=228h;IRQ=3,4,5,6,7,9,10,11,12;;
Help	Select an optimal settings for Super IO Device

4.4.3 Serial Port 3 Configuration
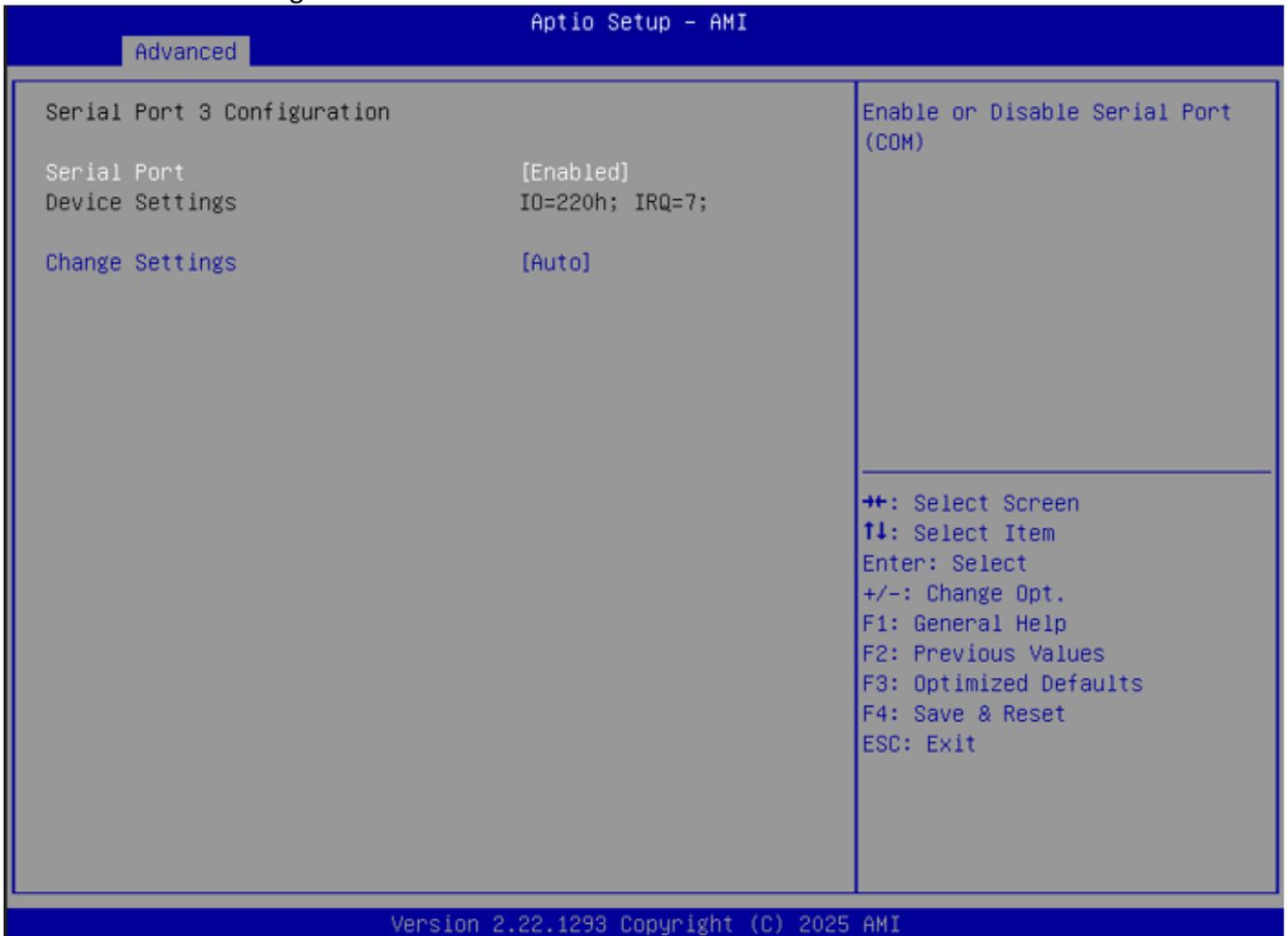
```
                        Aptio Setup - AMI
  [Advanced]

  Serial Port 3 Configuration                          Enable or Disable Serial Port
                                                        (COM)
  Serial Port                    [Enabled]
  Device Settings                IO=220h; IRQ=7;

  Change Settings                [Auto]




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




                 Version 2.22.1293 Copyright (C) 2025 AMI
```

Field Name	Serial Port
Default Value	[Enabled]
Possible Value	Disabled
	Enabled
Help	Enable or Disable Serial Port(COM)

Field Name	Device Settings
Default Value	Device Super IO COM3 Address and IRQ.
Comment	This field is not selectable. There is no help text associated with it.

Field Name	Change Settings
Default Value	[Auto]
Possible Value	Auto;
	IO=3E8h;IRQ=3,4,5,6,7,9,10,11,12;
	IO=2E8h;IRQ=3,4,5,6,7,9,10,11,12;
	IO=220h;IRQ=3,4,5,6,7,9,10,11,12;
	IO=228h;IRQ=3,4,5,6,7,9,10,11,12;
Help	Select an optimal settings for Super IO Device

4.4.4 Serial Port 4 Configuration
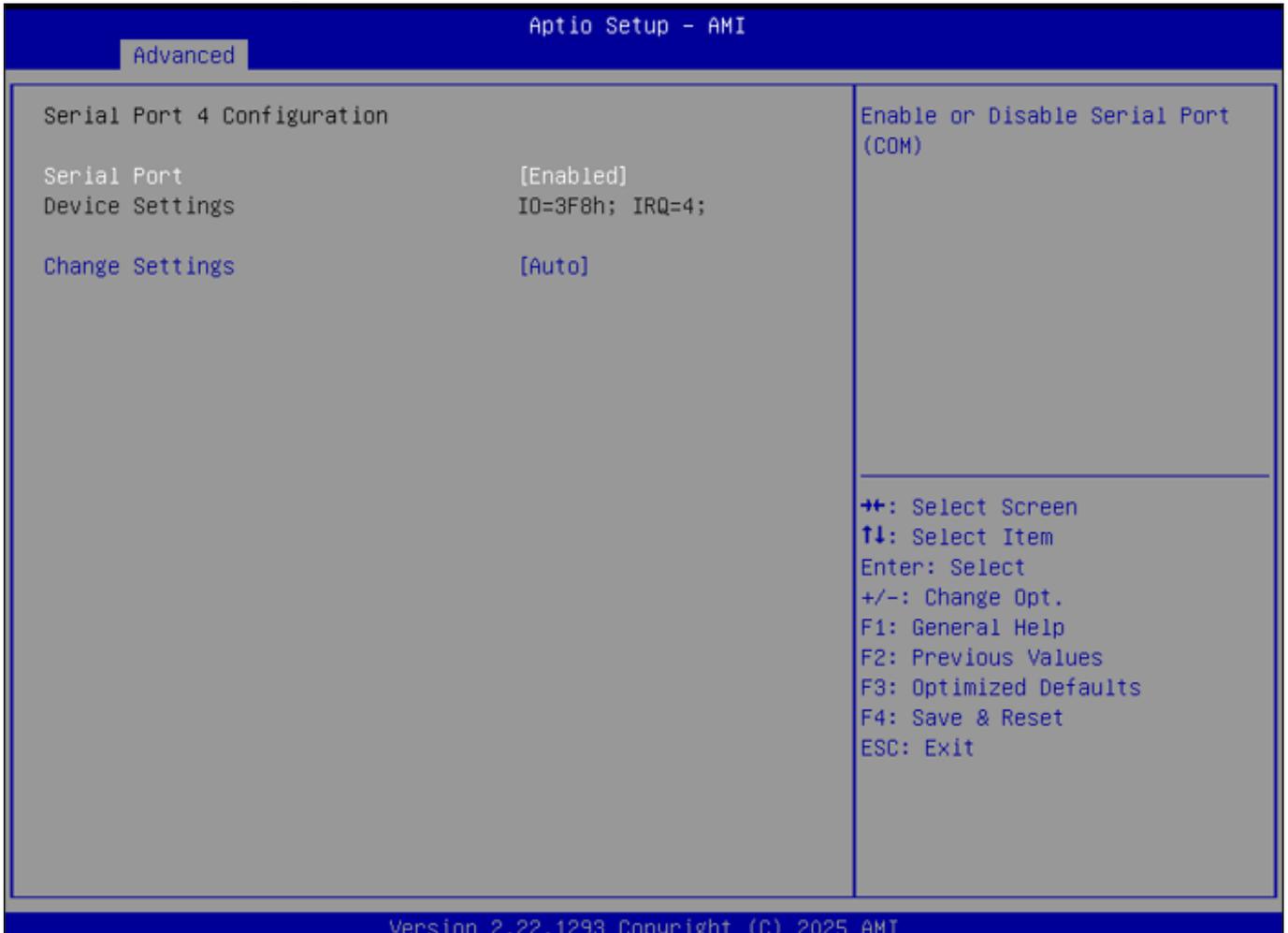
```
                          Aptio Setup – AMI
   Advanced

 Serial Port 4 Configuration                              Enable or Disable Serial Port
                                                          (COM)
 Serial Port                        [Enabled]
 Device Settings                    IO=3F8h; IRQ=4;

 Change Settings                    [Auto]



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



                    Version 2.22.1293 Copyright (C) 2025 AMI
```

Field Name	**Serial Port**
Default Value	[Enabled]
Possible Value	Disabled Enabled
Help	Enable or Disable Serial Port(COM)

Field Name	**Device Settings**
Default Value	Device Super IO COM4 Address and IRQ.
Comment	This field is not selectable. There is no help text associated with it.

Field Name	**Change Settings**
Default Value	[Auto]
Possible Value	Auto; IO=3F8h;IRQ=4; IO=3F8h;IRQ=3,4,5,6,7,9,10,11,12; IO=2F8h;IRQ=3,4,5,6,7,9,10,11,12; IO=3E8h;IRQ=3,4,5,6,7,9,10,11,12; IO=2E8h;IRQ=3,4,5,6,7,9,10,11,12;
Help	Select an optimal settings for Super IO Device

4.5 Hardware Monitor

```
                                  Aptio Setup - AMI
   Advanced

  Pc Health Status

  CPU Temperature                      : +68 ℃
  CPU VR Temperature                   : +38 ℃
  DIMM Temperature                     : +44 ℃
  CPU Fan Speed                        : N/A
  CPU_CORE_MON (CPUVCORE)              : +1.320 V
  VCCSA_MON (ATX5VSB/VIN0)             : +0.960 V
  VDD2_MON (AUXTIN/VIN2)               : +1.104 V
  VCCPRIM_IO (VTT)                     : +1.280 V
  VCC3V                                : +3.360 V
  VSB3V                                : +3.360 V
  VBAT                                 : +3.280 V       ──────────────────────
  AVSB                                 : +3.360 V       ↔: Select Screen
                                                        ↑↓: Select Item
                                                        Enter: Select
                                                        +/-: Change Opt.
                                                        F1: General Help
                                                        F2: Previous Values
                                                        F3: Optimized Defaults.
                                                        F4: Save & Reset
                                                        ESC: Exit




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```

Field Name	CPU Temperature
Default Value	Display CPU Temperature
Comment	This field is not selectable. There is no help text associated with it.

Field Name	CPU VR Temperature
Default Value	Display CPU VR Temperature
Comment	This field is not selectable. There is no help text associated with it.

Field Name	DIMM Temperature
Default Value	Display DIMM Temperature
Comment	This field is not selectable. There is no help text associated with it.

Field Name	CPU Fan Speed
Default Value	Display CPU Fan Speed
Comment	This field is not selectable. There is no help text associated with it.

Field Name	CPU_CORE_MON (CPUVCORE)
Default Value	Display CPUVCORE Voltage
Comment	This field is not selectable. There is no help text associated with it.

Field Name	VCCSA_MON (ATX5VSB/VIN0)
Default Value	Display ATX5VSB/VIN0 Voltage
Comment	This field is not selectable. There is no help text associated with it.

Field Name	VDD2_MON (AUXTIN/VIN2)
Default Value	Display AUXTIN/VIN2 Voltage
Comment	This field is not selectable. There is no help text associated with it.

Field Name	VCCPRIM_IO (VTT)
Default Value	Display VCCPRIM_IO (VTT) Voltage
Comment	This field is not selectable. There is no help text associated with it.

Field Name	VCC3V
Default Value	Display VCC3V Voltage
Comment	This field is not selectable. There is no help text associated with it.

Field Name	VSB3V
Default Value	Display VSB3V Voltage
Comment	This field is not selectable. There is no help text associated with it.

Field Name	VBAT
Default Value	Display VBAT Voltage
Comment	This field is not selectable. There is no help text associated with it.

Field Name	AVSB
Default Value	Display AVSB Voltage
Comment	This field is not selectable. There is no help text associated with it.

4.6 S5 RTC Wake Settings

```
                            Aptio Setup - AMI
  Advanced

 Wake system from S5              [Disabled]          Enable or disable System wake
                                                      on alarm event. Select
                                                      FixedTime, system will wake on
                                                      the hr::min::sec specified.




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



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```
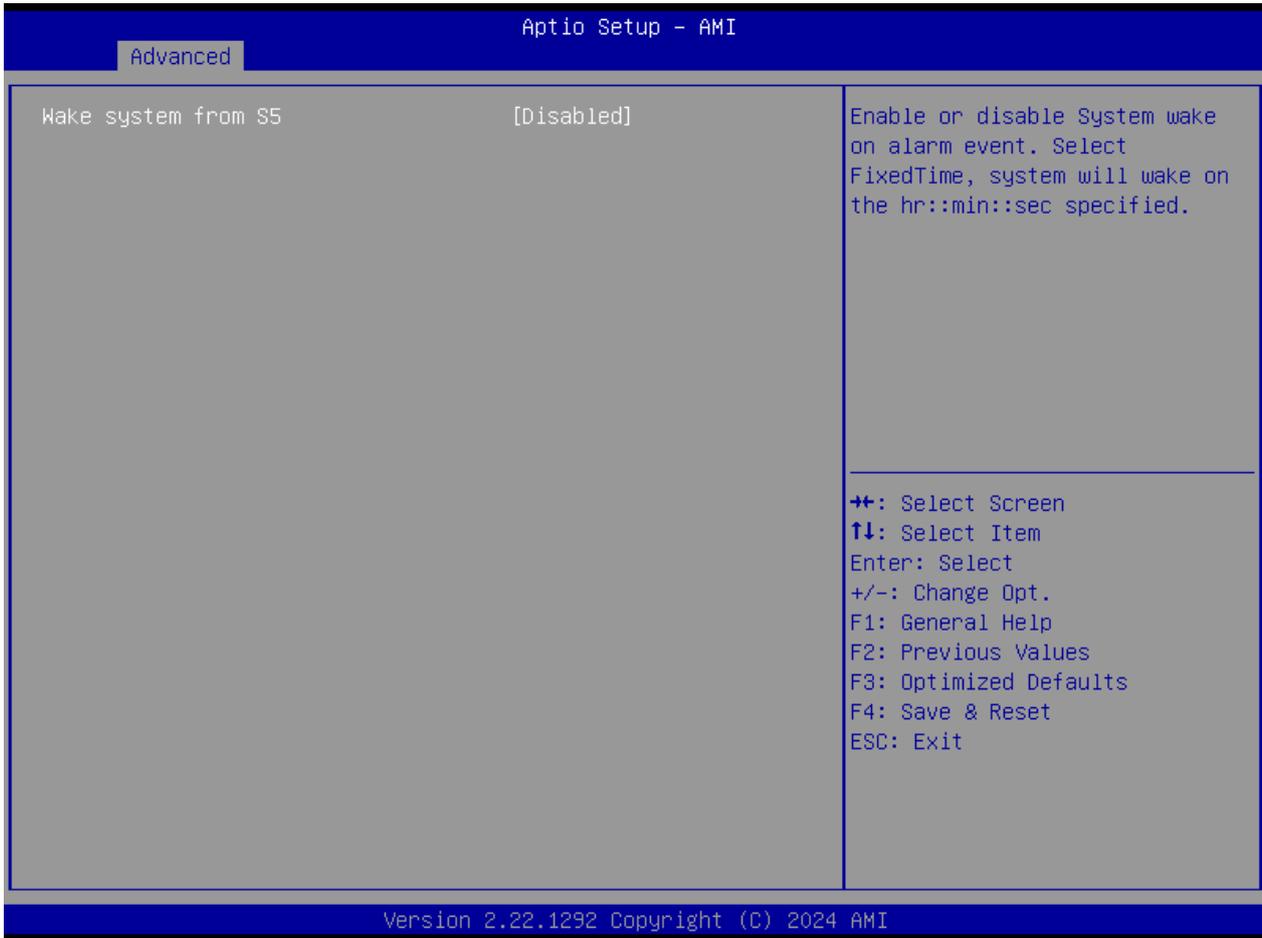
Field Name	Wake system from S5
Default Value	[Disabled]
Possible Value	Disabled
	Fixed Time
Help	Enable or disable System wake on alarm event. Select FixedTime, system wil wake on the hr::min::sec specified.

Field Name	Wake up hour(Show when Wake system from S5 set to Fixed Time)
Default Value	0
Possible Value	0-23
Help	select 0-23 For example enter 3 for 3am and 15 for 3pm

Field Name	Wake up minute(Show when Wake system from S5 set to Fixed Time)
Default Value	0
Possible Value	0-59
Help	select 0 – 59 for Minute

Field Name	Wake up second(Show when Wake system from S5 set to Fixed Time)
Default Value	0
Possible Value	0 - 59
Help	select 0 – 59 for Second

4.7 Network Stack Configuration

```
                              Aptio Setup – AMI
  Advanced

  Network Stack                      [Disabled]          Enable/Disable UEFI Network
                                                         Stack




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




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```

Field Name	**Network Stack**
Default Value	[Disabled]
Possible Value	Disabled Enabled
Help	Enable/Disable UEFI Network Stack.

Field Name	**IPv4 PXE Support** (Available when Network Stack Enabled)
Default Value	[Disabled]
Possible Value	Disabled Enabled
Help	Enable/Disable IPv4 PXE boot support. If disabled, IPv4 PXE boot support will not be available.

Field Name	**IPv6 PXE Support** (Available when Network Stack Enabled)
Default Value	[Disabled]
Possible Value	Disabled Enabled
Help	Enable/Disable IPv6 PXE boot support. If disabled, IPv6 PXE boot support will not be available.

4.8 NVMe Configuration

```
                              Aptio Setup – AMI
   Advanced

  NVMe Configuration

  No NVME Device Found




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




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```

Field Name	**(Device)**
Comment	Press Enter when selected to go into the associated Sub-Menu.

4.9 Intel$^{(R)}$ Rapid Storage Technology

```
                              Aptio Setup – AMI
  Advanced

 Intel(R) RST 19.5.0.5676 RST VMD Driver              Select to see more information
                                                       about the disk




 Non-RAID Physical Disks:
▶ PCIe 1.0, SSSTC CL4-8D256 0022343Y002B, 238.4GB




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




                     Version 2.22.1292 Copyright (C) 2024 AMI
```
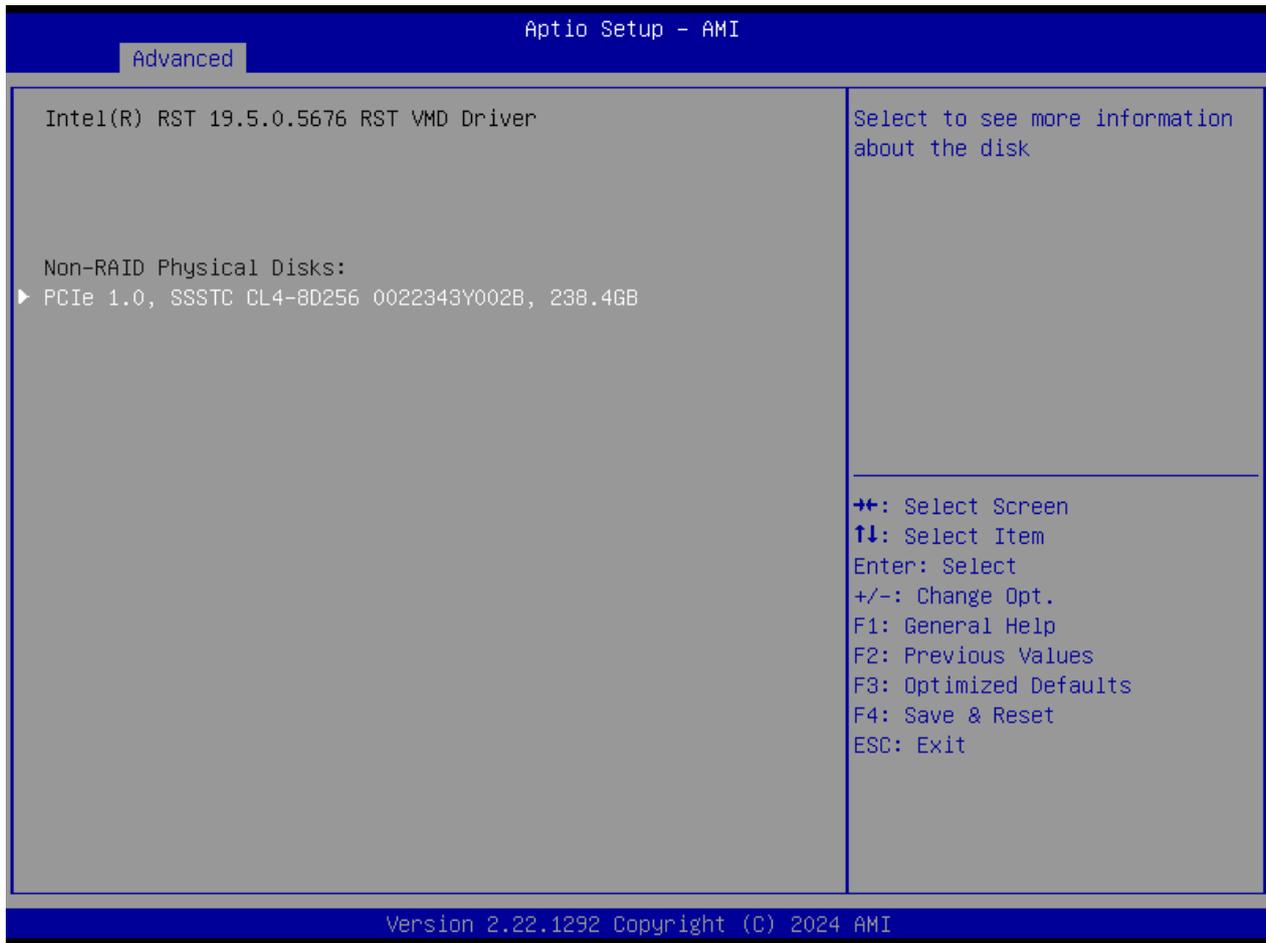
Field Name	(Device)
Comment	Press Enter when selected to go into the associated Sub-Menu.

4.10 Security Page

```
                              Aptio Setup – AMI
   Main  Advanced  Security  Boot  Save & Exit

  Password Description                        ▲ Set Administrator Password

  If ONLY the Administrator's password is set,
  then this only limits access to Setup and is
  only asked for when entering Setup.
  If ONLY the User's password is set, then this
  is a power on password and must be entered to
  boot or enter Setup. In Setup the User will
  have Administrator rights.
  The password length must be
  in the following range:
  Minimum length                 3
  Maximum length                 20
                                               →←: Select Screen
  Administrator Password                       ↑↓: Select Item
  User Password                                Enter: Select
                                               +/-: Change Opt.
                                               F1: General Help
                                               F2: Previous Values
  HDD Security Configuration:                  F3: Optimized Defaults
  ▶ P0:MTFDDAK128MAY-1AH1ZABHA                 F4: Save & Reset
                                               ESC: Exit
  ▶ Secure Boot
  ▶ BIOS Update                              ▼

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```

Field Name	**Administrator Password**
Help	Set Administrator Password

Field Name	**User Password**
Help	Set User Password.

Field Name	**HDD Security drive**
Help	HDD Security Configuration for selected drive
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**Secure Boot**
Help	Secure Boot configuration
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**BIOS Update**
Help	BIOS Update support
Comment	Press Enter when selected to go into the associated Sub-Menu.

4.10.1 HDD Security

```
                            Aptio Setup — AMI
        Security

 HDD Password Description :

 Allows Access to Set, Modify and Clear
 HardDisk  User  Password
 User Password is mandatory to Enable HDD Security.
 If the 'Set User Password' option is hidden,
 do power cycle to enable the option again.

 HDD PASSWORD CONFIGURATION:

 Security Supported :            Yes
 Security Enabled   :            No
 Security Locked    :            No                  →←: Select Screen
 Security Frozen    :            Yes                 ↑↓: Select Item
 HDD User Pwd Status:            NOT INSTALLED        Enter: Select
                                                     +/-: Change Opt.
                                                     F1: General Help
                                                     F2: Previous Values
                                                     F3: Optimized Defaults
                                                     F4: Save & Reset
                                                     ESC: Exit




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```

4.10.2 Secure Boot

```
                        Aptio Setup - AMI
      ┌──────────┐
      │ Security │
      └──────────┘
 ┌─────────────────────────────────────────────────┬─────────────────────────────┐
 │ System Mode                    Setup             │ Secure Boot feature is Active│
 │                                                  │ if Secure Boot is Enabled,   │
 │ Secure Boot                    [Enabled]         │ Platform Key(PK) is enrolled │
 │                                Not Active        │ and the System is in User    │
 │                                                  │ mode. The mode change        │
 │ Secure Boot Mode               [Standard]        │ requires platform reset      │
 │ ▶ Restore Factory Keys                           │                              │
 │ ▶ Reset To Setup Mode                            │                              │
 │                                                  │                              │
 │ ▶ Key Management                                 │                              │
 │                                                  │                              │
 │                                                  │                              │
 │                                                  ├──────────────────────────────│
 │                                                  │ →←: Select Screen            │
 │                                                  │ ↑↓: Select Item              │
 │                                                  │ Enter: Select                │
 │                                                  │ +/-: Change Opt.             │
 │                                                  │ F1: General Help             │
 │                                                  │ F2: Previous Values          │
 │                                                  │ F3: Optimized Defaults       │
 │                                                  │ F4: Save & Reset             │
 │                                                  │ ESC: Exit                    │
 │                                                  │                              │
 └─────────────────────────────────────────────────┴─────────────────────────────┘
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```

Field Name	**Secure Boot**
Default Value	[Enabled]
Possible Value	Enabled Disabled
Help	Secure Boot feature is Active if Secure Boot is Enabled,Platform Key(PK) is enrolled and the System is in User mode.The mode change requires platform reset

Field Name	**Secure Boot Mode**
Default Value	[Standard]
Possible Value	Standard Custom
Help	Secure Boot mode options:Standard or Custom.In Custom mode, Secure Boot Policy variables can be configured by a physically present user without full authentication

Field Name	**Restore Factory Keys**
Help	Force System to User Mode. Install factory default Secure Boot key databases

Field Name	**Reset To Setup Mode**
Help	Delete all Secure Boot key databases from NVRAM

Field Name	**Key Management**
Help	Enables expert users to modify Secure Boot Policy variables without variable authentication
Comment	Enables expert users to modify Secure Boot Policy variables without variable authentication

4.10.3 Key Management

```
                            Aptio Setup — AMI
            Security

  Vendor Keys                      Valid                  Install factory default Secure
                                                          Boot keys after the platform
  Factory Key Provision            [Disabled]             reset and while the System is
▶ Restore Factory Keys                                    in Setup mode
▶ Reset To Setup Mode
▶ Enroll Efi Image
▶ Export Secure Boot variables

  Secure Boot variable  | Size| Keys| Key Source
▶ Platform Key      (PK)|    0|    0| No Keys
▶ Key Exchange Keys (KEK)|    0|    0| No Keys
▶ Authorized Signatures (db)|  0|    0| No Keys
▶ Forbidden  Signatures(dbx)|  0|    0| No Keys             →←: Select Screen
▶ Authorized TimeStamps(dbt)|  0|    0| No Keys             ↑↓: Select Item
▶ OsRecovery Signatures(dbr)|  0|    0| No Keys             Enter: Select
                                                           +/-: Change Opt.
                                                           F1: General Help
                                                           F2: Previous Values
                                                           F3: Optimized Defaults
                                                           F4: Save & Reset
                                                           ESC: Exit

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```

Field Name	**Factory Key Provision**
Default Value	[Disabled]
Possible Value	Enabled Disabled
Help	Install factory default Secure Boot keys after the platform reset and while the System is in Setup mode

Field Name	**Restore Factory Keys**
Help	Force System to User Mode. Install factory default Secure Boot key databases

Field Name	**Reset To Setup Mode**
Help	Delete all Secure Boot key databases from NVRAM

Field Name	**Enroll Efi Image**
Help	Allow Efi image to run in Secure Boot mode. Enroll SHA256 Hash certificate of a PE image into Authorized Signature Database (db)

Field Name	**Export Secure Boot variables**
Help	Save NVRAM content of Secure Boot variable to a file

Field Name	**Platform Key (PK)**
Default Value	Size:0, Keys:0, Key Source: No Keys

Help	Enroll Factory Defaults or load certificates from a file:
	 1.Public Key Certificate:
	  a)EFI_SIGNATURE_LIST
	  b)EFI_CERT_X509 (DER)
	  c)EFI_CERT_RSA2048 (bin)
	  d)EFI_CERT_SHAXXX
	 2.Authenticated UEFI Variable
	 3.EFI PE/COFF Image(SHA256)
	Key Source:
	 Factory,Modified,Mixed

comment	Press Enter when selected to go into the associated Sub-Menu "Key Management".

Field Name	**Key Exchange Keys (KEK)**
Default Value	Size:0, Keys:0, Key Source: No Keys

Help	Enroll Factory Defaults or load certificates from a file:
	 1.Public Key Certificate:
	  a)EFI_SIGNATURE_LIST
	  b)EFI_CERT_X509 (DER)
	  c)EFI_CERT_RSA2048 (bin)
	  d)EFI_CERT_SHAXXX
	 2.Authenticated UEFI Variable
	 3.EFI PE/COFF Image(SHA256)
	Key Source:
	 Factory,Modified,Mixed

comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**Authorized Signatures (db)**
Default Value	Size:0, Keys:0, Key Source: No Keys

Help	Enroll Factory Defaults or load certificates from a file:
	 1.Public Key Certificate:
	  a)EFI_SIGNATURE_LIST
	  b)EFI_CERT_X509 (DER)
	  c)EFI_CERT_RSA2048 (bin)
	  d)EFI_CERT_SHAXXX
	 2.Authenticated UEFI Variable
	 3.EFI PE/COFF Image(SHA256)
	Key Source:
	 Factory,Modified,Mixed

comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**Forbidden Signatures (dbx)**
Default Value	Size:0, Keys:0, Key Source: No Keys

Help	Enroll Factory Defaults or load certificates from a file:
	 1.Public Key Certificate:
	  a)EFI_SIGNATURE_LIST
	  b)EFI_CERT_X509 (DER)
	  c)EFI_CERT_RSA2048 (bin)
	  d)EFI_CERT_SHAXXX
	 2.Authenticated UEFI Variable
	 3.EFI PE/COFF Image(SHA256)
	Key Source:
	 Factory,Modified,Mixed

comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**Authorized TimeStamps (dbt)**
Default Value	Size:0, Keys:0, Key Source: No Keys
Help	Enroll Factory Defaults or load certificates from a file:

	1.Public Key Certificate:
	  a)EFI_SIGNATURE_LIST
	  b)EFI_CERT_X509 (DER)
	  c)EFI_CERT_RSA2048 (bin)
	  d)EFI_CERT_SHAXXX
	2.Authenticated UEFI Variable
	3.EFI PE/COFF Image(SHA256)
	Key Source:
	  Factory,Modified,Mixed

comment	Press Enter when selected to go into the associated Sub-Menu.

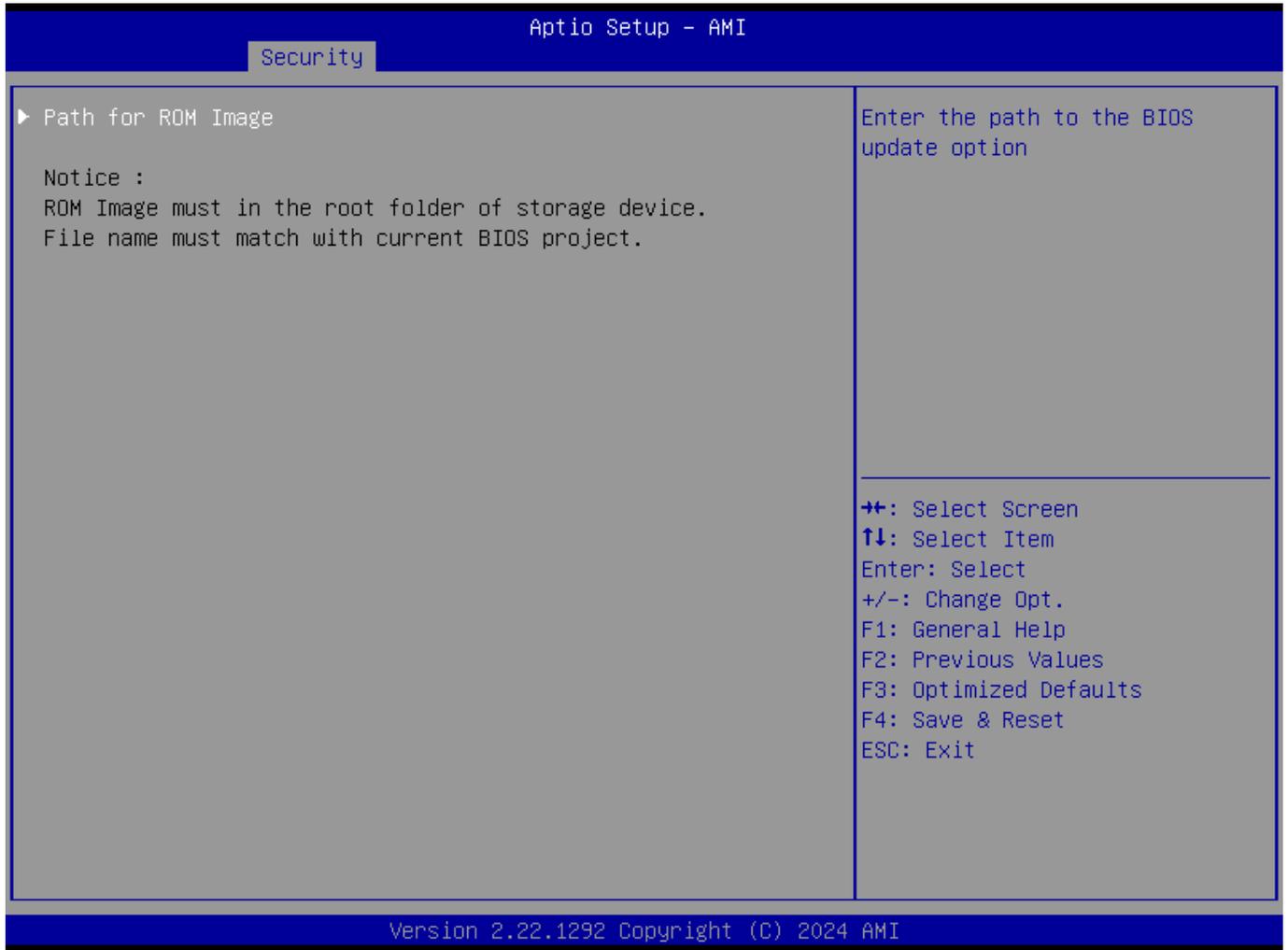| Field Name	**OsRecovery Signatures (dbr)**
Default Value	Size:0, Keys:0, Key Source: No Keys

Help	Enroll Factory Defaults or load certificates from a file:
	1.Public Key Certificate:
	  a)EFI_SIGNATURE_LIST
	  b)EFI_CERT_X509 (DER)
	  c)EFI_CERT_RSA2048 (bin)
	  d)EFI_CERT_SHAXXX
	2.Authenticated UEFI Variable
	3.EFI PE/COFF Image(SHA256)
	Key Source:
	  Factory,Modified,Mixed

comment	Press Enter when selected to go into the associated Sub-Menu.

4.10.4 BIOS Update

```
                          Aptio Setup - AMI
      Security

 ▶ Path for ROM Image                            Enter the path to the BIOS
                                                 update option
   Notice :
   ROM Image must in the root folder of storage device.
   File name must match with current BIOS project.





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




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```

Field Name	Path for ROM Image
Help	Enter the path to the BIOS update option

4.11 Boot Page

```
                             Aptio Setup – AMI
     Main   Advanced   Security   Boot   Save & Exit

    Boot Configuration                                   Number of seconds to wait for
    Setup Prompt Timeout              1                  setup activation key.
    Bootup NumLock State              [On]               65535(0xFFFF) means indefinite
                                                         waiting.

    FIXED BOOT ORDER Priorities
    Boot Option #1                    [USB Floppy]
    Boot Option #2                    [CD/DVD]
    Boot Option #3                    [USB CD/DVD]
    Boot Option #4                    [Hard Disk:Windows
                                      Boot Manager (P0:
                                      MTFDDAK128MAY-1AH1ZABHA
                                      ]
    Boot Option #5                    [USB Key:UEFI:      ↔: Select Screen
                                      JetFlashTranscend 16GB  ↑↓: Select Item
                                      1100, Partition 1]  Enter: Select
    Boot Option #6                    [USB Hard Disk]     +/-: Change Opt.
    Boot Option #7                    [Network]           F1: General Help
                                                          F2: Previous Values
    ▶ UEFI Hard Disk Drive BBS Priorities                 F3: Optimized Defaults
    ▶ UEFI USB Key Drive BBS Priorities                   F4: Save & Reset
                                                          ESC: Exit



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```

Field Name	**Setup Prompt Timeout**
Default Value	1
Possible Value	1~65535
Help	Number of seconds to wait for setup activation key. 65535(0xFFFF) means indefinite waiting.

Field Name	**Bootup NumLock State**
Default Value	[On]
Possible Value	On Off
Help	Select the keyboard NumLock state

Field Name	**Boot Option #1**
Default Value	[USB Floppy]
Possible Value	USB Floppy, CD/DVD, USB CD/DVD, Hard Disk , USB Key, USB Hard Disk , Network, Disabled
Help	Sets the system boot order

Field Name	**Boot Option #2**
Default Value	[CD/DVD]
Possible Value	USB Floppy, CD/DVD, USB CD/DVD, Hard Disk , USB Key, USB Hard Disk , Network, Disabled

Help	Sets the system boot order

Field Name	**Boot Option #3**
Default Value	[USB CD/DVD]
Possible Value	USB Floppy, CD/DVD, USB CD/DVD, Hard Disk , USB Key, USB Hard Disk , Network, Disabled
Help	Sets the system boot order

Field Name	**Boot Option #4**
Default Value	[Hard Disk]
Possible Value	USB Floppy, CD/DVD, USB CD/DVD, Hard Disk , USB Key, USB Hard Disk , Network, Disabled
Help	Sets the system boot order

Field Name	**Boot Option #5**
Default Value	[USB Key]
Possible Value	USB Floppy, CD/DVD, USB CD/DVD, Hard Disk , USB Key, USB Hard Disk , Network, Disabled
Help	Sets the system boot order

Field Name	**Boot Option #6**
Default Value	[USB Hard Disk]
Possible Value	USB Floppy, CD/DVD, USB CD/DVD, Hard Disk , USB Key, USB Hard Disk , Network, Disabled
Help	Sets the system boot order

Field Name	**Boot Option #7**
Default Value	[Network]
Possible Value	USB Floppy, CD/DVD, USB CD/DVD, Hard Disk , USB Key, USB Hard Disk , Network, Disabled
Help	Sets the system boot order

Field Name	**(UEFI) USB Floppy Drive BBS Priorities**
Help	Specifies the Boot Device Priority sequence from available UEFI USB Floppy Drives.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**(UEFI) CDROM/DVD Drive BBS Priorities**
Help	Specifies the Boot Device Priority sequence from available UEFI CDROM/DVD Drives.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**(UEFI) USB CDROM/DVD ROM Drive BBS Priorities**
Help	Specifies the Boot Device Priority sequence from available UEFI USB CDROM/DVD Drives.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**(UEFI) Hard Disk Drive BBS Priorities**
Help	Specifies the Boot Device Priority sequence from available UEFI Hard Disk Drives.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**(UEFI) USB Key Drive BBS Priorities**

Help	Specifies the Boot Device Priority sequence from available UEFI USB Key Drives.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	**(UEFI) USB Hard Disk Drive BBS Priorities**
Help	Specifies the Boot Device Priority sequence from available UEFI USB Hard Disk Drives.
Comment	Press Enter when selected to go into the associated Sub-Menu.

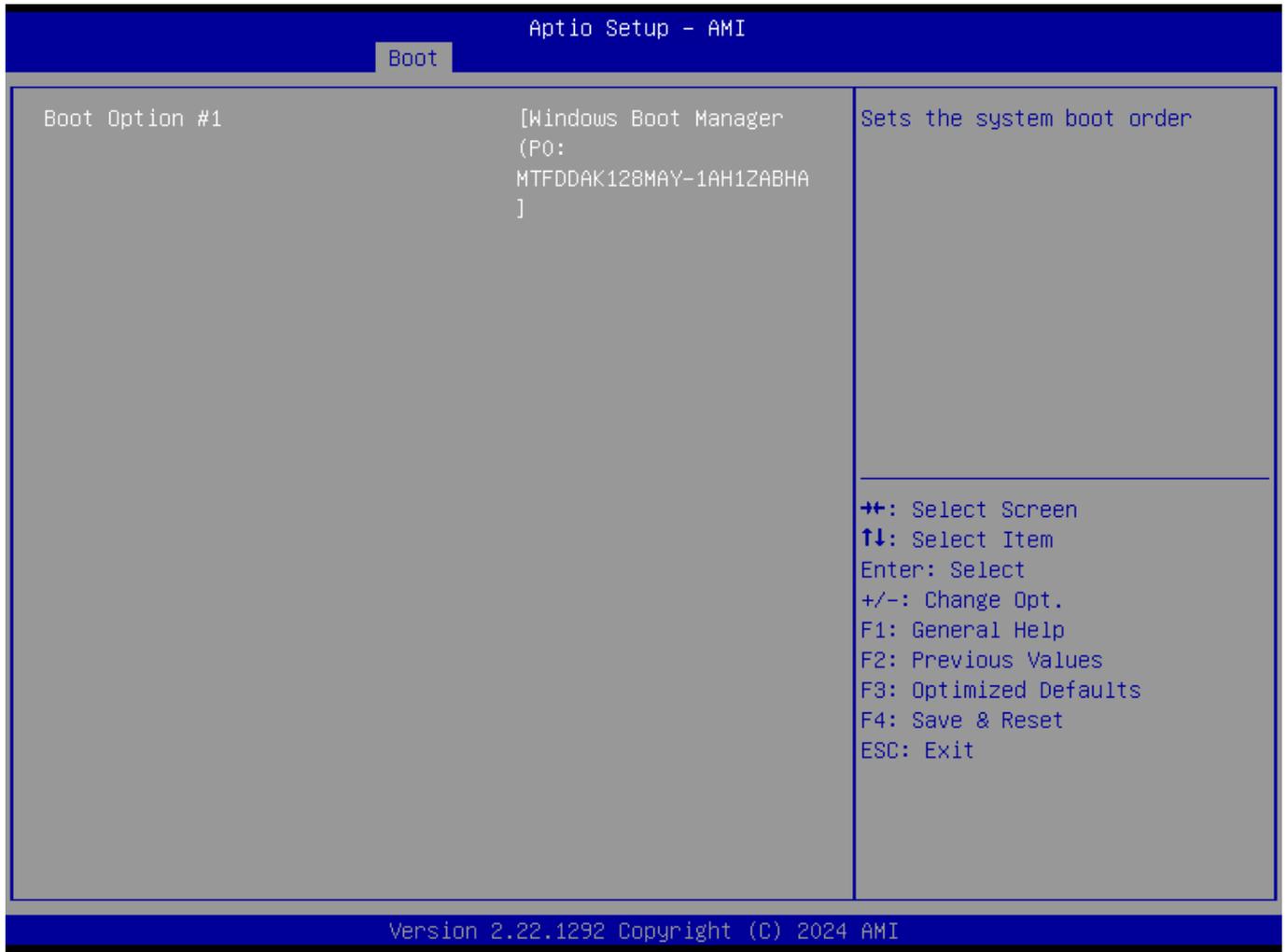| Field Name	**(UEFI) NETWORK Drive BBS Priorities**
Help	Specifies the Boot Device Priority sequence from available UEFI NETWORK Drives.
Comment	Press Enter when selected to go into the associated Sub-Menu.

4.11.1 (List Boot Device Type) Drive BBS Priorities

```
                         Aptio Setup - AMI
          Boot

 Boot Option #1                  [Windows Boot Manager        Sets the system boot order
                                 (P0:
                                 MTFDDAK128MAY-1AH1ZABHA
                                 ]




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



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```

Field Name	**Boot Option #1**
Default Value	
Possible Value	Boot Device Name 1 of this type, Disable
Help	Sets the system boot order

4.12 Save & Exit Page

```
                              Aptio Setup - AMI
     Main   Advanced   Security   Boot   Save & Exit

  Save Changes and Reset                          Reset the system after saving
  Discard Changes and Reset                        the changes.

  Restore Defaults




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




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```
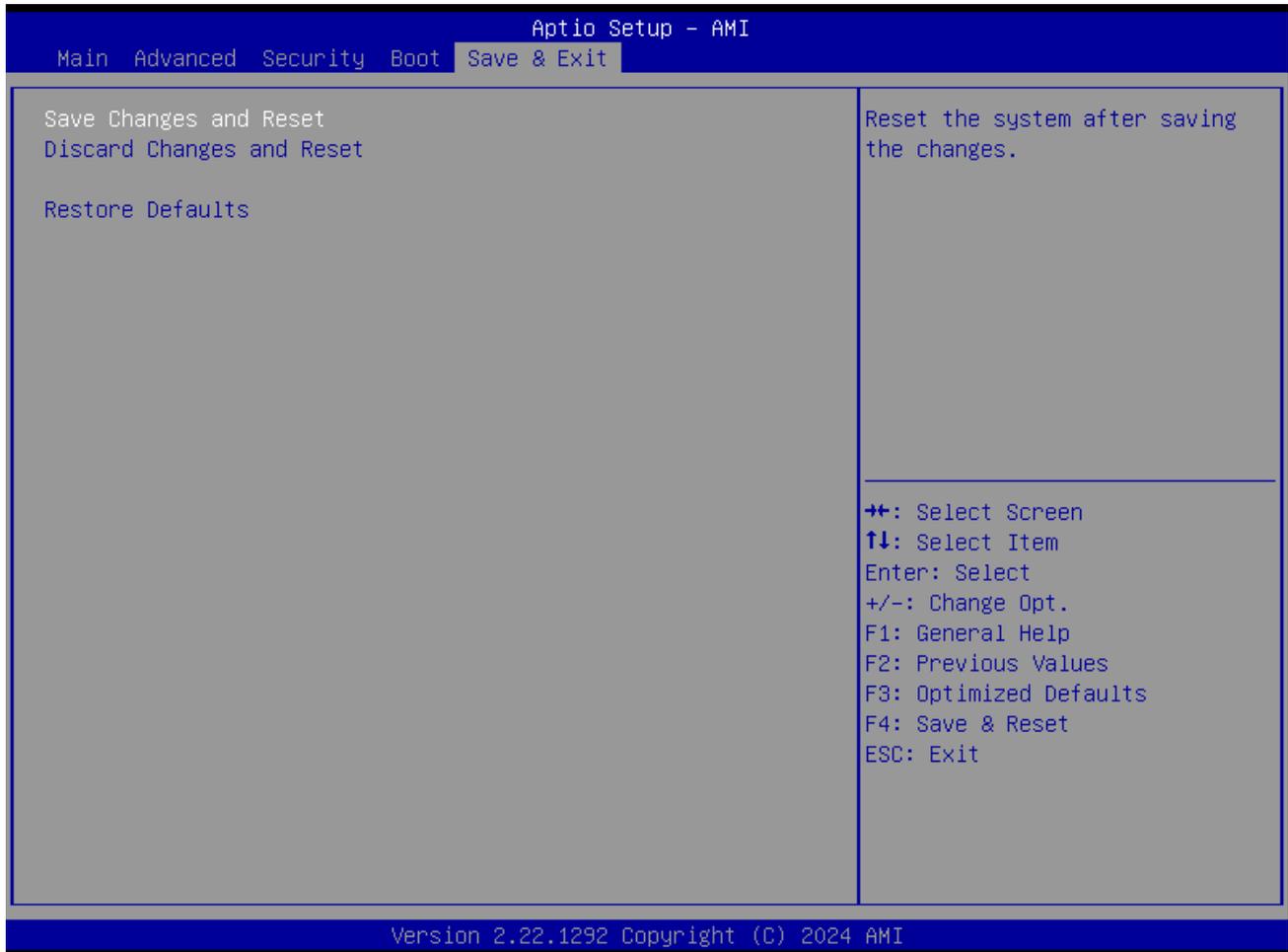
Field Name	**Save Changes and Reset**
Help	Reset the system after saving the changes.

Field Name	**Discard Changes and Reset**
Help	Reset system setup without saving any changes.

Field Name	**Restore Defaults**
Help	Restore/Load Default values for all the setup options.

4.13 MEBx

```
                        Aptio Setup - AMI
    Main  Advanced  Security  Boot  Save & Exit  MEBx

    Intel(R) ME Password                         MEBx Login




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




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```

Field Name	Intel ® ME Password
Default	admin (Force change new password after first entering.)
Help	MEBx Login

Password rule:

1. Password Length: At least 8 characters, and no more than 32.

2. Password Complexity: Password must include the following:

- At least one digit character ('0', '1', … '9')

- At least one 7-bit ASCII non alpha-numeric character (e.g. '!', '$', ';'), but excluding ':', ',' and '"' characters.

- At least one lower-case letter ('a', 'b'…'z') and at least one upper case letter ('A','B'…'Z').