SCH-X401

Micro-Grid Intel 10th CPU Fanless

Computer

User's Manual

Revision Date: Jan.12.2024

Safety Information

Electrical safety

- To prevent electrical shock hazard, disconnect the power cable from the electrical outlet before relocating the system.
- When adding or removing devices to or from the system, ensure that the power cables for the devices are unplugged before the signal cables are connected. If possible, disconnect all power cables from the existing system before you add a device.
- Before connecting or removing signal cables from the motherboard, ensure that all power cables are unplugged.
- Seek professional assistance before using an adapter or extension cord. These devices could interrupt the grounding circuit.
- Make sure that your power supply is set to the correct voltage in your area.
- If you are not sure about the voltage of the electrical outlet you are using, contact your local power company.
- If the power supply is broken, do not try to fix it by yourself. Contact a qualified service technician or your local distributor.

Operation safety

- Before installing the motherboard and adding devices on it, carefully read all the manuals that came with the package.
- Before using the product, make sure all cables are correctly connected and the power cables are not damaged. If you detect any damage, contact your dealer immediately.
- To avoid short circuits, keep paper clips, screws, and staples away from connectors, slots, sockets and circuitry.
- Avoid dust, humidity, and temperature extremes. Do not place the product in any area where it may become wet.
- Place the product on a stable surface.
- If you encounter any technical problems with the product, contact your local distributor

Statement

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- All trademarks are the properties of the respective owners.
- All product specifications are subject to change without prior notice

Revision History

Revision	Date (yyyy/mm/dd)	Changes
V1.0	2024/01/12	First release

Packing List

Item	Description	Q'ty
1	SCH-X401 Micro-Grid Intel 10th CPU Fanless Computer	1
2	Driver CD	1
3	SSD Tray Key	1
4	Rackmount Bracket + Screw	1 Set

Ordering information

SCH-X401

Micro-Grid Intel 10th CPU Fanless Computer with Intel. 10th Gen. Core i3/i5/i7/i9 Processor up to 65W, SO-DIMM DDR4 up to 64GB, 2 × RJ45 GbE, 4 x USB3.0, 2 x USB2.0, 2 x COM, 2 x DP, 1 x HDMI, 1 x Mic-in , 1 x Line-out, 2 x SSD Tray, AC 110V with Redundant, Operating Temperature -20~+60°C

RoHS Compliance

Perfectron RoHS Environmental Policy and Status Update

Perfectron is a global citizen for building the digital infrastructure. We are committed to providing green products and services, which are compliant with

European Union RoHS (Restriction on Use of Hazardous Substance in Electronic Equipment) directive 2011/65/EU, to be your trusted green partner and to protect our environment.

In order to meet the RoHS compliant directives, Perfectron has established an engineering and manufacturing task force to implement the introduction of green products. The task force will ensure that we follow the standard Perfectron development procedure and that all the new RoHS components and new manufacturing processes maintain the highest industry quality levels for which Perfectron are renowned.

The model selection criteria will be based on market demand. Vendors and suppliers will ensure that all designed components will be RoHS compliant

Chapter 1 : Production Introduction

1.1 Specifications

System

CPU	10th Generation Intel® Core™ i9/i7/i5 Processors
	Intel® Core™ i9-10900TE(20M Cache, up to 4.60 GHz)
	Intel® Core™ i7-10700TE(16M Cache, up to 4.50 GHz)
	Intel® Core™ i5-10500TE(12M Cache, up to 3.70 GHz)
Memory type	DDR4 SO-DIMM up to 64GB
Chipset	Q470E

Display

GPU	Intel® UHD Graphics
DisplayPort	DisplayPort 1.4, DP++ Max resolution up to 4096x2160@60Hz
HDMI	HDMI 2.0a, Max resolution up to 4096x2160@60Hz

Expansion

Expansion	1 x M.2 (Key E, 2230) with PCIe x1, USB 2.0 and CNVi for Wireless
	1 x M.2 (Key B, 3042 / 3052) with PCIe x1 / USB 3.0 / USB2.0 and SIM for 4G / 5G

Storage

Storage	1 x M.2 (Key M, 2242 / 2260 / 2280) with PCIE x4 or SATA3

Ethernet

Ethernet	1 x Intel Gigabit Ethernet LAN Interfaces (10/100/1000 Mbps)
	1 x Intel 2.5Gigabit Ethernet LAN Interfaces (10/100/1000/2500 Mbps)

Rear I/O

Power Button	1 x with backlight
Indicator	1 x HDD backlight
USB	2 x USB 2.0
Storage	2 x SSD Tray

Front I/O

Power Input	2 x 3P C14 Plug
LAN	1 x GbE RJ45 LAN

	1 x 2.5GbE RJ45 LAN
DisplayPort	2 x DP
HDMI	1 x HDMI
Audio	1 x Mic-in ; 1 x Line out
COM	2 x RS232/422/485

Power

Power Input	AC-IN 110V with Redundant

OS support list

Windows	Windows 10 x64
Linux	Linux Support by request

Mechanical and Environmental

Dimension	430 x 300 x 74 mm
Operating Temp.	-20 to 60°C
Storage Temp.	-40°C to 85°C
Relative Humidity	5% to 95%, non-condensing
EMC	CE, FCC Compliance
Green Product	RoHS, WEEE compliance
System Design	Fanless
Mounting	2U Rackmount

1.2 Front Panel I/O Placement
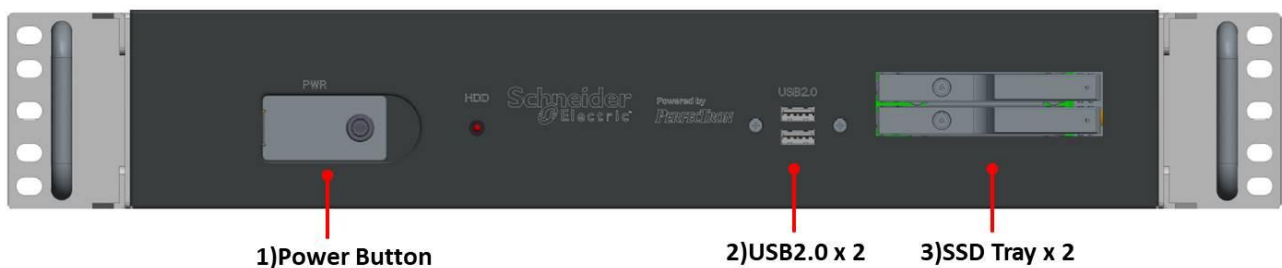
1)	Power Button
2)	USB2.0 x 2
3)	SSD Tray x 2

1.3 Rear Panel I/O Placement
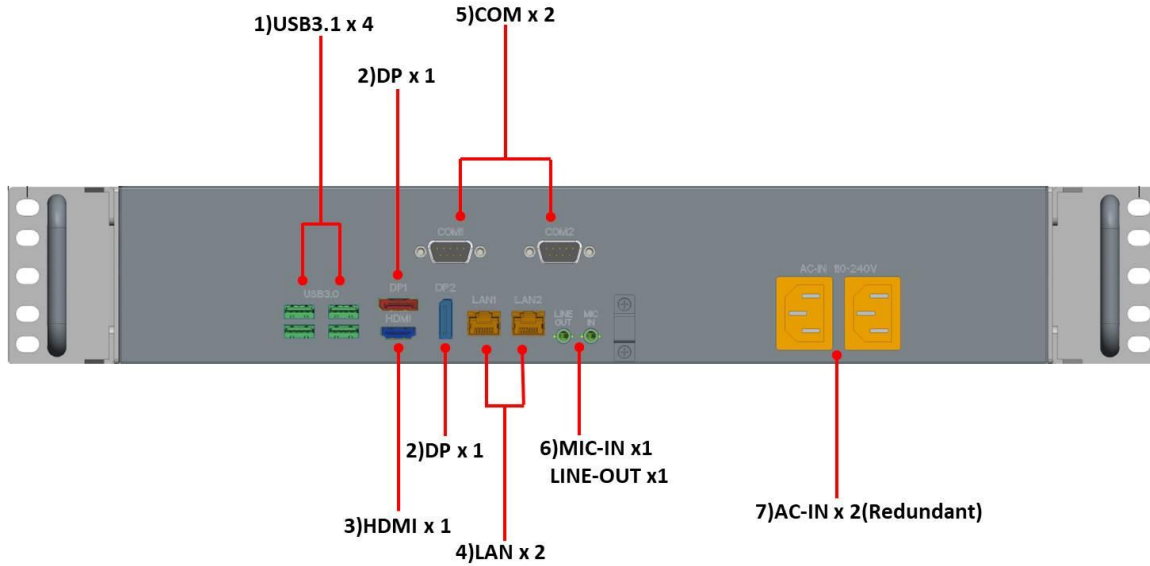
1)	USB3.1 x 4
2)	DP x 2
3)	HDMI x 1
4)	LAN x 2
5)	COM x 2
6)	MIC-IN x 1 LINE-OUT x 1
7)	AC-IN x 2

1.4 Mechanical Dimensions
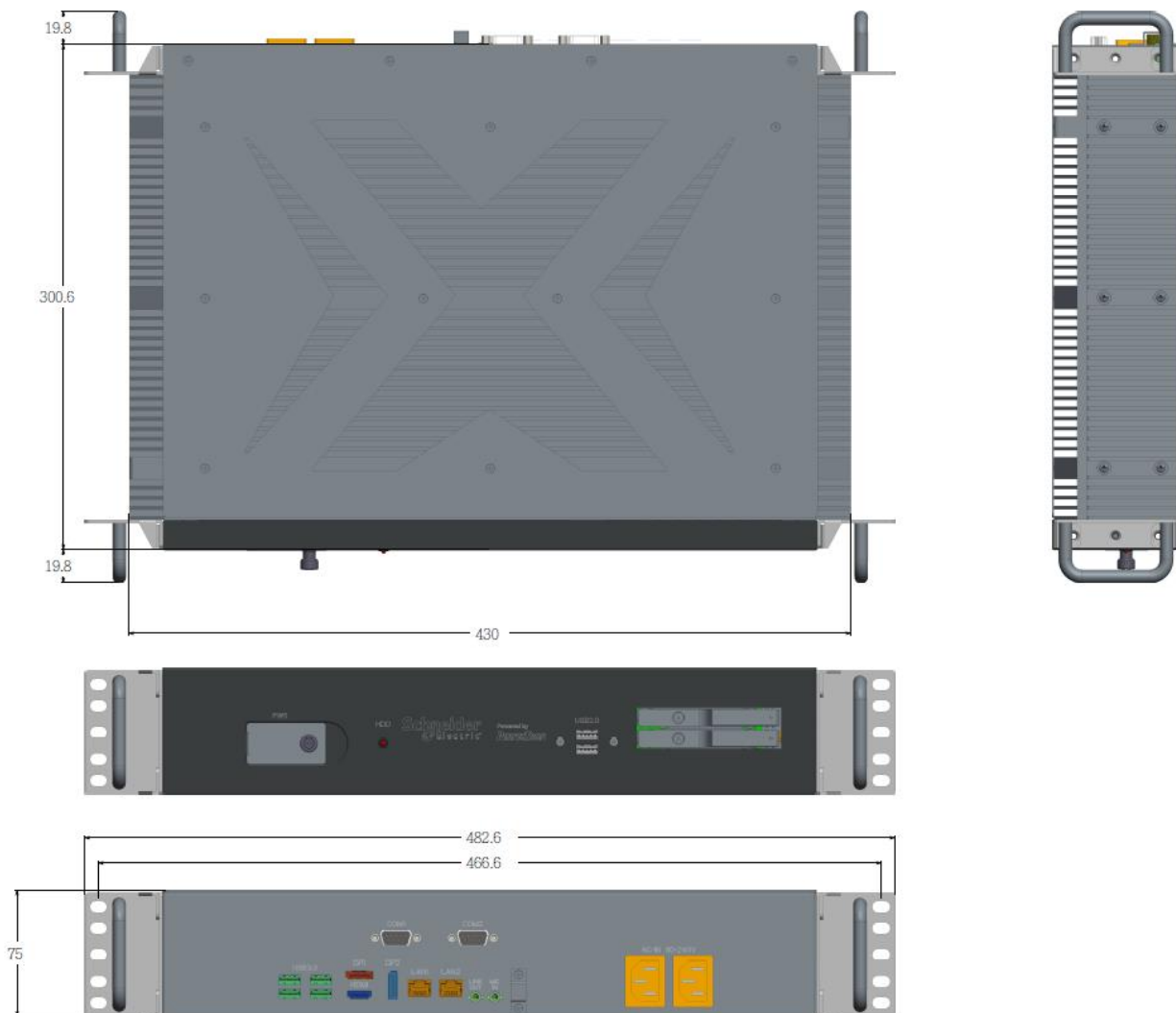
Chapter 2 : Rear I/O Ports

2.1 LAN port LED Indications

LAN Port LED Indications

Activity/Link LED		SPEED LED	
Status	Description	Status	Description
Off	No Link	Off	10Mbps connection
Blinking	Data Activity	Orange	100Mbps/1Gbps connection
On	Link	Green	2.5Gbps connection

ACT/LINK LED   SPEED LED

LAN Port
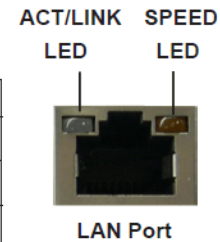
Chapter 3 : System Setup

This chapter provides more detailed information and let you know how to install components into the SCH-X401 series embedded system.

⚠ **Prior to removing the chassis cover, make sure the unit's power is off and disconnected from the power sources to prevent electric shock or system damage.**

3.1 2.5" Easy swap SSD installation

SCH-X401 series supports two 2.5" easy swap SSD

- Use Tri-angle security key to open keylock and pull out 2.5" SSD tray.
- Put 2.5"SSD on the tray and make sure SSD is fixed and push the tray back.
- Use Tri-angle security key to lock the tray door.

Chapter 4: AMI BIOS UTILITY

This chapter provides users with detailed descriptions on how to set up a basic system configuration through the AMI BIOS setup utility.

4.1 Starting

To enter the setup screens, perform the following steps:

• Turn on the computer and press the <Del> key immediately.

• After the <Del> key is pressed, the main BIOS setup menu displays. Other setup screens can be accessed from the main BIOS setup menu, such as the Chipset and Power menus.

4.2 Navigation Keys

The BIOS setup/utility uses a key-based navigation system called hot keys. Most of the BIOS setup utility hot keys can be used at any time during the setup navigation process.

Some of the hot keys are <F1>, <F10>, <Enter>, <ESC>, and <Arrow> keys.

Some of the navigation keys may differ from one screen to another.

Left/Right	The Left and Right <Arrow> keys moves the cursor to select a menu.
Up/Down	The Up and Down <Arrow> keys moves the cursor to select a setup screen or sub-screen.
+– Plus/Minus	The Plus and Minus <Arrow> keys changes the field value of a particular setup setting.
Tab	The <Tab> key selects the setup fields.
F1	The <F1> key displays the General Help screen.
F10	The <F10> key saves any changes made and exits the BIOS setup utility.
Esc	The <Esc> key discards any changes made and exits the BIOS setup utility.
Enter	The <Enter> key displays a sub-screen or changes a selected or highlighted option in each menu.

4.3 Main Screen

When you first enter the AMI BIOS setup utility, you will enter the Main setup screen. You can always return to the Main setup screen by selecting the Main tab on the top of the screen. The Main BIOS setup screen is shown below and the following items will be displayed:
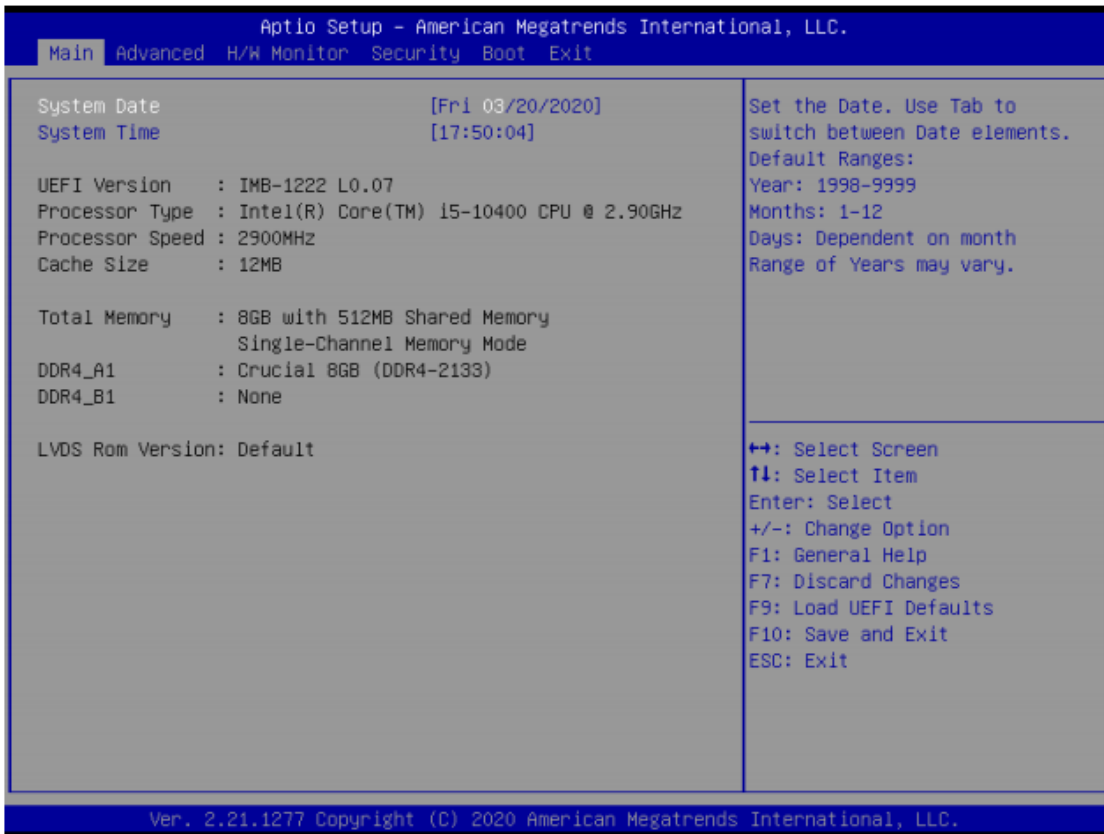
4.4 Advanced Screen

In this section, you may set the configurations for the following items: CPU Configuration, Chipset Configuration, Storage Configuration, Super IO Configuration, AMT Configuration, ACPI Configuration, USB Configuration and Trusted Computing.
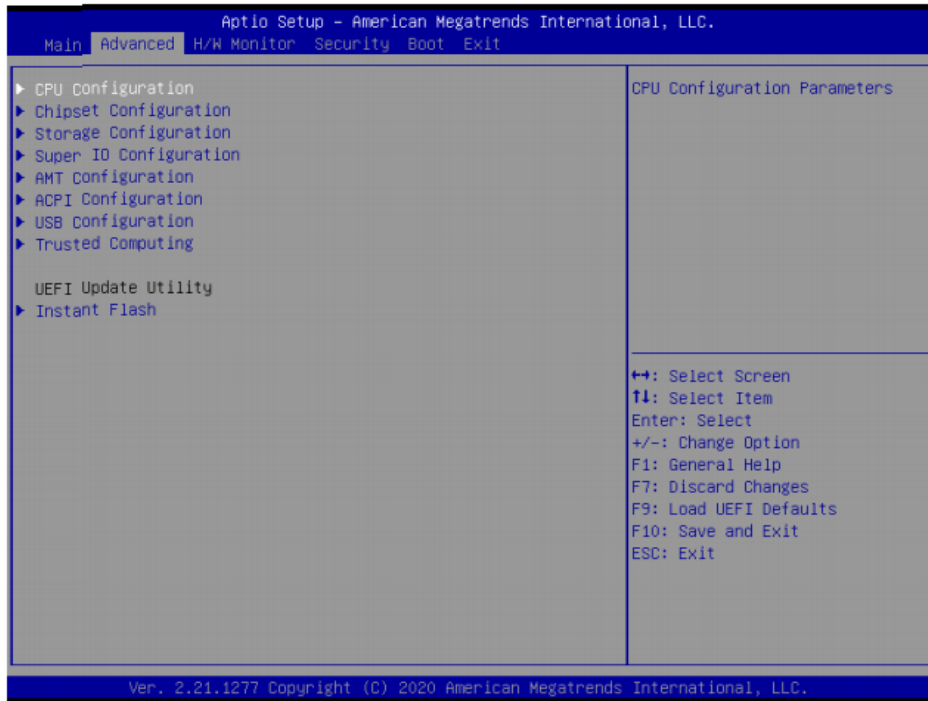
Setting wrong values in this section may cause the system to malfunction.

Instant Flash

Instant Flash is a UEFI flash utility embedded in Flash ROM. This convenient UEFI update tool allows you to update system UEFI without entering operating systems first like MS-DOS or Windows® . Just launch this tool and save the new UEFI file to your USB flash drive, floppy disk or hard drive, then you can update your UEFI only in a few clicks without preparing an additional floppy diskette or other complicated flash utility. Please be noted that the USB flash drive or hard drive must use FAT32/16/12 file system. If you execute Instant Flash utility, the utility will show the UEFI files and their respective information. Select the proper UEFI file to update your UEFI, and reboot your system after UEFI update process completes.

4.4.1 CPU Configuration

```
                 Aptio Setup - American Megatrends International, LLC.
   Advanced

   Intel(R) Core(TM) i5-10400 CPU @ 2.90GHz            Intel Hyper Threading
   Processor ID                 A0650                  Technology allows multiple
   Microcode Revision           BE                     threads to run on each core,
   Processor Max Speed          2900 MHz               so that the overall
   Processor Min Speed          800 MHz                performance on threaded
   Processor Cores              6Core(s) / 12Thread(s) software is improved.

   Intel Hyper Threading Technology    [Enabled]
   Active Processor Cores              [All]
   CPU C States Support                [Disabled]

   Intel Virtualization Technology     [Enabled]
   Intel SpeedStep Technology          [Enabled]
   Turbo Mode                          [Enabled]      ↔: Select Screen
                                                      ↑↓: Select Item
   CPU Thermal Throttling              [Enabled]      Enter: Select
                                                      +/-: Change Option
                                                      F1: General Help
                                                      F7: Discard Changes
                                                      F9: Load UEFI Defaults
                                                      F10: Save and Exit
                                                      ESC: Exit

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```

Intel Hyper Threading Technology

Intel Hyper Threading Technology allows multiple threads to run on each core, so that the overall performance on threaded software is improved.

Active Processor Cores

Select the number of cores to enable in each processor package.

CPU C States Support

Enable CPU C States Support for power saving. It is recommended to keep C3, C6 and C7 all enabled for better power saving.

Intel Virtualization Technology

When this option is set to [Enabled], a VMM (Virtual Machine Architecture) can utilize the additional hardware capabilities provided by Vanderpool Technology. This option will be hidden if the installed CPU does not support Intel Virtualization Technology.

Intel SpeedStep Technology

Intel SpeedStep technology is Intel's new power saving technology. Processors can switch between multiple frequencies and voltage points to enable power saving. The default value is [Enabled]. Configuration options: [Enabled] and [Disabled]. If you install Windows® OS and want to enable this function, please set this item to [Enabled]. This item will be hidden if the current CPU does not support Intel SpeedStep technology.

Please note that enabling this function may reduce CPU voltage and lead to system stability or compatibility issues with some power supplies. Please set this item to [Disabled] if above issues occur.

Intel Turbo Boost Technology

Use this item to enable or disable Intel Turbo Boost Mode Technology. Turbo Boost Mode allows processor cores to run faster than marked frequency in specific conditions. The default value is [Enabled].

CPU Thermal Throttling

You may select [Enabled] to enable CPU internal thermal control mechanism to keep the CPU from overheating.

4.4.2 Chipset Configuration

```
                    Aptio Setup - American Megatrends International, LLC.
        Advanced

     ME Firmware Version              14.0.31.1120           Select a primary VGA.
     VT-d Capability                  Supported

     Primary Graphics Adapter         [PCI Express]
     Above 4G Decoding                [Disabled]
     VT-d                             [Enabled]

     PCIE1 Link Speed                 [Auto]

     Share Memory                     [Auto]
     IGPU Multi-Monitor               [Disabled]
     Active LVDS                      [Disabled]
     Primary IGFX Boot Display        [VBIOS Default]
                                                            ↔: Select Screen
     Onboard LAN1                     [Enabled]             ↑↓: Select Item
     Onboard LAN2                     [Enabled]             Enter: Select
                                                            +/-: Change Option
     Onboard HD Audio                 [Enabled]             F1: General Help
       Front Panel                    [HD]                  F7: Discard Changes
                                                            F9: Load UEFI Defaults
     Deep Sleep                       [Disabled]            F10: Save and Exit
     Restore on AC/Power Loss         [Power Off]           ESC: Exit



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```

Primary Graphics Adapter

This allows you to select [Onboard] or [PCI Express] as the boot graphic adapter priority. The default value is [PCI Express].

Above 4G Decoding

Enable or disable 64bit capable Devices to be decoded in Above 4G Address Space (only if the system supports 64 bit PCI decoding).

VT-d

Use this to enable or disable Intel® VT-d technology (Intel® Virtualization Technology for Directed I/O). The default value of this feature is [Disabled].

PCIE1 Link Speed

Select the link speed for PCIE1.

Share Memory

Configure the size of memory that is allocated to the integrated graphics processor when the system boots up.

IGPU Multi-Moniter

Select disable to disable the integrated graphics when an external graphics card is installed. Select enable to keep the integrated graphics enabled at all times.

Active LVDS

Use this to enable or disable the LVDS. The default value is [Disabled]. Set the item to [enable]. Then press <F10> to save the setting and restart the system. Now the default value of Active LVDS is changed to ENABLE (F9 load default is also set to ENABLE). Change the setting from [Enable] to [Disable], and then press <F10> to save the setting and restart the system. Likewise, the default value of Active LVDS is changed to DISABLE (F9 load default is also set to DISABLE)

Primary IGFX Boot Display

Select the primary graphics boot display.

Onboard LAN1

This allows you to enable or disable the Onboard LAN1 feature.

Onboard LAN2

This allows you to enable or disable the Onboard LAN2 feature.

Onboard HD Audio

Select [Auto], [Enabled] or [Disabled] for the onboard HD Audio feature. If you select [Auto], the onboard HD Audio will be disabled when PCI Sound Card is plugged.

Front Panel

Enable/disable front panel HD audio.

Deep Sleep

Mobile platforms support Deep S4/S5 in DC only and desktop platforms support Deep S4/S5 in AC only. The default value is [Disabled].

Restore on AC/Power Loss

Select the power state after a power failure. If [Power Off] is selected, the power will remain off when the power recovers. If [Power On] is selected, the system will start to boot up when the power recovers.

4.4.3 Storage Configuration

SATA Controller(s)
Use this item to enable or disable the SATA Controller feature.

SATA Mode Selection
Use this to select SATA mode. The default value is [AHCI Mode].

> AHCI (Advanced Host Controller Interface) supports NCQ and other new features that will improve SATA disk performance.

SATA Aggressive Link Power Management
Use this item to configure SATA Aggressive Link Power Management.

Hard Disk S.M.A.R.T.
Use this item to enable or disable the S.M.A.R.T. (Self-Monitoring, Analysis, and Reporting Technology) feature. Configuration options: [Disabled] and [Enabled].

4.4.4 Super IO Configuration

```
                    Aptio Setup - American Megatrends International, LLC.
      Advanced

  COM1                              [Enabled]              Enable or Disable COM1
      Type Select                   [RS232]                IO=3F8h; IRQ=4;
  COM2                              [Enabled]
      Type Select                   [RS232]
  COM3                              [Enabled]
  COM4                              [Enabled]

  WDT Timeout Reset                 [Disabled]




                                                           ←→: Select Screen
                                                           ↑↓: Select Item
                                                           Enter: Select
                                                           +/-: Change Option
                                                           F1: General Help
                                                           F7: Discard Changes
                                                           F9: Load UEFI Defaults
                                                           F10: Save and Exit
                                                           ESC: Exit




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```

COM1 Configuration

Use this to set parameters of COM1.

Type Select

Use this to select COM1 port type: [RS232], [RS422] or [RS485].

COM2 Configuration

Use this to set parameters of COM2.

Type Select

Use this to select COM2 port type: [RS232], [RS422] or [RS485].

COM3 Configuration

Use this to set parameters of COM3.

COM4 Configuration

Use this to set parameters of COM4.

WDT Timeout Reset

Use this to set the Watch Dog Timer.

4.4.5 AMT Configuration

```
                    Aptio Setup - American Megatrends International, LLC.
        Advanced

  AMT BIOS Features                [Enabled]              When disabled AMT BIOS
                                                         Features are no longer
    USB Provisioning of AMT        [Disabled]            supported and user is no
  ▶ CIRA Configuration                                   longer able to access MEBx
  ▶ ASF Configuration                                    Setup.
  ▶ Secure Erase Configuration                           Note:
  ▶ OEM Flags Settings                                   This option does not disable
  ▶ MEBx Resolution Settings                             Manageability Features in FW.




                                                         ↔: Select Screen
                                                         ↑↓: Select Item
                                                         Enter: Select
                                                         +/-: Change Option
                                                         F1: General Help
                                                         F7: Discard Changes
                                                         F9: Load UEFI Defaults
                                                         F10: Save and Exit
                                                         ESC: Exit


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```

AMT BIOS Features

Use this to enable or disable Intel(R) Active Management Technology BIOS Extension. The default is [Enabled].

ASF support

Use this to enable or disable Alert Specification Format. The default is [Enabled].

USB Provisioning of AMT

Use this to enable or disable AMT USB Provisioning. The default is [Disabled].

Secure Erase mode

Change Secure Erase module behavior: Simulated: Performs SE flow without erasing SSD. Real: Erase SSD.

Force Secure Erase

Use this to enable or disable Force Secure Erase on next boot. The default is [Disabled].

MEBx hotkey Pressed

Use this to enable or disable MEBx hotkey press. The default is [Disabled].

MEBx Selection Screen

Use this to enable or disable MEBx Selection Screen. The default is [Disabled].

Hide Un-configure ME Confirmation Prompt

Hide Un-Configure ME without password confirmation prompt. The default is [Disabled].

MEBx OEM Debug Menu Enable

Use this to enable or disable MEBx OEM Debug Menu. The default is [Disabled].

Un-Configure ME

Un-Configure ME without password. The default is [Disabled].

WatchDog

Use this to enable or disable AMT WatchDog Timer. The default is [Disabled].

Activate Remote Assistance Process

Trigger CIRA boot. The default is [Disabled].

PET Progress

User can enable or disable PET Events progress to receive PET events or not. The default is [Enabled].

ASF Sensors Table

Use this to enable or disable ASF Sensor Table. The default is [Disabled].

Non-UI Mode Resolution

Use this to set resolution for non-UI text mode.

UI Mode Resolution

Use this to set resolution for UI text mode.

Graphics Mode Resolution

Use this to set resolution for graphics mode.

4.4.6 ACPI Configuration
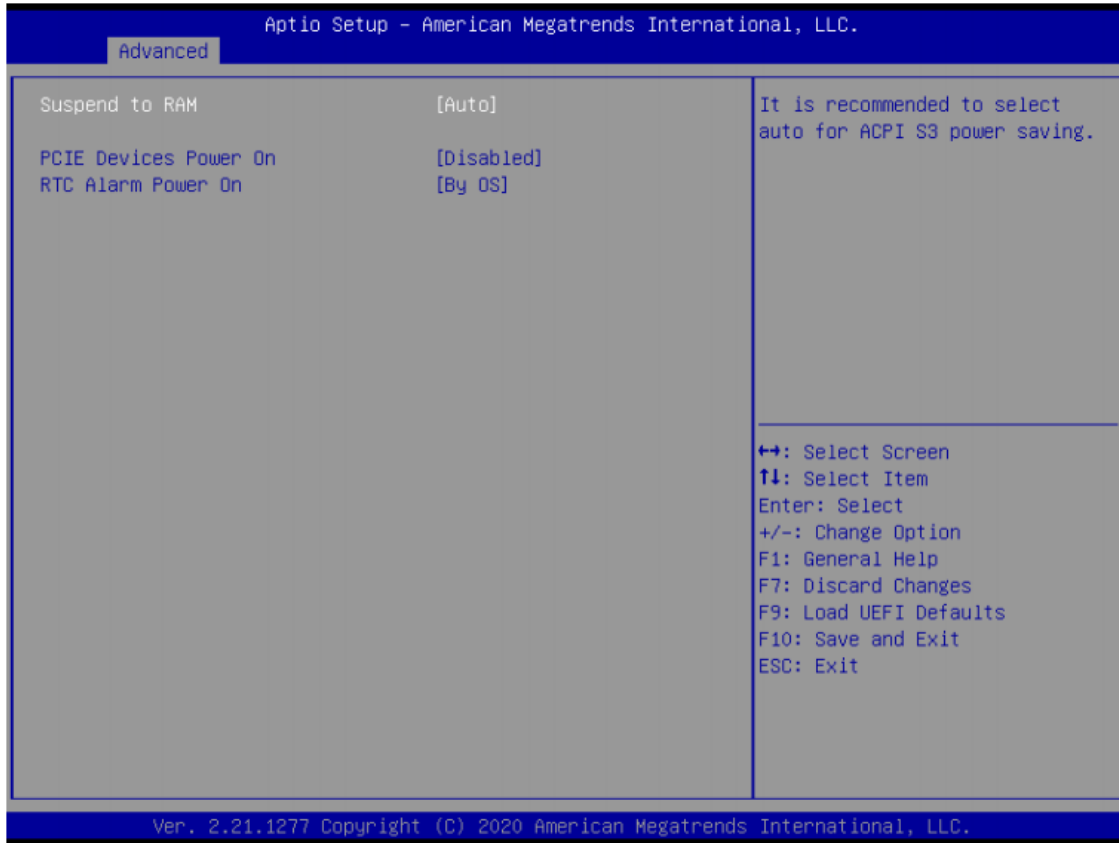
Suspend to RAM

Use this item to select whether to auto-detect or disable the Suspend-to-RAM feature. Select [Auto] will enable this feature if the OS supports it.

PCIE Devices Power On

Use this item to enable or disable PCIE devices to turn on the system from the power-soft-off mode.

RTC Alarm Power On

Use this item to enable or disable RTC (Real Time Clock) to power on the system.

4.4.7 USB Configuration

```
                    Aptio Setup - American Megatrends International, LLC.
        Advanced

    Legacy USB Support              [Enabled]          Enables Legacy USB support.
    USB Power Control               [Default Setting]  AUTO option disables legacy
                                                       support if no USB devices are
                                                       connected.



                                                       ←→: Select Screen
                                                       ↑↓: Select Item
                                                       Enter: Select
                                                       +/-: Change Option
                                                       F1: General Help
                                                       F7: Discard Changes
                                                       F9: Load UEFI Defaults
                                                       F10: Save and Exit
                                                       ESC: Exit



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```

Legacy USB Support

Use this option to select legacy support for USB devices. There are two configuration options: [Enabled], and [UEFI Setup Only]. The default value is [Enabled]. Please refer to below descriptions for the details of these four options:

[Enabled] - Enables support for legacy USB.

[UEFI Setup Only] - USB devices are allowed to use only under UEFI setup and Windows / Linux OS.

USB Power Control

Use this item to control USB power.

4.4.8 Trusted Computing

Security Device Support

Enable or disable BIOS support for security device.

4.5 Hardware Health Event Monitoring Screen

In this section, it allows you to monitor the status of the hardware on your system, including the parameters of the CPU temperature, motherboard temperature, CPU fan speed, chassis fan speed, and the critical voltage.

```
                 Aptio Setup - American Megatrends International, LLC.
       Main  Advanced  H/W Monitor  Security  Boot  Exit

    Hardware Health Event Monitoring                        Quiet Fan Function Control

    CPU Temperature                : +40 °C
    M/B Temperature                : +33 °C

    CPU_FAN1 Speed                 : N/A
    CHA_FAN1 Speed                 : 5660 RPM

    +3V                            : +3.376 V
    +3VSB                          : +3.360 V
    VCORE                          : +0.872 V
    VCCM                           : +1.200 V
    +5V                            : +5.088 V
    +12V                           : +12.160 V                ↔: Select Screen
                                                              ↑↓: Select Item
    CPU_FAN1 Setting               [Full On]                  Enter: Select
    CHA_FAN1 Setting               [Full On]                  +/-: Change Option
    Case Open Feature              [Disabled]                 F1: General Help
                                                              F7: Discard Changes
                                                              F9: Load UEFI Defaults
                                                              F10: Save and Exit
                                                              ESC: Exit



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```

CPU_FAN1 Setting

This allows you to set CPU fan 1's speed. Configuration options: [Full On] and [Automatic Mode]. The default value is [Full On].

CHA_FAN1 Setting

This allows you to set chassis fan 1's speed. Configuration options: [Full On] and [Automatic Mode]. The default value is [Full On].

Case Open Feature

This allows you to enable or disable case open detection feature. The default is value [Disabled].

Clear Status

This option appears only when the case open has been detected. Use this option to keep or clear the record of previous chassis intrusion status.

4.6 Security Screen

In this section, you may set, change or clear the supervisor/user password for the system.

```
                 Aptio Setup - American Megatrends International, LLC.
      Main  Advanced  H/W Monitor  Security  Boot  Exit

      Supervisor Password              Not Installed        Set or change the password for
      User Password                    Not Installed        the administrator account.
                                                            Only the administrator has
      Supervisor Password                                   authority to change the
      User Password                                         settings in the UEFI Setup
                                                            Utility. Leave it blank and
   ▶ Secure Boot                                            press enter to remove the
                                                            password.


                                                            ↔: Select Screen
                                                            ↑↓: Select Item
                                                            Enter: Select
                                                            +/-: Change Option
                                                            F1: General Help
                                                            F7: Discard Changes
                                                            F9: Load UEFI Defaults
                                                            F10: Save and Exit
                                                            ESC: Exit



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```

Supervisor Password

Set or change the password for the administrator account. Only the administrator has authority to change the settings in the UEFI Setup Utility. Leave it blank and press enter to remove the password.

User Password

Set or change the password for the user account. Users are unable to change the settings in the UEFI Setup Utility. Leave it blank and press enter to remove the password.

Secure Boot

Use this item to enable or disable support for Secure Boot.

4.7 Boot Screen

In this section, it will display the available devices on your system for you to configure the boot settings and the boot priority.
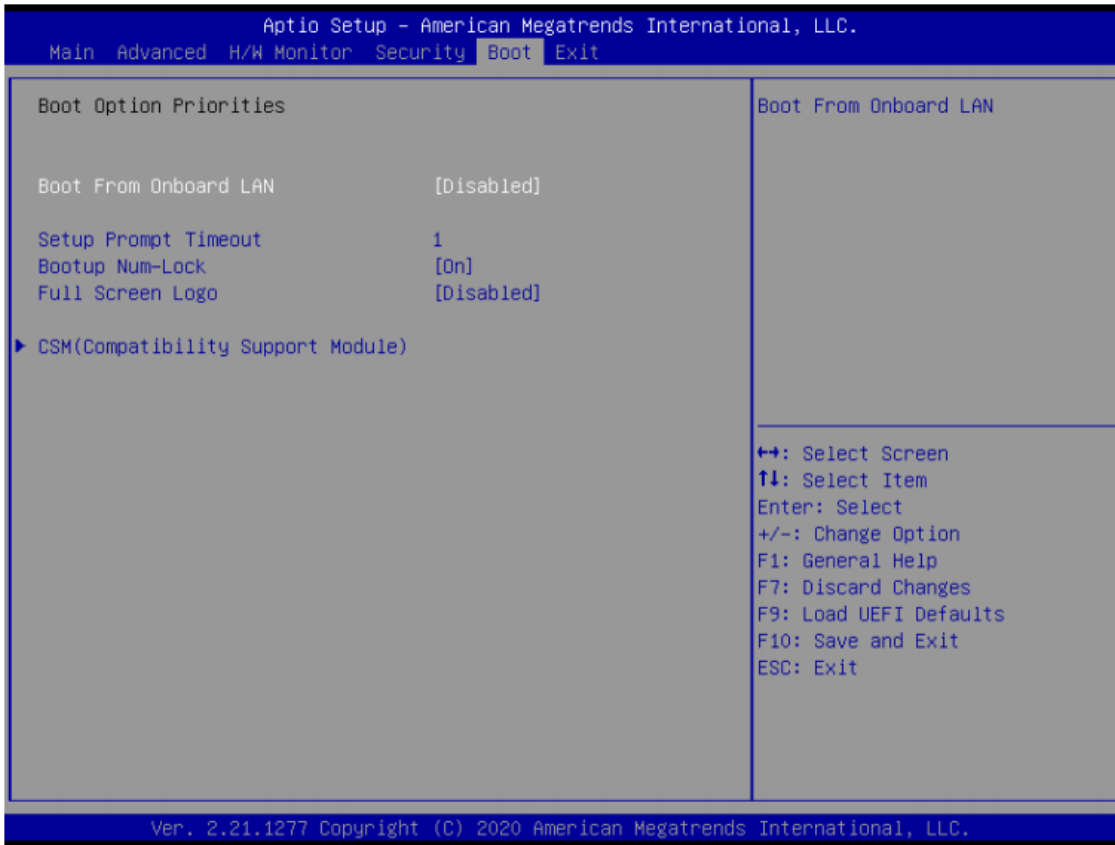
Boot From Onboard LAN

Use this item to enable or disable the Boot From Onboard LAN feature.

Setup Prompt Timeout

This shows the number of seconds to wait for setup activation key. 65535(0XFFFF) means indefinite waiting.

Bootup Num-Lock

If this item is set to [On], it will automatically activate the Numeric Lock function after boot-up.

Full Screen Logo

Use this item to enable or disable OEM Logo. The default value is [Disabled].

CSM (Compatibility Support Module)

```
                Aptio Setup Utility - Copyright (C) 2018 American Megatrends, Inc.
                                          Boot

  CSM                              [Disabled]           Enable to launch the
                                                        Compatibility Support Module.
                                                        If you are using Windows 8 or
                                                        later versions 64-bit UEFI and
                                                        all of your devices support
                                                        UEFI, you may also disable CSM
                                                        for faster boot speed.


                                                        ↔: Select Screen
                                                        ↑↓: Select Item
                                                        Enter: Select
                                                        +/-: Change Option
                                                        F1: General Help
                                                        F7: Discard Changes
                                                        F9: Load UEFI Defaults
                                                        F10: Save and Exit
                                                        ESC: Exit



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```
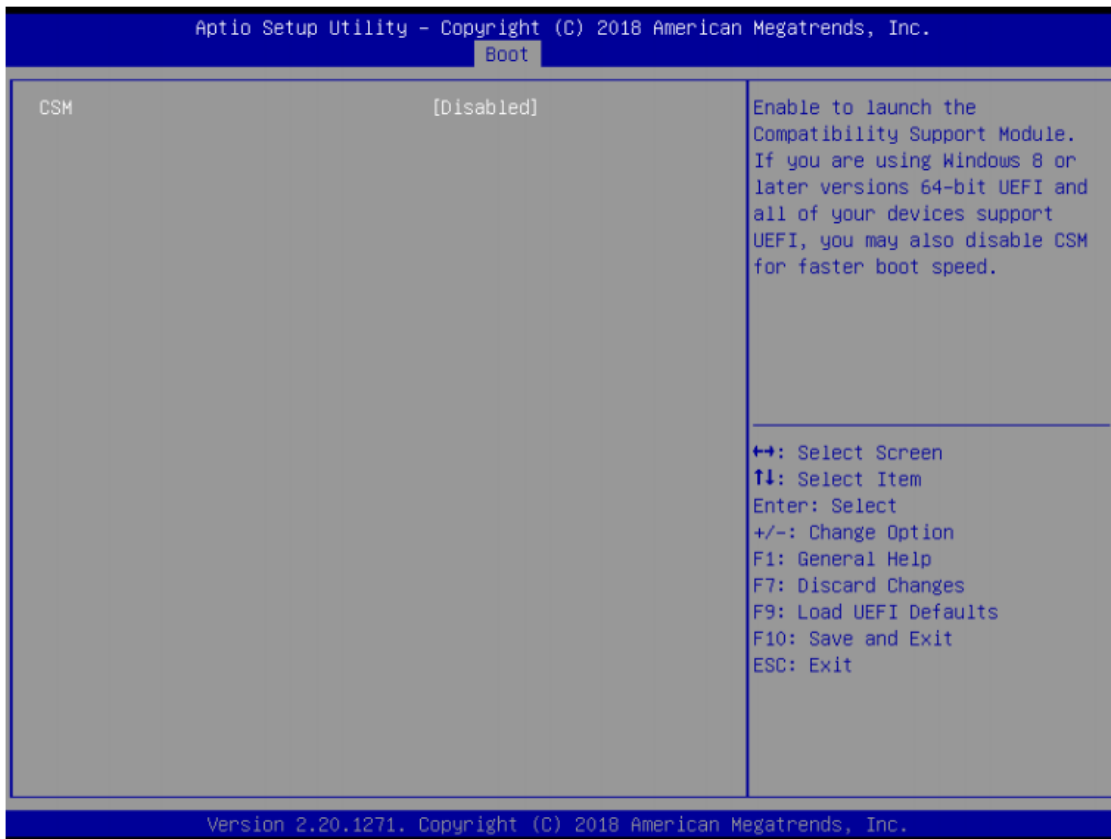
CSM

Use this to enable or disable Compatibility Support Module. The default value is [Disabled].

Launch PXE OpROM Policy

Select UEFI only to run those that support UEFI option ROM only. Select Legacy only to run those that support legacy option ROM only. Select Do not launch to not execute both legacy and UEFI option ROM.

Launch Storage OpROM Policy

Select UEFI only to run those that support UEFI option ROM only. Select Legacy only to run those that support legacy option ROM only. Select Do not launch to not execute both legacy and UEFI option ROM.

4.8 Exit Screen

```
              Aptio Setup Utility - Copyright (C) 2018 American Megatrends, Inc.
     Main  Advanced  H/W Monitor  Security  Boot  Exit

   Save Changes and Exit                              Exit system setup after saving
   Discard Changes and Exit                           the changes.
   Discard Changes
   Load UEFI Defaults                                 F10 key can be used for this
                                                      operation.
   Launch EFI Shell from filesystem device




                                                      ↔: Select Screen
                                                      ↑↓: Select Item
                                                      Enter: Select
                                                      +/-: Change Option
                                                      F1: General Help
                                                      F7: Discard Changes
                                                      F9: Load UEFI Defaults
                                                      F10: Save and Exit
                                                      ESC: Exit



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```

Save Changes and Exit

When you select this option, it will pop-out the following message, "Save configuration changes and exit setup?" Select [OK] to save the changes and exit the UEFI SETUP UTILITY.

Discard Changes and Exit

When you select this option, it will pop-out the following message, "Discard changes and exit setup?" Select [OK] to exit the UEFI SETUP UTILITY without saving any changes.

Discard Changes

When you select this option, it will pop-out the following message, "Discard changes?" Select [OK] to discard all changes.

Load UEFI Defaults

Load UEFI default values for all the setup questions. F9 key can be used for this operation.

Launch EFI Shell from filesystem device

Attempts to Launch EFI Shell application (Shell64.efi) from one of the available filesystem devices.