GIGABYTE™

MB10-DS1
BIOS Setup
User's Guide

Rev.1.0

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Documentation Classifications

In order to assist in the use of this product, GIGABYTE provides the following types of documentation:

- User Manual: detailed information & steps about the installation, configuration and use of this product (e.g. motherboard, server barebones), covering hardware and BIOS.
- User Guide: detailed information about the installation & use of an add-on hardware or software component (e.g. BMC firmware, rail-kit) compatible with this product.
- Quick Installation Guide: a short guide with visual diagrams that you can reference easily for installation purposes of this product (e.g. motherboard, server barebones).

Please see the support section of the online product page to check the current availability of these documents.

For More Information

For related product specifications, the latest firmware and software, and other information please visit our website at **http://www.gigabyte.com**

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Table of Contents

BIOS Setup

System BIOS

BIOS (Basic Input and Output System) records hardware parameters of the system in the EFI on the motherboard. Its major functions include conducting the Power-On Self-Test (POST) during system startup, saving system parameters, loading the operating system etc. The BIOS includes a BIOS Setup program that allows the user to modify basic system configuration settings or to activate certain system features. When the power is turned off, the battery on the motherboard supplies the necessary power to the CMOS to keep the configuration values in the CMOS.

To access the BIOS Setup program, press the <DEL> key during the POST when the power is turned on.

- When changing the system configuration settings
- When redefining the communication ports to prevent any conflicts
- When modifying the power management configuration
- When changing the password or making other changes to the security setup
- When a configuration error is detected by the system and you are prompted ("Run Setup" message) to make changes to the BIOS setup

NOTE: If you repeatedly receive Run Setup messages, the battery may be bad. Ask qualified technician for assistance.

NOTE: The screenshots used in this guide display default system values. These values may not be the same those found in your system.

Entering BIOS Setup

1. Turn on the server and the monitor.

   If the server is already turned on, close all open applications, then restart the server.

2. During POST, press **DEL**

   If you fail to press **DEL** before POST is completed, you will need to restart the server. The Setup Main menu will be displayed showing the Setup's menu bar. Use the left and right arrow keys to move between selections on the menu bar.

BIOS Setup Program Function Keys

<→><←>	Move the selection bar to select the screen
< ↑ >< ↓ >	Move the selection bar to select an item
<Enter>	Execute command or enter the submenu
<+>	Increase the numeric value or make changes
<->	Decrease the numeric value or make changes
<F1>	Show descriptions of general help
<F3>	Restore the previous BIOS settings for the current submenus
<F9>	Load the Optimized BIOS default settings for the current submenus
<F10>	Save all the changes and exit the BIOS Setup program
<Esc>	Main Menu: Exit the BIOS Setup program
	Submenus: Exit current submenu

Main
This setup page includes all the items of the standard compatible BIOS.

Advanced
This setup page includes all the items of AMI BIOS special enhanced features.
(ex: Auto detect fan and temperature status, automatically configure hard disk parameters.)

Chipset
This setup page includes all the submenu options for configuring the functions of the Platform Controller Hub.

Server Management
Server additional features enabled/disabled setup menus.

Security
Change, set, or disable supervisor and user password. Configuration supervisor password allows you to restrict access to the system and BIOS Setup.
A supervisor password allows you to make changes in BIOS Setup.
A user password only allows you to view the BIOS settings but not to make changes.

Boot
This setup page provides items for configuration of   the boot sequence.

Save & Exit
Save all the changes made in the BIOS Setup program to the CMOS and exit BIOS Setup. (Pressing <F10> can also carry out this task.)
Abandon all changes and the previous settings remain in effect. Pressing <Y> to the confirmation message will exit BIOS Setup. (Pressing <Esc> can also carry out this task.).

Main Menu

```
                              Bios Setup Utility
   Main  Advanced  IntelRCSetup  Server Mgmt  Security  Boot  Save & Exit

   BIOS Information                                          ▲  Set the Date. Use Tab to
   Project Name                 MB10-DS1                        switch between Date
   Project Version              F06                             elements.
   Build Date and Time          04/29/2016 10:43:53

   BMC Information
   BMC Firmware Version         08.37
   SDR Version                  00.04
   FRU Version                  01.00

   Processor Information
   CPU Brand String             Intel(R) Xeon(R) CPU D-15...
   Max CPU Speed                2400 MHz
   CPU Signature                50663                        ──────────────────────────
   Processor Core               4                            ➔◆: Select Screen
   Microcode Patch              07000009                     ↑↓: Select Item
                                                             Enter: Select
   Memory Information                                        +/-: Change Opt.
   Total Memory                 16384 MB                     F1: General Help
   Memory Frequency             2133 MHz                     F3: Previous Values
                                                             F9: Optimized Defaults
   Onboard LAN Information                                    F10: Save & Exit
   LAN1 MAC Address             1C-1B-0D-06-A6-A0            ESC: Exit
   LAN2 MAC Address             1C-1B-0D-06-A6-A1
                                                          ▼
```

```
                        Bios Setup Utility
   Main  Advanced  IntelRCSetup  Server Mgmt  Security  Boot  Save & Exit

   Project Version              F06                      ▲ Set the Time. Use Tab to
   Build Date and Time          04/29/2016 10:43:53      ▓ switch between Time
                                                           elements.
   BMC Information
   BMC Firmware Version         08.37
   SDR Version                  00.04
   FRU Version                  01.00

   Processor Information
   CPU Brand String             Intel(R) Xeon(R) CPU D-15...
   Max CPU Speed                2400 MHz
   CPU Signature                50663
   Processor Core               4                        ───────────────────────────
   Microcode Patch              07000009
                                                           →←: Select Screen
   Memory Information                                      ↑↓: Select Item
   Total Memory                 16384 MB                   Enter: Select
   Memory Frequency             2133 MHz                   +/-: Change Opt.
                                                           F1: General Help
   Onboard LAN Information                                 F3: Previous Values
   LAN1 MAC Address             1C-1B-0D-06-A6-A0          F9: Optimized Defaults
   LAN2 MAC Address             1C-1B-0D-06-A6-A1          F10: Save & Exit
                                                           ESC: Exit
   System Date                  [Thu 01/01/2015]
   System Time                  [00:42:09]              ▼
```

Parameter	Description
Project Name	Displays the project name information.
Project Version	Displays version number of the BIOS setup utility.
Build Date and Time	Displays the date and time when the BIOS setup utility was created.
BMC Information(Note1)	
BMC Firmware Version(Note1)	Displays BMC firmware version information.
SDR Information	Displays BMC SDR information.
FRU Information	Displays BMC FRU information.
Processor Information Name/ Brand String/ Frequency/ Processor ID/ Stepping/ Count/ Microcode Revision	Technical specifications for the installed processor.
Memory Information(Note2)	
Total Memory	Determines how much total memory is present during the POST.
Frequency	Technical specifications for the installed memory.
Onboard LAN Information(Note3)	
LAN1 MAC Address	Displays LAN MAC address information.
LAN2 MAC Address	Displays LAN MAC address information.
System Date	Set the date following the weekday-month-day- year format.
System Time	Set the system time following the hour-minute- second format.

NOTE!
1.   Functions available on selected models.
2.   This section will display capacity and frequency information of the memory that the customer has
3.   The number of LAN ports listed will depend on the motherboard / system model.

Advanced Menu

The Advanced menu display submenu options for configuring the function of various hardware components. Select a submenu item, then press Enter to access the related submenu screen.

```
                          Bios Setup Utility
   Main  Advanced  IntelRCSetup  Server Mgmt  Security  Boot  Save & Exit

 ▶ iSCSI Configuration                              Configure the iSCSI
 ▶ Trusted Computing                                parameters.
 ▶ AST2400 Super IO Configuration
 ▶ Serial Port Console Redirection
 ▶ PCI Subsystem Settings
 ▶ Network Stack Configuration
 ▶ CSM Configuration
 ▶ Post Report Configuration
 ▶ NVMe Configuration
 ▶ USB Configuration
 ▶ Chipset Configuration

                                                    ➔←: Select Screen
                                                    ↑↓: Select Item
                                                    Enter: Select
                                                    +/-: Change Opt.
                                                    F1: General Help
                                                    F3: Previous Values
                                                    F9: Optimized Defaults
                                                    F10: Save & Exit
                                                    ESC: Exit
```

iSCSI Configuration

```
                        Bios Setup Utility
 ┌──────────────┐
 │   Advanced   │
 └──────────────┘
 ┌─────────────────────────────────────────┬───────────────────────────────┐
 │                                          │                               │
 │  iSCSI Initiator Name                    │ The worldwide unique name     │
 │                                          │ of iSCSI Initiator. Only      │
 │ ▶ Add an Attempt                         │ IQN format is                 │
 │                                          │ accepted.Range is from 4      │
 │ ▶ Delete Attempts                        │ to 223                        │
 │                                          │                               │
 │ ▶ Change Attempt Order                   │                               │
 │                                          │                               │
 │                                          │                               │
 │                                          │                               │
 │                                          │                               │
 │                                          ├───────────────────────────────┤
 │                                          │ →←: Select Screen             │
 │                                          │ ↑↓: Select Item               │
 │                                          │ Enter: Select                 │
 │                                          │ +/-: Change Opt.              │
 │                                          │ F1: General Help              │
 │                                          │ F3: Previous Values           │
 │                                          │ F9: Optimized Defaults        │
 │                                          │ F10: Save & Exit              │
 │                                          │ ESC: Exit                     │
 │                                          │                               │
 │                                          │                               │
 │                                          │                               │
 └─────────────────────────────────────────┴───────────────────────────────┘
```

Parameter	Description	Option
iSCSI Initiator Name		
Add an Attempts	Press [Enter] for configuration of advanced items.	
Delete Attempts	Press [Enter] for configuration of advanced items.	
Change Attempt Order	Press [Enter] for configuration of advanced items.	

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Trusted Computing

```
                          Bios Setup Utility
 ┌──────────┐
 │ Advanced │
 └──────────┘

 Configuration                                    Enables or Disables BIOS
    Security Device Support        [Enable]        support for security
    NO Security Device Found                       device. O.S. will not show
                                                   Security Device. TCG EFI
                                                   protocol and INT1A
                                                   interface will not be
                                                   available.
                                                   ────────────────────────
                                                   ⇥: Select Screen
                                                   ↑↓: Select Item
                                                   Enter: Select
                                                   +/-: Change Opt.
                                                   F1: General Help
                                                   F3: Previous Values
                                                   F9: Optimized Defaults
                                                   F10: Save & Exit
                                                   ESC: Exit
```

Parameter	Description	Option
Configuration		
Security Device Support	Select Enabled to activate TPM support feature.	Enable [Disable]
Current Status Information	Display current TPM status information.	

AST2400 Super IO Configuration

```
                              Bios Setup Utility
  Advanced

  AST2400 Super IO Configuration                            Set Parameters of Serial
                                                            Port 1 (COMA)
  Super IO Chip                         AST2400
▶ Serial Port 1 Configuration
▶ Serial Port 2 Configuration




                                                            ──────────────────────────
                                                            ↔: Select Screen
                                                            ↑↓: Select Item
                                                            Enter: Select
                                                            +/-: Change Opt.
                                                            F1: General Help
                                                            F3: Previous Values
                                                            F9: Optimized Defaults
                                                            F10: Save & Exit
                                                            ESC: Exit
```

Parameter	Description	Option
AST2600 Super IO Configuration		
Super IO Chip	Displays the super IO chip information	
Serial Port 1 Configuration (Note1)	Press [Enter] for configuration of advanced items.	
Serial Port 2 Configuration (Note1)	Press [Enter] for configuration of advanced items.	
Serial Port 1/2	Enable/Disable the Serial Port (COM). When set to Enabled allows you to configure the Serial port 1/2 settings. When set to Disabled, displays no configuration for the serial port.	[Enabled] Disabled
Change Settings (Note2)	Select an optimal settings for Super IO Device.	[Auto] IO=3F8h; IRQ=4; IO=3F8h; IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12; IO=2F8h; IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12; IO=3E8h; IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12; IO=2E8h; IRQ=3, 4, 5, 6, 7, 9, 10, 11, 12;

NOTE!
1.   Advanced items prompt when this item is defined.
2.   This item appears when Serial Port is set to Enabled.

Serial Port Configuration

```
                                    Bios Setup Utility
      Advanced

                                                              Console Redirection Enable
                                                              or Disable.
   COM1
   Console Redirection                     [Disabled]
 ▶ Console Redirection Settings

   COM2/Serial Over LAN
   Console Redirection                     [Disabled]
 ▶ Console Redirection Settings

   Legacy Console Redirection
 ▶ Legacy Console Redirection Settings

   Serial Port for Out-of-Band Management/
   Windows Emergency Management Services (EMS)            ▶+: Select Screen
   Console Redirection                     [Disabled]     ↑↓: Select Item
 ▶ Console Redirection Settings                           Enter: Select
                                                          +/-: Change Opt.
                                                          F1: General Help
                                                          F3: Previous Values
                                                          F9: Optimized Defaults
                                                          F10: Save & Exit
                                                          ESC: Exit
```

Parameter	Description	Option
COM1/2 Console Redirection (Note1)	Select whether to enable console redirection for specified device. Console redirection enables the users to manage the system from a remote location.	Enabled [Disabled]
COM2 Serial Over LAN Console Redirection Settings	Press [Enter] to configure advanced items. **Please note that this item is configurable when COM1/Serial Over LAN & COM2 Console Redirection is set to Enabled.**	
Terminal Type	Selects a terminal type to be used for console redirection.	VT100 VT100+ [ANSI] VT-UTF8
Bits per second	Selects the transfer rate for console redirection.	9600 19200 38400 57600 [115200]
Data Bits	Selects the number of data bits used for console redirection.	7 [8]
Parity	A parity bit can be sent with the data bits to detect some transmission errors. Even: parity bit is 0 if the num of 1's in the data bits is even. Odd: parity bit is 0 if num of 1's in the data bits is odd. Mark: parity bit is always 1. Space: Parity bit is always 0.	[None] Even Odd Mark Space

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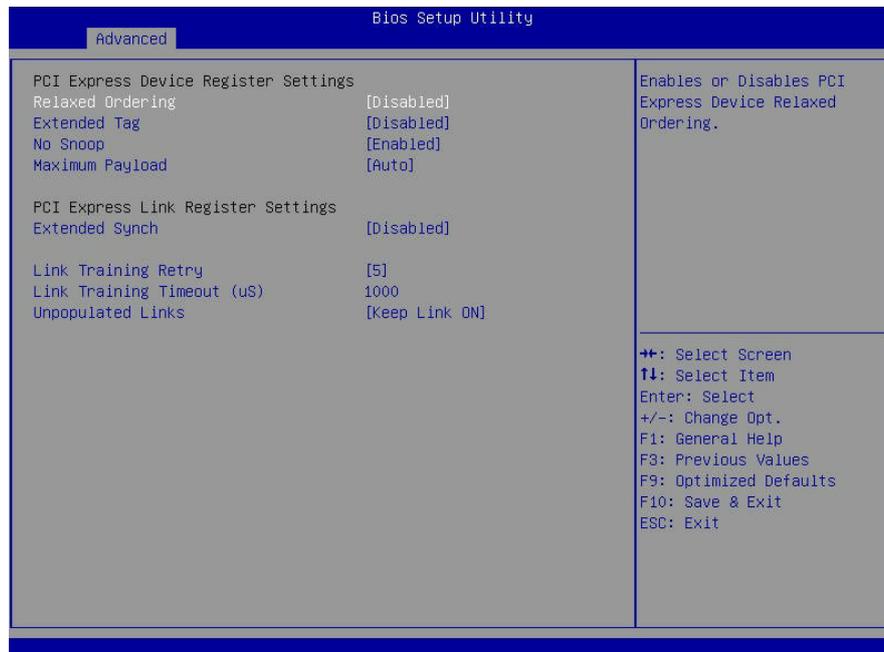|		
Stop Bits	Stop bits indicate the end of a serial data packet. (A start bit indicates the beginning). The standard setting is 1 stop bit. Communication with slow devices may require more than 1 stop bit.	[1] 2
Flow Control	Flow control can prevent data loss from buffer overflow. When sending data, if the receiving buffers are full, a 'stop' signal can be sent to stop the data flow. Once the buffers are empty, a 'start' signal can be sent to re-start the flow. Hardware flow control uses two wires to send start/stop signals.	[None] Hardware RTS/CTS
VT-UTF8 Combo Key Support	Enable/Disable the VT-UTF8 Combo Key Support.	[Enabled] Disabled
Recorder Mode (Note)	When this mode enabled, only texts will be send. This is to capture Terminal data.	Enabled [Disabled]
Recorder Mode (Note)	When this mode enabled, only texts will be send. This is to capture Terminal data.	[Enabled] Disabled
Resolution 100x31 (Note)	Enable/Disable extended terminal resolution.	Enabled] Disabled
Legacy OS Direction Resolution	On Legacy OS, the Number of Rows and Columns supported redirection.	[80x24] 80x25
Putty KeyPad (Note)	Selects Function Key and KeyPad on Putty.	[VT100] LINUX XTERMR6 SC0 ESCN VT400
Redirection After BIOS POST	This option allows user to enable console redirection after O.S has loaded.	[Always Enable] Boot Loader
Legacy Console Redirection Settings	Press [Enter] to configure advanced items. Selects a COM port for Legacy serial redirection.	[COM1] COM2
Serial Port for Out-of-Band Management / Windows Emergency Management Services (EMS) Console Redirection (Note)	EMS console redirection allows the user to configure Console Redirection Settings to support Out-of-Band Serial Port management.	Enabled [Disabled]
Serial Port for Out-of-Band EMS Console Redirection Settings	Press [Enter] to configure advanced items. **Please note that this item is configurable when Serial Port for Out-of-Band Management EMS Console Redirection is set to Enabled.**	
Out-of-Band Mgmt Port	Microsoft Windows Emerency Management Service (EMS) allows for remote management of a Windows Server OS through a serial port.	[COM1/Serial Over LAN] COM2.
Terminal Type	Selects a terminal type to be used for console redirection.	VT100 VT100+ [ANSI] VT-UTF8
Bits per second	Selects the transfer rate for console redirection.	9600 19200 38400 57600 [115200]
Flow Control	Flow control can prevent data loss from buffer overflow. When sending data, if the receiving buffers are full, a 'stop' signal can be sent to stop the data flow. Once the buffers are empty, a 'start' signal can be sent to re-start the flow. Hardware flow control uses two wires to send start/stop signals.	[None] Hardware RTS/CTS Software Xon/Xoff
Parity	A parity bit can be sent with the data bits to detect some transmission errors. Even: parity bit is 0 if the num of 1's in the data bits is even. Odd: parity bit is 0 if num of 1's in the data bits is odd.	[None] Even Odd Mark Space

Stop Bits	Stop bits indicate the end of a serial data packet. (A start bit indicates the beginning). The standard setting is 1 stop bit. Communication with slow	[1] 2

NOTE!
- Advanced items prompt when this item is defined.

NOTE!
- Advanced items prompt when this item is defined.

PCI Subsystem Settings

```
                              Bios Setup Utility
        Advanced

    PCI Express Slot #1 I/O ROM          [Enabled]          Enable/Disable PCI-Express
    Onboard LAN1 Controller              [Enabled]          slot #1 I/O ROM.
    Onboard LAN2 Controller              [Enabled]
    Onboard LAN1 I/O ROM                 [Enabled]
    Onboard LAN2 I/O ROM                 [Enabled]

    PCI Devices Common Settings:
    PCI Latency Timer                    [32 PCI Bus Clocks]
    VGA Palette Snoop                    [Disabled]
    Above 4G Decoding                    [Enabled]
    SR-IOV Support                       [Disabled]

  ▶ PCI Express Settings

                                                            →←: Select Screen
                                                            ↑↓: Select Item
                                                            Enter: Select
                                                            +/-: Change Opt.
                                                            F1: General Help
                                                            F3: Previous Values
                                                            F9: Optimized Defaults
                                                            F10: Save & Exit
                                                            ESC: Exit
```

```
                              Bios Setup Utility
        Advanced

    PCI Express Device Register Settings                    Enables or Disables PCI
    Relaxed Ordering                     [Disabled]         Express Device Relaxed
    Extended Tag                         [Disabled]         Ordering.
    No Snoop                             [Enabled]
    Maximum Payload                      [Auto]

    PCI Express Link Register Settings
    Extended Synch                       [Disabled]

    Link Training Retry                  [5]
    Link Training Timeout (uS)           1000
    Unpopulated Links                    [Keep Link ON]

                                                            →←: Select Screen
                                                            ↑↓: Select Item
                                                            Enter: Select
                                                            +/-: Change Opt.
                                                            F1: General Help
                                                            F3: Previous Values
                                                            F9: Optimized Defaults
                                                            F10: Save & Exit
                                                            ESC: Exit
```

Parameter	Description	Option
PCI Express Slot # I/O ROM	When enabled, This setting will initialize the device expansion ROM for the related PCI-E slot.	[Enabled] Disabled
Onboard LAN #1 I/O ROM Option	Configure onboard LAN device and initialize device expansion ROM.	iSCSI [PXE]
Onboard LAN1 Controller	Enable/Disable onboard LAN controller.	[Enabled] Disabled
Onboard LAN #1 I/O ROM	Enable/Disable onboard LAN#1 device and initialize device expansion ROM.	[Enabled] Disabled

PCI Latency Timer	Value to be programmed into PCI Latency Timer Register.	[32 PCI Bus Clocks] 64 PCI Bus Clocks 96 PCI Bus Clocks 128 PCI Bus Clocks 160 PCI Bus Clocks 192 PCI Bus Clocks 224 PCI Bus Clocks 248 PCI Bus Clocks
VGA Palette Snoop	Enable/Disable VGA Palette Registers Snooping.	Enabled [Disabled]
Above 4G Decoding	Enable/Disable memory mapped I/O to 4GB or greater address space (Above 4G Decoding).	[Enabled] Disabled
SR-IOV Support	If the system has SR-IOV capable PCIe devices, this item Enable/Disable Single Root IO Virtualization Support.	Enabled [Disabled]
PCI Express Settings	Press [Enter] for configuration of advanced items.	
Relaxed Ordering	Enable/Disable PCI Express Device Relaxed Ordering feature.	Enabled [Disabled]
Extended Tag	When this feature is enabled, the system will allow device to use 8-bit Tag field as are quester.	Enabled [Disabled]
No Snoop	Enable/Disable PCI Express Device No Snoop option.	[Enabled] Disabled
Maximum Payload	Set maximum payload for PCI Express Device or allow system BIOS to select the value.	[Auto] 128 Bytes 256 Bytes 512 Bytes 1024 Bytes 2048 Bytes 4096 Bytes
Maximum Read Request	Set maximum Read Request size for PCI Express Device or allow system BIOS to select the value.	[Auto] 128 Bytes 256 Bytes 512 Bytes 1024 Bytes 2048 Bytes
Extended Synch	When this feature is enabled, the system will allow generation of Extended Synchronization patterns.	Enabled [Disabled]
Link Training Retry	Define the number of Retry Attempts software will take to retrain the link if previous training attempt was unsuccessful. Press <+> / <-> keys to increase or decrease the desired values.	
Link Training Timeout (us)	Define the number of Microseconds software will wait before polling 'Link Training' bit in Link Status register. Press <+> / <-> keys to increase or decrease the desired values. Value rang is from 10 to 10000 us.	
Unpopulated Links	When this item is set to 'Disable Link, the system will operate power save feature for those unpopulated PCI Express links.	[Keep Link ON] Disable Link

Network Stack Configuration

```
                            Bios Setup Utility
   Advanced

   Network Stack                    [Enabled]              Enable/Disable UEFI
   Ipv4 PXE Support                 [Enabled]              Network Stack
   Ipv6 PXE Support                 [Enabled]
   PXE boot wait time               0
   Media detect count               1




                                                           →←: Select Screen
                                                           ↑↓: Select Item
                                                           Enter: Select
                                                           +/-: Change Opt.
                                                           F1: General Help
                                                           F3: Previous Values
                                                           F9: Optimized Defaults
                                                           F10: Save & Exit
                                                           ESC: Exit
```
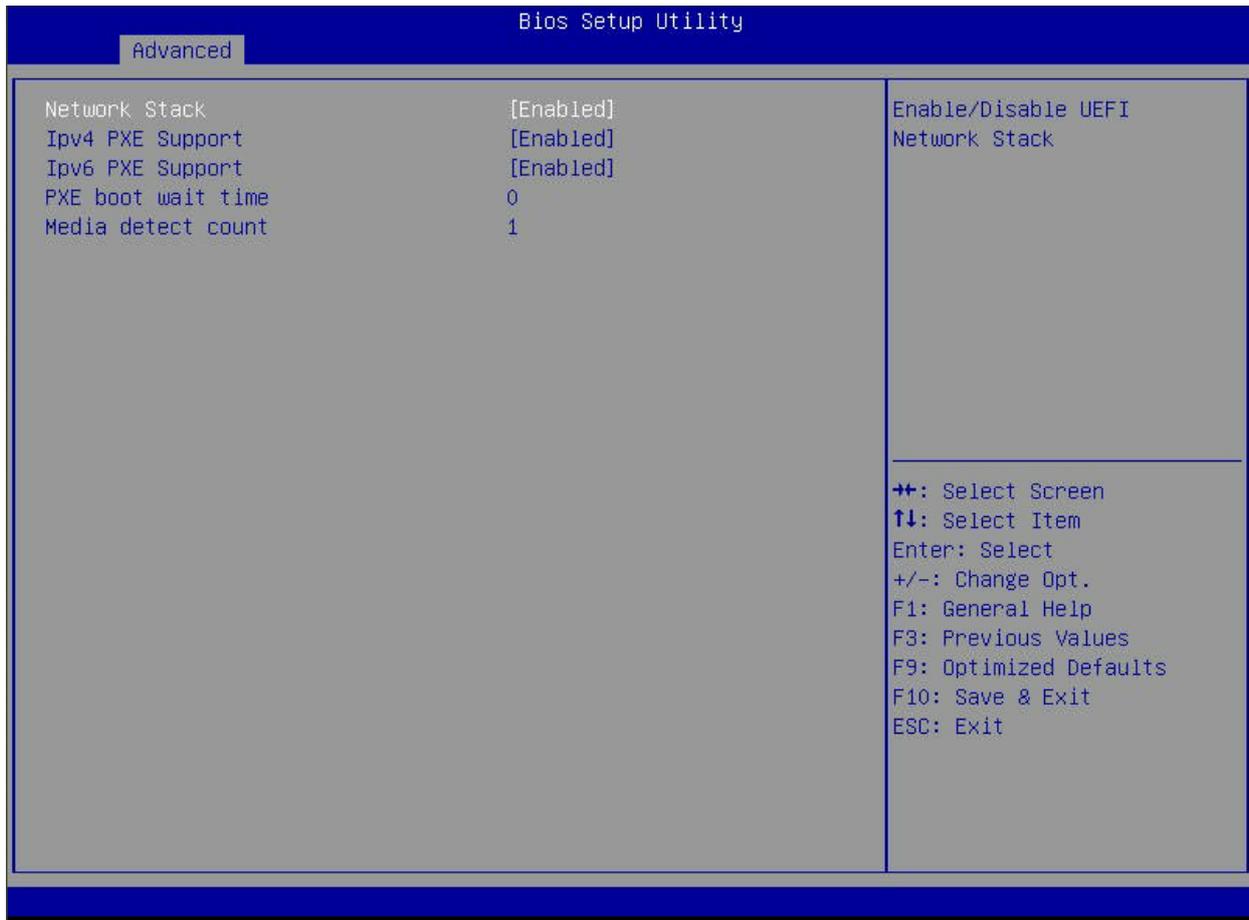
Parameter	Description	Option
Network stack (Note)	Enable/Disable UEFI network stack. When this item is enabled, advanced items show up.	Enabled [Disabled]
Ipv4 PXE Support	Enable/Disable Ipv4 PXE feature.	[Enabled] Disabled
Ipv6 PXE Support	Enable/Disable Ipv6 PXE feature.	[Enabled] Disabled
PXE boot wait time	Wait time in seconds to press ESC key to abort the PXE boot. Press the <+> / <-> keys to increase or decrease the desired values.	
Media detect count	Number of times the presence of media will be checked. Press the <+> / <-> keys to increase or decrease the desired values.	

NOTE!
● Advanced items prompt when this item is defined.

CSM Configuration

```
                              Bios Setup Utility
  ┌─────────────┐
  │  Advanced   │
  └─────────────┘
  Compatibility Support Module Configuration        Enable/Disable CSM Support.

  CSM Support                    [Enabled]

  CSM16 Module Version           07.79

  GateA20 Active                 [Upon Request]
  Option ROM Messages            [Force BIOS]
  INT19 Trap Response            [Immediate]
  INT19 Endless Retry            [Enabled]

  Boot option filter             [UEFI and Legacy]

  Option ROM execution                             →←: Select Screen
                                                   ↑↓: Select Item
  Network                        [Legacy]          Enter: Select
  Storage                        [Legacy]          +/-: Change Opt.
  Video                          [Legacy]          F1: General Help
  Other PCI devices              [UEFI]            F3: Previous Values
                                                   F9: Optimized Defaults
                                                   F10: Save & Exit
                                                   ESC: Exit
```

Parameter	Description	Option
Compatibility Support Module Configuration		
CSM Support	Enable/Disable CSM Support.	[Enabled] Disabled
CSM16 Module Version	Display CSM Module version information.	
Gate20 Active	Upon Request: GA20 can be disabled using BIOS services. Always: Do not allow disabling GA20; this	[Upon Request] Always
Option ROM Messages	Option ROM Messages.	[Force BIOS] Keep Current
INT19 Endless Retry	BIOS reaction on INT19 trapping by Option ROM	[Immediate] Postpone
NT19 Endless Retry	Enabled: Allowed headless retry boot	[Enabled Disabled
Boot option filter	Determines which devices system will boot to.	[UEFI and Legacy] Legacy only UEFI only

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Option ROM execution		
Network	Controls the execution UEFI and Legacy PXE OpROM.	Do not launch UEFI [Legacy]
Storage	Controls the execution UEFI and Legacy Storage OpROM.	Do not launch UEFI [Legacy]
Video	Controls the execution UEFI and Legacy Video OpROM.	Do not launch UEFI [Legacy]
Other PCI devices	Determines OpROM execution policy for devices other than network, Storage, or Video.	Do not launch [UEFI] Legacy

Post Report Configuration

```
                              Bios Setup Utility
    Advanced

  Post Report Configuration                                  Post Error Message Support
                                                             Enabled/Disabled
  Error Message Report
  Post Error Message                   [Enabled]




                                                             →←: Select Screen
                                                             ↑↓: Select Item
                                                             Enter: Select
                                                             +/-: Change Opt.
                                                             F1: General Help
                                                             F3: Previous Values
                                                             F9: Optimized Defaults
                                                             F10: Save & Exit
                                                             ESC: Exit


```
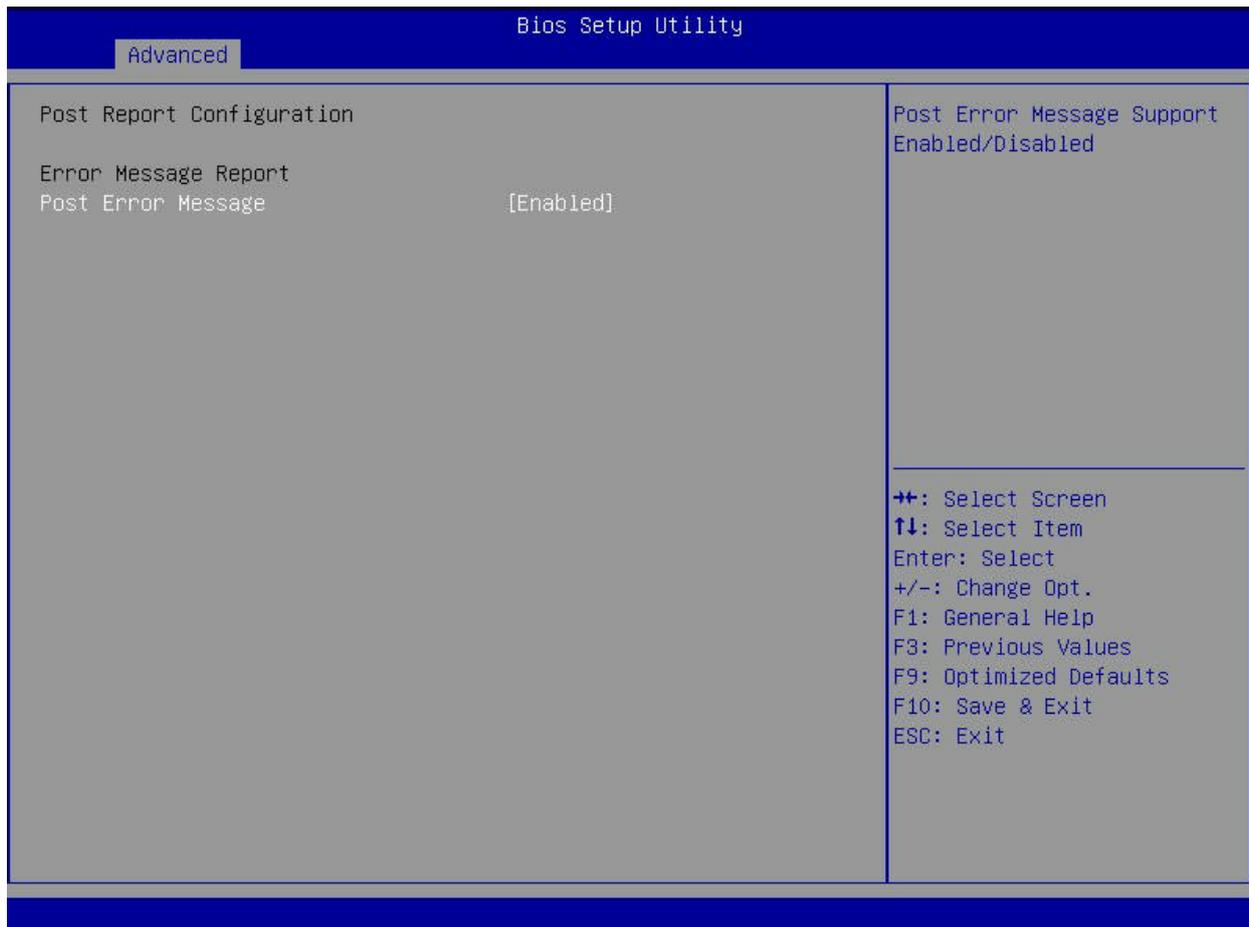
Parameter	Description	Option
Post Report Configuration		
Error Message Report		
Post Error Message	Enable/Disable Post Error Message support.	[Enabled] Disabled

NVMe Configuration

```
                              Bios Setup Utility
  ┌─────────────┐
  │  Advanced   │
  └─────────────┘

   NVMe controller and Drive information

   No NVME Device Found




                                                    ◄►: Select Screen
                                                    ↑↓: Select Item
                                                    Enter: Select
                                                    +/-: Change Opt.
                                                    F1: General Help
                                                    F3: Previous Values
                                                    F9: Optimized Defaults
                                                    F10: Save & Exit
                                                    ESC: Exit
```
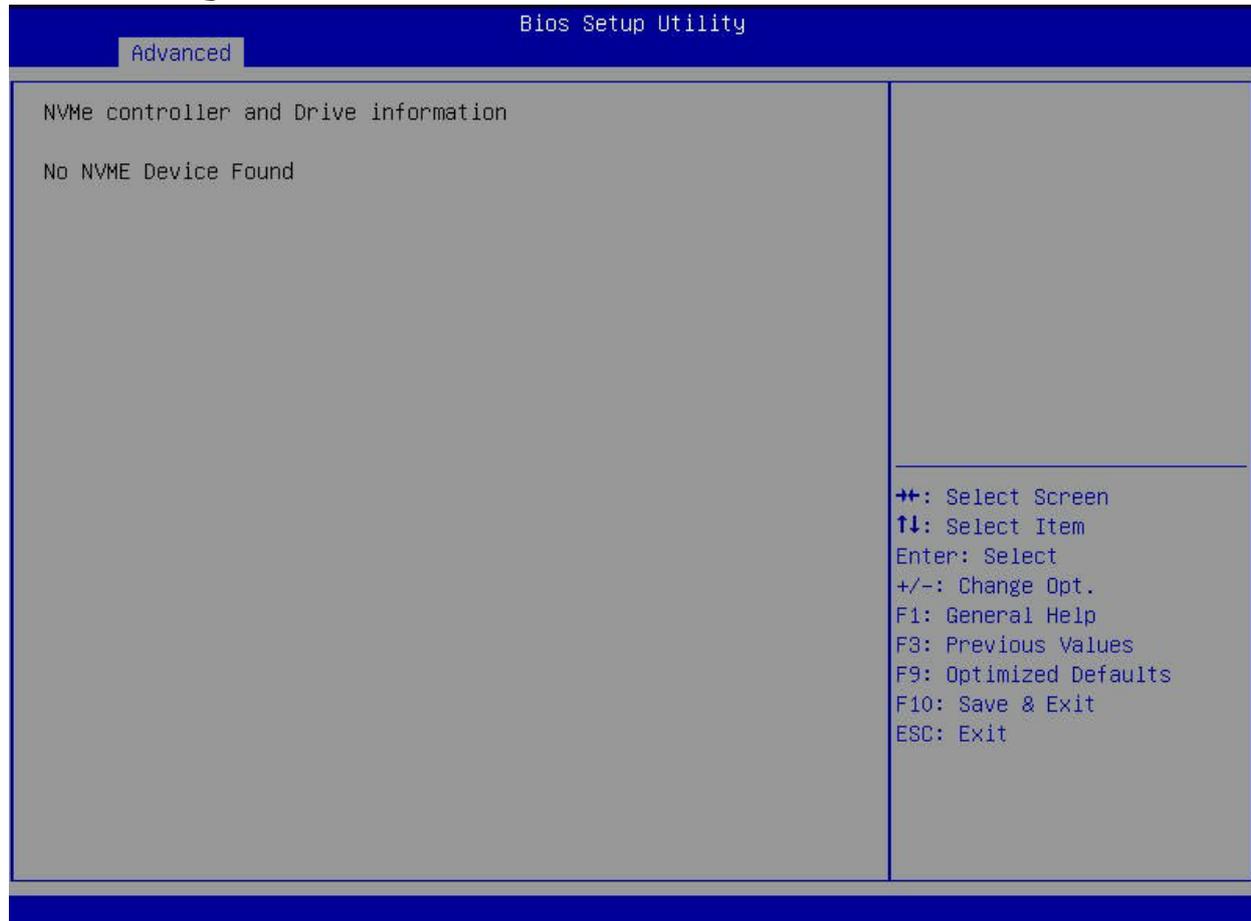
Parameter	Description	Option
NVMe Configuration	Displays the NVMe devices connected to the system	

USB Configuration

```
                              Bios Setup Utility
   ┌─────────┐
   │ Advanced │
   └─────────┴──────────────────────────────────────────────────────────────────
    USB Configuration                                    This is a workaround for
                                                         OSes without XHCI hand-off
    USB Controllers:                                     support. The XHCI
         1 EHCI, 1 XHCI                                  ownership change should be
    USB Devices:                                         claimed by XHCI driver.
         2 Keyboards, 3 Mice, 4 Hubs

    XHCI Hand-off                    [Enabled]
    EHCI Hand-off                    [Disabled]
    USB Mass Storage Driver Support  [Enabled]
    Port 60/64 Emulation             [Enabled]
                                                         ─────────────────────────
                                                         →←: Select Screen
                                                         ↑↓: Select Item
                                                         Enter: Select
                                                         +/-: Change Opt.
                                                         F1: General Help
                                                         F3: Previous Values
                                                         F9: Optimized Defaults
                                                         F10: Save & Exit
                                                         ESC: Exit
```

Parameter	Description	Option
USB Configuration		
USB Controllers:	Displays the USB controller connected to the system.	
USB Devices:	Displays the USB devices connected to the system.	
XHCI Hand-off	Configure XHCI (USB3.0) device.	[Enabled] Disabled
EHCI Hand-off	Configure EHCI (USB2.0) device.	Enabled [Disabled]
USB Mass Storage Drive Support	Enable/Disable USB Mass Storage Driver Support.	[Enabled] Disabled
Port 60/64 Emulation	Enable I/O port 60h/64h emulation support. This should be enabled for the complete USB Keyboard Legacy support for non-USB aware OS.	[Enabled] Disabled

Chipset Configuration

```
                            Bios Setup Utility
  Advanced

  Restore AC Power Loss         [Power On]           Specify what state when
                                                     power is re-applied after
  Chassis Opened Warning        [Disabled]           a power failure (G3 state).




                                                     →←: Select Screen
                                                     ↑↓: Select Item
                                                     Enter: Select
                                                     +/-: Change Opt.
                                                     F1: General Help
                                                     F3: Previous Values
                                                     F9: Optimized Defaults
                                                     F10: Save & Exit
                                                     ESC: Exit
```

Parameter	Description	Option
Restore AC Power Loss	Specify what was state when power is re-applied after a power failure (G3 state)	Power Off [Power On] Last Sate
Chassis opened warning	Enable/Disable/Clear chassis opened warning.	Enabled [Disabled] Clear

IntelRCSetup

This setup page includes all the submenu options for configuring the functions of the Platform Controller Hub. Select a submenu item, then press Enter to access the related submenu screen.
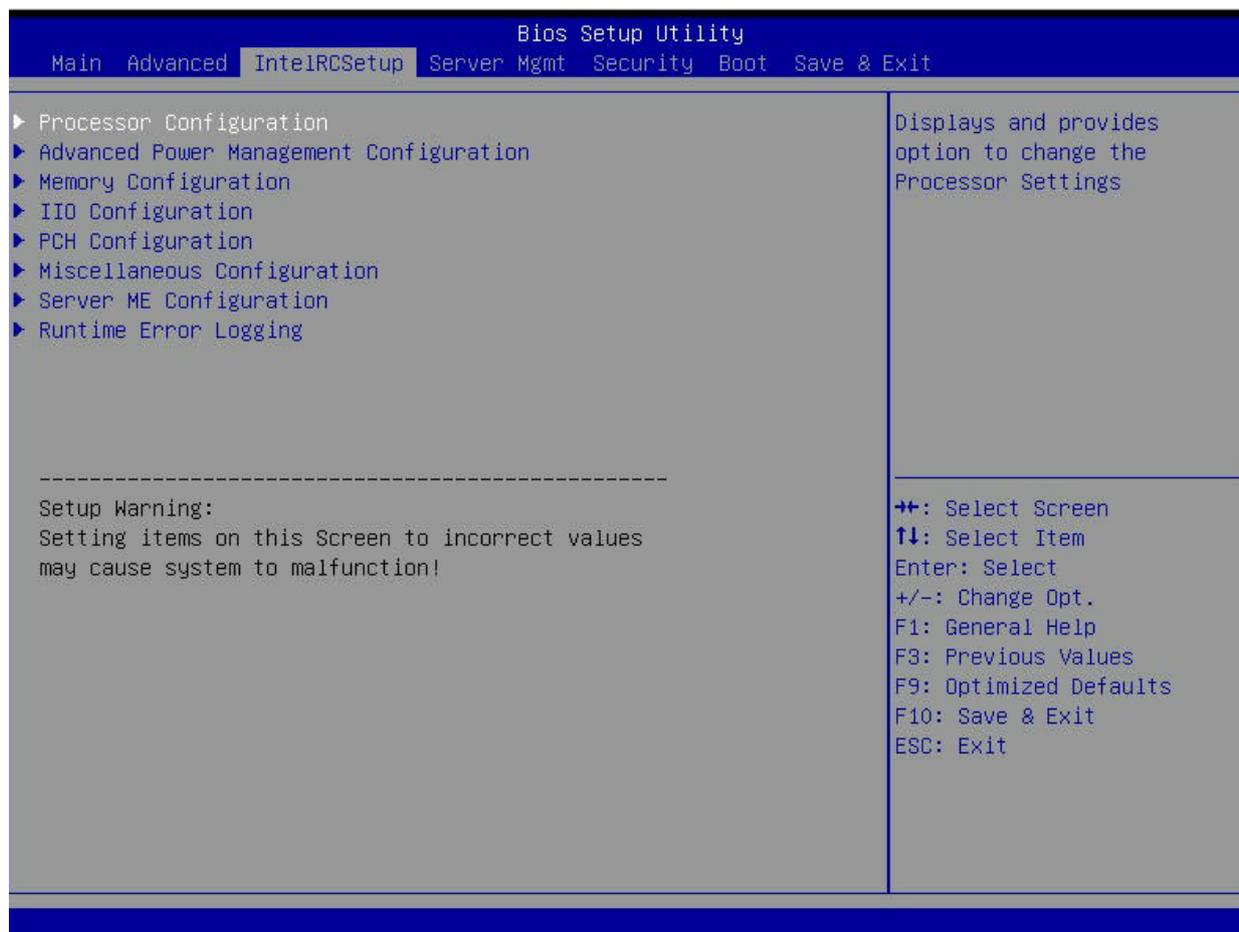
```
                              Bios Setup Utility
    Main   Advanced   IntelRCSetup  Server Mgmt   Security   Boot   Save & Exit

 ▶ Processor Configuration                          Displays and provides
 ▶ Advanced Power Management Configuration          option to change the
 ▶ Memory Configuration                             Processor Settings
 ▶ IIO Configuration
 ▶ PCH Configuration
 ▶ Miscellaneous Configuration
 ▶ Server ME Configuration
 ▶ Runtime Error Logging


 --------------------------------------------------
 Setup Warning:                                     ►◄: Select Screen
 Setting items on this Screen to incorrect values   ↑↓: Select Item
 may cause system to malfunction!                   Enter: Select
                                                    +/-: Change Opt.
                                                    F1: General Help
                                                    F3: Previous Values
                                                    F9: Optimized Defaults
                                                    F10: Save & Exit
                                                    ESC: Exit
```

Parameter	Description	Option
Processor Configuration	Press [Enter] for configuration of advanced items.	
Advanced Power Management Configuration	Press [Enter] for configuration of advanced items.	
Memory Configuration	Press [Enter] for configuration of advanced items.	
IIO Configuration	Press [Enter] for configuration of advanced items.	
PCH Configuration	Press [Enter] for configuration of advanced items.	
Miscellaneous Configuration	Press [Enter] for configuration of advanced items.	
Server ME Configuration	Press [Enter] for configuration of advanced items.	
Runtime Error Logging	Press [Enter] for configuration of advanced items.	

Processor Configuration

```
                              Bios Setup Utility
         IntelRCSetup

   Processor Configuration                                    ▲  Change Per-Socket Settings
   -------------------------------------------------
▶  Per-Socket Configuration
   Processor Socket                   Socket 0
   Processor ID                       00050663*
   Processor Frequency                2.400GHz
   Processor Max Ratio                18H
   Processor Min Ratio                08H
   Microcode Revision                 07000009
   L1 Cache RAM                           256KB
   L2 Cache RAM                          1024KB
   L3 Cache RAM                          6144KB
   Processor 0 Version                Intel(R) Xeon(R) CPU D-
                                      1521 @ 2.40GHz
                                                                 ++: Select Screen
                                                                 ↑↓: Select Item
   Hyper-Threading [ALL]              [Enable]                   Enter: Select
   Monitor/Mwait                      [Enable]                   +/-: Change Opt.
   Execute Disable Bit                [Enable]                   F1: General Help
   Enable Intel TXT Support           [Disable]                  F3: Previous Values
   VMX                                [Enable]                   F9: Optimized Defaults
   Enable SMX                         [Disable]                  F10: Save & Exit
   Lock Chipset                       [Enable]                   ESC: Exit
   Hardware Prefetcher                [Enable]
   Adjacent Cache Prefetch            [Enable]
   DCU Streamer Prefetcher            [Enable]                ▼
```

```
                              Bios Setup Utility
         IntelRCSetup

   Processor Max Ratio                18H                     ▲  Enable/disable AES-NI
   Processor Min Ratio                08H                        support
   Microcode Revision                 07000009
   L1 Cache RAM                           256KB
   L2 Cache RAM                          1024KB
   L3 Cache RAM                          6144KB
   Processor 0 Version                Intel(R) Xeon(R) CPU D-
                                      1521 @ 2.40GHz

   Hyper-Threading [ALL]              [Enable]
   Monitor/Mwait                      [Enable]
   Execute Disable Bit                [Enable]
   Enable Intel TXT Support           [Disable]
   VMX                                [Enable]
   Enable SMX                         [Disable]                  ++: Select Screen
   Lock Chipset                       [Enable]                   ↑↓: Select Item
   Hardware Prefetcher                [Enable]                   Enter: Select
   Adjacent Cache Prefetch            [Enable]                   +/-: Change Opt.
   DCU Streamer Prefetcher            [Enable]                   F1: General Help
   DCU IP Prefetcher                  [Enable]                   F3: Previous Values
   DCU Mode                           [32KB 8Way Without ECC]    F9: Optimized Defaults
   Direct Cache Access (DCA)          [Auto]                     F10: Save & Exit
   DCA Prefetch Delay                 [32]                       ESC: Exit
   X2APIC                             [Disable]
   AES-NI                             [Enable]                ▼
```

Parameter	Description	Option
Processor Configuration		
Pre-Socket Configuration	Press [Enter] for configuration of advanced items.	
Processor Socket / Processor ID / Processor Frequency / Processor Max Ratio / Processor Min Ratio / Microcode Revision / L1 Cache RAM(Per Core) / L2 Cache RAM(Per Core) / L3 Cache RAM(Per Package) / Processor Version	Displays the technical specifications for the installed processor.	
Hyper-Threading [All]	The Hyper Threading Technology allows a single processor to execute two or more separate threads concurrently. When hyper-threading is enabled, multi-threaded software applications can execute their threads, thereby improving performance.	[Enable] Disable
Monitor/Mwait	The Hyper Threading Technology allows a single processor to execute two or more separate threads concurrently. When hyper-threading is enabled, multi-threaded software applications can execute their threads, thereby improving performance.	Enable [Disable]
Execute Disable Bit	When enabled, the processor prevents the execution of code in data-only memory pages. This provides some protection against buffer overflow attacks. When disabled, the processor will not restrict code execution in any memory area. This makes the processor more vulnerable to buffer overflow attacks.	Enable [Disable]
Enable Intel TXT Support		
VMX	Enable/Disable the Vanderpool Technology. This will take effect after rebooting the system.	[Enable] Disable
Enable SMX	Intel Safer Mode Extensions Technology. Enable/Disabled Intel Safer Mode Extensions (SMX) support function.	Enable [Disable]
Lock Chipset	Lock or unlock chipset	[Enable] Disable
Hardware Prefetcher	Select whether to enable the speculative prefetch unit of the processor.	[Enable] Disable
Adjacent Cache Line Prefetch	When enabled, cache lines are fetched in pairs. When disabled, only the required cache line is fetched.	[Enable] Disable
DCU Streamer Prefetch	DCU streamer prefetcher is an L1 data cache prefetcher (MSR 1A4h [2]).	[Enable] Disable
DCU IP Prefetch	DCU IP prefetcher is an L1 data cache prefetcher (MSR 1A4h [3]).	[Enable] Disable
DCU Mode	MSR 31h Bit900 – A write of 1 selects the DCU mode as 16KB 4-way with ECC.	[32KB 8Way Without ECC] 16KB 4Way With ECC
Direct Cache Access (DCA)	Enable/Disable Direct Cache Access.	Enable Disable [Auto]
DCA Prefetch Delay	DCA Prefetch Delay Help	[32]
X2APIC		Enable [Disable]
AES-NI	Enable/Disable AES-NI (Intel Advanced Encryption Standard New Instructions) support function.	[Enable] Disable

Pre-socket Configuration

```
                          Bios Setup Utility
    IntelRCSetup

  ▶ CPU Socket 0 Configuration

                                                    →←: Select Screen
                                                    ↑↓: Select Item
                                                    Enter: Select
                                                    +/-: Change Opt.
                                                    F1: General Help
                                                    F3: Previous Values
                                                    F9: Optimized Defaults
                                                    F10: Save & Exit
                                                    ESC: Exit
```

Parameter	Description	Option
CPU Socket 0 Configuration	Press [Enter] for configuration of advanced items.	

Advanced Power Configuration

```
                              Bios Setup Utility
        IntelRCSetup

  Advanced Power Management Configuration            When enabled, OS sets CPU
  ------------------------------------------------    frequency according load.
  EIST (P-states)                   [Enable]          When disabled, CPU
  ▶ CPU P State Control                               frequency is set at max
  ▶ CPU HWPM State Control                            non-turbo.
  ▶ CPU C State Control
  ▶ CPU T State Control
  ▶ CPU Advanced PM Turning
                                                    _____

                                                    ➜←: Select Screen
                                                    ↑↓: Select Item
                                                    Enter: Select
                                                    +/-: Change Opt.
                                                    F1: General Help
                                                    F3: Previous Values
                                                    F9: Optimized Defaults
                                                    F10: Save & Exit
                                                    ESC: Exit
```

Parameter	Description	Option
EIST (P-State)	When enabled, OS sets CPU frequency according load. When disabled, CPU frequency is set at max npn-turbo.	[Enable] Disable
CPU P State Control	Press [Enter] for configuration of advanced items.	
CPU HWPM State Control	Press [Enter] for configuration of advanced items.	
CPU C State Control	Press [Enter] for configuration of advanced items.	
CPU T State Control	Press [Enter] for configuration of advanced items.	
CPU Advanced PM Turning	Press [Enter] for configuration of advanced items.	

CPU P-State Control

```
                              Bios Setup Utility
      IntelRCSetup

   CPU P State Control                                         HW_ALL (hardware)
                                                              coordination is
   P-state coordination          [HW_ALL]                    recommended over SW_ALL
   Turbo Mode                    [Enable]                     and SW_ANY (software
                                                              coordination).


                                                              ─────────────────────────
                                                              ➔←: Select Screen
                                                              ↑↓: Select Item
                                                              Enter: Select
                                                              +/-: Change Opt.
                                                              F1: General Help
                                                              F3: Previous Values
                                                              F9: Optimized Defaults
                                                              F10: Save & Exit
                                                              ESC: Exit
```

Parameter	Description	Option
P-state coordination	In HW_ALL mode, the processor hardware is responsible for coordinating the P-state among logical processors dependencies. The OS is responsible for keeping the P-state request up to date on all logical processors. In SW_ALL mode, the OS Power Manager is responsible for coordinating the P-state among logical processors with dependencies and must initiate the transition on all of those Logical Processors. In SW_ANY mode, the OS Power Manager is responsible for coordinating the P-state among logical processors with dependencies and may initiate the transition on any of those Logical Processors.	[HW_ALL] SW_ALL SW_ANY
Turbo Mode	When this item is enabled, the processor will automatically ramp up the clock speed of 1-2 of its processing cores to improve its performance. When this item is disabled, the processor will not overclock any of its core.	[Enable] Disable

CPU HWPM Control

```
                           Bios Setup Utility
          IntelRCSetup

 CPU HWPM State Control                               Enable CPU HWPM for CPU
                                                      for better Energy
 Enable CPU HWPM                [Disable]             performance
 Enable CPU Autonomous Cstate   [Disable]



                                                      ──────────────────────
                                                      →←: Select Screen
                                                      ↑↓: Select Item
                                                      Enter: Select
                                                      +/-: Change Opt.
                                                      F1: General Help
                                                      F3: Previous Values
                                                      F9: Optimized Defaults
                                                      F10: Save & Exit
                                                      ESC: Exit
```

Parameter	Description	Option
CPU HWPM Control		
Enable CPU HWPM	Enable CPU HWPM for CPU for better Energy performance	Enable [Disable]
Enable CPU Autonomous	Enable CPU Autonomous Cstate which is CPU converst HALT instruction to wait.	Enable [Disable]

CPU C State Control

```
                            Bios Setup Utility
          IntelRCSetup

     CPU C State Control                                    Enables the Enhanced Cx
                                                            state of the CPU, takes
     CPU C State                   [Enable]                 effect after reboot.
     Package C State limit         [C6(Retention) state]
     CPU C3 report                 [Disable]
     CPU C6 report                 [Enable]
     Enhanced Halt State (C1E)     [Enable]




                                                            ➜←: Select Screen
                                                            ↑↓: Select Item
                                                            Enter: Select
                                                            +/-: Change Opt.
                                                            F1: General Help
                                                            F3: Previous Values
                                                            F9: Optimized Defaults
                                                            F10: Save & Exit
                                                            ESC: Exit
```

Parameter	Description	Option
CPU C State Control		
CPU C State	Enables the Enhanced Cx state of the CPU, takes effect after reboot.	[Enable] Disable
Package C State limit	Configure state for the C-State package limit.	C0/C1 state C2 state [C6(non Retention) state] C6(Retention) state No limit
CPU C3 report	Enable/Disable CPU C3 (ACPI C2) report to OS Recommended to be disabled.	Enable [Disable]
CPU C6 report	Enable/Disable CPU C6 (ACPI C2) report to OS Recommended to be enabled.	[Enable] Disable
Enhanced Halt State (C1E)	Enables the Enhanced state of the CPU, takes effect after reboot.	[Enable] Disable

CPU T State Control

```
                              Bios Setup Utility
        IntelRCSetup

   CPU T State Control                                  Enable/Disable CPU
                                                        throttling by OS.
   ACPI T-States                    [Disable]           Throttling reduces power
                                                        consumption.









                                                        ↔: Select Screen
                                                        ↑↓: Select Item
                                                        Enter: Select
                                                        +/-: Change Opt.
                                                        F1: General Help
                                                        F3: Previous Values
                                                        F9: Optimized Defaults
                                                        F10: Save & Exit
                                                        ESC: Exit
```
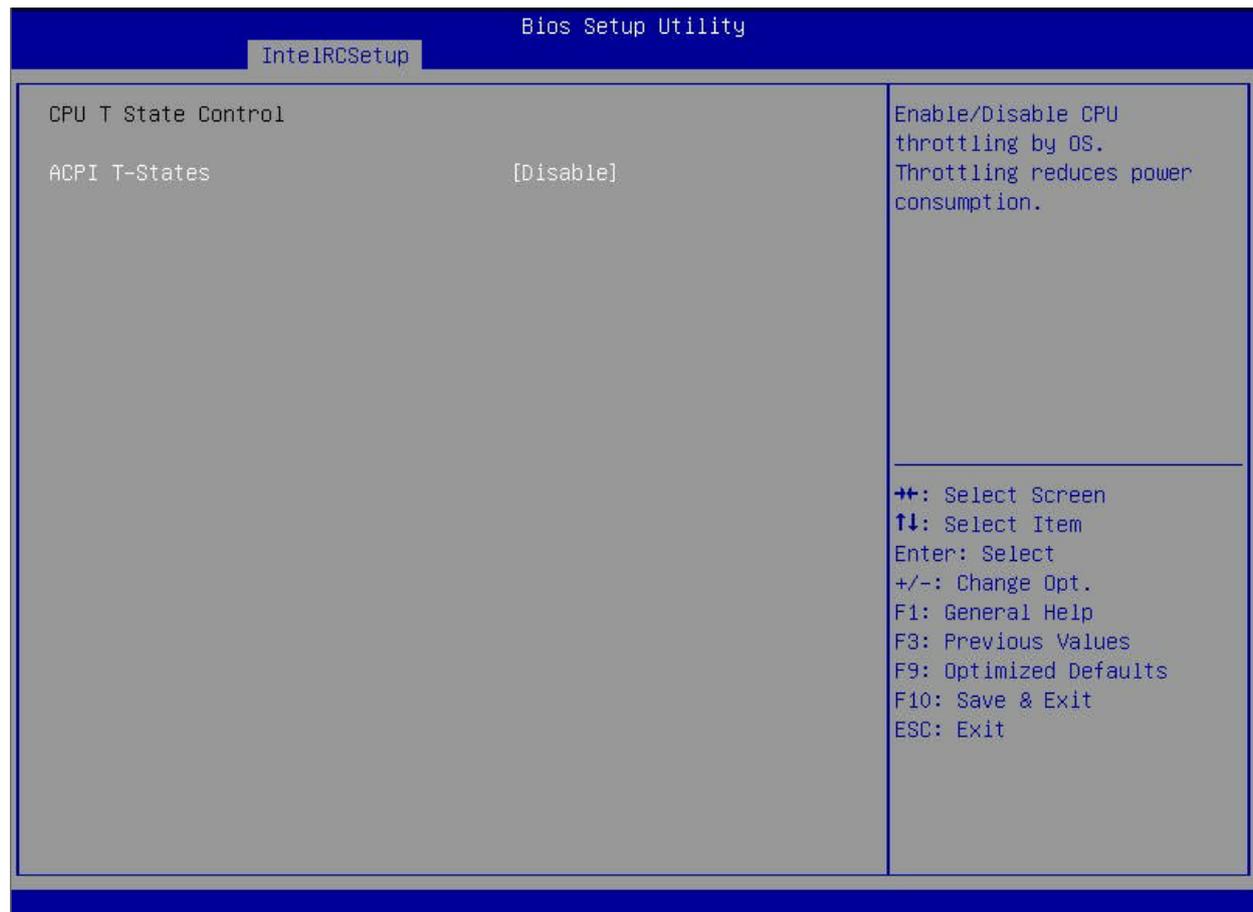
Parameter	Description	Option
CPU T State Control		
ACPI T-States	Enable/Disable CPU throttling by OS. Throttling reduces power consumption.	Enable [Disable]

CPU Advanced PM Turning

```
                          Bios Setup Utility
    IntelRCSetup

 CPU Advanced PM Turning                         Provides hint to CPU for
                                                 better performance or
 ▶ Energy Perf BIAS                              power savings.




                                                 ↔: Select Screen
                                                 ↑↓: Select Item
                                                 Enter: Select
                                                 +/-: Change Opt.
                                                 F1: General Help
                                                 F3: Previous Values
                                                 F9: Optimized Defaults
                                                 F10: Save & Exit
                                                 ESC: Exit
```

Parameter	Description	Option
CPU Advanced Tuning		
Energy Pref BIAS	Press [Enter] for configuration of advanced items.	
Energy Performance Tuning	Selects whether BIOS or operating System choose energy performance bias tunning.	[Enable] Disable
Energy Performance BIAS setting	Set Energy Performance BIAS which override OS setting.	Performance [Balanced Performance] Balanced Energy Power

Memory Configuration

```
                              Bios Setup Utility
           IntelRCSetup

  Integrated Memory Controller (iMC)                        Enable to enforce POR
  --------------------------------------------------        restrictions for DDR4
  Enforce POR                      [Enforce POR]            frequency and voltage
  Memory Frequency                 [Auto]                   programming
  ECC Support                      [Auto]
  Rank Margin Tool                 [Auto]
  RMT Pattern Length               32767
  SPD Write Lock                   [Enabled]
▶ Memory Topology
▶ Memory Thermal
▶ Memory Map
▶ Memory RAS Configuration
                                                            ▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬

                                                            ↔: Select Screen
                                                            ↑↓: Select Item
                                                            Enter: Select
                                                            +/-: Change Opt.
                                                            F1: General Help
                                                            F3: Previous Values
                                                            F9: Optimized Defaults
                                                            F10: Save & Exit
                                                            ESC: Exit
```

Parameter	Description	Option
Enforce POR	When set to Enable, the system enforces Plan Of Record restrictions for DDR4 frequency and voltage programming.	[Enforce POR] Disabled
Memory Frequency	Maximum memory frequency selections in MHz. Do not select reserved.	[Auto] 1333 1600 1867 2133 2400
ECC Support	Enable/Disable DDR ECC support	[Auto] Enable Disable
Rank Margin Tool	Enables the rank margin tool	[Auto] Enable Disable
RMT Pattern Length	Sets the pattern length for the RANK Margin tool	
SPD Write Lock	Enable/Disable Memory SPD write lock	[Enable] Disable
Memory Topology	Press [Enter] for configuration of advanced items.	
Memory Thermal	Press [Enter] for configuration of advanced items.	
Memory Map	Press [Enter] for configuration of advanced items.	
Memory RAS Configuration	Press [Enter] for configuration of advanced items.	

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Memory Thermal

```
                        Bios Setup Utility
      IntelRCSetup

   Set Throttling Mode           [CLTT]              Configure Thermal
   MEMHOT Throttling Mode        [Input-only]        Throttling Mode.
                                                     Select OLTT or CLTT mode.




                                                     ←→: Select Screen
                                                     ↑↓: Select Item
                                                     Enter: Select
                                                     +/-: Change Opt.
                                                     F1: General Help
                                                     F3: Previous Values
                                                     F9: Optimized Defaults
                                                     F10: Save & Exit
                                                     ESC: Exit
```

Parameter	Description	Option
Set Throttling Mode	Configure Thermal Throttling mode.	[CTLL] Disabled
MEMHOT Throttling Mode	Configure MEMHOT Input and Output mode: Mem Hot Sense Therm Throt or Mem Hot Output Therm Throt.	Disabled Output-only [Input-only]

Memory Map

```
                            Bios Setup Utility
      IntelRCSetup

   Channel Interleaving            [Auto]                    Select Channel
   Rank Interleaving               [Auto]                    Interleaving setting




                                                             →←: Select Screen
                                                             ↑↓: Select Item
                                                             Enter: Select
                                                             +/-: Change Opt.
                                                             F1: General Help
                                                             F3: Previous Values
                                                             F9: Optimized Defaults
                                                             F10: Save & Exit
                                                             ESC: Exit


```
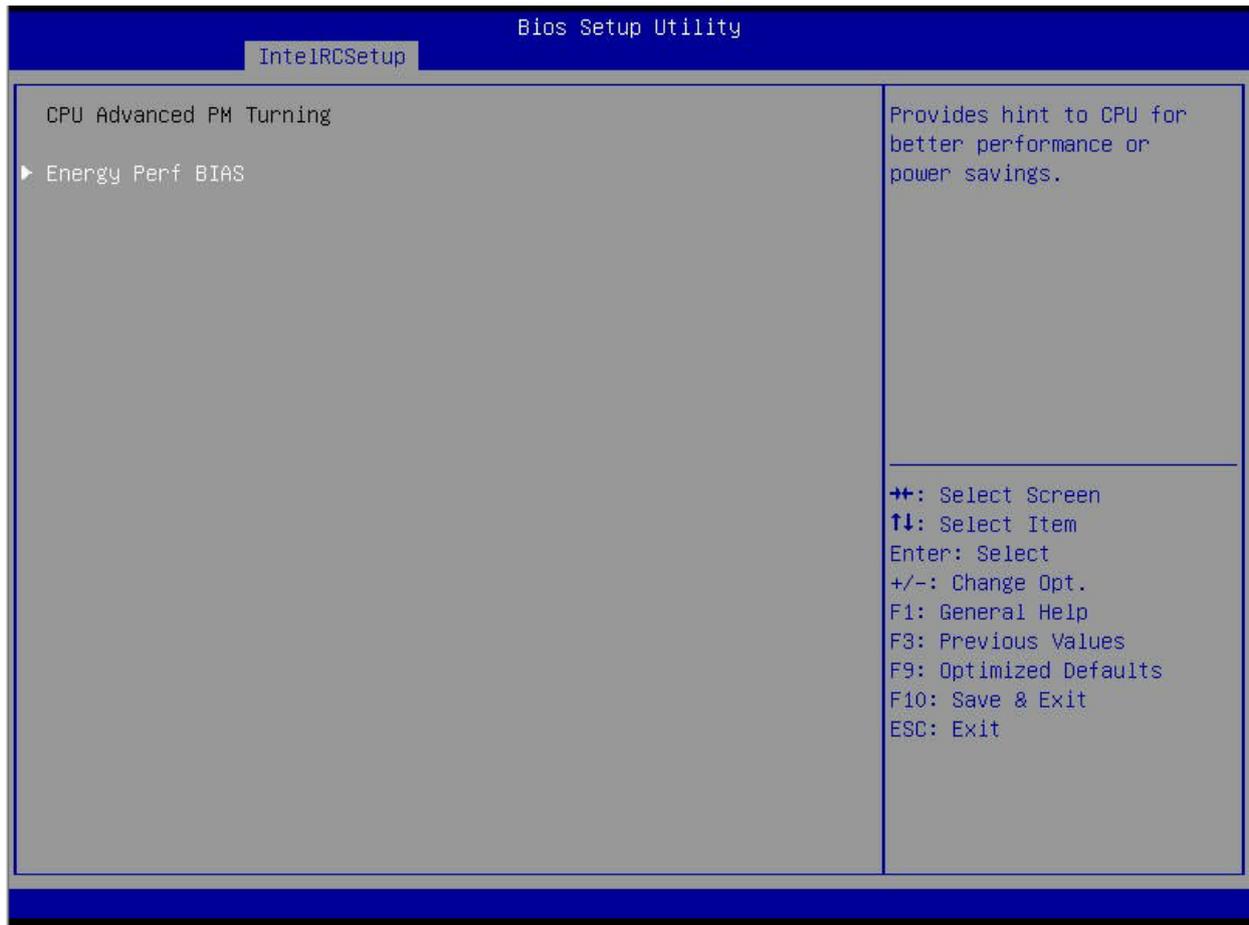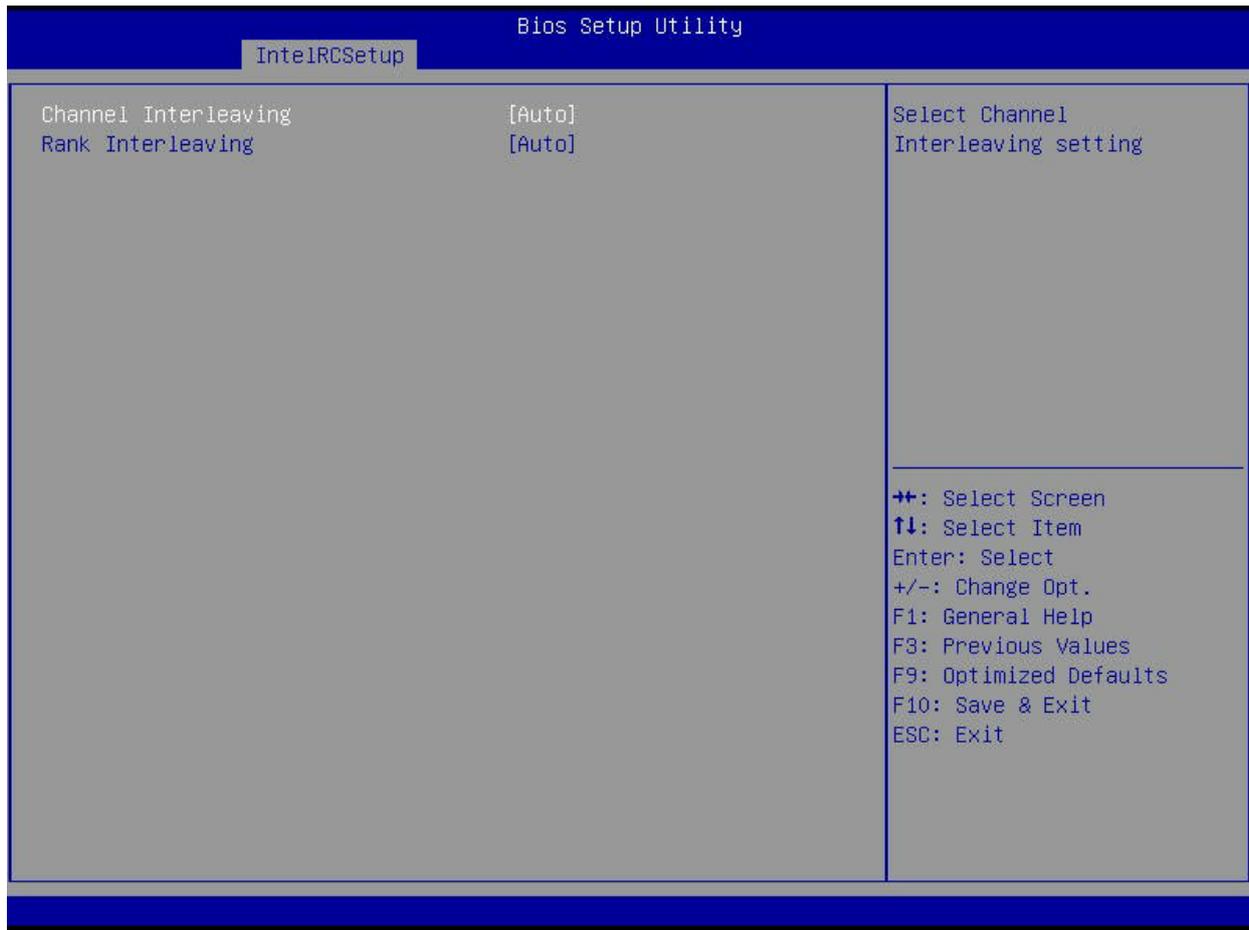
Parameter	Description	Option
Channel Interleaving	Select channel interleaving setting	[Auto/] 1-way Interleave 2-way Interleave 3-way Interleave 4-way Interleave
Rank Interleaving	The control of Active State Power Management on both NB side and SB side of the DMI Link.	[Auto/] 1-way Interleave 2-way Interleave 3-way Interleave 4-way Interleave

Memory RAS Configuration

```
                              Bios Setup Utility
          IntelRCSetup

  Correctable Error Threshold            1                    Correctable Error
                                                              Threshold (1 - 32767) used
                                                              for sparing, tagging, and
                                                              leaky bucket




                                                              →←: Select Screen
                                                              ↑↓: Select Item
                                                              Enter: Select
                                                              +/-: Change Opt.
                                                              F1: General Help
                                                              F3: Previous Values
                                                              F9: Optimized Defaults
                                                              F10: Save & Exit
                                                              ESC: Exit
```

Parameter	Description	Option
Correctable Error Threshold	Press <+> / <-> keys to increase or decrease the desired values.	

IIO Configuration

```
                              Bios Setup Utility
        IntelRCSetup

   IIO Configuration                                              Set this option to allow
   -------------------------------------------------             DFX Lock Bits to remain
   EV DFX Features                      [Disable]                 clear
 ▶ IOAT Configuration
 ▶ Intel VT for Directed I/O (VT-d)




                                                                 →←: Select Screen
                                                                 ↑↓: Select Item
                                                                 Enter: Select
                                                                 +/-: Change Opt.
                                                                 F1: General Help
                                                                 F3: Previous Values
                                                                 F9: Optimized Defaults
                                                                 F10: Save & Exit
                                                                 ESC: Exit



```

Parameter	Description	Option
EV DFX Features	Set this option to allow DFX Lock Bits to remain clear.	Enable [Disable]
IOAT Configuration	Press [Enter] for configuration of advanced items.	
Intel VT for Directed I/O (VT-d)	Press [Enter] for configuration of advanced items.	

IOAT Configuration

```
                              Bios Setup Utility
          IntelRCSetup

  Enable IOAT                    [Disable]          Control to enable/disable
  No Snoop                       [Disable]          IOAT devices












                                                    →←: Select Screen
                                                    ↑↓: Select Item
                                                    Enter: Select
                                                    +/-: Change Opt.
                                                    F1: General Help
                                                    F3: Previous Values
                                                    F9: Optimized Defaults
                                                    F10: Save & Exit
                                                    ESC: Exit



```

Parameter	Description	Option
Enable IOAT	Control to enable/disable IOAT (Intel I/O Acceleration Technology) device.	Enable [Disable]
No Snoop	nable/Disable PCI Express Device No Snoop option.	Enable [Disable]

Intel VT for Directed I/O (VT-d)

```
                         Bios Setup Utility
     IntelRCSetup

   Intel VT for Directed I/O (VT-d)                      Enable/Disable Intel
   ------------------------------------------------      Virtualization Technology
   Intel VT for Directed I/O (VT-d)    [Enable]          for Directed I/O (VT-d) by
   ACS Control                         [Disable]         reporting the I/O device
   Interrupt Remapping                 [Enable]          assignment to VMM through
   Coherency Support (Non-Isoch)       [Enable]          DMAR ACPI Tables.
   Coherency Support (Isoch)           [Enable]


                                                         →←: Select Screen
                                                         ↑↓: Select Item
                                                         Enter: Select
                                                         +/-: Change Opt.
                                                         F1: General Help
                                                         F3: Previous Values
                                                         F9: Optimized Defaults
                                                         F10: Save & Exit
                                                         ESC: Exit
```

Parameter	Description	Option
Intel VT for Directed I/O (VT-d)	Enable/Disable Intel VT for Directed I/O (VT-d) support function.	[Enable] Disable
ACS Control	Enable/disable ACS Control.	Enable [Disable]
Interrupt Remapping	Enable/Disable interrupt remapping support function.	[Enable] Disable
Coherency Support (Non-Isoch)	Enable/Disable Non-Isoch VT-D Engine Coherency support.	[Enable] Disable
Coherency Support (Isoch)	Enable/Disable Isoch VT-D Engine Coherency support.	[Enable] Disable

PCH Configuration

```
                        Bios Setup Utility
    IntelRCSetup

 PCH Configuration                                    Enable/Disable Intel(R) IO
 -----------------------------------------------      Controller Hub devices
 ▶ PCH Devices
 ▶ PCH SATA Configuration
 ▶ USB Configuration




                                                      ➜←: Select Screen
                                                      ↑↓: Select Item
                                                      Enter: Select
                                                      +/-: Change Opt.
                                                      F1: General Help
                                                      F3: Previous Values
                                                      F9: Optimized Defaults
                                                      F10: Save & Exit
                                                      ESC: Exit


```
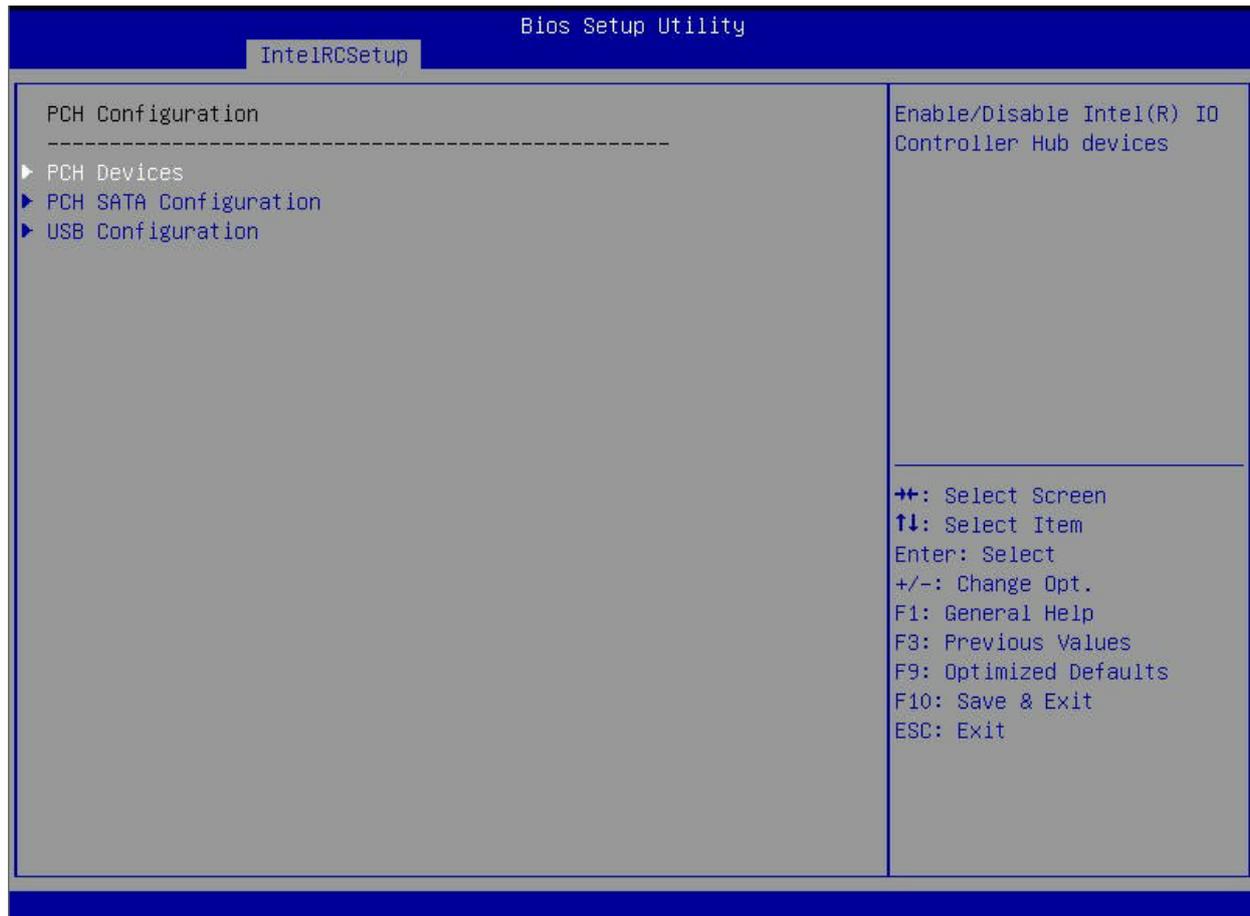
Parameter	Description	Option
PCH Configuration		
PCH Devices	Press [Enter] for configuration of advanced items.	
PCH SATA Configuration	Press [Enter] for configuration of advanced items.	
USB Configuration	Press [Enter] for configuration of advanced items.	

PCH Devices

```
                              Bios Setup Utility
        IntelRCSetup

   High Precision Timer          [Disabled]              Enable or Disable the High
   Boot Time with HPET Timer     [Disabled]              Precision Event Timer.
   PCH CRID                      [Disabled]




                                                         →←: Select Screen
                                                         ↑↓: Select Item
                                                         Enter: Select
                                                         +/-: Change Opt.
                                                         F1: General Help
                                                         F3: Previous Values
                                                         F9: Optimized Defaults
                                                         F10: Save & Exit
                                                         ESC: Exit


```

Parameter	Description	Option
High Precision Timer	Enable or disable the High Precision Timer	Enabled [Disabled]
Boot time with HPET Timer	Boot time calculation with High Precision Event Timer enabled.	Enabled [Disabled]
PCH CRID	Enable/Disable Intel Compatible Revision ID.	Enabled [Disabled]

PCH SATA Configuration

```
                           Bios Setup Utility
           IntelRCSetup

   PCH SATA Configuration                              ▲  Enable or Disable SATA
   --------------------------------------------------    Controller
   SATA Controller               [Enabled]
   Configure SATA as             [AHCI]

   SATA Port 0                   [Not Installed]
     Port 0                      [Enabled]
     Hot Plug                    [Disabled]
     Spin Up Device              [Disabled]
   SATA Port 1                   [Not Installed]
     Port 1                      [Enabled]
     Hot Plug                    [Disabled]
     Spin Up Device              [Disabled]
   SATA Port 2                   [Not Installed]
     Port 2                      [Enabled]                ↔: Select Screen
     Hot Plug                    [Disabled]               ↑↓: Select Item
     Spin Up Device              [Disabled]               Enter: Select
   SATA Port 3                   [Not Installed]          +/-: Change Opt.
     Port 3                      [Enabled]                F1: General Help
     Hot Plug                    [Disabled]               F3: Previous Values
     Spin Up Device              [Disabled]               F9: Optimized Defaults
   SATA Port 4                   [Not Installed]          F10: Save & Exit
     Port 4                      [Enabled]                ESC: Exit
     Hot Plug                    [Disabled]
     Spin Up Device              [Disabled]           ▼
```

```
                           Bios Setup Utility
           IntelRCSetup

   SATA Port 0                   [Not Installed]       ▲  If enabled for any of
     Port 0                      [Enabled]                ports Staggered Spin Up
     Hot Plug                    [Disabled]               will be performed and only
     Spin Up Device              [Disabled]               the drives which have this
   SATA Port 1                   [Not Installed]          option enabled will spin
     Port 1                      [Enabled]                up at boot. Otherwise all
     Hot Plug                    [Disabled]               drives spin up at boot.
     Spin Up Device              [Disabled]
   SATA Port 2                   [Not Installed]
     Port 2                      [Enabled]
     Hot Plug                    [Disabled]
     Spin Up Device              [Disabled]
   SATA Port 3                   [Not Installed]
     Port 3                      [Enabled]                ↔: Select Screen
     Hot Plug                    [Disabled]               ↑↓: Select Item
     Spin Up Device              [Disabled]               Enter: Select
   SATA Port 4                   [Not Installed]          +/-: Change Opt.
     Port 4                      [Enabled]                F1: General Help
     Hot Plug                    [Disabled]               F3: Previous Values
     Spin Up Device              [Disabled]               F9: Optimized Defaults
   SATA Port 5                   [Not Installed]          F10: Save & Exit
     Port 5                      [Enabled]                ESC: Exit
     Hot Plug                    [Disabled]
     Spin Up Device              [Disabled]           ▼
```

Parameter	Description	Option
PCH SATA Configuration	Enable/Disable SATA controller.	[Enabled] Disabled
SATA Controller	Configure on chip SATA type. IDE Mode: When set to IDE, the SATA controller disables its RAID and AHCI functions and runs in the IDE emulation mode. This is not allowed to access RAID setup utility. ACHI Mode: When set to AHCI, the SATA controller enables its AHCI functionality. Then the RAID function	IDE [AHCI]

	is disabled and cannot be access the RAID setup utility at boot time.	
Port 0/1/2/3/4/5	Enable/Disable Port 0/1/2/3/4/5 device.	[Enabled] Disabled
Hot Plug (for Port 0/1/2/3/4/5)	Enable/Disable HDD Hot-Plug function.	Enabled [Disabled]
pin Up Device (for Port 0/1/2/3/4/5)	On an edge detect from 0 to 1, the PCH starts a COM reset initialization to the device.	Enabled [Disabled]

USB Configuration

```
                              Bios Setup Utility
      IntelRCSetup

 USB Precondition              [Disabled]          Precondition work on USB
 xHCI Mode                     [Auto]              host controller and root
                                                   ports for faster
                                                   enumeration.


                                                   ──────────────────────
                                                   ➔←: Select Screen
                                                   ↑↓: Select Item
                                                   Enter: Select
                                                   +/-: Change Opt.
                                                   F1: General Help
                                                   F3: Previous Values
                                                   F9: Optimized Defaults
                                                   F10: Save & Exit
                                                   ESC: Exit
```
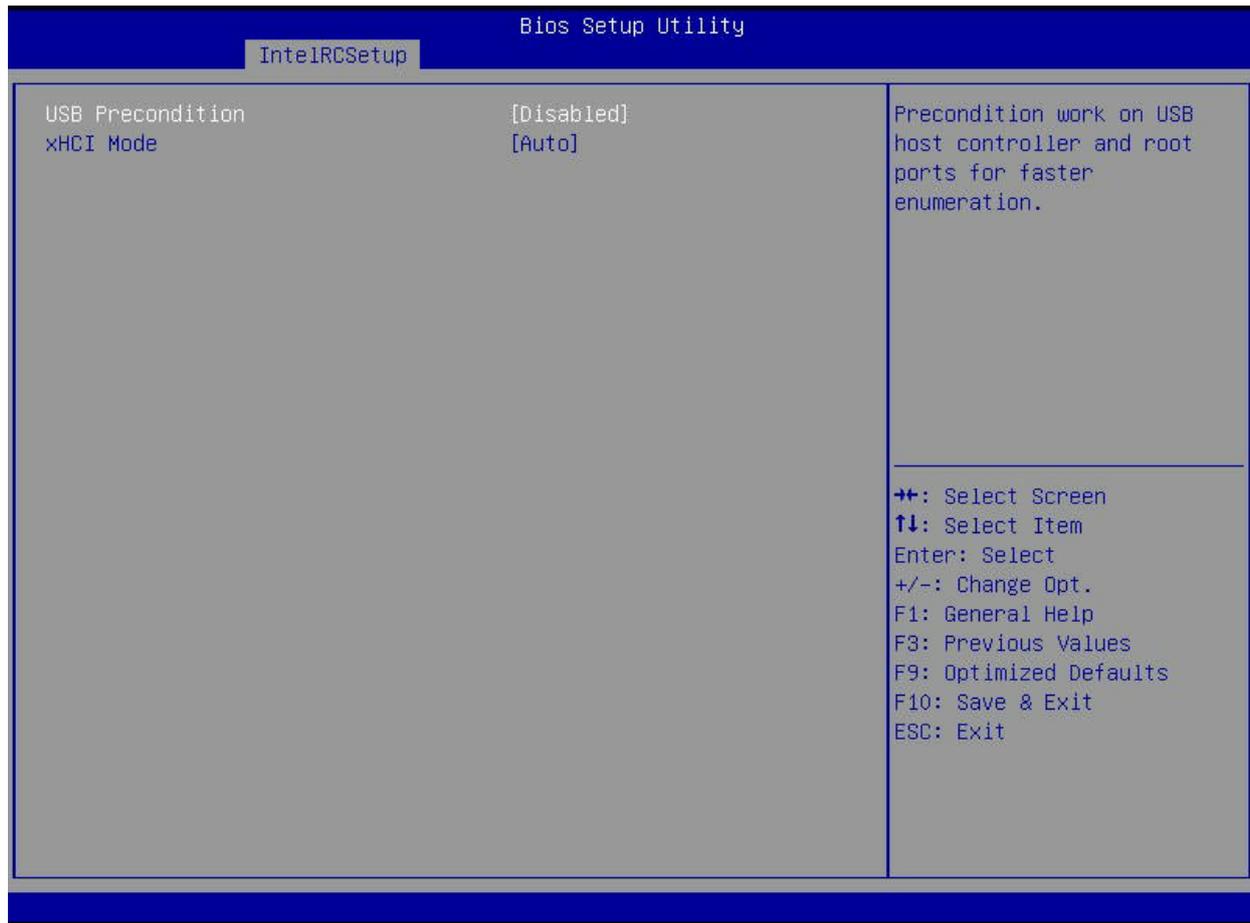
Parameter	Description	Option
USB Precondition	Precondition work on USB host controller and root ports for faster enumeration.	Enabled [Disabled]
xHCI Mode	Enable/Disable xHCI (USB 3.0) support function.	Smart Auto [Auto] Enabled Disabled

Miscellaneous Configuration

```
                              Bios Setup Utility
        IntelRCSetup

 Miscellaneous Configuration                                  Select active Video type
 ----------------------------------------------------
 Active Video                    [Onboard Device]




                                                              ↔: Select Screen
                                                              ↑↓: Select Item
                                                              Enter: Select
                                                              +/-: Change Opt.
                                                              F1: General Help
                                                              F3: Previous Values
                                                              F9: Optimized Defaults
                                                              F10: Save & Exit
                                                              ESC: Exit
```
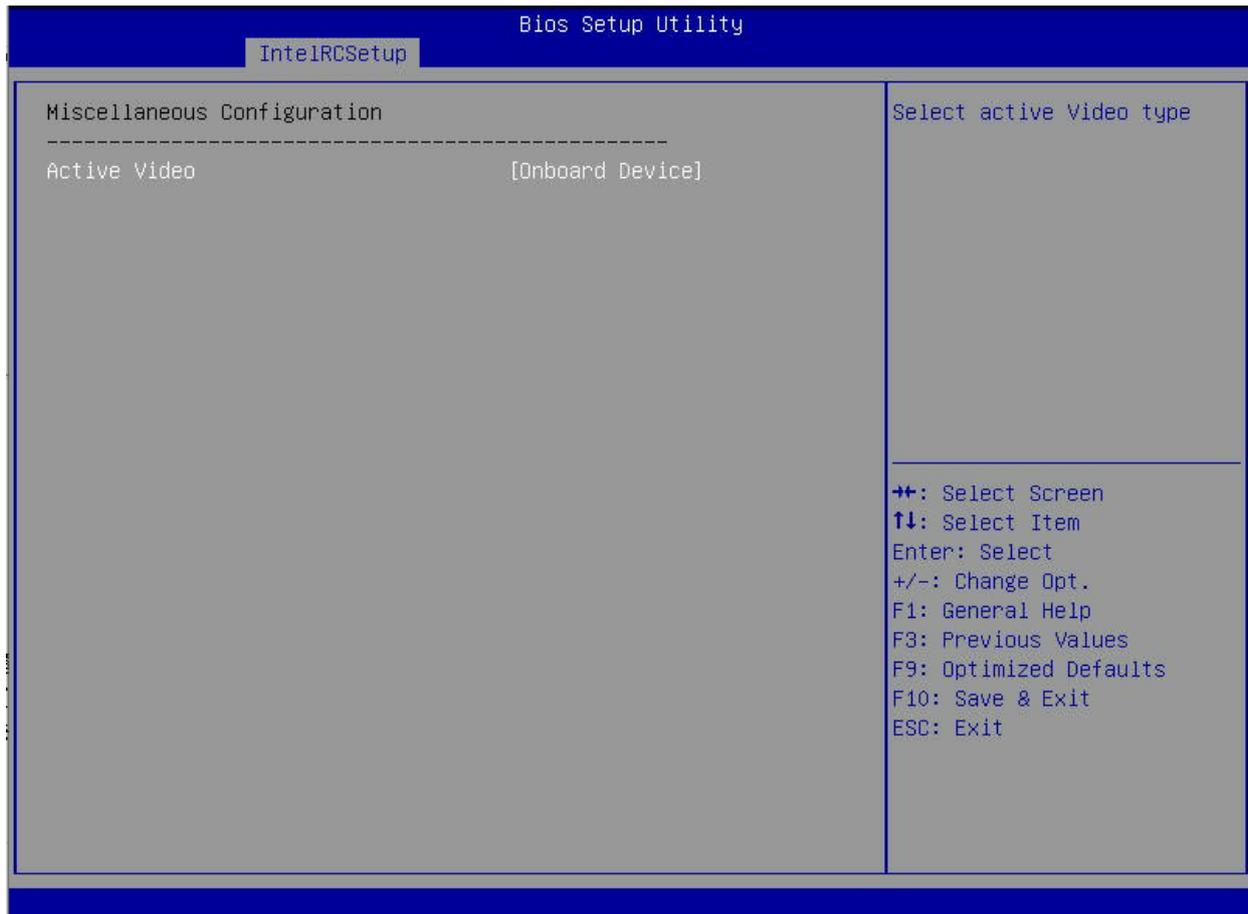
Parameter	Description	Option
Active Video	Select active Video type.	[Onboard Device] Offboard Device

Server ME Configuration

```
                              Bios Setup Utility
        IntelRCSetup

 General ME Configuration                                    MCTP bus owner location on
 Operational Firmware Version       3.0.3.20                 PCIe: [15:8] bus, [7:3]
 ME Firmware Type                   SPS                      device, [2:0] function. If
 Recovery Firmware Version          3.0.3.20                 all zeros sending bus
 ME Firmware Features               SiEn+NM+PECIProxy+ICC+PMB...   owner is disabled.
 ME Firmware Status #1              0x000F0345
 ME Firmware Status #2              0x38002000
   Current State                   Operational
   Error Code                      No Error
 MCTP Bus Owner                    0

                                                            →←: Select Screen
                                                            ↑↓: Select Item
                                                            Enter: Select
                                                            +/-: Change Opt.
                                                            F1: General Help
                                                            F3: Previous Values
                                                            F9: Optimized Defaults
                                                            F10: Save & Exit
                                                            ESC: Exit
```

Parameter	Description	Option
General ME Configuration	Displays general ME information.	
MCTP Bus Owner	Configure MCTP Bus Owner.	

Runtime Error Logging

```
                          Bios Setup Utility
       IntelRCSetup

  Runtime Error Logging                               System Error enabling and
  ------------------------------------------------    logging setup option.
  System Errors                    [Enable]
  S/W Error Injection Support      [Disable]
▶ Whea Settings :
▶ Memory Error Enabling :
▶ PCI/PCI-E Error Enabling :



                                                     ↔: Select Screen
                                                     ↑↓: Select Item
                                                     Enter: Select
                                                     +/-: Change Opt.
                                                     F1: General Help
                                                     F3: Previous Values
                                                     F9: Optimized Defaults
                                                     F10: Save & Exit
                                                     ESC: Exit
```
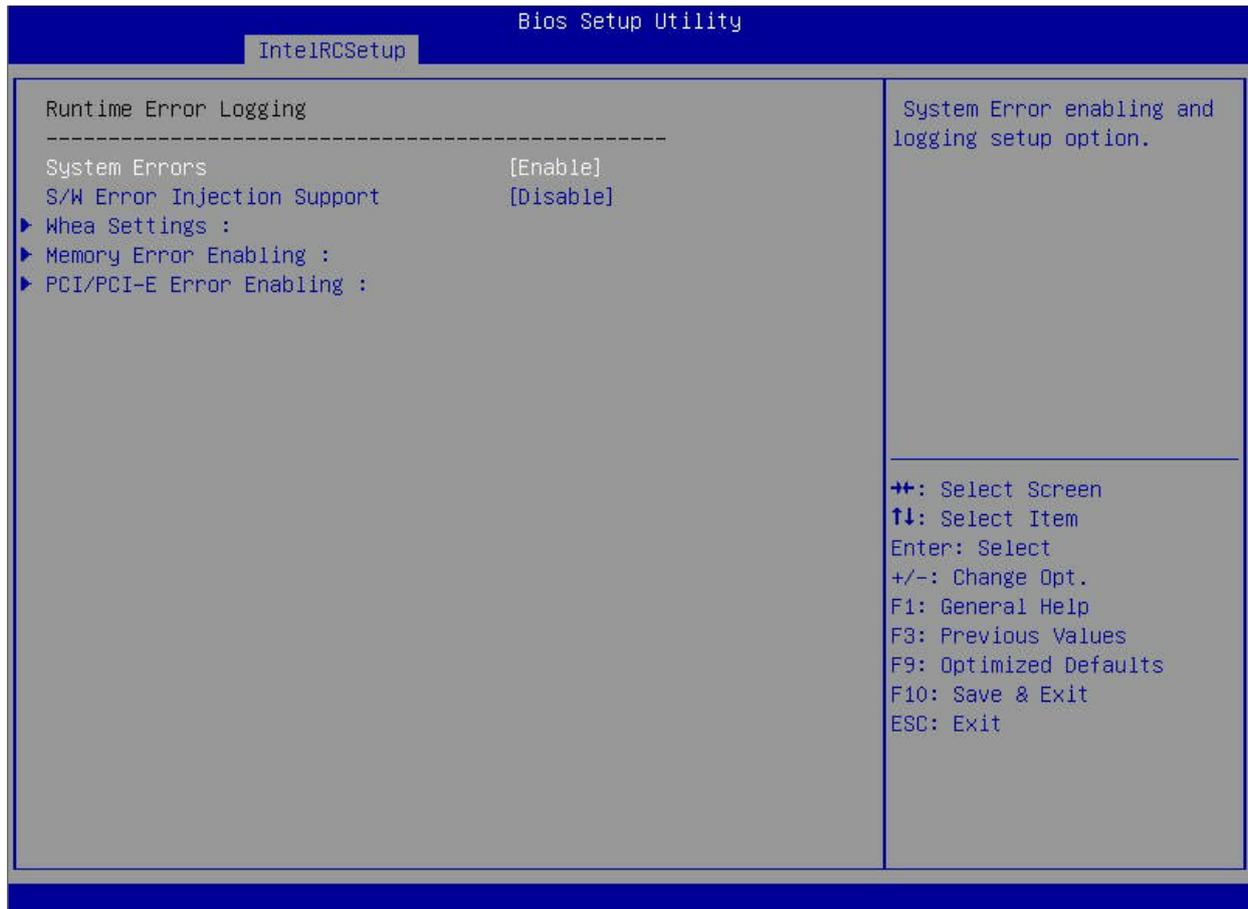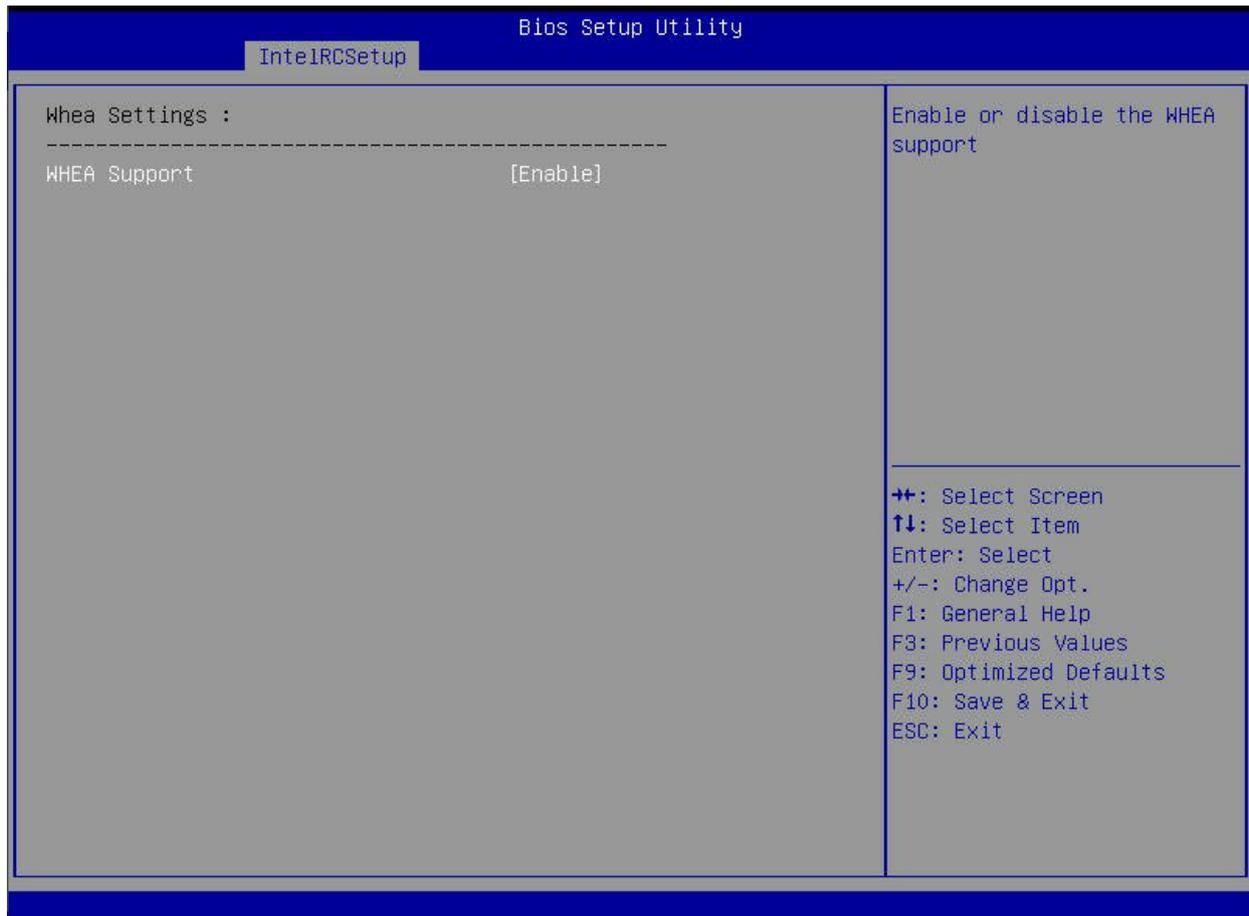
Parameter	Description	Option
Runtime Error Logging		
System Errors	Enable/Disable system error logging function.	[Enable] Disable
S/W Error Injection Support	Enable/Disable software injection error logging function.	Enable [Disable]
Whea Settings	Press [Enter] for configuration of advanced items.	
Memory Error Enabling	Press [Enter] for configuration of advanced items.	
PCI/PCI Error Enabling	Press [Enter] for configuration of advanced items.	

Whea Configuration

```
                                Bios Setup Utility
        IntelRCSetup

     Whea Settings :                                            Enable or disable the WHEA
     ---------------------------------------------------        support
     WHEA Support                        [Enable]







                                                                →←: Select Screen
                                                                ↑↓: Select Item
                                                                Enter: Select
                                                                +/-: Change Opt.
                                                                F1: General Help
                                                                F3: Previous Values
                                                                F9: Optimized Defaults
                                                                F10: Save & Exit
                                                                ESC: Exit



```

Parameter	Description	Option
Whea Settings		
WHEA Support	Enable/Disable WHEA Support.	[Enable] Disable

Memory Error Enabling

```
                          Bios Setup Utility
       IntelRCSetup

  Memory Error Enabling :                              Disable the Memory that
  ----------------------------------------------       trigger Uncorrected Error.
  Uncorrected Error disable Memory      [Disable]
  Memory corrected Error enbaling       [Disable]




                                                       ──────────────────────────
                                                       →←: Select Screen
                                                       ↑↓: Select Item
                                                       Enter: Select
                                                       +/-: Change Opt.
                                                       F1: General Help
                                                       F3: Previous Values
                                                       F9: Optimized Defaults
                                                       F10: Save & Exit
                                                       ESC: Exit




```
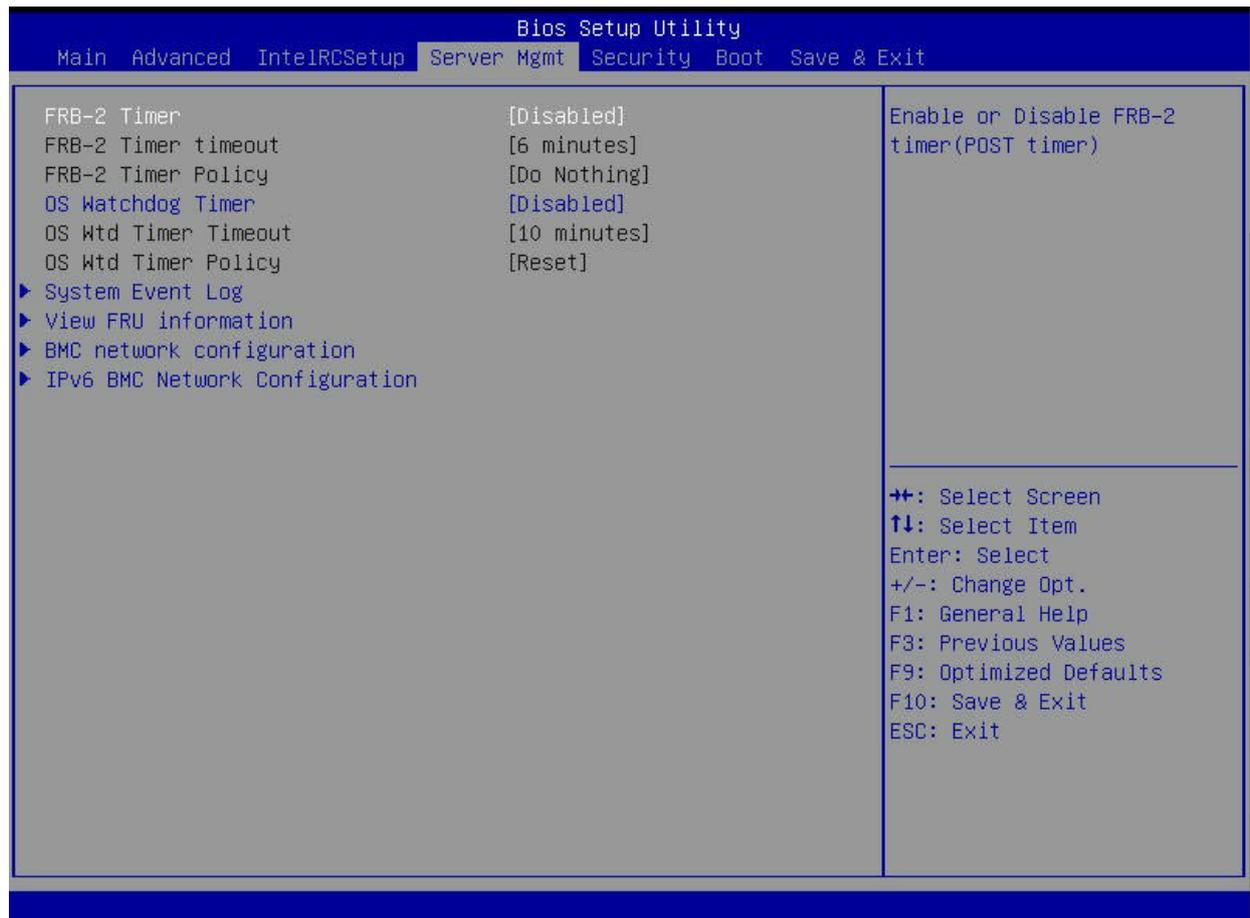
Parameter	Description	Option
Memory Error Enabling		
Un-Correctable Errors disable Memory	Enable/disable Memory test trigger Uncorrected Error.	Enable [Disable]
Memory corrected Errors enabling	Enable/disable Memory corrected Errors.	Enable [Disable]

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PCI/PCI-E Error Enabling

```
                              Bios Setup Utility
      IntelRCSetup

   PCI-Ex Error Enable              [no]



                                              ↦←: Select Screen
                                              ↑↓: Select Item
                                              Enter: Select
                                              +/-: Change Opt.
                                              F1: General Help
                                              F3: Previous Values
                                              F9: Optimized Defaults
                                              F10: Save & Exit
                                              ESC: Exit
```
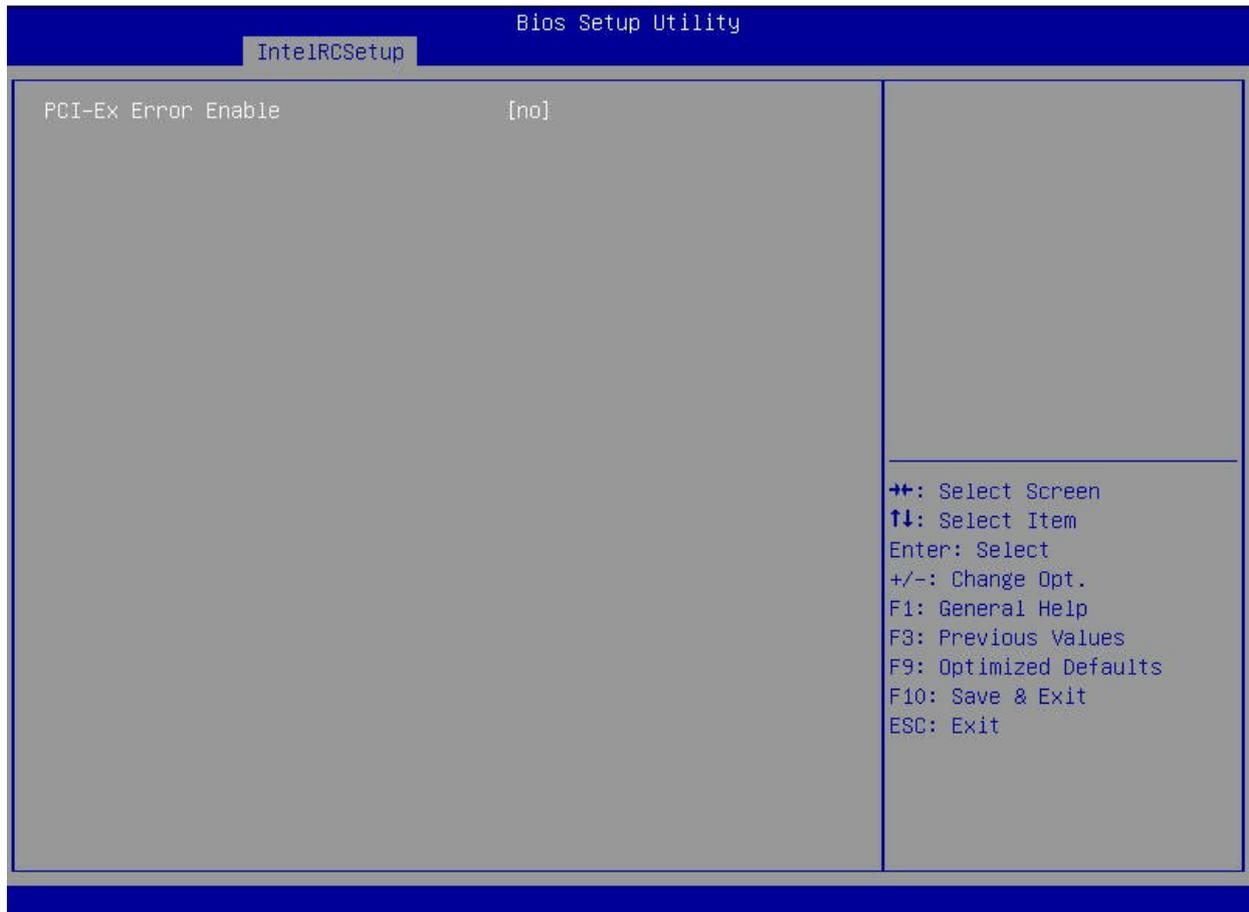
Parameter	Description	Option
PCI-Ex Error Enable		[no] yes

Server Management

```
                            Bios Setup Utility
    Main   Advanced   IntelRCSetup  Server Mgmt  Security  Boot  Save & Exit

    FRB-2 Timer                      [Disabled]              Enable or Disable FRB-2
       FRB-2 Timer timeout           [6 minutes]            timer(POST timer)
       FRB-2 Timer Policy            [Do Nothing]
    OS Watchdog Timer                [Disabled]
       OS Wtd Timer Timeout          [10 minutes]
       OS Wtd Timer Policy           [Reset]
    ▶ System Event Log
    ▶ View FRU information
    ▶ BMC network configuration
    ▶ IPv6 BMC Network Configuration

                                                            ↔: Select Screen
                                                            ↑↓: Select Item
                                                            Enter: Select
                                                            +/-: Change Opt.
                                                            F1: General Help
                                                            F3: Previous Values
                                                            F9: Optimized Defaults
                                                            F10: Save & Exit
                                                            ESC: Exit
```

Parameter	Description	Option
FRB-2 Timer	Enable/Disable FRB-2 timer (POST timer).	Enabled [Disabled]
FRB-2 Timer timeout	Configure the FRB2 Timer timeout.	3 minutes 4 minutes 5 minutes [6 minutes.]
FRB-2 Timer Policy	Configure the FRB2 Timer policy.	[Do Nothing] Reset Power Down
OS Watchdog Timer	Enable/Disable OS Watchdog Timer function.	Enabled [Disabled]
OS Wtd Timer Timeout	Configure OS Watchdog Timer. Please note that this item is configurable when OS Watchdog Timer is set to Enabled.	
OS Wtd Timer Policy	Configure OS Watchdog Timer Policy. Please note that this item is configurable when OS Watchdog Timer is set to Enabled.	[Reset] Do Nothing Power Down
System Event Log	Displays Event Log advanced settings. Press Enter to access the related submenu.	
View FRU information	The FRU information submenu is a simple display page for basic system ID information, as well as system product information. Items on this window are non-configurable	
BMC network configuration	Press Enter to access the related submenu.	
IPv6 BMC Network Configuration	Press Enter to access the related submenu.	

System Event Log

```
                        Bios Setup Utility
                        Server Mgmt

 Enabling/Disabling Options                          Change this to enable or
 SEL Components                    [Enabled]          disable all features of
                                                     System Event Logging
 Erasing Settings                                    during boot.
 Erase SEL                         [No]
 When SEL is Full                  [Do Nothing]

 Custom EFI Logging Options
 Log EFI Status Codes             [Error code]

 NOTE: All values changed here do not take effect
       until computer is restarted.
                                                     ──────────────────────
                                                     ↔: Select Screen
                                                     ↑↓: Select Item
                                                     Enter: Select
                                                     +/-: Change Opt.
                                                     F1: General Help
                                                     F3: Previous Values
                                                     F9: Optimized Defaults
                                                     F10: Save & Exit
                                                     ESC: Exit
```

Parameter	Description	Option
Enabling/Disabling Options		
SEL Components	Change this to enable or disable all features of System Event Logging during boot.	[Enabled] Disabled
Erasing Settings		
Erasing SEL	Choose options for erasing SEL.	[No] Yes, On next reset Yes, On every reset
When SEL is Full	Choose options for reactions to a full SEL.	[Do Nothing] Erase Immediately
Custom EFI Logging Options		
Log EFI Status Codes	Enable/Disable the logging of EFI Status Codes (if not already converted to legacy).	Disabled Both [Error code] Progress code

View FRU Information

The FRU Information screen is a simple display page for basic system ID information, as well as System product information. Items on this window are non-configurable.

```
                             Bios Setup Utility
                          Server Mgmt

  FRU Information

  System Manufacturer              GIGABYTE
  System Product Name              MB10-DS1
  System Version                   0100
  System Serial Number             012345678901234456789AB
  Board Manufacturer               GIGABYTE
  Board Product Name               MB10-DS1
  Board Version                    01234567
  Board Serial Number              GG4U6000019
  Chassis Manufacturer             GIGABYTE
  Chassis Product Name             01234567
  Chassis Serial Number            012345678901234456789AB
                                                         →←: Select Screen
                                                         ↑↓: Select Item
                                                         Enter: Select
                                                         +/-: Change Opt.
                                                         F1: General Help
                                                         F3: Previous Values
                                                         F9: Optimized Defaults
                                                         F10: Save & Exit
                                                         ESC: Exit
```

BMC network Configuration

```
                          Bios Setup Utility
                    Server Mgmt

   BMC network configuration                              Select to configure LAN
   Select NCSI and Dedicated LAN       [Mode1 (Dedicated)] channel parameters
                                                           statically or
   Lan channel 1                                           dynamically(DHCP). Do
   Configuration Address source        [DynamicBmcDhcp]    nothing option will not
   Station IP address                  10.1.111.46         modify any BMC network
   Subnet mask                         255.255.255.0       parameters during BIOS
   Router IP address                   10.1.111.253        phase
   Station MAC address                 1c-1b-0d-06-a6-a2

   Real-time synchronize BMC network parameter values

                                                           →←: Select Screen
                                                           ↑↓: Select Item
                                                           Enter: Select
                                                           +/-: Change Opt.
                                                           F1: General Help
                                                           F3: Previous Values
                                                           F9: Optimized Defaults
                                                           F10: Save & Exit
                                                           ESC: Exit
```

Parameter	Description	Option
BMC network configuration		
Select NCSI and Dedicated LAN	Switch NCSI and dedicated LAN and send KCS command.	[Mode1 (Dedicated)] Mode2(NSCI)
Lan Channel 1		
Configuration Address source	Select to configure LAN channel parameters statically or dynamically (DHCP). Do nothing option will not modify any BMC network parameters during BIOS phase.	Unspecified Static [DynamicBmcDhcp]
Station IP Address	Display IP Address information.	
Subnet Mask	Display Subnet Mask information.	
Router IP address	Display Router IP address information.	
Station MAC address	Display the default MAC address information.	
Real-time synchronize BMC network parameter values	Press [Enter] to synchronize BMC network parameter values.	

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IPv6 BMC Network Configuration

```
                        Bios Setup Utility
                    Server Mgmt

    IPv6 BMC Network Configuration                          Enable/Disable IPv6 BMC
                                                            LAN channel function.
    IPv6 BMC Lan Channel 1:                                 Disable option will not
    IPv6 BMC Lan Option               [Enable]              modify any BMC network
    IPv6 BMC Lan IP Address Source    [Dynamic-Obtained by BMC...]  during BIOS Phase
    IPv6 BMC Lan IP Address/Prefix Len   ::/0
    -> [::/0]




                                                            ➤←: Select Screen
                                                            ↑↓: Select Item
                                                            Enter: Select
                                                            +/-: Change Opt.
                                                            F1: General Help
                                                            F3: Previous Values
                                                            F9: Optimized Defaults
                                                            F10: Save & Exit
                                                            ESC: Exit
```
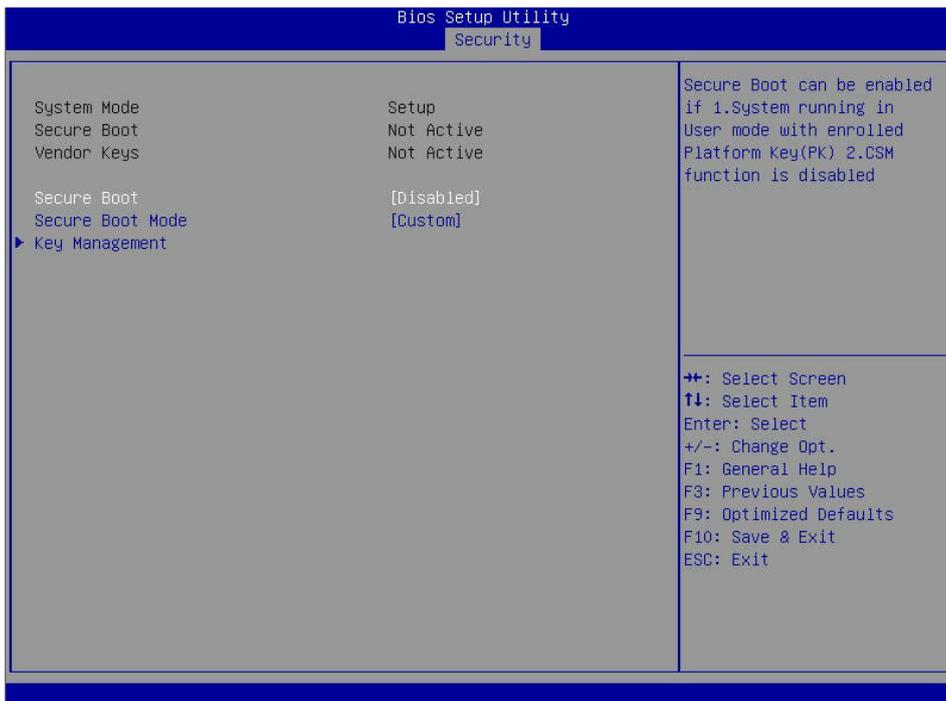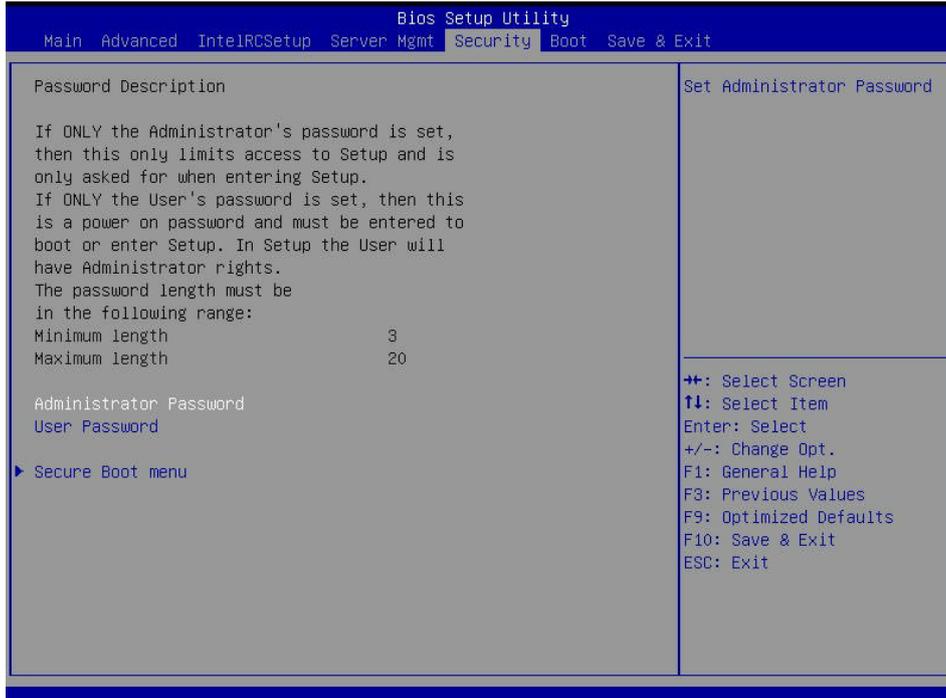
Parameter	Description	Option
IPv6 BMC network configuration		
IPv6 BMC Lan Channel 1		
IPv6 BMC Lan Option	Enable/Disable IPv6 BMC LAN channel function. When this item is disabled, the system will not modify any BMC network during BIOS phase.	[Enable] Disable
IPv6 BMC Lan IP Address Source	Selects to configure LAN channel parameters statically or dynamically (by BIOS or BMC).	Unspecified Static [Dynamic-Obtained by BMC running DHCP]
IPv6 BMC Lan IP Address/Prefix Length	Check if the IPv6 BMC LAN IP address matches those displayed on the screen.	

Security Menu

The Security menu allows you to safeguard and protect the system from unauthorized use by setting up access passwords.

```
                              Bios Setup Utility
      Main  Advanced  IntelRCSetup  Server Mgmt  Security  Boot  Save & Exit

     Password Description                                 Set Administrator Password

     If ONLY the Administrator's password is set,
     then this only limits access to Setup and is
     only asked for when entering Setup.
     If ONLY the User's password is set, then this
     is a power on password and must be entered to
     boot or enter Setup. In Setup the User will
     have Administrator rights.
     The password length must be
     in the following range:
     Minimum length              3
     Maximum length              20
                                                        →←: Select Screen
                                                        ↑↓: Select Item
     Administrator Password                             Enter: Select
     User Password                                      +/-: Change Opt.
                                                        F1: General Help
   ▶ Secure Boot menu                                   F3: Previous Values
                                                        F9: Optimized Defaults
                                                        F10: Save & Exit
                                                        ESC: Exit
```

```
                              Bios Setup Utility
                                  Security

                                                        Secure Boot can be enabled
     System Mode              Setup                     if 1.System running in
     Secure Boot              Not Active                User mode with enrolled
     Vendor Keys              Not Active                Platform Key(PK) 2.CSM
                                                        function is disabled
     Secure Boot              [Disabled]
     Secure Boot Mode         [Custom]
   ▶ Key Management




                                                        →←: Select Screen
                                                        ↑↓: Select Item
                                                        Enter: Select
                                                        +/-: Change Opt.
                                                        F1: General Help
                                                        F3: Previous Values
                                                        F9: Optimized Defaults
                                                        F10: Save & Exit
                                                        ESC: Exit
```

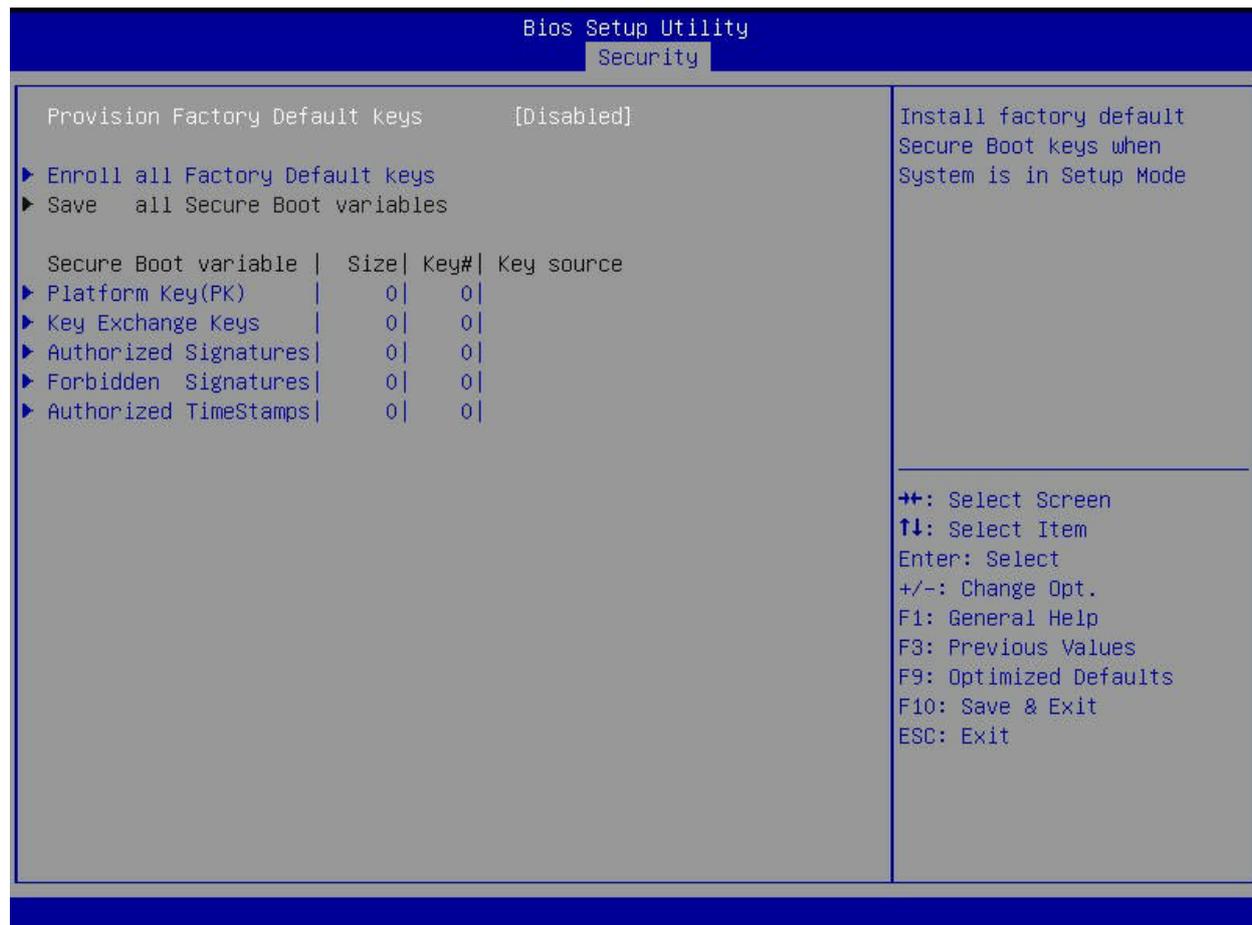There are three types of passwords that you can set:

- Administrator password

    Entering this password will allow the user to access and change all settings in the Setup Utility.

- User password

    Entering this password will restrict a user's access to the Setup menus. To enable or disable this field, a Administrator Password must first be set. A user can only access and modify the System Time, System Date, and Set User Password fields.

- Power-on boot

    When the Password on Boot field is enabled, a password will be required to boot up the server. To enable or disable this field, a Administrator Password must first be set.

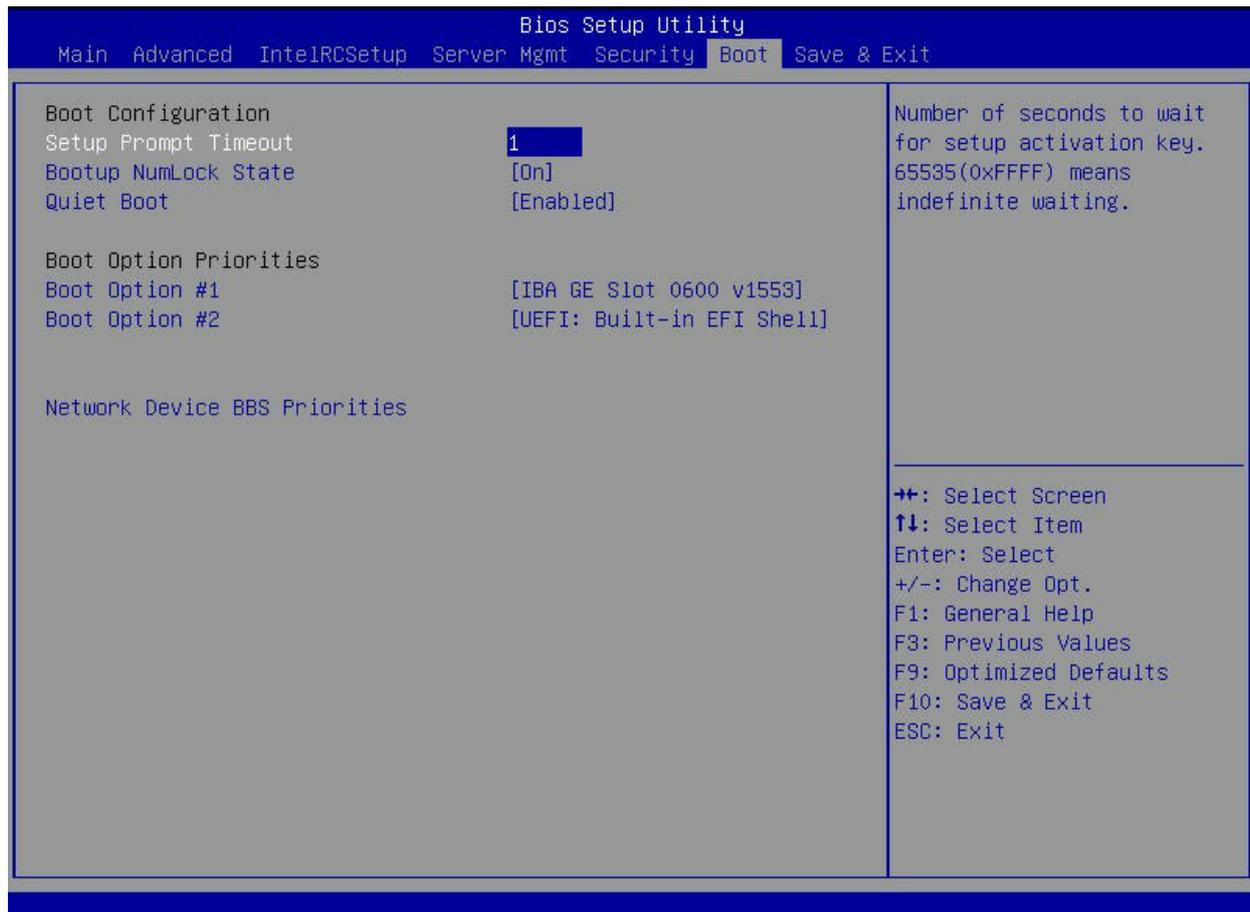| Parameter	Description	Option
Administrator Password	Press Enter to configure the Administrator password	
User Password	Press Enter to configure the user password.	
Secure Boot	Press [Enter] to configure advanced items.	
System Mode	Displays if the system is in User mode or Setup mode.	
Secure Boot	Displays secure boot status.	
Vendor Keys	Displays if the system vendor key information.	
Secure Boot	Enable/ Disable the Secure Boot function.	Enable [Disabled]
Secure Boot Mode (Note)	Secure Boot requires all the applications that are running during the booting process to be pre-signed with valid digital certificates. This way, the system knows all files being loaded before Windows loads to the login screen have not been tampered with. When set to Standard, it will automatically load the Secure Boot keys form the BIOS databases. When set to Custom, you can customize the Secure Boot settings and manually load its keys from the BIOS database.	Standard [Custom]
Key Management	Press [Enter] for configuration of advanced items.	

NOTE!
- Advanced items prompt when this item is set to Custom.

Key Management

```
                        Bios Setup Utility
                              Security
─────────────────────────────────────────────────────────────────
 Provision Factory Default keys      [Disabled]        Install factory default
                                                        Secure Boot keys when
▶ Enroll all Factory Default keys                       System is in Setup Mode
▶ Save   all Secure Boot variables

   Secure Boot variable |  Size| Key#| Key source
▶ Platform Key(PK)       |     0|    0|
▶ Key Exchange Keys      |     0|    0|
▶ Authorized Signatures| |     0|    0|
▶ Forbidden  Signatures| |     0|    0|
▶ Authorized TimeStamps| |     0|    0|

                                                        ──────────────────────
                                                        ↔: Select Screen
                                                        ↑↓: Select Item
                                                        Enter: Select
                                                        +/-: Change Opt.
                                                        F1: General Help
                                                        F3: Previous Values
                                                        F9: Optimized Defaults
                                                        F10: Save & Exit
                                                        ESC: Exit
─────────────────────────────────────────────────────────────────
```

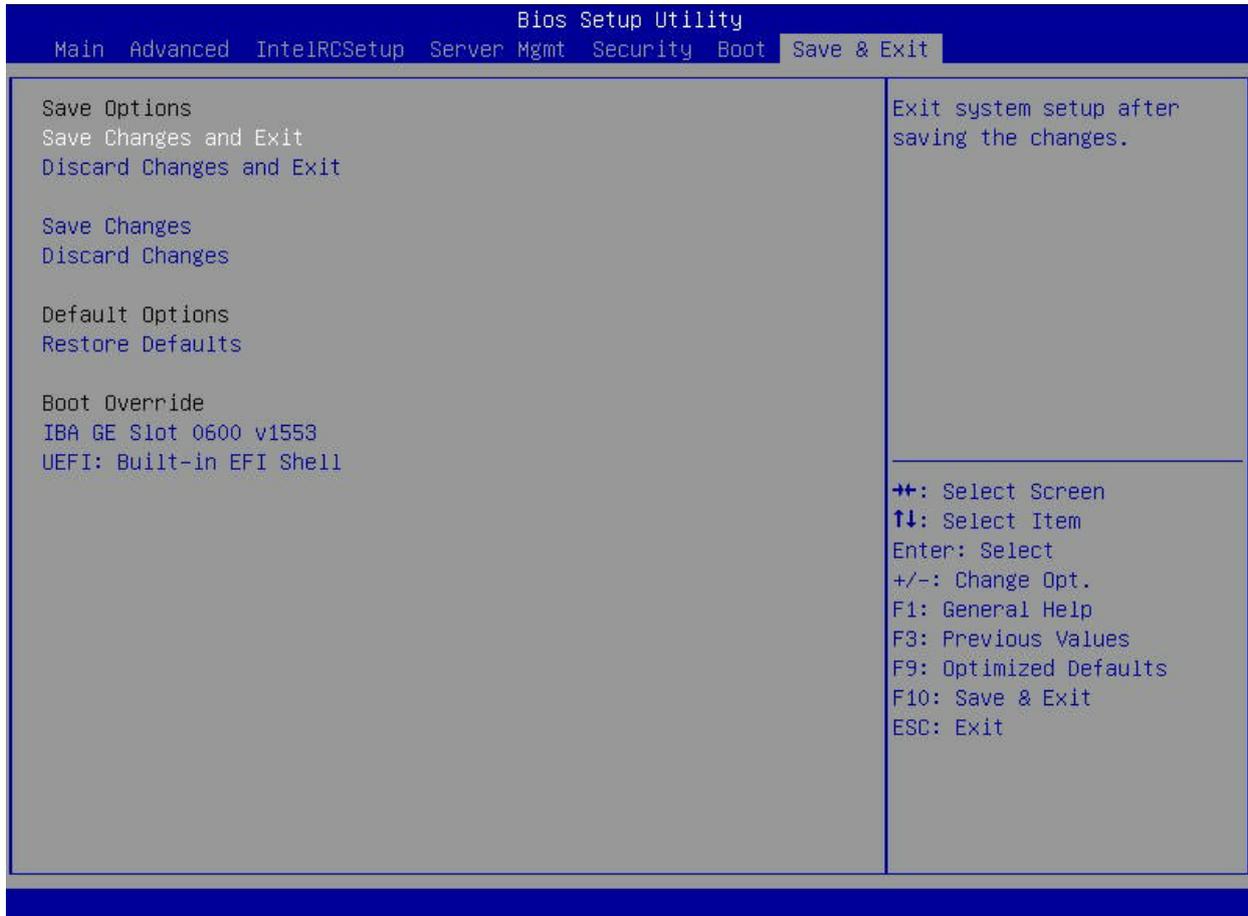| Parameter	Description	Option
Provision Factory Default keys	Install factory default Secure Boot keys when system is in Setup mode.	Enabled [Disabled]
Enroll Factory Default Key Provisioning	Force the system to Setup Mode. This will clear all Secure Boot Variables such as Platform Key (PK), Key-exchange Key (KEK), Authorized Signature Database (db), and Forbidden Signaures Database (dbx).	Enabled [Disabled]
Save All Factory Default Secure Boot Keys	Press [Enter] to save default Secure Boot Keys.	
Platform Key(PK)	Press [Enter] to configure Platform Key(PK)	
Key Exchange Keys	Press [Enter] to configure Key Exchange Keys	
Authorized Signatures	Press [Enter] to configure Authorized Signatures	
Forbidden Signatures	Press [Enter] to configure forbidden Signatures	
Authorized TimeStamps	Press [Enter] to configure Authorized TimeStamps	

Boot Option Menu

The Boot menu allows you to set the drive priority during system boot-up. BIOS setup will display an error message if the drive(s) specified is not bootable.

```
                              Bios Setup Utility
   Main  Advanced  IntelRCSetup  Server Mgmt  Security  Boot  Save & Exit

   Boot Configuration                                    Number of seconds to wait
   Setup Prompt Timeout          1                       for setup activation key.
   Bootup NumLock State          [On]                    65535(0xFFFF) means
   Quiet Boot                    [Enabled]               indefinite waiting.

   Boot Option Priorities
   Boot Option #1                [IBA GE Slot 0600 v1553]
   Boot Option #2                [UEFI: Built-in EFI Shell]


   Network Device BBS Priorities
                                                         ─────────────────────────
                                                         →←: Select Screen
                                                         ↑↓: Select Item
                                                         Enter: Select
                                                         +/-: Change Opt.
                                                         F1: General Help
                                                         F3: Previous Values
                                                         F9: Optimized Defaults
                                                         F10: Save & Exit
                                                         ESC: Exit
```

Parameter	Description	Option
Boot Configuration		
Setup Prompt Timeout	Number of seconds to wait for setup activation key. 65535 (0xFFFF) means indefinite waiting.	
Bootup NumLock State	Enable/Disable the Bootup NumLock function.	[On] Off
Quiet Boot	Enable/Disable showing the logo during POST.	[Enabled] Disable
Boot Option Priorities		
Boot Option #1/#2/	Press Enter to configure the boot priority. By default, the server searches for boot devices in the following sequence: 1. UEFI device. 2. Hard drive.	
Network Device BBS Priority	Press Enter to configure the boot priority.	

Exit Menu

The Exit menu displays the various options to quit from the BIOS setup. Highlight any of the exit options then press **Enter**.

```
                              Bios Setup Utility
    Main   Advanced   IntelRCSetup   Server Mgmt   Security   Boot   Save & Exit

    Save Options                                      Exit system setup after
    Save Changes and Exit                             saving the changes.
    Discard Changes and Exit

    Save Changes
    Discard Changes

    Default Options
    Restore Defaults

    Boot Override
    IBA GE Slot 0600 v1553
    UEFI: Built-in EFI Shell                          ─────────────────────────

                                                      ↔: Select Screen
                                                      ↑↓: Select Item
                                                      Enter: Select
                                                      +/-: Change Opt.
                                                      F1: General Help
                                                      F3: Previous Values
                                                      F9: Optimized Defaults
                                                      F10: Save & Exit
                                                      ESC: Exit
```

Parameter	Description	Option
Save Options		
Save Changes and Exit	Saves changes made and close the BIOS setup.	Yes No
Discard Changes and Exit	Discards changes made and close the BIOS setup.	Yes No
Save Changes	Saves changes made in the BIOS setup.	Yes No
Restore Defaults	Loads the default settings for all BIOS setup parameters. Setup Defaults are quite demanding in terms of resources consumption. If you are using low-speed memory chips or other kinds of low-performance components and you choose to load these settings, the system might not function properly.	Yes No
Defaults Options		
Restore Defaults	Loads the default settings for all BIOS setup parameters. Setup Defaults are quite demanding in terms of resources consumption. If you are using low-speed memory chips or other kinds of low-performance components and you choose to load these settings, the system might not function properly.	Yes No
Boot Override	Press [Enter] to configure the device as the boot-up	

	drive.	
UEFI: Built-in in EFI Shell	Press[Enter] on this item to Launch EFI Shell from file system device.	

BIOS Beep Codes

BIOS POST Beep code (AMI standard)

# of Beeps	Description
1	Memory not Installed.
1	Memory was installed twice (InstallPeiMemory routine in PEI Core called twice)
2	Recovery started
3	DXEIPL was not found
3	DXE Core Firmware Volume was not found
4	Recovery failed
4	S3 Resume failed
7	Reset PPI is not available