DMTX-TWL1 Series

User's Manual

Revision: 1.0

Release date: 30- Octobor, 2026

Trademark:

*** Specifications and Information contained in this documentation are furnished for information use only, and are**

subject to change at any time without notice, and should not be construed as a commitment by manufacturer.

Environmental Protection Announcement

Do not dispose this electronic device into the trash while discarding. To minimize pollution and ensure environment protection of mother earth, please recycle.



TABLE OF CONTENT

ENVIRONMENTAL SAFETY INSTRUCTION.....iv
USER'S NOTICE.....v
MANUAL REVISION INFORMATION.....v
ITEM CHECKLIST.....v
CHAPTER 1 INTRODUCTION OF THE MOTHERBOARD
1-1 FEATURE OF MOTHERBOARD.....1
1-2 SPECIFICATION.....2
1-3 LAYOUT DIAGRAM.....4
CHAPTER 2 HARDWARE INSTALLATION
2-1 JUMPER SETTINGS.....11
2-2 CONNECTORS , HEADERS & WAFERS.....14
2-2-1 REAR I/O PANEL CONNECTORS.....14
2-2-2 MOTHERBOARD INTERNAL CONNECTORS.....15
2-2-3 PIN DEFINITION FOR HEADERS & WAFERS.....18
2-2-4 MAXIMUM VOLTAGE & CURRENT LIMIT.....24
CHAPTER 3 INTRODUCING BIOS
3-1 ENTERING SETUP.....26
3-2 BIOS MENU SCREEN.....27
3-3 FUNCTION KEYS.....28
3-4 GETTING HELP.....29
3-5 MEMU BARS.....30
3-6 MAIN MENU.....31
3-7 ADVANCED MENU.....32
3-8 CHIPSET MENU.....46
3-9 SECURITY MENU.....47
3-10 BOOT MENU.....52
3-11 SAVE & EXIT MENU.....53



Environmental Safety Instruction

- Avoid the dusty, humidity and temperature extremes. Do not place the product in any area where it may become wet.

- 0 to 60 centigrade is the suitable temperature. (The figure comes from the request of the main chipset)

- Generally speaking, dramatic changes in temperature may lead to contact malfunction and crackles due to constant thermal expansion and contraction from the welding spots' that connect components and PCB. Computer should go through an adaptive phase before it boots when it is moved from a cold environment to a warmer one to avoid condensation phenomenon. These water drops attached on PCB or the surface of the components can bring about phenomena as minor as computer instability resulted from corrosion and oxidation from components and PCB or as major as short circuit that can burn the components. Suggest starting the computer until the temperature goes up.

- The increasing temperature of the capacitor may decrease the life of computer. Using the close case may decrease the life of other device because the higher temperature in the inner of the case.

- Attention to the heat sink when you over-clocking. The higher temperature may decrease the life of the device and burned the capacitor.

USER'S NOTICE

COPYRIGHT OF THIS MANUAL BELONGS TO THE MANUFACTURER. NO PART OF THIS MANUAL, INCLUDING THE PRODUCTS AND SOFTWARE DESCRIBED IN IT MAY BE REPRODUCED, TRANSMITTED OR TRANSLATED INTO ANY LANGUAGE IN ANY FORM OR BY ANY MEANS WITHOUT WRITTEN PERMISSION OF THE MANUFACTURER.

THIS MANUAL CONTAINS ALL INFORMATION REQUIRED TO USE THIS MOTHER-BOARD SERIES AND WE DO ASSURE THIS MANUAL MEETS USER'S REQUIREMENT BUT WILL CHANGE, CORRECT ANY TIME WITHOUT NOTICE. MANUFACTURER PROVIDES THIS MANUAL "AS IS" WITHOUT WARRANTY OF ANY KIND, AND WILL NOT BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTIAL OR CONSEQUENTIAL DAMAGES (INCLUDING DAMANGES FOR LOSS OF PROFIT, LOSS OF BUSINESS, LOSS OF USE OF DATA, INTERRUPTION OF BUSINESS AND THE LIKE).

PRODUCTS AND CORPORATE NAMES APPEARING IN THIS MANUAL MAY OR MAY NOT BE REGISTERED TRADEMARKS OR COPYRIGHTS OF THEIR RESPECTIVE COMPANIES, AND THEY ARE USED ONLY FOR IDENTIFICATION OR EXPLANATION AND TO THE OWNER'S BENEFIT, WITHOUT INTENT TO INFRINGE.

Manual Revision Information

Reversion	Revision History	Date
1.0	First Edition	2026-10-30

Item Checklist

- ☑ Motherboard
- ☑ Cable(s)

Chapter 1
Introduction of the Motherboard

1-1 Feature of Motherboard

- Onboard Intel® Processor N-series Processors (formerly Twin Lake) Intel® Processor N150 *For additional compatible CPUs, please contact regional sales(DMTX-TWL1)

  Onboard Intel® Processor X7000 series Processors (formerly Amston Lake) Intel® Processor X7433RE *For additional compatible CPUs, please contact regional sales(DMTX-ASL1)
- 1 x DDR5 4800MHz SO-DIMM up to 32GB
- 1 x DP, 1 x HDMI®, 1 x eDP, 1 x LVDS/eDP
- 2 x GbE LAN
- 6 x COM, 2 x USB 3.2 Gen 1, 8 x USB 2.0
- 1 x M.2 M-Key, 2242/2280 (NVMe, PCIe x2 Interface)
- 1 x M.2 M-Key, 2242 (SATA Interface, Co-lay SATA Socket) ,1 x M.2 E-Key, 2230 (PCIe x1/USB 2.0, CNVi Interface)
- 1 x PCIe x4 (Gen 3, PCIe x1 Interface) slot

Back to Content

1-2 Specification

DMTX-TWL1

SYSTEM	
MB FORM FACTOR	Mini-ITX
CPU	Onboard Intel® Processor N150 (Formerly Twin Lake, TDP 6W)
CHIPSET	Intel® SoC
MEMORY	1 x DDR5 4800MT/s, Single Channel SO-DIMM, up to 32GB
BIOS	AMI Flash ROM
WAKE ON LAN	Yes
WATCHDOG TIMER	255 Levels
SECURITY	Intel® PTT (Integrated fTPM) & TPM 2.0 (dTPM)
RTC BATTERY	Lithium Battery
DIMENSION (W X D)	170.0 (W) x 170.0 (D) mm (6.7″ x 6.7″)
OS SUPPORT	Windows® 11 (64bit), Windows® 10 (64bit), Linux
POWER	
POWER REQUIREMENT	DC-in 12~19V
POWER ON MODE	AT / ATX
CONNECTOR	DC Jack Internal 2-pin Header
DISPLAY	
GPU	Intel® HD Graphics, shared memory
LVDS	1 x LVDS/eDP (Max. Resolution: 1920 x 1200 @60Hz)
eDP	1 x eDP (Max Resolution: 2560 x 1600@60Hz)
DP	1 x DP1.4 (Max Resolution: 4096 x 2160@60Hz)
HDMI®	1 x HDMI® 2.1 (Max Resolution: 4096 x 2160@60Hz)
MULTIPLE DISPLAY	Support 3 Displays
AUDIO	
CODEC	Realtek ALC897
Line-out	1 x Audio Jack for Line-out
MIC-in	1 x Audio Jack for MIC-in
AMPLIFIER	3W
LAN	
ETHERNET	2 x RJ45 for Realtek® RTL8111H GbE
USB PORT	
USB	Internal Header for 6 x USB 2.0 2 x USB 2.0 2 x USB 3.2 Gen 1x1 (5Gbps, Formerly USB 3.1 Gen 1)
SERIAL PORT	
COM	Internal Header for 2 x RS-232/485 Internal Header for 4 x RS-232 with 5V/12V header
INTERNAL I/O	
GPIO	8-Bit
SMBUS	Yes

FAN	1 x CPU Fan Header
FRONT PANEL	HDD Active LED, Power LED, Power On/Off, Reset
ADDITIONAL	1 x Chassis intrusion 1 x AT Mode Selection 1 x Inverter 1 x 2pin Power Connector 1 x FP_Audio
STORAGE	
SATA	1 x SATA III 1 x SATA Power Connector
PCIE & PCI	
PCIe	1 x PCIe x4 (PCIe x1 Interface)
M.2 & MINI CARD	
M.2	1 x E-Key 2230 (USB 2.0/PCIe x1) Support CNVio 1 x M.2 M-Key, 2242 (SATA Interface, Factory Option) 1 x M-Key 2242/2280 (PCIe 3.0 x2)
ENVIRONMENT & CERTIFICATION	
OPERATING TEMPERATURE	0°C ~ 60°C (32°F ~ 140°F)
STORAGE TEMPERATURE	-20°C ~ 70°C (-4°F ~ 158°F)
OPERATING HUMIDITY	10 ~ 90% @ 40°C, Non-condensing
CERTIFICATION	CE/FCC Class A LVD
ESG DECLARATION	EU RoHS, China RoHS, REACH (Option)

DMTX-ASL1

SYSTEM	
MB FORM FACTOR	Mini-ITX
CPU	Onboard Intel® Processor X7000 series Processors (formerly Amston Lake) Intel® Processor X7433RE
CHIPSET	Intel® SoC
MEMORY	1 x DDR5 4800MT/s, Single Channel SO-DIMM, up to 32GB
BIOS	AMI Flash ROM
WAKE ON LAN	Yes
WATCHDOG TIMER	255 Levels
SECURITY	Intel® PTT (Integrated fTPM) & TPM 2.0 (dTPM)
RTC BATTERY	Lithium Battery
DIMENSION (W X D)	170.0 (W) x 170.0 (D) mm (6.7″ x 6.7″)
OS SUPPORT	Windows® 11 (64bit), Windows® 10 (64bit), Linux
POWER	
POWER REQUIREMENT	DC-in 12~19V
POWER ON MODE	AT / ATX
CONNECTOR	DC Jack Internal 2-pin Header
DISPLAY	
GPU	Intel® UHD Graphics, shared memory
LVDS	1 x LVDS/eDP (Max. Resolution: 1920 x 1200 @60Hz)
eDP	1 x eDP (Max Resolution: 1920 x 1080@60Hz)
DP	1 x DP1.4 (Max Resolution: 4096 x 2160@60Hz)
HDMI®	1 x HDMI® 2.0 (Max Resolution: 4096 x 2160@60Hz)
MULTIPLE DISPLAY	Support 3 Displays
AUDIO	
CODEC	Realtek ALC897
Line-out	1 x Audio Jack for Line-out
MIC-in	1 x Audio Jack for MIC-in
AMPLIFIER	3W
LAN	
ETHERNET	2 x RJ45 for Realtek® RTL8111H GbE
USB PORT	
USB	Internal Header for 6 x USB 2.0 2 x USB 2.0 2 x USB 3.2 Gen 1x1 (5Gbps, Formerly USB 3.1 Gen 1)
SERIAL PORT	
COM	Internal Header for 2 x RS-232/485 Internal Header for 4 x RS-232 with 5V/12V header
INTERNAL I/O	
GPIO	8-Bit
SMBUS	Yes
FAN	1 x CPU Fan Header
FRONT PANEL	HDD Active LED, Power LED, Power On/Off, Reset

ADDITIONAL	1 x Chassis intrusion 1 x AT Mode Selection 1 x Inverter 1 x 2pin Power Connector 1 x FP_Audio
STORAGE	
SATA	1 x SATA III 1 x SATA Power Connector
PCIE & PCI	
PCIe	1 x PCIe x4 (PCIe x1 Interface)
M.2 & MINI CARD	
M.2	1 x E-Key 2230 (USB 2.0/PCIe x1) Support CNVio 1 x M.2 M-Key, 2242 (SATA Interface, Factory Option) 1 x M-Key 2242/2280 (PCIe 3.0 x2)
ENVIRONMENT & CERTIFICATION	
OPERATING TEMPERATURE	0°C ~ 60°C (32°F ~ 140°F)
STORAGE TEMPERATURE	-20°C ~ 70°C (-4°F ~ 158°F)
OPERATING HUMIDITY	10 ~ 90% @ 40°C, Non-condensing
CERTIFICATION	CE/FCC Class A LVD
ESG DECLARATION	EU RoHS, China RoHS, REACH (Option)

Packing List

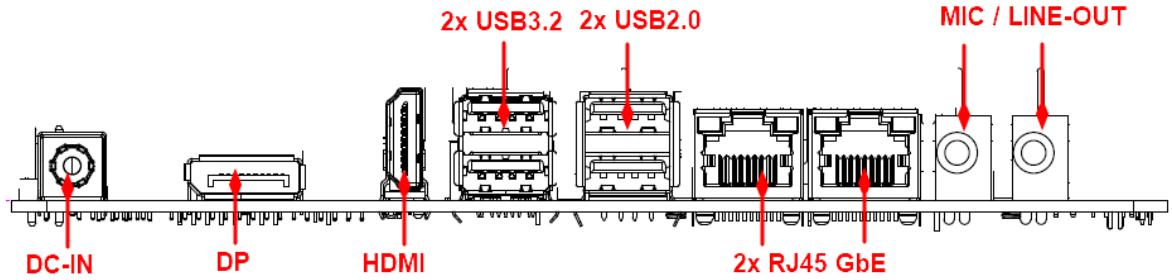
Part Number	Description	QTY per Board
DMTX-TWL1 Series	DMTX-TWL1 Series M/B	1
F04-MB-075-1F	LI1S DC+VGA/COM+HDMI+4USB+2LAN+2JK	1
G01-COM-H2M22-1F	COM9 2*5P 1/2 K=9 L=220mm PH2.0	2

Order Information

Item	DMTX-TWL1-N1500	DMTX-TWL1-N1502	DMTX-ASL1-74330	DMTX-ASL1-74332
CPU	Intel® Processor N150	Intel® Processor N150	Intel® Processor X7433RE	Intel® Processor X7433RE
SECURITY	Intel® PTT (fTPM)	TPM 2.0 (dTPM)	Intel® PTT (fTPM)	TPM 2.0 (dTPM)
GPU	Intel® HD Graphics	Intel® HD Graphics	Intel® UHD Graphics	Intel® UHD Graphics

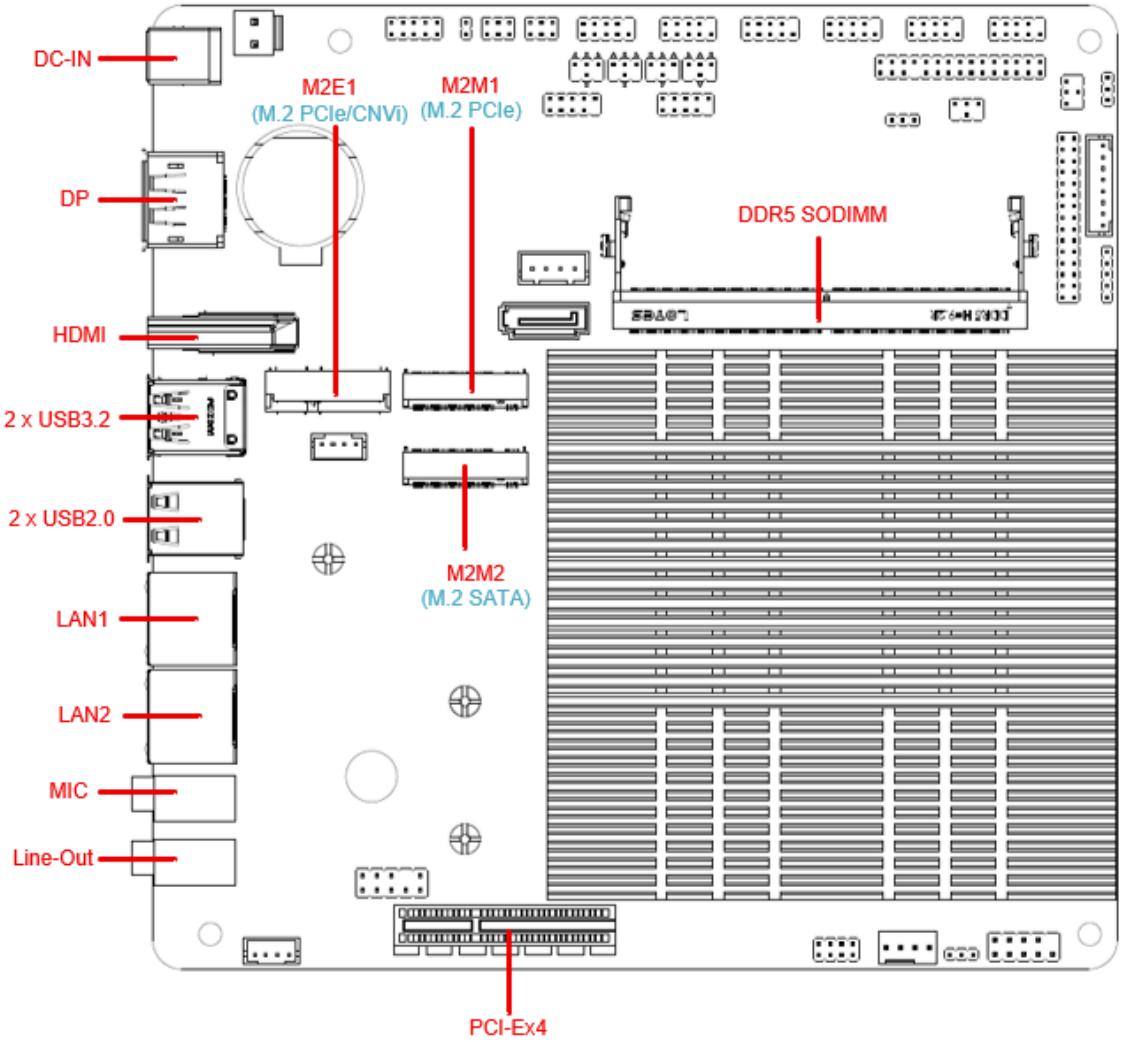
1-3 Layout Diagram

Rear IO Diagram:



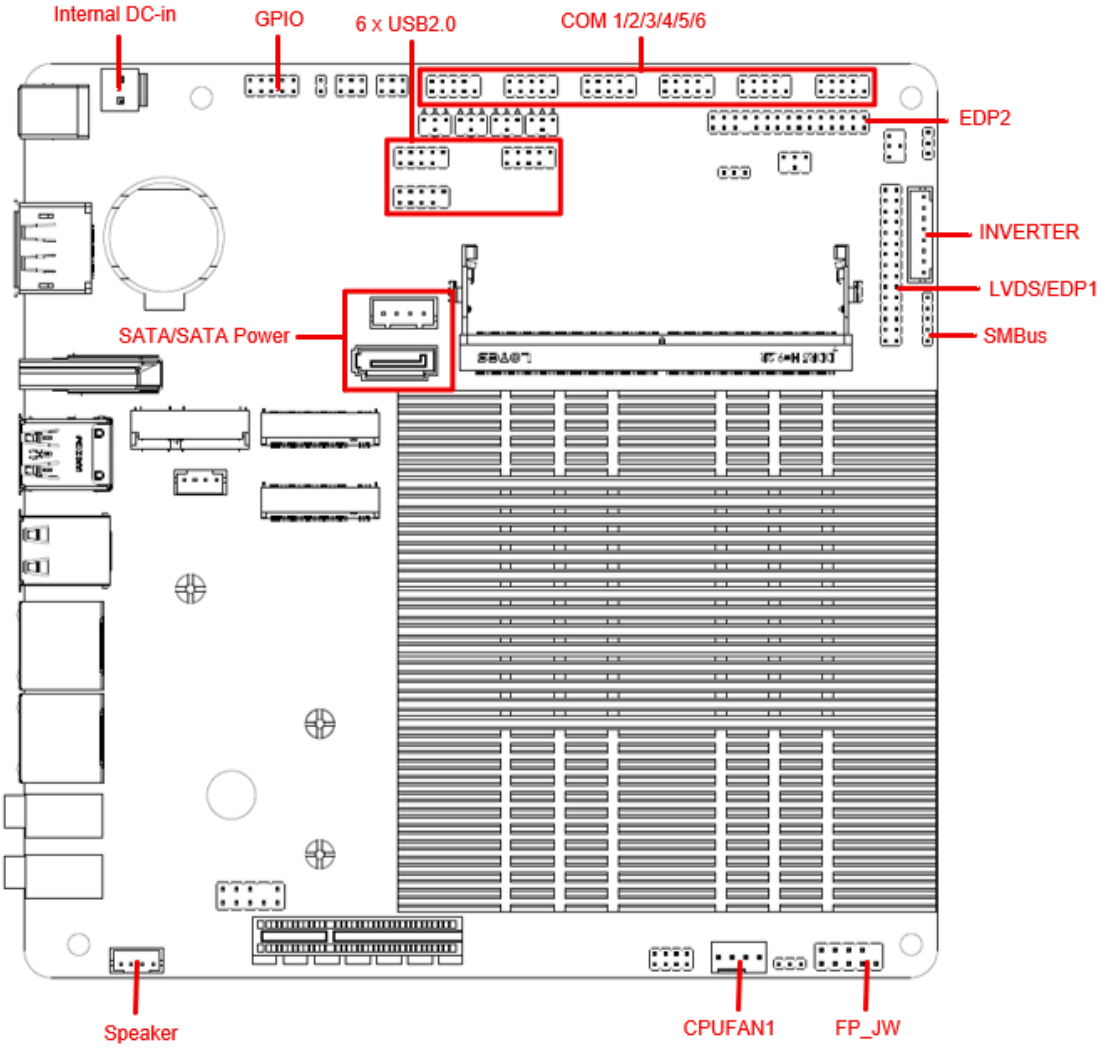
The board has a 12~19V DC-in power connector **(DCIN1)** in I/O back panel and an internal 12~19V power connector **(DCIN2).** User can only connect one type of compatible power supply to one of them to power the system.

Connectors and Slots:



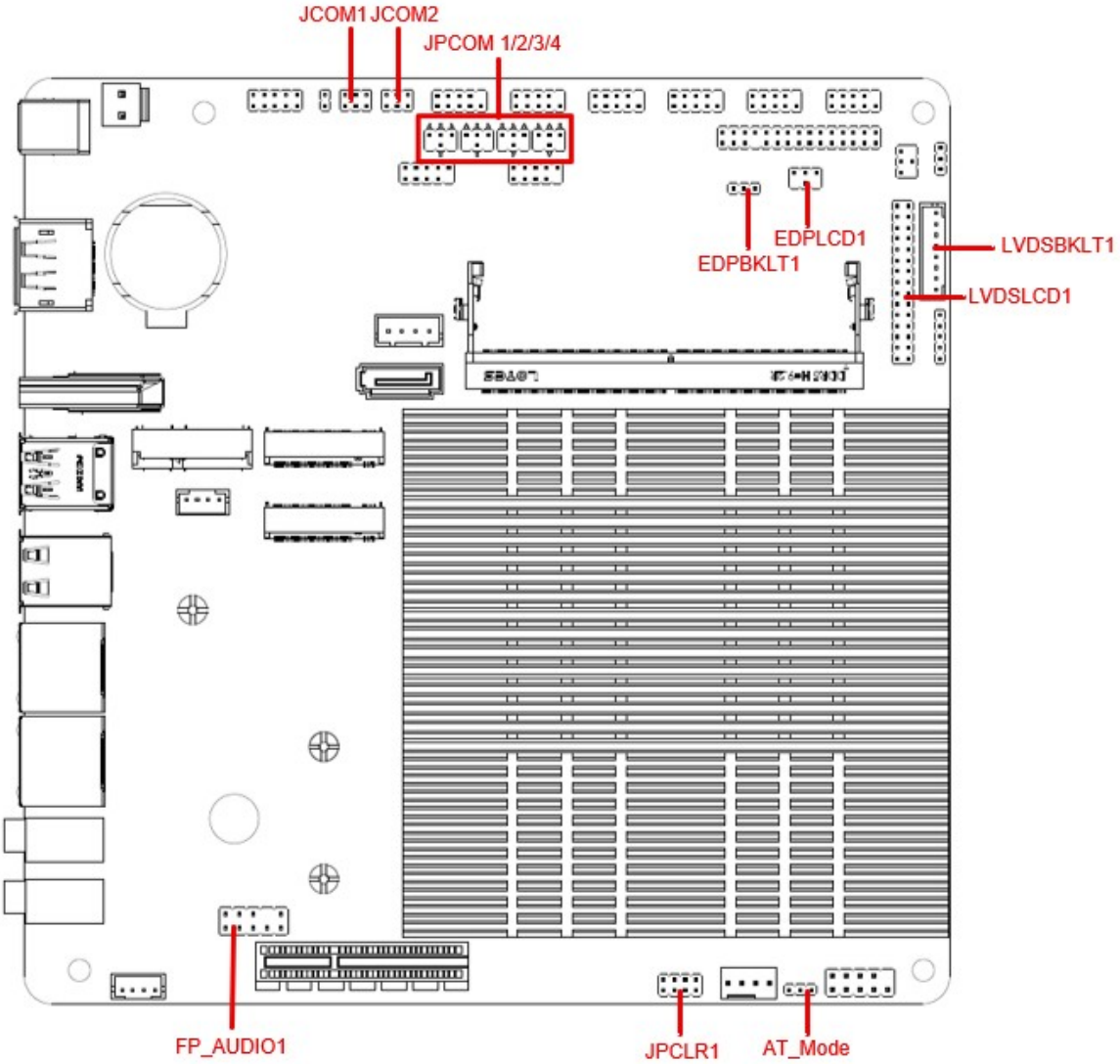
Back to Content

Internal Connectors



Back to Content

Internal Jumpers



Back to Content

Jumpers/Internal Headers

Jumper	Name	Description	Pitch
JCOM1	COM1 Port RS232/485 Select	6-Pin Block	2.0mm
JCOM2	COM2 Port RS232/485 Select	6-Pin Block	2.0mm
JPCOM1	COM1 Function Select	4-Pin Block	2.0mm
JPCOM2	COM2 Function Select	4-Pin Block	2.0mm
JPCOM3	COM3 Function Select	4-Pin Block	2.0mm
JPCOM4	COM4 Function Select	4-Pin Block	2.0mm
EDPBKLT1	EDP backlight Power Select	3-Pin Block	2.0mm
EDPLCD1	EDP LCD Power Select	4-Pin Block	2.0mm
LVDSBKLT1	LVDS backlight Power Select	3-Pin Block	2.0mm
LVDSLCD1	LVDS LCD Power Select	3-Pin Block	2.0mm
AT_MODE1	AT/ATX Power Mode	3-Pin Block	2.0mm
JPCLR1	Clear RTC/CMOS, Case-Open	8-Pin Block	2.0mm
FP_AUDIO	Front Panel Audio Header	9-pin Block	2.0mm
SPEAK_CON1	3W Amplifier Wafer	4-pin Block	2.0mm
GPIO	GPIO Port Header	10-pin Block	2.0mm
COM 1/2	RS232/485 Serial Port Header	9-pin Block	2.0mm
COM 3/4/5/6	RS232 Serial Port Header	9-pin Block	2.0mm
JW_FP1	Front Panel Header (PWR LED/ HDD LED/Power Button /Reset)	8-pin Block	2.54mm
SMBUS	SMBUS Header	5-pin Block	2.0mm
FP_USB1/2/3	Internal USB2.0 Port Header	9-pin Block	2.0mm
LVDS/EDP1	LVDS/EDP Header	30-pin Block	2.0mm
EDP2	EDP Header	30-pin	2.0mm

Back to Content

		Block	
INVERTER1	LVDS_EDP Inverter Wafer	8-pin Block	2.0mm

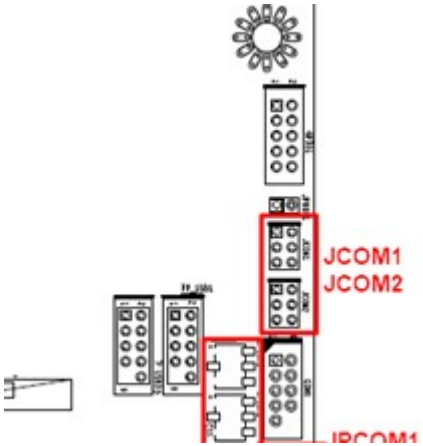
Connectors

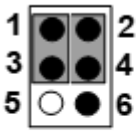
Connector	Name
LAN1/LAN2	RJ-45 LAN Port Connector x2
USB1	USB3.2 (Gen.1) Port Connector x2
USB2	USB2.0 Port Connector x2
DP1	Display Port Connector x1
HDMI1	HDMI Port Connector x1
Line-Out	Audio Line-Out Connector
MIC	Audio MIC Connector
COM1/COM2	Serial Port (RS232/485) Connector **Support 5V/12V*
DCIN1	12~19V DC–in Power Connector
DCIN2	Internal 2-Pin 12~19V DC-in Power Connector
CPUFAN1	CPU FAN Connector
SATA1	SATAIII Port Connector
PWROUT	SATA HDD Power-out Connector

Chapter 2
Hardware Installation

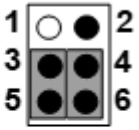
2-1 Jumper Settings

JCOM1/JCOM2 (6-pin): COM1 Port Pin-9 Function Select (2.0 pitch)





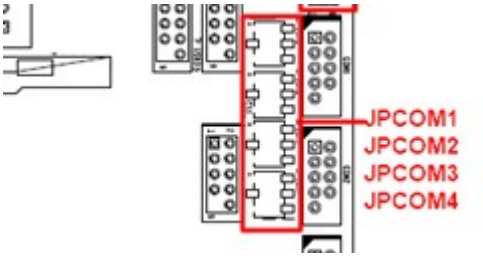
2-4 Closed
1-3 Closed
COM = RS485

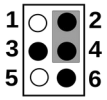


4-6 Closed
3-5 Closed
COM = RS232

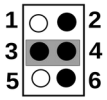
JPCOM1/JPCOM2/JPCOM3/JPCOM4 (4-pin): COM3 Header Pin-9 Function Select (2.0 pitch)

Back to Content

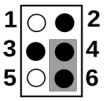




2-4 Closed:
RI=RS232;

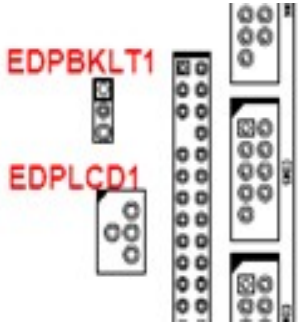


3-4 Closed:
RI= +5V;



4-6 Closed:
RI= +12V.

EDPBKLT1: EDP Backlight VCC 5V/12V Select (2.0 pitch)



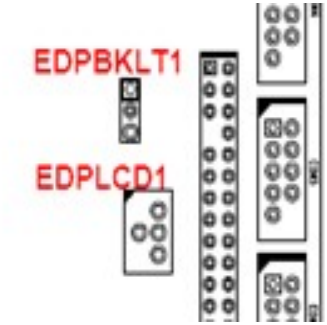


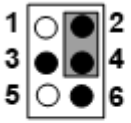
1-2 Closed: VCC=5V



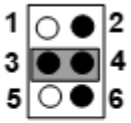
2-3 Closed: VCC=12V. (Default)

EDPLCD1: EDP LCD VCC 3.3V/5V/12V Select (2.0 pitch)

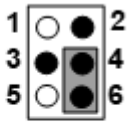




2-4 Closed:
LCD VCC=12V

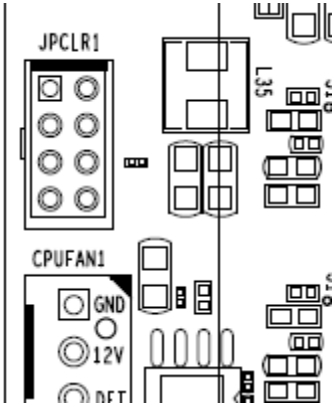


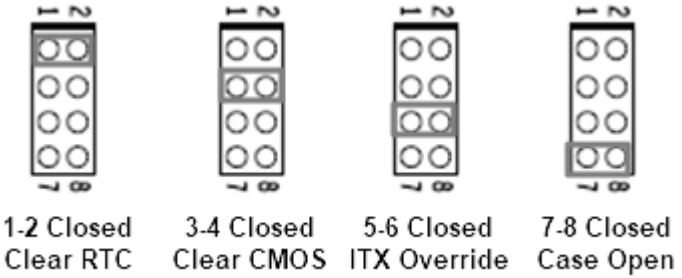
3-4 Closed:
LCD VDD=5V



4-6 Closed:
LVD VCC=3.3V

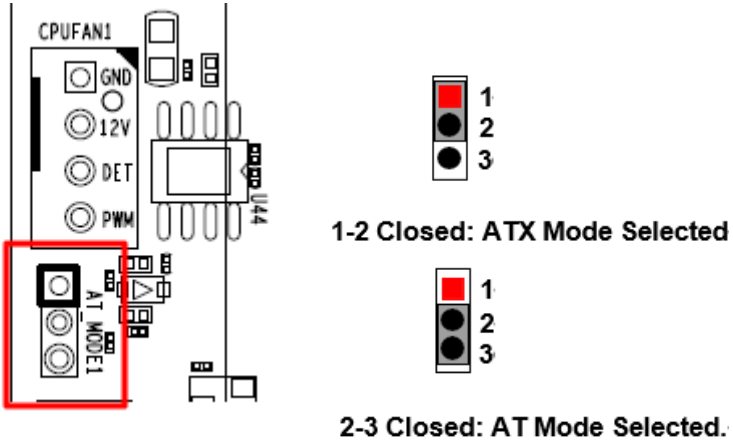
JPLCR1: Clear RTC, CMOS, ITX Override, Case Open Setting (2.0 pitch)





AT_MODE1 (3-pin): ATX Mode/AT Mode Select (2.0 pitch)

Back to Content



***ATX Mode Selected**: *Press power button to power on after power input ready;*

AT Mode Selected: *Directly power on as power input ready.*

2-2 Connectors, Headers and Wafers

2-2-1 Rear I/O Panel Connectors

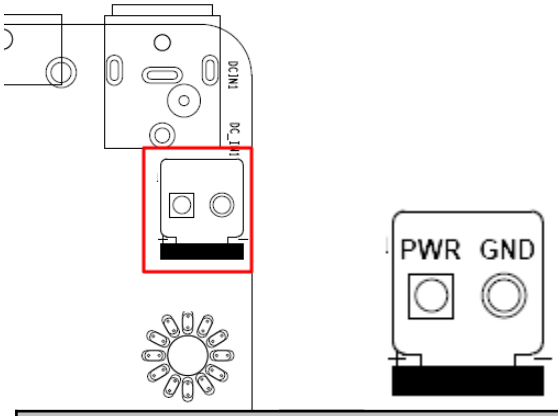
Icon	*Name*	*Function*
	**RJ-45 LAN Port**	This connector is standard RJ-45 LAN jack for Network connection which supports10/100/1000 Mbps Ethernet data transfer rate
	**Type-A USB2.0 Port**	To connect USB keyboard, mouse or other devices compatible with USB 2.0 specification.
	**Type-A USB3.2 (Gen.1) Port**	To connect USB keyboard, mouse or other devices compatible with USB3.2 (Gen.1) specification. Ports support up to 5Gbps data transfer rate.

	**HDMI2.0b Port**	For user to connect display device that support HDMI2.0b specification.
	**Display Port**	To the system to corresponding Display device with Compatible display port cable
	**Audio Connector**	Green: Line-out connector Pink: MIC connector
	**Serial Port**	RS232/485 with 5V/12V selectable
	**12~19V DC-in Power Jack**	For user to connect compatible power adapter to provide power supply for the system.

2-2-2 Motherboard Internal Connectors

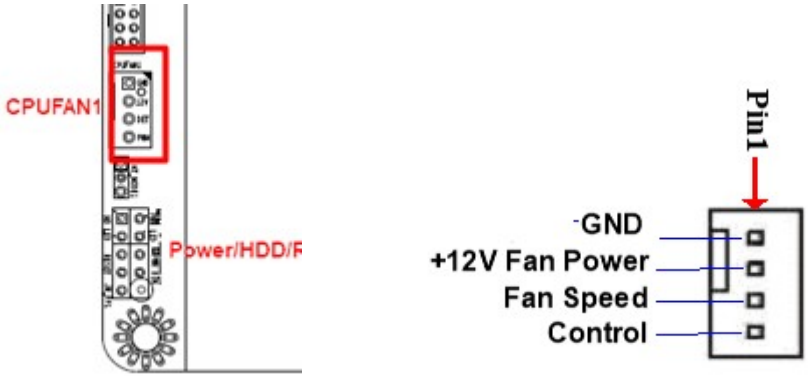
(1) DCIN2 (4-pin): Internal 12~19V DC-in Power Connector

Back to Content



Warning! The board has a 12V~19V DC-in power connector **(DCIN1)** on I/O back panel and an internal 12V~19V power connector **(DCIN2).** User can only connect one type of compatible power supply to one of them to power the system.

(2) CPUFAN (4-pin): CPU FAN Connector (2.54 pitch)

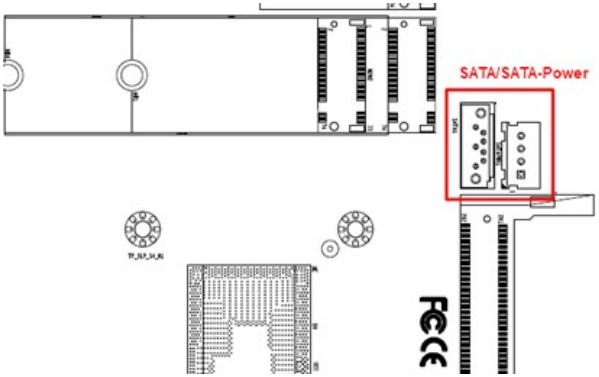


***Note:** Maximum current limit is **1.5A** while using **12V** working voltage*

(3) SATA1 (7-pin): SATAIII Port connector

This is a high-speed SATAIII port that supports 6GB/s transfer rate.

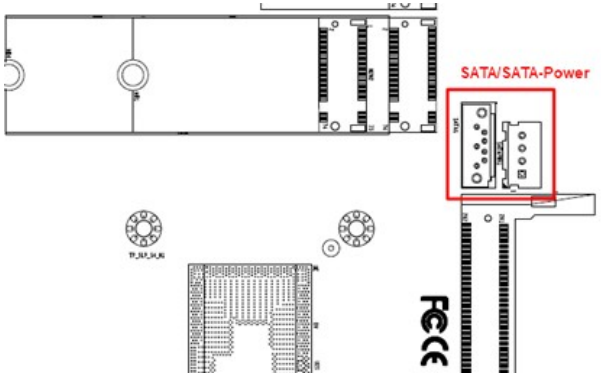
***Notice: The SATA port and the M.2 SATA slot** share the same channel and are mutually exclusive**, Please use only one at a time.**

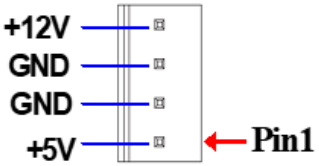




Pin No.	Definition
1	GND
2	TXP
3	TXN
4	GND
5	RXN
6	RXP
7	GND

(4) PWROUT (4-pin): SATA HDD Power-Out Connector (2.54 pitch)





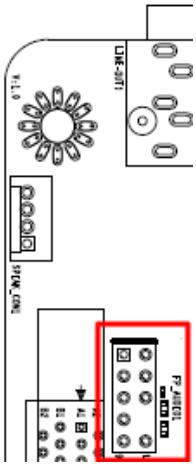
Back to Content

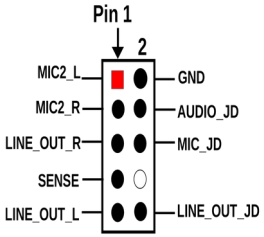
Warning: *Make sure that Pin-1 of compatible SATA Power out connector is inserted into corresponding Pin-1 of* ***SATAPWR*** *connector to avoid possible damage to the board and hard disk driver!*

2-2-3 Pin Definition for Headers & Wafers

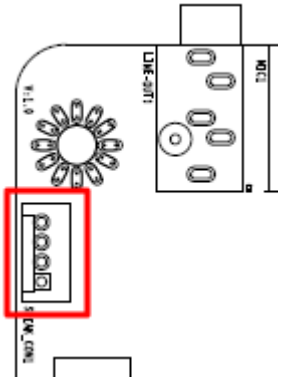
FP_AUDIO (9-pin): Front Panel Audio Header (2.0 pitch)

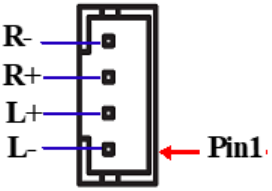
This header connects to Front Panel Line-out, MIC-In connector with cable.





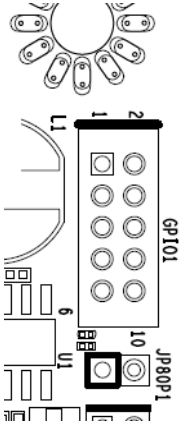
SPEAK_CON (4-pin): 3W Amplifier Wafer (2.0 pitch)

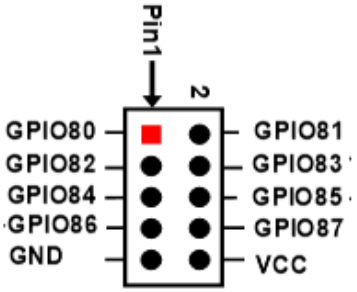




Back to Content

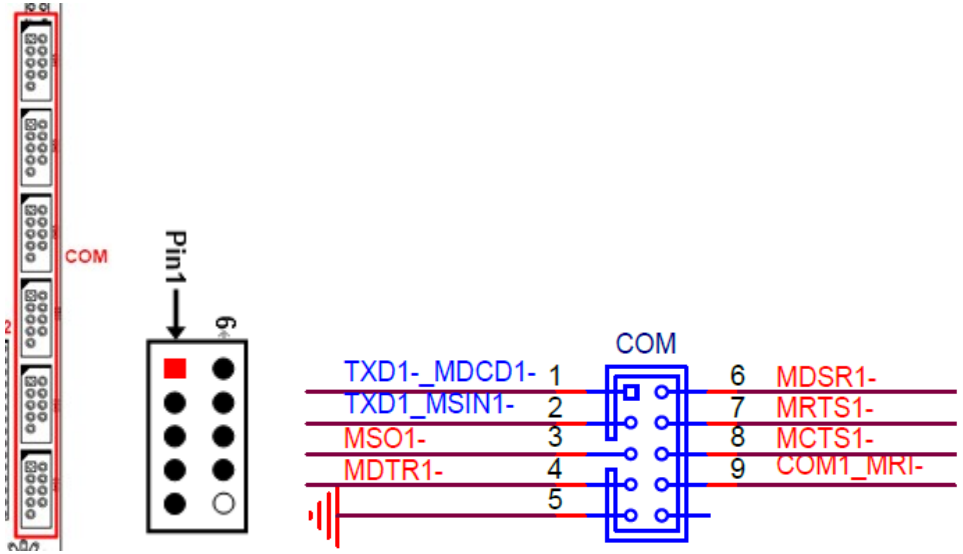
GPIO (10-pin): GPIO & 80 Port Header (2.0 pitch)





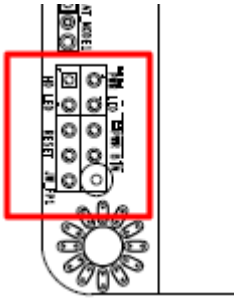
JP80P Open: For 80Port Function;
JP80P Closed: Normal 8-bit GPIO.

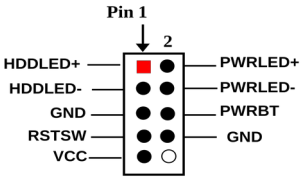
COM1/2/3/4/5/6 (9-pin): RS232/485(COM1/2) and RS232 (COM3/4/5/6) Serial Port Headers (2.0 pitch)



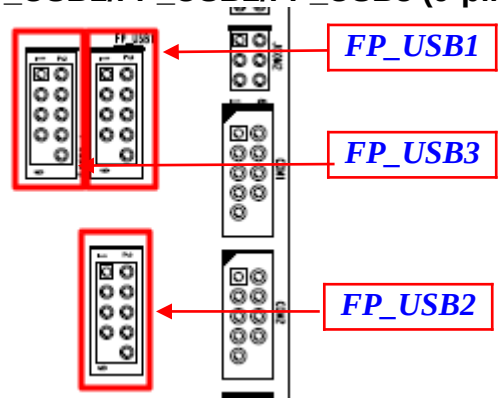
Back to Content

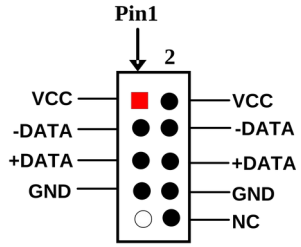
JW_FP1 (10-pin): Front Panel Function Select (2.54 pitch)





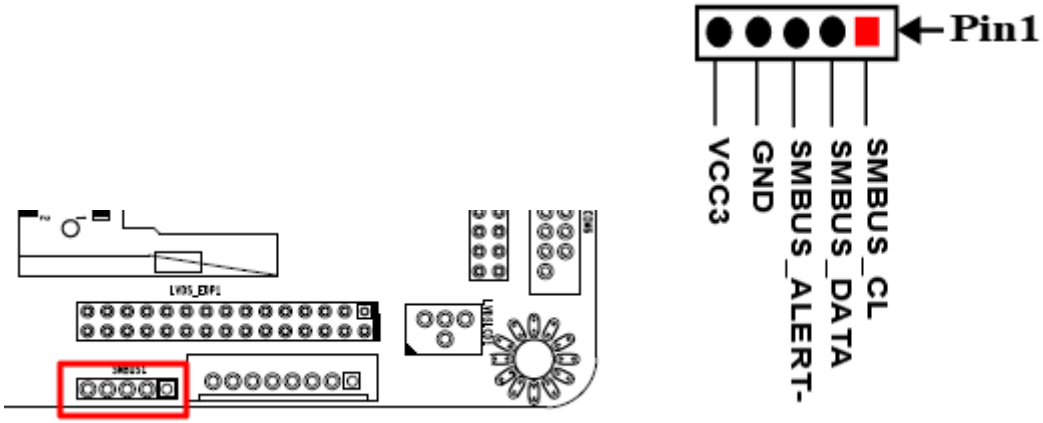
FP_USB1/FP_USB2/FP_USB3 (9-pin): USB 2.0 Port Header (2.0 pitch)



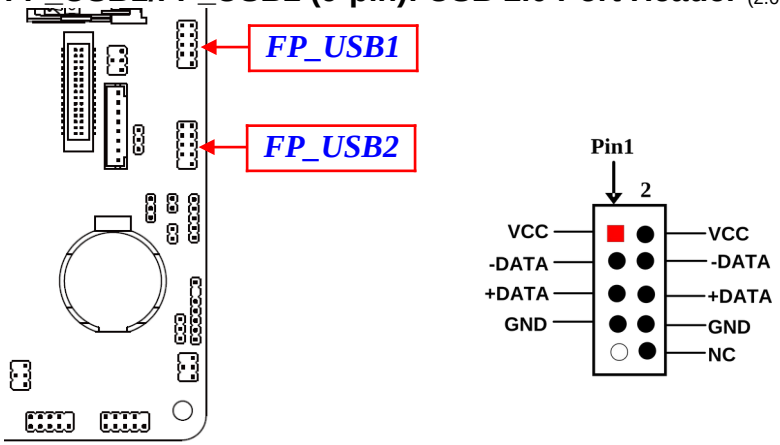


Back to Content

SMBUS (5-pin): SM BUS Header (2.0 pitch)

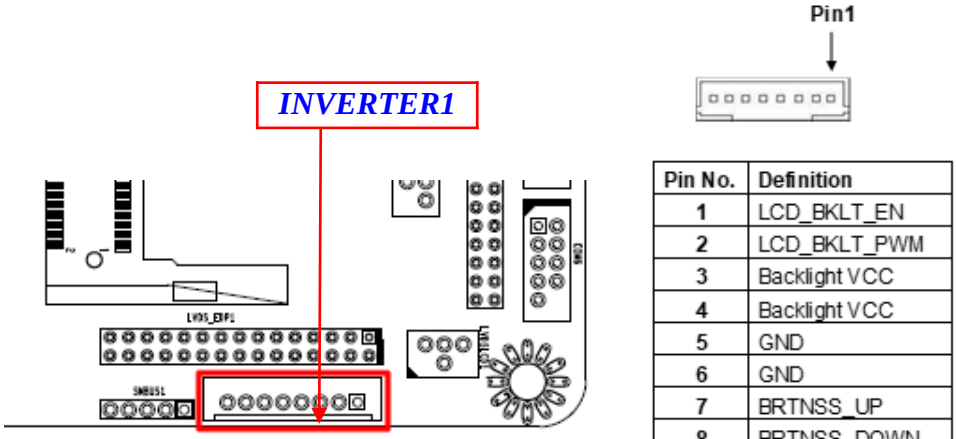


FP_USB1/FP_USB2 (9-pin): USB 2.0 Port Header (2.0 pitch)



***Note:** Maximum current limit is **1.5A** while using 5V working voltage*

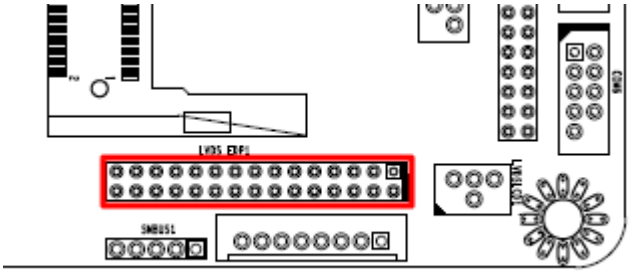
INVERTER1 (8-pin): LVDS Inverter Connector (2.0 pitch)

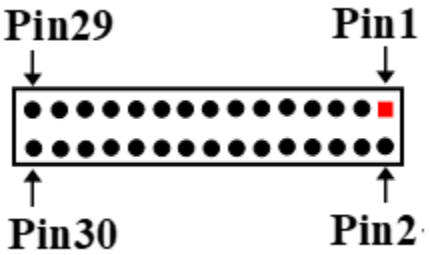


Pin No.	Definition
1	LCD_BKLT_EN
2	LCD_BKLT_PWM
3	Backlight VCC
4	Backlight VCC
5	GND
6	GND
7	BRTNSS_UP
8	BRTNSS_DOWN

Warning! *Find* ***Pin-1*** *location of the inverter and make sure that the installation direction is correct! Otherwise serious harm will occur to the board/display panel!!*

LVDS_EDP1 (30-pin): LVDS/EDP Port Header (2.00 pitch)





Pin Define	Pin NO.	Pin NO.	Pin Define
LCD_VCC	Pin 1	Pin 2	LCD_VCC
LCD_VCC	Pin 3	Pin 4	GND
GND	Pin 5	Pin 6	GND
LVDSA_DATAN0	Pin 7	Pin 8	LVDSA_DATAP0
LVDSA_DATAN1_eDP_TX1N	Pin 9	Pin 10	LVDSA_DATAP1_eDP_TX1P
LVDSA_DATAN2_eDP_TX0N	Pin 11	Pin 12	LVDSA_DATAP2_eDP_TX0P
GND	Pin 13	Pin 14	GND
LVDS_CLKAN_eDP_AUXN	Pin 15	Pin 16	LVDSA_CLKAP_eDP_TX0P
LVDSA_DATAN3	Pin 17	Pin 18	LVDSA_DATAP3
LVDSB_DATAN0	Pin 19	Pin 20	LVDSB_DATAP0
LVDSB_DATAN1	Pin 21	Pin 22	LVDSB_DATAP1
LVDSB_DATAN2	Pin23	Pin 24	LVDSB_DATAP2
GND	Pin 25	Pin 26	GND
LVDS_CLKBN	Pin 27	Pin 28	LVDS_CLKBP
LVDSB_DATAN3	Pin 29	Pin 30	LVDSB_DATAP3

2-2-4 Maximum Voltage & Current Limit

Below is a list of maximum voltage & Current Limit specification for motherboard interface (including but not limited to slots, connectors and headers) for setup reference:

Parts		Working Voltage	Current Support
USB Port from	***USB1***	5V	***900mA***
	USB2	5V/12V	500mA x2
	FP_USB1	5V	1.5A
	FP_USB2	5V	1.5A
	FP_USB3	5V	1.5A
JW_FP		5V	1A
LVDS_EDP1		3.3V/5V/12V (via jumper setting)	**2A**
EDP2		3.3V/5V/12V (via jumper setting)	**2A**
INVERTER1		5V/12V/Adapter VCC (via jumper setting	**2A**
CPUFAN1		12V	1.5A
SATAPWR		5V	1A
GPIO		5V	1A
SMBUS		5V	0.3A

Chapter 3
Introducing BIOS

Notice!	The BIOS options in this manual are for reference only. Different configurations may lead to difference in BIOS screen and BIOS screens in manuals are usually the first BIOS version when the board is released and may be different from your purchased motherboard. Users are welcome to download the latest BIOS version form our official website.

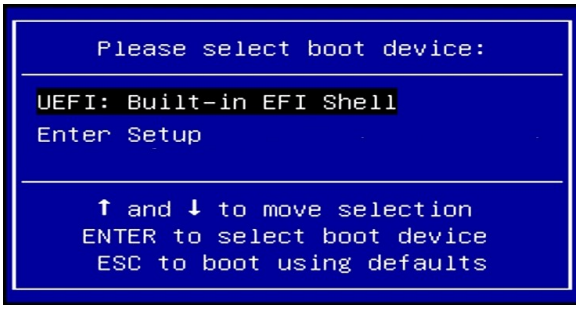
The BIOS is a program located on a Flash Memory on the motherboard. This program is a bridge between motherboard and operating system. When you start the computer, the BIOS program will gain control. The BIOS first operates an auto-diagnostic test called POST (power on self test) for all the necessary hardware, it detects the entire hardware device and configures the parameters of the hardware synchronization. Only when these tasks are completed done it gives up control of the computer to operating system (OS). Since the BIOS is the only channel for hardware and software to communicate, it is the key factor for system stability, and in ensuring that your system performance as its best.

Back to Content

3-1 Entering Setup

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

If the message disappears before your respond and you still wish to enter Setup, restart the system to try again by turning it OFF then ON or pressing the “RESET” button on the system case. You may also restart by simultaneously pressing <Ctrl>, <Alt> and <Delete> keys. If you do not press the keys at the correct time and the system does not boot, an error message will be displayed and you will again be asked to

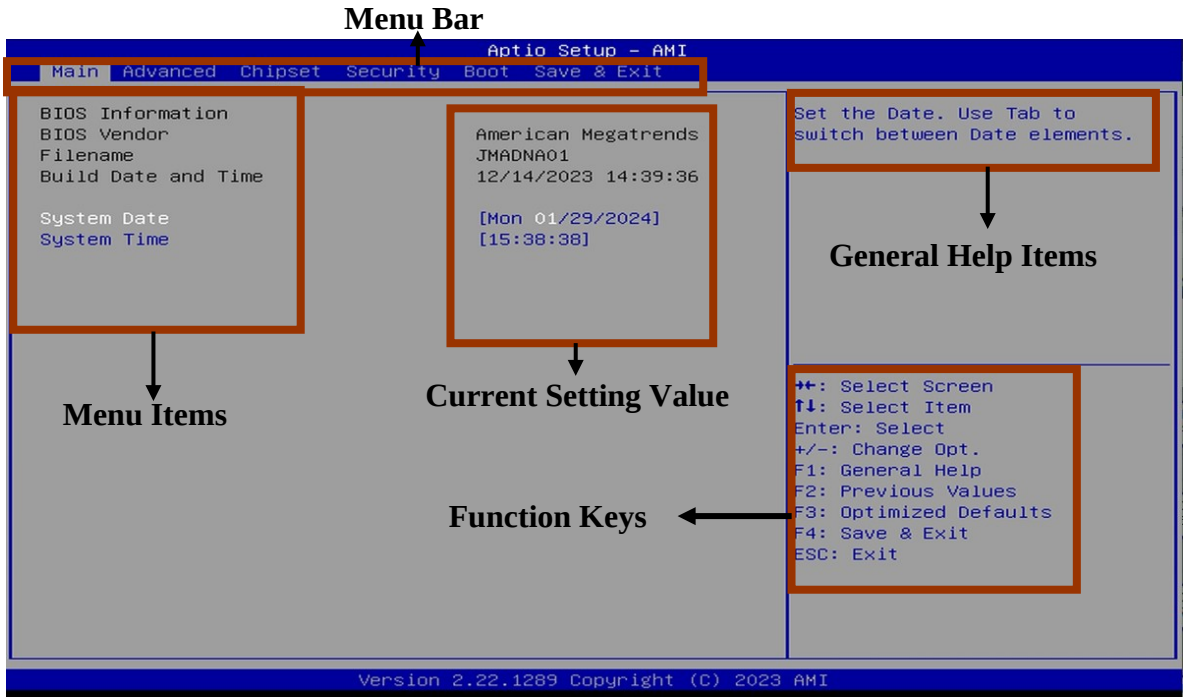


Press **<Del>** to enter Setup/ Press **<F7>** to enter Popup Menu.

Back to Content

3-2 BIOS Menu Screen

The following diagram show a general BIOS menu screen:



Back to Content

3-3 Function Keys

In the above BIOS Setup main menu of, you can see several options. We will explain these options step by step in the following pages of this chapter, but let us first see a short description of the function keys you may use here:

- Press←→ (left, right) to select screen;
- Press ↑↓ (up, down) to choose, in the main menu, the option you want to confirm or to modify.
- Press <Enter> to select.
- Press <+>/<–> keys when you want to modify the BIOS parameters for the active option.
- [F1]: General help.
- [F2]: Previous value.
- [F3]: Optimized defaults.
- [F4]: Save & Exit.
- Press <Esc> to quit the BIOS Setup.

3-4 Getting Help

Main Menu

The on-line description of the highlighted setup function is displayed at the top right corner the screen.

Status Page Setup Menu/Option Page Setup Menu

Press **[F1**] to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window, press <**Esc**>.

Back to Content

3-5 Menu Bars

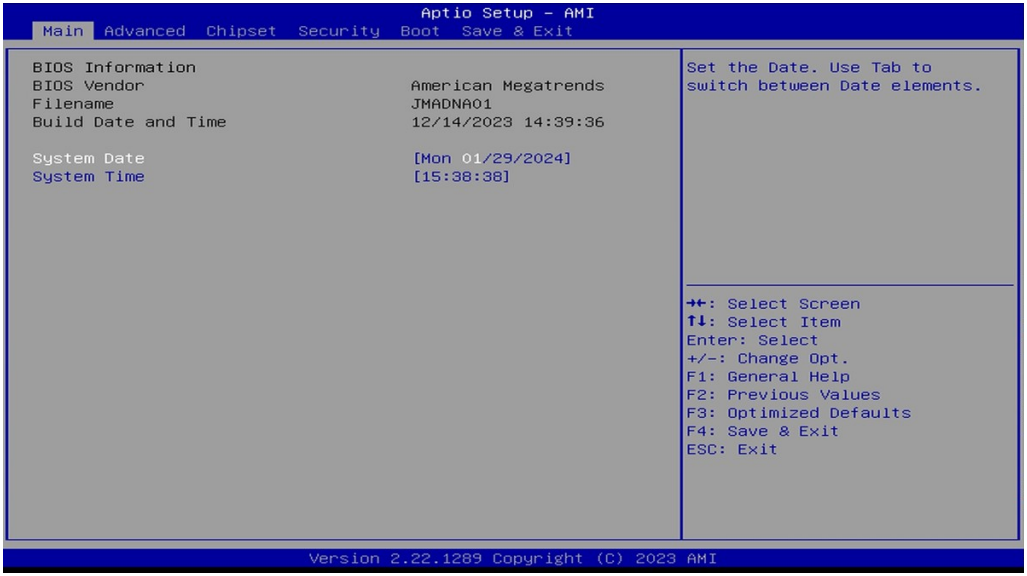
There are six menu bars on top of BIOS screen:

Main	To change system basic configuration
Advanced	To change system advanced configuration
Chipset	To change chipset configuration
Security	Password settings
Boot	To change boot settings
Save & Exit	Save setting, loading and exit options.

User can press the right or left arrow key on the keyboard to switch from menu bar. The selected one is highlighted.

3-6 Main Menu

Main menu screen includes some basic system information. Highlight the item and then use the <+> or <-> and numerical keyboard keys to select the value you want in each item.



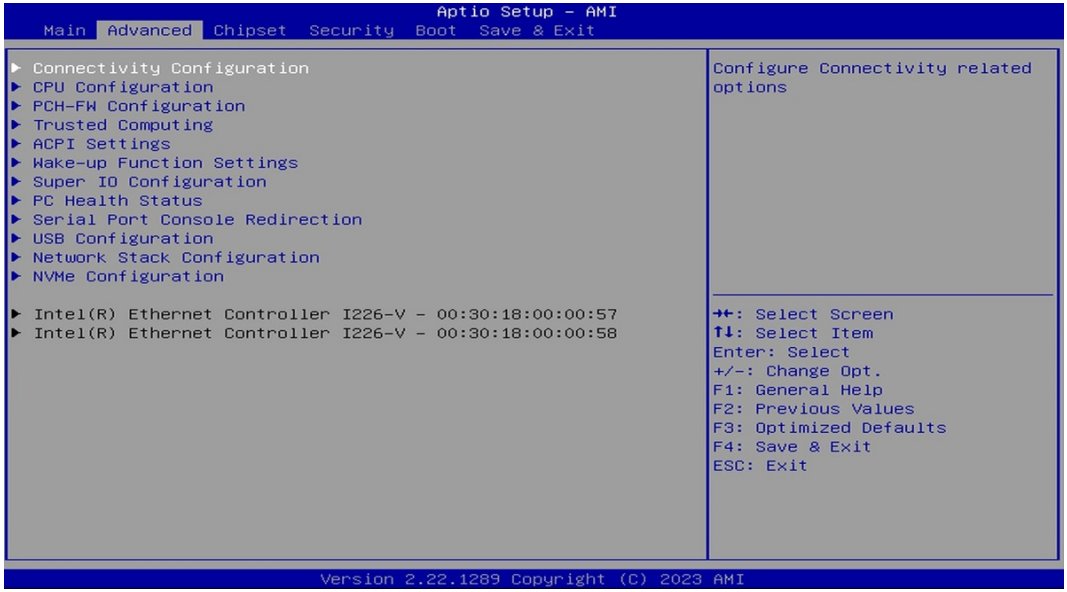
System Date

Set the date. Please use [Tab] to switch between date elements.

System Time

Set the time. Please use [Tab] to switch between time elements.

3-7 Advanced Menu



► **Connectivity Configuration**

Press [Enter] to make settings for the following sub-items:

CNVi Mode

Use this item to this option configures connectivity.

[Auto Detection] means that if discrete solution is discovered it will be enabled by default. Otherwise integrated solution (CNVi) will be enabled;

[Disable Integrated] disables integrated solution.

The optional settings: [Disable Integrated]; [Auto Detection].

► **CPU Configuration**

Press [Enter] to view current CPU configuration and make settings for the following sub-items:

Intel(R) SpeedStep(tm)

Use this item to allows more than two frequency ranges to be supported
The optional settings: [Disabled]; [Enabled]

Turbo Mode

Use this item to enable/disable processor turbo mode (requires EMTTM enabled too). AUTO means enabled.
The optional settings: [Disabled]; [Enabled]

C-States

Use this item to enable or disable C-State.
The optional settings: [Disabled]; [Enabled].

► **PCH-FW Configuration**

Use this item to configure management engine technology parameters

Press [Enter] to make settings for the following sub-items:

TPM Device Selection

Use this item to selects TPM device: PTT or dTPM. PTT-Enables PTT in SKuMgr dTPM 1.2-Disables PTT in SKuMgr Warning! PTT/dTPM will be disabled and all date saved on it will be lost.
The optional settings: [dTPM]; [PTT].

- **Firmware Update Configuration**
  Use this item to enable/disable Me FW Image Re-Flash function.
  The optional settings: [Disabled]; [Enabled].

► **Trusted Computing**

Press [Enter] to enable or disable '**Security Device Support**'.

Security Device Support

Use this item to 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
The optional settings: [Disabled]; [Enabled].

When set as **[Enabled]**, the following sub-items shall appear:

Active PCR Banks

Available PCR Banks

SHA256 PCR Bank

Use this item to enable or disable SHA256 PCR Bank
The optional settings are: [Disabled]; [Enabled]

SHA384 PCR Bank

Use this item to enable or disable SHA384 PCR Bank
The optional settings are: [Disabled]; [Enabled]

SM3_256 PCR Bank

Use this item to enable or disable SM3_256 PCR Bank
The optional settings are: [Disabled]; [Enabled]

Pending Operation

Use this item to schedule an operation for the security device.
NOTE: Your computer will reboot during restart in order to change state of security device
The optional settings are: [None]; [TPM Clear]

Device Select

Use this item to TPM 1.2 will restrict support to TPM 1.2 devices, TPM 2.0 will restrict support to TPM both with the default set to TPM 2.0 devices if not found, TPM 1.2 devices will be enumerated.
The optional settings are: [TPM 1.2]; [TPM 2.0]; [Auto]

► **ACPI Settings**

Press [Enter] to make settings for the following sub-items:
ACPI Settings

ACPI Sleep State

Use this item to select the highest ACPI sleep state the system will enter when the suspend button is pressed.
The optional settings are: [Suspend Disabled]; [S3 (Suspend to RAM)].

▸ **Wakeup Function Settings**

Press [Enter] to make settings for the following sub-items:

Wake-up System with Fixed Time

Use this item to enable or disable system wake on alarm event.
The optional settings: [Disabled]; [Enabled].

When set as [Enabled], system will wake on the hour/min/sec specified.

Wake-up Hour

Use this item to 0-23. For example, 3 for 3am and 15 for 3pm

Wake-up Minute

Use this item to 0-59

Wake-up Second

Use this item to 0-59

When set **Wake-up System with Fixed Time** as [Enabled], user can make further settings in the following items:

Wake-up System with Dynamic Time

Use this item to enable or disable system wake on alarm event.

System will wake on the current time + Increase minutes.

The optional settings: [Disabled]; [Enabled].

When set as [Enabled], system will wake on the current time + increased minute(s).

Wake-up Minute Increase

Use this item to 1 to 60 minute(s)

PS2 KB/MS Wake-Up

Use this item to enable or disable PS2 KB/MS Wake-Up from (S3/S4/S5) support only disable ERP function.

Please disable ERP before activating this function in S4-S5

The optional settings: [Disabled]; [Enabled].

PCIE Wake-up from S3-S5

The optional settings: [Disabled]; [Enabled].

USB S3/S4 Wake-up

Use this item to enable or disable USB S3/S4 Wake-up support only disable ERP function.

The optional settings: [Disabled]; [Enabled].

USB S5 Power

Use this item to USB power after system shutdown support only disable ERP function.

The optional settings: [Disabled]; [Enabled]

► **Super I/O Configuration**

Press [Enter] to make settings for the following sub-items:

Super IO Configuration

ERP Support

Use this item to energy-related products function. Disable ERP to active all wake-up functions.

The optional settings are: [Disabled]; [Enabled].

► **Serial Port 1 Configuration**

Press [Enter] to make settings for the following items:

Serial Port

Use this item to enable or disable serial port (COM).

The optional settings are: [Disabled]; [Enabled].

When set as **[Enabled]**, the following sub-items shall appear:

Device Settings

Change Settings

Use this item to select an optimal setting for super IO device.

The optional settings are: [IO=3F8h; IRQ=4]; [IO=3F8h; IRQ=3,4,5,7,10,11]; [IO=2F8h; IRQ=3,4,5,7,10,11]; [IO=3E8h; IRQ=3,4,5,7,10,11]; [IO=2E8h; IRQ=3,4,5,7,10,11]

Transmission Mode Select

The optional settings are: [RS422]; [RS232]; [RS485].

Mode Speed Select

The optional settings are: [RS232/RS422/RS485=250kbps]; [RS232=1Mbps, RS422/RS485=10Mbps].

► **Serial Port 2 Configuration**

Press [Enter] to make settings for the following sub-items:

Serial Port

Use this item to enable or disable serial port (COM).

The optional settings are: [Disabled]; [Enabled].

Back to Content

When set as **[Enabled]**, the following sub-items shall appear:

Device Settings

Change Settings

Use this item to select an optimal setting for super IO device.

The optional settings are: [IO=2F8h; IRQ=3]; [IO=3F8h; IRQ=3,4,5,7,10,11]; [IO=2E8h; IRQ=3,4,5,7,10,11]; [IO=3E8h; IRQ=3,4,5,7,10,11]; [IO=2E8h; IRQ=3,4,5,7,10,11]

- **Serial Port 3 Configuration**

Press [Enter] to make settings for the following items:

Serial Port

Use this item to enable or disable serial port (COM).

The optional settings are: [Disabled]; [Enabled].

When set as **[Enabled]**, the following sub-items shall appear:

Device Settings

Change Settings

Use this item to select an optimal setting for super IO device.

The optional settings are: [IO=3E8h; IRQ=10]; [IO=3F8h; IRQ=3,4,5,7,10,11]; [IO=2F8h; IRQ=3,4,5,7,10,11]; [IO=3E8h; IRQ=3,4,5,7,10,11]; [IO=2E8h; IRQ=3,4,5,7,10,11]; [IO=3E0h; IRQ=3,4,5,7,10,11]; [IO=2E0h; IRQ=3,4,5,7,10,11]

- **Serial Port 4 Configuration**

Press [Enter] to make settings for the following items:

Serial Port

Use this item to enable or disable serial port (COM).

The optional settings are: [Disabled]; [Enabled].

When set as **[Enabled]**, the following sub-items shall appear:

Device Settings

Change Settings

Use this item to select an optimal setting for super IO device.

The optional settings are: [IO=2E8h; IRQ=10]; [IO=3F8h; IRQ=3,4,5,7,10,11]; [IO=2F8h; IRQ=3,4,5,7,10,11]; [IO=3E8h; IRQ=3,4,5,7,10,11]; [IO=2E8h;

IRQ=3,4,5,7,10,11]; [IO=3E0h; IRQ=3,4,5,7,10,11]; [IO=2E0h; IRQ=3,4,5,7,10,11]

- **Serial Port 5 Configuration**

Press [Enter] to make settings for the following items:

Serial Port

Use this item to enable or disable serial port (COM).

The optional settings are: [Disabled]; [Enabled].

When set as **[Enabled]**, the following sub-items shall appear:

Device Settings

Change Settings

Use this item to select an optimal setting for super IO device.

The optional settings are: [IO=3F0h; IRQ=11]; [IO=3F8h; IRQ=3,4,5,7,10,11]; [IO=2F8h; IRQ=3,4,5,7,10,11]; [IO=3E8h; IRQ=3,4,5,7,10,11]; [IO=2E8h; IRQ=3,4,5,7,10,11]; [IO=3E0h; IRQ=3,4,5,7,10,11]; [IO=2E0h; IRQ=3,4,5,7,10,11]

- **Serial Port 6 Configuration**

Press [Enter] to make settings for the following items:

Serial Port

Use this item to enable or disable serial port (COM).

The optional settings are: [Disabled]; [Enabled].

When set as **[Enabled]**, the following sub-items shall appear:

Device Settings

Change Settings

Use this item to select an optimal setting for super IO device.

The optional settings are: [IO=2F0h; IRQ=11]; [IO=3F8h; IRQ=3,4,5,7,10,11]; [IO=2F8h; IRQ=3,4,5,7,10,11]; [IO=3E8h; IRQ=3,4,5,7,10,11]; [IO=2E8h; IRQ=3,4,5,7,10,11]; [IO=3E0h; IRQ=3,4,5,7,10,11]; [IO=2E0h; IRQ=3,4,5,7,10,11]

WatchDog Reset Timer

Use this item to enable or disable WDT reset function. When set as [Enabled], the following sub-items shall appear:

WatchDog Reset Timer Value
User can select a value in the range of [10] to [255] seconds when '**WatchDog Reset Timer Unit**' set as [Sec]; or in the range of [1] to [255] minutes when '**WatchDog Reset Timer Unit**' set as [Min].

WatchDog Reset Timer Unit
The optional settings are: [Sec.]; [Min.].
ATX Power Emulate AT Power
This item support Emulate AT power function, MB power On/Off control by power supply. Use needs to select 'AT or ATX Mode' on MB jumper at first (refer to JAT_ATX jumper setting Pin 1&2 of for ATX Mode & Pin 2&3 of AT Mode Select).
Case Open Detect
Use this item to detect case has already open or not, show message in POST.
The optional settings: [Disabled]; [Enabled].
When set as [Enabled], system will detect if COPEN has been short or not (refer to COPEN jumper setting for Case Open Detection); if Pin 1&2 of COPEN are short, system will show Case Open Message during POST

► **PC Health Status**
Press [Enter] to view current hardware health status, make further settings in '**SmartFAN Configuration**'.

► **SmartFAN Configuration**
Press [Enter] to make settings for SmartFan Configuration:
SmartFAN Configuration

CPUFAN1 Smart Mode
The optional settings are: [Disabled]; [Enabled].
When set as [Enabled], the following sub-items shall appear:
CPUFAN1 Full-Speed Temperature
Use this item to set CPUFAN1 full speed temperature. Fan will run at full speed when above this pre-set temperature.
CPUFAN1 Full-Speed Duty
Use this item to set CPUFAN1 full-speed duty. Fan will run at full speed when

Back to Content

above this pre-set duty.

CPUFAN1 Idle-Speed Temperature

Use this item to set CPUFAN1 idle speed temperature. Fan will run at idle speed when below this pre-set temperature.

CPUFAN1 Idle-Speed Duty

Use this item to set CPUFAN1 idle speed duty. Fan will run at idle speed when below this pre-set duty

SYSFAN1 Smart Mode

The optional settings are: [Disabled]; [Enabled].

When set as [Enabled], the following sub-items shall appear:

SYSFAN1 Full-Speed Temperature

Use this item to set SYSFAN1 full speed temperature. Fan will run at full speed when above this pre-set temperature.

SYSFAN1 Full-Speed Duty

Use this item to set SYSFAN1 full-speed duty. Fan will run at full speed when above this pre-set duty.

SYSFAN1 Idle-Speed Temperature

Use this item to set SYSFAN1 idle speed temperature. Fan will run at idle speed when below this pre-set temperature.

SYSFAN1 Idle-Speed Duty

Use this item to set SYSFAN1 idle speed duty. Fan will run at idle speed when below this pre-set duty

- **Serial Port Console Redirection**

COM1

Console Redirection

The optional settings: [Disabled]; [Enabled].

When set as [Enabled], the following sub-items shall appear:

- **Console Redirection Settings**

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

Back to Content

compatible settings.
Press [Enter] to make settings for the following items:

COM1

Console Redirection Settings

Terminal Type

The optional settings: [VT100]; [VT100Plus]; [VT-UTF8]; [ANSI].
Emulation: ANSI: Extended ASCII char set. VT100:ASCII char set. VT100Plus: Extends VT100 to support color. function keys, etc.; VT-UTF8: Uses UTF8 encoding to map Unicode chars onto 1 or more bytes

Bits per second

Use this item to select serial port transmission speed. The speed must be matched on the other side. Long or noisy lines may require lower speeds.
The optional settings: [9600]; [19200]; [38400]; [57600]; [115200].

Data Bits

The optional settings: [7]; [8].

Parity

A parity bit can be sent with the data bits to detect some transmission errors.
The optional settings: [None]; [Even]; [Odd]; [Mark]; [Space].
Even: parity bit is 0 if the data bits is odd; Odd: parity bit is 0 if num of 1's in the data bits is odd; Mark: parity bit is always 1; Space: Parity bit is always 0; Mark and Space Parity do not allow for error detection.

Stop Bits

Stop bits indicate the end of a serial data packet. (A start bit indicates the beginning). The standard setting is 1 stop bit. Communication with slow devices may require more than 1 stop bit.
The optional settings: [1]; [2].

Flow Control

Flow control can prevent data loss from buffer overflow. When sending data, if the receiving buffers are full, a "stop" signal can be sent to stop the data flow. Once the buffers are empty, a "start" signal can be sent to re-start the flow. Hardware flow control uses two wires to send start/stop signals.

The optional settings: [None]; [Hardware RTS/CTS].

VT-UTF8 Combo Key Support

Use this item to enable VT-UTF8 Combination Key Support for ANSI/VT100 terminals.

The optional settings: [Disabled]; [Enabled].

Recorder Mode

With this mode enable only text will be sent. This is to capture Terminal data.

The optional settings: [Disabled]; [Enabled].

Resolution 100x31

Use this item to enable or disable extended terminal resolution.

The optional settings: [Disabled]; [Enabled].

Legacy OS Redirection Resolution

On Legacy OS, the Number of Rows and Columns supported redirection.

The optional settings: [80x24]; [80x25].

Putty KeyPad

Use this item to select FunctionKey and KeyPad on Putty.

The optional settings: [VT100]; [Linux]; [XTERMR6]; [SCO]; [ESCN]; [VT400].

Redirection After BIOS POST

The optional settings are: [Always Enable]; [BootLoader].

Whet Bootloader is selected, then Lagacy Console Redirection is disabled before booting to legacy OS. When Always Enable is selected, then Legacy Console is enabled for legacy OS. Default setting for this option is set to Always Enable.

Serial Port for Out-of-Band Management/ Windows Emergency Management Services (EMS)

Console Redirection

The optional settings: [Disabled]; [Enabled].

When set as [Enabled], the following sub-items shall appear:

- **Console Redirection Settings**

  The settings specify how the host computer and the remote computer (which

Back to Content

the user is using) will exchange data. Both computers should have the same or compatible settings.
Press [Enter] to make settings for the following items:

Out-of-Band Mgmt Port

The optional setting is: [COM1].

Terminal Type

The optional settings: [VT100]; [VT100Plus]; [VT-UTF8]; [ANSI].
VT-UTF8 is the preferred terminal type for out-of-band management. The next best choice is VT100+ and then VT100. See above, in console redirection settings page, for more help with terminal type/emulation.

Bits per second EMS

Use this item to select serial port transmission speed. The speed must be matched on the other side. Long or noisy lines may require lower speeds.
The optional settings: [9600]; [19200]; [57600]; [115200].

Flow Control EMS

Flow control can prevent data loss from buffer overflow. When sending data, if the receiving buffers are full, a “stop” signal can be sent to stop the data flow. Once the buffers are empty, a “start” signal can be sent to re-start the flow. Hardware flow control uses two wires to send start/stop signals.
The optional settings: [None]; [Hardware RTS/CTS]; [Software Xon/Xoff].

Data Bits EMS

The default setting is: [8].
**This item may or may not show up, depending on different configuration.*

Parity EMS

The default setting is: [None].
**This item may or may not show up, depending on different configuration.*

Stop Bits EMS

The default setting is: [1].
**This item may or may not show up, depending on different configuration.*

- **USB Configuration**

  Press [Enter] to make settings for the following sub-items:

Back to Content

USB Configuration

XHCI Hand-off

This is a workaround for OSes without XHCI hand-off support. The XHCI ownership change should be claimed by XHCI driver.

The optional settings are: [Enabled]; [Disabled].

USB Mass Storage Driver Support

The optional settings are: [Disabled]; [Enabled].

USB Hardware Delays and Time-outs:

USB Transfer Time-out

Use this item to set the time-out value for control, bulk, and interrupt transfers.

The optional settings are: [1 sec]; [5 sec]; [10 sec]; [20 sec].

Device Reset Time-out

Use this item to set USB mass storage device start unit command time-out.

The optional settings are: [10 sec]; [20 sec]; [30 sec]; [40 sec].

Device Power-up Delay

Use this item to set maximum time the device will take before it properly reports itself to the host controller.

The optional settings: [Auto]; [Manual].

'Auto' uses default value: for a root port it is 100 ms, for a hub port the delay is taken from hub descriptor.

Select [Manual] you can set value for the following sub-item: '**Device Power-up Delay in Seconds'.**

Device Power-up Delay in Seconds

The delay range is from [1] to [40] seconds, in one second increments.

- **Network Stack Configuration**

Press [Enter] to go to '**Network Stack**' screen to make further settings.

Network Stack

The optional settings are: [Enabled]; [Disabled].

When set as [Enabled], the following sub-items shall appear:

Ipv4 PXE Support

The optional settings are: [Disabled]; [Enabled].

Back to Content

Use this item to enable Ipv4 PXE Boot Support. When set as [Disabled], Ipv4 boot optional will not be created.

Ipv6 PXE Support

The optional settings are: [Disabled]; [Enabled].

Use this item to enable Ipv6 PXE Boot Support. When set as [Disabled], Ipv6 boot optional will not be created.

PXE Boot Wait Time

Use this item to set wait time to press [ESC] key to abort the PXE boot.

Media Detect Count

Use this item to set number of times presence of media will be checked.

The optional settings range from [1] to [50].

- **NVMe Configuration**

Press [Enter] to view current NVMe Configuration.

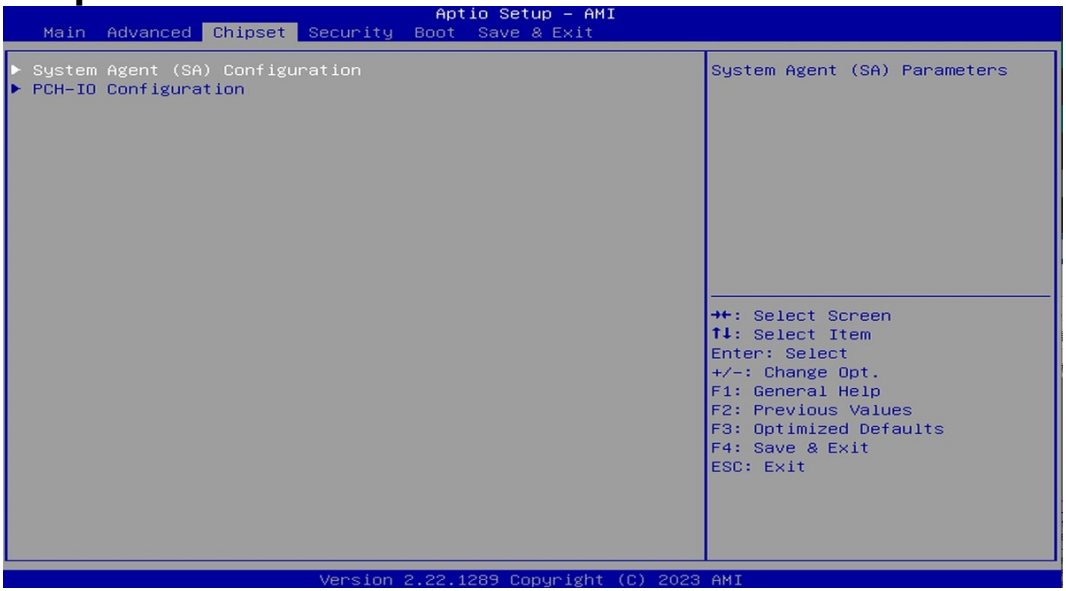
**Note: options only when NVME device is available.*

- **Intel(R) Ethernet Controller I226-V-XX:XX:XX:XX:XX:XX**
- **Intel(R) Ethernet Controller I226-V -XX:XX:XX:XX:XX:XX**

These items show current network brief information.

Back to Content

3-8 Chipset Menu



- **System Agent (SA) Configuration**

  Press [Enter] to make settings for the following sub-items:

  ► **Maximum Memory Frequency**

  Use this item to Maximum Memory Frequency selections in Mhz

  The optional settings are: [Auto]; [3200]; [3467]; [3600]; [3733]; [4000]; [4200]; [4267]; [4400]; [4600]; [4800]; [5000]; [5200]; [5400]; [5600]; [5800]; [6000]; [6200]; [6400].

  Memory Frequency

  Total Memory

  GTT Size

  Use this item to select the GTT size

  The optional settings are: [2MB]; [4MB]; [8MB].

  DVMT Pre-Allocated

Use this item to select DVMT 5.0 Pre-Allocated (Fixed) graphics memory size used by the internal graphics device.
The optional settings are: [OM]; [32M]; [64M]; [96M]; [128M]; [160M]; [4M]; [8M]; [12M]; [16M]; [20M]; [24M]; [28M]; [32M/F7]; [36M]; [40M]; [44M]; [48M]; [52M]; [56M]; [60M].

Active LVDS/eDP

Use this item to select the active configuration
The optional settings are: [Disabled]; [Enabled]

Panel Type

The optional settings: [800x480 1ch 18-bit]; [800x600 1ch 18-bit]; [800x600 1ch 24-bit]; [1024x600 1ch 18-bit]; [1024x768 1ch 18-bit]; [1024x768 1ch 24-bit]; [1280x768 1ch 24-bit]; [1280x800 1ch 24-bit]; [1366x768 1ch 18-bit]; [1366x768 1ch 24-bit]; [1440x900 2ch 18-bit]; [1440x900 2ch 24-bit]; [1280x1024 2ch 24-bit]; [1680x1050 2ch 24-bit]; [1920x1080 2ch 24-bit]; [eDP]

Backlight Control

The optional settings: [PWM Inverted]; [PWM Normsl]

► **PCH-IO Configuration**

Press [Enter] to make settings for the following sub-items:

SATA Controller(s)

Use this item to enable or disable SATA device.
The optional settings: [Disabled]; [Enabled].
When set as **[Enabled]**, the following sub-items shall appear:

SATA Mode Selection

This item determines how SATA controller(s) operate.
The optional settings: [AHCI].

M.2

Port

The optional settings: [Disabled]; [Enabled].

SATA1

Port

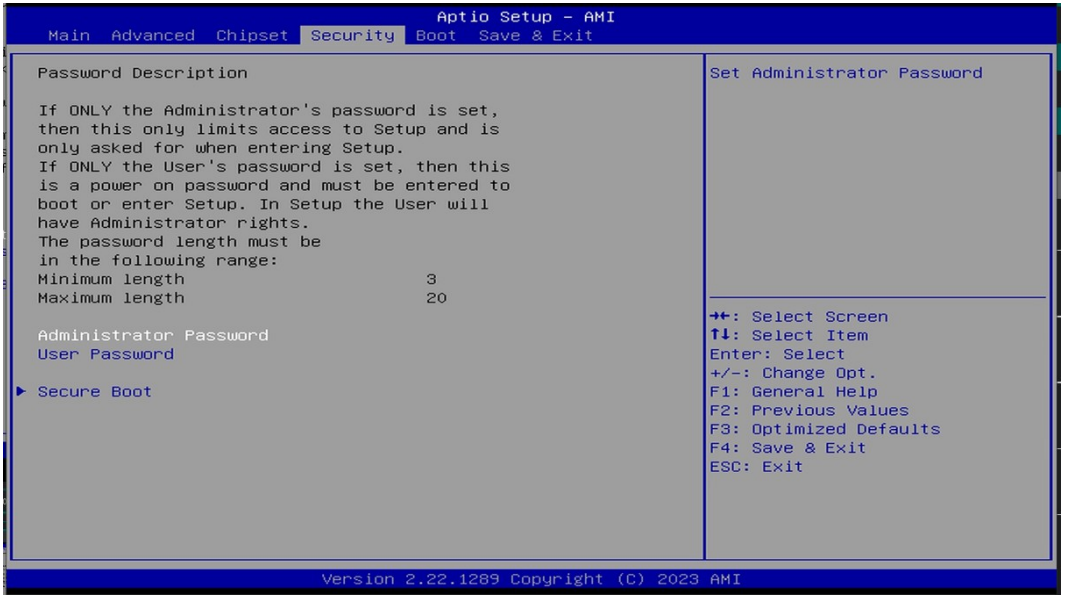
The optional settings: [Disabled]; [Enabled].

Back to Content

HD Audio
This item controls detection of the HD-Audio device.
The optional settings are: [Disabled]; [Enabled].
[**Disabled**]: HDA will be unconditionally disabled.
[**Enabled**]: HAD will be unconditionally enabled.
eMMC Controller(Option)
Use this item to enable or disable eMMC controller
The optional settings are: [Disabled]; [Enabled].
System State After Power Failure
Use this item to specify what state to go to when power is re-applied after a power failure (G3 state)
The optional settings are: [Always On]; [Always Off]; [Former State].

Back to Content

3-9 Security Menu



Security menu allow users to change administrator password and user password settings.

Administrator Password

If there is no password present on system, please press [Enter] to create new administrator password. If password is present on system, please press [Enter] to verify old password then to clear/change password. Press again to confirm the new administrator password.

User Password

If there is no password present on system, please press [Enter] to create new user password. If password is present on system, please press [Enter] to verify old password then to clear/change password. Press again to confirm the new user password.

- **Secure Boot**

Press [Enter] to make customized secure settings:

Secure Boot

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.

The optional settings are: [Disabled]; [Enabled]

Secure Boot Mode

The optional settings are: [Standard]; [Custom].

Set UEFI Secure Boot Mode to Standard mode or Custom mode. This change is effective after save. After reset, this mode will return to Standard mode.

**When set as [Custom], user can make further settings in 'Key Management'.*

- **Restore Factory Keys**

Use this item to force system to User Mode, to install factory default Secure Boot key databases.

- **Reset To Setup Mode**

Use this item to delete all Secure Boot Key databases from NVRAM.

- **Key Management**

This item enables expert users to modify Secure Boot Policy variables without full authentication. Press [Enter] to make settings for the following sub-items:

Factory Key Provision

This item is for user to install factory default secure boot keys after the platform reset and while the system is in Setup mode.

The optional settings are: [Disabled]; [Enabled].

- **Restore Factory Keys**

Use this item to force system into User Mode. Install factory default Secure Boot Key databases.

- **Reset to Setup Mode**

Use this item to delete all Secure Boot key databases from NVRAM.

- **Enroll Efi Image**

Use this item to allow efi image to run in secure boot mode. Enroll SHA256

Hash certificate of a PE image into authorized signature database (db)
The optional settings are: [<EFI>]; [<System Volume Information>]; [date.txt]; [Time.txt]; [Counter.txt]

- **Export Secure Boot variables**

Use this item to copy NVRAM content of Secure Boot variables to files in a root folder on a file system device.

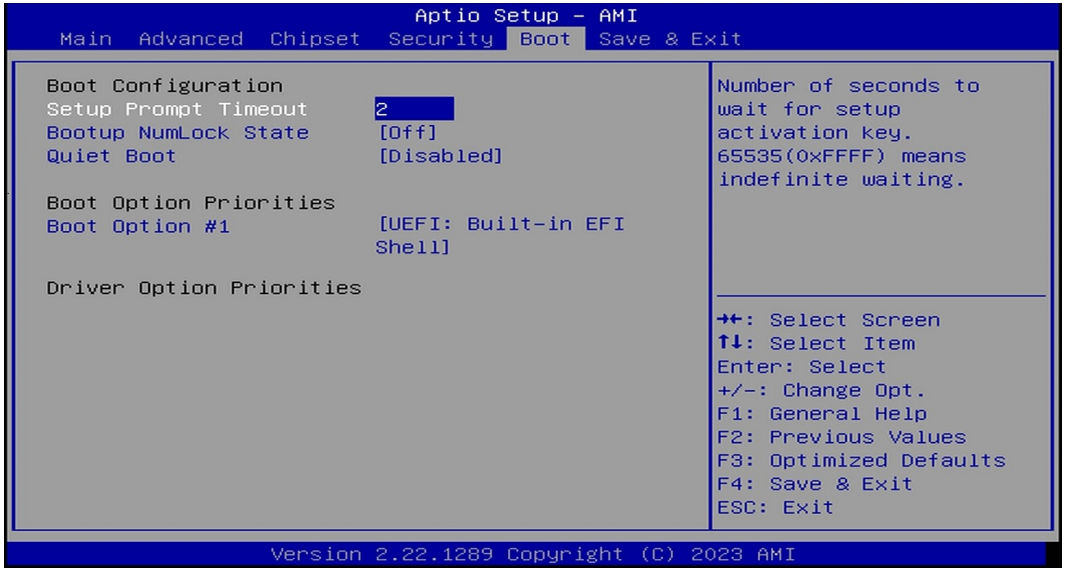
Secure Boot Variable/Size/Keys/Key Source

- **Platform Key (PK)/Key Exchange Keys/Authorized Signature/Forbidden Signature/ Authorized TimeStamps/OS Recovery Signatures**

Use this item to enroll Factory Defaults or load the keys from a file with:
1. Public Key Certificate in:
 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, External, Mixed.

3-10 Boot Menu



Setup Prompt Timeout

Use this item to set number of seconds to wait for setup activation key.

Bootup Numlock State

Use this item to select keyboard numlock state.

The optional settings are: [On]; [Off].

Quiet Boot

The optional settings are: [Disabled]; [Enabled].

Boot Option Priorities

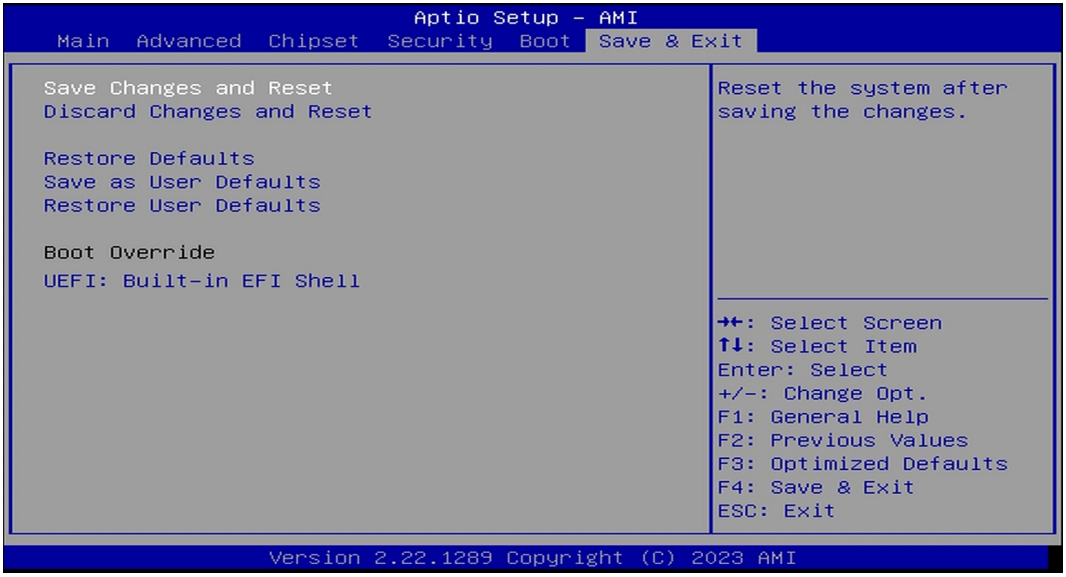
Boot Option #1

Use this item to Sets the system boot order.

The optional settings are: [UEFI: Built- in EFI Shell]; [Disabled]

Driver Option Priorities

3-11 Save & Exit Menu



Save Changes and Reset
This item allows user to reset the system after saving the changes.
Discard Changes and Reset
This item allows user to reset the system without saving any changes.

Restore Defaults
Use this item to restore /load default values for all the setup options.
Save as User Defaults
Use this item to save the changes done so far as user defaults.
Restore User Defaults
Use this item to restore defaults to all the setup options.

Boot Override

The available options here are dynamically updated and make system boot to any

boot option selected.

UEFI: Built-in EFI Shell

Use this item to launch EFI shell application (shell.efi) from one of the available filesystem device.

Back to Content