

# BIOS Reference Manual

REV. 7 August 2017

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## Bengal (VL-EPMe-30)

Intel® Atom™-based SBC with Dual Ethernet, Video, USB, SATA, Serial I/O, Digital I/O, Trusted Platform Module Security, Counter/Timers, Mini PCIe, mSATA, SPX, and PCIe/104 OneBank™ Interface





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## Product Release Notes

This document reflects the content of the BIOS Setup program for the EPMe-30 Bengal Board.

Board Revision	BIOS Version	BIOS ID String	Comments
Rev 2.00	1.01	Bengal_3.1.0.334.r1.101	First release of document
Rev 2.02A	1.02	Bengal_3.1.0.334.r1.102	Changed default setting of PCIe 1 speed from <u>Auto</u> to <u>Gen 1</u>
Rev 3.00	1.04	Bengal_3.1.0.547.r1.104	
Rev 3.01	1.05	Bengal_3.1.0.547.r1.105	Updated Web Links Refer to the table below

**Table 1: Changes from BIOS 334.r1.104 to BIOS 547.r1.105**

Change	Ref.
Updated video BIOS and GOP driver to better support DP++ mode.	N/A
Added Intel PXE ROM for built-in I210 Ethernet	N/A
<u>Added option to configure action on boot failure.</u>	N/A
Fixed fan control issues.	N/A
Removed 9600 baud setting from console redirection options.	Page 16
Removed Load Optimized Defaults from Exit tab.	Page 132

## Support Page

The [Bengal Support Page](#) contains additional information and resources for this product including:

- Operating system information and software drivers
- Data sheets and manufacturers' links for chips used in this product
- BIOS information and upgrades

## VersaTech KnowledgeBase

The [VersaTech KnowledgeBase](#) contains useful technical information about VersaLogic products, along with product advisories.

## Customer Support

If you are unable to solve a problem after reading this manual, visiting the product support page, or searching the KnowledgeBase, contact VersaLogic Technical Support at (503) 747-2261. VersaLogic support engineers are also available via e-mail at [Support@VersaLogic.com](mailto:Support@VersaLogic.com).

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The BIOS Setup utility is stored in the Serial Peripheral Interface (SPI) Flash device. The initial production BIOS ID string is Bengal\_3.1.0.547.r1.104.

The BIOS Setup utility can be used to view and change the BIOS settings for the Bengal board.

To access the BIOS Setup utility, press  during the early boot cycle.

The top-level menu bar is shown below.

Phoenix SecureCore Technology Setup				
Main	Advanced	Security	Boot	Exit












Table 2 lists the BIOS Setup utility top-level menu bar features.

**Table 2: Top-level Menu Bar Features**

Menu	Function
Main	Displays processor and memory configuration
Advanced	Configures advanced features available through the chipset
Security	Sets passwords and security features
Boot	Selects boot device options
Exit	Saves or discards changes to Setup utility options

Table 3 lists the function keys available for menu screens.

**Table 3. BIOS Setup Utility Function Keys**

Menu	Function
	Help
 or 	Selects an item (Moves the cursor up or down)
 or 	Changes values
	Loads setup default values
	Exits the menu
 or 	Selects a different menu screen (Moves the cursor left or right)
	Executes a command or selects a sub-menu
	Saves the current values and exits the BIOS Setup utility

The Main menu enables you to:

- Set system date and time
- Set boot features
- View and clear the error log

Top level view of Main menu screen.

```
Phoenix SecureCore Technology Setup
Main Advanced Security Boot Exit
-----
System Date      [01/14/2016]
System Time     [11:31:50]
> System Information
> Boot Features
> Error Manager
Item Specific Help
-----
View or set system
date.
-----
F1  Help  ↑↓  Select Item  +/-  Change Values  F9  Setup Defaults
Esc Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10 Save and Exit
```



## Main → System Date

```



Phoenix SecureCore Technology Setup
Main  Advanced  Security  Boot  Exit
-----
System Date      [01/14/2016]
System Time      [11:31:50]



> System Information
> Boot Features
> Error Manager



Item Specific Help
-----
View or set system
date.

F1  Help  ↑↓  Select Item  +/-  Change Values  F9  Setup Defaults
Esc  Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10  Save and Exit

```

Use the  and  keys to switch between the System Date and System Time fields.

Use the  and  keys to set the month, day, and year.

Use the  or  key to move from month → day → year.

## Main → System Time

```



Phoenix SecureCore Technology Setup
Main  Advanced  Security  Boot  Exit
-----
System Date      [01/14/2016]
System Time      [11:32:50]



> System Information
> Boot Features
> Error Manager



Item Specific Help
-----
View or set system
time.

F1  Help  ↑↓  Select Item  +/-  Change Values  F9  Setup Defaults
Esc  Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10  Save and Exit

```

Use the  and  keys to switch between the System Date and System Time fields.

Use the  and  keys to set the hours, minutes, and seconds.

Use the  or  key to move from hours → minutes → seconds.

## Main → System Information

```

Phoenix SecureCore Technology Setup
Main  Advanced  Security  Boot  Exit
-----
System Date      [01/14/2016]
System Time     [11:38:50]
> System Information
> Boot Features
> Error Manager

Item Specific Help
-----
Display System
Information.

F1  Help  ↑↓  Select Item  +/-  Change Values  F9  Setup Defaults
Esc  Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10  Save and Exit

```

This screen is read-only; there are no user-configurable options.

Example view of System Information screen:

```

Phoenix SecureCore Technology Setup
Main  Advanced  Security  Boot  Exit
-----
System Information
-----
BIOS Version      Bengal_3.1.0.547.r1.104 X64
Build Time       02/04/2016
Processor Type    Intel(R) Atom(TM) CPU E3845 @ 1.91GHz
Processor Speed   1.924 GHz
System Memory Speed 1333 MHz
L2 Cache RAM     2048 KB
Total Memory     4096 MB
[1]              4096 MB (DDR3- 1333) @ DIMMO
[2]              0 MB

F1  Help  ↑↓  Select Item  +/-  Change Values  F9  Setup Defaults
Esc  Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10  Save and Exit

```

## Main → Boot Features

Phoenix SecureCore Technology Setup				
Main	Advanced	Security	Boot	Exit
Boot Features				Item Specific Help
NumLock:	[On]		^	Selects Power-on state for NumLock.
Timeout	[ 2]		*	
CSM Support	[Yes]		*	
Quick Boot	[Disabled]		*	
Diagnostic Splash Screen	[Disabled]		*	
Diagnostic Summary Screen	[Disabled]		*	
BIOS Level USB	[Enabled]		*	
Console Redirection	[Disabled]		*	
Allow Hotkey in S4 resume	[Enabled]		+	
UEFI Boot	[Enabled]		+	
Legacy Boot	[Enabled]		v	
Boot in Legacy Video Mode	[Disabled]		*	
Load OPROM	[On Demand]		v	
F1 Help	↑↓ Select Item	+/- Change Values	F9 Setup Defaults	
Esc Exit	<> Select Menu	Enter Select > Sub-Menu	F10 Save and Exit	

## Main → Boot Features → NumLock

Phoenix SecureCore Technology Setup				
Main	Advanced	Security	Boot	Exit
Boot Features			Item Specific Help	
NumLock:	[On]	^	Selects Power-on state for NumLock.	
Timeout	[ 2]	*		
CSM Support	[Yes]	*		
Quick Boot	[Disabled]	*		
Diagnostic Splash Screen	[Disabled]	*		
Diagnostic Summary Screen	[Disabled]	*		
BIOS Level USB	[Enabled]	*		
Console Redirection	[Disabled]	*		
Allow Hotkey in S4 resume	[Enabled]	+		
UEFI Boot	[Enabled]	+		
Legacy Boot	[Enabled]	v		
Boot in Legacy Video Mode	[Disabled]	*		
Load OPROM	[On Demand]	v		
F1	Help	↑↓	Select Item	+/- Change Values
F9	Setup Defaults			
Esc	Exit	<>	Select Menu	Enter Select > Sub-Menu
F10	Save and Exit			

Options	<b>On (default)</b>	Enable keyboard NumLock function at power-on
	Off	Disable keyboard NumLock function at power-on

## Main → Boot Features → Timeout

Phoenix SecureCore Technology Setup							
Main	Advanced	Security	Boot	Exit			
Boot Features			Item Specific Help				
NumLock:		[On]	^	Number of seconds that P.O.S.T will wait for the user input before booting.			
Timeout		[ 2]	*				
CSM Support		[Yes]	*				
Quick Boot		[Disabled]	*				
Diagnostic Splash Screen		[Disabled]	*				
Diagnostic Summary Screen		[Disabled]	*				
BIOS Level USB		[Enabled]	*				
Console Redirection		[Disabled]	*				
Allow Hotkey in S4 resume		[Enabled]	+				
UEFI Boot		[Enabled]	+				
Legacy Boot		[Enabled]	v				
Boot in Legacy Video Mode		[Disabled]	*				
Load OPROM		[On Demand]	v				
F1	Help	↑↓	Select Item	+/-	Change Values	F9	Setup Defaults
Esc	Exit	<>	Select Menu	Enter	Select > Sub-Menu	F10	Save and Exit

Options	<b>2 (default)</b>	Two-second delay
	0-99	Acceptable range

## Main → Boot Features → CSM Support

Phoenix SecureCore Technology Setup							
Main	Advanced	Security	Boot	Exit			
Boot Features			Item Specific Help				
NumLock:		[On]	^	The Compatibility Support Module supports legacy (non-UEFI) OSes and provides legacy BIOS services, such as software interrupt Int10/Int13.			
Timeout		[ 2]	*				
CSM Support		[Yes]	*				
Quick Boot		[Disabled]	*				
Diagnostic Splash Screen		[Disabled]	*				
Diagnostic Summary Screen		[Disabled]	*				
BIOS Level USB		[Enabled]	*				
Console Redirection		[Disabled]	*				
Allow Hotkey in S4 resume		[Enabled]	+				
UEFI Boot		[Enabled]	+				
Legacy Boot		[Enabled]	v				
Boot in Legacy Video Mode		[Disabled]	*				
Load OPROM		[On Demand]	v				
F1	Help	↑↓	Select Item	+/-	Change Values	F9	Setup Defaults
Esc	Exit	<>	Select Menu	Enter	Select > Sub-Menu	F10	Save and Exit

Options	No	Disable Compatibility Support Module (CSM)
	<b>Yes (default)</b>	Enable Compatibility Support Module (CSM)

## Main → Boot Features → Quick Boot

Phoenix SecureCore Technology Setup							
Main	Advanced	Security	Boot	Exit			
<b>Boot Features</b>				Item Specific Help			
NumLock:		[On]	^	Enable/Disable quick boot.			
Timeout		[ 2]	*				
CSM Support		[Yes]	*				
<b>Quick Boot</b>		<b>[Disabled]</b>	*				
Diagnostic Splash Screen		[Disabled]	*				
Diagnostic Summary Screen		[Disabled]	*				
BIOS Level USB		[Enabled]	*				
Console Redirection		[Disabled]	*				
Allow Hotkey in S4 resume		[Enabled]	+				
UEFI Boot		[Enabled]	+				
Legacy Boot		[Enabled]	v				
Boot in Legacy Video Mode		[Disabled]	*				
Load OPROM		[On Demand]	v				
F1	Help	↑↓	Select Item	+/-	Change Values	F9	Setup Defaults
Esc	Exit	<>	Select Menu	Enter	Select > Sub-Menu	F10	Save and Exit

Options	<b>Disabled (default)</b>	Disable Quick Boot
	Enabled	Enable Quick Boot



## Main → Boot Features → Diagnostic Splash Screen

Phoenix SecureCore Technology Setup				
Main	Advanced	Security	Boot	Exit
Boot Features				Item Specific Help
NumLock:		[On]	^	If you select
Timeout		[ 2]	*	'Enabled' the
CSM Support		[Yes]	*	diagnostic splash
Quick Boot		[Disabled]	*	screen always
Diagnostic Splash Screen		[Enabled]	*	displays during boot.
Diagnostic Summary Screen		[Disabled]	*	If you select
BIOS Level USB		[Enabled]	*	'Disabled' the
Console Redirection		[Disabled]	*	diagnostic splash
Allow Hotkey in S4 resume		[Enabled]	+	screen does not
UEFI Boot		[Enabled]	+	display unless you
Legacy Boot		[Enabled]	v	press HOTKEY during
Boot in Legacy Video Mode		[Disabled]	*	boot.
Load OPROM		[On Demand]	v	
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit				

Options	<b>Disabled (default)</b>	Diagnostic splash screen does not display unless you press HOTKEY during boot
	Enabled	Diagnostic splash screen always displays during boot

## Main → Boot Features → Diagnostic Summary Screen

Phoenix SecureCore Technology Setup							
Main	Advanced	Security	Boot	Exit			
<b>Boot Features</b>				Item Specific Help			
NumLock:		[On]	^	Display the Diagnostic summary screen during boot.			
Timeout		[ 2]	*				
CSM Support		[Yes]	*				
Quick Boot		[Disabled]	*				
Diagnostic Splash Screen		[Enabled]	*				
<b>Diagnostic Summary Screen</b>		<b>[Disabled]</b>	*				
BIOS Level USB		[Enabled]	*				
Console Redirection		[Disabled]	*				
Allow Hotkey in S4 resume		[Enabled]	+				
UEFI Boot		[Enabled]	+				
Legacy Boot		[Enabled]	v				
Boot in Legacy Video Mode		[Disabled]	*				
Load OPROM		[On Demand]	v				
F1	Help	↑↓	Select Item	+/-	Change Values	F9	Setup Defaults
Esc	Exit	<>	Select Menu	Enter	Select > Sub-Menu	F10	Save and Exit

Options	Disabled (default)	Diagnostic summary screen does not display during boot
	Enabled	Diagnostic summary screen displays during boot

## Main → Boot Features → BIOS Level USB

Phoenix SecureCore Technology Setup				
Main	Advanced	Security	Boot	Exit
Boot Features			Item Specific Help	
NumLock:	[On]	^	Enable/Disable all	
Timeout	[ 2]	*	BIOS support for USB	
CSM Support	[Yes]	*	in order to reduce	
Quick Boot	[Disabled]	*	boot time. Note that	
Diagnostic Splash Screen	[Enabled]	*	this will prevent	
Diagnostic Summary Screen	[Disabled]	*	using a USB keyboard	
<b>BIOS Level USB</b>	<b>[Enabled]</b>	*	in setup or a USB	
Console Redirection	[Disabled]	*	biometric scanner	
Allow Hotkey in S4 resume	[Enabled]	+	such as a finger	
UEFI Boot	[Enabled]	+	print reader to	
Legacy Boot	[Enabled]	v	control access to	
Boot in Legacy Video Mode	[Disabled]	*	setup, but does not	
Load OPROM	[On Demand]	v	prevent the operating	
		+	system from	
		v	supporting such	
			hardware.	
F1	Help	↑↓	Select Item	+/- Change Values
F9	Setup Defaults			
Esc	Exit	<>	Select Menu	Enter Select > Sub-Menu
F10	Save and Exit			

Options	Disabled	Disables USB support within BIOS
	<b>Enabled (default)</b>	Enables USB support within BIOS

## Main → Boot Features → Console Redirection

Phoenix SecureCore Technology Setup				
Main	Advanced	Security	Boot	Exit
Boot Features				Item Specific Help
NumLock:		[On]	^	Enable/Disable
Timeout		[ 2]	*	Universal Console
CSM Support		[Yes]	*	Redirection.
Quick Boot		[Disabled]	*	
Diagnostic Splash Screen		[Enabled]	*	
Diagnostic Summary Screen		[Disabled]	*	
BIOS Level USB		[Enabled]	*	
Console Redirection		[Disabled]	*	
Allow Hotkey in S4 resume		[Enabled]	+	
UEFI Boot		[Enabled]	+	
Legacy Boot		[Enabled]	v	
Boot in Legacy Video Mode		[Disabled]	*	
Load OPROM		[On Demand]	v	
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit				

Options	<b>Disabled (default)</b>	Disables Universal Console Redirection (UCR)
	Enabled	Enables Universal Console Redirection (UCR). When enabled, four sub-menus appear for setting console redirection parameters.

## Main → Boot Features → Console Redirection → Terminal Type

Phoenix SecureCore Technology Setup				
Main	Advanced	Security	Boot	Exit
Boot Features			Item Specific Help	
NumLock:	[On]	^	Set terminal type of	
Timeout	[ 2]	*	UCR.	
CSM Support	[Yes]	*		
Quick Boot	[Disabled]	*	In VT100+ mode, send	
Diagnostic Splash Screen	[Enabled]	*	Fx keys as Esc,x	
Diagnostic Summary Screen	[Disabled]	*	sequence	
BIOS Level USB	[Enabled]	*		
Console Redirection	[Enabled]	*	F1 = Esc,1	
Terminal Type	[VT100+]	*	F2 = Esc,2	
Baudrate	[115200]	*		
Flow Control	[None]	*		
Continue C.R. after POST	[Enabled]	*		
Allow Hotkey in S4 resume	[Enabled]	+		
UEFI Boot	[Enabled]	+		
Legacy Boot	[Enabled]	v		
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit				

Options	ANSI	Sets terminal type to ANSI
	VT100	Sets terminal type to VT100
	<b>VT100+ (default)</b>	Sets terminal type to VT100+
	UTF8	Sets terminal type to UTF8

## Main → Boot Features → Console Redirection → Baudrate

Phoenix SecureCore Technology Setup							
Main	Advanced	Security	Boot	Exit			
Boot Features				Item Specific Help			
CSM Support		[Yes]	^	Set baudrate of UCR.			
Quick Boot		[Disabled]	+				
Diagnostic Splash Screen		[Enabled]	+				
Diagnostic Summary Screen		[Disabled]	*				
BIOS Level USB		[Enabled]	*				
Console Redirection		[Enabled]	*				
Terminal Type		[VT100+]	*				
<b>Baudrate</b>		<b>[115200]</b>	*				
Flow Control		[None]	*				
Continue C.R. after POST		[Enabled]	*				
Allow Hotkey in S4 resume		[Enabled]	*				
UEFI Boot		[Enabled]	*				
Legacy Boot		[Enabled]	*				
Boot in Legacy Video Mode		[Disabled]	*				
Load OPROM		[On Demand]	v				
F1	Help	↑↓	Select Item	+/-	Change Values	F9	Setup Defaults
Esc	Exit	<>	Select Menu	Enter	Select > Sub-Menu	F10	Save and Exit

Options	19200	Sets baudrate to 19200
	38400	Sets baudrate to 38400
	57600	Sets baudrate to 57600
	<b>115200 (default)</b>	Sets baudrate to 115200

## Main → Boot Features → Console Redirection → Flow Control

Phoenix SecureCore Technology Setup				
Main	Advanced	Security	Boot	Exit
Boot Features			Item Specific Help	
NumLock:		[On]	^	Set flow control
Timeout		[ 2]	*	method for UCR.
CSM Support		[Yes]	*	
Quick Boot		[Disabled]	*	[None] - No flow
Diagnostic Splash Screen		[Enabled]	*	control.
Diagnostic Summary Screen		[Disabled]	*	
BIOS Level USB		[Enabled]	*	[XON/XOFF] -
Console Redirection		[Enabled]	*	Software flow control.
Terminal Type		[VT100+]	*	
Baudrate		[115200]	*	
Flow Control		[None]	*	
Continue C.R. after POST		[Enabled]	*	
Allow Hotkey in S4 resume		[Enabled]	+	
UEFI Boot		[Enabled]	+	
Legacy Boot		[Enabled]	v	
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit				

Options	<b>None (default)</b>	No flow control
	[XON/XOFF]	Software flow control

## Main → Boot Features → Console Redirection → Continue C.R. after POST

Phoenix SecureCore Technology Setup				
Main	Advanced	Security	Boot	Exit
Boot Features				Item Specific Help
NumLock:		[On]	^	Enables Console
Timeout		[ 2]	*	Redirection after OS
CSM Support		[Yes]	*	has loaded.
Quick Boot		[Disabled]	*	
Diagnostic Splash Screen		[Enabled]	*	
Diagnostic Summary Screen		[Disabled]	*	
BIOS Level USB		[Enabled]	*	
Console Redirection		[Enabled]	*	
Terminal Type		[VT100+]	*	
Baudrate		[115200]	*	
Flow Control		[None]	*	
Continue C.R. after POST		[Enabled]	*	
Allow Hotkey in S4 resume		[Enabled]	+	
UEFI Boot		[Enabled]	+	
Legacy Boot		[Enabled]	v	
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit				

Options	Disabled	Disables console redirection after the operating system has loaded
	<b>Enabled (default)</b>	Enables console redirection after the operating system has loaded



## Main → Boot Features → Allow Hotkey in S4 Resume

Phoenix SecureCore Technology Setup				
Main	Advanced	Security	Boot	Exit
Boot Features				Item Specific Help
NumLock:		[On]	^	Enable hotkey
Timeout		[ 2]	*	detection when system
CSM Support		[Yes]	*	resuming from
Quick Boot		[Disabled]	*	Hibernate state
Diagnostic Splash Screen		[Enabled]	*	
Diagnostic Summary Screen		[Disabled]	*	
BIOS Level USB		[Enabled]	*	
Console Redirection		[Disabled]	*	
Allow Hotkey in S4 resume		[Enabled]	+	
UEFI Boot		[Enabled]	+	
Legacy Boot		[Enabled]	v	
Boot in Legacy Video Mode		[Disabled]	*	
Load OPROM		[On Demand]	v	
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit				

Options	Disabled	Disables Hotkey detection when system resumes from Hibernate state
	<b>Enabled (default)</b>	Enables Hotkey detection when system resumes from Hibernate state

## Main → Boot Features → UEFI Boot

Phoenix SecureCore Technology Setup				
Main	Advanced	Security	Boot	Exit
Boot Features			Item Specific Help	
NumLock:	[On]	^	Enable the UEFI boot.	
Timeout	[ 2]	*		
CSM Support	[Yes]	*		
Quick Boot	[Disabled]	*		
Diagnostic Splash Screen	[Enabled]	*		
Diagnostic Summary Screen	[Disabled]	*		
BIOS Level USB	[Enabled]	*		
Console Redirection	[Disabled]	*		
Allow Hotkey in S4 resume	[Enabled]	+		
<b>UEFI Boot</b>	<b>[Enabled]</b>	+		
Legacy Boot	[Enabled]	v		
Boot in Legacy Video Mode	[Disabled]	*		
Load OPROM	[On Demand]	v		
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit				

Options	Disabled	Disables Unified Extensible Firmware Interface (UEFI) boot
	<b>Enabled (default)</b>	Enables Unified Extensible Firmware Interface (UEFI) boot

## Main → Boot Features → Legacy Boot

Phoenix SecureCore Technology Setup				
Main	Advanced	Security	Boot	Exit
<b>Boot Features</b>				Item Specific Help
CSM Support		[Yes]	^	Enable the Legacy boot.
Quick Boot		[Disabled]	+	
Diagnostic Splash Screen		[Enabled]	+	
Diagnostic Summary Screen		[Disabled]	*	
BIOS Level USB		[Enabled]	*	
Console Redirection		[Disabled]	*	
Allow Hotkey in S4 resume		[Enabled]	+	
UEFI Boot		[Enabled]	+	
<b>Legacy Boot</b>		<b>[Enabled]</b>	v	
Boot in Legacy Video Mode		[Disabled]	*	
Load OPROM		[On Demand]	v	
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit				

Options	Disabled	Disables Legacy boot
	<b>Enabled (default)</b>	Enables Legacy boot

## Main → Boot Features → Boot In Legacy Video Mode

Phoenix SecureCore Technology Setup				
Main	Advanced	Security	Boot	Exit
Boot Features			Item Specific Help	
CSM Support		[Yes]	^	Enable to force the display adapter to switch the video mode to Text Mode 3 at the end of BIOS POST for non-UEFI boot mode (Legacy Boot). Some legacy software, such as DUET, requires that the BIOS explicitly enter text video mode prior to boot.
Quick Boot		[Disabled]	+	
Diagnostic Splash Screen		[Enabled]	+	
Diagnostic Summary Screen		[Disabled]	*	
BIOS Level USB		[Enabled]	*	
Console Redirection		[Disabled]	*	
Allow Hotkey in S4 resume		[Enabled]	+	
UEFI Boot		[Enabled]	+	
Legacy Boot		[Enabled]	v	
Boot in Legacy Video Mode		[Disabled]	*	
Load OPROM		[On Demand]	v	
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit				

Options	Disabled (default)	Does not force a video mode switch to Text Mode 3.
	Enabled	Forces the display adapter to switch to Text Mode 3 at the end of BIOS POST for non-UEFI boot mode (that is, Legacy Boot).

## Main → Boot Features → Load OPROM

Phoenix SecureCore Technology Setup				
Main	Advanced	Security	Boot	Exit
Boot Features			Item Specific Help	
CSM Support	[Yes]		^	Load all OPROMs or on demand according to the boot device.
Quick Boot	[Disabled]		+	
Diagnostic Splash Screen	[Enabled]		+	
Diagnostic Summary Screen	[Disabled]		*	
BIOS Level USB	[Enabled]		*	
Console Redirection	[Disabled]		*	
Allow Hotkey in S4 resume	[Enabled]		+	
UEFI Boot	[Enabled]		+	
Legacy Boot	[Enabled]		v	
Boot in Legacy Video Mode	[Disabled]		*	
<b>Load OPROM</b>	<b>[On Demand]</b>		v	
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit				

Options	All	Load all option ROMs.
	<b>On Demand (default)</b>	Load option ROMs (OPROMs) on demand according to the requirements of the boot device.

## Main → Error Manager

```
Phoenix SecureCore Technology Setup
Main  Advanced  Security  Boot  Exit
-----
System Date      [12/31/2017]
System Time      [12:34:25]
> System Information
> Boot Features
> Error Manager

Item Specific Help
-----
Display Error Manager
Log information.


F1  Help  ↑↓  Select Item  +/-  Change Values  F9  Setup Defaults
Esc Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10  Save and Exit
```

## Main → Error Manager → View Error Manager Log

```


Phoenix SecureCore Technology Setup
Main  Advanced  Security  Boot  Exit
-----
Error Manager
-----
View Error Manager Log [Enter]
Clear Error Manager Log [Enter]
-----
Item Specific Help
-----
Display Error Manager
Log information.
-----
F1  Help  ↑↓  Select Item  +/-  Change Values  F9  Setup Defaults
Esc Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10  Save and Exit

```

Press  to view the Error Manager Log information.

**Main → Error Manager → Clear Error Manager Log**

```
Phoenix SecureCore Technology Setup
Main  Advanced  Security  Boot  Exit
-----
Error Manager
-----
View Error Manager Log  [Enter]
Clear Error Manager Log [Enter]
-----
Item Specific Help
Clear Error Manager
Log.
-----
F1  Help  ↑↓  Select Item  +/-  Change Values  F9  Setup Defaults
Esc Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10 Save and Exit
```

Press  to clear the Error Manager Log information.





The Advanced menu enables you to:

- Select the operating system
- Configure VersaLogic product-specific features
- Configure CPU parameters
- Configure graphics and non-core related parameters
- Configure chipset parameters
- Configure certain security/TXE (Trusted Execution Environment) parameters
- Configure thermal monitor parameters
- Examine SMBIOS event log items

Top-level view of Advanced menu screen:

```

Phoenix SecureCore Technology Setup
Main   Advanced Security Boot Exit
-----
Setup Warning:
Setting items on this screen to incorrect
values may cause system to malfunction!

OS Selection [Linux]

> VersaLogic Features
> CPU Configuration
> Graphics/Uncore Configuration
> South Cluster Configuration
> Security Configuration
> Thermal
> SMBIOS Event Log

Item Specific Help
-----
Select which OS will
be loaded.

Warning: Linux boot
may fail if Windows
is selected.

F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults
Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit
    
```

## Advanced → OS Selection

```

Phoenix SecureCore Technology Setup
Main  Advanced  Security  Boot  Exit
-----
Setup Warning:
Setting items on this screen to incorrect
values may cause system to malfunction!

OS Selection [Linux]

> VersaLogic Features
> CPU Configuration
> Graphics/Uncore Configuration
> South Cluster Configuration
> Security Configuration
> Thermal
> SMBIOS Event Log

Item Specific Help
-----
Select which OS will
be loaded.

Warning: Linux boot
may fail if Windows
is selected.

F1  Help  ↑↓  Select Item  +/-  Change Values  F9  Setup Defaults
Esc Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10  Save and Exit

```

Options	Windows	Selects Microsoft Windows as the boot operating system [Assumes boot device contains a Microsoft Windows operating system.]
	<b>Linux (default)</b>	Selects Linux as the boot operating system [Assumes boot device contains a Linux operating system.]

## Advanced → VersaLogic Features

Phoenix SecureCore Technology Setup			
Main	Advanced	Security	Boot Exit
VersaLogic Features		Item Specific Help	
FPGA Revision	[ 6]	^	The Mini Card slot can support either a PCIe Mini Card or an mSATA module. The mSATA specifications states that Pin 51 on the connector can be used to automatically detect an mSATA module. But some modules also use Pin 43 due to conflicts on Pin 51. Almost all modules will be correctly detected by using the setting of Pin 43 or Pin 51 mSATA detect, but there may be cases on older or non-standard modules where more specific settings are required including forcing the slot to always be a PCIe Mini Card or an mSATA module.
FPGA Flags	[EXTEMP]	*	
Battery Status	[OK]	*	
Fan Speed (RPM)	[ 5430]	*	
Mini Card Mode	[Pin 43 or 51 mSATA Detect]	*	
UART1	[Enabled]	*	
Base Address	[3F8]	*	
IRQ	[IRQ4]	*	
Mode	[RS-232]	+	
UART2	[Enabled]	v	
Base Address	[2F8]	*	
IRQ	[IRQ3]	*	
Mode	[RS-232]	+	
F1 Help	↑↓ Select Item	+/- Change Values	
Esc Exit	<> Select Menu	Enter Select > Sub-Menu	F10 Save and Exit

This screen provides information on the FPGA, battery status, and fan speed.

## Advanced → VersaLogic Features → Mini Card Mode

Phoenix SecureCore Technology Setup			
Main	Advanced	Security	Boot Exit
VersaLogic Features		Item Specific Help	
FPGA Revision	[ 6]	^	The Mini Card slot can support either a PCIe Mini Card or an mSATA module. The mSATA specifications states that Pin 51 on the connector can be used to automatically detect an mSATA module. But some modules also use Pin 43 due to conflicts on Pin 51. Almost all modules will be correctly detected by using the setting of Pin 43 or Pin 51 mSATA detect, but there may be cases on older or non-standard modules where more specific settings are required including forcing the slot to always be a PCIe Mini Card or an mSATA module.
FPGA Flags	[EXTEMP]	*	
Battery Status	[OK]	*	
Fan Speed (RPM)	[ 5430]	*	
<b>Mini Card Mode</b>	<b>[Pin 43 or 51 mSATA Detect]</b>	*	
UART1	[Enabled]	*	
Base Address	[3F8]	*	
IRQ	[IRQ4]	*	
Mode	[RS-232]	+	
UART2	[Enabled]	v	
Base Address	[2F8]	*	
IRQ	[IRQ3]	*	
Mode	[RS-232]	+	
F1 Help	↑↓ Select Item	+/- Change Values	
Esc Exit	<> Select Menu	Enter Select > Sub-Menu	F10 Save and Exit

Pin 43 or 51 mSATA Detect (default)	
Options	Pin 43 mSATA Detect
	Pin 51 mSATA Detect
	Force PCIe Mini Card Mode
	Force mSATA SSD Mode

## Advanced → VersaLogic Features → UART1

Phoenix SecureCore Technology Setup				
Main	Advanced	Security	Boot	Exit
VersaLogic Features				Item Specific Help
FPGA Revision	[ 6 ]			^
FPGA Flags	[ EXTEMP ]			*
Battery Status	[ OK ]			*
Fan Speed (RPM)	[ 5400 ]			*
Mini Card Mode	[ Pin 43 or 51 mSATA Detect ]			*
<b>UART1</b>	<b>[ Enabled ]</b>			*
Base Address	[ 3F8 ]			*
IRQ	[ IRQ4 ]			*
Mode	[ RS-232 ]			+
				+
UART2	[ Enabled ]			v
Base Address	[ 2F8 ]			*
IRQ	[ IRQ3 ]			*
Mode	[ RS-232 ]			+
F1	Help	↑↓	Select Item	+/-
Esc	Exit	<>	Select Menu	Enter
			Change Values	
			Select > Sub-Menu	
F9	Setup Defaults			
F10	Save and Exit			

Options	Disabled	Disables UART1
	<b>Enabled (default)</b>	Enables UART1

## Advanced → VersaLogic Features → UART1 → Base Address

Phoenix SecureCore Technology Setup			
Main	<b>Advanced</b>	Security	Boot Exit
<b>VersaLogic Features</b>		Item Specific Help	
FPGA Revision	[ 6]	^	Select the base address for UART1.
FPGA Flags	[EXTEMP]	*	
Battery Status	[OK]	*	
Fan Speed (RPM)	[ 5400]	*	
Mini Card Mode	[Pin 43 or 51 mSATA Detect]	*	
<b>UART1</b>	[Enabled]	*	
<b>Base Address</b>	<b>[3F8]</b>	*	
IRQ	[IRQ4]	*	
Mode	[RS-232]	+	
		+	
UART2	[Enabled]	v	
Base Address	[2F8]		
IRQ	[IRQ3]	*	
Mode	[RS-232]	+	
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit			

	<b>3F8 (default)</b>
	2F8
	3E8
	2E8
Options	200
	208
	220
	228
	238
	338

## Advanced → VersaLogic Features → UART1 → IRQ

Phoenix SecureCore Technology Setup		
Main	<b>Advanced</b>	Security Boot Exit
VersaLogic Features		Item Specific Help
FPGA Revision	[ 6]	^
FPGA Flags	[EXTEMP]	*
Battery Status	[OK]	*
Fan Speed (RPM)	[ 5400]	*
Mini Card Mode	[Pin 43 or 51 mSATA Detect]	*
<b>UART1</b>	[Enabled]	*
Base Address	[3F8]	*
<b>IRQ</b>	[IRQ4]	*
Mode	[RS-232]	+
		+
UART2	[Enabled]	v
Base Address	[2F8]	
IRQ	[IRQ3]	*
Mode	[RS-232]	+

F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults  
 Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit

Options	Disabled
	IRQ3
	<b>IRQ4 (default)</b>
	IRQ5
	IRQ10
	IRQ6
	IRQ7
	IRQ9
	IRQ11

**Advanced → VersaLogic Features → UART1 → Mode**

```

Phoenix SecureCore Technology Setup
Main   Advanced Security Boot Exit
-----
VersaLogic Features
-----
FPGA Revision      [ 6]
FPGA Flags         [EXTEMP]
Battery Status     [OK]
Fan Speed (RPM)    [ 5400]
Mini Card Mode     [Pin 43 or 51 mSATA Detect]
UART1
Base Address       [Enabled]
IRQ                [3F8]
Mode               [RS-232]
UART2
Base Address       [Enabled]
IRQ                [2F8]
IRQ                [IRQ3]
Mode               [RS-232]
-----
F1  Help  ↑↓  Select Item  +/-  Change Values  F9  Setup Defaults
Esc  Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10 Save and Exit
  
```

Options	<b>RS-232 (default)</b>
	RS-422
	RS-485 (Manual Direction Control)
	RS-485 (Automatic Direction Control)



## Advanced → VersaLogic Features → UART2

Phoenix SecureCore Technology Setup				
Main	Advanced	Security	Boot	Exit
VersaLogic Features				Item Specific Help
FPGA Revision	[ 6]		^	Enable or disable UART2.
FPGA Flags	[EXTEMP]		*	
Battery Status	[OK]		^	
Fan Speed (RPM)	[ 5370]		+	
Mini Card Mode	[Pin 43 or 51 mSATA Detect]		+	
UART1	[Enabled]		*	
Base Address	[3F8]		*	
IRQ	[IRQ4]		*	
Mode	[RS-232]		*	
UART2	[Enabled]		*	
Base Address	[2F8]		*	
IRQ	[IRQ3]		*	
Mode	[RS-232]		v	
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit				

Options	Disabled	Disables UART2
	<b>Enabled (default)</b>	Enables UART2

**Advanced → VersaLogic Features → UART2 → Base Address**

Phoenix SecureCore Technology Setup

Main    **Advanced**    Security    Boot    Exit

---

VersaLogic Features		Item Specific Help
FPGA Revision	[ 6 ]	^
FPGA Flags	[ EXTEMP ]	*
Battery Status	[ OK ]	^
Fan Speed (RPM)	[ 5370 ]	+
Mini Card Mode	[ Pin 43 or 51 mSATA Detect ]	*
UART1	[ Enabled ]	*
Base Address	[ 3F8 ]	*
IRQ	[ IRQ4 ]	*
Mode	[ RS-232 ]	*
UART2	[ Enabled ]	*
Base Address	[ 2F8 ]	*
IRQ	[ IRQ3 ]	*
Mode	[ RS-232 ]	v

F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults  
Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit

Options	3F8
	<b>2F8 (default)</b>
	3E8
	2E8
	200
	208
	220
	228
	238
	338

**Advanced → VersaLogic Features → UART2 → IRQ**

Phoenix SecureCore Technology Setup

Main    **Advanced**    Security    Boot    Exit

VersaLogic Features		Item Specific Help
FPGA Revision	[ 6]	^
FPGA Flags	[EXTEMP]	*
Battery Status	[OK]	^
Fan Speed (RPM)	[ 5370]	+
Mini Card Mode	[Pin 43 or 51 mSATA Detect]	*
UART1	[Enabled]	*
Base Address	[3F8]	*
IRQ	[IRQ4]	*
Mode	[RS-232]	*
<b>UART2</b>	[Enabled]	*
Base Address	[2F8]	*
<b>IRQ</b>	[IRQ3]	*
Mode	[RS-232]	v

F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults  
 Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit

Options	Disabled
	<b>IRQ3 (default)</b>
	IRQ4
	IRQ5
	IRQ10
	IRQ6
	IRQ7
	IRQ9
	IRQ11

**Advanced → VersaLogic Features → UART2 → Mode**

```

Phoenix SecureCore Technology Setup
Main   Advanced Security Boot   Exit
-----
VersaLogic Features
-----
FPGA Revision      [ 6]          ^
FPGA Flags         [EXTEMP]      *
Battery Status     [OK]          ^
Fan Speed (RPM)    [ 5370]      +
Mini Card Mode     [Pin 43 or 51 mSATA Detect] *
UART1
Base Address       [3F8]          *
IRQ                [IRQ4]         *
Mode               [RS-232]        *
UART2
Base Address       [2F8]          *
IRQ                [IRQ3]         *
Mode               [RS-232]        v
-----
F1 Help  ↑↓ Select Item  +/- Change Values  F9 Setup Defaults
Esc Exit  <> Select Menu  Enter Select > Sub-Menu F10 Save and Exit
    
```

Options	<b>RS-232 (default)</b>
	RS-422
	RS-485 (Manual Direction Control)
	RS-485 (Automatic Direction Control)

## Advanced → CPU Configuration

```

Phoenix SecureCore Technology Setup
Main   Advanced Security Boot Exit
-----
Setup Warning:
Setting items on this screen to incorrect
values may cause system to malfunction!

OS Selection                [Linux]

> VersaLogic Features
> CPU Configuration
> Graphics/Uncore Configuration
> South Cluster Configuration
> Security Configuration
> Thermal
> SMBIOS Event Log

Item Specific Help

F1  Help  ↑↓  Select Item  +/-  Change Values  F9  Setup Defaults
Esc Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10 Save and Exit

```

This is the top-level screen for the CPU Configuration menu.

## Advanced → CPU Configuration → Execute Disable Bit

Phoenix SecureCore Technology Setup			
Main	Advanced	Security	Boot Exit
CPU Configuration		Item Specific Help	
CPU Configuration		Execute Disable Bit	
Execute Disable Bit	[Enable]	prevent certain	
AES-NI	[Enable]	classes of malicious	
Limit CPUID Maximum	[Disable]	buffer overflow	
Bi-directional PROCHOT#	[Enable]	attacks when combined	
VTX-2	[Enable]	with a supporting OS	
TML	[Enable]		
DTS	[Enable]		
Intel Hyper-Threading Technology	Not Supported		
> CPU Power Management			
F1	Help	↑↓	Select Item +/- Change Values
Esc	Exit	<>	Select Menu Enter Select > Sub-Menu
F9	Setup Defaults		F10 Save and Exit

Options	Disable
	<b>Enable (default)</b>

## Advanced → CPU Configuration → AES-NI

Phoenix SecureCore Technology Setup	
Main	Advanced
Security	Boot
Exit	
CPU Configuration	
CPU Configuration	Item Specific Help
Execute Disable Bit [Enable]	AES-NI
<b>AES-NI [Enable]</b>	
Limit CPUID Maximum [Disable]	
Bi-directional PROCHOT# [Enable]	
VTX-2 [Enable]	
TMI [Enable]	
DTS [Enable]	
Intel Hyper-Threading Technology Not Supported	
> CPU Power Management	
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit	

Options	Disable	Disables Advanced Encryption Standard New Instructions (AES-NI)
	<b>Enable (default)</b>	Enables Advanced Encryption Standard New Instructions (AES-NI)

## Advanced → CPU Configuration → Limit CPUID Maximum

Phoenix SecureCore Technology Setup				
Main	Advanced	Security	Boot	Exit
CPU Configuration		Item Specific Help		
CPU Configuration		When enabled, code cannot execute CPUID function > 3.		
Execute Disable Bit		[Enable]		
AES-NI		[Enable]		
Limit CPUID Maximum		[Disable]		
Bi-directional PROCHOT#		[Enable]		
VTX-2		[Enable]		
TMI		[Enable]		
DTS		[Enable]		
Intel Hyper-Threading Technology		Not Supported		
> CPU Power Management				
F1	Help	↑↓	Select Item	+/- Change Values
Esc	Exit	<>	Select Menu	Enter Select > Sub-Menu
F9	Setup Defaults			F10 Save and Exit

Options	<b>Disable (default)</b>
	Enable



## Advanced → CPU Configuration → Bi-directional PROCHOT#

Phoenix SecureCore Technology Setup				
Main	Advanced	Security	Boot	Exit
CPU Configuration		Item Specific Help		
CPU Configuration		When a processor thermal sensor trips (either core), the PROCHOT# will be driven.		
Execute Disable Bit		[Enable]		
AES-NI		[Enable]		
Limit CPUID Maximum		[Disable]		
Bi-directional PROCHOT#		[Enable]		
VTX-2		[Enable]		
TMI		[Enable]		
DTS		[Enable]		
Intel Hyper-Threading Technology		Not Supported		
> CPU Power Management				
F1	Help	↑↓	Select Item	+/- Change Values
Esc	Exit	<>	Select Menu	Enter Select > Sub-Menu
F9	Setup Defaults			F10 Save and Exit

Options	Disable
	<b>Enable (default)</b>

## Advanced → CPU Configuration → VTX-2

Phoenix SecureCore Technology Setup				
Main	<b>Advanced</b>	Security	Boot	Exit
<b>CPU Configuration</b>			Item Specific Help	
CPU Configuration			To enable or disable the VTX-2 Mode support	
Execute Disable Bit			[Enable]	
AES-NI			[Enable]	
Limit CPUID Maximum			[Disable]	
Bi-directional PROCHOT#			[Enable]	
<b>VTX-2</b>			<b>[Enable]</b>	
TMI			[Enable]	
DTS			[Enable]	
Intel Hyper-Threading Technology			Not Supported	
> CPU Power Management				
F1	Help	↑↓	Select Item	+/- Change Values
Esc	Exit	<>	Select Menu	Enter Select > Sub-Menu
F9	Setup Defaults			F10 Save and Exit

Options	Disable	Disables VTX-2 virtualization technology
	<b>Enable (default)</b>	Enables VTX-2 virtualization technology

## Advanced → CPU Configuration → TM1

Phoenix SecureCore Technology Setup				
Main	<b>Advanced</b>	Security	Boot	Exit
<b>CPU Configuration</b>			Item Specific Help	
CPU Configuration			Enable/Disable TM1	
Execute Disable Bit		[Enable]		
AES-NI		[Enable]		
Limit CPUID Maximum		[Disable]		
Bi-directional PROCHOT#		[Enable]		
VTX-2		[Enable]		
<b>TM1</b>		<b>[Enable]</b>		
DTS		[Enable]		
Intel Hyper-Threading Technology		Not Supported		
> CPU Power Management				
F1	Help	↑↓	Select Item	+/- Change Values
Esc	Exit	<>	Select Menu	Enter Select > Sub-Menu
F9	Setup Defaults			F10 Save and Exit

Options	Disable	Disables Thermal Monitor 1
	<b>Enable (default)</b>	Enables Thermal Monitor 1

## Advanced → CPU Configuration → DTS

Phoenix SecureCore Technology Setup			
Main	Advanced	Security	Boot Exit
CPU Configuration		Item Specific Help	
CPU Configuration		Enabled/Disable	
Execute Disable Bit	[Enable]	Digital Thermal Sensor	
AES-NI	[Enable]		
Limit CPUID Maximum	[Disable]		
Bi-directional PROCHOT#	[Enable]		
VTX-2	[Enable]		
TMI	[Enable]		
DTS	[Enable]		
Intel Hyper-Threading Technology	Not Supported		
> CPU Power Management			
F1	Help	↑↓	Select Item +/- Change Values
Esc	Exit	<>	Select Menu Enter Select > Sub-Menu
F9			Setup Defaults
F10			Save and Exit

Options	Disable	Disables Digital Thermal Sensor
	<b>Enable (default)</b>	Enables Digital Thermal Sensor

## Advanced → CPU Configuration → Intel Hyper-Threading Technology

```

Phoenix SecureCore Technology Setup
Main   Advanced Security Boot Exit
-----
CPU Configuration | Item Specific Help
-----|-----
CPU Configuration
Execute Disable Bit [Enable]
AES-NI [Enable]
Limit CPUID Maximum [Disable]
Bi-directional PROCHOT# [Enable]
VTX-2 [Enable]
TMI [Enable]
DTS [Enable]
Intel Hyper-Threading Technology Not Supported

> CPU Power Management

-----
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults
Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit

```



**Note:** This feature is not supported at this time.

## Advanced → CPU Power Management

```

                                Phoenix SecureCore Technology Setup
Main      Advanced      Security      Boot      Exit
-----
                                CPU Power Management
-----
System Power Options
Intel(R) SpeedStep(tm)          [Enable]
  Boot performance mode        [Max Performance]
Intel Turbo Boost Technology    [Enable]
C-States                        [Enable]
  Enhanced C-states            [Enable]
Max C State                      [C7]
-----
                                Item Specific Help
-----
F1  Help  ↑↓  Select Item  +/-  Change Values      F9  Setup Defaults
Esc Exit  <>  Select Menu  Enter  Select > Sub-Menu F10 Save and Exit

```

This is the top-level screen of the CPU Power Management menu.

## Advanced → CPU Power Management → Intel SpeedStep

Phoenix SecureCore Technology Setup			
Main	Advanced	Security	Boot Exit
CPU Power Management		Item Specific Help	
System Power Options		Enable processor performance states (P-States).	
Intel(R) SpeedStep(tm)	[Enable]		
Boot performance mode	[Max Performance]		
Intel Turbo Boost Technology	[Enable]		
C-States	[Enable]		
Enhanced C-states	[Enable]		
Max C State	[C7]		
F1 Help	↑↓ Select Item	+/- Change Values	F9 Setup Defaults
Esc Exit	<> Select Menu	Enter Select > Sub-Menu	F10 Save and Exit

Options	Disable
	<b>Enable (default)</b>

**Advanced → CPU Power Management → Intel SpeedStep → Boot Performance Mode**

Phoenix SecureCore Technology Setup			
Main	<b>Advanced</b>	Security	Boot    Exit
<b>CPU Power Management</b>		Item Specific Help	
System Power Options			
Intel(R) SpeedStep(tm)	[Enable]	Select the performance state that the BIOS will set before OS handoff.	
<b>Boot performance mode</b>	<b>[Max Performance]</b>		
Intel Turbo Boost Technology	[Enable]		
C-States	[Enable]		
Enhanced C-states	[Enable]		
Max C State	[C7]		
F1 Help    ↑↓ Select Item    +/- Change Values    F9 Setup Defaults Esc Exit    <> Select Menu    Enter Select > Sub-Menu    F10 Save and Exit			

Options	<b>Max Performance (default)</b>
	Max Battery



## Advanced → CPU Power Management → Intel Turbo Boost Technology

Phoenix SecureCore Technology Setup			
Main	<b>Advanced</b>	Security	Boot Exit
<b>CPU Power Management</b>		Item Specific Help	
System Power Options			
Intel(R) SpeedStep(tm)	[Enable]	Enable to automatically allow processor cores to run faster than the base operating frequency if it's operating below power, current, and temperature specification limits.	
Boot performance mode	[Max Performance]		
<b>Intel Turbo Boost Technology</b>	<b>[Enable]</b>		
C-States	[Enable]		
Enhanced C-states	[Enable]		
Max C State	[C7]		
F1 Help ↑↓ Select Item +/- Change Values		F9 Setup Defaults	
Esc Exit <> Select Menu Enter Select > Sub-Menu		F10 Save and Exit	

Options	Disable
	<b>Enable (default)</b>

## Advanced → CPU Power Management → C-States

Phoenix SecureCore Technology Setup			
Main	<b>Advanced</b>	Security	Boot Exit
<b>CPU Power Management</b>		Item Specific Help	
System Power Options		Enable/Disable C States	
Intel(R) SpeedStep(tm)	[Enable]		
Boot performance mode	[Max Performance]		
Intel Turbo Boost Technology	[Enable]		
<b>C-States</b>	<b>[Enable]</b>		
Enhanced C-states	[Enable]		
Max C State	[C7]		
F1 Help ↑↓ Select Item +/- Change Values		F9 Setup Defaults	
Esc Exit <> Select Menu Enter Select > Sub-Menu		F10 Save and Exit	

Options	Disable
	<b>Enable (default)</b>

**Advanced → CPU Power Management → C-States → Enhanced C-States**

Phoenix SecureCore Technology Setup			
Main	<b>Advanced</b>	Security	Boot Exit
<b>CPU Power Management</b>		Item Specific Help	
System Power Options		Enable/Disable C1E, C2E and C4E. When enabled, CPU will switch to minimum speed when all cores enter C-State.	
Intel(R) SpeedStep(tm)	[Enable]		
Boot performance mode	[Max Performance]		
Intel Turbo Boost Technology	[Enable]		
C-States	[Enable]		
<b>Enhanced C-states</b>	<b>[Enable]</b>		
Max C State	[C7]		
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit			

Options	Disable
	<b>Enable (default)</b>

## Advanced → CPU Power Management → Max C State

```

Phoenix SecureCore Technology Setup
Main  Advanced  Security  Boot  Exit
-----
CPU Power Management
-----
System Power Options
Intel(R) SpeedStep(tm)          [Enable]
  Boot performance mode        [Max Performance]
Intel Turbo Boost Technology    [Enable]
C-States                        [Enable]
  Enhanced C-states            [Enable]
Max C State                     [C7]
-----
Item Specific Help
-----
This option controls
the Max C State that
the processor will
support.
-----
F1  Help  ↑↓  Select Item  +/-  Change Values  F9  Setup Defaults
Esc Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10 Save and Exit

```

	<b>C7 (default)</b>
Options	C6
	C1

## Advanced → Graphics/Uncore Configuration

```

Phoenix SecureCore Technology Setup
Main   Advanced Security Boot Exit
-----
Setup Warning:
Setting items on this screen to incorrect
values may cause system to malfunction!

OS Selection [Linux]

> VersaLogic Features
> CPU Configuration
> Graphics/Uncore Configuration
> South Cluster Configuration
> Security Configuration
> Thermal
> SMBIOS Event Log

Item Specific Help

F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults
Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit

```

This menu enables you to configure graphics and “uncore” (that is, outside of the SoC’s core) functions.

## Advanced → Graphics/Uncore Configuration → GOP Driver

Phoenix SecureCore Technology Setup			
Main	Advanced	Security	Boot Exit
Graphics/Uncore Configuration		Item Specific Help	
GOP Configuration		^	Enable GOP Driver
GOP Driver	[Enable]	*	will unload VBIOS;
		*	Disable it will load
		*	VBIOS
IGD Configuration		*	
Integrated Graphics Device	[Enable]	*	
Primary Display	[Auto]	*	
RC6(Render Standby)	[Enable]	*	
PAVC	[LITE Mode]	*	
GTT Size	[2MB]	*	
Aperture Size	[256MB]	*	
DVMT Pre-Allocated	[64M]	+	
DVMT Total Gfx Mem	[256M]	+	
IGD Turbo	[Auto]	+	
IGD - LCD Control		v	
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit			

Options	Options	Description
<b>Enable (default)</b>		Enables the Graphics Output Protocol (GOP) driver
Disable		Disables the Graphics Output Protocol (GOP) driver

## Advanced → Graphics/Uncore Configuration → Integrated Graphics Device

Phoenix SecureCore Technology Setup			
Main	<b>Advanced</b>	Security	Boot Exit
<b>Graphics/Uncore Configuration</b>		Item Specific Help	
GOP Configuration		^	Enable : Enable
GOP Driver	[Enable]	*	Integrated Graphics
IGD Configuration		*	Device (IGD) when
<b>Integrated Graphics Device</b>	<b>[Enable]</b>	*	selected as the
Primary Display	[Auto]	*	Primary Video
RC6(Render Standby)	[Enable]	*	Adaptor. Disable:
PAVC	[LITE Mode]	*	Always disable IGD
GTT Size	[2MB]	*	
Aperture Size	[256MB]	*	
DVMT Pre-Allocated	[64M]	+	
DVMT Total Gfx Mem	[256M]	+	
IGD Turbo	[Auto]	+	
IGD - LCD Control		v	
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit			

Options	Disable
	<b>Enable (default)</b>

## Advanced → Graphics/Uncore Configuration → Primary Display

Phoenix SecureCore Technology Setup							
Main	Advanced	Security	Boot	Exit			
Graphics/Uncore Configuration		Item Specific Help					
GOP Configuration			^	Select which of			
GOP Driver	[Enable]		*	IGD/PCI Graphics			
			*	device should be			
IGD Configuration			*	Primary Display Or			
Integrated Graphics Device	[Enable]		*	select SG for			
Primary Display	[Auto]		*	Switchable/Hybrid Gfx.			
RC6(Render Standby)	[Enable]		*				
PAVC	[LITE Mode]		*				
GTT Size	[2MB]		*				
Aperture Size	[256MB]		*				
DVMT Pre-Allocated	[64M]		+				
DVMT Total Gfx Mem	[256M]		+				
IGD Turbo	[Auto]		+				
IGD - LCD Control			v				
F1	Help	↑↓	Select Item	+/-	Change Values	F9	Setup Defaults
Esc	Exit	<>	Select Menu	Enter	Select > Sub-Menu	F10	Save and Exit

Options	<b>Auto (default)</b>
	IGD
	PCIe
	SG



## Advanced → Graphics/Uncore Configuration → RC6 (Render Standby)

Phoenix SecureCore Technology Setup				
Main	<b>Advanced</b>	Security	Boot	Exit
<b>Graphics/Uncore Configuration</b>			Item Specific Help	
GOP Configuration			^	Check to enable render standby support
GOP Driver		[Enable]	*	
IGD Configuration			*	
Integrated Graphics Device		[Enable]	*	
Primary Display		[Auto]	*	
<b>RC6(Render Standby)</b>		<b>[Enable]</b>	*	
PAVC		[LITE Mode]	*	
GTT Size		[2MB]	*	
Aperture Size		[256MB]	*	
DVMT Pre-Allocated		[64M]	+	
DVMT Total Gfx Mem		[256M]	+	
IGD Turbo		[Auto]	+	
IGD - LCD Control			v	
F1	Help	↑↓	Select Item	+/- Change Values
Esc	Exit	<>	Select Menu	Enter Select > Sub-Menu
F9	Setup Defaults			F10 Save and Exit

Options	<b>Enable (default)</b>
	Disable

## Advanced → Graphics/Uncore Configuration → PAVC

```

Phoenix SecureCore Technology Setup
Main  Advanced  Security  Boot  Exit
-----
Graphics/Uncore Configuration
-----
GOP Configuration          ^
GOP Driver                 * [Enable]                * Protected Audio Video
                           *                               * Control
IGD Configuration        *
Integrated Graphics Device * [Enable]
Primary Display           * [Auto]
RC6(Render Standby)      * [Enable]
PAVC                      * [LITE Mode]
GTT Size                  * [2MB]
Aperture Size             * [256MB]
DVMT Pre-Allocated       + [64M]
DVMT Total Gfx Mem       + [256M]
IGD Turbo                 + [Auto]
                           +
IGD - LCD Control        v
-----
F1  Help  ↑↓  Select Item  +/-  Change Values      F9  Setup Defaults
Esc  Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10 Save and Exit
    
```

Options	Disable	Disables Protected Audio Video Control (PAVC) support
	<b>LITE Mode (default)</b>	Allows PAVC-protected Blu-ray disks to play.
	SERPENT Mode	Disables the Windows Aero interface and uses ~96 MB of RAM for encrypted data that the operating system cannot see.

## Advanced → Graphics/Uncore Configuration → GTT Size

Phoenix SecureCore Technology Setup				
Main	<b>Advanced</b>	Security	Boot	Exit
<b>Graphics/Uncore Configuration</b>			Item Specific Help	
GOP Configuration			^	Select the GTT Size
GOP Driver		[Enable]	*	
IGD Configuration			*	
Integrated Graphics Device		[Enable]	*	
Primary Display		[Auto]	*	
RC6(Render Standby)		[Enable]	*	
PAVC		[LITE Mode]	*	
<b>GTT Size</b>		<b>[2MB]</b>	*	
Aperture Size		[256MB]	*	
DVMT Pre-Allocated		[64M]	+	
DVMT Total Gfx Mem		[256M]	+	
IGD Turbo		[Auto]	+	
IGD - LCD Control			v	
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit				

Options	Value	Description
	1 MB	Sets the Graphics Translation Table (GTT) size to 1 MB
	<b>2 MB (default)</b>	Sets the Graphics Translation Table (GTT) size to 2 MB

## Advanced → Graphics/Uncore Configuration → Aperture Size

Phoenix SecureCore Technology Setup				
Main	<b>Advanced</b>	Security	Boot	Exit
<b>Graphics/Uncore Configuration</b>			Item Specific Help	
GOP Configuration			^	Select the Aperture
GOP Driver	[Enable]		*	Size
			*	
IGD Configuration			*	
Integrated Graphics Device	[Enable]		*	
Primary Display	[Auto]		*	
RC6(Render Standby)	[Enable]		*	
PAVC	[LITE Mode]		*	
GTT Size	[2MB]		*	
<b>Aperture Size</b>	<b>[256MB]</b>		*	
DVMT Pre-Allocated	[64M]		+	
DVMT Total Gfx Mem	[256M]		+	
IGD Turbo	[Auto]		+	
			+	
IGD - LCD Control			v	
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit				

Options	128 MB
	<b>256 MB (default)</b>
	512 MB

## Advanced → Graphics/Uncore Configuration → DVMT Pre-Allocated

Phoenix SecureCore Technology Setup				
Main	Advanced	Security	Boot	Exit
Graphics/Uncore Configuration		Item Specific Help		
GOP Configuration			^	Select DVMT 5.0
GOP Driver	[Enable]		*	Pre-Allocated (Fixed)
			*	Graphics Memory size
			*	used by the Internal
			*	Graphics Device
IGD Configuration			*	
Integrated Graphics Device	[Enable]		*	
Primary Display	[Auto]		*	
RC6(Render Standby)	[Enable]		*	
PAVC	[LITE Mode]		*	
GTT Size	[2MB]		*	
Aperture Size	[256MB]		*	
DVMT Pre-Allocated	[64M]		+	
DVMT Total Gfx Mem	[256M]		+	
IGD Turbo	[Auto]		+	
			+	
IGD - LCD Control			v	
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit				

	<b>64M (default)</b>	Sets the Dynamic Video Memory Technology (DVMT) size to 64 MB
	96M	Sets the Dynamic Video Memory Technology (DVMT) size to 96 MB
	128M	Sets the Dynamic Video Memory Technology (DVMT) size to 128 MB
	160M	Sets the Dynamic Video Memory Technology (DVMT) size to 160 MB
	192M	Sets the Dynamic Video Memory Technology (DVMT) size to 192 MB
	224M	Sets the Dynamic Video Memory Technology (DVMT) size to 224MB
	256M	Sets the Dynamic Video Memory Technology (DVMT) size to 256 MB
Options	288M	Sets the Dynamic Video Memory Technology (DVMT) size to 288 MB
	320M	Sets the Dynamic Video Memory Technology (DVMT) size to 320 MB
	352M	Sets the Dynamic Video Memory Technology (DVMT) size to 352 MB
	384M	Sets the Dynamic Video Memory Technology (DVMT) size to 384 MB
	416M	Sets the Dynamic Video Memory Technology (DVMT) size to 416 MB
	448M	Sets the Dynamic Video Memory Technology (DVMT) size to 448 MB
	480M	Sets the Dynamic Video Memory Technology (DVMT) size to 480 MB
	512M	Sets the Dynamic Video Memory Technology (DVMT) size to 512 MB

## Advanced → Graphics/Uncore Configuration → DVMT Total Gfx Mem

Phoenix SecureCore Technology Setup							
Main	Advanced	Security	Boot	Exit			
Graphics/Uncore Configuration		Item Specific Help					
GOP Configuration			^	Select DVMT5.0 Total			
GOP Driver	[Enable]		*	Graphic Memory size			
			*	used by the Internal			
IGD Configuration			*	Graphics Device			
Integrated Graphics Device	[Enable]		*				
Primary Display	[Auto]		*				
RC6(Render Standby)	[Enable]		*				
PAVC	[LITE Mode]		*				
GTT Size	[2MB]		*				
Aperture Size	[256MB]		*				
DVMT Pre-Allocated	[64M]		+				
DVMT Total Gfx Mem	[256M]		+				
IGD Turbo	[Auto]		+				
IGD - LCD Control			v				
F1	Help	↑↓	Select Item	+/-	Change Values	F9	Setup Defaults
Esc	Exit	<>	Select Menu	Enter	Select > Sub-Menu	F10	Save and Exit

Options	128 MB
	<b>256 MB (default)</b>

## Advanced → Graphics/Uncore Configuration → IGD Turbo

Phoenix SecureCore Technology Setup							
Main	Advanced	Security	Boot	Exit			
Graphics/Uncore Configuration		Item Specific Help					
GOP Configuration			^	Select the IGD Turbo feature, if Auto selected, IGD Turbo will only be enabled when SOC stepping is B0 or above.			
GOP Driver [Enable]			*				
IGD Configuration			*				
Integrated Graphics Device [Enable]			*				
Primary Display [Auto]			*				
RC6(Render Standby) [Enable]			*				
PAVC [LITE Mode]			*				
GTT Size [2MB]			*				
Aperture Size [256MB]			*				
DVMT Pre-Allocated [64M]			+				
DVMT Total Gfx Mem [256M]			+				
IGD Turbo [Auto]			+				
IGD - LCD Control			v				
F1	Help	↑↓	Select Item		+/-	Change Values	F9
Esc	Exit	<>	Select Menu	Enter	Select > Sub-Menu	F10	Save and Exit

Options	<b>Auto (default)</b>
	Enable
	Disable

## Advanced → Graphics/Uncore Configuration → BIA

Phoenix SecureCore Technology Setup			
Main	<b>Advanced</b>	Security	Boot Exit
<b>Graphics/Uncore Configuration</b>		Item Specific Help	
RC6(Render Standby)	[Enable]	^	>>Auto: GMCH Use
PAVC	[LITE Mode]	+	VBIOS Default;
GTT Size	[2MB]	+	>>Level n: Enabled
Aperture Size	[256MB]	+	with Selected
DVMT Pre-Allocated	[64M]	+	Aggressiveness Level.
DVMT Total Gfx Mem	[256M]	*	
IGD Turbo	[Auto]	*	
		*	
IGD - LCD Control		*	
<b>BIA</b>	[Auto]	*	
LCD Panel Type	[Auto]	*	
IGD Boot Type	[Auto]	*	
Panel Scaling	[Auto]	*	
GMCH BLC Control	[PWM-Inverted]	*	
		v	
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit			

	<b>Auto (default)</b> Auto-configures Backlight Image Adaptation (BIA)
Options	Disabled
	Level 1
	Level 2
	Level 3
	Level 4
	Level 5



## Advanced → Graphics/Uncore Configuration → LCD Panel Type

Phoenix SecureCore Technology Setup			
Main	Advanced	Security	Boot Exit
Graphics/Uncore Configuration		Item Specific Help	
RC6(Render Standby)	[Enable]	^	
PAVC	[LITE Mode]	+	
GTT Size	[2MB]	+	
Aperture Size	[256MB]	+	
DVMT Pre-Allocated	[64M]	+	
DVMT Total Gfx Mem	[256M]	*	
IGD Turbo	[Auto]	*	
IGD - LCD Control		*	
BIA	[Auto]	*	
LCD Panel Type	[Auto]	*	
IGD Boot Type	[Auto]	*	
Panel Scaling	[Auto]	*	
GMCH BLC Control	[PWM-Inverted]	*	
		v	
F1	Help	↑↓	Select Item +/- Change Values
Esc	Exit	<>	Select Menu Enter Select > Sub-Menu
F9			Setup Defaults
F10			Save and Exit

Options	Auto (default)
	Panel1 640 x 480
	Panel2 800 x 600
	Panel3 1024 x 768
	Panel4 1280 x 1024
	Panel5 1400 x 1050
	Panel6 1400 x 1050
	Panel7 1600 x 1200
	Panel8 1360 x 768
	Panel9 1680 x 1050
	Panel10 1820 x 1200
	Panel11 1440 x 900
	Panel12 1280 x 1024
	Panel13 1600 x 900
	Panel14 1024 x 768
	Panel15 1920 x 1080
	Panel16 2048 x 1536

## Advanced → Graphics/Uncore Configuration → IGD Boot Type

Phoenix SecureCore Technology Setup				
Main	<b>Advanced</b>	Security	Boot	Exit
<b>Graphics/Uncore Configuration</b>			Item Specific Help	
Primary Display	[Auto]	^	Selects display	
RC6(Render Standby)	[Enable]	+	interface for	
PAVC	[LITE Mode]	+	Integrated Graphics	
GTT Size	[2MB]	+	Device (IGD) at	
Aperture Size	[256MB]	*	system boot.	
DVMT Pre-Allocated	[64M]	*		
DVMT Total Gfx Mem	[256M]	*	If CSM is enabled:	
IGD Turbo	[Auto]	*	HDMI PortB=EFP1	
IGD - LCD Control		*	DP PortB=EFP1	
BIA	[Auto]	*	DP PortC=EFP2	
LCD Panel Type	[Auto]	*	eDP=LFP1	
<b>IGD Boot Type</b>	<b>[Auto]</b>	*	DSI PortA=LFP2	
Panel Scaling	[Auto]	+	DSI ProtC=LFP2	
GMCH BLC Control	[PWM-Inverted]	v		
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit				

Options	
	<b>Auto (default)</b>
	VGA Port
	HDMI Port B
	DP Port B
	DP Port C
	DSI Port A
	DSI Port C

## Advanced → Graphics/Uncore Configuration → Panel Scaling

Phoenix SecureCore Technology Setup				
Main	Advanced	Security	Boot	Exit
Graphics/Uncore Configuration			Item Specific Help	
Primary Display	[Auto]	^	Select the LCD panel	
RC6(Render Standby)	[Enable]	+	scaling option used	
PAVC	[LITE Mode]	+	by Internal Graphics	
GTT Size	[2MB]	+	Device.	
Aperture Size	[256MB]	*		
DVMT Pre-Allocated	[64M]	*		
DVMT Total Gfx Mem	[256M]	*		
IGD Turbo	[Auto]	*		
IGD - LCD Control		*		
BIA	[Auto]	*		
LCD Panel Type	[Auto]	*		
IGD Boot Type	[Auto]	*		
Panel Scaling	[Auto]	+		
GMCH BLC Control	[PWM-Inverted]	v		
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit				

Options	Auto (default)
	Centering
	Stretching

## Advanced → Graphics/Uncore Configuration → GMCH BLC Control

Phoenix SecureCore Technology Setup				
Main	Advanced	Security	Boot	Exit
Graphics/Uncore Configuration			Item Specific Help	
Primary Display	[Auto]		^	Back Light Control
RC6(Render Standby)	[Enable]		+	Setting
PAVC	[LITE Mode]		+	
GTT Size	[2MB]		+	
Aperture Size	[256MB]		*	
DVMT Pre-Allocated	[64M]		*	
DVMT Total Gfx Mem	[256M]		*	
IGD Turbo	[Auto]		*	
IGD - LCD Control			*	
BIA	[Auto]		*	
LCD Panel Type	[Auto]		*	
IGD Boot Type	[Auto]		*	
Panel Scaling	[Auto]		+	
<b>GMCH BLC Control</b>	<b>[PWM-Inverted]</b>		v	
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit				

Options	<b>PWM-Inverted (default)</b>
	GMBus-Inverted
	PWM-Normal
	GMBus-Normal

## Advanced → South Cluster Configuration

```

Phoenix SecureCore Technology Setup
Main   Advanced Security Boot Exit
-----
South Cluster Configuration          Item Specific Help
-----
> PCI Express Configuration
> USB Configuration
> Audio Configuration
> SATA Drives
> LPSS & SCC Configuration
> Miscellaneous Configuration

F1  Help  ↑↓  Select Item  +/-  Change Values      F9  Setup Defaults
Esc Exit  <>  Select Menu  Enter  Select > Sub-Menu F10 Save and Exit

```

This is the top-level screen for the South Cluster Configuration sub-menu.

## Advanced → PCI Express Configuration → PCIe 0 Speed

```

Phoenix SecureCore Technology Setup
Main   Advanced Security Boot Exit
-----
PCI Express Configuration
-----
PCIe 0 Speed [Auto]
PCIe 1 Speed [Gen1]
PCIe 2 Speed [Auto]
PCIe 3 Speed [Auto]
PCI Express Root Port 1 [Enable]
PCI Express Root Port 2 [Enable]
PCI Express Root Port 3 [Enable]
PCI Express Root Port 4 [Enable]
-----
Item Specific Help
Configure PCIe Speed
-----
F1  Help  ↑↓  Select Item  +/-  Change Values  F9  Setup Defaults
Esc Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10 Save and Exit

```

Options	<b>Auto (default)</b>
	Gen 1
	Gen 2

## Advanced → PCI Express Configuration → PCIe 1 Speed

```

Phoenix SecureCore Technology Setup
Main   Advanced Security Boot Exit
-----
PCI Express Configuration
-----
PCIe 0 Speed      [Auto]
PCIe 1 Speed      [Gen1]
PCIe 2 Speed      [Auto]
PCIe 3 Speed      [Auto]
PCI Express Root Port 1 [Enable]
PCI Express Root Port 2 [Enable]
PCI Express Root Port 3 [Enable]
PCI Express Root Port 4 [Enable]
-----
Item Specific Help
Configure PCIe Speed
-----
F1  Help  ↑↓  Select Item  +/-  Change Values  F9  Setup Defaults
Esc Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10 Save and Exit

```

Options	Auto
	<b>Gen 1 (default)</b>
	Gen 2

## Advanced → PCI Express Configuration → PCIe 2 Speed

```

Phoenix SecureCore Technology Setup
Main   Advanced Security Boot Exit
-----
PCI Express Configuration
-----
PCIe 0 Speed      [Auto]
PCIe 1 Speed      [Gen1]
PCIe 2 Speed      [Auto]
PCIe 3 Speed      [Auto]
PCI Express Root Port 1 [Enable]
PCI Express Root Port 2 [Enable]
PCI Express Root Port 3 [Enable]
PCI Express Root Port 4 [Enable]
-----
Item Specific Help
Configure PCIe Speed
-----
F1  Help  ↑↓  Select Item  +/-  Change Values  F9  Setup Defaults
Esc Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10 Save and Exit

```

Options	<b>Auto (default)</b>
	Gen 1
	Gen 2



## Advanced → PCI Express Configuration → PCIe 3 Speed

```

Phoenix SecureCore Technology Setup
Main   Advanced Security Boot Exit
-----
PCI Express Configuration
-----
PCIe 0 Speed      [Auto]
PCIe 1 Speed      [Gen1]
PCIe 2 Speed      [Auto]
PCIe 3 Speed      [Auto]
PCI Express Root Port 1 [Enable]
PCI Express Root Port 2 [Enable]
PCI Express Root Port 3 [Enable]
PCI Express Root Port 4 [Enable]
-----
Item Specific Help
Configure PCIe Speed
-----
F1  Help  ↑↓  Select Item  +/-  Change Values  F9  Setup Defaults
Esc Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10 Save and Exit

```

Options	<b>Auto (default)</b>
	Gen 1
	Gen 2

## Advanced → PCI Express Configuration → PCI Express Root Port 1

Phoenix SecureCore Technology Setup			
Main	Advanced	Security	Boot Exit
PCI Express Configuration		Item Specific Help	
PCIe 0 Speed	[Auto]	Control the PCI Express Root Port.	
PCIe 1 Speed	[Gen1]		
PCIe 2 Speed	[Auto]		
PCIe 3 Speed	[Auto]		
PCI Express Root Port 1	[Enable]		
PCI Express Root Port 2	[Enable]		
PCI Express Root Port 3	[Enable]		
PCI Express Root Port 4	[Enable]		
F1 Help	↑↓ Select Item	+/- Change Values	F9 Setup Defaults
Esc Exit	<> Select Menu	Enter Select > Sub-Menu	F10 Save and Exit

Options	<b>Enable (default)</b>
	Disable

## Advanced → PCI Express Configuration → PCI Express Root Port 2

Phoenix SecureCore Technology Setup			
Main	<b>Advanced</b>	Security	Boot Exit
<b>PCI Express Configuration</b>		Item Specific Help	
PCIe 0 Speed	[Auto]	Control the PCI Express Root Port.	
PCIe 1 Speed	[Gen1]		
PCIe 2 Speed	[Auto]		
PCIe 3 Speed	[Auto]		
PCI Express Root Port 1	[Enable]		
<b>PCI Express Root Port 2</b>	<b>[Enable]</b>		
PCI Express Root Port 3	[Enable]		
PCI Express Root Port 4	[Enable]		
F1 Help	↑↓ Select Item	+/- Change Values	F9 Setup Defaults
Esc Exit	<> Select Menu	Enter Select > Sub-Menu	F10 Save and Exit

Options	<b>Enable (default)</b>
	Disable

## Advanced → PCI Express Configuration → PCI Express Root Port 3

Phoenix SecureCore Technology Setup			
Main	<b>Advanced</b>	Security	Boot Exit
<b>PCI Express Configuration</b>		Item Specific Help	
PCIe 0 Speed	[Auto]	Control the PCI Express Root Port.	
PCIe 1 Speed	[Gen1]		
PCIe 2 Speed	[Auto]		
PCIe 3 Speed	[Auto]		
PCI Express Root Port 1	[Enable]		
PCI Express Root Port 2	[Enable]		
<b>PCI Express Root Port 3</b>	<b>[Enable]</b>		
PCI Express Root Port 4	[Enable]		
F1 Help	↑↓ Select Item	+/- Change Values	F9 Setup Defaults
Esc Exit	<> Select Menu	Enter Select > Sub-Menu	F10 Save and Exit

Options	<b>Enable (default)</b>
	Disable

## Advanced → PCI Express Configuration → PCI Express Root Port 4

```

Phoenix SecureCore Technology Setup
Main   Advanced Security Boot Exit
-----
PCI Express Configuration
-----
PCIe 0 Speed      [Auto]
PCIe 1 Speed      [Gen1]
PCIe 2 Speed      [Auto]
PCIe 3 Speed      [Auto]
PCI Express Root Port 1 [Enable]
PCI Express Root Port 2 [Enable]
PCI Express Root Port 3 [Enable]
PCI Express Root Port 4 [Enable]
-----
Item Specific Help
Control the PCI Express Root Port.
-----
F1  Help  ↑↓  Select Item  +/-  Change Values  F9  Setup Defaults
Esc Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10 Save and Exit
    
```

Options	<b>Enable (default)</b>
	Disable

## Advanced → USB Configuration → XHCI Link Power Management

```

Phoenix SecureCore Technology Setup
Main   Advanced Security Boot Exit
-----
USB Configuration
-----
xHCI Mode [Disable]
XHCI Link Power Management [Enable]
EHCI Controller [Enable]
USB Per-Port Control [Enable]
USB Port #0 [Enable]
USB Port #1 [Enable]
USB Port #2 [Enable]
USB Port #3 [Enable]
-----
Item Specific Help
-----
Enable/Disable XHCI
Link Power Management
-----
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults
Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit

```

Options	Disable
	<b>Enable (default)</b>

## Advanced → USB Configuration → EHCI Controller

Phoenix SecureCore Technology Setup			
Main	<b>Advanced</b>	Security	Boot Exit
<b>USB Configuration</b>		Item Specific Help	
xHCI Mode	[Disable]	Control the USB EHCI (USB 2.0) functions.	
XHCI Link Power Management	[Enable]		
<b>EHCI Controller</b>	<b>[Enable]</b>	One EHCI controller must always be enabled	
USB Per-Port Control	[Enable]		
USB Port #0	[Enable]		
USB Port #1	[Enable]		
USB Port #2	[Enable]		
USB Port #3	[Enable]		
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit			

Options	<b>Enable (default)</b>
	Disable

## Advanced → USB Configuration → USB Per-Port Control

Phoenix SecureCore Technology Setup			
Main	<b>Advanced</b>	Security	Boot Exit
<b>USB Configuration</b>		Item Specific Help	
xHCI Mode	[Disable]	Control each of the USB ports (0~3) disabling	
XHCI Link Power Management	[Enable]		
EHCI Controller	[Enable]		
<b>USB Per-Port Control</b>	<b>[Enable]</b>		
USB Port #0	[Enable]		
USB Port #1	[Enable]		
USB Port #2	[Enable]		
USB Port #3	[Enable]		
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit			

Options	Disable
	<b>Enable (default)</b>



## Advanced → USB Configuration → USB Port #0

Phoenix SecureCore Technology Setup			
Main	Advanced	Security	Boot Exit
USB Configuration		Item Specific Help	
xHCI Mode	[Disable]	Enable/Disable USB Port #0	
XHCI Link Power Management	[Enable]	Right-angle xHCI/EHCI header (J16)	
EHCI Controller	[Enable]		
USB Per-Port Control	[Enable]		
<b>USB Port #0</b>	<b>[Enable]</b>		
USB Port #1	[Enable]		
USB Port #2	[Enable]		
USB Port #3	[Enable]		
F1 Help	↑↓ Select Item	+/- Change Values	F9 Setup Defaults
Esc Exit	<> Select Menu	Enter Select > Sub-Menu	F10 Save and Exit

Options	Disable
	<b>Enable (default)</b>

## Advanced → USB Configuration → USB Port #1

Phoenix SecureCore Technology Setup			
Main	<b>Advanced</b>	Security	Boot Exit
<b>USB Configuration</b>		Item Specific Help	
xHCI Mode	[Disable]	Enable/Disable USB Port #1	
XHCI Link Power Management	[Enable]	CBR-5015 J4_Top (EHCI Debug port)	
EHCI Controller	[Enable]		
USB Per-Port Control	[Enable]		
<b>USB Port #0</b>	<b>[Enable]</b>		
USB Port #1	[Enable]		
USB Port #2	[Enable]		
USB Port #3	[Enable]		
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit			

Options	Disable
	<b>Enable (default)</b>

## Advanced → USB Configuration → USB Port #2

Phoenix SecureCore Technology Setup			
Main	<b>Advanced</b>	Security	Boot Exit
<b>USB Configuration</b>		Item Specific Help	
xHCI Mode	[Disable]	Enable/Disable USB Port #2	
XHCI Link Power Management	[Enable]	CBR-5015 J4_Bot, both J5 ports	
EHCI Controller	[Enable]		
USB Per-Port Control	[Enable]		
USB Port #0	[Enable]		
USB Port #1	[Enable]		
<b>USB Port #2</b>	<b>[Enable]</b>		
USB Port #3	[Enable]		
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit			

Options	Disable
	<b>Enable (default)</b>

## Advanced → USB Configuration → USB Port #3

Phoenix SecureCore Technology Setup

Main    **Advanced**    Security    Boot    Exit

USB Configuration	Item Specific Help
xHCI Mode [Disable]	Enable/Disable USB Port #3
XHCI Link Power Management [Enable]	
EHCI Controller [Enable]	Mini Card (J14)
USB Per-Port Control [Enable]	
USB Port #0 [Enable]	
USB Port #1 [Enable]	
USB Port #2 [Enable]	
<b>USB Port #3 [Enable]</b>	

F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults  
 Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit

Options	Disable
	<b>Enable (default)</b>

## Advanced → Audio Configuration → Audio Controller

```

Phoenix SecureCore Technology Setup
Main   Advanced Security Boot Exit
-----
Audio Configuration
-----
Audio Controller [Disable]
-----
Item Specific Help
-----
Enable or disable the
Azalia (HD Audio)
device.

Disabled = Azalia
will be disabled

Enabled = Azalia will
be enabled
-----
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults
Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit

```

Options	Disable (default)	Disable "Azalia" (high-definition) audio
	Enable	Enable "Azalia" (high-definition) audio



**Note:** The default setting for this menu item is Disable. When the audio controller is enabled, two additional options will be available:

- Azalia VCi Enable (see page 88)
- Azalia HDMI Codec (see page 89)

## Advanced → Audio Configuration → Azalia VCI Enable

```

Phoenix SecureCore Technology Setup
Main  Advanced  Security  Boot  Exit
-----
Audio Configuration
-----
Audio Controller      [Enable]
Azalia VCI Enable    [Enable]
Azalia HDMI Codec    [Enable]
-----
Item Specific Help
-----
Enable/Disable
Virtual Channel 1 of
Audio Controller
-----
F1  Help  ↑↓  Select Item  +/-  Change Values  F9  Setup Defaults
Esc Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10  Save and Exit
    
```

Options	Disable
	<b>Enable (default)</b>

## Advanced → Audio Configuration → Azalia HDMI CODEC

```

Phoenix SecureCore Technology Setup
Main  Advanced  Security  Boot  Exit
-----
Audio Configuration
-----
Audio Controller      [Enable]
Azalia VCi Enable    [Enable]
Azalia HDMI Codec    [Enable]
-----
Item Specific Help
-----
Enable/Disable
internal HDMI codec
for Azalia
-----
F1  Help  ↑↓  Select Item  +/-  Change Values  F9  Setup Defaults
Esc Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10  Save and Exit
    
```

Options	Disable
	<b>Enable (default)</b>

## Advanced → SATA Drives → Chipset SATA

Phoenix SecureCore Technology Setup	
Main	Advanced
SATA Drives	
SATA Drives	Item Specific Help
Chipset-SATA Controller Configuration	Enables or Disables the Chipset SATA Controller.
Chipset SATA [Enable]	SATA Port 0 -> On-Board Connector (J2).
Chipset SATA Mode [AHCI]	SATA Port 1 -> mSATA (J14).
	Up to 3Gb/s supported per port.
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit	

Options	Value	Description
	<b>Enable (default)</b>	Enables onboard SATA ports
	Disable	Disables onboard SATA ports



## Advanced → SATA Drives → Chipset SATA Mode

```

Phoenix SecureCore Technology Setup
Main   Advanced Security Boot Exit
-----
SATA Drives
-----
SATA Drives
Chipset-SATA Controller Configuration
Chipset SATA [Enable]
Chipset SATA Mode [AHCI]
-----
Item Specific Help
-----
IDE: Compatibility
mode disables AHCI
support. AHCI:
Supports advanced
SATA features such as
Native Command
Queuing.
Warning: OS may not
boot if this setting
is changed after OS
install.
-----
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults
Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit

```

Options	IDE
	<b>AHCI (default)</b>

## Advanced → LPSS & SCC Configuration → LPSS Devices Mode

Phoenix SecureCore Technology Setup				
Main	<b>Advanced</b>	Security	Boot	Exit
<b>LPSS &amp; SCC Configuration</b>			Item Specific Help	
<b>LPSS Devices Mode</b> [PCI Mode]			LPSS (Low Power Subsystem) Devices Mode Settings.	
LPSS Configuration				
	LPSS DMA #1 Support	[Disable]		
	LPSS DMA #2 Support	[Enable]		
	LPSS I2C #1 Support	[Enable]		
	LPSS PWM #1 Support	[Disable]		
	LPSS PWM #2 Support	[Disable]		
F1	Help	↑↓	Select Item	+/- Change Values
Esc	Exit	<>	Select Menu	Enter Select > Sub-Menu
F9	Setup Defaults			F10 Save and Exit

Options	ACPI Mode
	<b>PCI Mode (default)</b>

## Advanced → LPSS & SCC Configuration → LPSS DMA #1 Support

Phoenix SecureCore Technology Setup				
Main	<b>Advanced</b>	Security	Boot	Exit
<b>LPSS &amp; SCC Configuration</b>			Item Specific Help	
LPSS Devices Mode [PCI Mode]			LPSS DMA #1 Support Enable\Disable	
LPSS Configuration				
LPSS DMA #1 Support [Disable]				
LPSS DMA #2 Support [Enable]				
LPSS I2C #1 Support [Enable]				
LPSS PWM #1 Support [Disable]				
LPSS PWM #2 Support [Disable]				
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit				

Options	<b>Disable (default)</b>
	Enable



**Note:** The default setting for this menu item is Disable. In this mode, the following menu items are not accessible:

- LPSS PWM #1 Support
- LPSS PWM #2 Support

## Advanced → LPSS & SCC Configuration → LPSS DMA #2 Support

Phoenix SecureCore Technology Setup			
Main	<b>Advanced</b>	Security	Boot Exit
<b>LPSS &amp; SCC Configuration</b>		Item Specific Help	
LPSS Devices Mode	[PCI Mode]	LPSS DMA #2 Support Enable\Disable	
LPSS Configuration			
LPSS DMA #1 Support	[Disable]		
<b>LPSS DMA #2 Support</b>	<b>[Enable]</b>		
LPSS I2C #1 Support	[Enable]		
LPSS PWM #1 Support	[Disable]		
LPSS PWM #2 Support	[Disable]		
F1 Help	↑↓ Select Item	+/- Change Values	F9 Setup Defaults
Esc Exit	<> Select Menu	Enter Select > Sub-Menu	F10 Save and Exit

Options	Disable
	<b>Enable (default)</b>

## Advanced → LPSS & SCC Configuration → LPSS I2C #1 Support

Phoenix SecureCore Technology Setup	
Main	Advanced
Security	Boot
Exit	
LPSS & SCC Configuration	
LPSS Devices Mode	[PCI Mode]
LPSS Configuration	
LPSS DMA #1 Support	[Disable]
LPSS DMA #2 Support	[Enable]
LPSS I2C #1 Support	[Enable]
LPSS PWM #1 Support	[Disable]
LPSS PWM #2 Support	[Disable]
Item Specific Help	
LPSS I2C #1 Support Enable\Disable	
F1 Help	↑↓ Select Item +/- Change Values
Esc Exit	<> Select Menu Enter Select > Sub-Menu
F9	Setup Defaults
F10	Save and Exit

Options	Description
Disable	Disables the I <sup>2</sup> C ports and the LPSS I2C #1 support option.
<b>Enable (default)</b>	Enables I <sup>2</sup> C ports and the LPSS I2C #1 support option.

## Advanced → LPSS & SCC Configuration → LPSS PWM #1 Support

Phoenix SecureCore Technology Setup			
Main	<b>Advanced</b>	Security	Boot Exit
<b>LPSS &amp; SCC Configuration</b>		Item Specific Help	
LPSS Devices Mode [PCI Mode]		LPSS PWM #1 Support Enable\Disable	
LPSS Configuration			
LPSS DMA #1 Support [Disable]			
LPSS DMA #2 Support [Enable]			
LPSS I2C #1 Support [Enable]			
<b>LPSS PWM #1 Support [Disable]</b>			
LPSS PWM #2 Support [Disable]			
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit			

Options | **Disable (default)**  
 | Enable



**Note:** This option is accessible only when LPSS DMA #1 is enabled. (See page 93.)

## Advanced → LPSS & SCC Configuration → LPSS PWM #2 Support

Phoenix SecureCore Technology Setup			
Main	<b>Advanced</b>	Security	Boot Exit
<b>LPSS &amp; SCC Configuration</b>		Item Specific Help	
LPSS Devices Mode [PCI Mode]		LPSS PWM #2 Support Enable\Disable	
LPSS Configuration			
LPSS DMA #1 Support	[Disable]		
LPSS DMA #2 Support	[Enable]		
LPSS I2C #1 Support	[Enable]		
LPSS PWM #1 Support	[Disable]		
<b>LPSS PWM #2 Support</b>	<b>[Disable]</b>		
F1 Help ↑↓ Select Item +/- Change Values		F9 Setup Defaults	
Esc Exit <> Select Menu Enter Select > Sub-Menu		F10 Save and Exit	

Options | **Disable (default)**  
| Enable



**Note:** This option is accessible only when LPSS DMA #1 is enabled. (See page 93.)

## Advanced → Miscellaneous Configuration → High Precision Timer

Phoenix SecureCore Technology Setup			
Main	Advanced	Security	Boot Exit
Miscellaneous Configuration		Item Specific Help	
Miscellaneous Configuration		Enable or Disable the High Precision Event Timer	
High Precision Timer	[Enable]		
Boot Time with HPET Timer	[Disable]		
State After G3	[S0 State]		
SoC Debug UART	[Disable]		
SMM Lock	[Enable]		
PCI MMIO Size	[2GB]		
F1 Help	↑↓ Select Item	+/- Change Values	F9 Setup Defaults
Esc Exit	<> Select Menu	Enter Select > Sub-Menu	F10 Save and Exit

Options	Disable
	<b>Enable (default)</b>



## Advanced → Miscellaneous Configuration → Boot Time with HPET Timer

Phoenix SecureCore Technology Setup			
Main	<b>Advanced</b>	Security	Boot    Exit
<b>Miscellaneous Configuration</b>		Item Specific Help	
Miscellaneous Configuration		Boot time calculation with High Precision Event Timer enabled	
High Precision Timer	[Enable]		
<b>Boot Time with HPET Timer</b>	<b>[Disable]</b>		
State After G3	[S0 State]		
SoC Debug UART	[Disable]		
SMM Lock	[Enable]		
PCI MMIO Size	[2GB]		
F1 Help    ↑↓ Select Item    +/- Change Values    F9 Setup Defaults Esc Exit    <> Select Menu    Enter Select > Sub-Menu    F10 Save and Exit			

Options	<b>Disable (default)</b>
	Enable

## Advanced → Miscellaneous Configuration → State After G3

Phoenix SecureCore Technology Setup	
Main	<b>Advanced</b> Security    Boot    Exit
<b>Miscellaneous Configuration</b>	Item Specific Help
Miscellaneous Configuration	Specify what state to go to when power is re-applied after a power failure (G3 state).
High Precision Timer            [Enable]	
Boot Time with HPET Timer      [Disable]	
<b>State After G3                    [S0 State]</b>	
SoC Debug UART                  [Disable]	
SMM Lock                          [Enable]	
PCI MMIO Size                    [2GB]	
F1 Help    ↑↓ Select Item    +/- Change Values    F9 Setup Defaults Esc Exit    <> Select Menu    Enter Select > Sub-Menu    F10 Save and Exit	

Options	<b>S0 State (default)</b>
	S5 State

## Advanced → Miscellaneous Configuration → SoC Debug UART

Phoenix SecureCore Technology Setup			
Main	Advanced	Security	Boot Exit
Miscellaneous Configuration		Item Specific Help	
Miscellaneous Configuration		Enable/Disable SoC Debug UART.	
High Precision Timer	[Enable]		
Boot Time with HPET Timer	[Disable]		
State After G3	[S0 State]	WARNING: Conflicts with UART2 lines, and with UART1 default base address.	
SoC Debug UART	[Disable]		
SMM Lock	[Enable]		
PCI MMIO Size	[2GB]		
F1 Help	↑↓ Select Item	+/- Change Values	F9 Setup Defaults
Esc Exit	<> Select Menu	Enter Select > Sub-Menu	F10 Save and Exit

Options	<b>Disable (default)</b>
	Enable

## Advanced → Miscellaneous Configuration → SMM Lock

Phoenix SecureCore Technology Setup			
Main	<b>Advanced</b>	Security	Boot Exit
<b>Miscellaneous Configuration</b>		Item Specific Help	
Miscellaneous Configuration		Enabling the SMM Lock feature will lock SMRAM to prevent additional loading of SMM drivers.	
High Precision Timer	[Enable]		
Boot Time with HPET Timer	[Disable]		
State After G3	[S0 State]		
SoC Debug UART	[Disable]		
<b>SMM Lock</b>	<b>[Enable]</b>		
PCI MMIO Size	[2GB]		
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit			

Options	Disable	Allows additional SMM (System Management Mode) drivers to be loaded
	<b>Enable (default)</b>	Prevents additional SMM (System Management Mode) drivers from being loaded

## Advanced → Miscellaneous Configuration → PCI MMIO Size

```

Phoenix SecureCore Technology Setup
Main  Advanced  Security  Boot  Exit
-----
Miscellaneous Configuration
-----
Miscellaneous Configuration
High Precision Timer      [Enable]
Boot Time with HPET Timer [Disable]
State After G3            [S0 State]
SoC Debug UART           [Disable]
SMM Lock                  [Enable]
PCI MMIO Size             [2GB]
-----
Item Specific Help
PCI MMIO Size
-----
F1  Help  ↑↓  Select Item  +/-  Change Values  F9  Setup Defaults
Esc Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10  Save and Exit

```

Options	<b>2GB (default)</b>
	1.5GB
	1.25GB
	1GB

## Advanced → Security

```

Phoenix SecureCore Technology Setup
Main   Advanced Security Boot Exit
-----
Setup Warning:
Setting items on this screen to incorrect
values may cause system to malfunction!

OS Selection          [Linux]

> VersaLogic Features
> CPU Configuration
> Uncore Configuration
> South Cluster Configuration
> Security Configuration
> Thermal
> SMBIOS Event Log

Item Specific Help

F1  Help  ↑↓  Select Item  +/-  Change Values  F9  Setup Defaults
Esc Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10 Save and Exit

```

This is the top-level screen for the Security sub-menu.

## Advanced → Security Configuration → TXE

```

Phoenix SecureCore Technology Setup
Main   Advanced Security Boot Exit
-----
Security Configuration
-----
TXE Configuration
TXE FW Version           1.0.2.1060
TXE FW Capabilities      20001040
TXE FW Features          20001040
TXE FW OEM Tag           00000000
TXE Firmware Mode        Normal
TXE File System Integrity Value 0

TXE [Enable]
TXE HMRFP0 [Disable]
TXE Firmware Update [Enable]
TXE EOP Message [Disable]
TXE Unconfiguration Perform

Item Specific Help
-----
Trusted Execution Engine
-----

F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults
Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit

```

Options	Disable
	<b>Enable (default)</b>

This screen also provides status on the Trusted Execution Engine (TXE).

## Advanced → Security Configuration → TXE HMRFPO

Phoenix SecureCore Technology Setup			
Main	Advanced	Security	Boot Exit
Security Configuration		Item Specific Help	
TXE Configuration			Host ME(TXE) Region
TXE FW Version	1.0.2.1060		Flash Protection
TXE FW Capabilities	20001040		Override
TXE FW Features	20001040		
TXE FW OEM Tag	00000000		
TXE Firmware Mode	Normal		
TXE File System Integrity Value	0		
TXE	[Enable]		
<b>TXE HMRFPO</b>	<b>[Disable]</b>		
TXE Firmware Update	[Enable]		
TXE EOP Message	[Disable]		
TXE Unconfiguration Perform			
F1 Help	↑↓ Select Item	+/- Change Values	F9 Setup Defaults
Esc Exit	<> Select Menu	Enter Select > Sub-Menu	F10 Save and Exit

Options	<b>Disable (default)</b>
	Enable

This screen also provides status on the Trusted Execution Engine (TXE).



## Advanced → Security Configuration → TXE Firmware Update

```

Phoenix SecureCore Technology Setup
Main   Advanced Security Boot Exit
-----
Security Configuration
-----
TXE Configuration
TXE FW Version           1.0.2.1060
TXE FW Capabilities      20001040
TXE FW Features          20001040
TXE FW OEM Tag           00000000
TXE Firmware Mode        Normal
TXE File System Integrity Value 0

TXE                       [Enable]
TXE HMRFP0                 [Disable]
TXE Firmware Update        [Enable]
TXE EOP Message            [Disable]
TXE Unconfiguration Perform

-----
F1  Help  ↑↓  Select Item  +/-  Change Values      F9  Setup Defaults
Esc Exit  <>  Select Menu  Enter  Select > Sub-Menu F10 Save and Exit

```

Options	Disable
	<b>Enable (default)</b>

This screen also provides status on the Trusted Execution Engine (TXE).

## Advanced → Security Configuration → TXE EOP Message

```

Phoenix SecureCore Technology Setup
Main   Advanced Security Boot Exit
-----
Security Configuration
-----
TXE Configuration
TXE FW Version           1.0.2.1060
TXE FW Capabilities      20001040
TXE FW Features          20001040
TXE FW OEM Tag           00000000
TXE Firmware Mode        Normal
TXE File System Integrity Value 0

TXE                       [Enable]
TXE HMRFP0                 [Disable]
TXE Firmware Update        [Enable]
TXE EOP Message            [Disable]
TXE Unconfiguration Perform

Item Specific Help
-----
Send EOP Message
Before Enter OS

F1  Help  ↑↓  Select Item  +/-  Change Values      F9  Setup Defaults
Esc Exit  <>  Select Menu  Enter  Select > Sub-Menu F10 Save and Exit

```

Options	<b>Disable (default)</b>	Do not send an End-of-POST (EOP) message before entering the operating system
	Enable	Send an End-of-POST (EOP) message before entering the operating system

This screen also provides status on the Trusted Execution Engine (TXE).

## Advanced → Security Configuration → TXE Unconfiguration Perform

```

Phoenix SecureCore Technology Setup
Main   Advanced Security Boot Exit
-----
Security Configuration
-----
TXE Configuration
TXE FW Version           1.0.2.1060
TXE FW Capabilities      20001040
TXE FW Features          20001040
TXE FW OEM Tag           00000000
TXE Firmware Mode        Normal
TXE File System Integrity Value 0
TXE                       [Enable]
TXE HMRFP0                [Disable]
TXE Firmware Update       [Enable]
TXE EOP Message           [Disable]
TXE Unconfiguration Perform

Item Specific Help
-----
Revert TXE settings
to factory defaults

F1  Help  ↑↓  Select Item  +/-  Change Values      F9  Setup Defaults
Esc Exit  <>  Select Menu  Enter  Select > Sub-Menu F10 Save and Exit

```

Options	<b>No (default)</b>	Do not perform a TXE unconfiguration
	Yes	Perform a TXE unconfiguration

## Advanced → Thermal

```

Phoenix SecureCore Technology Setup
Main   Advanced Security Boot Exit
-----
Setup Warning:
Setting items on this screen to incorrect
values may cause system to malfunction!

OS Selection          [Linux]

> VersaLogic Features
> CPU Configuration
> Uncore Configuration
> South Cluster Configuration
> Security Configuration
> Thermal
> SMBIOS Event Log

Item Specific Help

F1  Help  ↑↓  Select Item  +/-  Change Values  F9  Setup Defaults
Esc Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10 Save and Exit

```

This is the top level screen for the Thermal sub-menu.

## Advanced → Thermal → Critical Trip Point

Phoenix SecureCore Technology Setup			
Main	<b>Advanced</b>	Security	Boot Exit
<b>Thermal</b>		Item Specific Help	
Local Temperature	[ 30 C ]	This value controls the temperature of the ACPI Critical Trip Point - the point in which the OS will shut the system off.	
Remote Temperature	[36.5 C ]		
CPU DTS Temperature	[36 C ]		
Thermal Configuration Parameters			
<b>Critical Trip Point</b>	<b>[110 C]</b>		
Passive Trip Point	[105 C]		
Active Trip Point	[55 C]		
Start Fan with Cold CPU	[Disable]		
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit			

Options	15 C
	23 C
	31 C
	39 C
	47 C
	55 C
	63 C
	71 C
	79 C
	85 C
	87 C
	90 C
	100 C
	105 C
	<b>110 C (default)</b>

This screen also provides temperature information (local, remote, and CPU digital thermal sensor).

## Advanced → Thermal → Passive Trip Point

Phoenix SecureCore Technology Setup				
Main	<b>Advanced</b>	Security	Boot	Exit
<b>Thermal</b>			Item Specific Help	
Local Temperature		[ 30 C	]	This value controls the temperature of the ACPI Passive Trip Point - the point in which the OS will begin throttling the processor.
Remote Temperature		[36.625 C	]	
CPU DTS Temperature		[36 C	]	
Thermal Configuration Parameters				
Critical Trip Point		[110 C]		
<b>Passive Trip Point</b>		<b>[105 C]</b>		
Active Trip Point		[55 C]		
Start Fan with Cold CPU		[Disable]		
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit				

Options	15 C
	23 C
	31 C
	39 C
	47 C
	55 C
	63 C
	71 C
	79 C
	85 C
	87 C
	90 C
	95 C
	100 C
	<b>105 C (default)</b>
	110 C

This screen also provides temperature information (local, remote, and CPU digital thermal sensor).

## Advanced → Thermal → Active Trip Point

Phoenix SecureCore Technology Setup				
Main	Advanced	Security	Boot	Exit
Thermal			Item Specific Help	
Local Temperature		[30.25 C	]	This value controls the temperature of the ACPI Active Trip Point - the point in which the CPU fan comes on.
Remote Temperature		[36.75 C	]	
CPU DTS Temperature		[36 C	]	
Thermal Configuration Parameters				
Critical Trip Point		[110 C]		
Passive Trip Point		[105 C]		
Active Trip Point		[55 C]		
Start Fan with Cold CPU		[Disable]		
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit				

Options	Fan always on
	Fan always off
	15 C
	39 C
	47 C
	<b>55 C (default)</b>
	63 C
	71 C
	79 C
	85 C
	87 C
	90 C
	95 C
	100 C
105 C	
110 C	

This screen also provides temperature information (local, remote, and CPU digital thermal sensor).

## Advanced → Thermal → Start Fan With Cold CPU

Phoenix SecureCore Technology Setup				
Main	Advanced	Security	Boot	Exit
<b>Thermal</b>				Item Specific Help
Local Temperature		[30.25 C	]	If enabled, the CPU fan will turn on at boot even when cold (< 10 C).
Remote Temperature		[36.75 C	]	
CPU DTS Temperature		[36 C	]	
Thermal Configuration Parameters				
Critical Trip Point		[110 C]		Warning: Enable when large temperature swings are expected and no ACPI OS is in use.
Passive Trip Point		[105 C]		
Active Trip Point		[55 C]		
<b>Start Fan with Cold CPU</b>		<b>[Disable]</b>		
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit				

Options	<b>Disable (default)</b>
	Enable

This screen also provides temperature information (local, remote, and CPU digital thermal sensor).



## Advanced → SMBIOS Event Log

```

Phoenix SecureCore Technology Setup
Main   Advanced Security Boot Exit
-----
Setup Warning:
Setting items on this screen to incorrect
values may cause system to malfunction!

OS Selection                [Linux]

> VersaLogic Features
> CPU Configuration
> Uncore Configuration
> South Cluster Configuration
> Security Configuration
> Thermal
> SMBIOS Event Log

Item Specific Help
-----
Manage SMBIOS Event
Log.

F1  Help  ↑↓  Select Item  +/-  Change Values  F9  Setup Defaults
Esc Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10 Save and Exit

```

This is the top level screen for the SMBIOS Event Log sub-menu.

## Advanced → SMBIOS Event Log → Event Log

```

Phoenix SecureCore Technology Setup
Main   Advanced Security Boot Exit
-----
SMBIOS Event Log
-----
Event Log Validity          Valid
Event Log Capacity         Space Available

Event Log [Enabled]
> View SMBIOS event log

Mark SMBIOS events as read [Enter]
Clears SMBIOS events      [Enter]
-----
Item Specific Help
-----
View SMBIOS event log.
-----
F1  Help  ↑↓  Select Item  +/-  Change Values  F9  Setup Defaults
Esc Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10 Save and Exit

```

Options	Disable
	<b>Enable (default)</b>

This screen also provides information about the event log's validity and capacity.

## Advanced → SMBIOS Event Log → Mark SMBIOS Events As Read

```

Phoenix SecureCore Technology Setup
Main   Advanced Security Boot Exit
-----
SMBIOS Event Log
-----
Event Log Validity          Valid
Event Log Capacity         Space Available

Event Log                  [Enabled]
> View SMBIOS event log

Mark SMBIOS events as read [Enter]
Clears SMBIOS events      [Enter]
-----
Item Specific Help
-----
Mark SMBIOS events as
read. Marked SMBIOS
events won't be
displayed.
-----
F1  Help  ↑↓  Select Item  +/-  Change Values  F9  Setup Defaults
Esc Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10 Save and Exit

```

Press  to mark SMBIOS events as read.

This screen also provides information about the event log's validity and capacity.

## Advanced → SMBIOS Event Log → Clear SMBIOS Events

```


Phoenix SecureCore Technology Setup
Main  Advanced  Security  Boot  Exit
-----
SMBIOS Event Log
-----
Event Log Validity          Valid
Event Log Capacity         Space Available

Event Log                  [Enabled]
> View SMBIOS event log

Mark SMBIOS events as read [Enter]
Clears SMBIOS events      [Enter]
-----
Item Specific Help
-----
Clears SMBIOS events.

F1  Help  ↑↓  Select Item  +/-  Change Values  F9  Setup Defaults
Esc Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10 Save and Exit

```

Press  to clear SMBIOS events.

This screen also provides information about the event log's validity and capacity.

The Security menu enables you to:

- Activate Secure Boot options
- Set and clear supervisor passwords
- Set and clear user passwords
- Configure the Trusted Platform Module (TPM)

Top-level view of Security menu screen:

```

Phoenix SecureCore Technology Setup
Main      Advanced      Security      Boot      Exit
-----
Secure Boot Activation      [Disabled]      ^
> Secure Boot Configuration *
Supervisor Password is:    Cleared          *
User Password is:         Cleared          *
Set Supervisor Password    [Enter]         *
Supervisor Hint String     [                ] *
Set User Password         [Enter]         *
User Hint String          [                ] *
Min. password length      [ 1]            *
Authenticate User on Boot [Disabled]      +
HDD Security Status       No HDD detected +
Trusted Platform Module (TPM)
TPM Support                [Enabled]
TPM Configuration

Item Specific Help
-----
Set or clear the
Supervisor account's
password.

F1  Help  ↑↓  Select Item  +/-  Change Values  F9  Setup Defaults
Esc Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10 Save and Exit
    
```

## Security → Set Supervisor Password

```

Phoenix SecureCore Technology Setup
Main      Advanced      Security      Boot      Exit
-----
Secure Boot Activation      [Disabled]      ^
> Secure Boot Configuration *
Supervisor Password is:    Cleared          *
User Password is:         Cleared          *
                          *
Set Superv/                Set Supervisor Password
Supervisor                  -----
Set User P                  Enter New Password [
User Hint                   Confirm New Password [
                          ]
Min. passwo
Authenticate User on Boot   [Disabled]      +
                          +
HDD Security Status        +
No HDD detected            v
Trusted Platform Module (TPM)
TPM Support                [Enabled]
TPM Configuration

Item Specific Help
-----
Set or clear the
Supervisor account's
password.

F1  Help  ↑↓  Select Item  +/-  Change Values  F9  Setup Defaults
Esc  Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10  Save and Exit

```

1. Type the supervisor password
2. Confirm the supervisor password

## Security → Supervisor Hint String


```

Phoenix SecureCore Technology Setup
Main      Advanced  Security  Boot      Exit
-----
Secure Boot Activation      [Disabled]      ^
> Secure Boot Configuration
Supervisor Password is:    Cleared          *
User Password is:         Cleared          *
Set Supervisor Password    [Enter]          *
Supervisor Hint String     [                ] *
Set User Password          [Enter]          *
User Hint String           [                ] *
Min. password length       [ 1]             *
Authenticate User on Boot  [Disabled]      +
HDD Security Status        No HDD detected  +
Trusted Platform Module (TPM)
TPM Support                 [Enabled]        v
TPM Configuration

Item Specific Help
-----
Press Enter to type
Supervisor Hint
String.

F1  Help  ↑↓  Select Item  +/-  Change Values  F9  Setup Defaults
Esc  Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10  Save and Exit

```

Press  to type the supervisor password hint string.

## Security → Set User Password

```

Phoenix SecureCore Technology Setup
Main      Advanced      Security      Boot      Exit
-----
Secure Boot Activation      [Disabled]      ^
> Secure Boot Configuration  *
Supervisor Password is:    Cleared          *
User Password is:          Cleared          *
Item Specific Help
* Set or clear the
* Supervisor account's
* password.
-----
Set Superv/
Supervisor |          Set User Password          |
-----
Set User P | Enter New Password [          ] |
User Hint  | Confirm New Password [          ] |
-----
Min. passwo
Authenticate User on Boot    [Disabled]      +
HDD Security Status        +
No HDD detected              +
Trusted Platform Module (TPM)
TPM Support                  [Enabled]      v
TPM Configuration
-----
F1  Help  ↑↓  Select Item  +/-  Change Values  F9  Setup Defaults
Esc  Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10  Save and Exit

```

1. Type the user password
2. Confirm the user password



## Security → User Hint String


```

Phoenix SecureCore Technology Setup
Main      Advanced  Security  Boot      Exit
-----
Secure Boot Activation      [Disabled]      ^
> Secure Boot Configuration *
Supervisor Password is:    Cleared         *
User Password is:         Cleared         *
Set Supervisor Password    [Enter]        *
Supervisor Hint String     [                ] *
Set User Password          [Enter]        *
User Hint String           [                ] *
Min. password length      [ 1]           *
Authenticate User on Boot  [Disabled]    +
HDD Security Status       No HDD detected +
Trusted Platform Module (TPM)
TPM Support                [Enabled]      v
TPM Configuration

Item Specific Help
-----
Press Enter to type
Supervisor Hint
String.

F1  Help  ↑↓  Select Item  +/-  Change Values  F9  Setup Defaults
Esc  Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10  Save and Exit

```

Press  to type the user password hint string.

## Security → Min. Password Length

```

Phoenix SecureCore Technology Setup
Main      Advanced  Security  Boot      Exit
-----
> Secure Boot Configuration
Supervisor Password is:      Cleared
User Password is:           Cleared

Set Supervisor Password      [Enter]
Supervisor Hint String       [          ]

Set User Password            [Enter]
User Hint String             [          ]

Min. password length        [ 1 ]

Authenticate User on Boot    [Disabled]

HDD Security Status
No HDD detected

Trusted Platform Module (TPM)
TPM Support                  [Enabled]
TPM Configuration

Item Specific Help
-----
+
* Set the minimum
* number of characters
* for password (1-20).
*
+
+
v

F1  Help  ↑↓  Select Item  +/-  Change Values      F9  Setup Defaults
Esc  Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10 Save and Exit

```

Enter the minimum number of characters for passwords. Range is 1 to 20.

## Security → TPM Support

```

Phoenix SecureCore Technology Setup
Main      Advanced  Security  Boot      Exit
-----
> Secure Boot Configuration
Supervisor Password is:      Cleared
User Password is:           Cleared

Set Supervisor Password      [Enter]
Supervisor Hint String       [          ]

Set User Password            [Enter]
User Hint String             [          ]

Min. password length         [ 1]

Authenticate User on Boot    [Disabled]

HDD Security Status
No HDD detected

Trusted Platform Module (TPM)
TPM Support                  [Enabled]
TPM Configuration

Item Specific Help
-----
* This is used to decide
* whether TPM support
* should be enabled or
* disabled.

F1  Help  ↑↓  Select Item  +/-  Change Values  F9  Setup Defaults
Esc  Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10 Save and Exit

```

Options	Disabled	Disables TPM configuration options
	<b>Enabled (default)</b>	Enables TPM configuration options

## Security → TPM Configuration

Phoenix SecureCore Technology Setup			
Main	Advanced	<b>Security</b>	Boot Exit
<b>TPM Configuration</b>		Item Specific Help	
Current TPM State	[Enabled and Activated]		
TPM Action	[No Change]		
Omit Boot Measurements	[Disabled]		
		Enact TPM Action. Note: Most TPM actions require TPM to be Enabled to take effect.	
F1 Help	↑↓ Select Item	+/- Change Values	F9 Setup Defaults
Esc Exit	<> Select Menu	Enter Select > Sub-Menu	F10 Save and Exit

## Security → TPM Configuration → Current TPM State

```

Phoenix SecureCore Technology Setup
Main    Advanced    Security    Boot    Exit
-----
TPM Configuration
-----
Current TPM State    [Enabled and Activated]
TPM Action           [No Change]
Omit Boot Measurements [Disabled]
-----
Item Specific Help
-----
Enact TPM Action.
Note: Most TPM
actions require TPM
to be Enabled to take
effect.
-----
F1  Help  ↑↓  Select Item  +/-  Change Values    F9  Setup Defaults
Esc Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10 Save and Exit

```

This screen displays the current state of the TPM.

## Security → TPM Configuration → TPM Action

```

Phoenix SecureCore Technology Setup
Main    Advanced    Security    Boot    Exit
-----
TPM Configuration
-----
Current TPM State      [Enabled and Activated]
TPM Action             [No Change]
Omit Boot Measurements [Disabled]
-----
Item Specific Help
-----
Enact TPM Action.
Note: Most TPM
actions require TPM
to be Enabled to take
effect.
-----
F1  Help  ↑↓  Select Item  +/-  Change Values  F9  Setup Defaults
Esc Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10 Save and Exit
    
```

	<b>No change (default)</b>
	Enable
	Disable
	Activate
	Deactivate
	Clear
	Enable and Activate
	Disable and Deactivate
	Set Owner Install, with state=True
Options	Set Owner Install, with state=False
	Enable, Activate, and Set Owner Install with state=True
	Disable, Deactivate, and Set Owner Install with state=False
	Clear, Enable, and Activate
	Require PP for provisioning
	Do not require PP for provisioning
	Require PP for clear
	Do not require PP for clear
	Enable, Activate, and Clear
	Enable, Activate, Clear, Enable, and Activate

## Security → TPM Configuration → Omit Boot Measurements

Phoenix SecureCore Technology Setup	
Main	Advanced <b>Security</b> Boot Exit
TPM Configuration	
Current TPM State	[Enabled and Activated]
TPM Action	[No Change]
Omit Boot Measurements	[Disabled]
Item Specific Help	
Enabling this option causes the system to omit recording boot device attempts in PCR[4].	
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults Esc Exit <> Select Menu Enter Select > Sub-Menu F10 Save and Exit	

Options	Disabled (default)	Boot device attempts are recorded in PCR[4]
	Enabled	Causes the system to omit recording boot device attempts in PCR[4]








The Boot menu enables you to set the priority of boot devices.

```

Phoenix SecureCore Technology Setup
Main      Advanced      Security      Boot      Exit
-----
Boot Priority Order
1.  USB CD:
2.  ATAPI CD:
3.  USB HDD:
4.  ATA HDD0:
5.  ATA HDD1:
6.  USB FDD:
7.  Internal Shell
8.  PCI LAN:

Item Specific Help
-----
Keys used to view or
configure devices: ^
and v arrows Select a
device. '+' and '-'
move the device up or
down. 'Shift + 1'
enables or disables a
device. 'Del' deletes
an unprotected device.

F1  Help  ↑↓  Select Item  +/-  Change Values  F9  Setup Defaults
Esc Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10  Save and Exit
    
```

Options	 or 	Selects a device from the list
	 or 	Moves a selected device up or down the list
	 or 	Enables or disables a device
		Deletes an unprotected device



If you have updated the firmware in the board's I210 Ethernet controllers, the PCI LAN entry will include options for network boot, as shown below. The example below shows both LAN ports (NIC1/Ethernet Port 0 and NIC2/Ethernet Port 1, respectively) enabled for network boot.

```

Phoenix SecureCore Technology Setup
Main      Advanced      Security      Boot      Exit
-----
Boot Priority Order
1.  USB CD:
2.  ATAPI CD:
3.  USB HDD:
4.  ATA HDD0:
5.  ATA HDD1:
6.  USB FDD:
7.  Internal Shell
8.  ▼PCI LAN:
    IBA GE Slot 0800 v1578
    IBA GE Slot 0900 v1578

Item Specific Help
-----
Keys used to view or
configure devices: ^
and v arrows Select a
device. '+' and '-'
move the device up or
down. 'Shift + 1'
enables or disables a
device. 'Del' deletes
an unprotected device.

F1  Help  ↑↓  Select Item  +/-  Change Values      F9  Setup Defaults
Esc Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10 Save and Exit
    
```

The Exit menu provides options for the following:




- Exiting the BIOS Setup utility with our without saving changes
- Loading or re-loading default values
- Saving or discarding changes

```

Phoenix SecureCore Technology Setup
Main      Advanced      Security      Boot      Exit
-----
Exit Saving Changes
Exit Discarding Changes
Load Setup Defaults
Load Optimized Defaults
Discard Changes
Save Changes

Item Specific Help
-----
Equal to F10, save
all changes of all
menus, then exit
setup configure
driver. Finally
resets the system
automatically.

F1  Help  ↑↓  Select Item  +/-  Change Values      F9  Setup Defaults
Esc  Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10 Save and Exit
    
```

<b>Exit Saving Changes</b>	Save all changes in all menus, exit setup, and perform a reset; same as 
<b>Exit Discarding Changes</b>	Exit Setup without saving changes; same as 
<b>Load Setup Defaults</b>	Load standard default values; same as 
<b>Discard Changes</b>	Load original values of this boot time (not the default values).
<b>Save Changes</b>	Save all changes in all menus, but do not reset system.

\*\*\* End of document \*\*\*