ZRT 智锐通

EZT-E3950A

SMARC 核心板

USER’ Manual V10

USER'S MANUAL

用户手册

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声明

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⚠ 安全须知

1	产品使用前，务必仔细阅读产品说明书。
2	对未准备安装的板卡，应将其保存在防静保护袋中。
3	在从包装袋中拿板卡前，应将手先置于接地金属物体上一会儿，以释放身体及手中的静电。
4	在拿板卡时，需佩带静电保护手套，并且应该养成只触及其边缘部份的习惯。
5	主板与电源连接时，请确认电源电压。
6	为避免人本被电击或产品被损坏，在每次对主板、板卡进行拔插或生新配置时须先关闭交流电源或将交流电源线从电源插座中拔掉。
7	在对板卡进行搬动前，先将交流电源线从电源插座中拔掉。
8	当您需连接或拔除任何设备前，须确定所有的电源线事先已被拔掉。
9	为避免频繁开关机对产品造成不必要的损伤,关机后,应至少等待30秒后再开机。
10	设备在使用过程时出现异常情况，请找专业人员处理。

目录

第一章 产品介绍

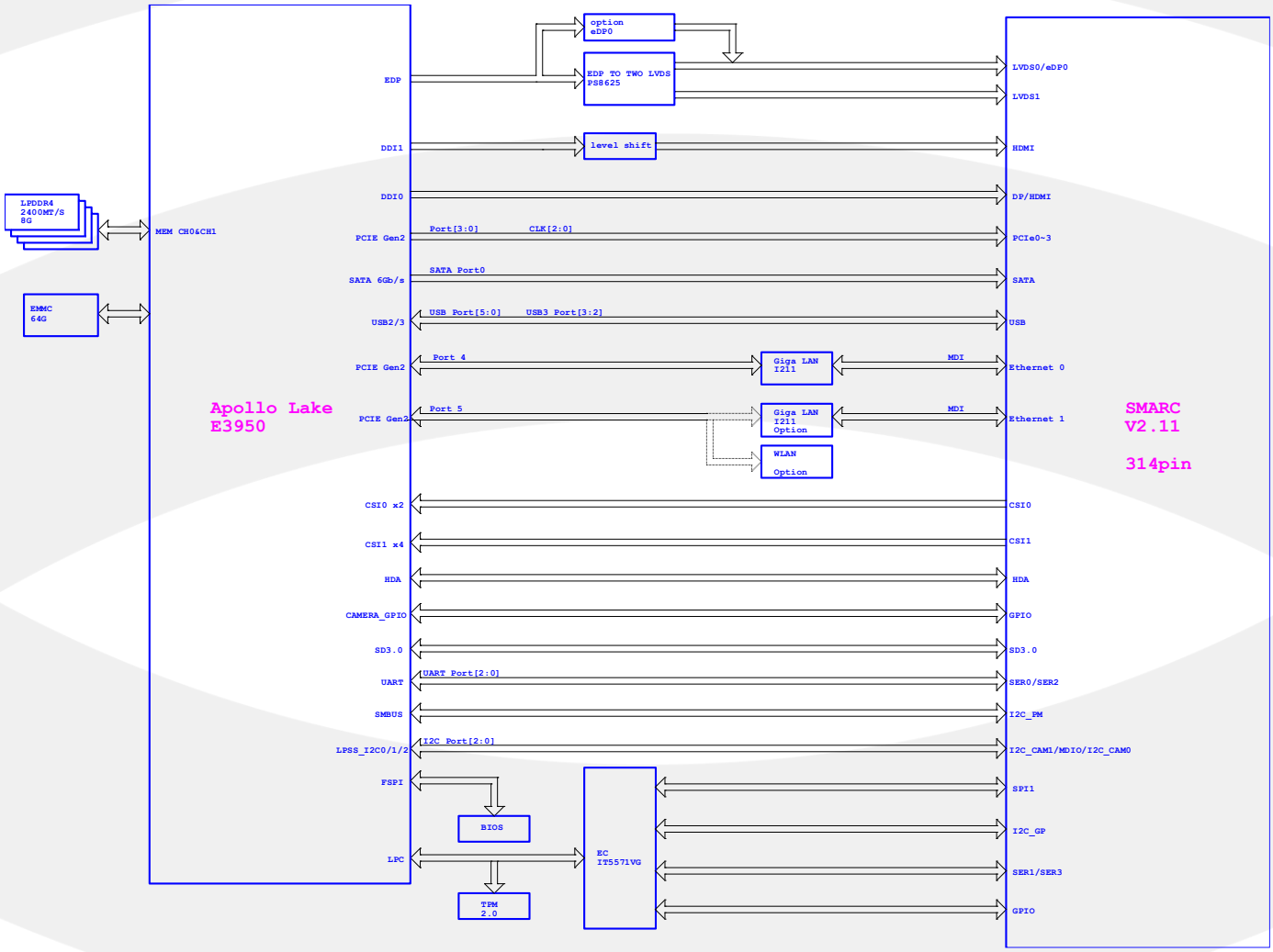
1.1 产品规格

Model		EZT-E3950A
产品类型 Form Factor	产品类型 Form Factor	SMARC 核心板
处理器 Processor System	处理器 CPU	Intel Atom X7- E3950 SREK9
	内核数 Core Number	4
	基本主频 Base Frequency	2.60GHz
	三级缓存 L3 Cache	2M
	功耗 TDP (W)	10W
	芯片组 Chipset	Apollo Lake
	BIOS	AMI EFI BIOS
内存 Memory	规格 Technology	LPDDR4 1600/2133/2400MHz
	最大容量 Max. Capacity	8G
	插槽 Socket	On Board
扩展插槽 Expansion Slot	PCI-Express	1 x PCIe 2.0 x4
存储 Storage	SATA	1 x SATA3.0
	EMMC	64GB
显示 Graphics	最多显示 Multiple Display	2 Ports
	I/O	1 x eDP 转 LVDS，可配置为 eDP 1 x DDI，可配置为 HDMI 1 x DDI，可配置为 HDMI/DP
	分辨率 Resolution	DP 1.2:4096*2160@60Hz HDMI 1.4b:3840*2160@30Hz eDP 1.3:3840*2160@60Hz LVDS:1368*768@60Hz
GPIO	I/O	1 x 8bit GPIO

USB / Type-C	**USB3.0**	2 x USB3.0
	USB2.0	4 x USB2.0
以太网 Ethernet	**控制器 Controller**	Intel® Ethernet Controller I211-AT
	I/O	2 x LAN
音频 Audio	**I/O**	1 x HAD
其它 Others	**按钮 Button**	1 x Power Button 1 x Reset Button
	CSI	2 x CSI
	SDIO	1 x SDIO
	SPI	1 x SPI
	I2C	5 x I2C
	UART	4 x UART
	SMBUS	1 x SMBUS
电源 Power Requirements	**电源类型 Power Type**	DC AT: VCC
	电源电压 Input Voltage	5V±5%
环境 Environment	**工作温度 Operating Temperature**	0~60℃
	存储温度 Storage Temperature	-40~85℃
	工作湿度 Operating Humidity	5~85%(0℃~45℃)非冷凝
物理特性 Physical	**尺寸 Dimensions**	82*50*1.2mm
	PCB 颜色 Color	Green

操作系统 os	**Microsoft**	Windows 10 1809(RS5)/1607(RS1)
	Linux	Yocto YP2.5(4.14) Yocto YP2.7(4.19)

1.2 功能框图



1.3 产品料号

Model	Part Number	Specification
EZT-3950A	8.ZRT.80-6479-03-LEE	EZT-E3950A SMARC,VER 11,Apollo lake E3950+LPDDR4*4+IT5571VG+I211*1+TPS650940+EDP+NOEMMC 工包六十入
	8.ZRT.80-6479-00-LFF	EZT-E3950A SMARC,VER 10,Apollo lake E3950+LPDDR4*4+IT5571VG+I211*1+TPS650940+EDP+NOEMMC 彩包二十入
	8.ZRT.80-6479-01-LFF	EZT-E3950A SMARC, VER 10,Apollo lake E3950+LPDDR4*4+IT5571VG+I211*2+TPS650940+EMMC64G 散热器+彩包二十入

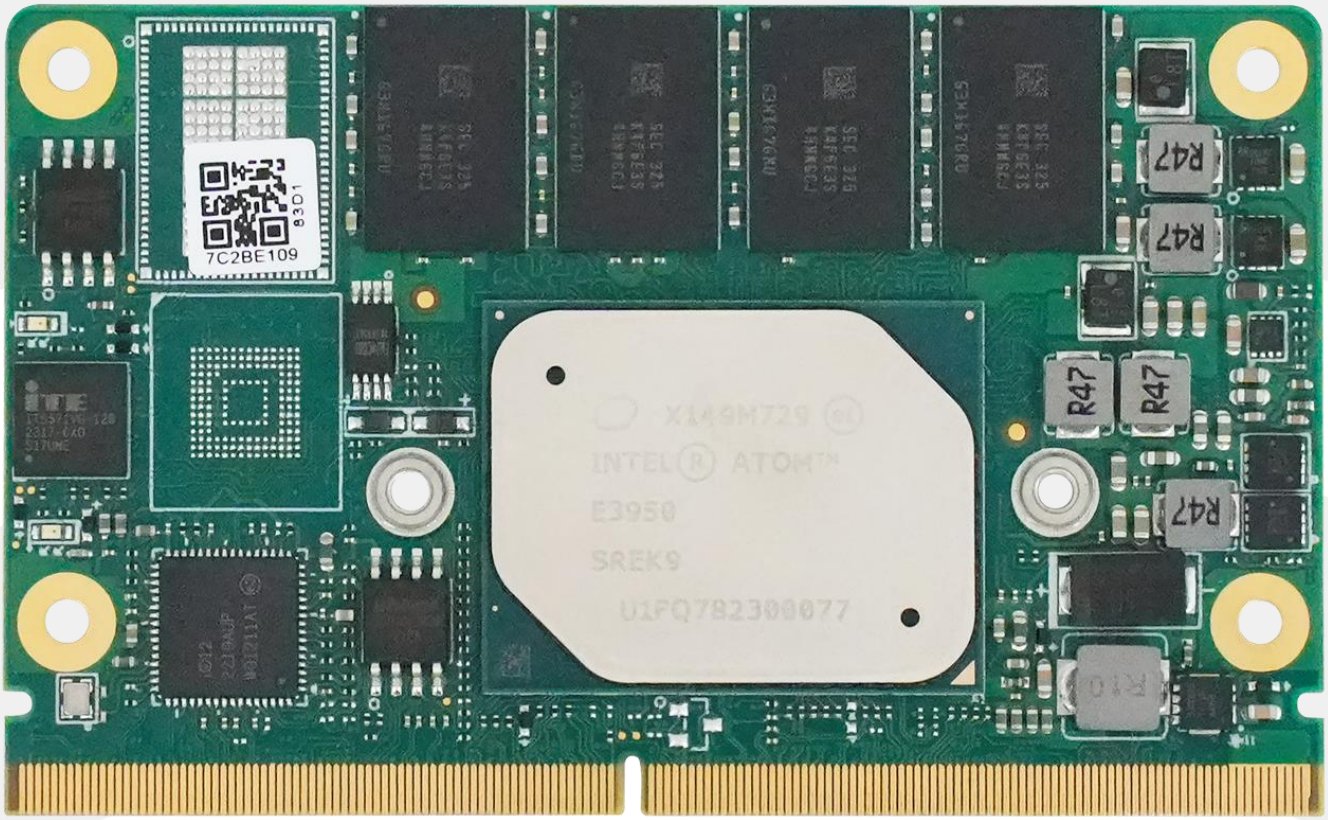
1.4 产品照片

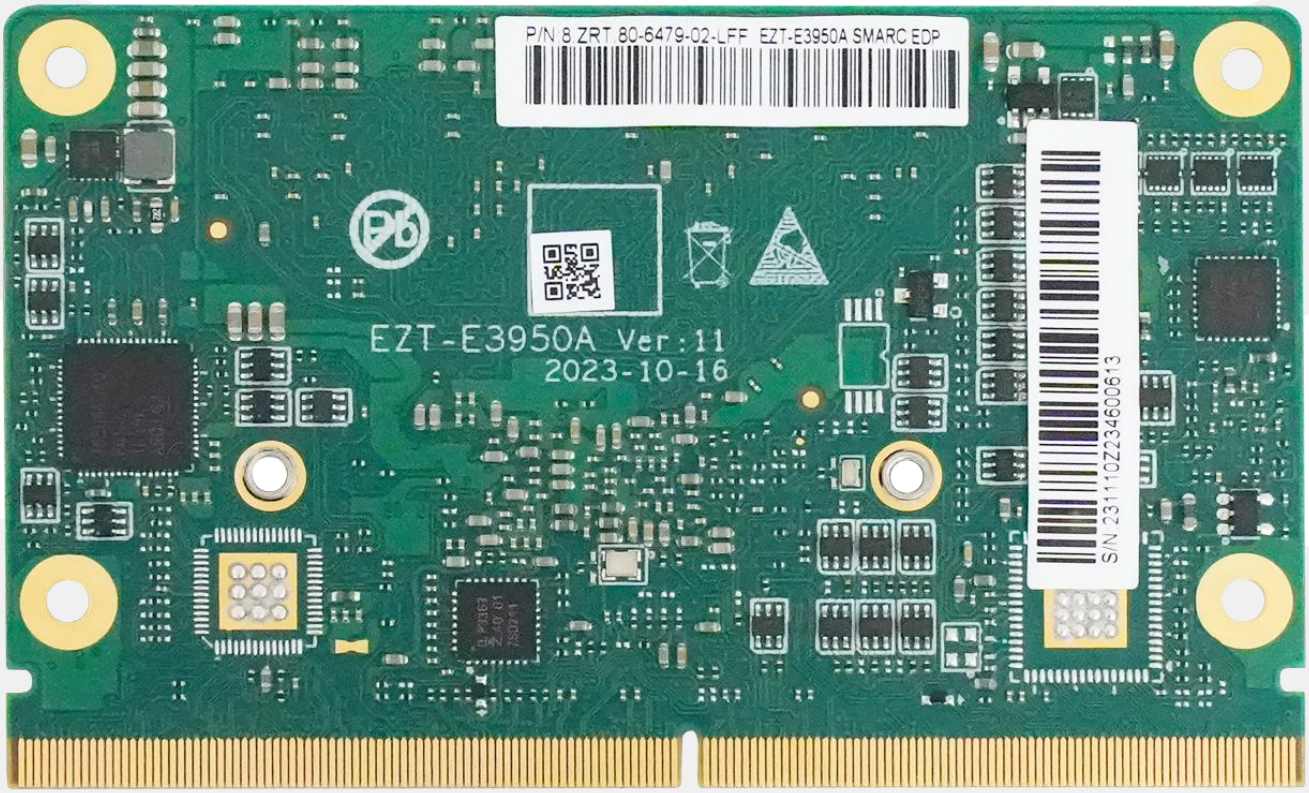
EMMC


X148M233
INTEL ATOM
E3950
SREK9
R47
R47
R47


STM-5
94V-0
EZT-E3950A Ver:0B
2022-03-28

Without EMMC

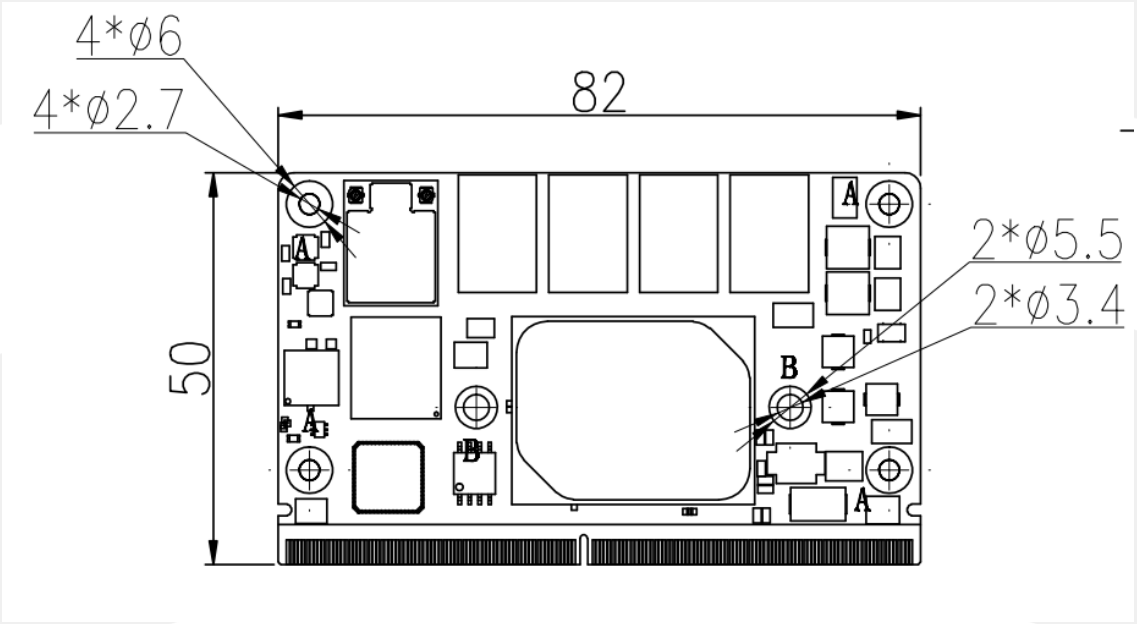




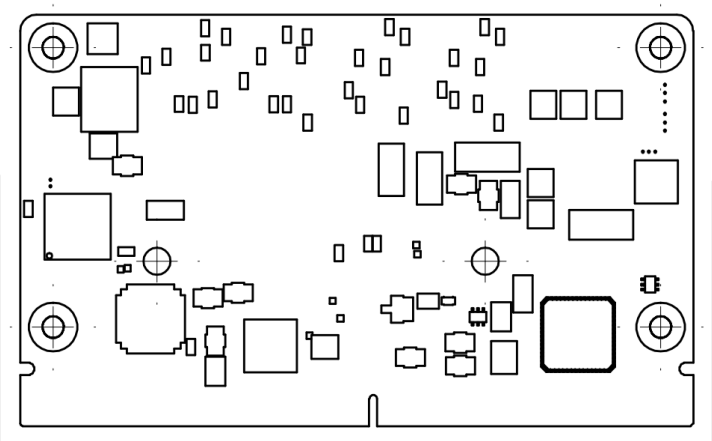
第二章 安装说明

2.1 接口/尺寸图

安装设备时，请对照此示意图并详细阅读下面的说明，安装组件过程中必须小心，对于有些部件，如果安装不正确，设备将不能正常工作。



Mechanical Drawing (TOP Side)



Mechanical Drawing (Bottom Side)

Mechanical Drawing (Side view)

2.2 硬件安装

⚠注意：操作时，请戴上防静电手套，因为静电有可能会损坏部件。

本主板关键元器件都是集成电路，而这些元件很容易因为遭受静电的影响而损坏。因此，请在正式安装主板之前，请先做好以下的准备：

1. 拿主板时手握板边，尽可能不触及元器件和插头插座的引脚。
2. 接触集成路元件（如 CPU、RAM 等）时，最好戴上防静电手环/手套。
3. 在集成电路元件未按装前，需将元件放在防静电垫或防静电袋内。
4. 在确认电源的开关处于断开位置后，再插上电源插头。

2.3 接口引脚定义

Pin	Signal Name	Pin	Signal Name	Pin	Signal Name	Pin	Signal Name
P1	SOC_SMB_ALERT_N	S1	LPSS_I2C0_MCSI_SCL	P78	PCI_A_CKREQ#	S78	PCIE2_RX_P
P2	GND	S2	LPSS_I2C0_MCSI_SDA	P79	GND	S79	PCIE2_RX_N
P3	CSI1_CLKP	S3	GND	P80	NC	S80	GND
P4	CSI1_CLKN	S4	NC	P81	NC	S81	PCIE2_TX_P
P5	GBE1_SDP	S5	LPSS_I2C2_MCSI_SCL	P82	GND	S82	PCIE2_TX_N
P6	GBE0_SDP	S6	CAM_CLK	P83	PCIE_CLK0_P	S83	GND
P7	CSI1_RX0+	S7	LPSS_I2C2_MCSI_SDA	P84	PCIE_CLK0_N	S84	PCIE_CLK1_P
P8	CSI1_RX0-	S8	CSI0_CLKP	P85	GND	S85	PCIE_CLK1_N
P9	GND	S9	CSI0_CLKN	P86	PCIE0_RX_P	S86	GND
P10	CSI1_RX1+	S10	GND	P87	PCIE0_RX_N	S87	PCIE1_RX_P
P11	CSI1_RX1-	S11	CSI0_RX0+	P88	GND	S88	PCIE1_RX_N
P12	GND	S12	CSI0_RX0-	P89	PCIE0_TX_P	S89	GND
P13	CSI1_RX2+	S13	GND	P90	PCIE0_TX_N	S90	PCIE1_TX_P
P14	CSI1_RX2-	S14	CSI0_RX1+	P91	GND	S91	PCIE1_TX_N
P15	GND	S15	CSI0_RX1-	P92	HDMI2_DATA_P2	S92	GND
P16	CSI1_RX3+	S16	GND	P93	HDMI2_DATA_N2	S93	DDI0-TX0_DP
P17	CSI1_RX3-	S17	GBE1_MDI0+	P94	GND	S94	DDI0-TX0_DN

Pin	Signal Name	Pin	Signal Name	Pin	Signal Name	Pin	Signal Name
P18	GND	S18	GBE1_MDI 0-	P95	HDMI2_DA TA_P1	S95	DP0_AUX_ SEL
P19	GBE0_MDI 3-	S19	GBE1_LINK 100#	P96	HDMI2_DA TA_N1	S96	DDI0- TX1_DP
P20	GBE0_MDI 3+	S20	GBE1_MDI 1+	P97	GND	S97	DDI0- TX1_DN
P21	GBE0_LINK 100#	S21	GBE1_MDI 1-	P98	HDMI2_DA TA_P0	S98	DP_HPD_N
P22	GBE0_LINK 1000#	S22	GBE1_LINK 1000#	P99	HDMI2_DA TA_N0	S99	DDI0- TX2_DP
P23	GBE0_MDI 2-	S23	GBE1_MDI 2+	P100	GND	S100	DDI0- TX2_DN
P24	GBE0_MDI 2+	S24	GBE1_MDI 2-	P101	HDMI2_CK _P	S101	GND
P25	GBE0_ACT #	S25	GND	P102	HDMI2_CK _N	S102	DDI0- TX3_DP
P26	GBE0_MDI 1-	S26	GBE1_MDI 3+	P103	GND	S103	DDI0- TX3_DN
P27	GBE0_MDI 1+	S27	GBE1_MDI 3-	P104	HDMI2_HP D_CN	S104	NC
P28	NC	S28	NC	P105	HDMI2_DD CSCL	S105	DDC_SCL/ AUX_P
P29	GBE0_MDI 0-	S29	PCIE3_TX_P	P106	HDMI2_DD CSDA	S106	DDC_SDA/ AUX_N
P30	GBE0_MDI 0+	S30	PCIE3_TX_ N	P107	NC	S107	LVDS1_BKL T_EN
P31	NC	S31	GBE1_ACT #	P108	GPIO_68	S108	LVDS1_CK +
P32	GND	S32	PCIE3_RX_ P	P109	GPIO_69	S109	LVDS1_CK-
P33	SOC_SD_W P_N	S33	PCIE3_RX_ N	P110	GPIO_71	S110	GND
P34	SOC_SD_C MD	S34	GND	P111	GPIO_72	S111	LVDS1_0+
P35	SOC_SD_C D_N	S35	USB2_P4	P112	HDA_RST_ N	S112	LVDS1_0-
P36	SOC_SD_C LK	S36	USB2_N4	P113	GPIO_5	S113	NC
P37	SDMMC3_ PWR_EN_N	S37	USB_VBUS	P114	GPIO_6	S114	LVDS1_1+
P38	GND	S38	NC	P115	GPIO_7	S115	LVDS1_1-
P39	SOC_SD_D 0	S39	NC	P116	GPIO_8	S116	LCD1_VDD _EN
P40	SOC_SD_D 1	S40	NC	P117	GPIO_9	S117	LVDS1_2+

Pin	Signal Name	Pin	Signal Name	Pin	Signal Name	Pin	Signal Name
P41	SOC_SD_D2	S41	NC	P118	GPIO_10	S118	LVDS1_2-
P42	SOC_SD_D3	S42	NC	P119	GPIO_11	S119	GND
P43	NC	S43	NC	P120	GND	S120	LVDS1_3+
P44	NC	S44	NC	P121	SOC_SMB_CLK	S121	LVDS1_3-
P45	NC	S45	LPSS_I2C1_MCSI_SCL	P122	SOC_SMB_DATA	S122	LCD1_BKLT_PWM
P46	NC	S46	LPSS_I2C1_MCSI_SDA	P123	NC	S123	SPKR
P47	GND	S47	GND	P124	NC	S124	GND
P48	SATA_TXP0_P	S48	I2C_GP_CK_S48	P125	NC	S125	EDP_TX0_DP/LVDS0_0+
P49	SATA_TXN0_N	S49	I2C_GP_DAT_S49	P126	RESET_OUT#	S126	EDP_TX0_DN/LVDS0_0-
P50	GND	S50	HDA_SYNC	P127	RESET_IN	S127	LVDS0_BKLT_EN
P51	SATA_RXP0	S51	HDA_SDOUT	P128	PWR_BTN#	S128	EDP_TX1_DP/LVDS0_1+
P52	SATA_RXN0	S52	HDA_SDIN0	P129	SOC_UART0_TXD	S129	EDP_TX1_DN/LVDS0_1-
P53	GND	S53	HDA_BIT_CLK	P130	SOC_UART0_RXD	S130	GND
P54	NC	S54	SATA_LED_N	P131	SOC_UART0_RTS	S131	EDP_TX2_DP/LVDS0_2+
P55	SPI1_CS1#	S55	USB2_EN_OC#	P132	SOC_UART0_CTS	S132	EDP_TX2_DN/LVDS0_2-
P56	SPI1_CLK	S56	NC	P133	GND	S133	LCD0_VDD_EN
P57	SPI1_DIN	S57	NC	P134	SER1_TX	S134	EDP_AUX_P/LVDS0_CK+
P58	SPI1_DO	S58	NC	P135	SER1_RX	S135	EDP_AUX_N/LVDS0_CK-
P59	GND	S59	USB2_P5	P136	SOC_UART2_TXD	S136	GND

Pin	Signal Name	Pin	Signal Name	Pin	Signal Name	Pin	Signal Name
P60	USB2_P0	S60	USB2_N5	P137	SOC_UART2_RXD	S137	EDP_TX3_DP/LVDS0_3+
P61	USB2_N0	S61	GND	P138	SOC_UART2_RTS	S138	EDP_TX3_DN/LVDS0_3-
P62	USB2_EN_OC#	S62	USB3_TX1_P	P139	SOC_UART2_CTS	S139	NC
P63	USB_VBUS	S63	USB3_TX1_N	P140	SER3_TX	S140	NC
P64	SOC_USB_OTGID	S64	GND	P141	SER3_RX	S141	LCD0_BKLT_PWM
P65	USB2_P1	S65	USB3_RX1_P	P142	GND	S142	GPIO12
P66	USB2_N1	S66	USB3_RX1_N	P143	NC	S143	GND
P67	USB2_EN_OC#	S67	GND	P144	NC	S144	EDP_HPD
P68	GND	S68	USB2_P3	P145	NC	S145	WDT_TIME_OUT#
P69	USB2_P2	S69	USB2_N3	P146	NC	S146	PCIE_WAKE#
P70	USB2_N2	S70	GND	P147	+V5A_VDD_IN	S147	VCC_RTC
P71	USB3_EN_OC#	S71	USB3_TX0_P	P148	+V5A_VDD_IN	S148	LID#
P72	SMCLK0_DEBUG	S72	USB3_TX0_N	P149	+V5A_VDD_IN	S149	SLEEP#
P73	SMDAT0_DEBUG	S73	GND	P150	+V5A_VDD_IN	S150	VIN_PWR_BAD#
P74	USB3_EN_OC#	S74	USB3_RX0_P	P151	+V5A_VDD_IN	S151	CHARGING#
P75	PCIE_RESET	S75	USB3_RX0_N	P152	+V5A_VDD_IN	S152	CHARGER_PRSNT
P76	USB2_EN_OC#	S76	PCIE_RESET	P153	+V5A_VDD_IN	S153	CARRIER_STBY#
P77	PCI_B_CKREQ#	S77	PCIE_RESET	P154	+V5A_VDD_IN	S154	CARRIER_PWR_ON

第三章 BIOS 程序设置

AMI BIOS 刷新

BIOS 提供对硬件资源的底层驱动，是联系硬件和操作系统的桥梁。现在硬件和各种应用软件不断更新，当您的系统遇到问题时，例如系统不支持最新公布的 CPU 时，就需要升级您的 BIOS 了。

注意：

1. ***升级 BIOS 只在遇到问题，必要的时侯进行。***
2. ***升级 BIOS 请使用我们驱动光盘内所附的 BIOS 读写程序，或者在相关网站下载更新版本的程序。***
3. ***在升级过程中不要关闭电源或重新启动系统，以免造成您的 BIOS 资料将被损坏，系统也可能不能启动。***
4. ***为防止意外发生，请您先备份当前的 BIOS 资料。***

AMI BIOS 描述

开机时，BIOS 会对主板上的硬件进行自我诊断，设定硬件时序参数等工作，最后才将系统控制权交给操作系统。如何正确的设定 BIOS 参数对系统是否稳定的工作及系统是否工作在最佳状态至关重要。

如何进行 BIOS 参数设置：

电脑开机，在完成自我诊断后，屏幕上会显示出如下信息：Del->SETUP，此时您点击一下 Del 键，则 BIOS 在完成 IDE 等设备的侦测后会自动转入 SETUP 设置画面。

1. 打开系统电源或重新启动系统，显示器屏幕将出现自我测试的信息。
2. 当屏幕中间出 G 现〝Press<Del>to enter setup〞提示时，按下<Del>键，就可以进入 BIOS 设定程序。
3. 以方向键移动至你要修改的选项，按下<Enter>键即可进入该选项的子画面。
4. 使用方向键及<Enter>键即可修改所选项目的值，按回车键选择 BIOS 选项并修改。
5. 任何时侯按下<Esc>键即可回到上一画面。

Setup Utility User Interface

This document describes BIOS Setup Utility user interface.

3.1 Main Screen

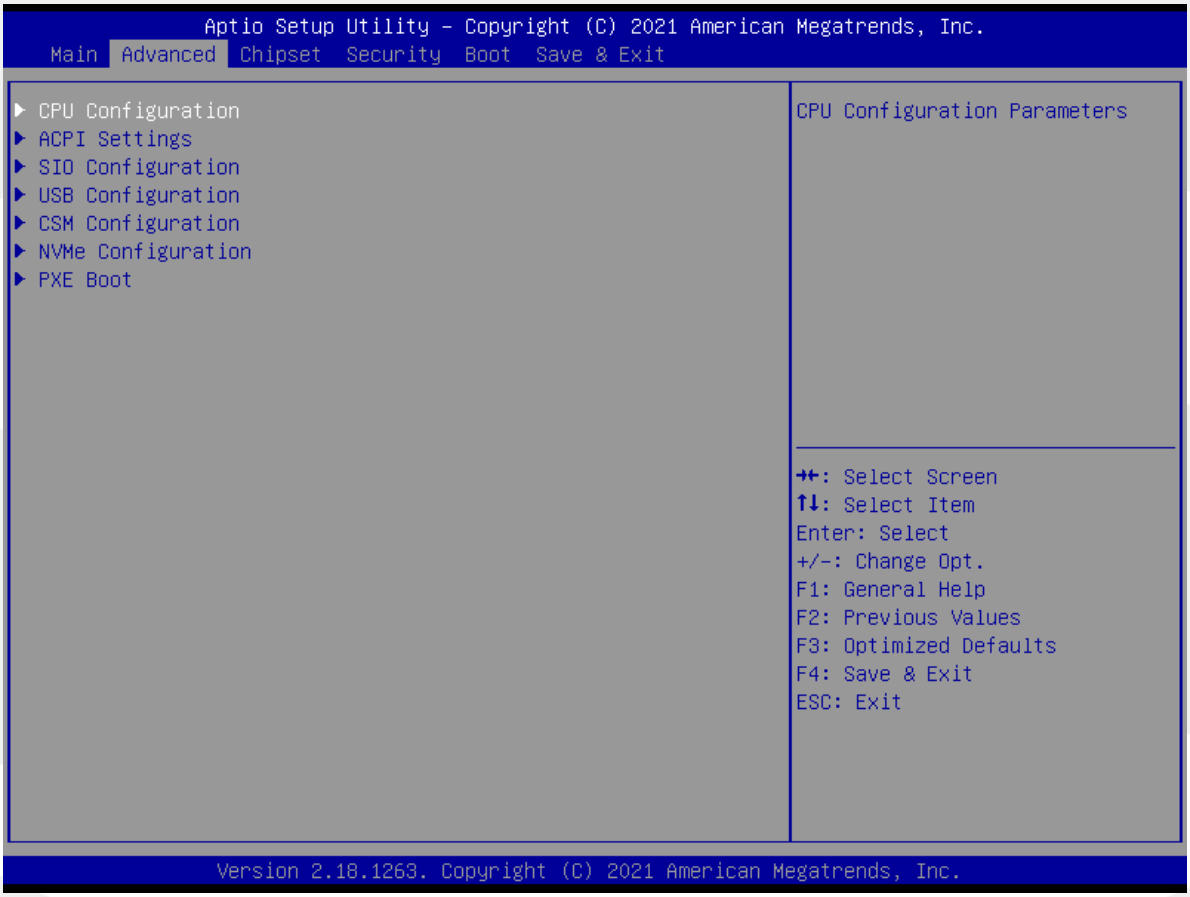
The Main screen is the first screen that is displayed when the BIOS Setup is entered.

Setup Item	Options	Help Text	Comments
BIOS Information			
BIOS Vendor			Displays BIOS vendor.
Core Version			
Project Version			Displays the current BIOS version: Format: AAAABBC **AAAAA = Project name** **BB = BIOS revision** **C = Customer number**
Build Date and Time			Displays the current BIOS build date.
Access Level			Displays password level that setup is running in: Administrator or User. With no passwords set, Administrator is the default mode.

Setup Item	Options	Help Text	Comments
Memory Information			
Total Memory			Displays the total physical memory installed in the system, MB Unit.
Memory Speed			
System Language	English	Choose the system default language.	
System Date	[Day of week MM/DD/YYYY]	Set and display the Date.	
System Time	[HH:MM:SS]	Set and display the Time.	

3.2 Advanced Screen

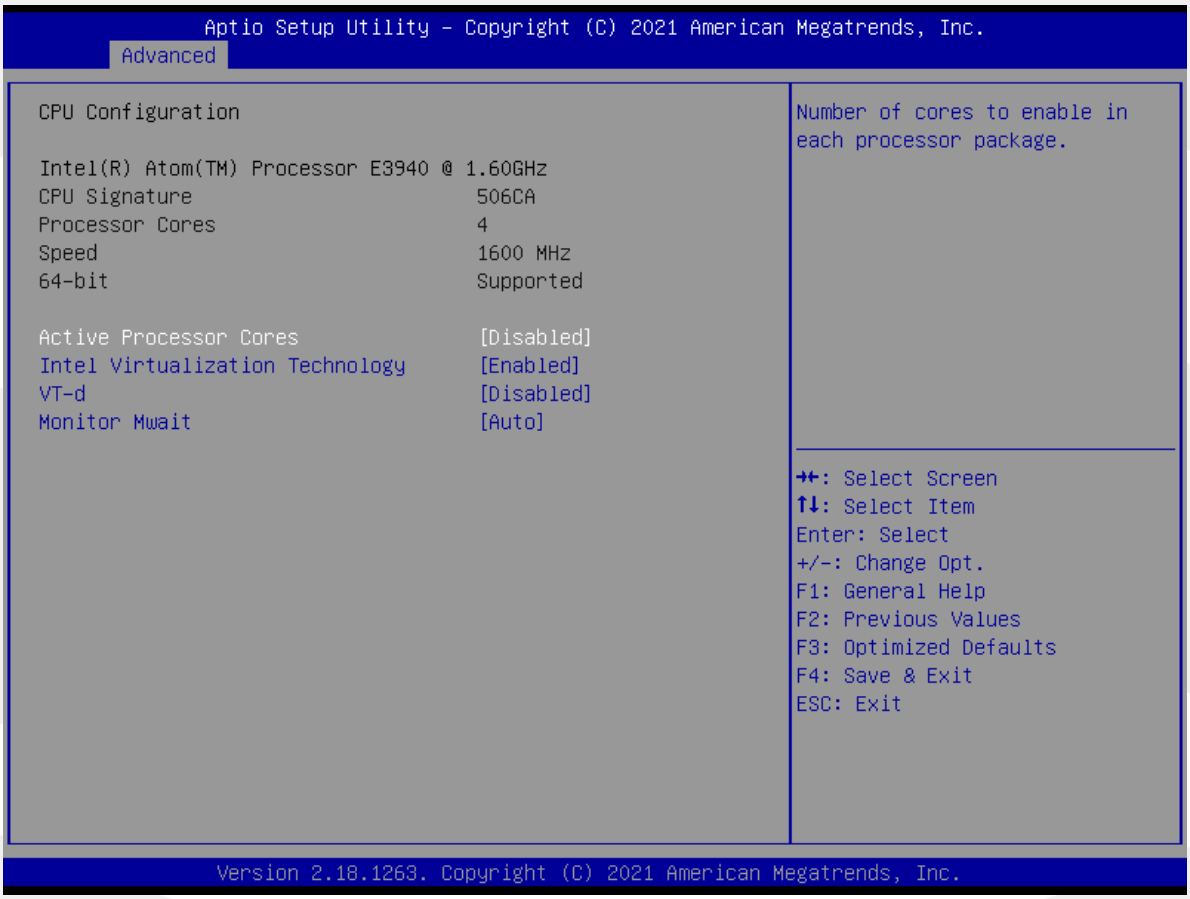
The Advanced screen provides an access point to configure several options. On this screen, the user selects the option that is to be configured.



Setup Item	Options	Help Text	Comments
CPU Configuration		CPU Configuration Parameters.	
ACPI Settings		System ACPI Parameters.	
SIO Configuration		System Super IO chip Parameters.	
USB Configuration		USB Configuration Parameters.	
CSM Configuration		CSM configuration: Enable/Disable, Option ROM execution settings, etc.	
NVMe Configuration		NVMe Device options settings.	
PXE Boot		Legacy PXE Support Control.	

3.2.1 CPU Configuration Screen

The CPU Configuration screen allows the user to view the processor information, and to enable or disable processor options. To access this screen from the Main screen, choose ***Advanced > CPU Configuration.***

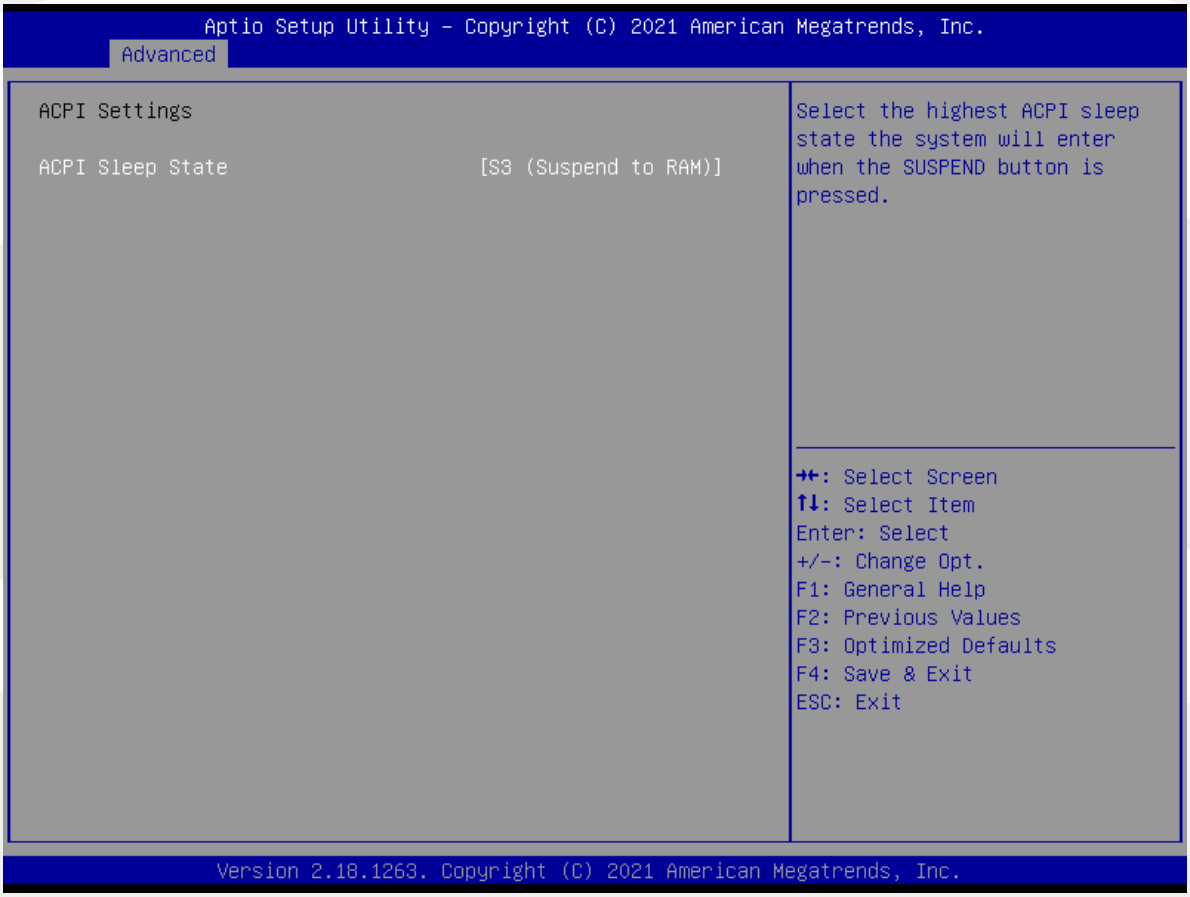


Setup Item	Options	Help Text	Comments
CPU Configuration			
CPU Signature	Displays CPU Signature	CPU Signature.	Displays CPU Signature.
Processor Cores	Number of the Processor cores.	Processor Cores.	Number of the Processor cores.
Speed	Current frequency of the processor.	Speed.	Current frequency of the processor.
64-bit	If Current processor supports EM64T it shows supported.	64-bit.	If Current processor supports EM64T it shows supported.
Active Processer Cores	Disabled Enabled	Number of cores to enable in each processor package.	
Intel Virtualization Technology	Disabled Enabled	When enabled, a VMM can utilize the additional hardware capabilities provided by Vander pool Technology.	
VT-d	Disabled Enabled	Enabled/Disabled CPU VT-d.	

Setup Item	Options	Help Text	Comments
Monitor Mwait	Disabled Enabled	Enabled/Disabled Monitor Mwait.	

3.2.2 ACPI Settings Screen

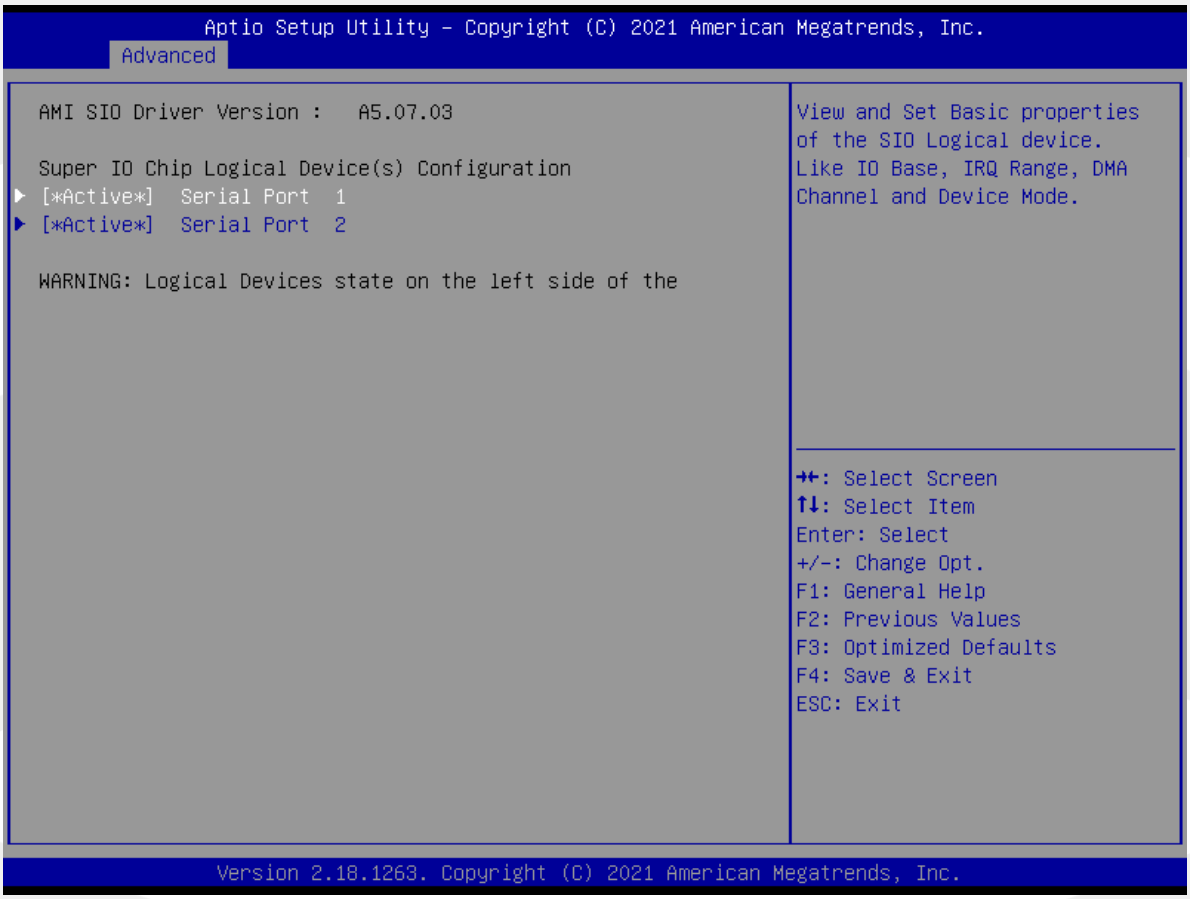
The ACPI Settings screen allows the user to set the system ACPI parameters. To access this screen from the Main screen, choose ***Advanced > ACPI Settings***.



Setup Item	Options	Help Text	Comments
ACPI Settings			
ACPI Sleep State	Suspend Disabled S3 (Suspend to RAM)	Select the highest ACPI sleep state the system will enter when the SUSPEND button is pressed.	Sleep supported optionally.

3.2.3 Super IO Configuration

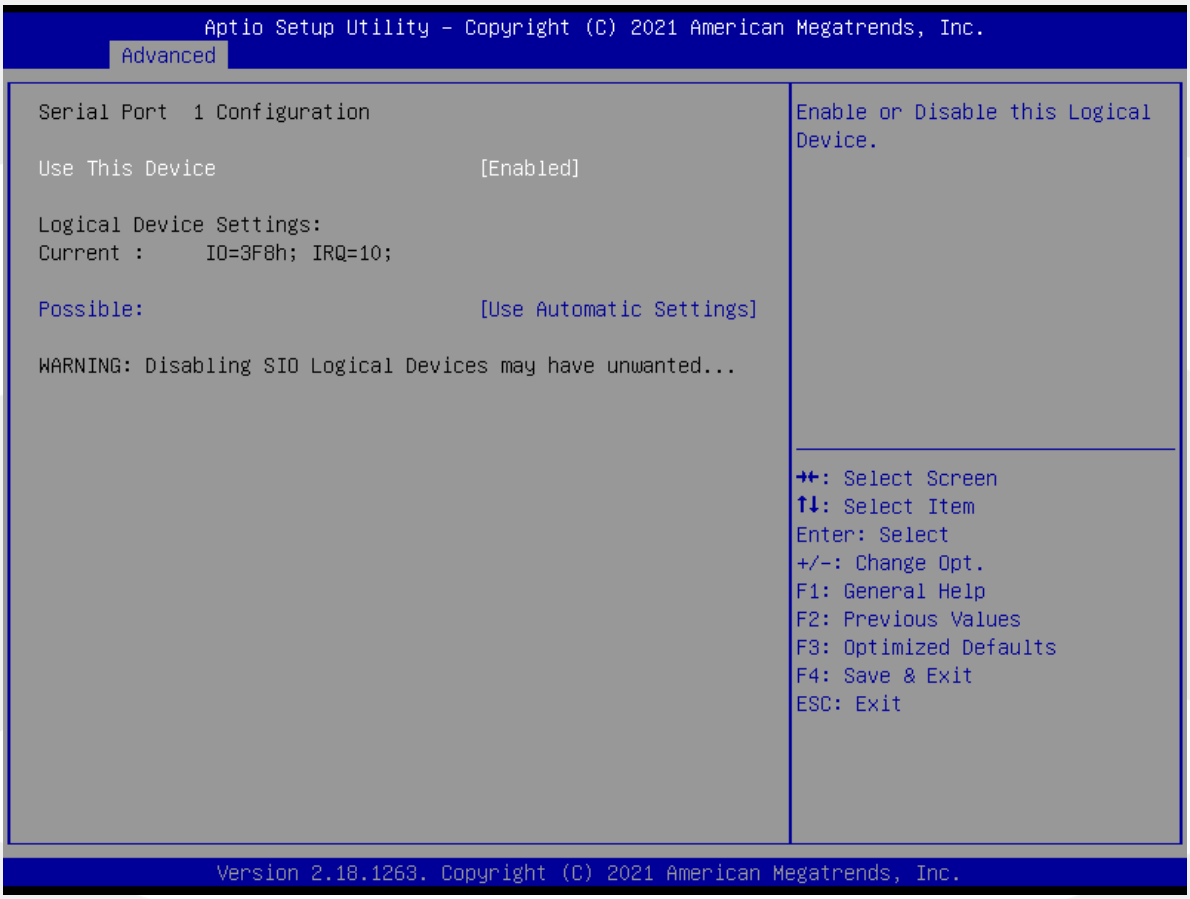
The Super IO Configuration screen allows the user to view the super IO information, and to enable or disable super IO options. To access this screen from the Advanced screen, choose ***Advanced > IO Configuration***.



Setup Item	Options	Help Text	Comments
Super IO Chip Logical Device(s) Configuration			
Serial Port 1			Set Parameters of Serial Port 1 (COM1).
Serial Port 2			

3.2.4 Serial PortX Configuration

The Super IO Configuration screen allows the user to view the super IO information, and to enable or disable serial port options. To access this screen from the Advanced screen, choose ***Advanced-> IO Configuration->Serial PortX Configuration***.



Setup Item	Options	Help Text	Comments
Serial Port 1 Configuration			
Use This Device	Enabled Disabled	Enable or Disable Serial Port (COM).	

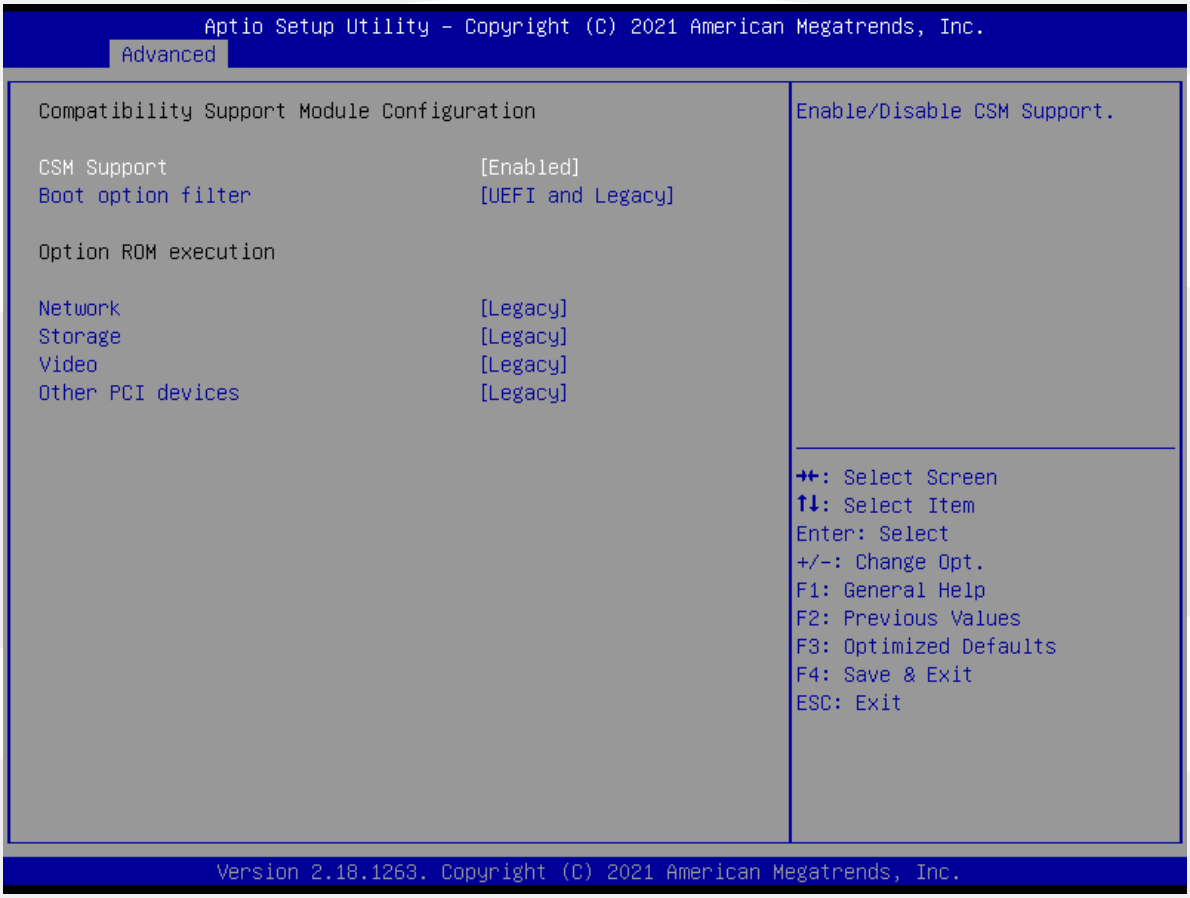
3.2.5 USB Configuration

The USB Configuration screen allows the user to view the USB Configuration information, and to enable or disable options. To access this screen from the Main screen, choose ***Advanced > USB Configuration***.

Setup Item	Options	Help Text	Comments
USB Configuration			
Legacy USB Support	Enabled Disabled	Enables Legacy USB support. AUTO option disables legacy support if no USB devices are connected. DISABLE option will keep USB devices available only for EFI applications.	
XHCI Hand-off	Enabled Disabled	This is a workaround for OSes without XHCI hand-off support. The XHCI ownership change should be claimed by XHCI driver.	
USB MASS Storage Driver Support	Enabled Disabled	Enable/Disable USB Mass Storage Driver Support.	
USB hardware delays and time-outs			
USB transfer time-out	1 sec 5 sec 10 sec 20 sec	The time-out value for Control, Bulk, and Interrupt transfers.	
Device reset time-out	1 sec 5 sec 10 sec 20 sec	USB mass storage device Start Unit command time-out.	
Device power-up delay	Auto Manual	Maximum time the device will take before it properly reports itself to the Host Controller. ' auto' uses default value: for a Root port it is 100ms,for a Hub port the delay is taken from Hub descriptor.	
Mass Storage Device			
Lenovo UFD X3C 32G 1100	Auto		

3.2.6 CSM Configuration

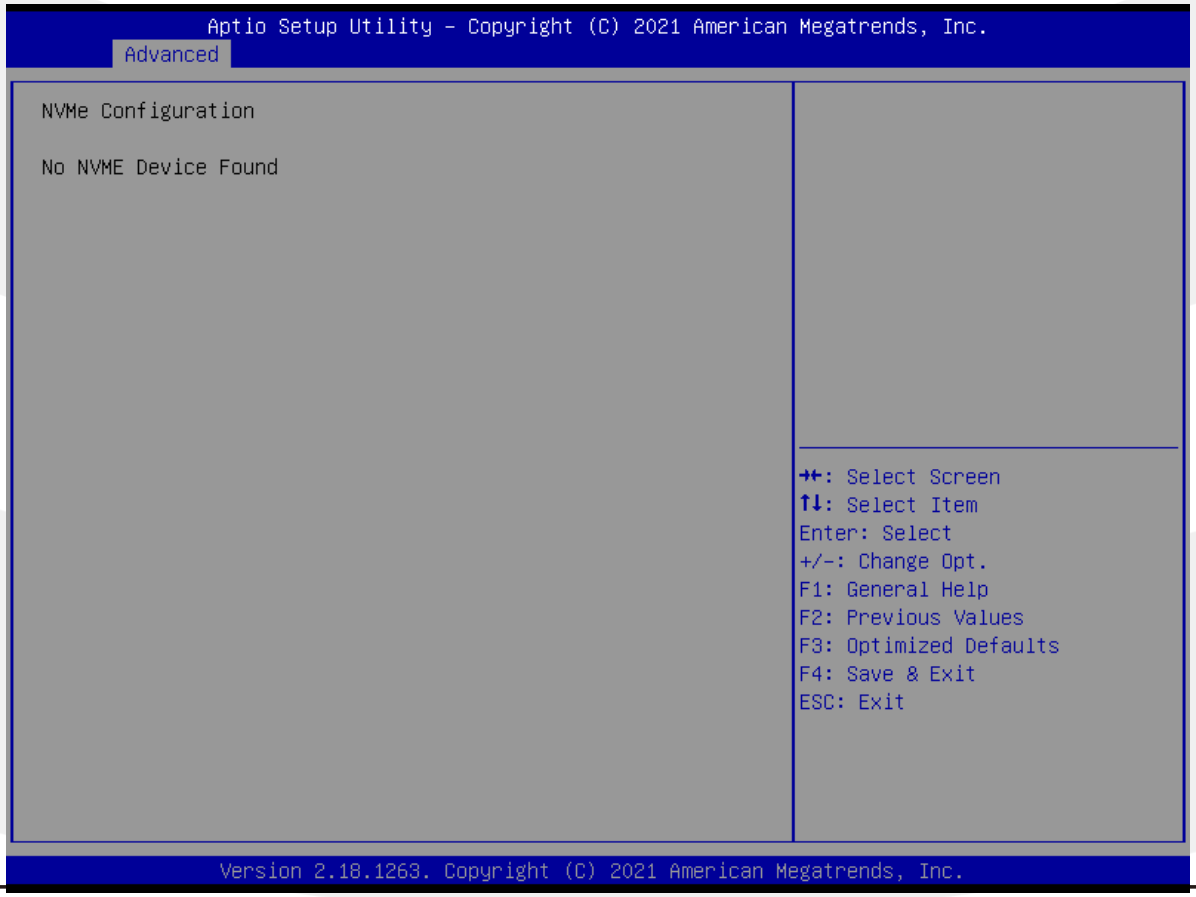
The CSM Configuration screen allows the user to view the CSM information, and to enable or disable CSM options. To access this screen from the Main screen, choose ***Advanced > CSM Configuration***.



Setup Item	Options	Help Text	Comments
CSM Configuration			
CSM Support	Enabled Disabled	Enable / Disable CSM support.	
Boot option filter	UEFI and Legacy Legacy only UEFI only	This option control Legacy/UEFI ROMs priority.	
Network	Legacy UEFI Do not lunch	Control the execution of UEFI and Legacy PXE OpROM.	
Storage	Legacy UEFI Do not lunch	Control the execution of UEFI and Legacy Storage OpROM.	
Video	Legacy UEFI Do not lunch	Control the execution of UEFI and Legacy video OpROM.	
Other PCI devices	Legacy UEFI Do not lunch	Determines OpROM execution policy for devices other than Network,Storage or video.	

3.2.7 NVMe Configuration

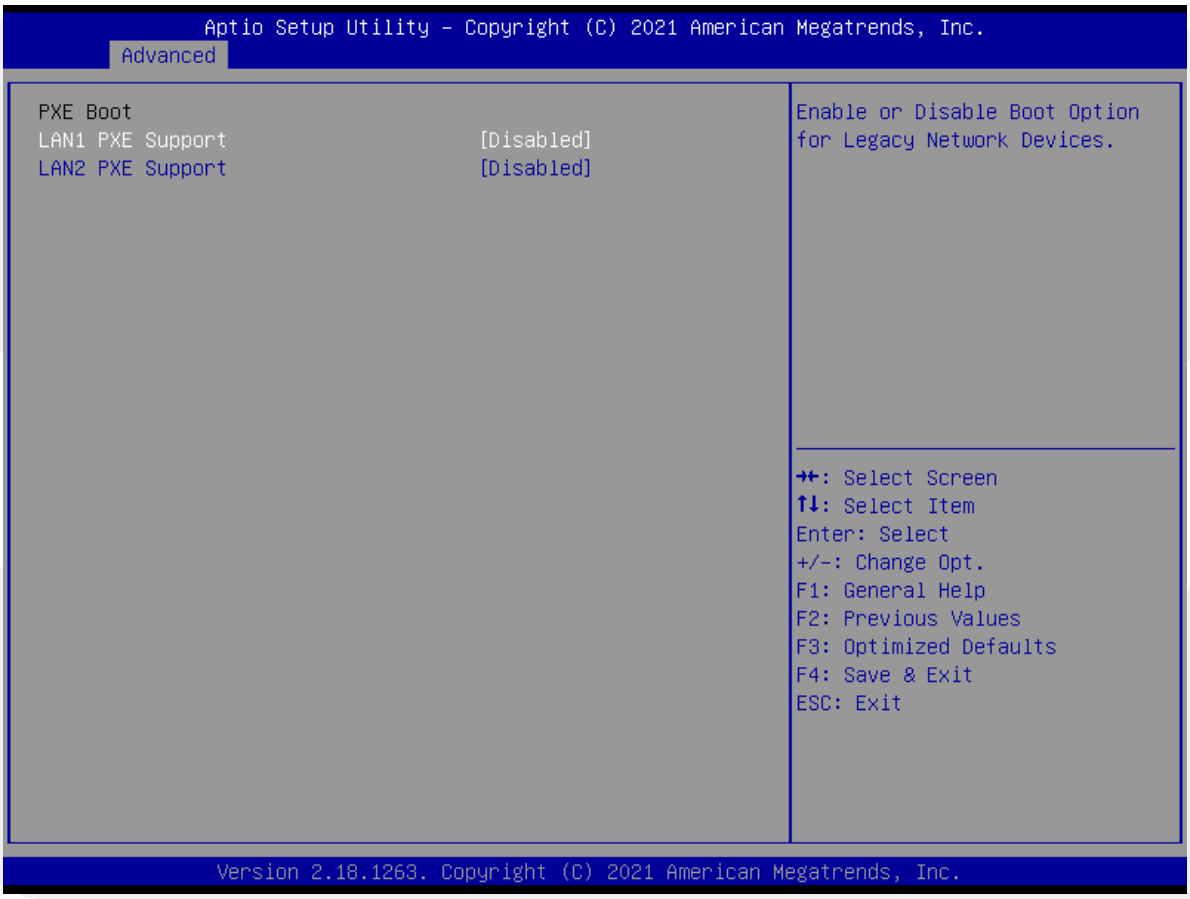
The NVMe Configuration screen allows the user to view the NVMe device information. To access this screen from the Main screen, choose ***Advanced > NVMe Configuration***.



Setup Item	Options	Help Text	Comments
NVMe Configuration			
Controller 0			Show NVMe device information connected.

3.2.8 PXE Boot

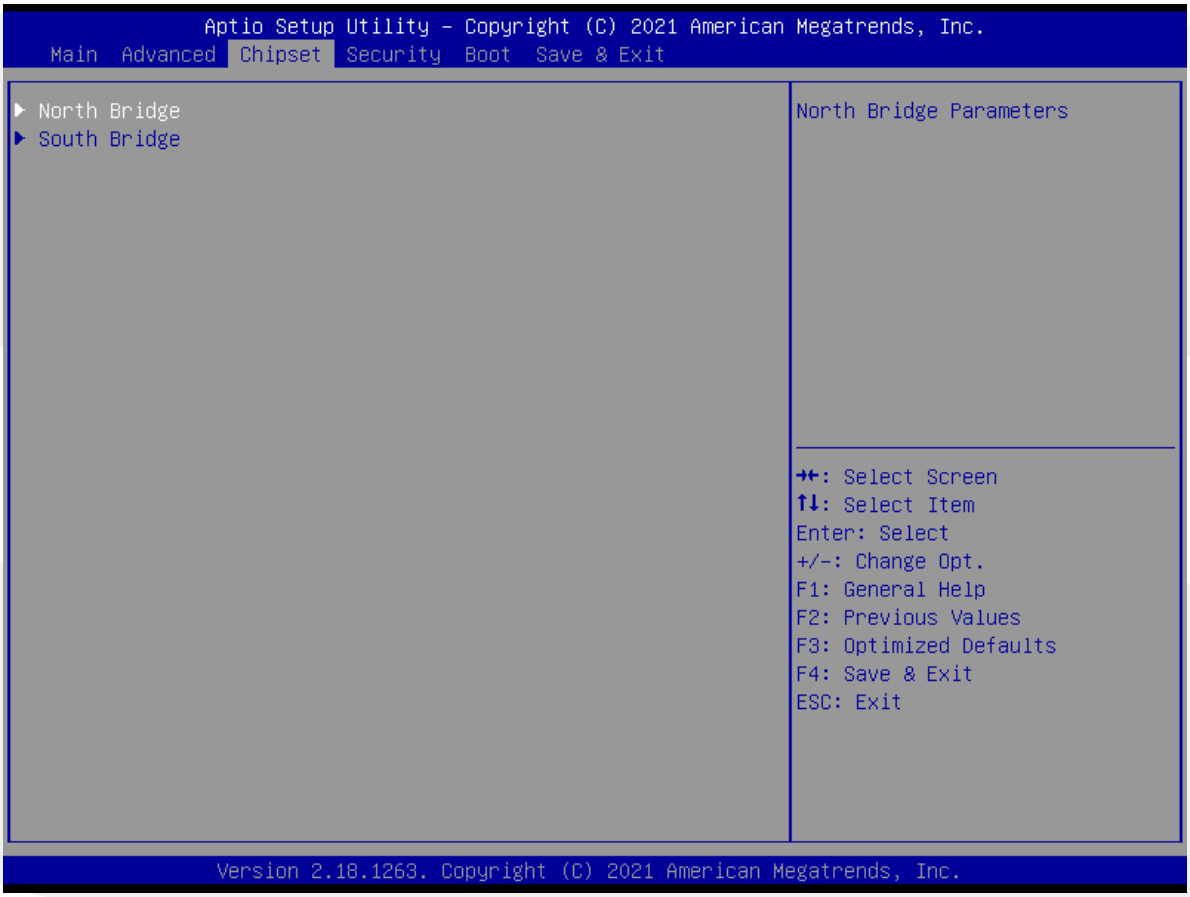
The PXE Boot screen allows the user to Enable or Disable Boot Option for Legacy Network Devices. To access this screen from the Main screen, choose ***Advanced > PXE Boot***.



Setup Item	Options	Help Text	Comments
PXE Boot			
LAN1 PXE Support	Disabled Enabled		Legacy PXE Support Control .
LAN2 PXE Support	Disabled Enabled		Legacy PXE Support Control .

3.3 Chipset Screen

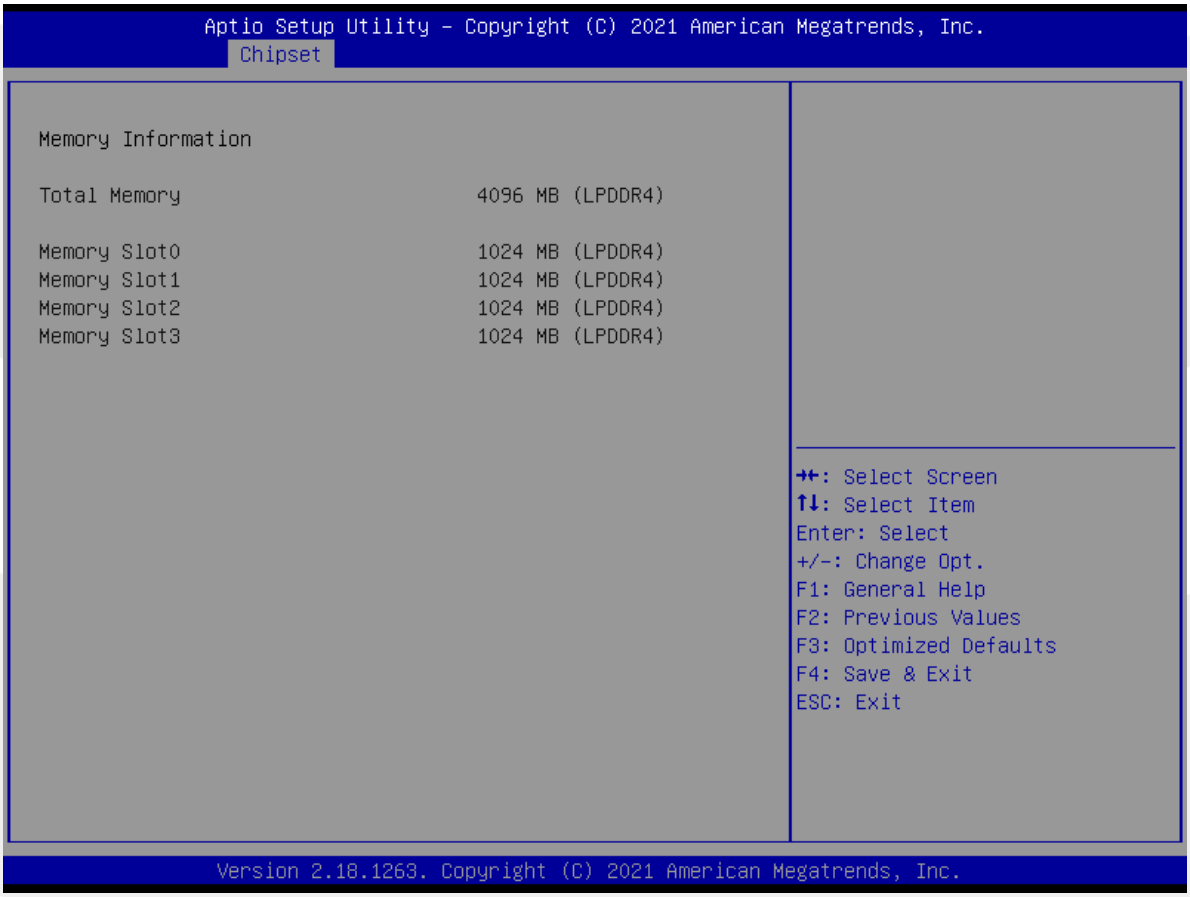
The Chipset screen provides an access point to configure North Bridge and South Bridge.To access this screen from the Main screen, press the right arrow until the Chipset screen is chosen.



Setup Item	Options	Help Text	Comments
Chipset Screen			
North Bridge		North Bridge Parameters.	
South Bridge		South Bridge Parameters.	

3.3.1 North Bridge Configuration

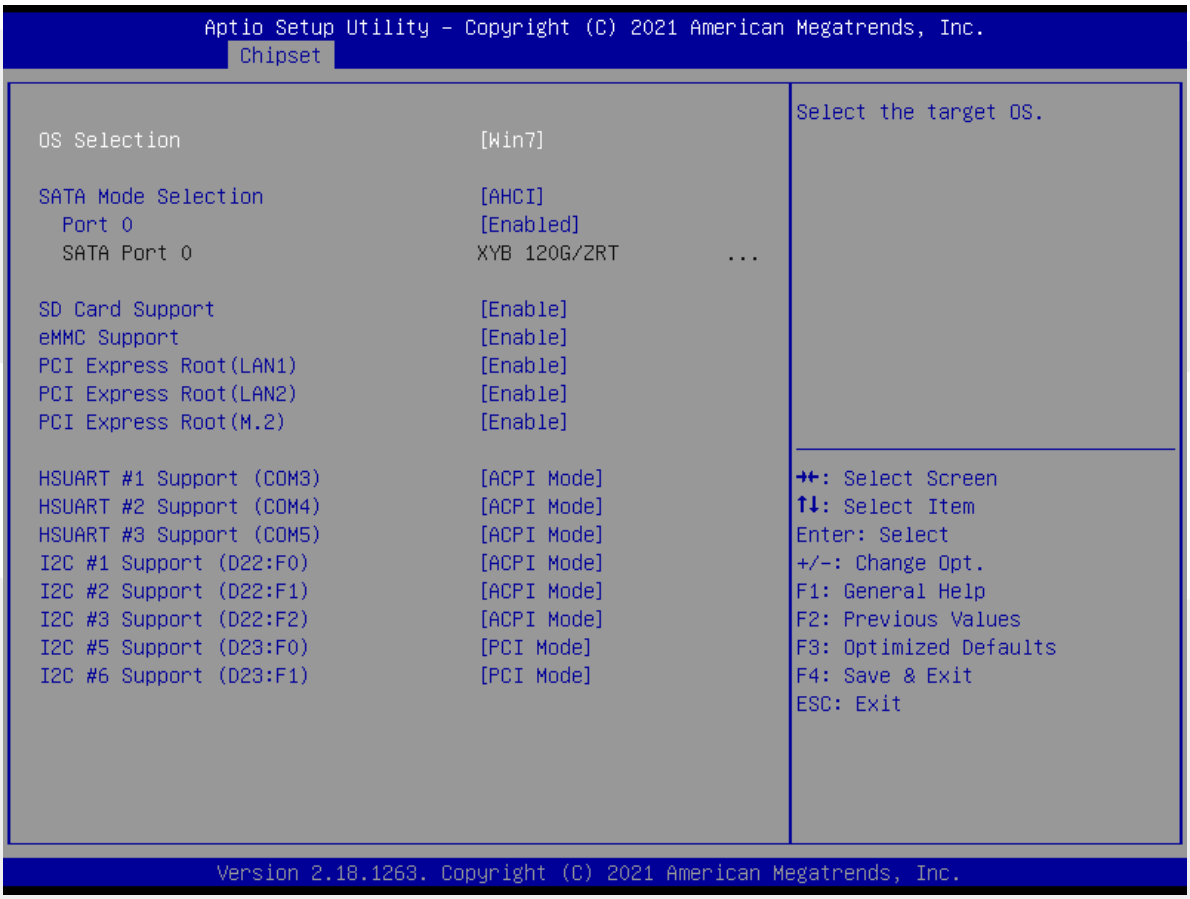
The North Bridge Screen allows user to set NB chipset configuration.To access this screen, form the Main screen, choose ***Chipset-> North Bridge Configuration***.



Setup Item	Options	Help Text	Comments
North Bridge Configuration			
Memory Information		Show Memory information.	
Total Memory			
Memory slot0			
Memory slot1			
Memory slot2			
Memory slot3			

3.3.2 South Bridge Configuration

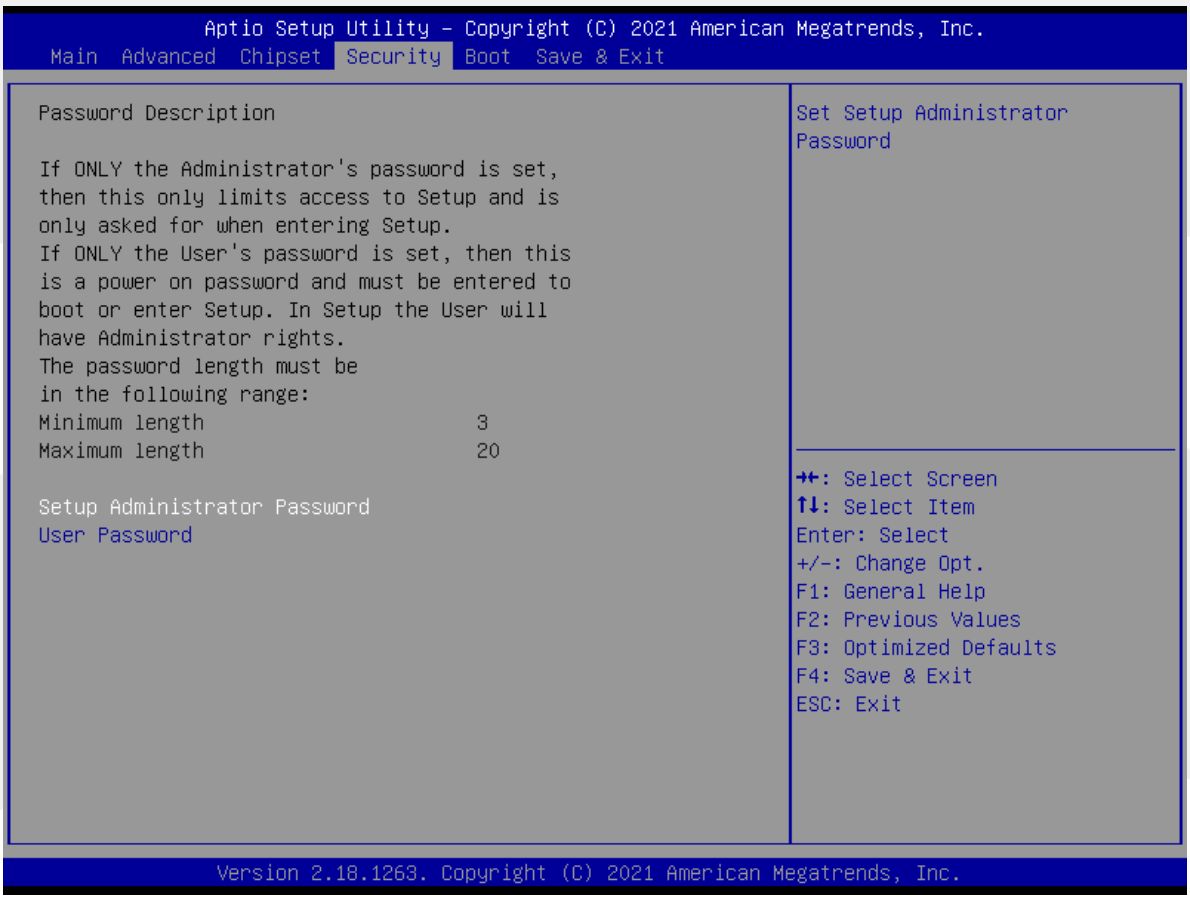
The South Bridge Screen allows user to set SB chipset configuration.
To access this screen form the Main screen, choose ***Chipset>South Bridge Configuration***.



Setup Item	Options	Help Text	Comments
South Bridge Configuration			
OS Selection	WINDOWS ANDROID WIN7 INTEL LINUX	Select the target OS.	
SATA Mode Selection	AHCI	Determines how SATA controller(s) operate.	
Port 0	Enabled Disabled	Enable or Disable SATA Port.	
SATA Port 0			
SD Card Support	Enable Disable	Enable or Disable SCC SD CARD support.	
eMMC support	Enable Disable	Enable or Disable SCC MMC support.	
PCIE Express(LAN1)	Enable Disable	Control the PCI Express Root Port.	
PCIE Express(LAN2)	Enable Disable	Control the PCI Express Root Port.	
PCIE Express(M.2)	Enable Disable	Control the PCI Express Root Port.	
HSUART1 #1 Support (COM3)	ACPI Mode	Enable or Disable HSUART1 support.	
HSUART1 #1 Support (COM4)	ACPI Mode	Enable or Disable HSUART2 support.	
HSUART1 #1 Support (COM5)	ACPI Mode	Enable or Disable HSUART3 support.	
I2C #1 Support	ACPI Mode	Enable or Disable I2C #1 support.	
I2C #2 Support	ACPI Mode	Enable or Disable I2C #2 support.	
I2C #3 Support	ACPI Mode	Enable or Disable I2C #3 support.	
I2C #5 Support	PCI Mode	Enable or Disable I2C #5 support.	
I2C #6 Support	PCI Mode	Enable or Disable I2C #6 support.	

3.4 Security

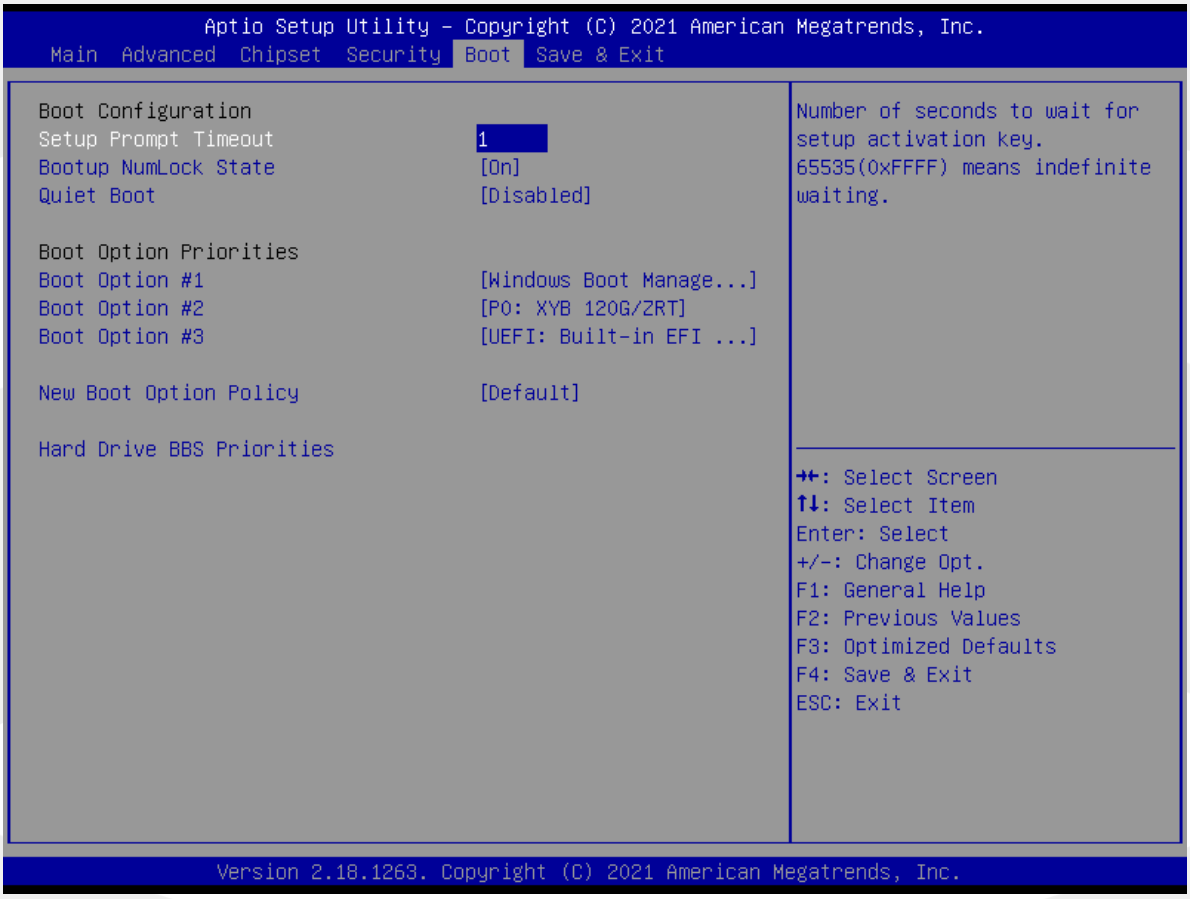
To access this screen form the Main screen, choose ***Security***.



Setup Item	Options	Help Text	Comments
Security			
Administrator Password		Set Administrator Password.	
User Password		Set User Password.	

3.5 Boot Screen

The Boot screen displays any bootable media encountered during POST, and allows the user to configure desired boot device.To access this screen from the Main screen, choose ***Boot***.

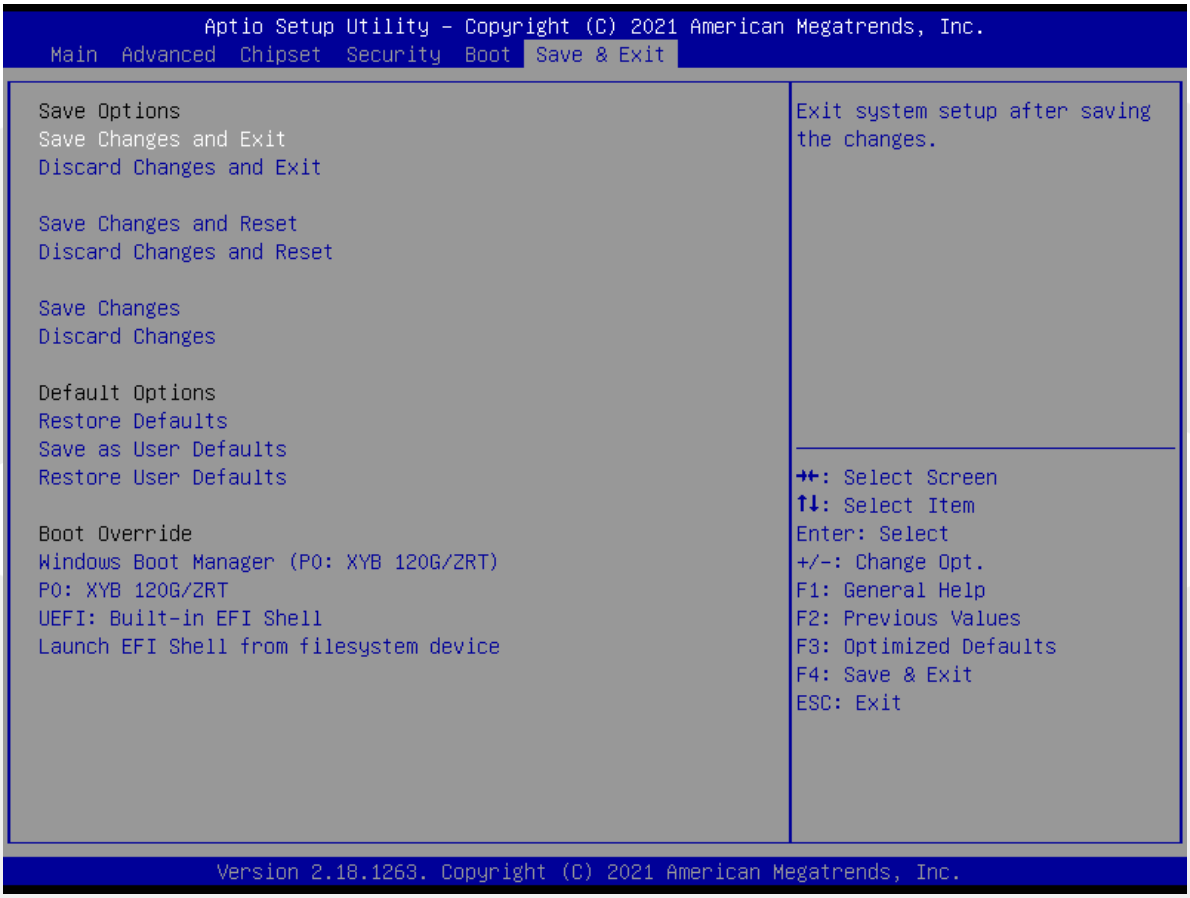


Setup Item	Options	Help Text	Comments
Boot Configuration			
Setup Prompt Timeout	1~65535	Number of seconds to wait for setup activation key.65535(0xFFFF) means indefinite waiting.	
Bootup NumLock State	On off	Select the keyboard Number state.	
Quiet Boot	Disabled Enabled	Enables or disables Quiet Boot option.	
Boot Option Priorities			
Boot Option #1		Sets the system boot order.	Note：Showed When boot devices existed.
Boot Option #2		Sets the system boot order.	
Boot Option #3		Sets the system boot order.	
New Boot Option Policy	Default		

Setup Item	Options	Help Text	Comments
Hard Drive BBS Priorities		Set the order of the legacy devices in this group	Set boot order in each group of the same kind, such as HDD, network.

3.6 Save & Exit Screen

The Save & Exit screen allows the user to choose whether to save or discard the configuration changes made on the other screens. It also allows the user to restore the server to the factory defaults or to save or restore them to set of user-defined default values.



Setup Item	Options	Help Text	Comments
Save & Exit			
Save Options			
Save Changes and Exit		Exit system setup after saving the changes.	User is prompted for confirmation only if any of the setup fields were modified.
Discard Changes and Exit		Exit system setup without saving any changes.	
Save Changes and Reset		Reset the system after saving the changes..	
Discard Changes and Reset		Reset system setup without saving and changes.	
Save Changes		Save Changes done so far to any of the setup options.	

Setup Item	Options	Help Text	Comments
Discard Changes		Discard Changes done so far to any or the setup options.	
Default Options			
Restore Defaults		Restore/Load Default values for all the setup options.	
Save as User Defaults		Save the changes done so far as User Defaults.	
Restore User Defaults		Restore the User Defaults to all the setup options.	
Boot Override			
Shows the Device can boot			Note：Showed When boot devices existed.

附录

附一：术语表

ACPI 高级配置和电源管理

ACPI 规范允许操作系统控制计算机及其附加设备的大部份电能。

BIOS 基本输入/输出系统

是在 PC 中包含所有的输入/输出控制代码界面的软件。它在系统启动时进行硬件检测，开始操作系统的运作，在操作系统和硬件之间提供一个界面。BIOS 是存储在一个只读存储器芯片内。

BUS 总线

在计算机系统中，不同部件之间交换数据的通道，是一组硬件线路。我们所指的 BUS 通常是 CPU 和主内存元件内部的局部线路。

Chipset 芯片组

是为执行一个或多个相关功能而设计的集成芯片。我们指的是由南桥和北桥组成的系统级芯片组，他决定了主板的架构和主要功能。

CMOS 互补金属

氧化物半导体。是一种被广泛应用的半导体类型。它具有高速、低功耗的特点。我们指的 CMOS 是在主板上的 CMOS RAM 中预留的一部份空间，用来保存日期、时间、系统信息和系统参数设定信息等。

COM 串口

一种通用的串行通信接口，一般采用标准 DB9 公头接口连接方式。

DIMM 双列直插式内存模块

是一个带有内存芯片组的小电路板。提供 64bit 的内存总线宽度。

DRAM 动态随机存取存储器

是一个普通计算机的通用内存类型。通常用一个晶体管和一个电容来存储一个位。随着技术的发展，DRAM 的类型和规格已经在计算机应用中变得越来越多样化。例如现在常用的就有 SDRAM、DDR SDRAM 和 RDRAM。

L2c

Inter-Integrated Circuit 总线是一种由 PHILIPS 公司开发的两线式串行总线，用于连接微控制器及其外围设备。

LAN 局域网络接口

一个小区域内相互关联的计算机组成的一个计算机网络，一般是在一个企事业单位或一栋建筑物。局域网一般由服务器、工作站、一些通信链接组成，一个终端可以通过电线访问数据和设备的任何地方，许多用户可以共享昂贵的设备和资源。

LED 发光二极管

一种半导体设备，当电流流过时它会被点亮，通常用来把信息非常直观的表示出来，例如表示电源已经导通或硬盘驱动器正在工作等。

PnP 即插即用

允许 PC 对外接设备进行自动配置，不用用户手动操作系统就可以自己工作的一种规格。为实现这个特点，BIOS 支持 PnP 和一个 PnP 扩展卡都是必需的。

POST 上电自检

在启动系统期间，BIOS 会对系统执行一个连续的检测操作，包括检测 RAM，键盘，硬盘驱动器等，看它们是否正确连接和是否正常工作。

PS/2

由 IBM 发展的一种键盘和鼠标连接的接口规范。PS/2 是一个仅有 6PIN 的 DIN 接口，也可以用以连接其他的设备，比如调制解调器。

USB 通用串行总线

一种适合低速外围设备的硬件接口，一般用来连接键盘、鼠标等。一台 PC 最多可以连接 127 个 USB 设备，提供一个 12Mbit/s 的传输带宽；USB 支持热插拔和多数据流功能即在系统工作时可以插入 USB 设备，系统可以自动识别并让插入的设备正常。

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