I11C-G2060S

Rugged GPU Server
Support Nvidia RXT2060S

User's Manual

Revision Date: June. 15. 2021

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	2021/06/15	First release

Packing List

Item	Description	Q'ty
1	I11C-G2060S , AI Accelerated GPU Server	1
2	Driver CD	1

Ordering Information

i11C-G2060S

Rugged GPU Server Support NVIDIA RTX2060S with Intel 8 /9th Gen i7-9700TE CPU, Rich I/O Interface, w/GPU, 9~36V DC-DC 300W,Operation Temp. 0 to 50°C

i11C-G2060S-ET

Rugged GPU Server Support NVIDIA RTX2060S with Intel 8 /9th Gen i7-9700TE CPU, Rich I/O Interface, w/o GPU, 9~36V DC-DC 300W,Operation Temp. -20 to 55°C

i11C-G2060S-UT

Rugged GPU Server Support NVIDIA RTX2060S with Intel 8 /9th Gen i7-9700TE CPU, Rich I/O Interface, w/o GPU, 9~36V DC-DC 300W,Operation Temp. -30 to 70°C

RoHS

7Starlake RoHS Environmental Policy and Status Update

7Starlake 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, 7Starlake 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 7Starlake development procedure and that all the new RoHS components and new manufacturing processes maintain the highest industry quality levels for which 7Starlake 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.

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Chapter 1 : Produc Introduction

1.1 Specifications

System	
CPU	9th Gen. Intel® Coffee Lake LGA1151 Socket Processor Intel® Core i7-9700 (8 Cores 65W) Intel® Core i7-9700TE (8 Cores 35W)
Memory type	2 x SO-DIMM DDR4 2666 MHz up to 64GB
Chipset	Intel® Q370 Chipset
Expansion slot	1 x M.2 (Key M, 2242/2260/2280) with PCIex4 and SATA3
GPU	RTX2060S (CUDA Core: 2176, 8GB GDDR6)
Display	
Display Port	Resolution up to 4096 x 2304 60@Hz
HDMI	Resolution up to 4096 x 2160 30@Hz
Storage	
Storage 1	1 x M.2 2280
Storage 2	2 x SATAIII
Ethernet	
Ethernet	Intel® I210 & I219LM GbE LAN (support 10/100/1000 Mbps)
Rear I/O	
DC-IN	1 x 4P Terminal Block
USB	4 x USB2.0
Front I/O	
Display Port	2 x DP ; 1 x HDMI
Ethernet	2 x RJ45
Audio	2 x 3.5mm Audio Jacks (1 x MIC, 1 x Line-Out)
USB	4 x USB 3.1
Antenna	4 x Antenna hole(options)
Power Button	1 x Power Button w/indicatot LED

Power Requiremen

Power Input	9~36V 300W DC-DC 100~240V AC-DC for options

Applications, Operating System

Applications	Commercial and Industrial Platforms, Embedded Computing, Process Control, Intelligent Automation and manufacturing applications
Operating System	Windows 10 64Bit, Ubuntu13.04, Ubuntu13.10, Ubuntu14.04, Fedora20

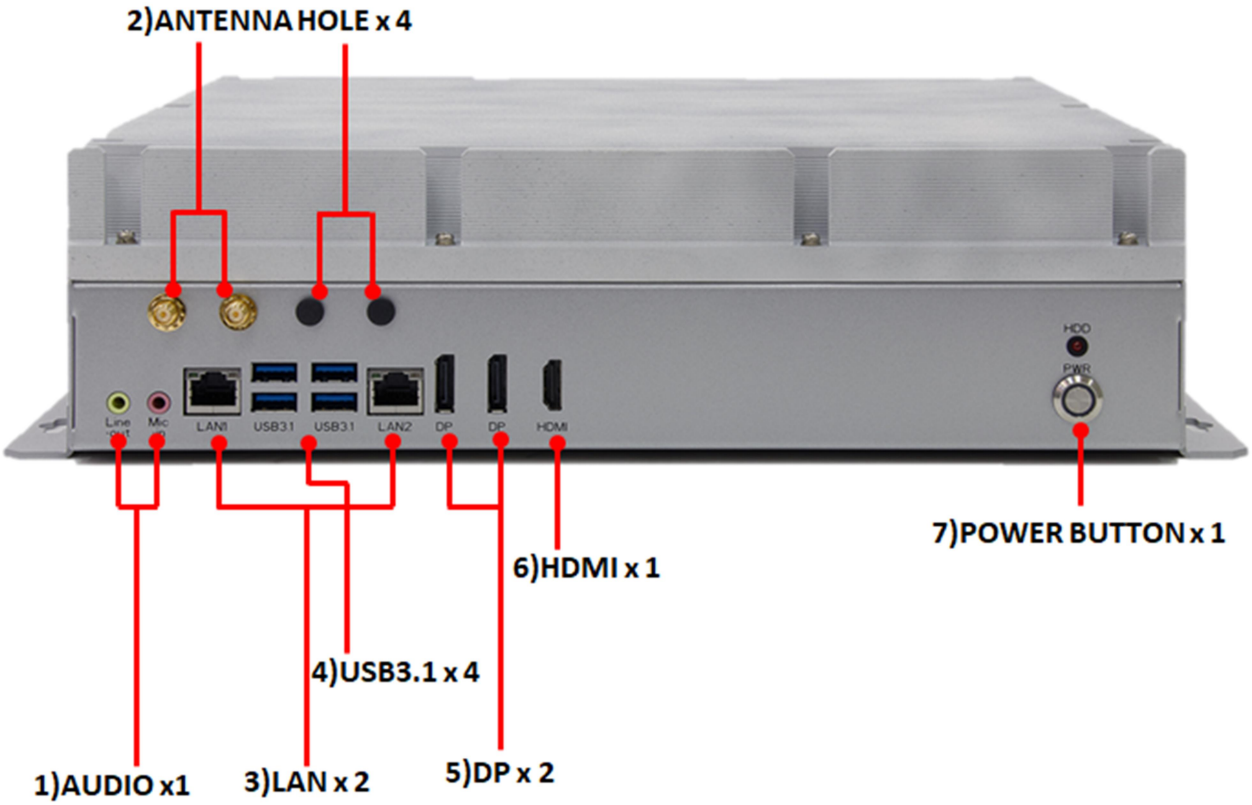
Physical

Dimension	301 x 315 x 86 mm (W x D x H)
Weight	5.5kg
Chassis	SECC
Heatsink	Aluminum Alloy, Corrosion Resistant
Finish	Anodic aluminum oxide

Environmental

Compliance	MIL-STD-810G, IEC-61850-3, IEEE-1613, CE and FCC, RoHS
Operating Temp.	-20 to 55°C
Storage Temp.	-40 to 85°C
Relative Humidity	5% to 95%, non-condensing

1.2 Front Panel I/O Placement

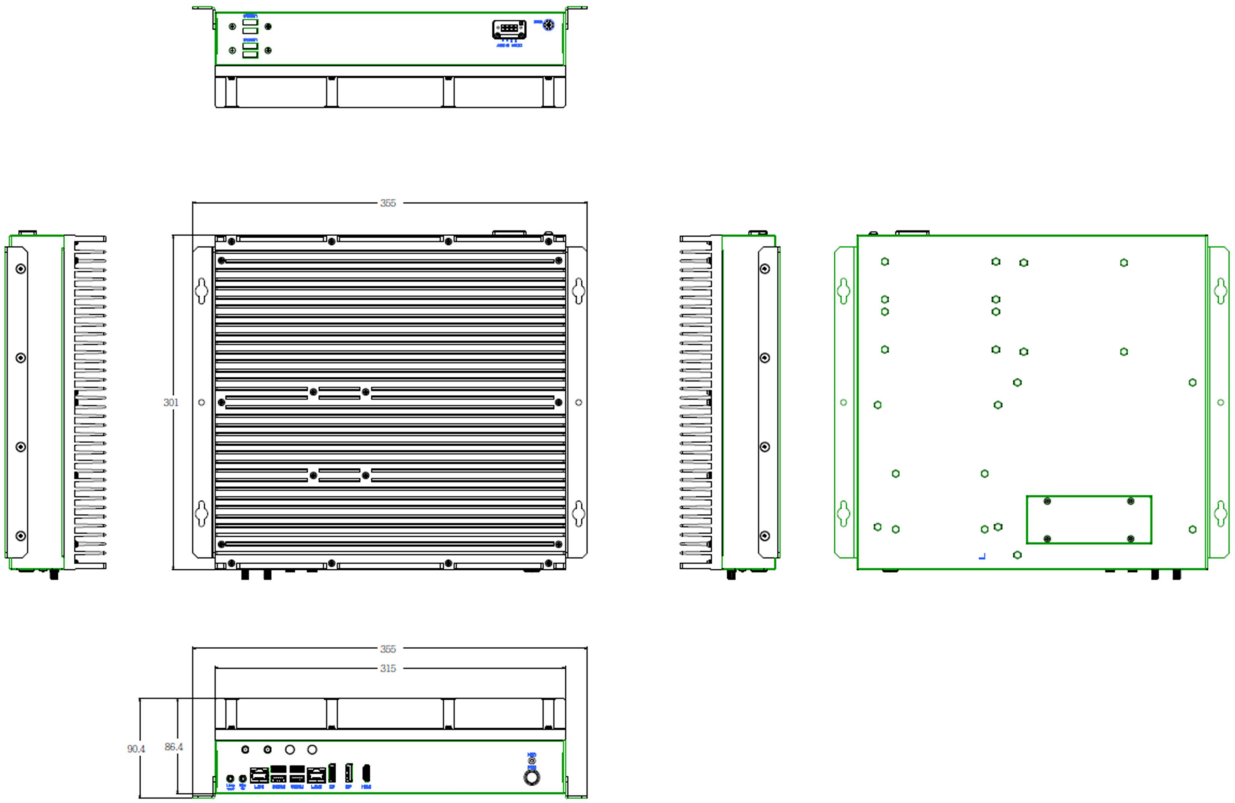


1)	AUDIO x1
2)	ANTENNA HOLD x 4
3)	LAN x 2
4)	USB3.1 x 2
5)	DP x 2
6)	HDMI x 1
7)	POWER BUTTON x 1

1.3 Rear Panel I/O Placement

1)	DC-IN x 1
2)	USB2.0 x 4

1.4 Mechanical Dimensions



Chapter 2 : Rear I/O Ports

2.1 Panel Connector Pin Define

LAN1 and LAN2 LED

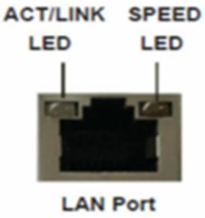
LAN Port LED Indications

Activity/Link LED

Status	Description
Off	No Link
Blinking	Data Activity
On	Link

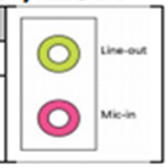
SPEED LED

Status	Description
Off	10Mbps connection
Yellow	100Mbps connection
Green	1Gbps connection



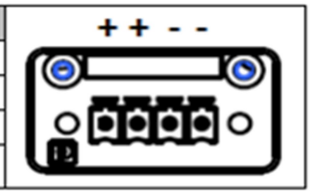
AUDIO: LINE-OUT/MIC-IN

Pin	Definition
1	Line-out
2	Mic-in



DC-In:

Pin	DC-In
1	V-In +
2	V-In +
3	GND
4	GND



Chapter 3: 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.

3.1 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.

3.2 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.

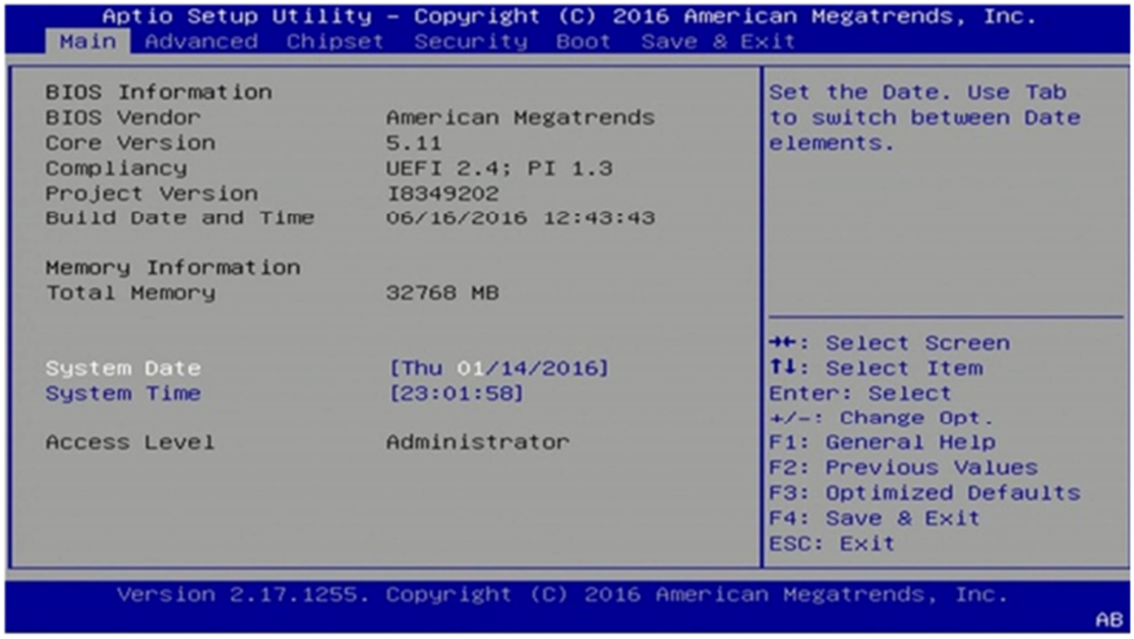
Some of the hot keys are <F1>, <F10>, <Enter>, <ESC>, and <Arrow> keys.

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.

3.3 Main

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



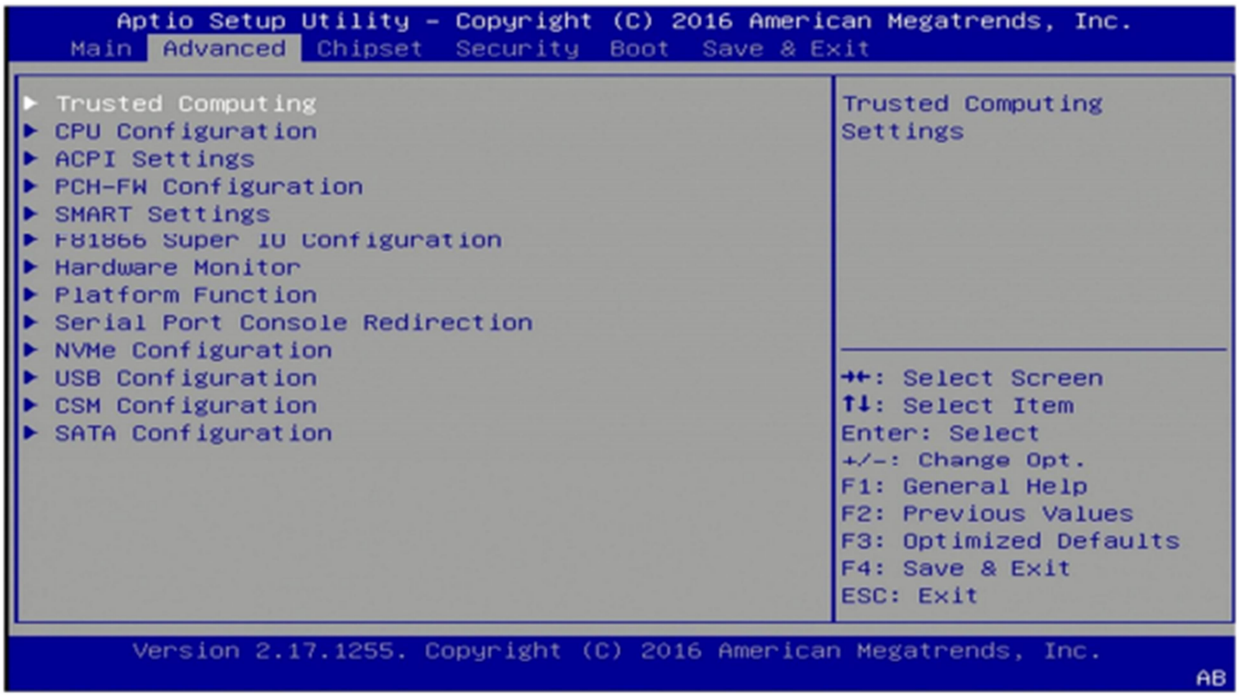
System Date
Use this function to change the system date.
Select System Date using the Up and Down <Arrow> keys. Enter the new values through the keyboard. Press the Left and Right <Arrow> keys to move between fields.
The date setting must be entered in MM/DD/YY format.

System Time
Use this function to change the system time.
Select System Time using the Up and Down <Arrow> keys. Enter the new values through the keyboard. Press the Left and Right <Arrow> keys to move between fields.
The time setting is entered in HH:MM:SS format.
Note: The time is in 24-hour format. For example, 5:30 A.M. appears as 05:30:00, and 5:30 P.M. as 17:30:00.

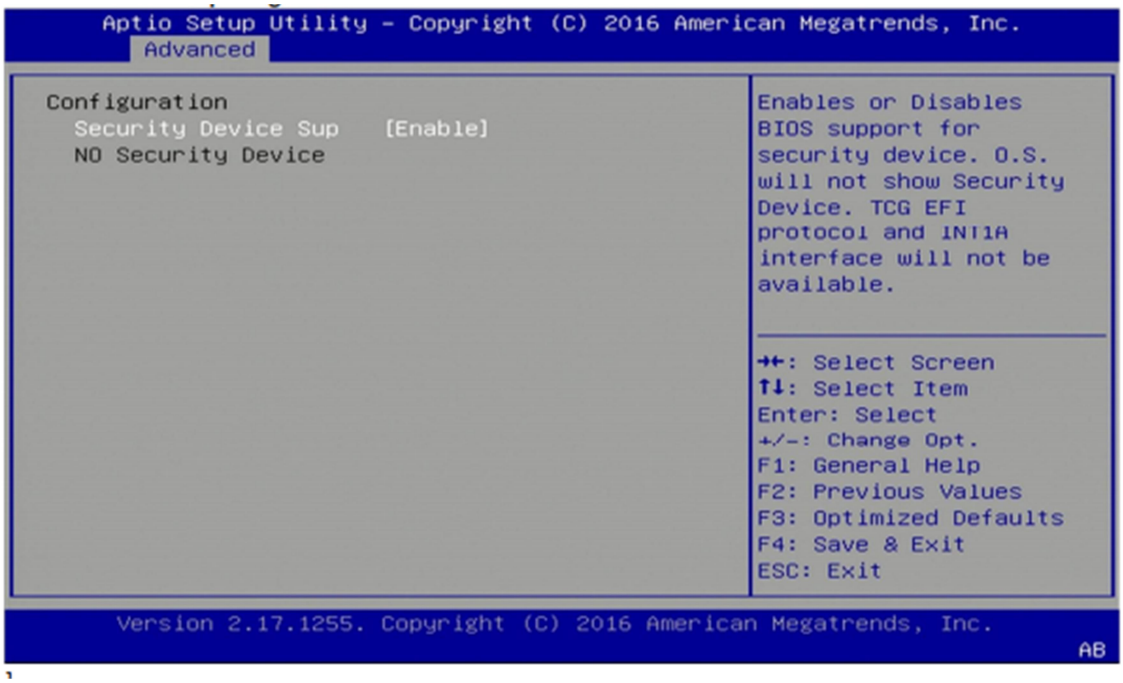
Access Level
Display the access level of the current user in the BIOS.

3.4 Advanced

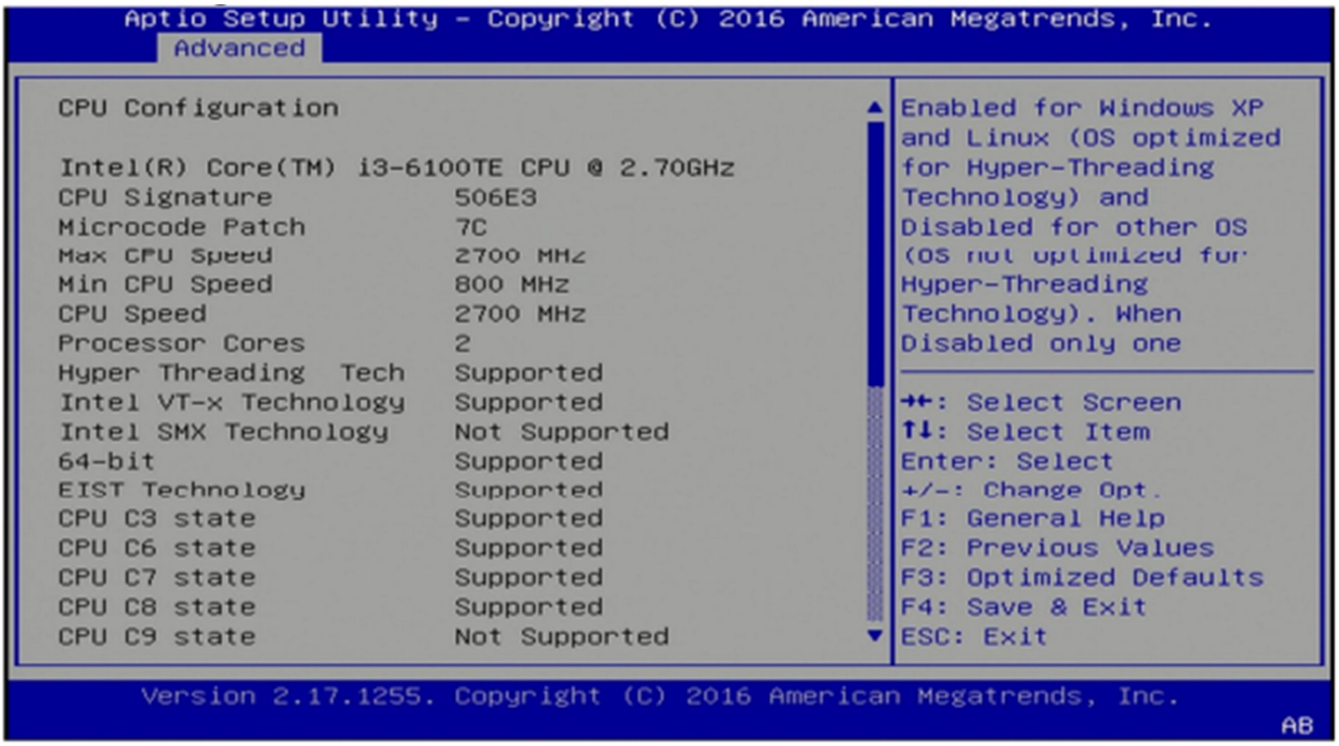
The Advanced Menu allows you to configure your system for basic operation. Some entries are defaults required by the system board, while others, if enabled, will improve the performance of your system or let you set some features according to your preference. ***Setting incorrect field values may cause the system to malfunction.***

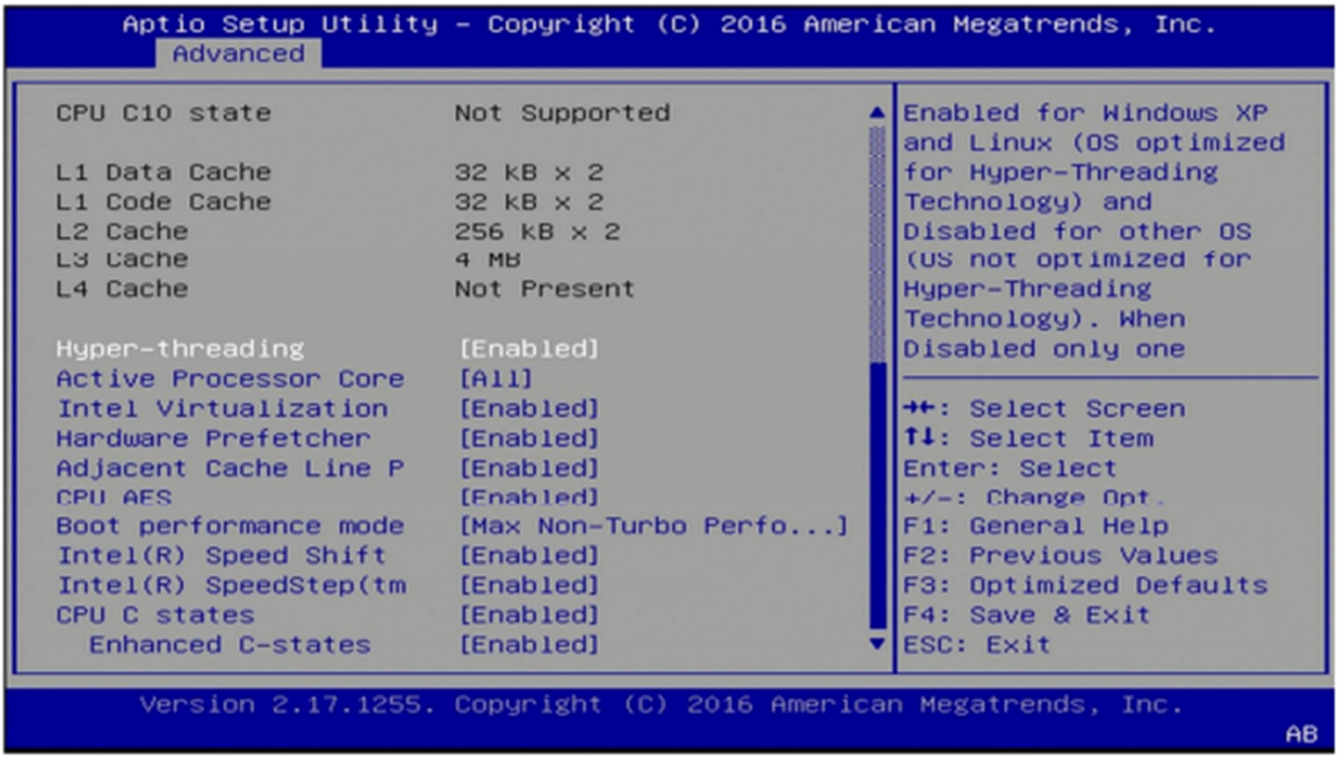


3.4.2 Trusted Computing

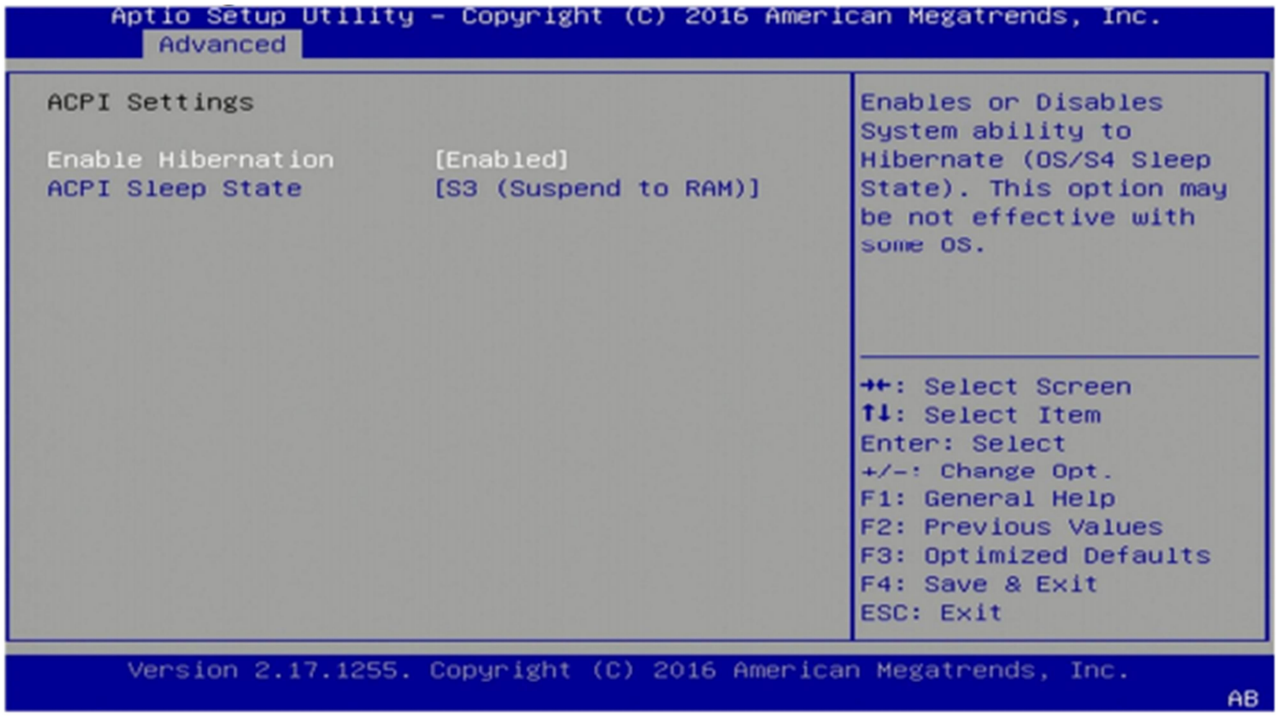


3.4.2 CPU Configuration

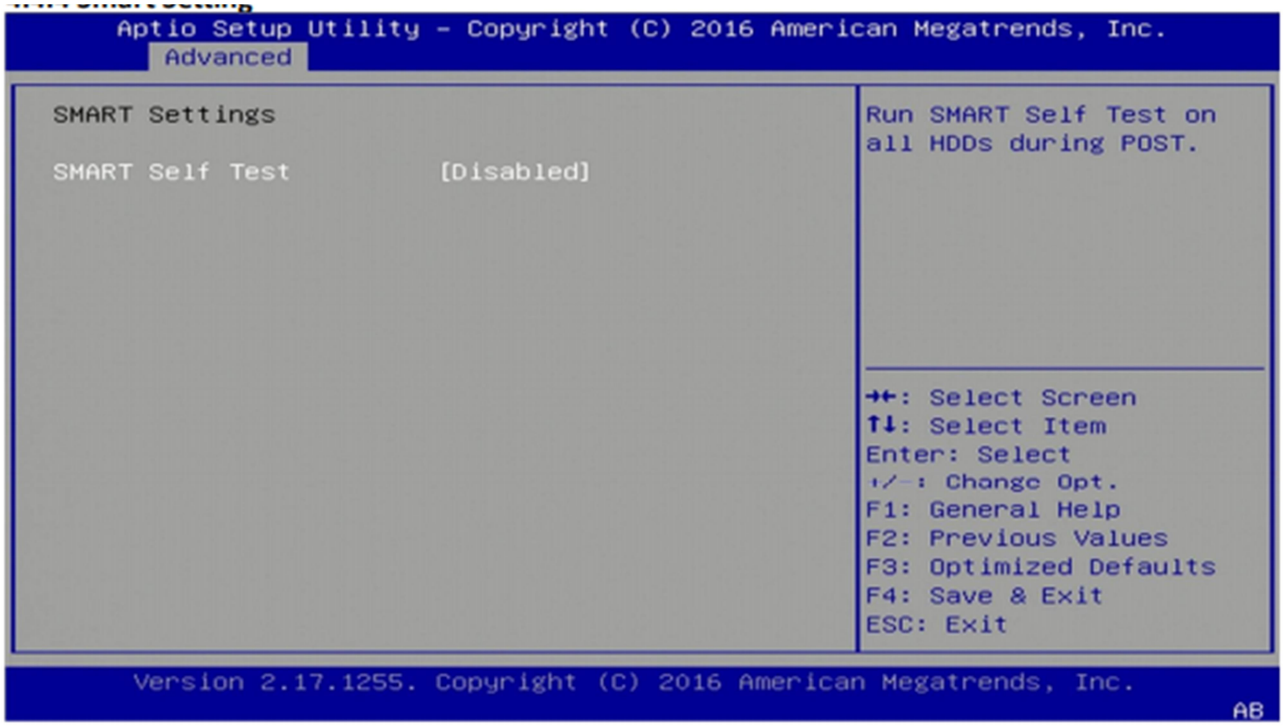




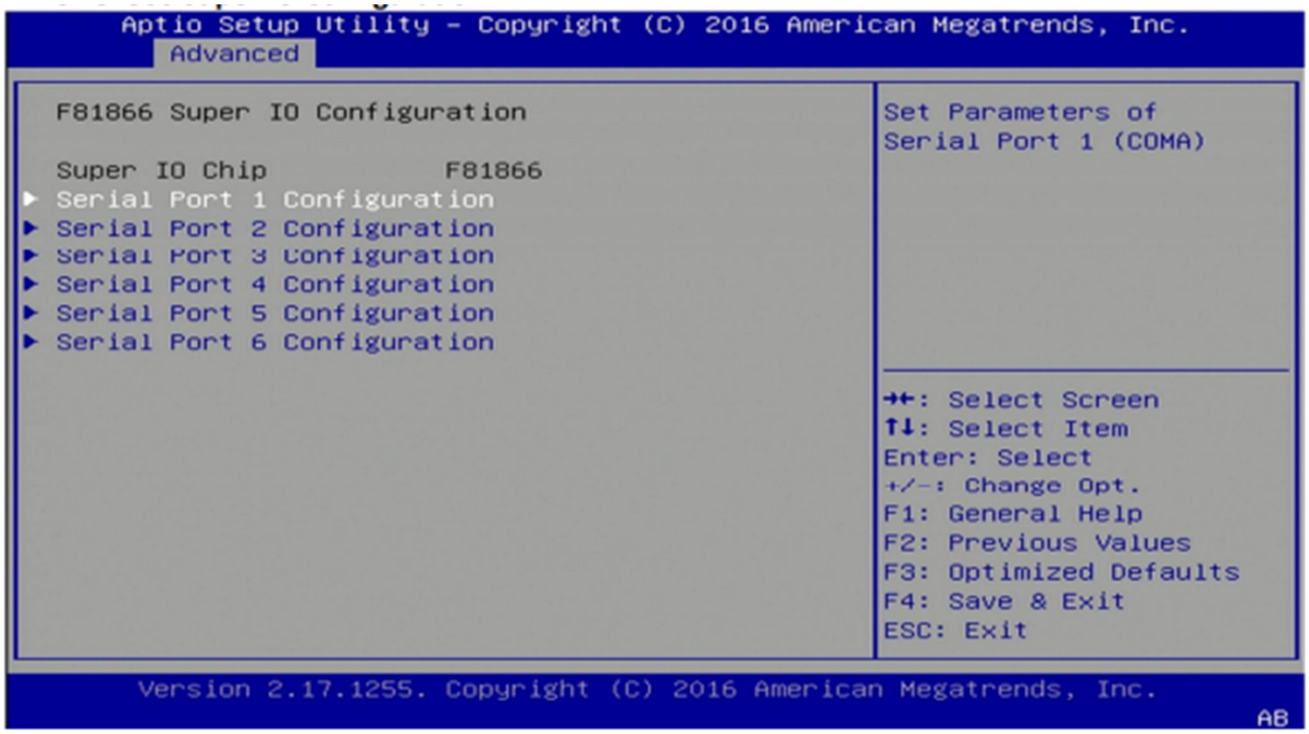
3.4.3 ACPI Setting

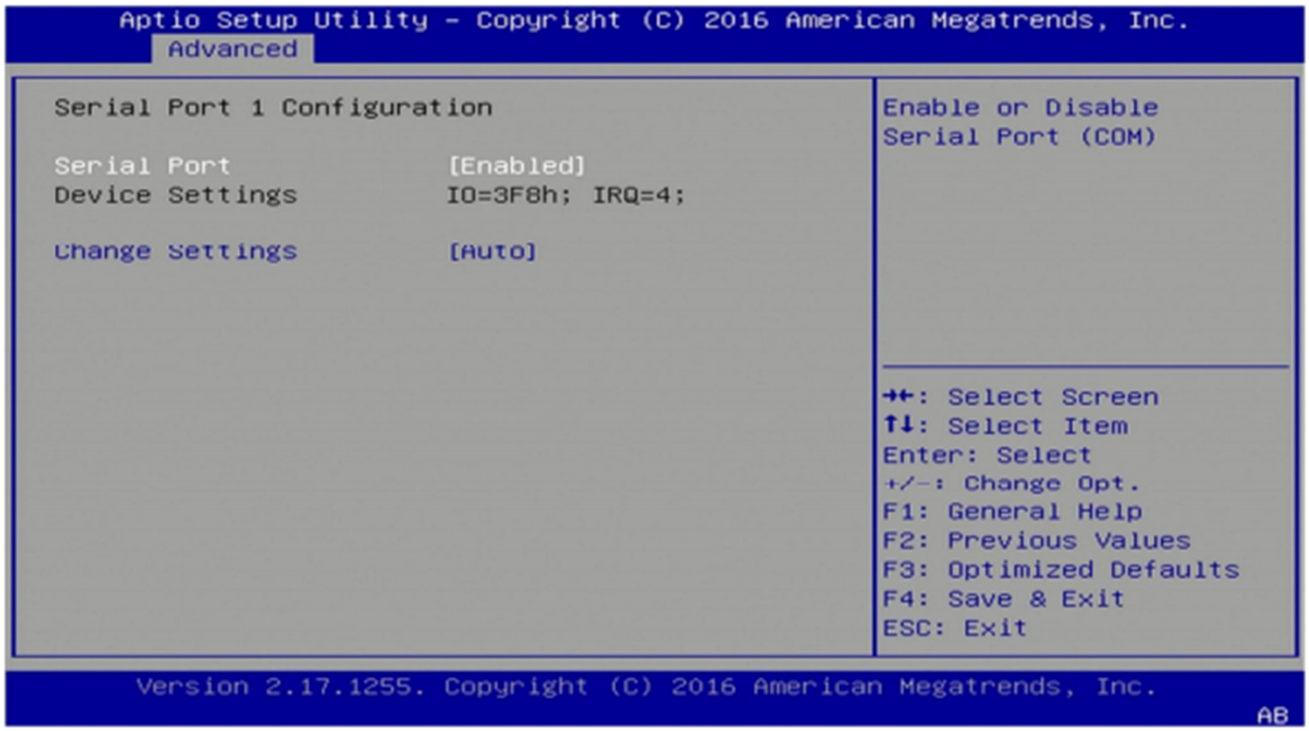


3.4.4 Smart Setting

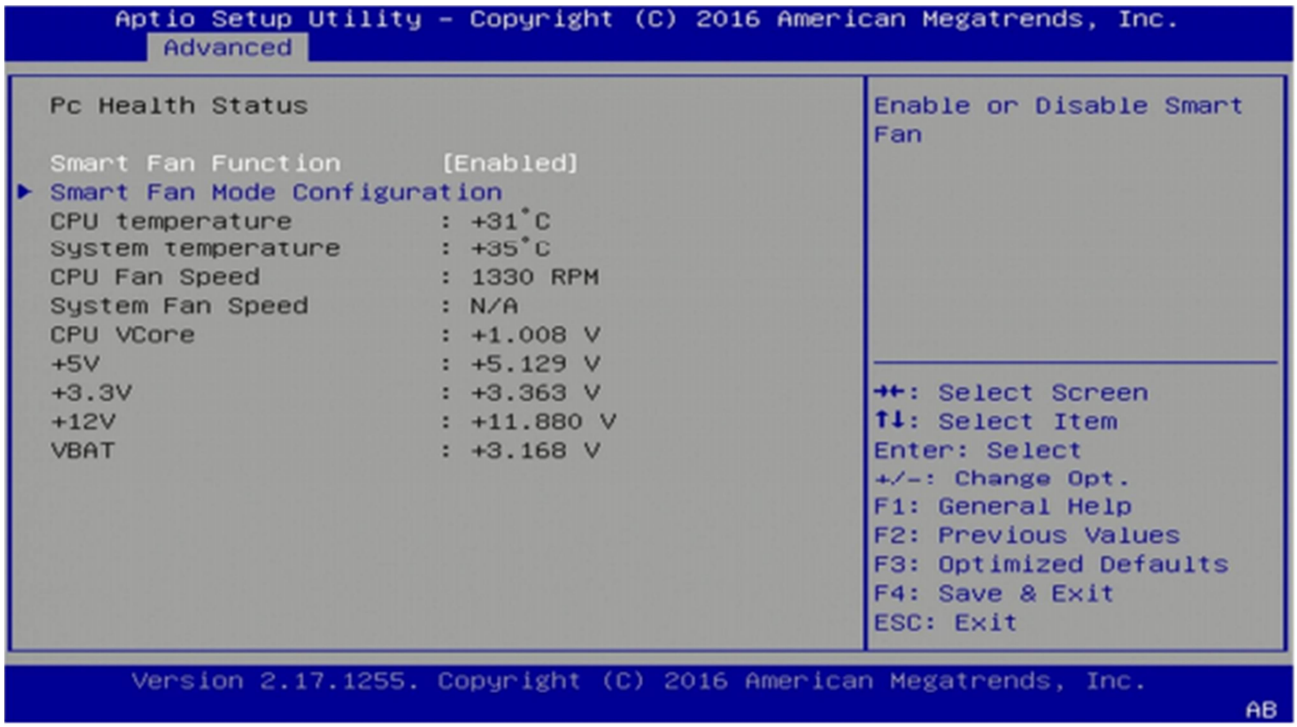


3.4.5 F81866 Super IO Configuration

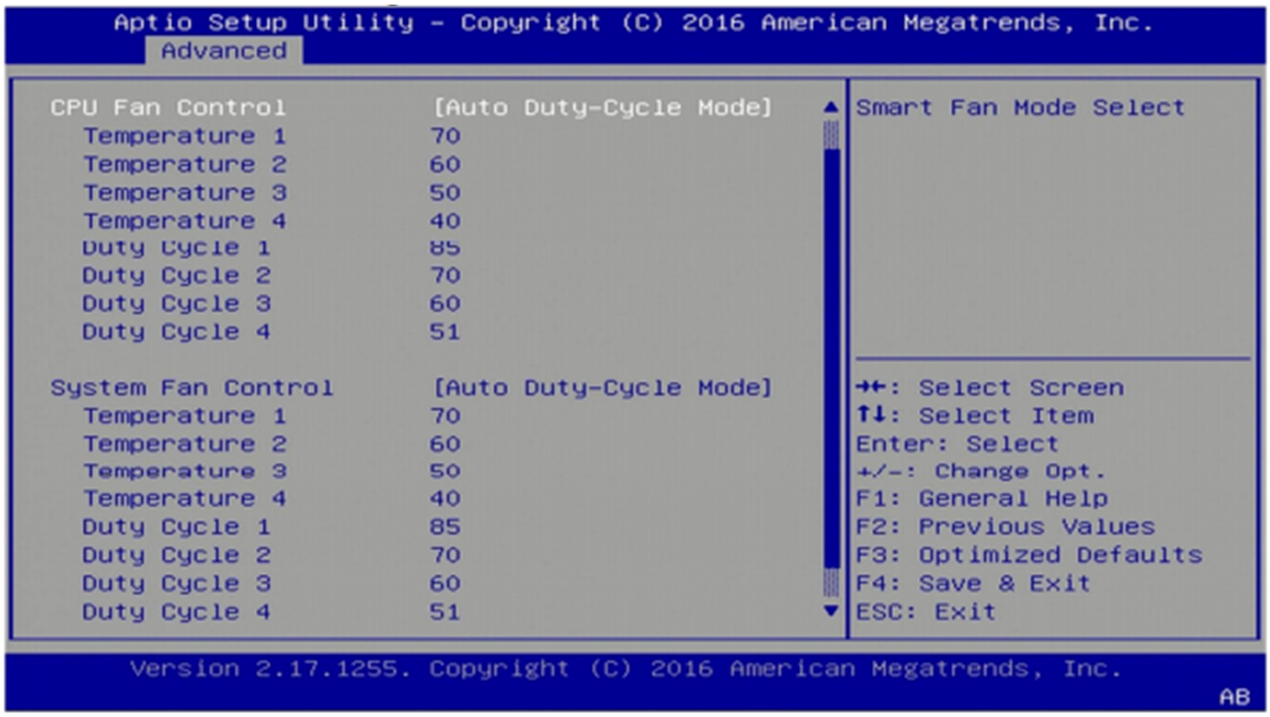




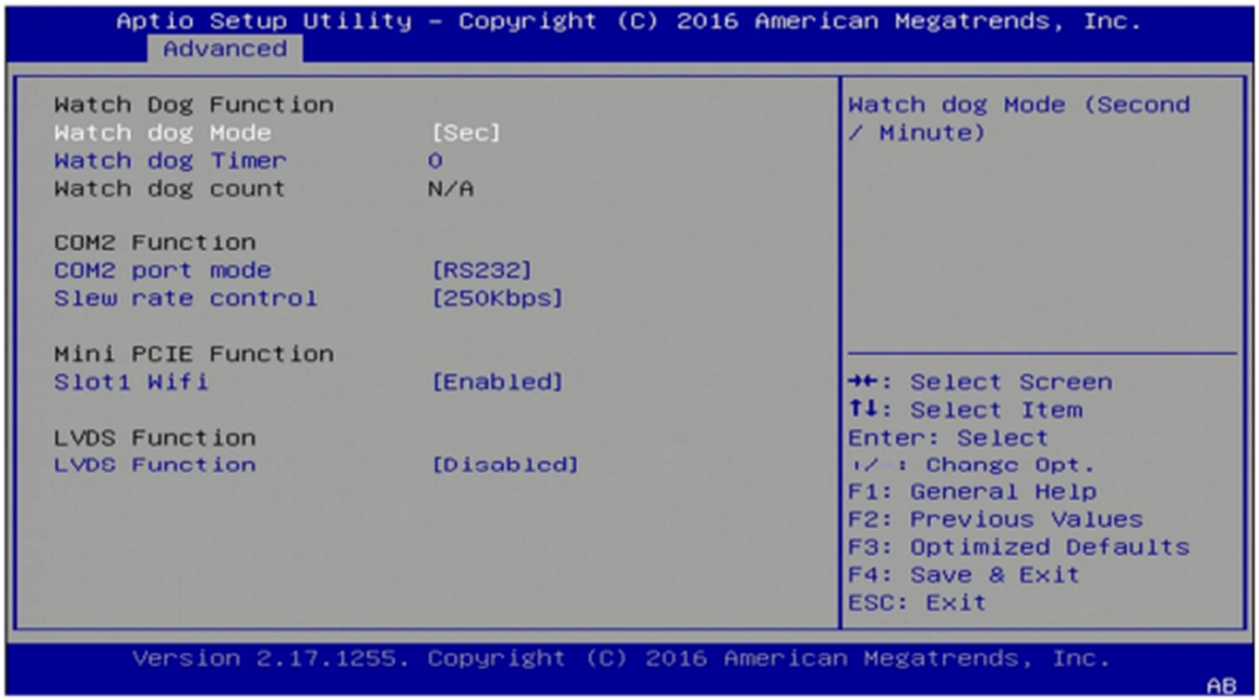
3.4.6 Hardware Monitor

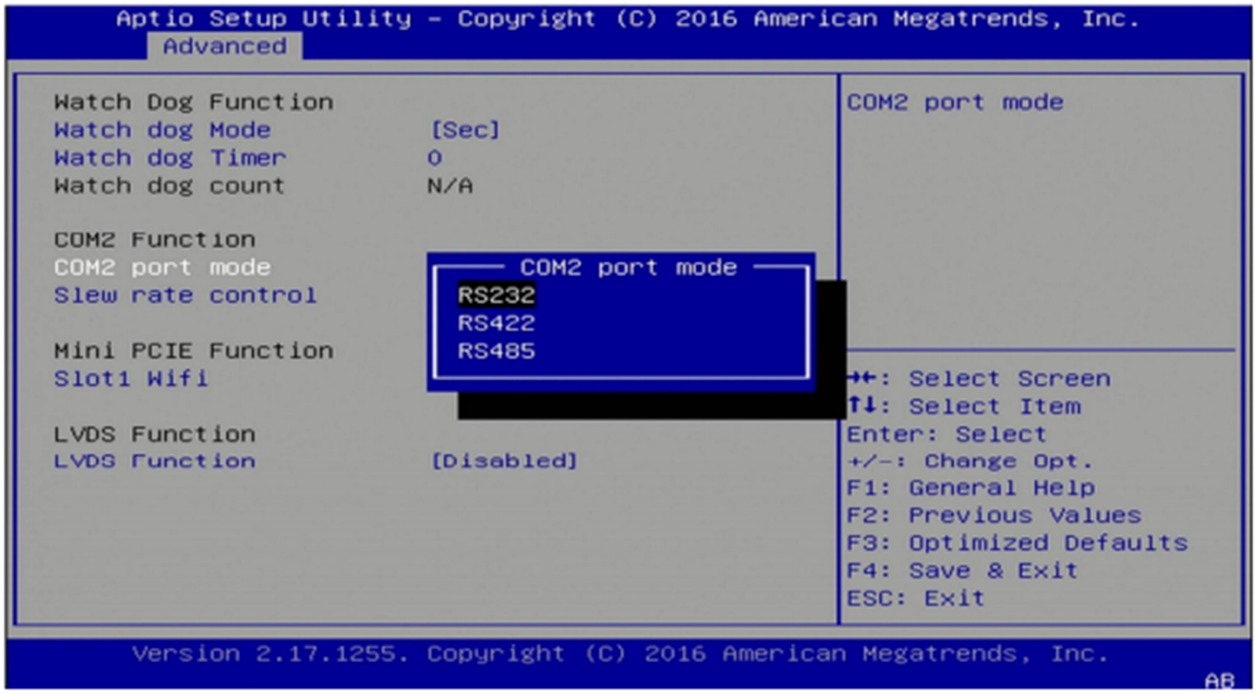


3.4.6.1 Smart Fan Mode Configuration

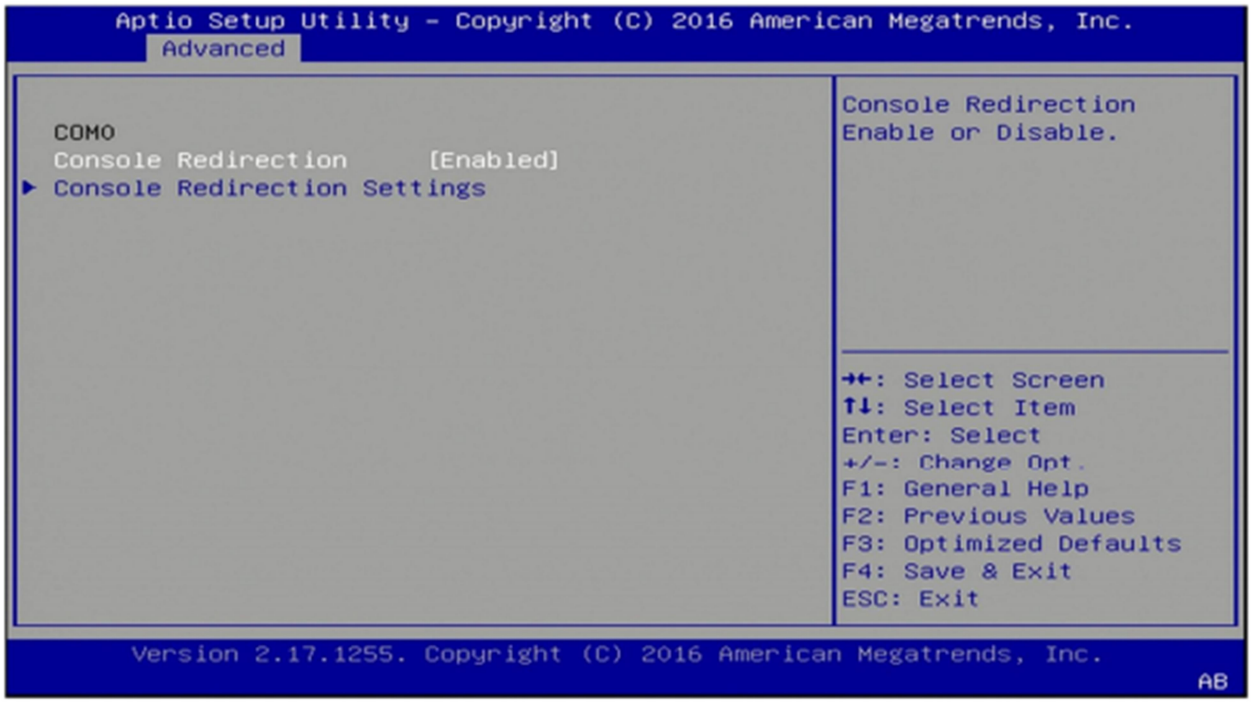


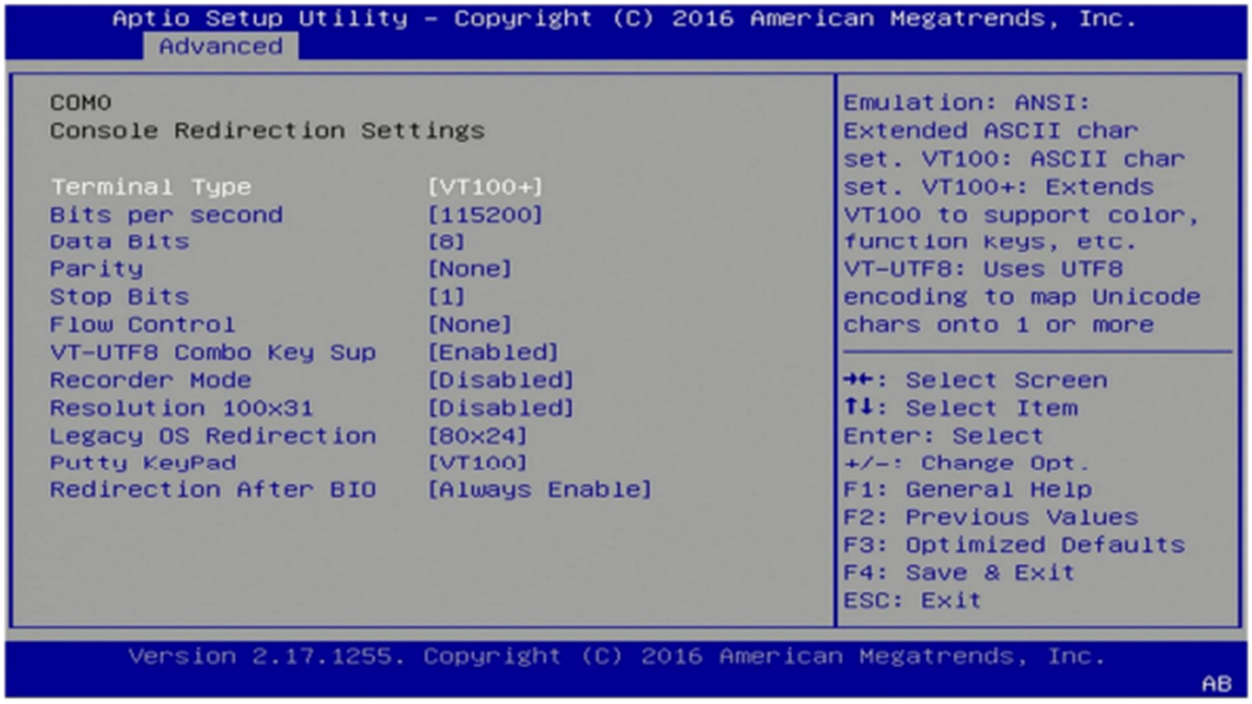
3.4.7 Platform Function



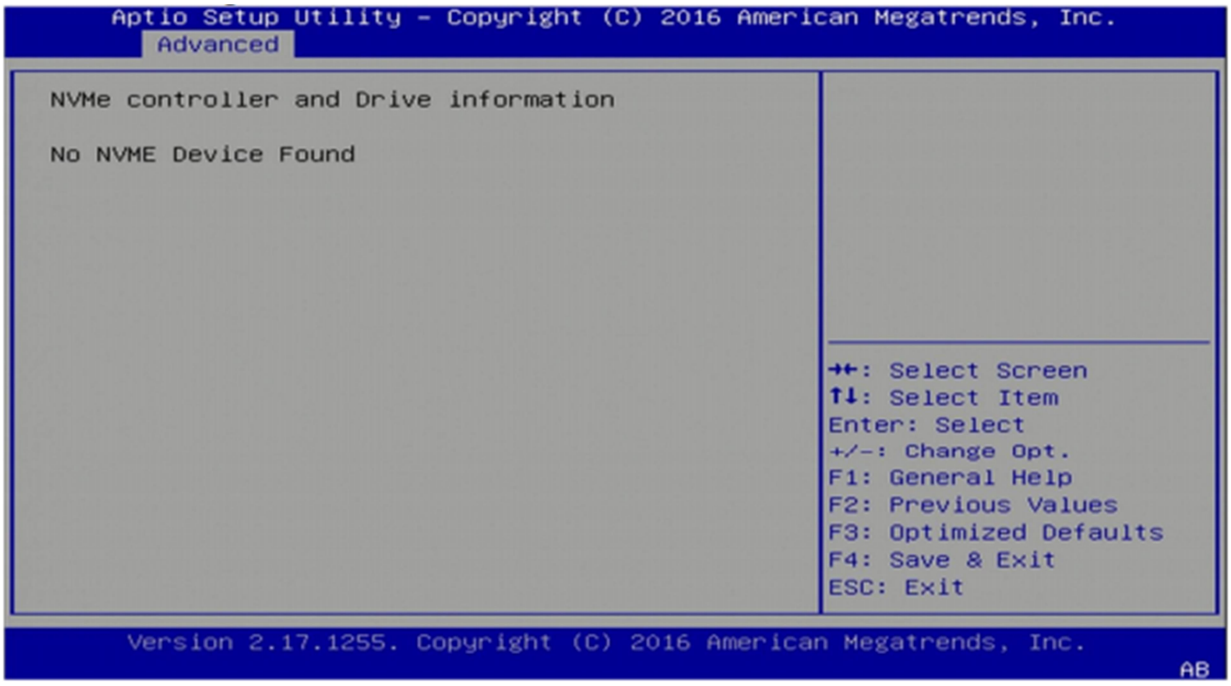


3.4.8 Serial Consolr Redirection

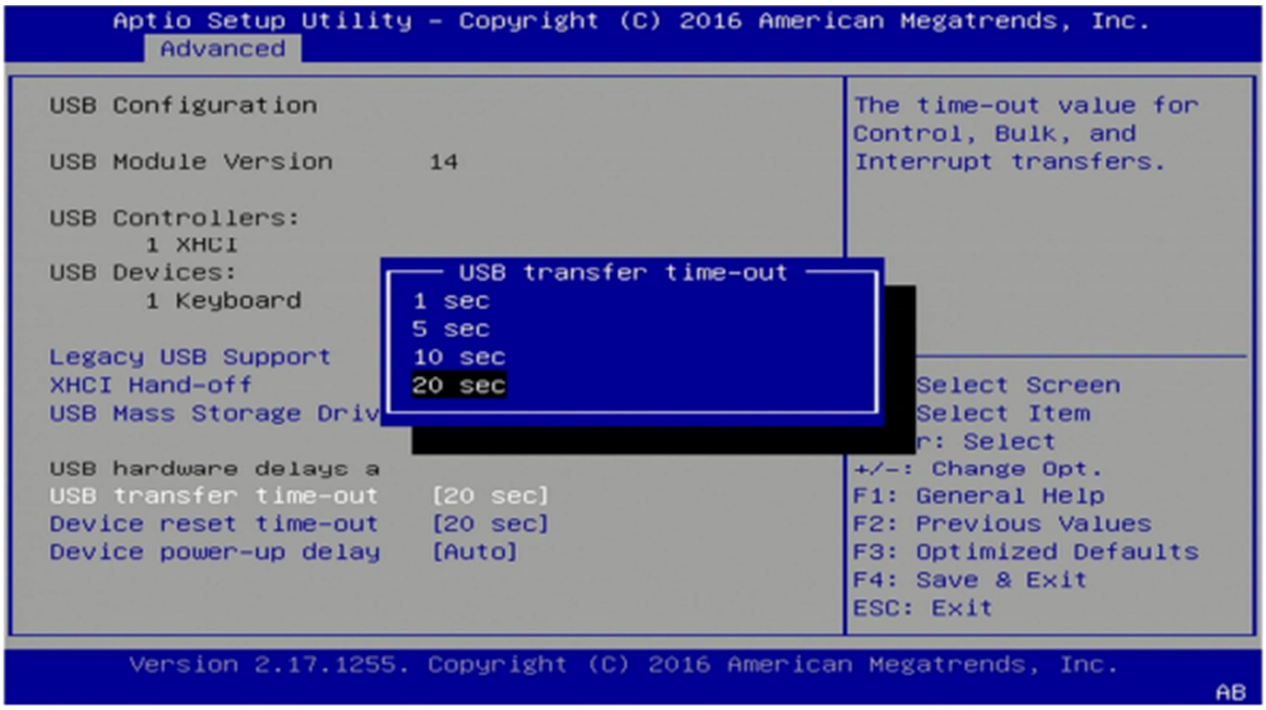




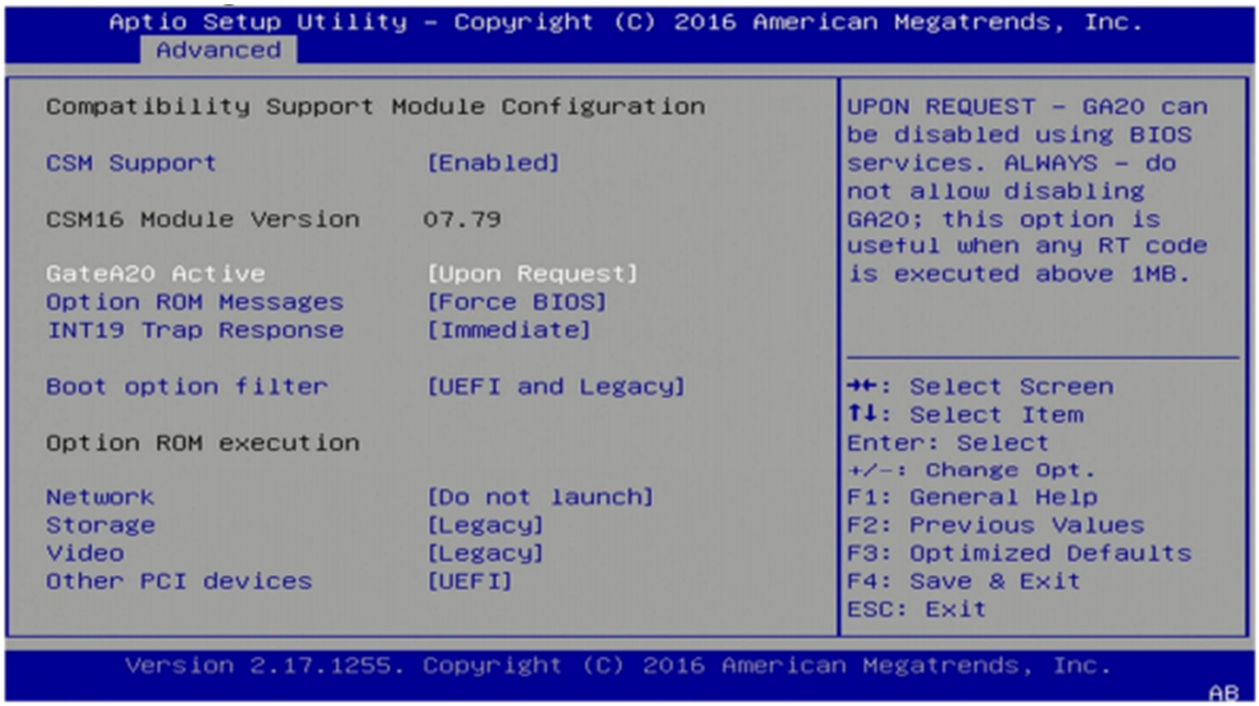
3.4.9 NVMe Configuration



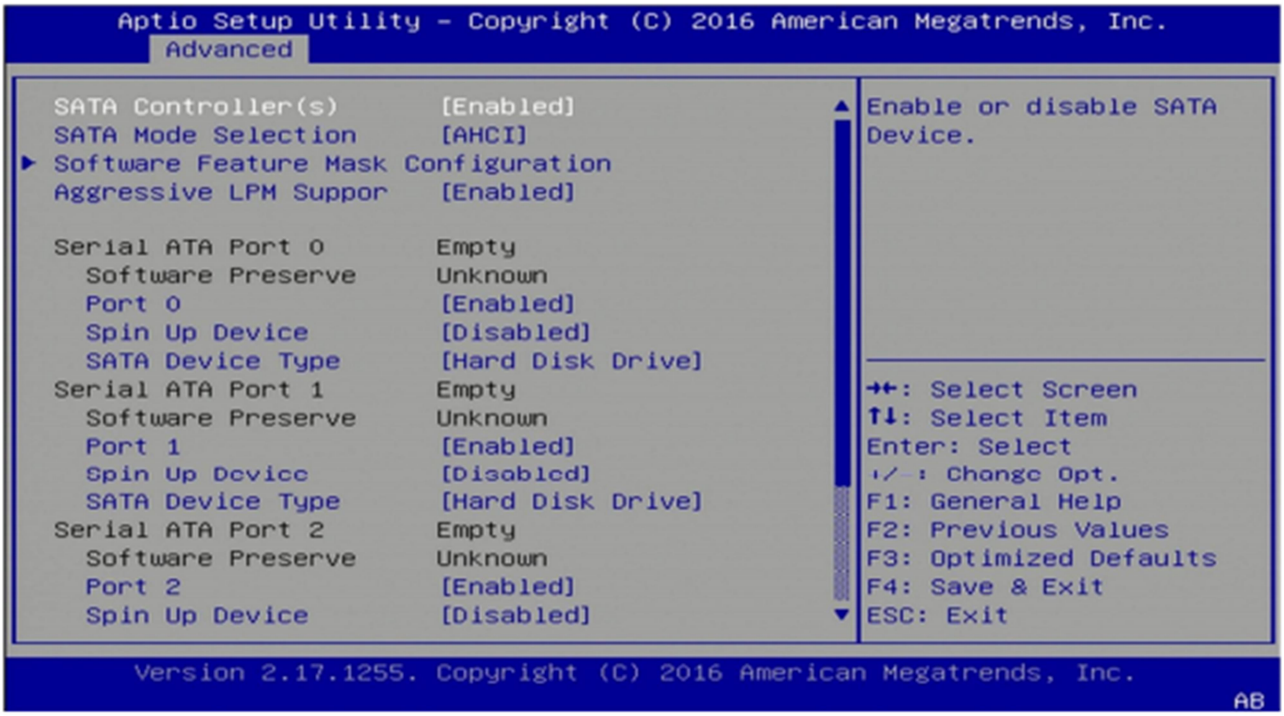
3.4.10 USB Configuration



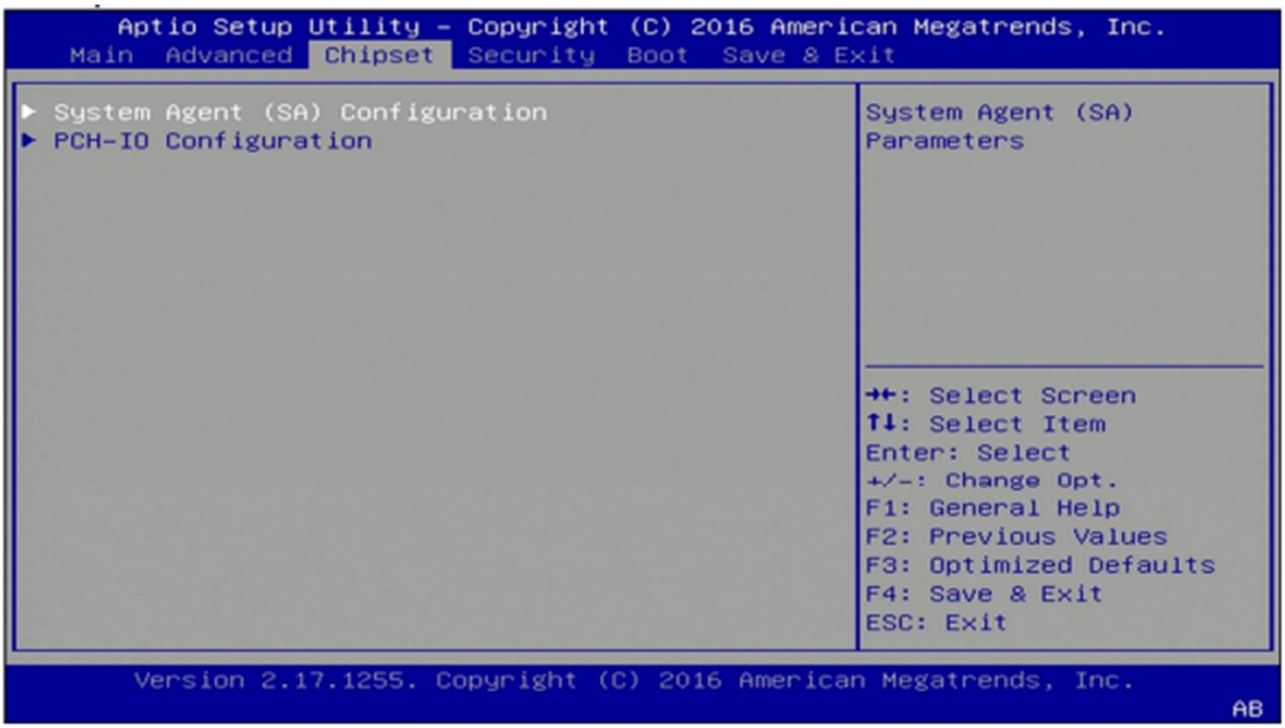
3.4.11 CSM Configuration



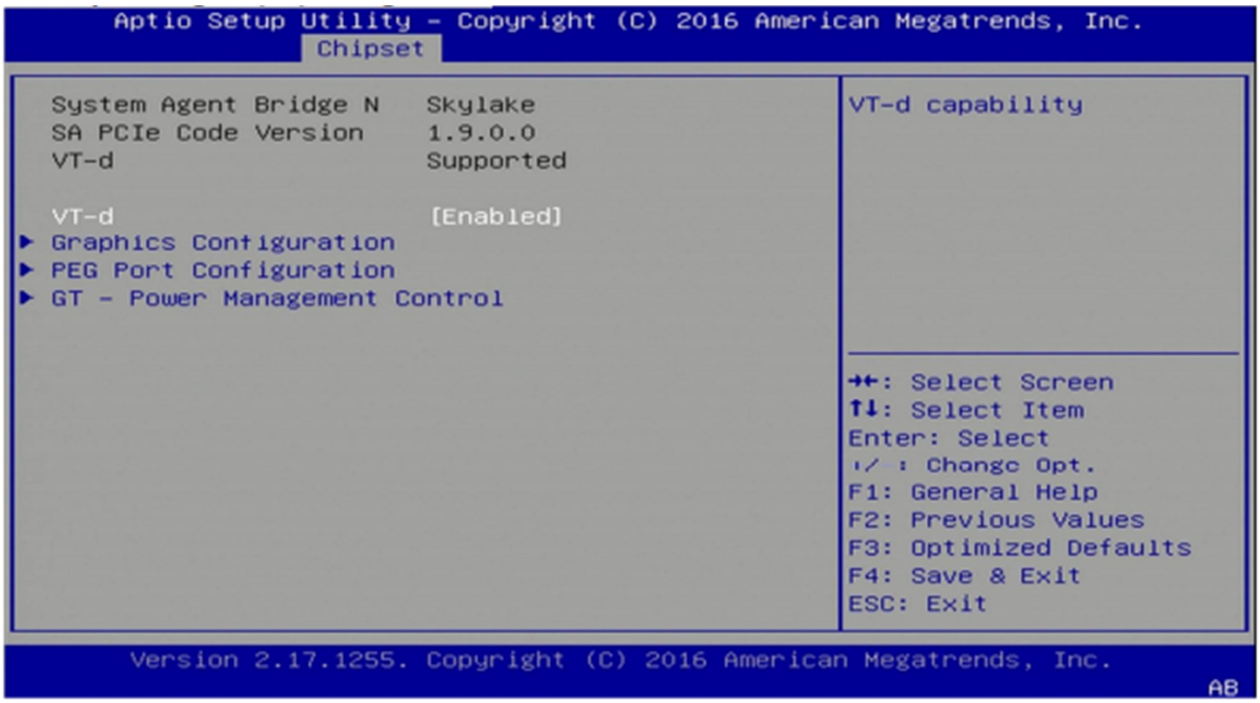
3.4.12 SATA Configuration



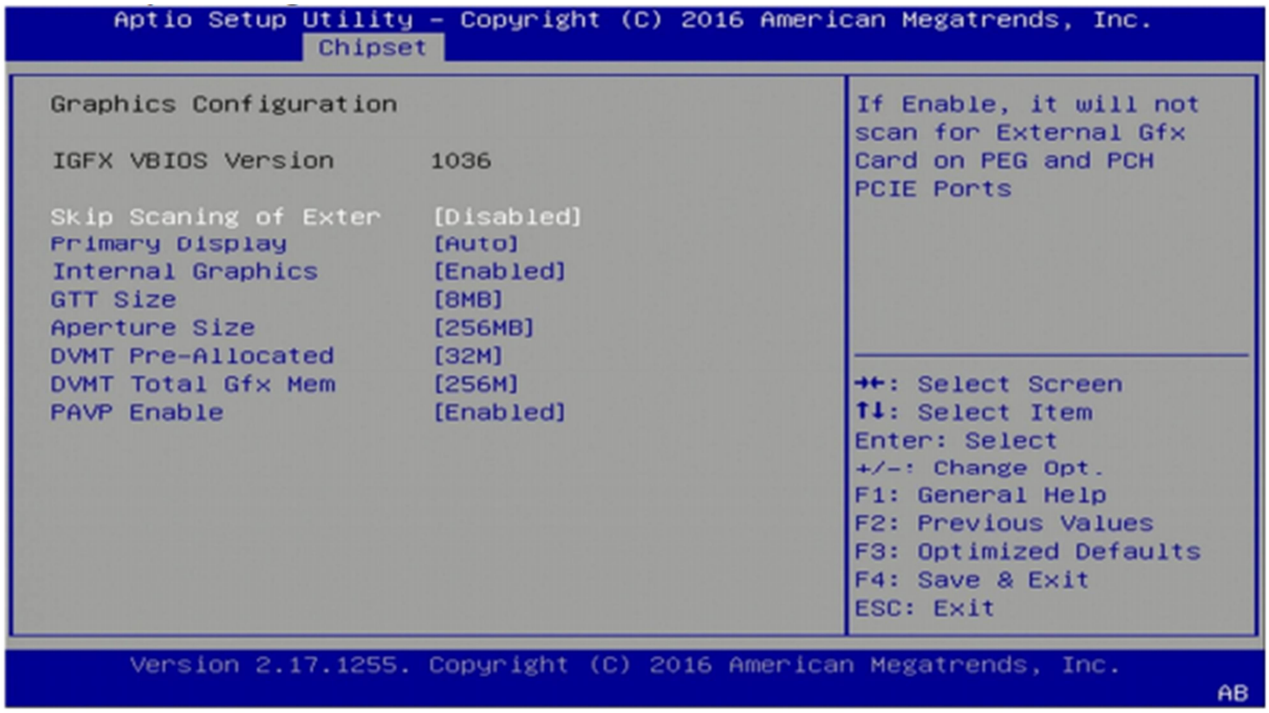
3.5 Chipset Menu



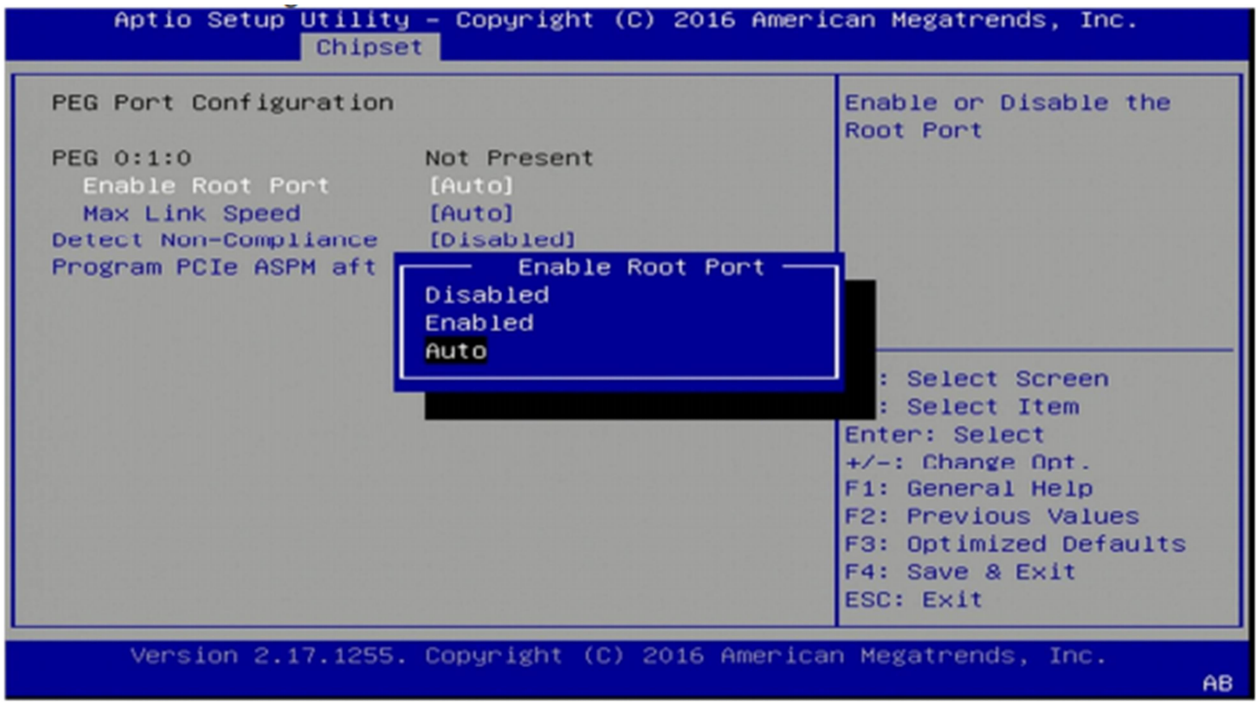
3.5.1 System Agent (SA) Configuration



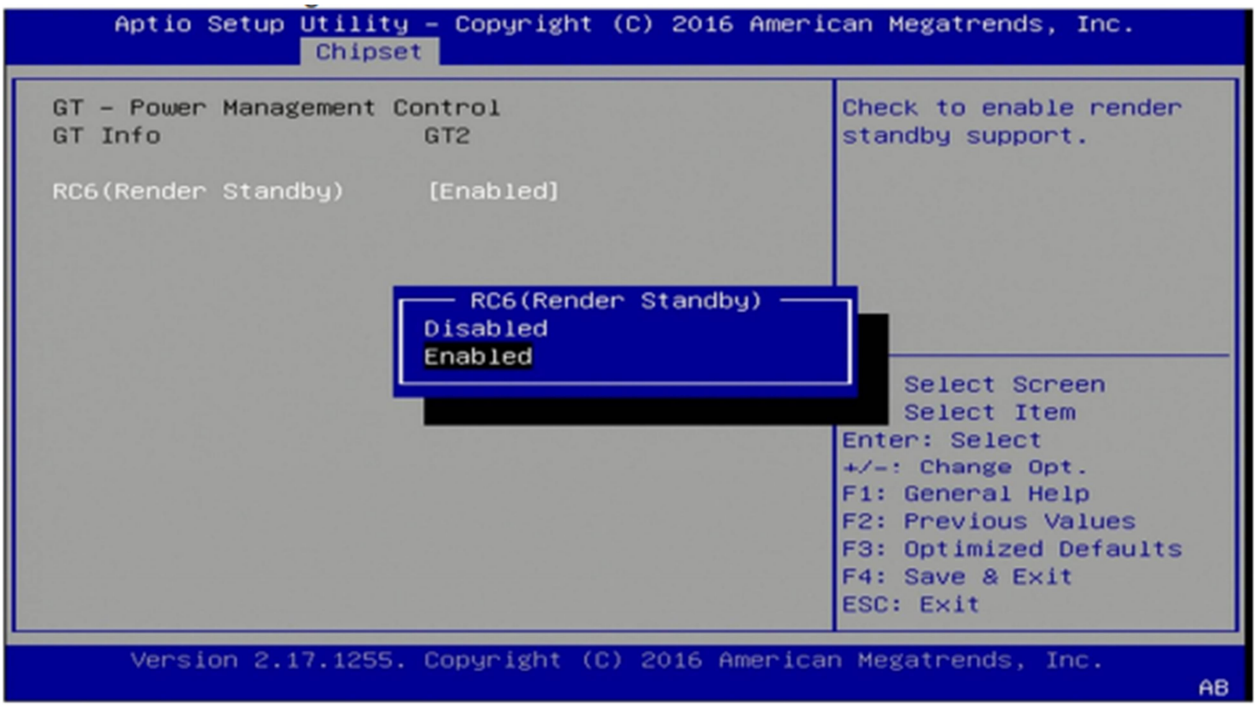
3.5.1.1 Graphics Configuration



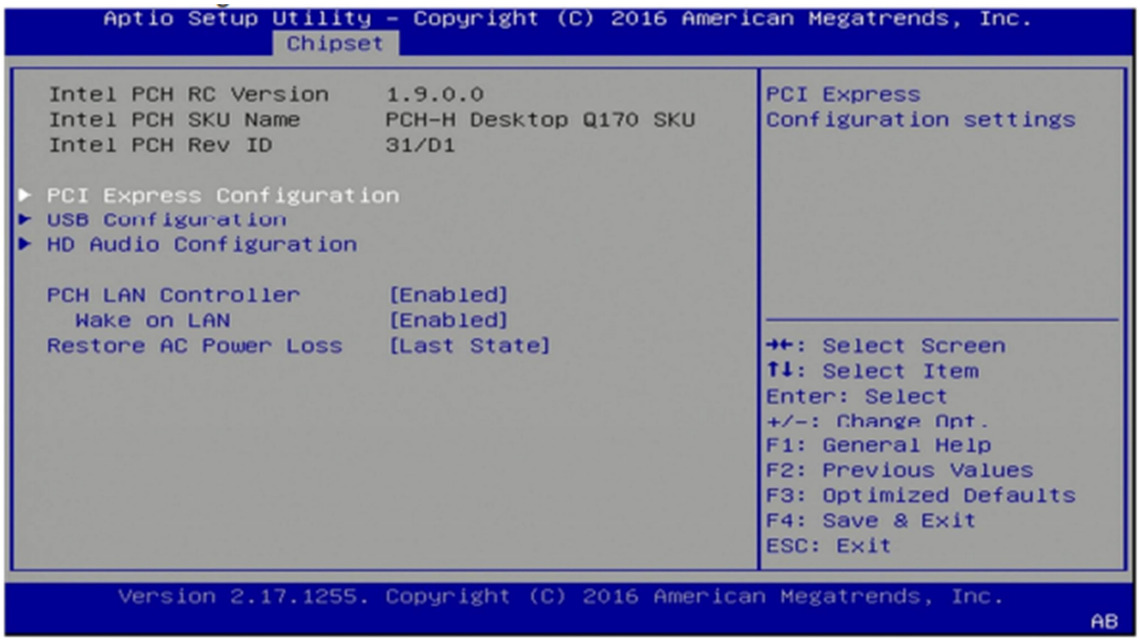
3.5.1.2 PEG Port Configuration

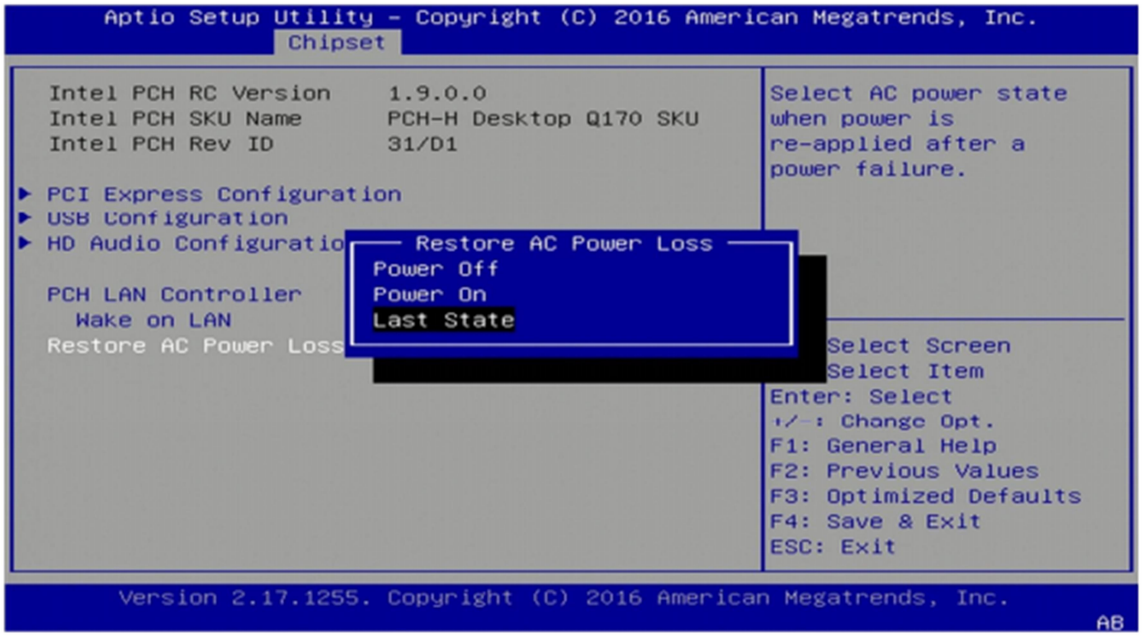


3.5.1.3 GT-Power Management Control

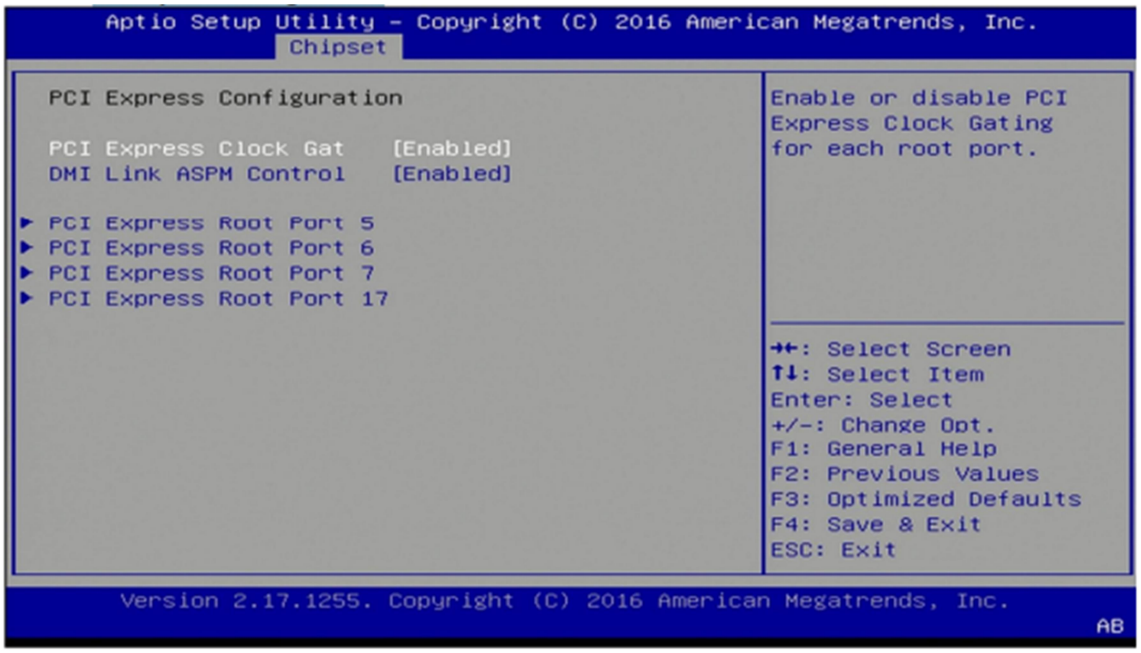


3.5.2 PCH-IO Configuration

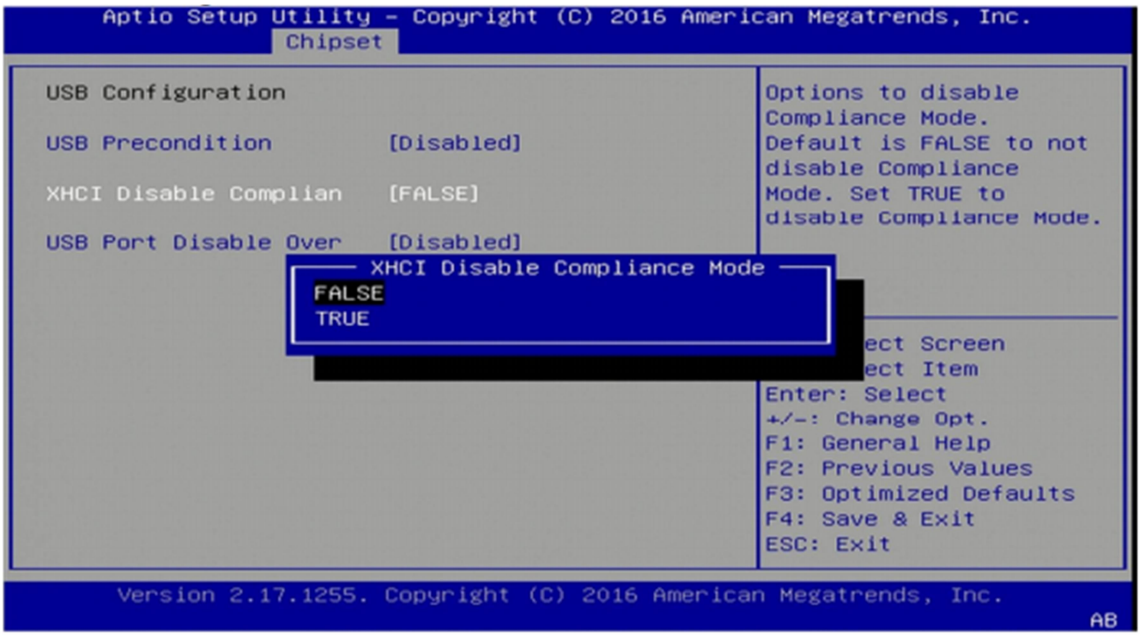


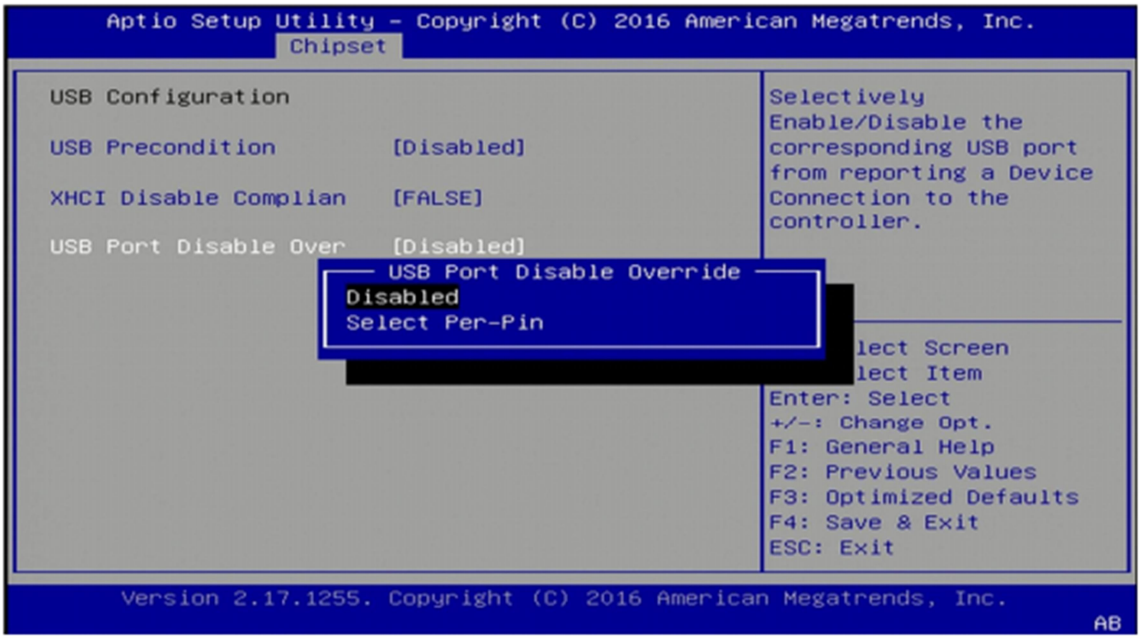


3.5.2.1 PCI Express Configuration

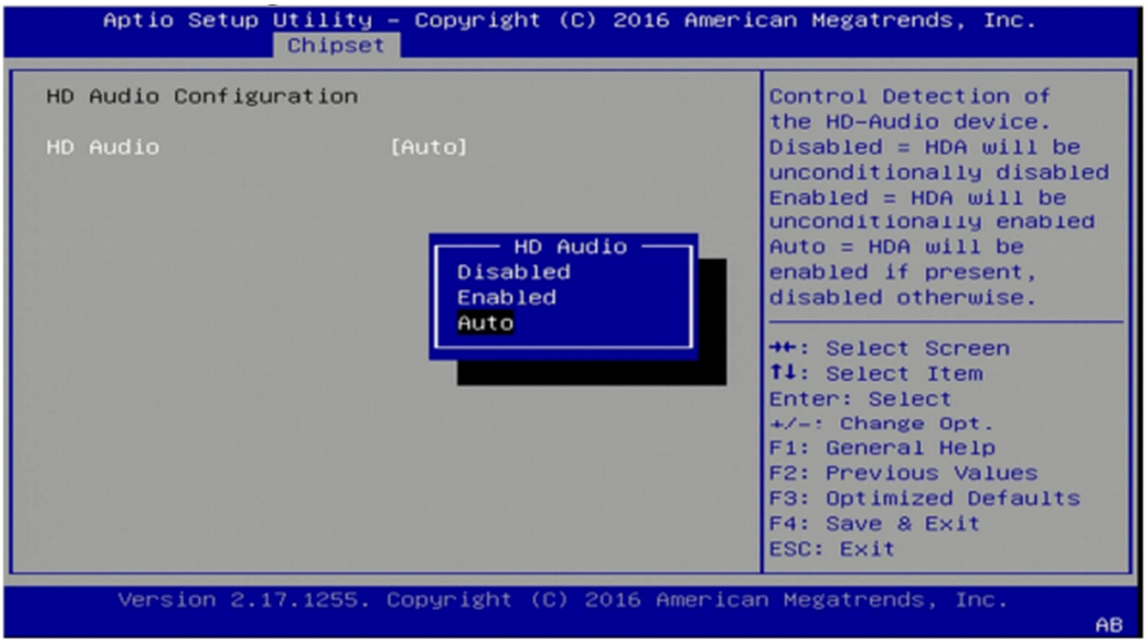


3.5.2.2 USB configuration



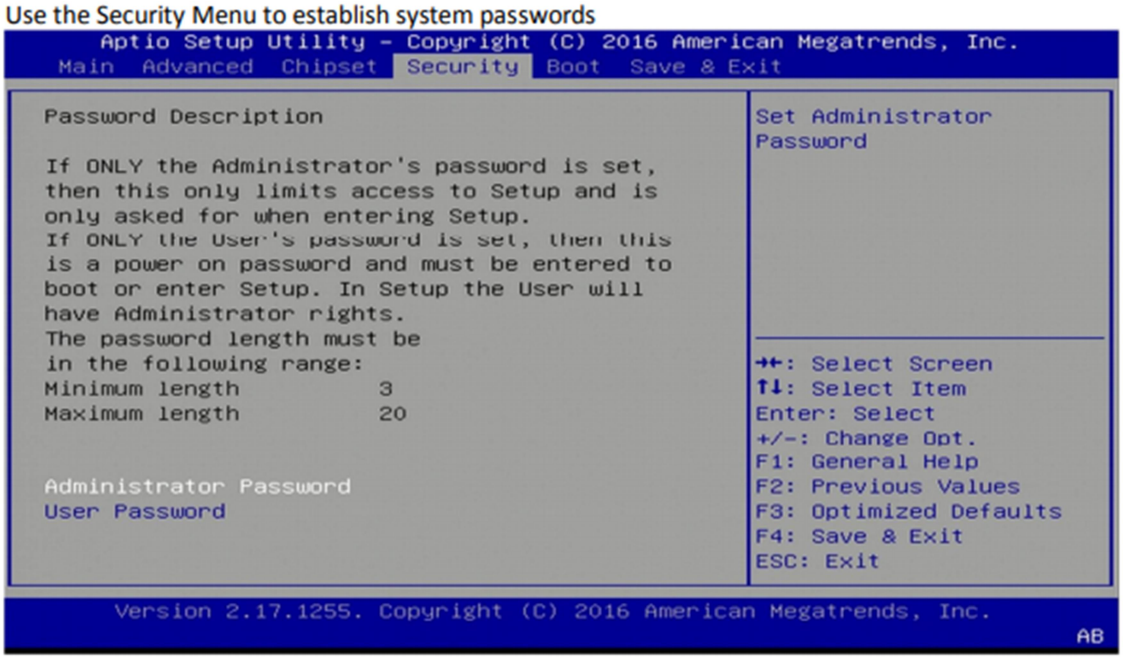


3.5.2.3 HD Audio Configuration



3.6 Security Menu

Use the Security Menu to establish system passwords

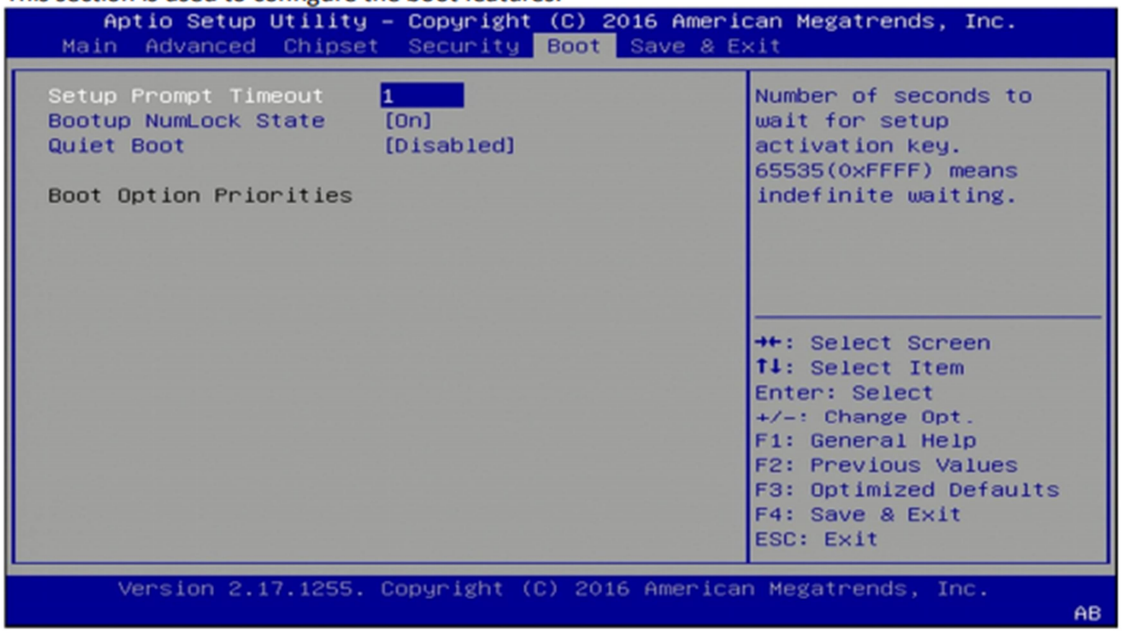


Administrator Password
Set administrator password.

User Password
Set user Password.

3.7 Boot Menu

This section is used to configure the boot features.



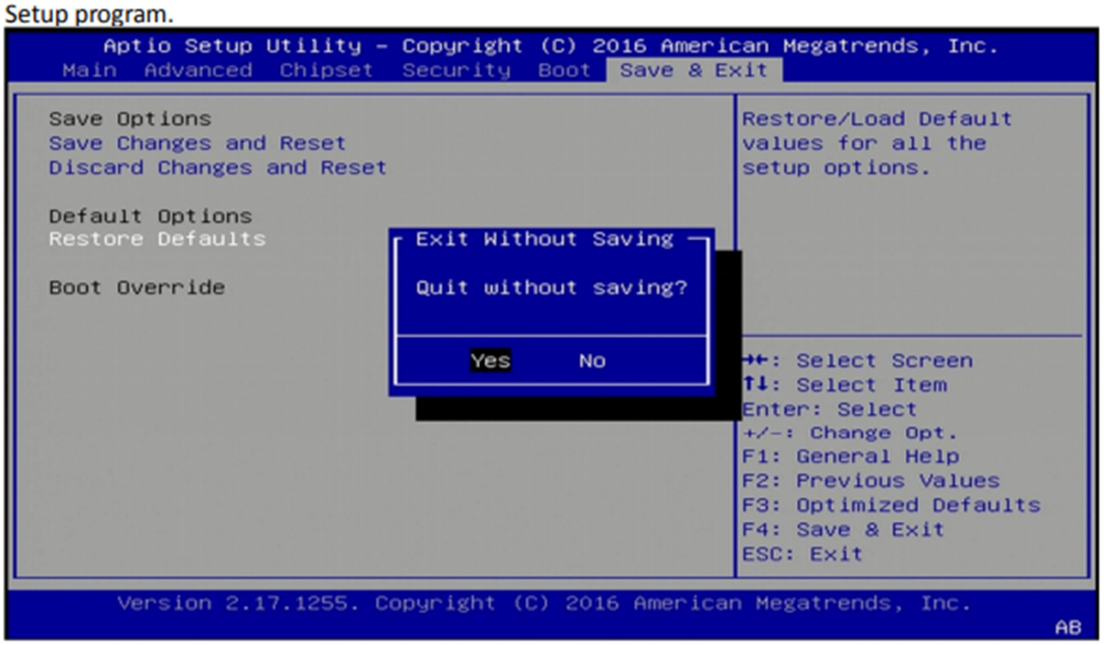
Setup Prompt Timeout
Number of seconds to wait for setup activation key. 65535 (0xFFFF) means indefinite waiting.

Bootup NumLock State
Select the keyboard NumLock state

Quiet Boot
Enables or disables quiet boot option

3.8 Save & Exit

This screen provides functions for handling changes made to the BIOS settings and the exiting of the Setup program.



Save Changes and Exit
Exit system setup after saving the changes

Discard Changes and Exit
Exit system setup without saving changes

Restore Defaults
Restore/Load default values for all the setup options