

RXi – Panel PC



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Section 1: Getting Started

1.1 Features

Primary technical features:

- 7" / 10" / 12" / 15" / 19" / 24" Industrial Widescreens
- 7" / 10" / 12" / 15" Industrial Widescreen Outdoor Sunlight Readable Screens
- Modular Design
- AMD Embedded G-Series SOC Processor
- Onboard DDR3L, up to 8GB (Soldered with ECC)
- 1 x SSD Slot
- Flat Front Panel Projected Capacitive Touch Screens
- Fanless Design
- 24VDC Wide Range Power Input

1.2 Specifications

Display	Display Size	7"	10"	12"	15"	19"	24"
	Resolution	1024 x 600 WSVGA	1280 x 800 WXGA		1920 x 1080 Full HD		
	Format	Widescreen (16:10)			Widescreen (16:9)		
	Orientation	Land-Scape					
	Reading Angle (°)	150 (H) / 145 (V)	170 (H) / 170 (V)	176 (H) / 176 (V)	170 (H) / 170 (V)	178 (H) / 178 (V)	
	Display Off-Color	Black					
	Contrast	800:1		1000:1	800:1	1000:1	5000:1
	Brightness (cd/m2)	500 (1000 with Outdoor SLR Screen)		400 (1000 with Outdoor SLR Screen)	450 (1000 with Outdoor SLR Screen)	350	300
	Colors	16.2 Million					
	MTBF Backlighting	50,000 h (at 25°C)					
Backlight	LED, Dimmable via Software						

	Display Size	7"	10"	12"	15"	19"	24"	
Processor	Chipset	AMD Embedded G-Series SOC						
	Processor	GX-210HL			GX-412GC			
	# of cores/TDP	2/7W			4/15W			
	CPU frequency/L2 Cache	1.0Ghz/1MB			1.2Ghz/2MB			
	GPU frequency	267Mhz			300Mhz			
	Memory	Capacity	4GB or 8GB DDR3L (Soldered with ECC, -40°C ~ 85°C)					
Storage		Internal	32 / 64 / 128GB MLC SSD (SATA Slim, -40°C ~ 85°C)			64 / 128GB MLC SSD (SATA Slim, -40°C ~ 85°C)		
	External Slot	1 x External Micro SD/ SDHC Card Slot (up to 32GB)						
Watchdog Timer	Timer Levels	255 timer levels, set up by software						
Operating Control	Method	Touch						
Touchscreen	Technology	Projected Capacitive Touch (PCT/PCAP)						
	Touch Sensor	Multi-touch (Ten-Point)						
Interfaces	Port 1	2 x 10/100/1000 Base T Ethernet RJ45			4 x 10/100/1000 Base T Ethernet RJ45			
	Port 2	1 x RS-232 COM Port (5-Pin Connector, Isolated) 1 x RS-485 COM Port (5-Pin Connector, Isolated)						
	Port 3	2 x USB 3.0 (Type-A)			2 x USB 3.0 (Type-A) 2 x USB 2.0 (Type-A)			
	Port 4	1 x DisplayPort						
	Port 5	1 x Mic In (Mono) (3.5mm Jack)						
	Port 6	1 x Line Out (Stereo) (3.5mm Jack)						
Status Indicators	Front Bezel Tri-color LED	Amber / Green / Red						
	On-board Buzzer	Yes (85dB sound level with 80mA mean current)						
Power-Supply	Voltage [V]	+24VDC ±20% (19.2 V to 28.8 V, 3-Pin Connector, Isolated)						
Power Consumption	Maximum Wattage [W]	20 W	23 W	33 W	39 W	35 W	52 W	

	Display Size	7"	10"	12"	15"	19"	24"	
Protection-Class	Front-Side	IP66 (When Installed to a Wall/Panel)						
	Back-Side	IP20						
Operating System	Installed Standard	Windows 10 IOT Enterprise LTSB						
Software Tools	Tool 1	Secure & Trusted Boot Capability						
	Tool 2	DHCP-Client, Web Browser (IE or FireFox), Java JRE Capability						
Secure & Trusted Boot	Item 1	On-Board TPM2.0						
Design	Housing	Aluminum Die Casting (Front)						
	Construction Type	Modular (Detachable Modules; Computer, Monitor, Touch Display, DIO)						
	Cooling	Natural Convection (Fanless Passive Cooling)						
	Operating Temperature	-20°C to +65°C						
	Storage Temperature	-30°C to +70°C						
	Operating Humidity	85% RH (non-condensing) @ 30°C						
	Operating Altitude	10000 ft. (3.000 m)						
	Vibration	1Grms / 5 ~ 500Hz (Random) / Operation IEC 60068-2-64 10G peak acceleration (11 msec. duration)/operation IEC 60068-2-27						
Compliance	Certifications	UL and cUL 62368, UL and cUL 61010, IECCE CB Scheme						
		UL TYPE 4 & 4X, IP66 (ANSI/IEC 60529)						
		CE (EN 62368, EN 61000-6-4, 61000-6-2)						
		FCC Part15 Class A						
	RoHS							
	Certifications Coming Q4 2019	UL Listed US/CAN Hazardous Locations: Class 1 Division 2, Class 2 Division 2, Class 3 Division 1						
		ATEX Zone 2/22 & IECEX						
BIS & Marine; DNV, ABS, BV								
Mounting	Panel Cutout Dimensions (mm)	183.5(W) 128.5(H)	255.5(W) 174(H)	317(W) 214.5(H)	398(W) 245.5(H)	482(W) 297(H)	581(W) 360(H)	
	VESA Mounting	75 x 75			100 x 100			
	Hardware Included	Mounting Clamps and Allen Screws						
Physical Specification	Net Weight (kg)	2.0	2.6	3.8	5.1	6.9	9.0	
	Dimensions (mm)	192(W) 137(H) 65(D)	267(W) 186.2(H) 65(D)	329.1(W) 226.8(H) 66(D)	410.2(W) 257.6(H) 65(D)	500(W) 315(H) 70(D)	600(W) 382(H) 71(D)	

1.3 Technical Drawings & Dimensions

Figure 1.1 Dimensions of 7"

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETER (MM).
2. DIMENSIONS SHOWN IN BOTTOM VIEW REPRESENT THE APPROXIMATE CENTER OF THE DESIGNATED CONNECTOR.

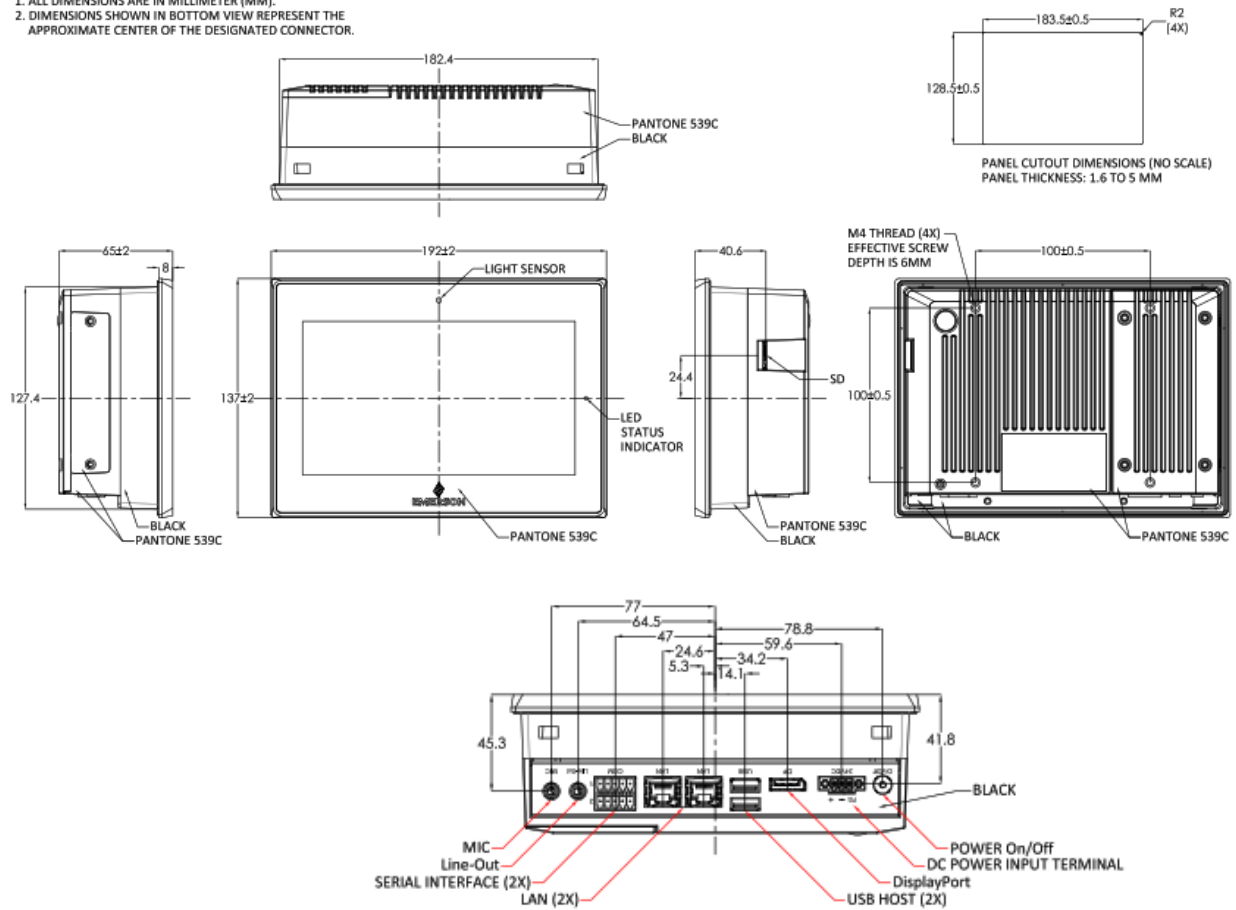


Figure 1.2 Dimensions of 10"

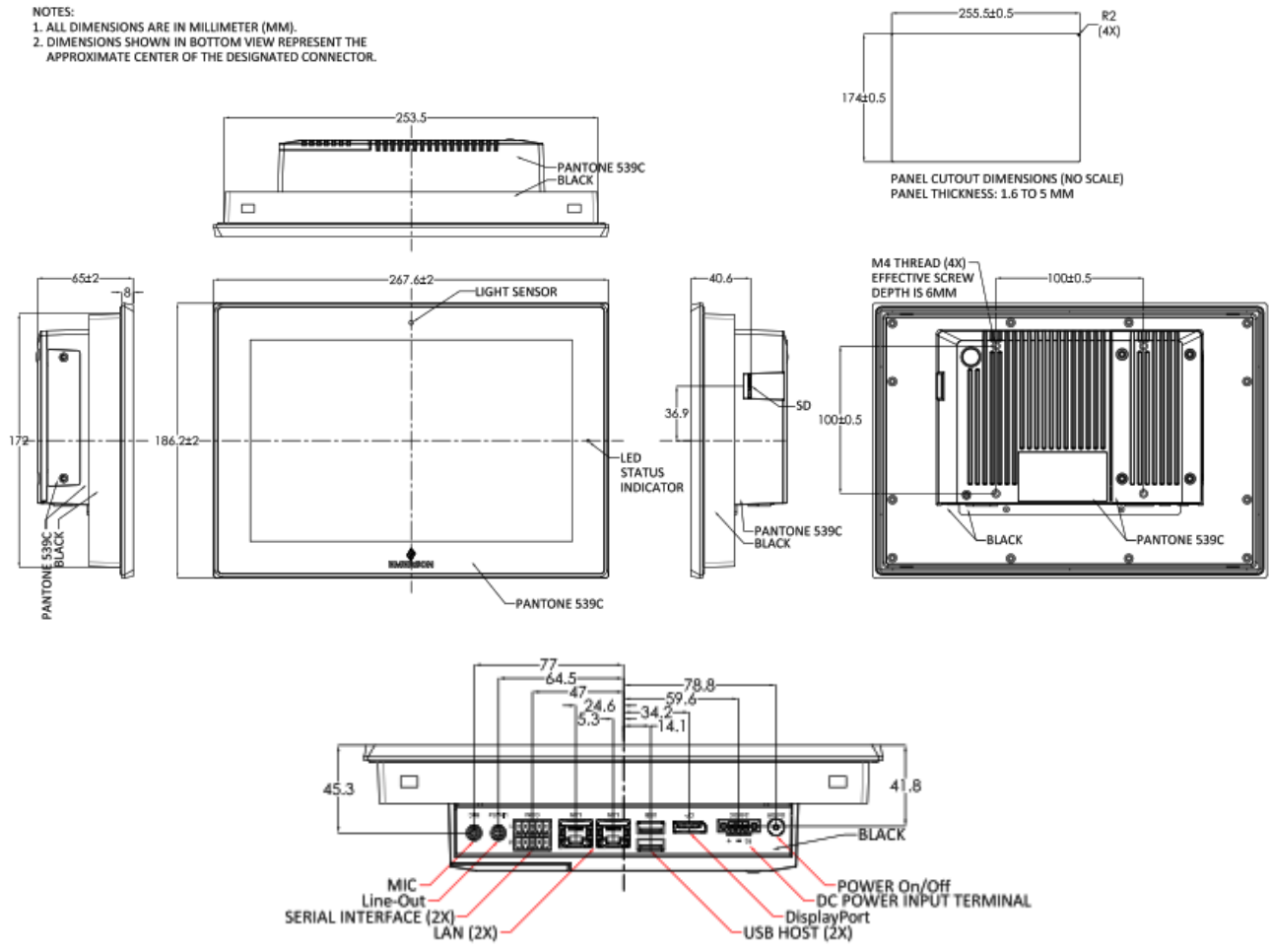


Figure 1.3 Dimensions of 12"

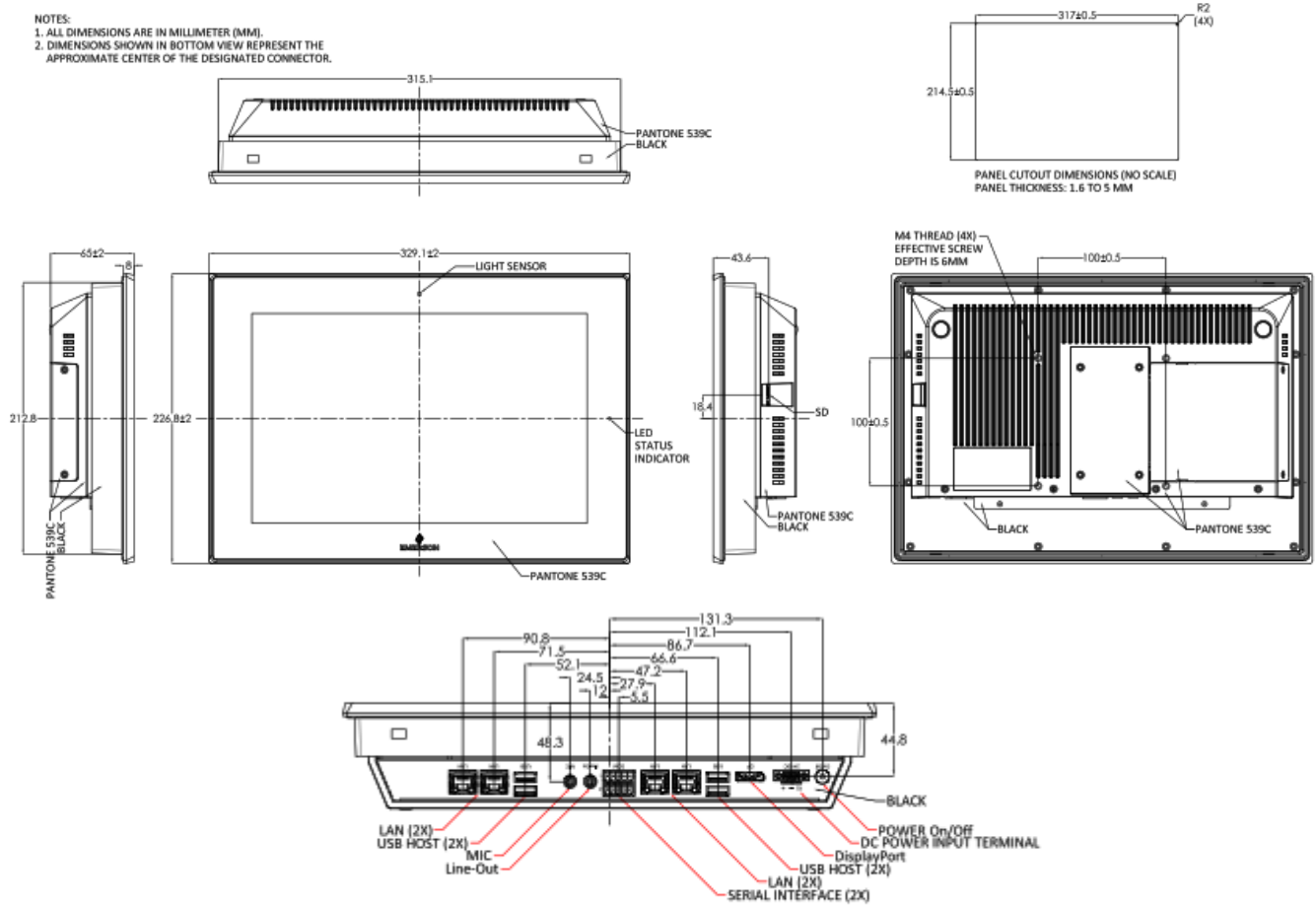


Figure 1.4 Dimensions of 15"

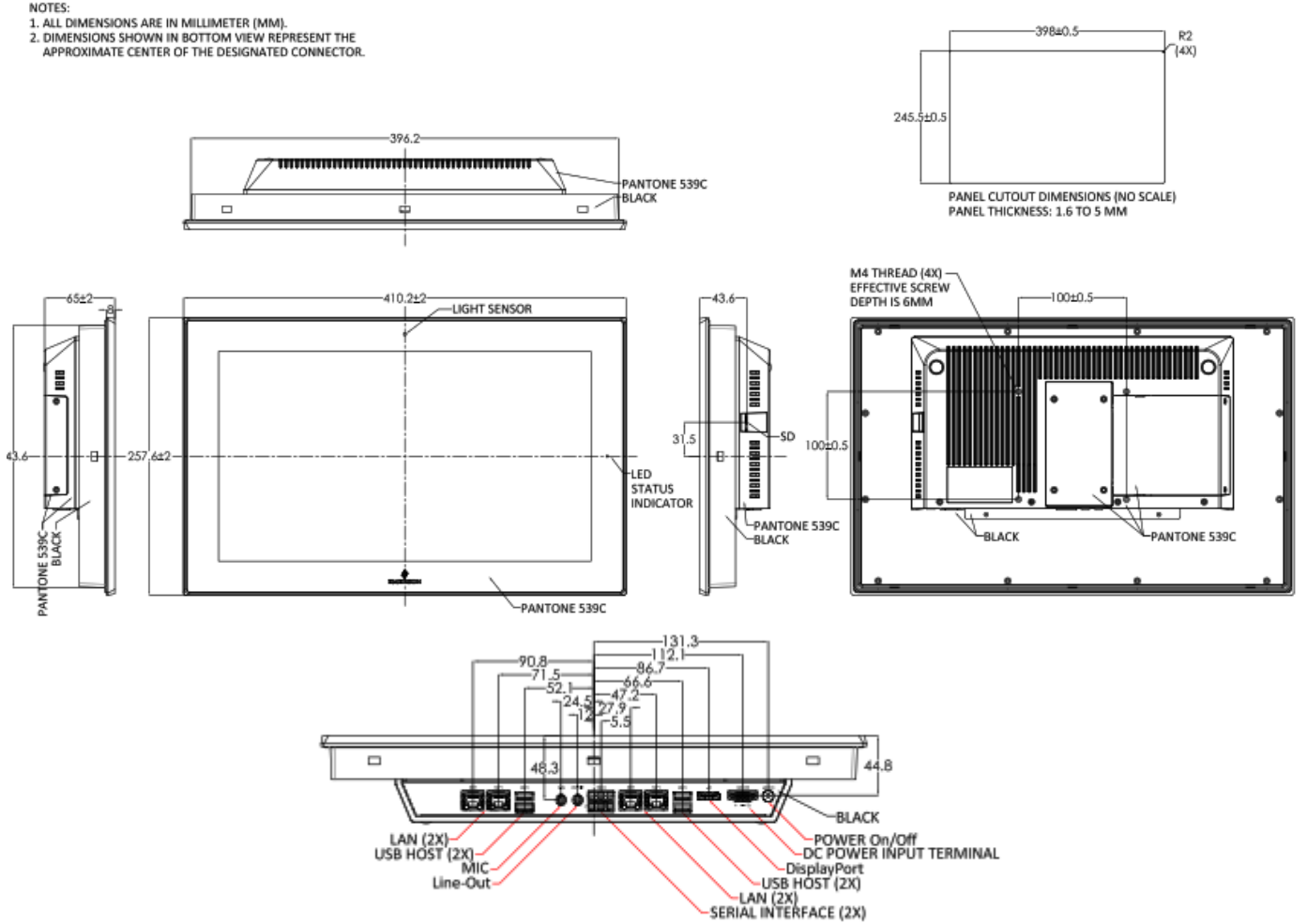


Figure 1.5 Dimensions of 19"

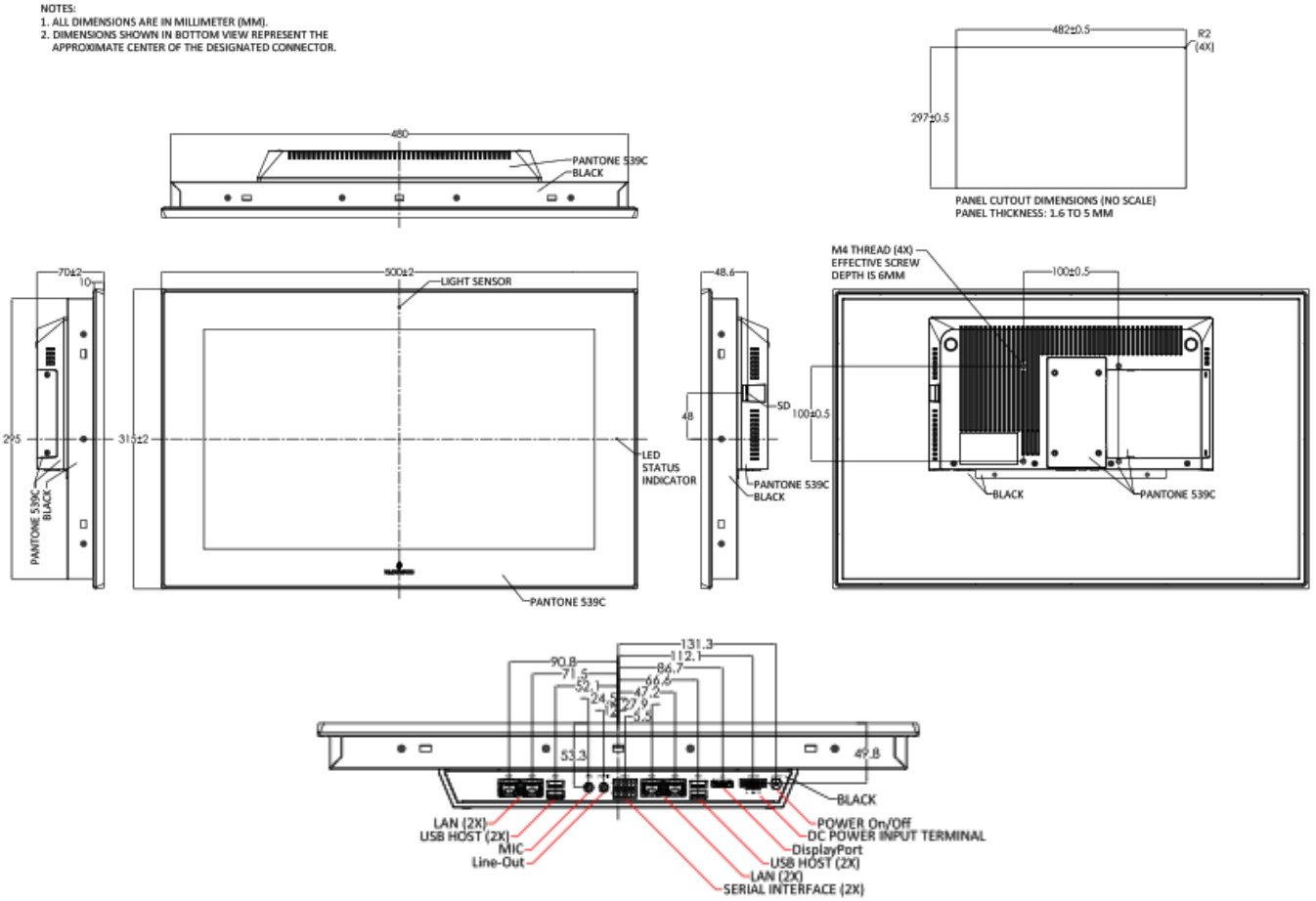
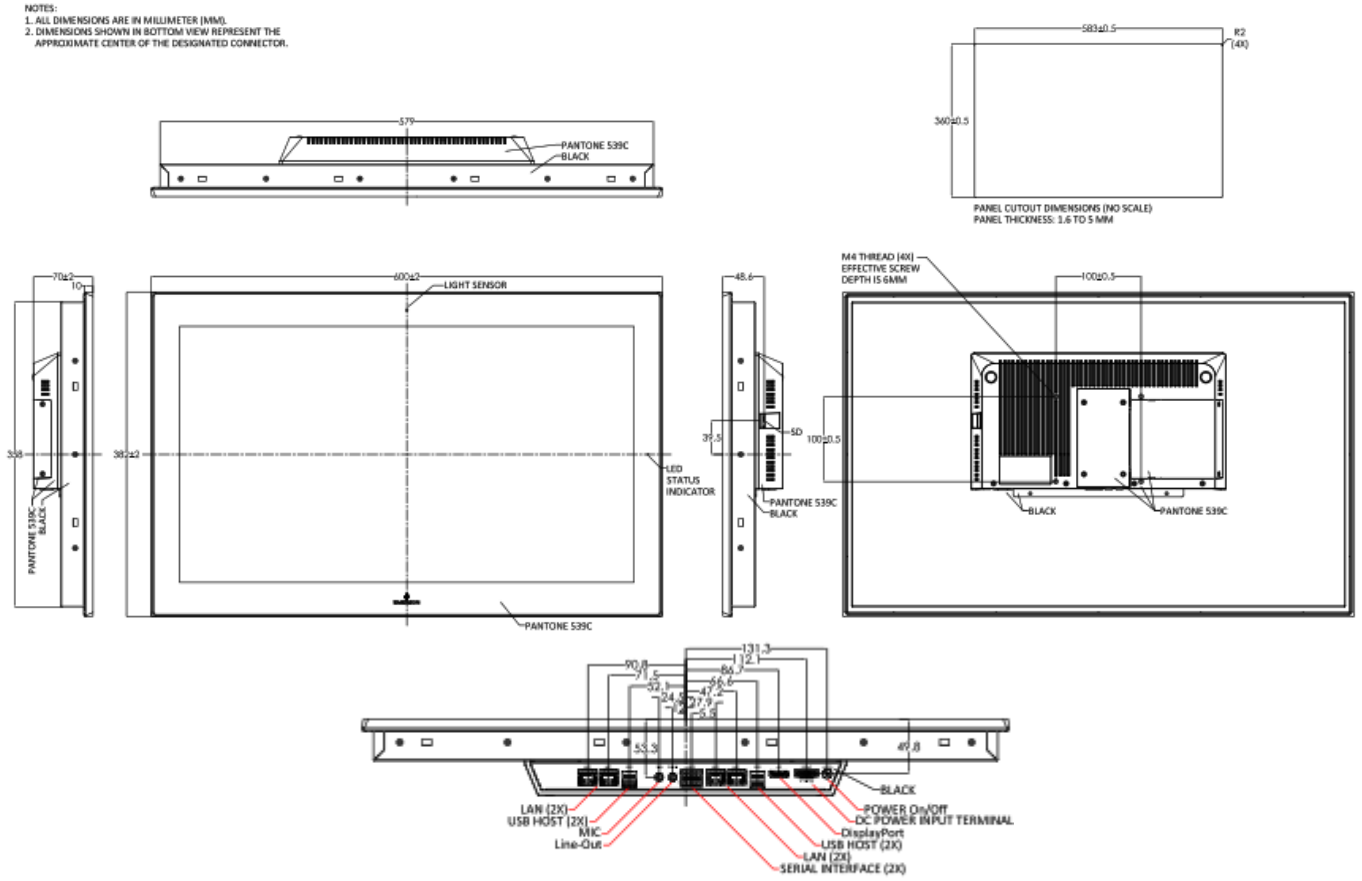


Figure 1.6 Dimensions of 24"



1.4 Brief Description of RXi - Panel PC

The RXi - Panel PC modular display portfolio offers multiple options of separable screens and computing units that maximize flexibility, performance, and durability. The portfolio ranges from 7" to 24" screens in a widescreen format, with 7" to 15" models also available with outdoor sunlight readable screens. The modular nature of the unit allows users to easily swap an indoor screen for an outdoor screen, change screen sizes, or simply replace a damaged screen, while utilizing the same computing unit.

The RXi – Panel PC comes with either a Dual Core 1.0 GHz processor or a Quad Core 1.2GHz Processor with 4GB or 8GB of available DDR3 RAM with Windows 10 IOT Enterprise LTSB OS installed standard. The high resolution, multitouch, projective capacitive screens can be used with personal protective equipment and feature quick response times.

The outdoor rated sunlight readable screens are optically bonded and feature UV protection reducing reflections and glare. All indoor and outdoor rated configurations carry the same certifications and capabilities.

The entire RXi – Panel PC portfolio features IP66 rated screens that protect against dust, moisture, and even direct water jets. The effective operating temperatures range as high as 65°C and as low as -20°C. With Marine, ATEX/IECEX, and HazLoc certifications, the RXi - Panel PC provides you with a solution that is designed to go where you need it to.

Figure 1.7 Front View of 7"



Figure 1.8 **Front View of 10"**



Figure 1.9 **Front View of 12"**

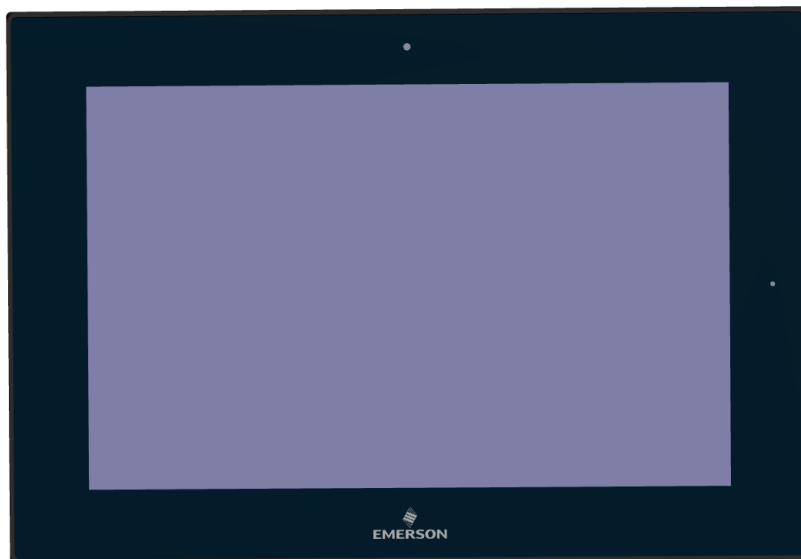


Figure 1.10 Front View of 15"



Figure 1.11 Front View of 19"



Figure 1.12 Front View of 24"

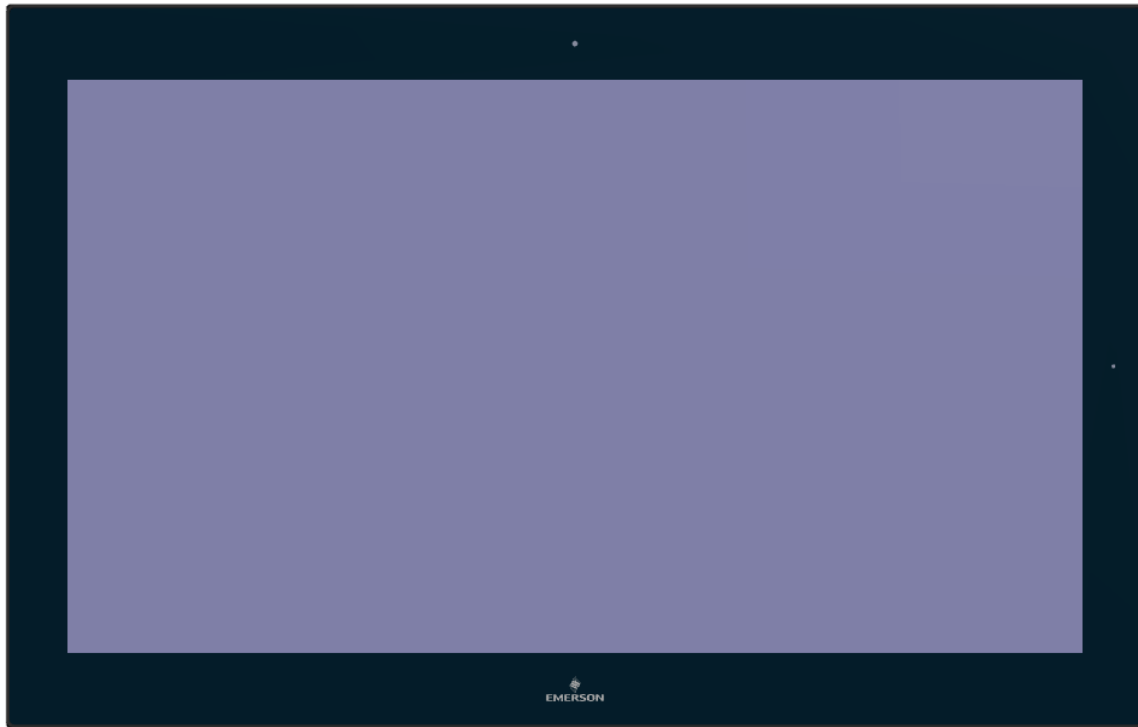


Figure 1.13 Rear View of 7"



Figure 1.14 Rear View of 10"



Figure 1.15 Rear View of 12"



Figure 1.16 Rear View of 15"



Figure 1.17 Rear View of 19"



Figure 1.18 Rear View of 24"



Section 2: Hardware

2.1 Key Features

- Watchdog Timer
- DDR3
- Graphics
- Serial ATA
- Gigabit LAN
- Power Failure Recovery
- USB
- Wake-On-LAN
- Wake-On-USB
- ACPI-STR
- RTC Timer

2.2 Motherboard Specifications

2.2.1 Specifications

Board Size	170mm x 113mm
CPU Support	AMD® Embedded G-Series AMD® GX-210HL, Dual Core, 1M Cache, 1.0GHz, 7W AMD® GX-412GC, Quad Core, 2M Cache, 1.2GHz, 15W
Memory Support	On board 4GB/8GB DDR3L Memory with ECC Supports Single Channel DDR3 1066/1333MHz
Graphics	AMD Radeon™ R3E GPU DirectX® 11.2, OpenGL 4.3, OpenCL™ 1.2 graphics support 1 x DP++ 1 x LVDS DP++: resolution up to 4096x2160 @ 30Hz LVDS: dual channel 24-bit, resolution up to 1920x1200 @ 60Hz
BIOS	AMI SPI 64Mbit
Storage	1 x Micro SD 1 x SATA 3.0 (7+15pin)
Ethernet	2 x Intel® I210IT, -40 to 105°C PCIe (10/100/1000Mbps)
Outside I/O	2 x USB 3.0 1 x RS-232 1 x RS-485 1 x Line-out 1 x Mic-in 2 x GbE (RJ-45) 1 x DP++ 1 x Power Button
Internal I/O	1 x LVDS LCD Panel Connector 1 x AIO/DIO 1x30pin Connector (JAE TX24-30R-10ST-H1E)
Battery	CR2032 Coin Cell
Audio	Codec:92HD73C
Expansion	1 x Mini PCIe (PCIe/USB 2.0) 1 x M.2 E key 2230 (PCIe/USB 2.0)
Security	TPM2.0
Watchdog Timer	System Reset Programmable via Software from 1 to 255 Seconds/Minutes
Temperature	Operating: -30 to 85°C Storage: -30 to 85°C
Humidity	Operating: 10 to 90% RH Storage: 10 to 90% RH
OS Support	Windows 10 IoT Enterprise (64-bit)

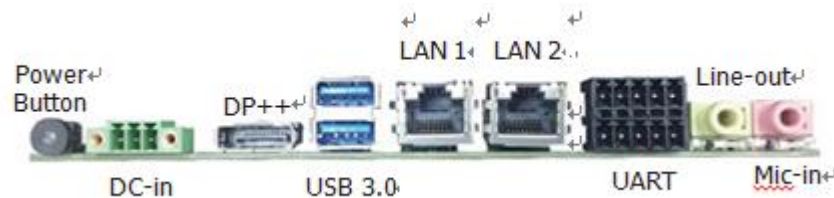
2.3 I/O and Connectors

2.3.1 Outside I/O

The rear panel I/O port arrangement consists of the following:

- 1 power button
- 1 24V DC-in 3-pin power connector
- 1 DP++
- 2 USB 3.0 ports
- 2 RJ45 LAN ports
- 1 UART terminal-block
- 1 Line-out jack
- 1 Mic-in jack

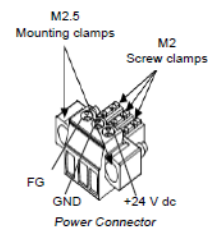
Figure 2.1 Rear Panel Arrangement



2.3.2 Connecting Input Power (24V DC-in)

To connect to power, follow these steps:

1. Verify that the power cable is not energized.
2. Loosen the screw clamps on the mating power connector.
3. Strip the insulation from the power cables.
4. Secure the power cable to the mating connector, noting polarity, and tighten the screw clamps. The torque for the attaching screws is 0.3 Nm (2.26 in-lb).
5. Apply dc power to the unit. During normal startup and operation, the LED status indicator displays as follows:
 - Solid amber while the RXi - Industrial Display unit is starting up



- Solid green during normal operation
6. Once power is applied, the unit begins initializing. The first thing to display is the splash screen.

Be sure to connect a DC power cord to this 3-pin power connector. Using a voltage out of the range may fail to boot the system or cause damage to the system board.

2.3.3 Graphics Interface

The display port consists of the following:

- 1 DP++ port

2.3.3.1 DP++ Port

The DP++ is a digital display interface used to connect a display device such as a computer monitor. It is used to transmit audio and video simultaneously. The interface, which is developed by VESA, delivers higher performance features than any other digital interface.

2.3.3.2 BIOS Setting

Configure the display device in the Chipset menu (“DISPLAY control” submenu) of the BIOS. Refer to the chapter 3 for more information.

2.3.4 RJ45 LAN Ports

2.3.4.1 Features

2 Intel® I210IT PCI Express Gigabit Ethernet controllers (4 on larger box module)

The LAN ports allow the system board to connect to a local area network by means of a network hub or router.

2.3.4.2 BIOS Setting

Configure the onboard LAN in the Advanced menu (“Wakeup Configuration” submenu) of the BIOS. Refer to chapter 3 for more information.

2.3.5 USB Ports

The USB ports allow for data exchange between your computer and a wide range of simultaneously accessible external Plug and Play peripherals. The RXi – Panel PC is equipped with 2 onboard USB 3.0 ports (USB 0-1) in the small configuration with an additional 2 USB 2.0 ports (USB 4-5) in the large box configuration.

2.3.5.1 BIOS Setting

Configure the onboard USB in the Advanced menu (“Wakeup Configuration” submenu) of the BIOS. Refer to chapter 3 for more information.

2.3.5.2 Wake-On-USB Keyboard/Mouse

The Wake-On-USB Keyboard/Mouse function allows you to use a USB keyboard or USB mouse to wake up a system from the S3 (STR - Suspend To RAM) state.

2.3.6 Serial Ports (UART)

Serial Connection	Pin	Function
RS232	1	TXD
	2	RXD
	3	RTS
	4	CTS
	5	GND
RS485	6	TX+
	7	TX-
	8	RX+
	9	RX-
	10	GND

2.3.7 Audio

2.3.7.1 Rear Audio

The system board is equipped with 2 audio jacks (Line-out and Mic-in). A jack is a one-hole connecting interface for inserting a plug.

- Line-out Jack (Lime)

This jack is used to connect a headphone or external speakers.

- Mic-in Jack (Pink)

This jack is used to connect an external microphone.

2.3.7.2 BIOS Setting

Configure the onboard Audio device in the Chipset menu (“SB HD Azalia Configuration” submenu) of the BIOS. Refer to the chapter 3 for more information.

2.3.8 I/O Connectors

2.3.8.1 Serial ATA (SATA) Connector

2.3.8.1.1 Features

- 1 Serial ATA 3.0 port with data transfer rate up to 6Gb/s
- Integrated Advanced Host Controller Interface (AHCI) controller

The Serial ATA connector is used to connect the Serial ATA device. Connect one end of the Serial ATA data connector to a SATA connector on the other end to your Serial ATA device.

2.3.8.1.2 BIOS Setting

Configure the Serial ATA drive in the Chipset menu (“SB SATA Configuration” submenu) of the BIOS. Refer to chapter 3 for more information.

2.3.9 Expansion Slots

2.3.9.1.1 Micro SD Socket

The micro SD socket allows you to install a micro SD card for the expansion of available storage.

2.3.10 LVDS LCD Panel Connector

The system board allows you to connect a LCD Display Panel with the LVDS LCD panel connector. This connector transmits video signals and power from the system board to the LCD Display Panel. Refer to the right side for the pin functions of LVDS connector.

2.3.10.1.1 BIOS Setting

Configure the LCD panel in the Chipset menu (“DISPLAY control” submenu) of the BIOS. Refer to Chapter 3 for more information.

2.3.11 AIO/DIO Connector

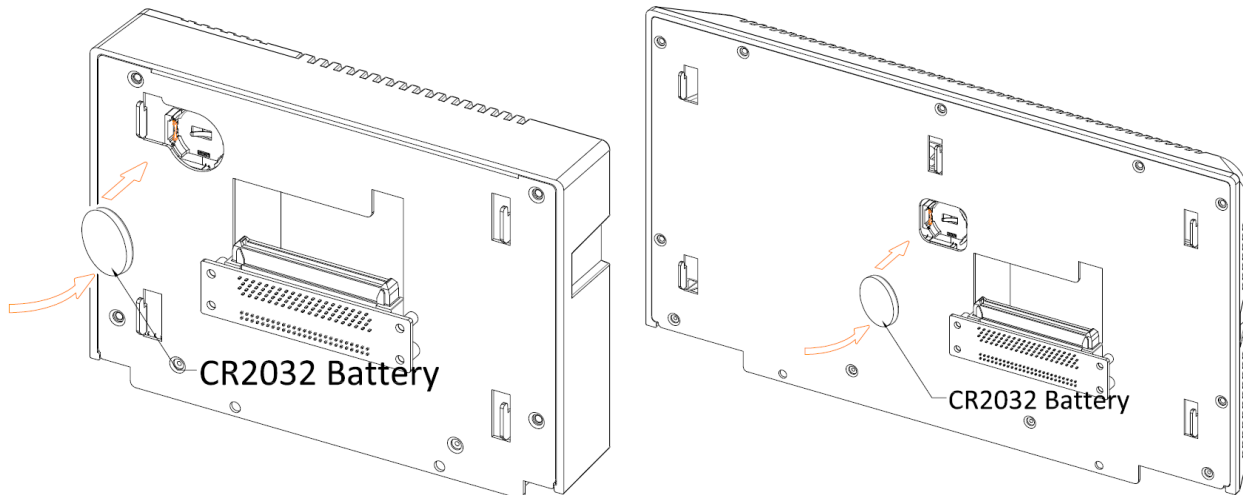
AIO/DIO connector provides functionality to external devices that are connected to the connector. **(FOR FUTURE USE)**

2.3.12 Battery

The lithium ion battery powers the real-time clock and CMOS memory. It is an auxiliary source of power when the main power is shut off or disconnected. It is a standard CR2032 battery and is accessible on the bottom of the computing module when separated from the screen (as shown below)

Safety Measures

- Danger of explosion if battery incorrectly replaced.
- Replace only with the same or equivalent type recommend by the manufacturer.
- Dispose of used batteries according to local ordinances.



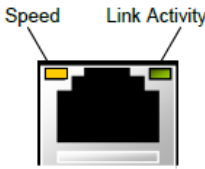
2.4 LED Indicators

2.4.1 Operation Status LEDs (Screen)

All RXi Industrial Displays have a tri-color LED built into the screen that provides visual indication of the operation status.

LED State	System State
Amber, Solid	Operating system starting
Green, Solid	Normal operating state
Green, Blinking	Backlight off
Red, Blinking	Backlight failure
Off	Power not applied to unit

2.4.2 Ethernet Port Operation LEDs

	LED	LED State	Operating State
	Speed	Yellow, ON	10/100/1000
	Link Activity	Green, ON	Link Status

Section 3: BIOS Setup

3.1 BIOS Setup

The BIOS is a program that handles of the basic levels of communication between the CPU and peripherals. It contains codes for various advanced features found in this system board. The BIOS allows you to configure the system and save the configuration in a battery-backed CMOS so that the data is retained even when the power is off. In general, the information stored in the CMOS RAM of the EEPROM will stay unchanged unless a configuration change has been made such as a hard drive replaced or a device added.

It is possible for the CMOS battery to fail over time, causing CMOS data loss. If this happens, you need to install a new CMOS battery and reconfigure the BIOS settings.

Keys	Function
Right and Left arrows	Moves the highlight left or right to select a menu.
Up and Down arrows	Moves the highlight up or down between submenu or fields.
<Enter>	Press <Enter> to enter the highlighted submenu or item.
+ (plus key)	Scrolls forward through the values or options of the highlighted field.
- (minus key)	Scrolls backward through the values or options of the highlighted field.
<F1>	Displays general help
<F2>	Pervious values
<F3>	Load Optimized Defaults
<F4>	Saves and resets the setup program.
<Esc>	Exit to the BIOS Setup Utility.

3.1.1 Submenu

When “▶” appears on the left of a particular field, it indicates that a submenu which contains additional options are available for that field. To display the submenu, move the highlight to that field and press <Enter>.

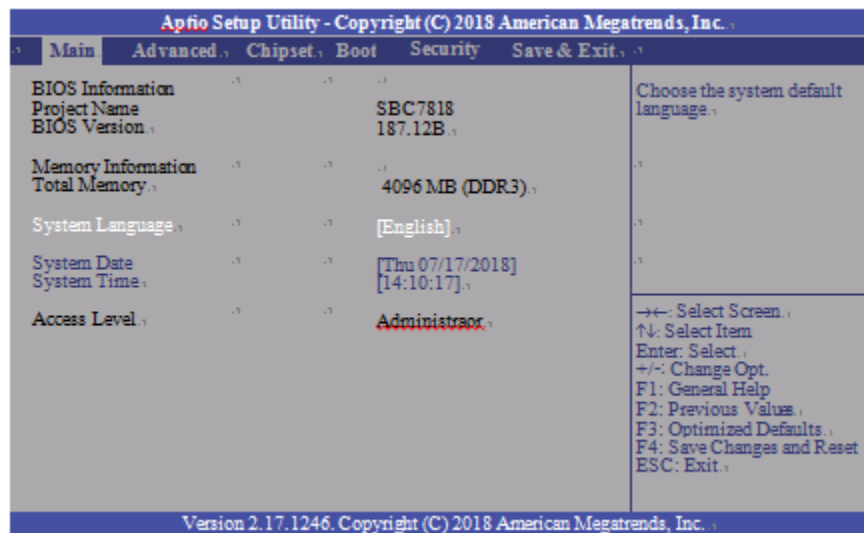
3.2 AMI BIOS Setup Utility

3.2.1 Accessing the BIOS

To access the BIOS, you must attach a USB keyboard to the computing unit and repeatedly press F2 during the start up sequence until it brings you to the Main Menu

3.2.2 Main Menu

The Main menu is the first screen that you will see when you enter the BIOS Setup Utility.



3.2.3 System Language

Choose the system default language.

3.2.4 System Date

The date format is <day>, <month>, <date>, <year>. Day displays a day, from Sunday to Saturday. Month displays the month, from 01 to 12. Date displays the date, from 01 to 31. Year displays the year, from 1980 to 2099.

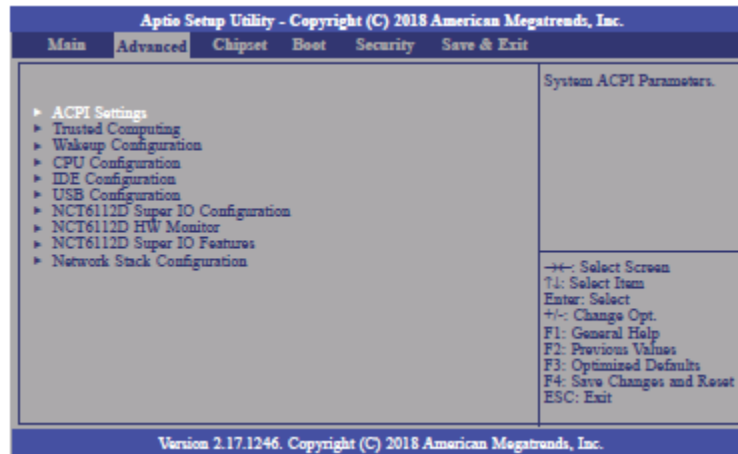
3.2.5 System Language

The time format is <hour>, <minute>, <second>. The time is based on the 24-hour military-time clock. For example, 1 p.m. is 13:00:00. Hour displays hours from 00 to

23. Minute displays minutes from 00 to 59. Second displays seconds from 00 to 59.

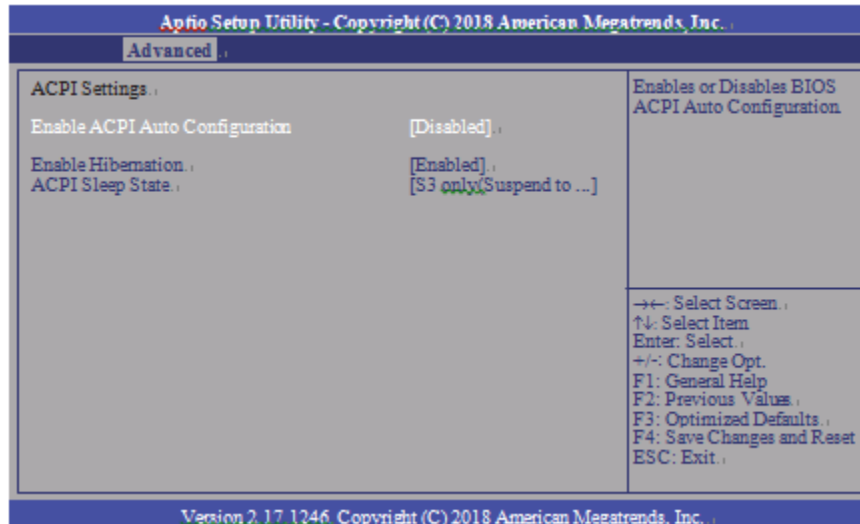
3.2.6 Advanced

The Advanced menu allows you to configure your system for basic operation. Some entries are defaults required by the system board, while others, if enabled, will improve the performance of your system or allow the user to set some features according to their preference.



3.2.7 ACPI Settings

This section configures system ACPI parameters.



3.2.7.1 Enable ACPI Auto Configuration

This field is used to enable or disable BIOS ACPI auto configuration.

3.2.7.2 Enable Hibernation

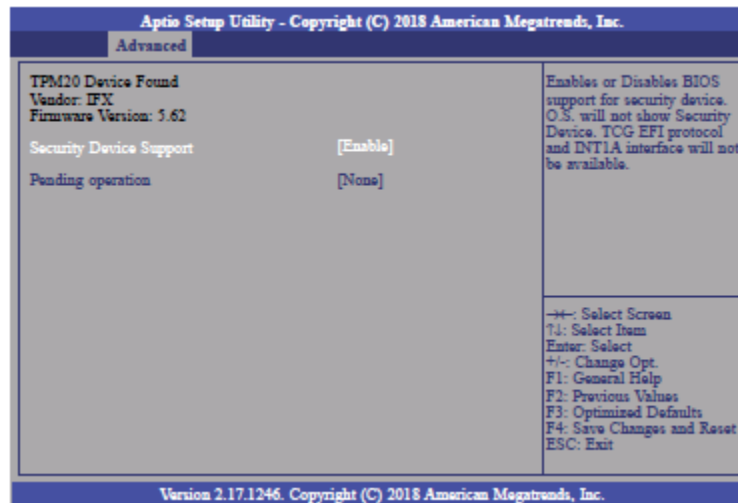
This field is used to enable or disable the system's ability to hibernate (OS/S4 Sleep State). This option may not be functional with all operating systems.

3.2.7.3 ACPI Sleep State

This field is used to select ACPI sleep state the system will enter when the SUSPEND button is pressed.

3.2.8 Trusted Computing

This section is used to configure the Trusted Computing settings.



3.2.8.1 Security Device Support

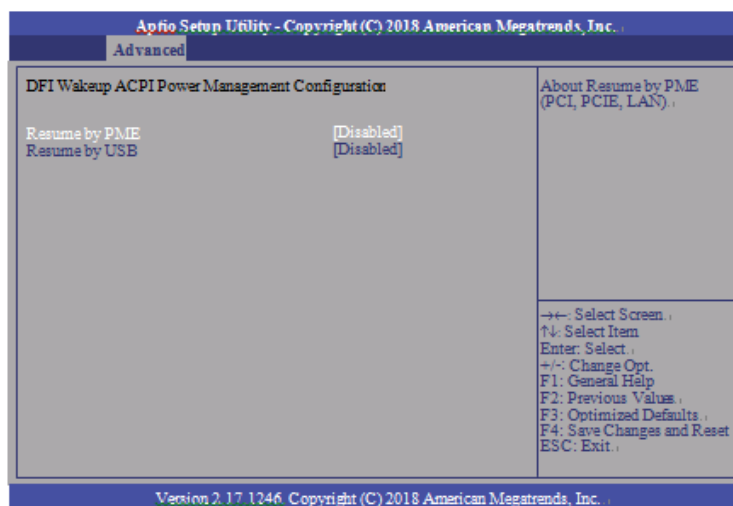
Enable or disable BIOS support for security device. The Operating System will not show security device. TCG EFI protocol and INT1A interface will not be available.

3.2.8.2 Pending Operation

Schedule an operation for the security device. Your computer will reboot during restart in order to change state of security device.

3.2.9 Wakeup Configuration

This section is used to configure the Wakeup ACPI Power Management.



3.2.9.1 Resume by PME

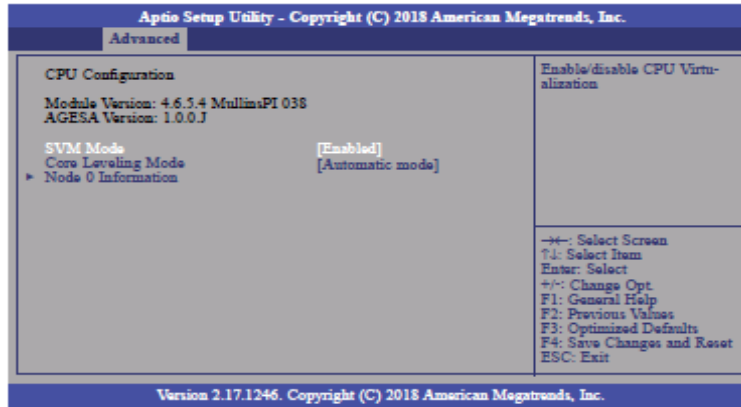
Enable or disable to resume by PME (PCI, PCIe, LAN, etc.)

3.2.9.2 Resume by USB

Enable or disable to resume by USB.

3.2.10 CPU Configuration

This section is used to configure the CPU. It will also display the detected CPU information.



3.2.10.1 SVM Mode

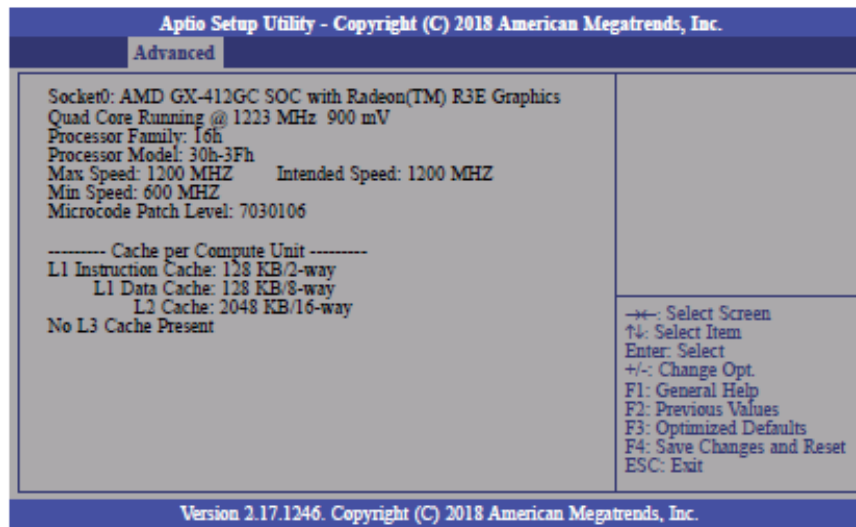
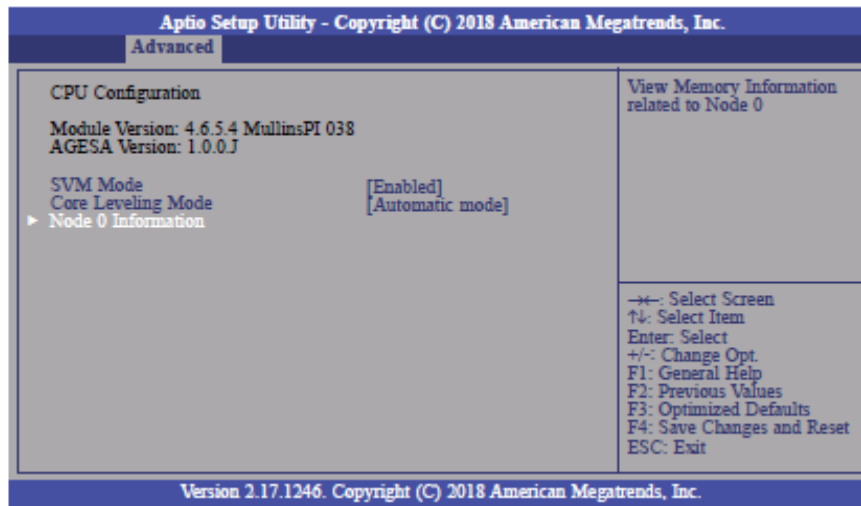
Enable or disable CPU Virtualization.

3.2.10.2 Core Leveling Mode

Select the number of cores in the system: Automatic mode, Three cores per processor, Two cores per processor or One core per processor.

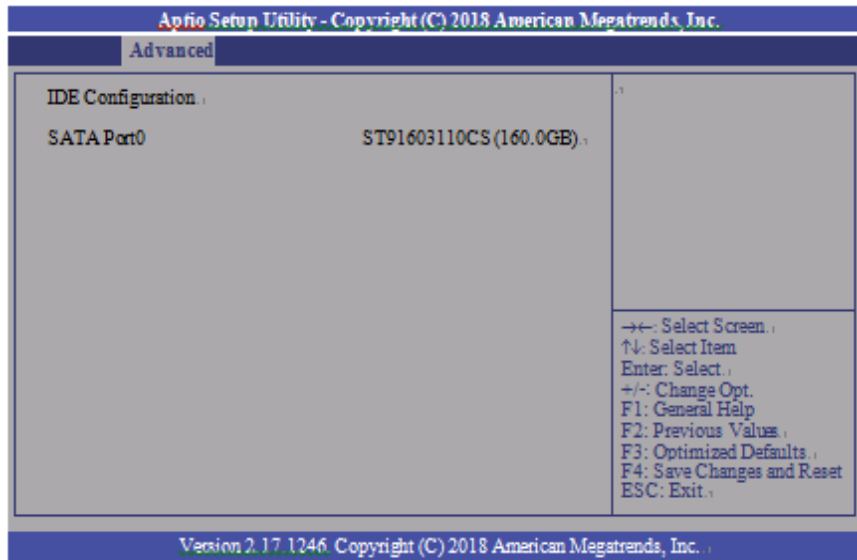
3.2.10.3 Node 0 Information

View Memory Information related to Node 0.



3.2.11 IDE Configuration

This section is used to configure the IDE Devices. It will also display the detected information.



3.2.12 USB Configuration

This section is used to configure the parameters of USB Device.



3.2.13 Legacy USB Support

3.2.13.1.1 Enabled

Enable Legacy USB

3.2.13.1.2 Disabled

Keep USB devices available only for EFI applications.

3.2.13.1.3 Auto

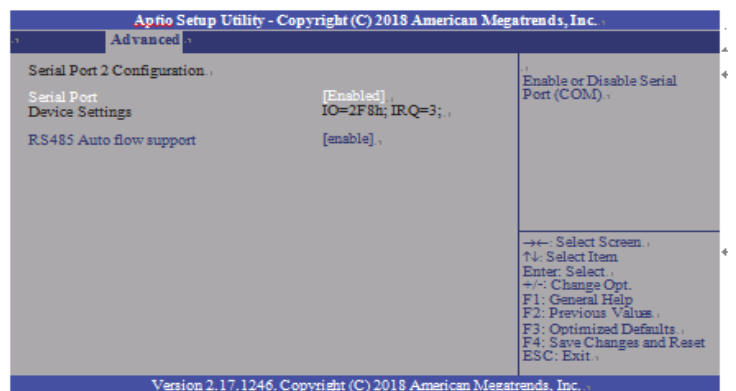
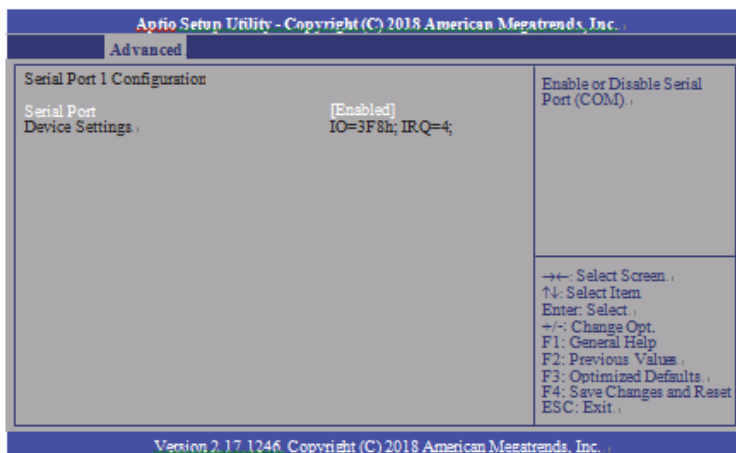
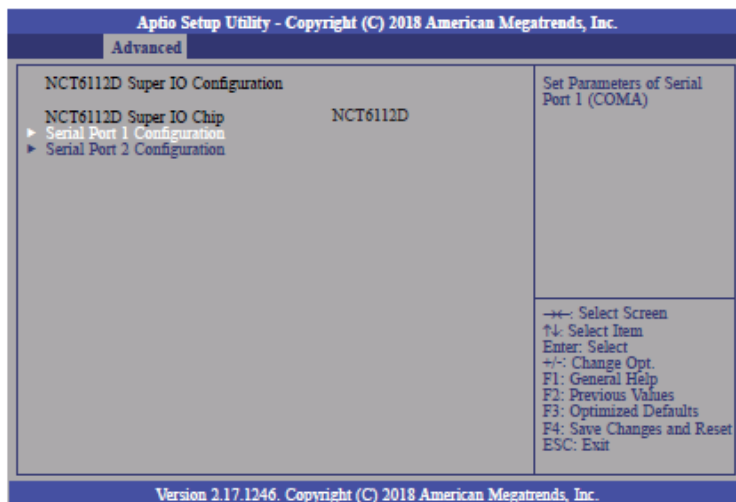
Disable support for legacy when no USB devices are connected.

3.2.14 USB Mass Storage Driver Support

Enable or disable the support of the USB Mass Storage Driver.

3.2.15 NCT61120 Super IO Configuration

This section is used to configure the parameters of the system super IO chip.



3.2.15.1 Serial Port

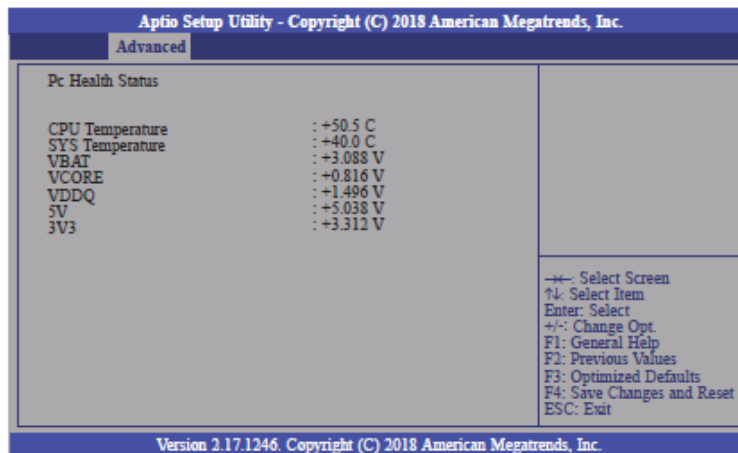
Enable or disable the serial COM port.

3.2.15.2 RS485 Auto Flow Support

Enable or disable the RS485 auto flow support.

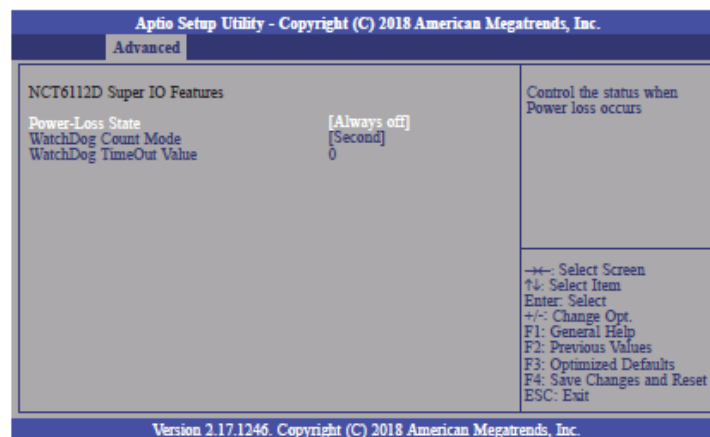
3.2.16 NCT 6112D HW Monitor

This section is used to monitor the hardware status.



3.2.17 NCT 6112D Super IO Features

This section is used to configure some control functions of the system super IO chip.



3.2.17.1 WatchDog Count Mode

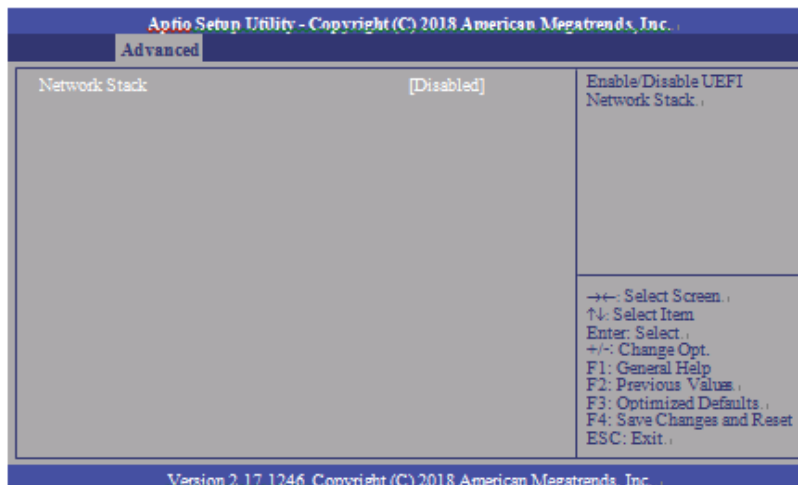
A WatchDog timer (WDT) is a hardware timer that automatically generates a system reset if the main program neglects to periodically service it. It is often used to automatically reset an embedded device that hangs because of a software or hardware fault. Use this menu to select the WatchDog Timer Unit: second or minute.

3.2.17.2 WatchDog Timeout Value

Enter the value to set the Super IO WatchDog timer. 0 means disabled.

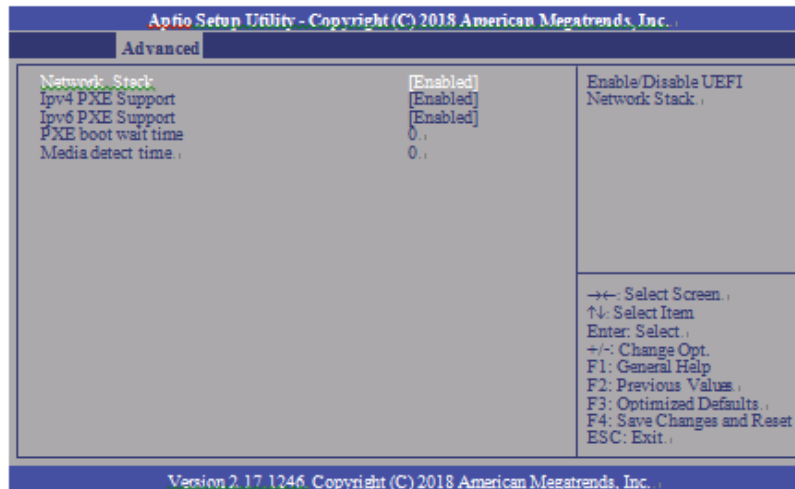
3.2.18 Network Stack Configuration

This section is used to enable or disable network stack settings. The Network Stack Controls LAN1 & LAN2 (Also LAN 3 & LAN4 on large computing module).



3.2.18.1 Network Stack

Enable or disable UEFI network stack. When Network Stack is set to enabled, the screen will be displayed as below.



3.2.18.2 Ipv4 PXE Support

When enabled, Ipv4 PXE boot supports. When disabled, Ipv4 PXE boot option will not be available.

3.2.18.3 Ipv6 PXE Support

When enabled, Ipv6 PXE boot supports. When disabled, Ipv6 PXE boot option will not be available.

3.2.18.4 PXE boot wait time

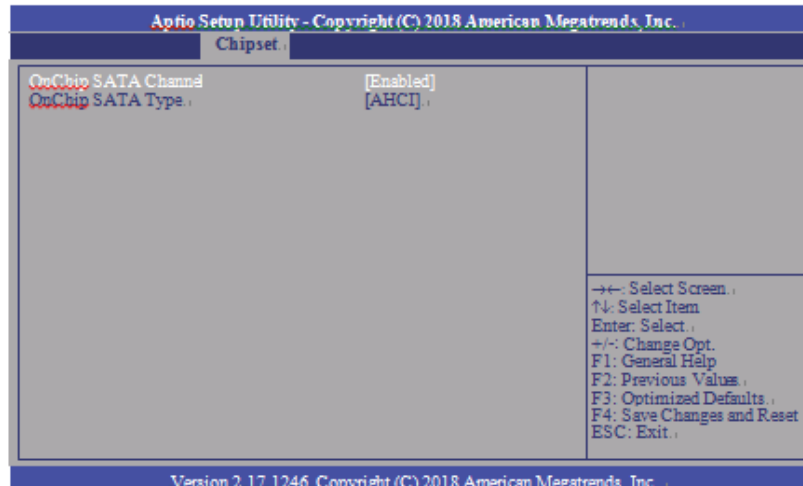
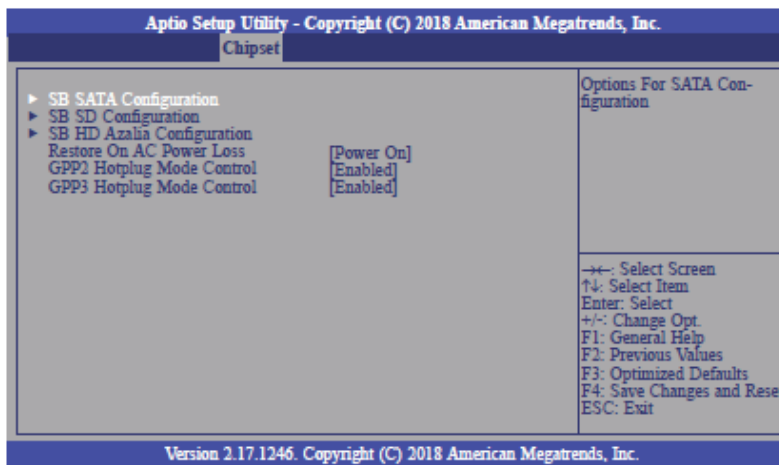
Enter the wait time value to abort the PXE boot.

3.2.18.5 Media detect time

Enter the wait time in seconds to detect media.

3.3 Chipset

This section configures relevant chipset functions.

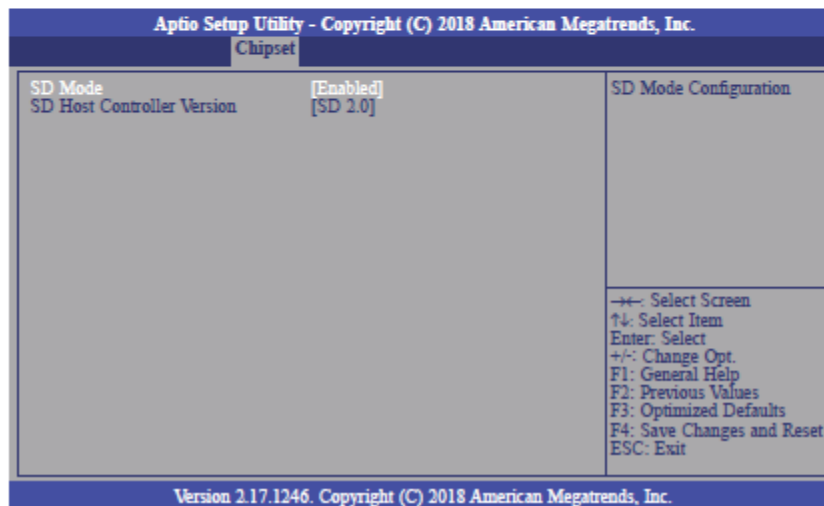
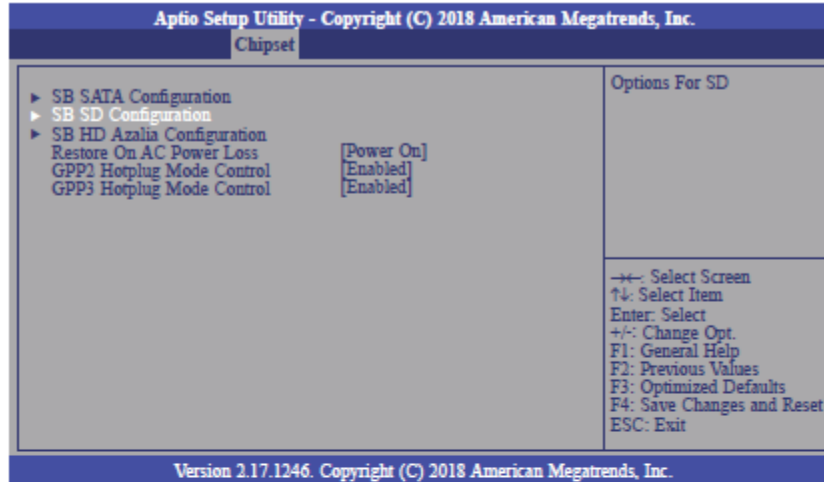


3.3.1 OnChip SATA Channel

Enable or disable Serial ATA.

3.3.2 OnChip SATA Type

Select OnChip SATA Type: Native IDE, AHCI, or Legacy IDE.

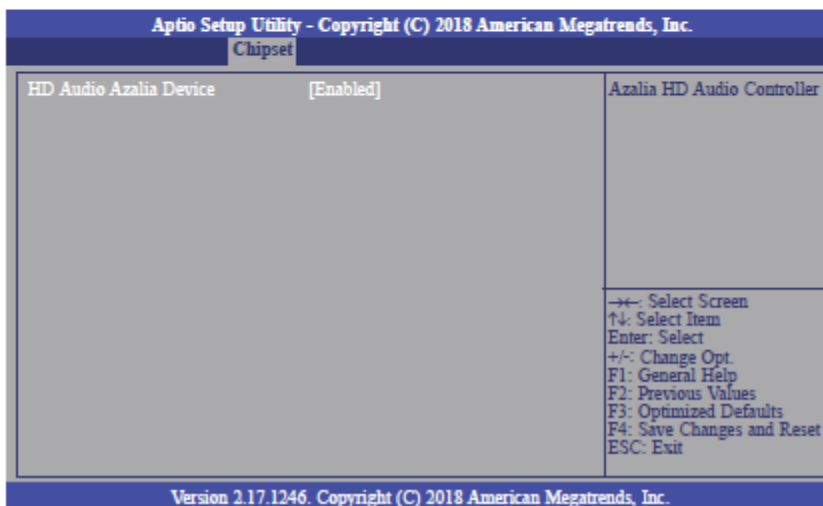
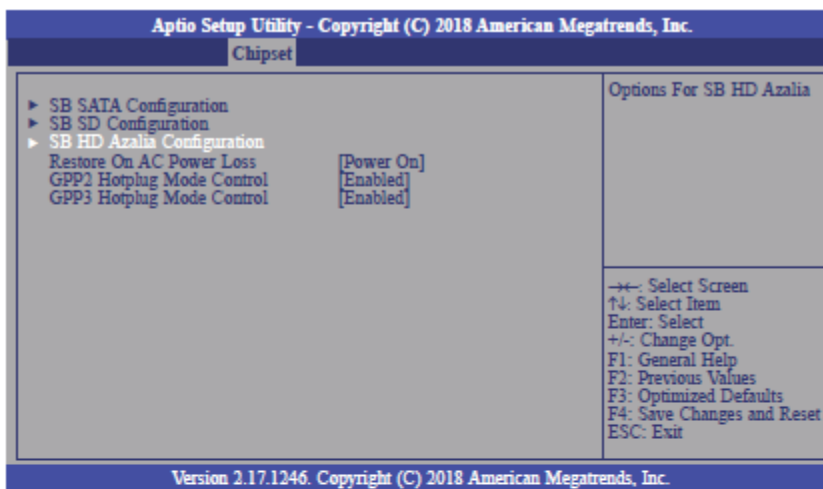


3.3.3 SD Mode

Enable or disable Secure Digital (SD) Mode configuration.

3.3.4 SD Host Controller Version

Select Secure Digital (SD) host controller version: SD2.0 or SD3.0.



3.3.5 SD Host Controller Version

Control the detection of the Azalia device.

3.3.5.1 Auto

HD Audio will be enabled if present, disabled otherwise.

3.3.5.2 Disabled

HD Audio will be fully disabled.

3.3.5.3 Enabled

HD Audio will be fully enabled.

3.3.6 Restore on AC power loss

3.3.6.1 Power On

When power returns after an AC power failure, the system will automatically power-on.

3.3.6.2 Power Off

When power returns after an AC power failure, the system will remain off. You must press the Power button to power on the system.

3.3.6.3 Last State

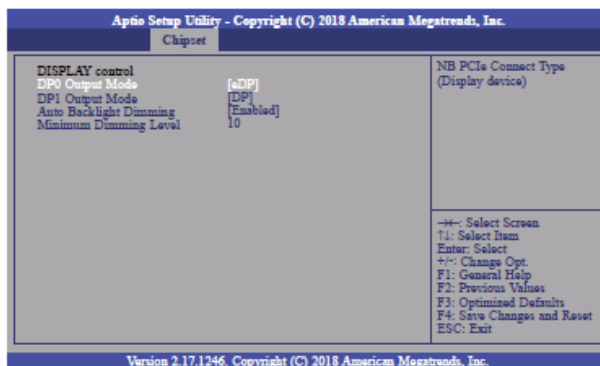
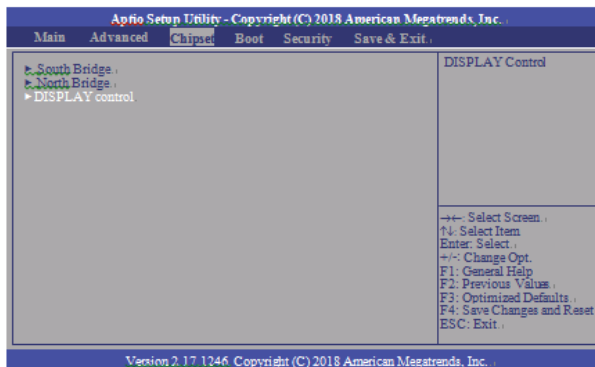
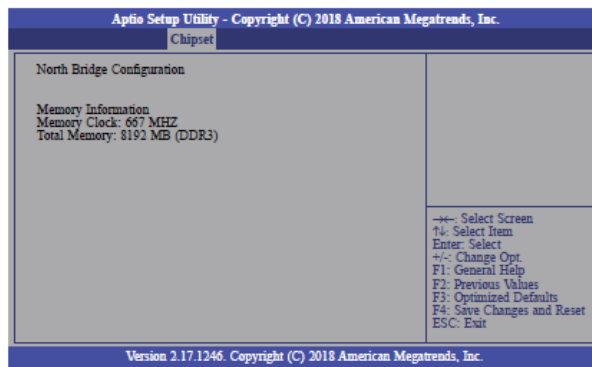
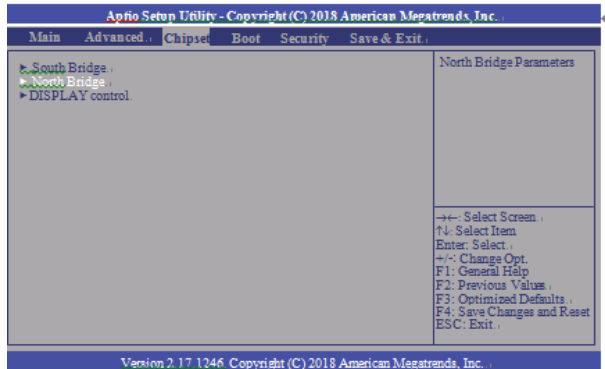
When power returns after an AC power failure, the system will return to the state where you left off before power failure occurs. If the system's power is off when AC power failure occurs, it will remain off when power returns. If the system's power is on when AC power failure occurs, the system will power-on when power returns.

3.3.7 GPP2 Hotplug Mode Control

Enable or disable GPP2 hotplug mode control.

3.3.8 GPP3 Hotplug Mode Control

Enable or disable GPP3 hotplug mode control.



3.3.9 DPO Output Mode

Select NB PCIe connect type (display device): eDP or Disabled.

3.3.10 DP1 Output Mode

Select NB PCIe connect type (display device): DP or Disabled.

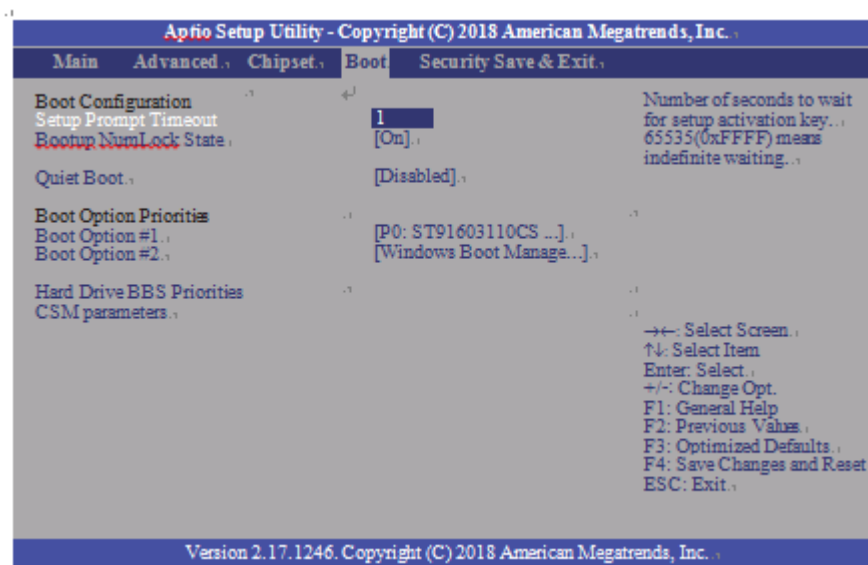
3.3.11 Auto Backlight Dimming

Enable or disable dimming backlight by TB573D.

3.3.12 Minimum Dimming Level

Set the minimum dimming level control. The range is 1~20%.

3.3.13 Boot



3.3.13.1 Setup Prompt Timeout

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

3.3.13.2 Bootup NumLock State

This allows you to determine the default state of the numeric keypad. By default, the system boots up with NumLock on wherein the function of the numeric keypad is the number keys. When set to Off, the function of the numeric keypad is the arrow keys.

3.3.13.3 Quiet Boot

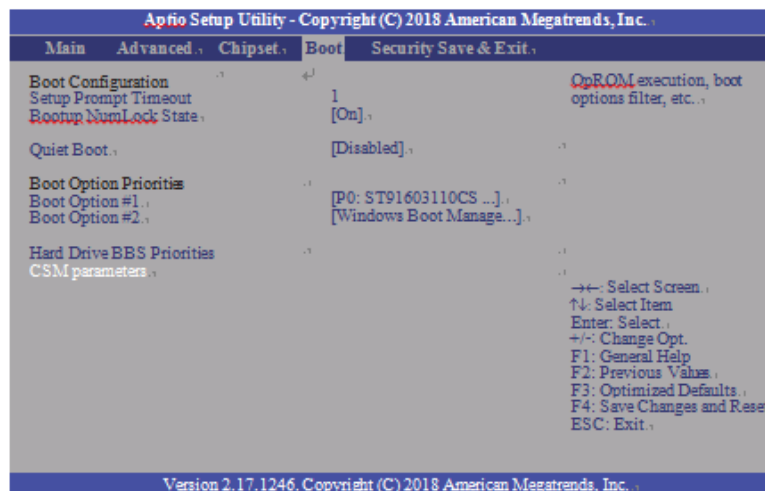
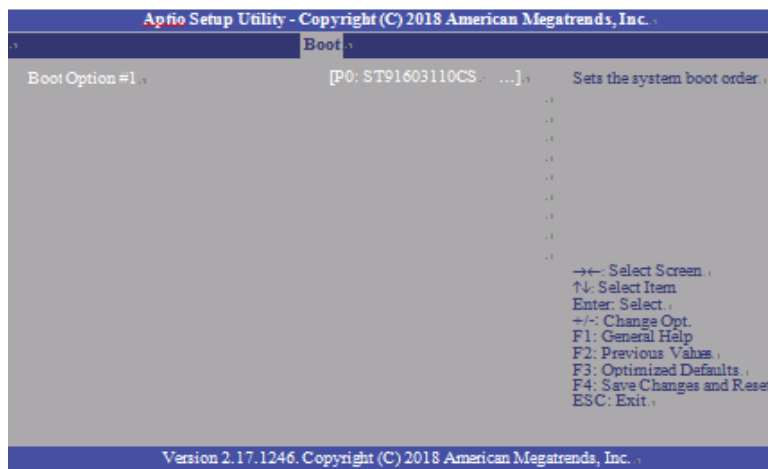
Enable or disable Quiet Boot option.

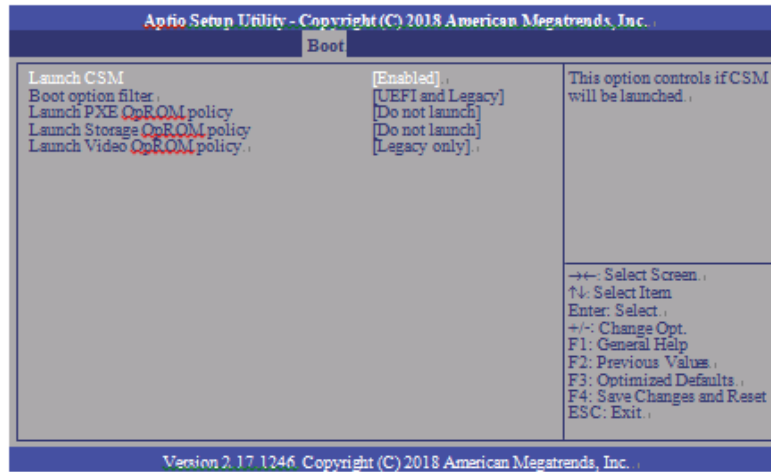
3.3.13.4 Boot Option #1/#2

Select the system boot order.

3.3.14 Hard Drive BBS Priorities

Set the order of the legacy devices in this group.





3.3.14.1 Launch CSM

This field is used to enable or disable to launch CSM.

3.3.14.2 Boot option filter

This option controls what device(s) the system will boot to.

3.3.14.3 Launch PXE OpROM policy

This field controls the execution of UEFI and Legacy PXE OpROM.

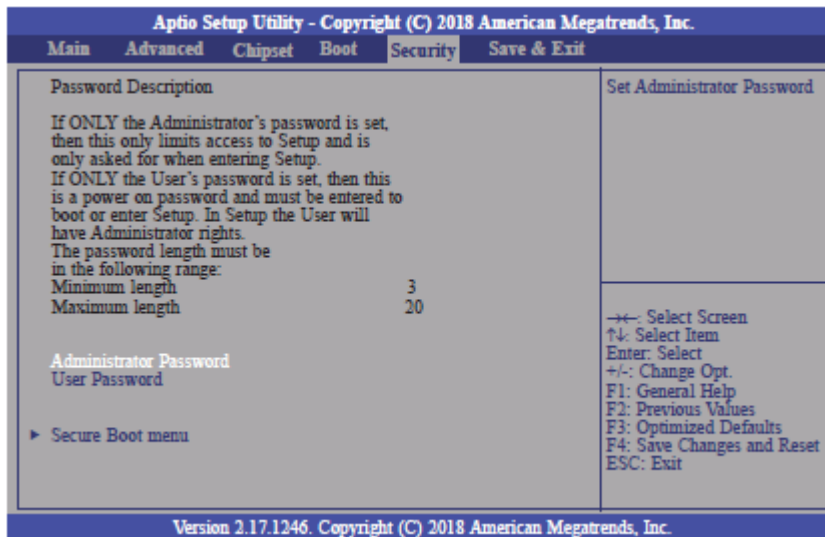
3.3.14.4 Launch Storage OpROM policy

This field controls the execution of UEFI and Legacy Storage OpROM.

3.3.14.5 Launch Video OpROM policy

This field controls the execution of UEFI and Legacy Video OpROM.

3.4 Security



3.4.1 Administrator Password

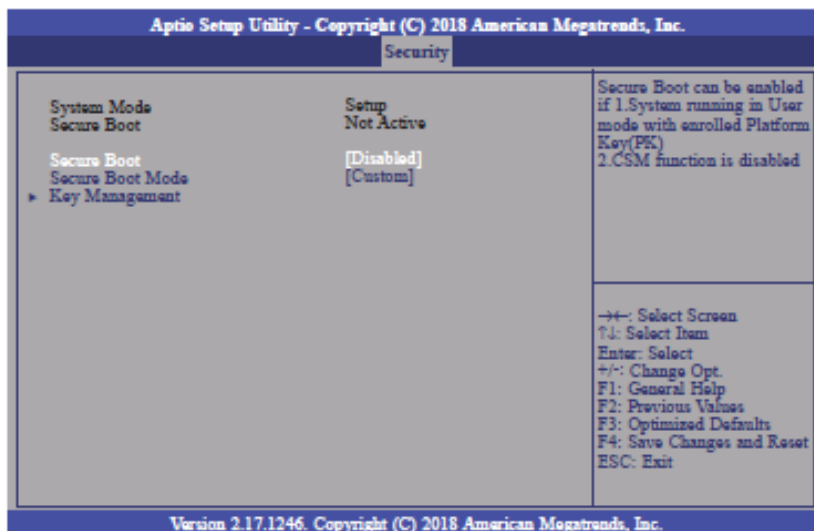
Set the administrator password.

3.4.2 User Password

Set the user password.

3.4.3 Secure Boot Menu

This section is used to configure customizable secure boot settings.



3.4.3.1 Secure Boot

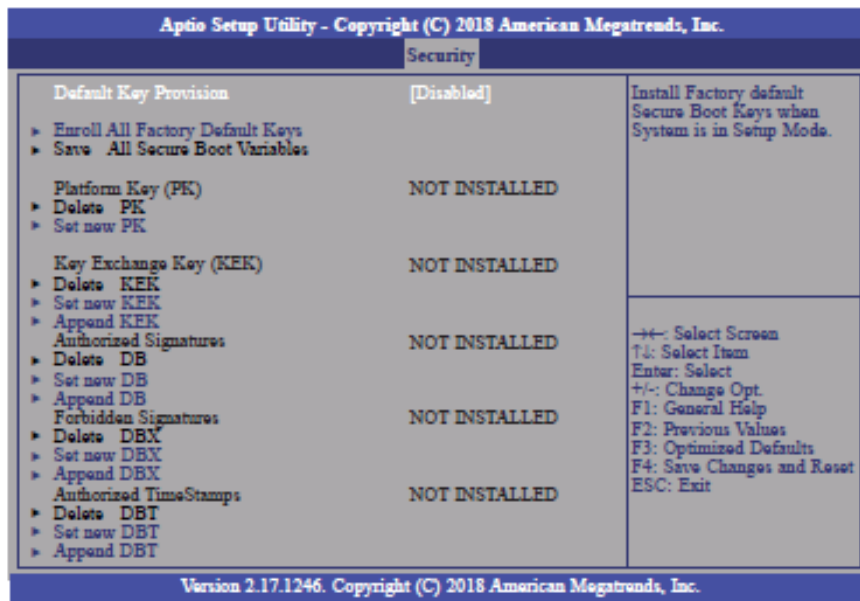
Enable or disable secure boot. Secure Boot can be enabled if: 1. System running in user mode with enrolled platform key (PK); 2. CSM function is disabled.

3.4.3.2 Secure Boot Mode

Select secure boot mode: standard or custom. Custom mode enables users to change image execution policy and manage secure boot keys.

3.4.4 Key Management

This section enables experienced users to modify secure boot variables.



3.4.4.1 Default Key Provision

Enable or disable to install factory default secure boot keys when system is in setup mode. When enabled, a pop-up window will display. Select “Yes” and press <Enter> to install factory default keys.

3.4.4.2 Enroll All Factory Default Keys

Select “Yes” and press <Enter> to install ALL factory default keys, including PK, KEK, DB, DBX and DBT. Change takes effect after reboot.

3.4.4.3 Set new PK

Select "Yes" and press <Enter> to set a new PK or select "No" and press <Enter> to load it from a file on external media.

3.4.4.4 Set new KEK

Select "Yes" and press <Enter> to set a new KEK or select "No" and press <Enter> to load it from a file on external media.

3.4.4.5 Append KEK

Select "Yes" and press <Enter> to set a new KEK or select "No" and press <Enter> to load it from a file on external media.

3.4.4.6 Set new DB

Select "Yes" and press <Enter> to set a new DB or select "No" and press <Enter> to load it from a file on external media.

3.4.4.7 Append DB

Select "Yes" and press <Enter> to set a new DB or select "No" and press <Enter> to load it from a file on external media.

3.4.4.8 Set new DBX

Select "Yes" and press <Enter> to set a new DBX or select "No" and press <Enter> to load it from a file on external media.

3.4.4.9 Append DBX

Select "Yes" and press <Enter> to set a new DBX or select "No" and press <Enter> to load it from a file on external media.

3.4.4.10 Set new DBT

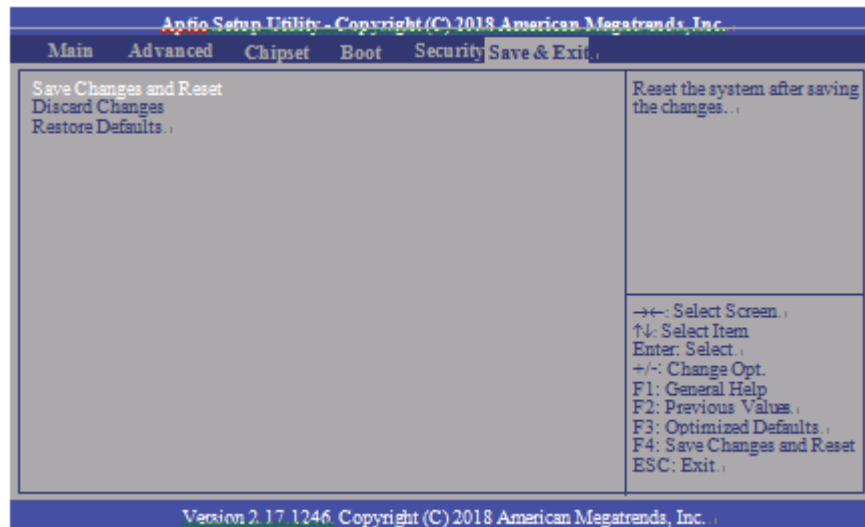
Select "Yes" and press <Enter> to set a new DBT or select "No" and press <Enter> to load it from a file on external media.

3.4.4.11 Append DBT

Select "Yes" and press <Enter> to set a new DBT or select "No" and press <Enter> to load it from a file on external media.

3.5 Save & Exit

3.5.1 Menu Options



3.5.1.1 Save Changes and Reset

To save the changes, select this field and then press <Enter>. A dialog box will appear. Select Yes to reset the system after saving all changes made.

3.5.1.2 Discard Changes

To discard the changes, select this field and then press <Enter>. A dialog box will appear. Select Yes to reset the system setup without saving any changes.

3.5.1.3 Restore Defaults

To restore and load the optimized default values, select this field and then press <Enter>. A dialog box will appear. Select Yes to restore the default values of all the setup options.

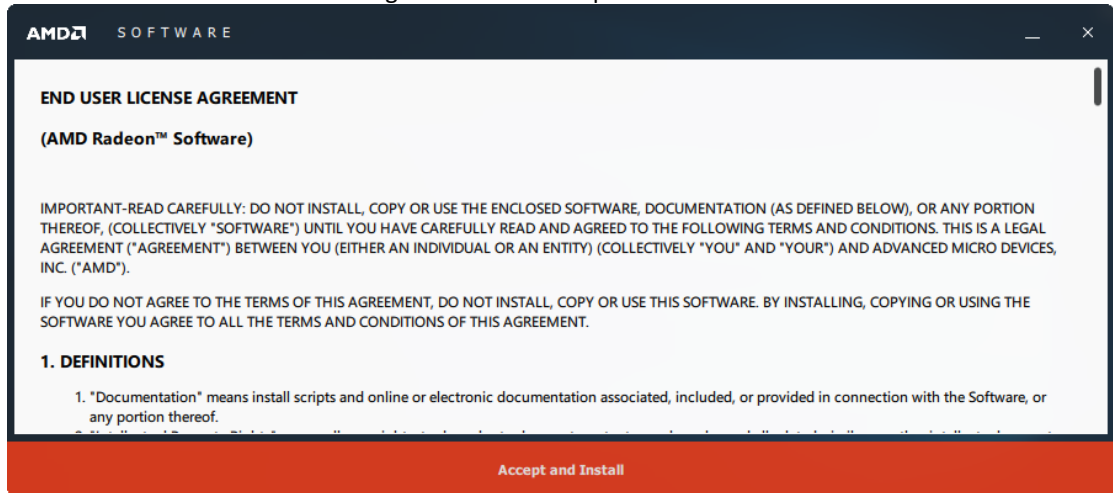
3.5.2 Updating the BIOS

To update the BIOS, you will need the BIOS file and a flash utility. Please contact technical support or your sales representative for the files.

Section 4: Installation of Drivers

4.1 Drivers Installation Instruction

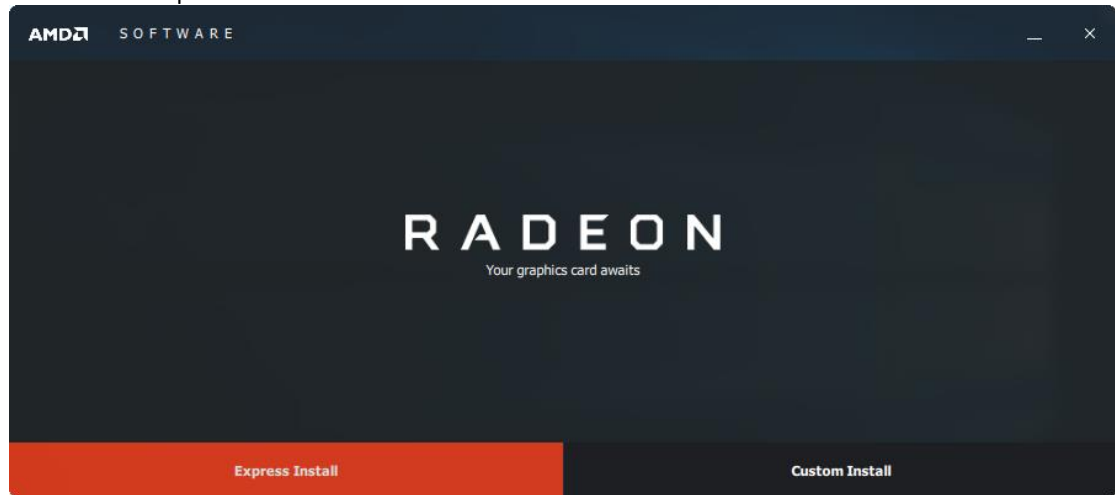
1. Read the End User License Agreement and accept to start installation



2. Detecting hardware



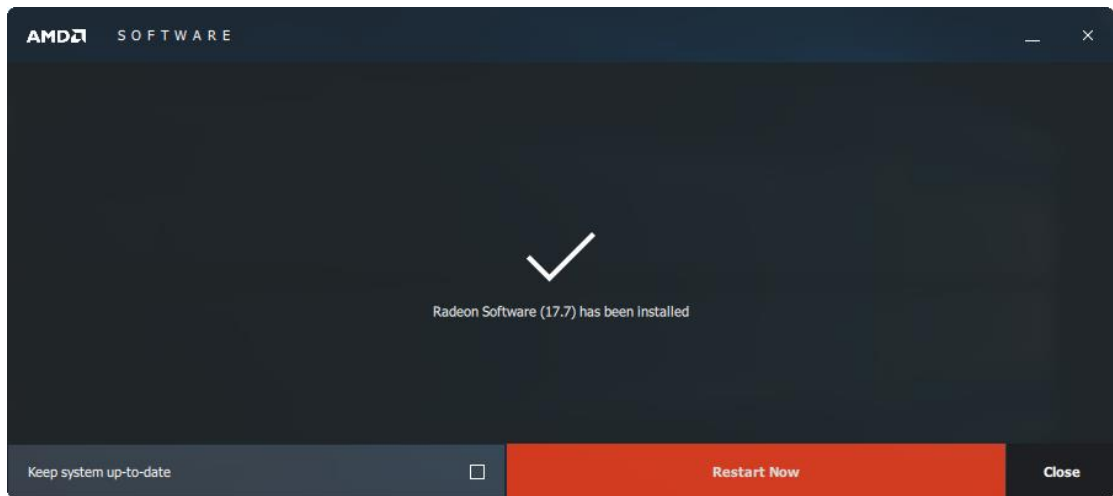
3. Select Express Installation



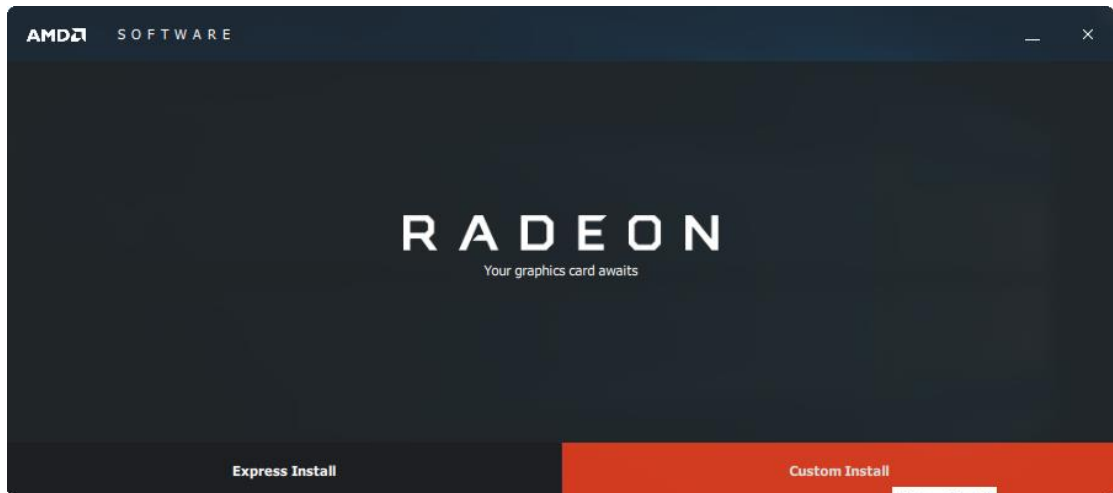
4. Installing now



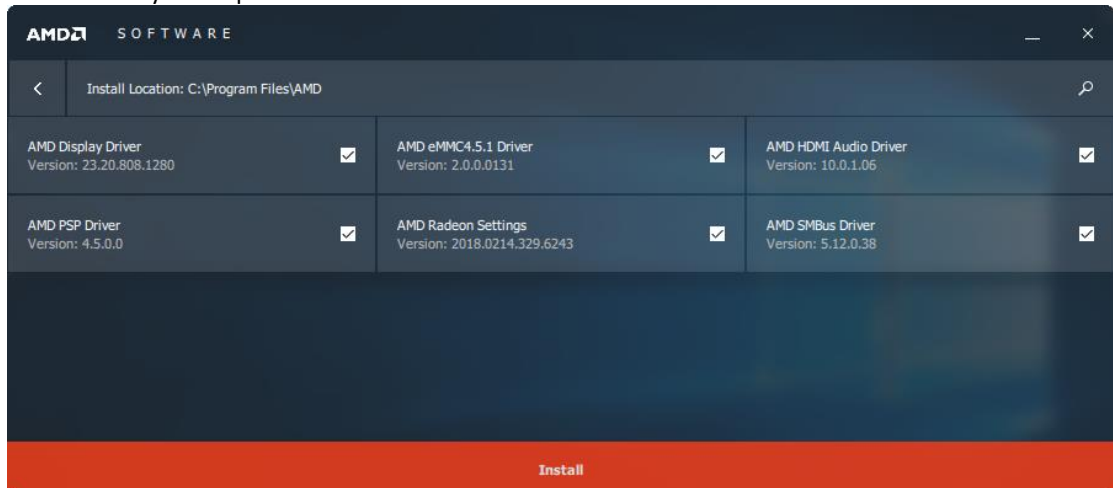
5. Radeon Software (17.7) has been installed and restarts the computer now



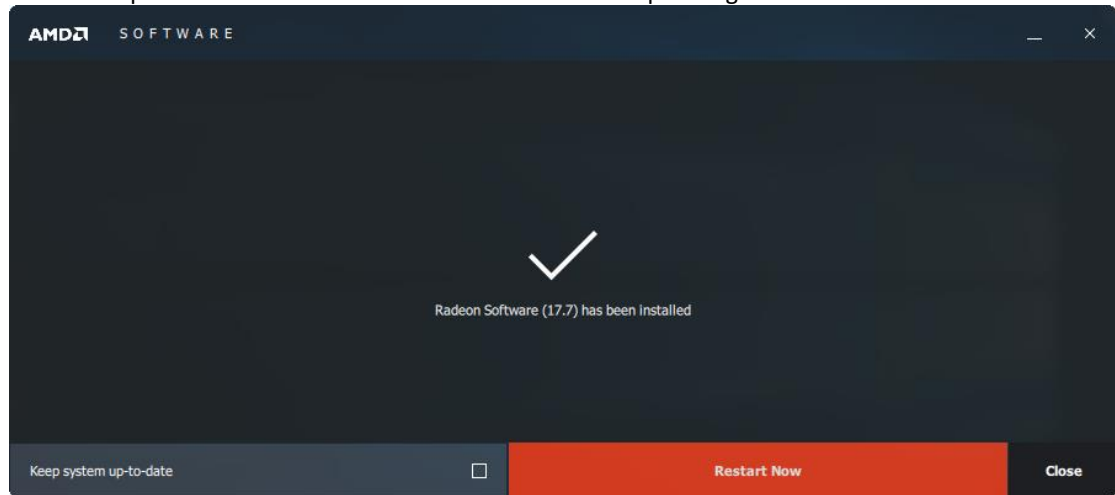
6. Select Custom Installation



7. Select your requirements of this installation



8. Complete the whole installation and restart the computer again



Section 5: Mounting Information

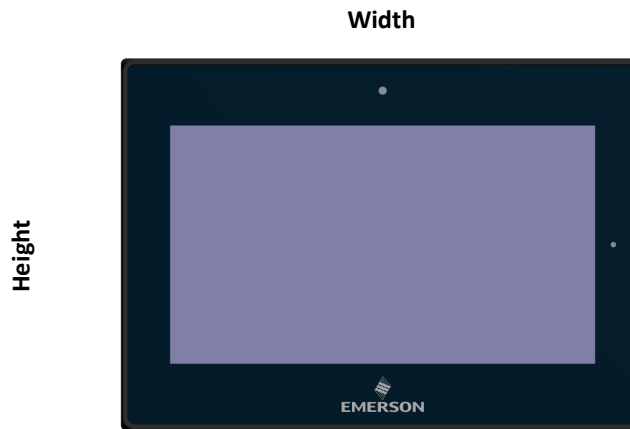
5.1 Panel Mount

5.1.1 Panel Cutout Dimensions

Panel Thickness: 1.6 to 5mm

All measurements within $\pm 0.5\text{mm}$

Figure 5.1 Panel Cutout Dimension Definitions

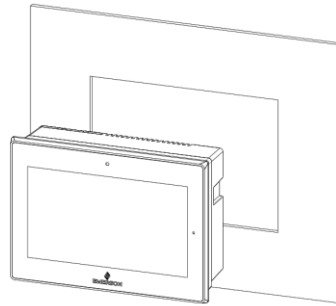


Display Size (in)	Width (mm)	Height (mm)
7	183.5	128.5
10	255.5	174
12	317	214.5
15	398	245.5
19	482	297
24	581	360

5.1.2 Installation Steps

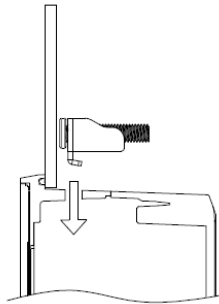
1. Verify that the gasket is present and properly seated in the bezel channel located on the sides of the unit
2. Insert the Panel PC into the mounting panel cutout

Figure 5.2 Panel Install View



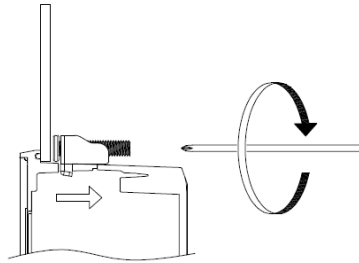
3. Insert the hook of the mounting bracket into the mounting hole as displayed in the following figure.

Figure 5.3 Mounting Bracket Insertion



4. Tighten the screws on the mounting bracket in a clock-wise direction.

Figure 5.4 Tighten Mounting Bracket



5.2 Mounting to Modular Display

Figure 4.2 7" Mount

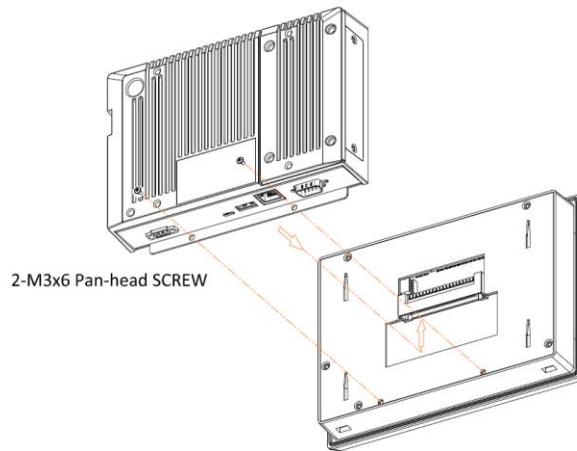


Figure 4.3 10" Mount

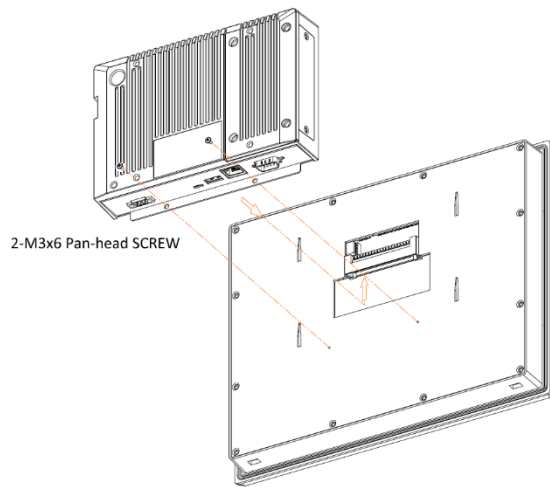


Figure 4.4 12" Mount

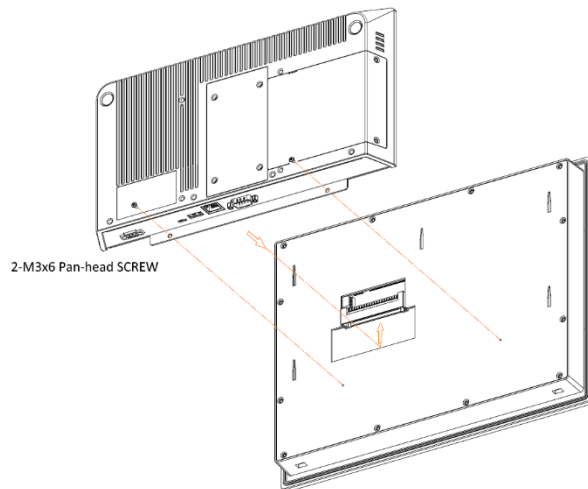


Figure 4.5 15" Mount

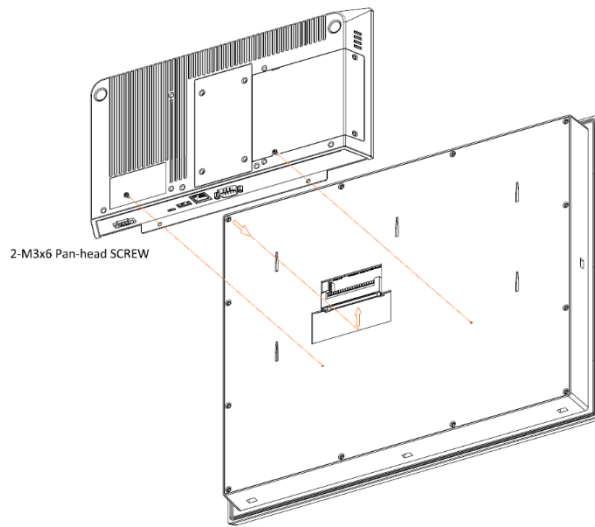
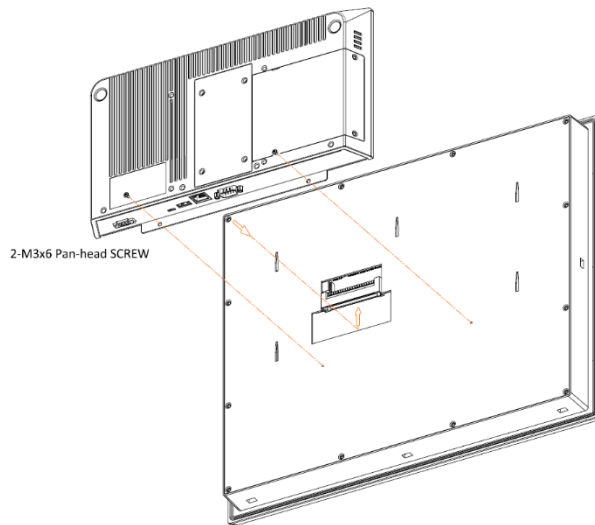


Figure 4.6 19"/24" Mount



5.3 VESA Mount

5.3.1 VESA Mount Dimensions

All 7" & 10" units include VESA Mount Dimensions of 75mm x 75mm. All 12" through 24" units include VESA Mount Dimensions of 100mm x 100mm.

All units fastened with four M4x8 Screws

Figure 5.5 7" VESA Mount

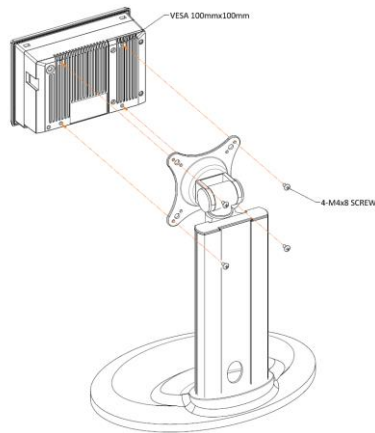


Figure 5.6 10" VESA Mount

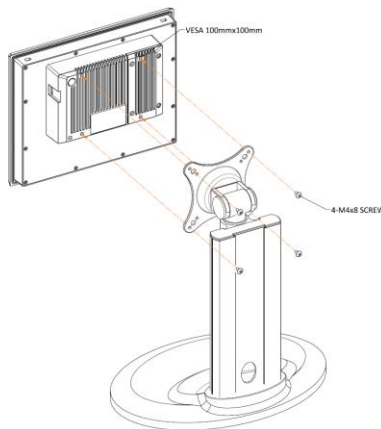


Figure 5.7 12" VESA Mount

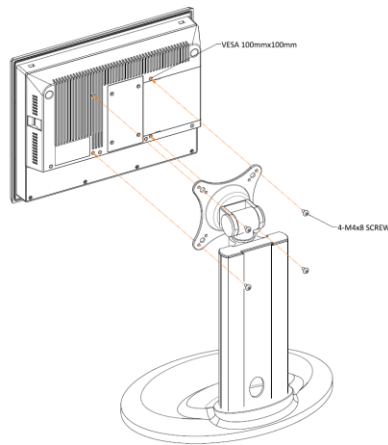


Figure 5.8 15" VESA Mount

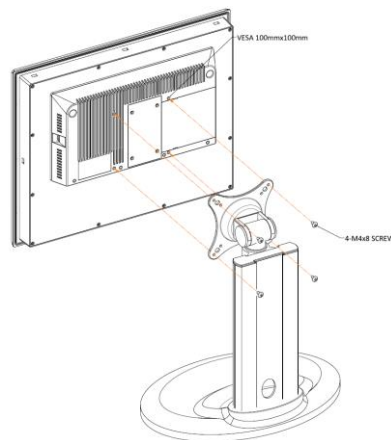
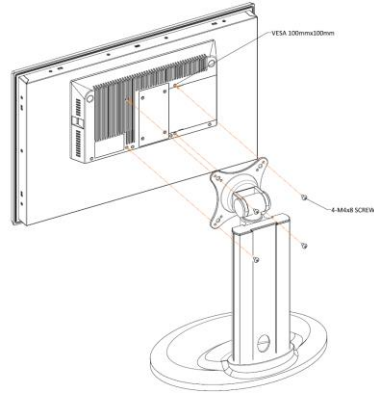


Figure 5.9 19"/24" VESA Mount



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