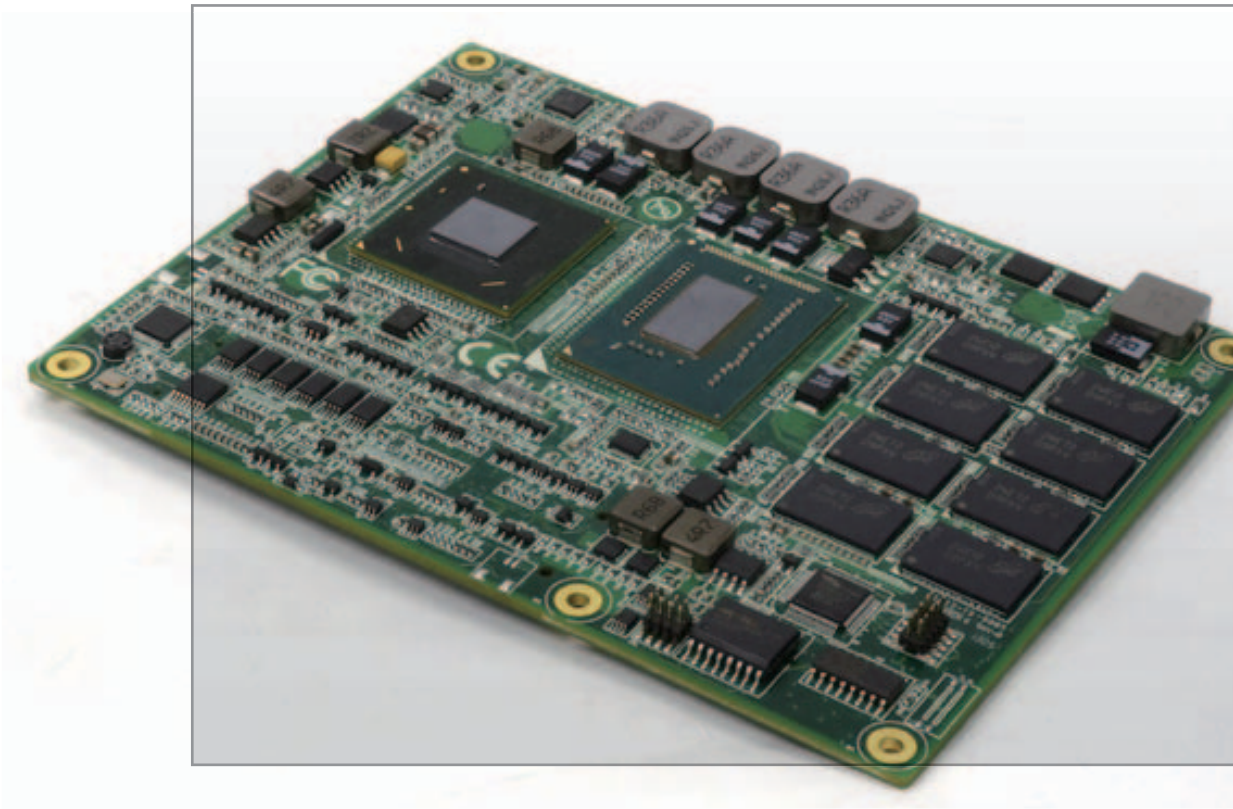
OXY5135B

COM Express with Intel Ivy Bridge+QM77
User's Manual



Safety Information

Electrical safety

- To prevent electrical shock hazard, disconnect the power cable from the electrical outlet before relocating the system.
- When adding or removing devices to or from the system, ensure that the power cables for the devices are unplugged before the signal cables are connected. If possible, disconnect all power cables from the existing system before you add a device.
- Before connecting or removing signal cables from the motherboard, ensure that all power cables are unplugged.
- Seek professional assistance before using an adapter or extension cord. These devices could interrupt the grounding circuit.
- Make sure that your power supply is set to the correct voltage in your area.
- If you are not sure about the voltage of the electrical outlet you are using, contact your local power company.
- If the power supply is broken, do not try to fix it by yourself. Contact a qualified service technician or your local distributor.

Operation safety

- Before installing the motherboard and adding devices on it, carefully read all the manuals that came with the package.
- Before using the product, make sure all cables are correctly connected and the power cables are not damaged. If you detect any damage, contact your dealer immediately.
- To avoid short circuits, keep paper clips, screws, and staples away from connectors, slots, sockets and circuitry.
- Avoid dust, humidity, and temperature extremes. Do not place the product in any area where it may become wet.
- Place the product on a stable surface.
- If you encounter any technical problems with the product, contact your local distributor

Statement

Revision History

Revision	Date (dd.mm.yyyy)	Changes
Version 1.0	01.08.2013	Initial release

Packing list

- ☐ OXY5135B COM Express Type 6 Module
- ☐ CD (Driver + user's manual)

Optional Accessories

- ☐ Thermal kit: Heatspreader
- ☐ Thermal kit: Active heatsink
- ☐ SK505 COM Express Type 6 carrier board

If any of the above items is damaged or missing, please contact your local distributor.

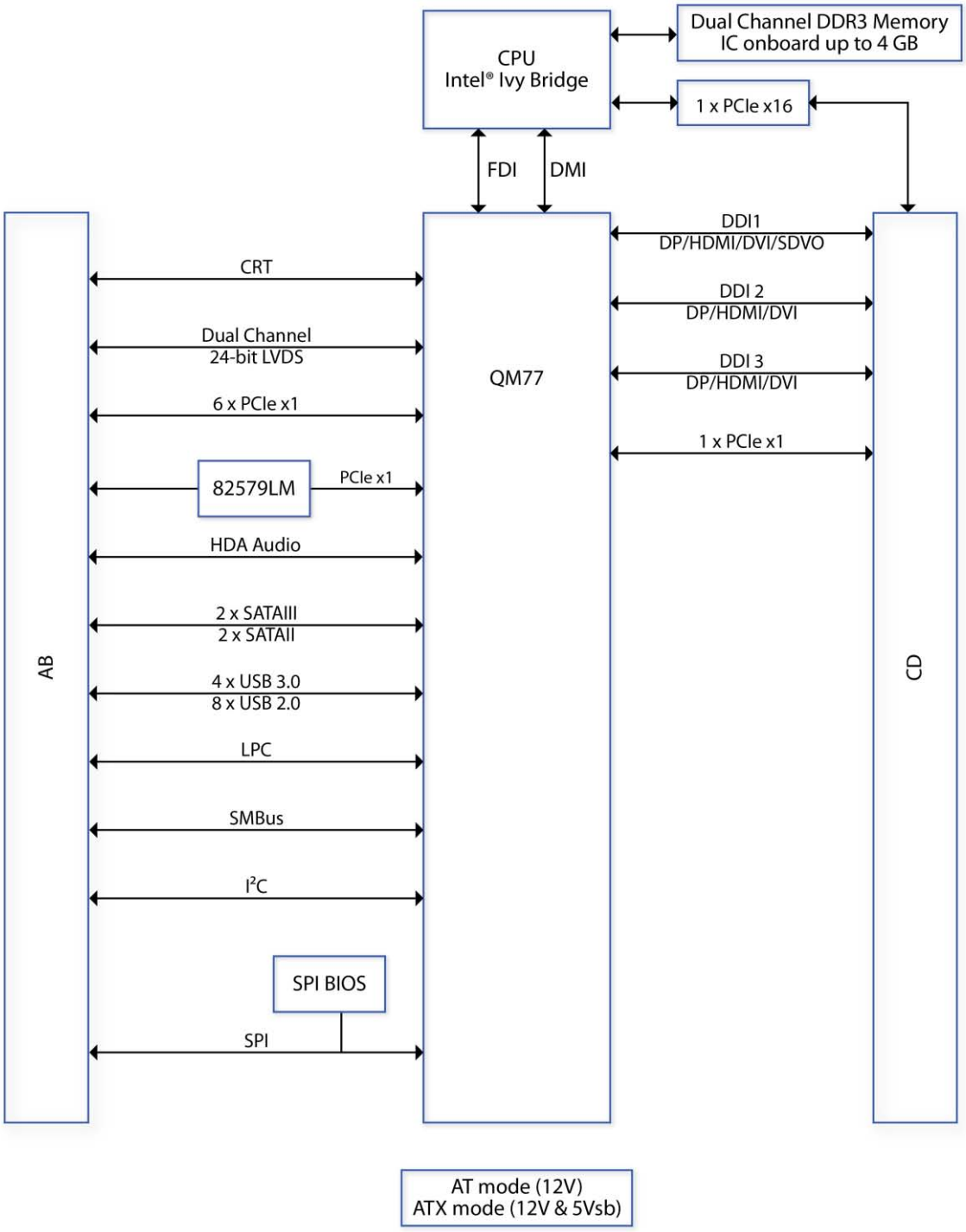
Ordering Information

Model Number	Description
OXY5135B-ET-3517UE	COM Express Type 6 Intel® Ivy Bridge Processor (Mobile) BGA CPU (Core™ i7-3517UE) (-20 to 70°C)
OXY5135B-ET-3610ME	COM Express Type 6 Intel® Ivy Bridge Processor (Mobile) BGA CPU (Core™ i5-3610ME) (-20 to 70°C)
OXY5135B-ET-3217UE	COM Express Type 6 Intel® Ivy Bridge Processor (Mobile) BGA CPU (Core™ i3-3217UE) (-20 to 70°C)
OXY5135B-UT-3517UE	COM Express Type 6 Intel® Ivy Bridge Processor (Mobile) BGA CPU (Core™ i7-3517UE) (-40 to 85°C optional)
OXY5135B-UT-3610ME	COM Express Type 6 Intel® Ivy Bridge Processor (Mobile) BGA CPU (Core™ i5-3610ME) (-40 to 85°C optional)
OXY5135B-UT-3217UE	COM Express Type 6 Intel® Ivy Bridge Processor (Mobile) BGA CPU (Core™ i3-3217UE) (-40 to 85°C optional)

Table of content

Chapter 1: Product Information

1.1 Block Diagram



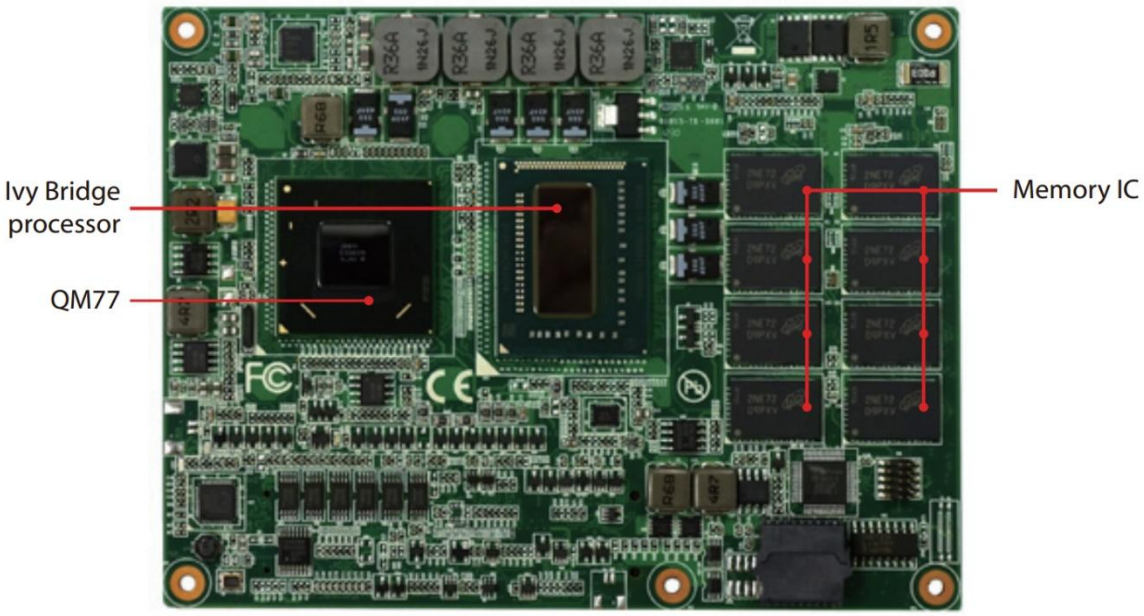
1.2 Key Features

Processor & System	
CPU Type	3rd Generation Intel® Core™ i7/i5/i3 processor, BGA type Core™ i7-3615QE (4C, 2.3GHz, 45W) Core™ i7-3612QE (4C, 2.1GHz, 35W) Core™ i7-3555LE (2C, 2.5GHz, 25W) Core™ i7-3517UE (2C, 1.7GHz, 17W) Core™ i5-3610ME (2C, 2.7GHz, 35W) Core™ i3-3120ME (2C, 2.4GHz, 35W) Core™ i3-3217UE (2C, 1.6GHz, 17W)
Chipset	Intel® QM77
Memory Type	Dual channel 4 GB DDR3 1600 MHz memory IC onboard
BIOS	AMI® UEFI BIOS
Super I/O	Fintek F81801-I
Watchdog	1-255 sec. or 1-255 min. software programmable, can generate system reset
Expansion Busses	1 x PCIe x16 (2 x PCIe x8 or 1 x PCIe x8 + 2 x PCIe x4) 7 x PCIe x1
Display	
Chipset	Integrated GFX in Ivy Bridge processor
VGA	Yes (Max. resolution 2048 x1536 @ 60 Hz)
LVDS	Dual channel 24-bit LVDS
DDI	Three DDI ports support HDMI/DP/SDVO/DVI
Audio	
Codec	Integrated Intel® High Definition Audio
Ethernet	
Chipset	1 x Intel® 82579LM GbE LAN
WOL	Yes
Boot from LAN	Yes for PXE
I/O Interface	
SATA	2 x SATAIII (6 Gb/s) 2 x SATAII (3 Gb/s)
USB	4 x USB 3.0 8 x USB 2.0
LPC bus	1
SMBus	1
I^2C	1

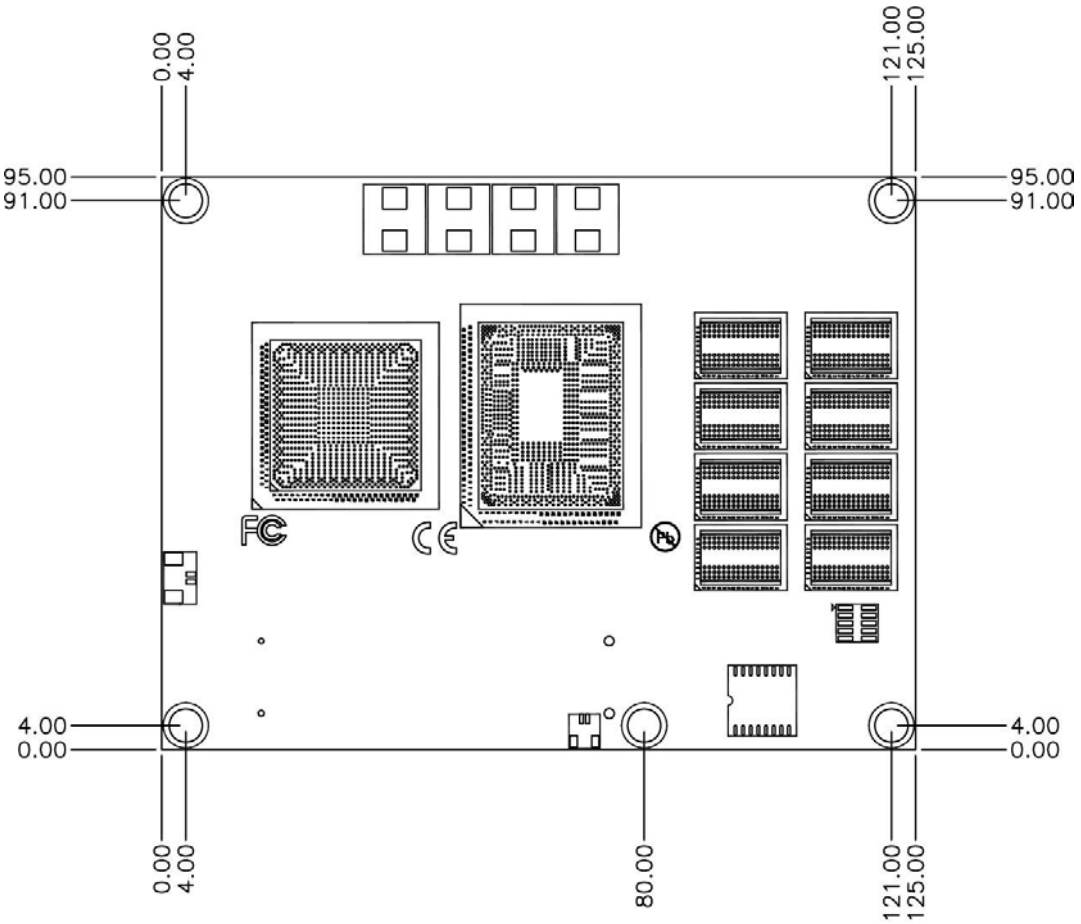
Mechanical and Environment	
Form Factor	COM Express Type 6
Power Type	AT mode (12V) ATX mode (12V & 5Vsb)
Dimension	125 x 95 mm (4.9" x 3.7")
Operating Temp.	-20 to 70°C
Storage Temp.	-20 to 85°C
Relative Humidity	10% to 90%, non-condensing

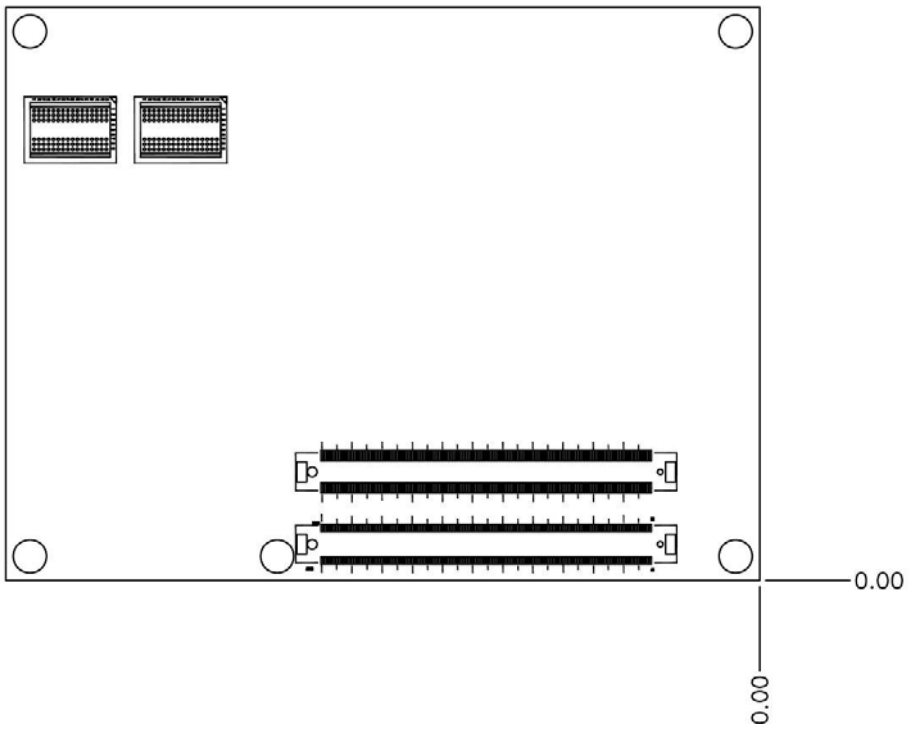
***All specifications and photos are subject to change without notice.**

1.3 Board Placement



1.4 Mechanical Drawing





Chapter 2: Jumpers and Connectors

2.1 AB Connector (CD Side close to board edge)

- VGA
- 24-bit LVDS Dual Channel
- 6 x PCIe x1
- 1 x PCIe x16
- 1 x Gigabit Ethernet
- High Definition Audio bus
- 2 x SATAIII, 2 x SATAII
- 4 x USB 3.0, 8 x USB 2.0
- LPC
- SMBus and I^2C

2.2 CD Connector

- DDI1 (DP/HDMI/DVI/SDVO)
- DDI2 (DP/HDMI/DVI)
- DDI3 (DP/HDMI/DVI)
- 1 x PCIe x1

2.3 Pin Definitions

Row A		Row B	
Pin	Definition	Pin	Definition
A1	GND	B1	GND
A2	GBE0_MDI3-	B2	GBE0_ACT#
A3	GBE0_MDI3+	B3	LPC_FRAME#
A4	GBE0_LINK100#	B4	LPC_AD0
A5	GBE0_LINK1000#	B5	LPC_AD1
A6	GBE0_MDI2-	B6	LPC_AD2
A7	GBE0_MDI2+	B7	LPC_AD3
A8	GBE0_LINK#	B8	LPC_DRQ0#
A9	GBE0_MDI1-	B9	LPC_DRQ#1
A10	GBE0_MDI1+	B10	LPC_CLK
A11	GND	B11	GND
A12	GBE0_MDI0-	B12	PWRBTN#
A13	GBE0_MDI0+	B13	SMB_CLK
A14	GBE0_CTREF	B14	SMB_DAT
A15	SUS_S3#	B15	SMB_ALERT#
A16	SATA0_TX+	B16	SATA1_TX+
A17	SATA0_TX-	B17	SATA1_TX-
A18	SUS_S4#	B18	SUS_STAT#
A19	SATA0_RX+	B19	SATA1_RX+
A20	SATA0_RX-	B20	SATA1_RX-
A21	GND	B21	GND
A22	SATA2_TX+	B22	SATA3_TX+
A23	SATA2_TX-	B23	SATA3_TX-
A24	SUS_S5#	B24	PWR_OK
A25	SATA2_RX+	B25	SATA3_RX+
A26	SATA2_RX-	B26	SATA3_RX-
A27	BATLOW#	B27	WDT
A28	(S)ATA_ACT#	B28	AC/HDA_SDIN2
A29	AC/HDA_SYNC	B29	AC/HDA_SDIN1
A30	AC/HDA_RST#	B30	AC/HDA_SDIN0
A31	GND	B31	GND
A32	AC/HDA_BITCLK	B32	SPKR
A33	AC/HDA_SDOUT	B33	I2C_CK

Row C		Row D	
Pin	Definition	Pin	Definition
C1	GND	D1	GND
C2	GND	D2	GND
C3	USB_SSRX0-	D3	USB_SSTX0-
C4	USB_SSRX0+	D4	USB_SSTX0+
C5	GND	D5	GND
C6	USB_SSRX1-	D6	USB_SSTX1-
C7	USB_SSRX1+	D7	USB_SSTX1+
C8	GND	D8	GND
C9	USB_SSRX2-	D9	USB_SSTX2-
C10	USB_SSRX2+	D10	USB_SSTX2+
C11	GND	D11	GND
C12	USB_SSRX3-	D12	USB_SSTX3-
C13	USB_SSRX3+	D13	USB_SSTX3+
C14	GND	D14	GND
C15	DDI1_PAIR6+	D15	DDI1_CTRLCLK_AUX+
C16	DDI1_PAIR6-	D16	DDI1_CTRLDATA_AUX-
C17	NC	D17	NC
C18	NC	D18	NC
C19	PCIE_RX6+	D19	PCIE_TX6+
C20	PCIE_RX6-	D20	PCIE_TX6-
C21	GND	D21	GND
C22	NC	D22	NC
C23	NC	D23	NC
C24	DDI1_HPD	D24	NC
C25	DDI1_PAIR4+	D25	NC
C26	DDI1_PAIR4-	D26	DDI1_PAIR0+
C27	NC	D27	DDI1_PAIR0-
C28	NC	D28	NC
C29	DDI1_PAIR5+	D29	DDI1_PAIR1+
C30	DDI1_PAIR5-	D30	DDI1_PAIR1-
C31	GND	D31	GND
C32	DDI2_CTRLCLK_AUX+	D32	DDI1_PAIR2+
C33	DDI2_CTRLDATA_AUX-	D33	DDI1_PAIR2-

A34	BIOS_DIS0#	B34	I2C_DAT
A35	THRMTRIP#	B35	THRM#
A36	USB6-	B36	USB7-
A37	USB6+	B37	USB7+
A38	USB_6_7_OC#	B38	USB_4_5_OC#
A39	USB4-	B39	USB5-
A40	USB4+	B40	USB5+
A41	GND	B41	GND
A42	USB2-	B42	USB3-
A43	USB2+	B43	USB3+
A44	USB_2_3_OC#	B44	USB_0_1_OC#
A45	USB0-	B45	USB1-
A46	USB0+	B46	USB1+
A47	VCC_RTC	B47	EXCD1_PERST#
A48	EXCD0_PERST#	B48	EXCD1_CPPE#
A49	EXCD0_CPPE#	B49	SYS_RESET#
A50	LPC_SERIRQ	B50	CB_RESET#
A51	GND	B51	GND
A52	PCIE_TX5+	B52	PCIE_RX5+
A53	PCIE_TX5-	B53	PCIE_RX5-
A54	GPI0	B54	GPO1
A55	PCIE_TX4+	B55	PCIE_RX4+
A56	PCIE_TX4-	B56	PCIE_RX4-
A57	GND	B57	GPO2
A58	PCIE_TX3+	B58	PCIE_RX3+
A59	PCIE_TX3-	B59	PCIE_RX3-
A60	GND	B60	GND
A61	PCIE_TX2+	B61	PCIE_RX2+
A62	PCIE_TX2-	B62	PCIE_RX2-
A63	GPI1	B63	GPO3
A64	PCIE_TX1+	B64	PCIE_RX1+
A65	PCIE_TX1-	B65	PCIE_RX1-
A66	GND	B66	WAKE0#
A67	GPI2	B67	WAKE1#
A68	PCIE_TX0+	B68	PCIE_RX0+
A69	PCIE_TX0-	B69	PCIE_RX0-
A70	GND	B70	GND

C34	DDI2_DDC_AUX_SEL	D34	DDI1_DDC_AUX_SEL
C35	NC	D35	NC
C36	DDI3_CTRLCLK_AUX+	D36	DDI1_PAIR3+
C37	DDI3_CTRLDATA_AUX-	D37	DDI1_PAIR3-
C38	DDI3_DDC_AUX_SEL	D38	NC
C39	DDI3_PAIR0+	D39	DDI2_PAIR0+
C40	DDI3_PAIR0-	D40	DDI2_PAIR0-
C41	GND	D41	GND
C42	DDI3_PAIR1+	D42	DDI2_PAIR1+
C43	DDI3_PAIR1-	D43	DDI2_PAIR1-
C44	DDI3_HPD	D44	DDI2_HPD
C45	NC	D45	NC
C46	DDI3_PAIR2+	D46	DDI2_PAIR2+
C47	DDI3_PAIR2-	D47	DDI2_PAIR2-
C48	NC	D48	NC
C49	DDI3_PAIR3+	D49	DDI2_PAIR3+
C50	DDI3_PAIR3-	D50	DDI2_PAIR3-
C51	GND	D51	GND
C52	PEG_RX0+	D52	PEG_TX0+
C53	PEG_RX0-	D53	PEG_TX0-
C54	NC	D54	PEG_LANE_RV#
C55	PEG_RX1+	D55	PEG_TX1+
C56	PEG_RX1-	D56	PEG_TX1-
C57	NC	D57	GND
C58	PEG_RX2+	D58	PEG_TX2+
C59	PEG_RX2-	D59	PEG_TX2-
C60	GND	D60	GND
C61	PEG_RX3+	D61	PEG_TX3+
C62	PEG_RX3-	D62	PEG_TX3-
C63	NC	D63	NC
C64	NC	D64	NC
C65	PEG_RX4+	D65	PEG_TX4+
C66	PEG_RX4-	D66	PEG_TX4-
C67	NC	D67	GND
C68	PEG_RX5+	D68	PEG_TX5+
C69	PEG_RX5-	D69	PEG_TX5-
C70	GND	D70	GND

A71	LVDS_A0+	B71	LVDS_B0+
A72	LVDS_A0-	B72	LVDS_B0-
A73	LVDS_A1+	B73	LVDS_B1+
A74	LVDS_A1-	B74	LVDS_B1-
A75	LVDS_A2+	B75	LVDS_B2+
A76	LVDS_A2-	B76	LVDS_B2-
A77	LVDS_VDD_EN	B77	LVDS_B3+
A78	LVDS_A3+	B78	LVDS_B3-
A79	LVDS_A3-	B79	LVDS_BKLD_EN
A80	GND	B80	GND
A81	LVDS_A_CK+	B81	LVDS_B_CK+
A82	LVDS_A_CK-	B82	LVDS_B_CK-
A83	LVDS_I2C_CK	B83	LVDS_BKLT_CTLR
A84	LVDS_I2C_DAT	B84	VCC_5V_SBY
A85	GPI3	B85	VCC_5V_SBY
A86	RSVD	B86	VCC_5V_SBY
A87	RSVD	B87	VCC_5V_SBY
A88	PCIE0_CK_REF+	B88	BIOS_DIS1#
A89	PCIE0_CK_REF-	B89	VGA_RED
A90	GND	B90	GND
A91	SPI_POWER	B91	VGA_GRN
A92	SPI_MISO	B92	VGA_BLU
A93	GPO0	B93	VGA_HSYNC
A94	SPI_CLK	B94	VGA_VSYNC
A95	SPI_MOSI	B95	VGA_I2C_CK
A96	PP_TPM	B96	VGA_I2C_DAT
A97	NC	B97	SPI_CS#
A98	RS1_TX	B98	RSVD
A99	RS1_RX	B99	RSVD
A100	GND	B100	GND
A101	RS2_TX	B101	FAN_PWMOUT
A102	RS2_RX	B102	FAN_TACHIN
A103	LID#	B103	SLEEP#
A104	VCC_12V	B104	VCC_12V
A105	VCC_12V	B105	VCC_12V
A106	VCC_12V	B106	VCC_12V
A107	VCC_12V	B107	VCC_12V

C71	PEG_RX6+	D71	PEG_TX6+
C72	PEG_RX6-	D72	PEG_TX6-
C73	GND	D73	GND
C74	PEG_RX7+	D74	PEG_TX7+
C75	PEG_RX7-	D75	PEG_TX7-
C76	GND	D76	GND
C77	NC	D77	NC
C78	PEG_RX8+	D78	PEG_TX8+
C79	PEG_RX8-	D79	PEG_TX8-
C80	GND	D80	GND
C81	PEG_RX9+	D81	PEG_TX9+
C82	PEG_RX9-	D82	PEG_TX9-
C83	NC	D83	NC
C84	GND	D84	GND
C85	PEG_RX10+	D85	PEG_TX10+
C86	PEG_RX10-	D86	PEG_TX10-
C87	GND	D87	GND
C88	PEG_RX11+	D88	PEG_TX11+
C89	PEG_RX11-	D89	PEG_TX11-
C90	GND	D90	GND
C91	PEG_RX12+	D91	PEG_TX12+
C92	PEG_RX12-	D92	PEG_TX12-
C93	GND	D93	GND
C94	PEG_RX13+	D94	PEG_TX13+
C95	PEG_RX13-	D95	PEG_TX13-
C96	GND	D96	GND
C97	NC	D97	NC
C98	PEG_RX14+	D98	PEG_TX14+
C99	PEG_RX14-	D99	PEG_TX14-
C100	GND	D100	GND
C101	PEG_RX15+	D101	PEG_TX15+
C102	PEG_RX15-	D102	PEG_TX15-
C103	GND	D103	GND
C104	VCC_12V	D104	VCC_12V
C105	VCC_12V	D105	VCC_12V
C106	VCC_12V	D106	VCC_12V
C107	VCC_12V	D107	VCC_12V

A108	VCC_12V	B108	VCC_12V
A109	VCC_12V	B109	VCC_12V
A110	GND	B110	GND

C108	VCC_12V	D108	VCC_12V
C109	VCC_12V	D109	VCC_12V
C110	GND	D110	GND

Chapter 3: AMI BIOSUTILITY

This chapter provides users with detailed descriptions on how to set up a basic system configuration through the AMI BIOS setup utility

3.1 Starting

To enter the setup screens, perform the following steps:

- Turn on the computer and press the <Del> key immediately.
- After the <Del> key is pressed, the main BIOS setup menu displays. Other setup screens can be accessed from the main BIOS setup menu, such as the Chipset and Power menus.

3.2 Navigation Keys

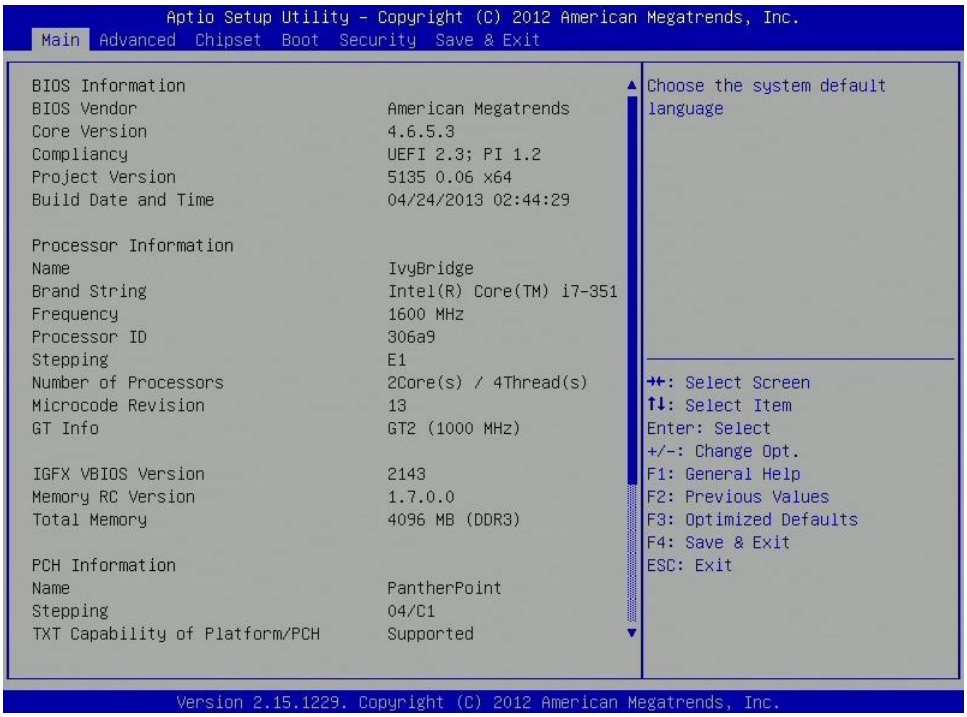
The BIOS setup/utility uses a key-based navigation system called hot keys. Most of the BIOS setup utility hot keys can be used at any time during the setup navigation process. Some of the hot keys are <F1>, <F10>, <Enter>, <ESC>, and <Arrow> keys.

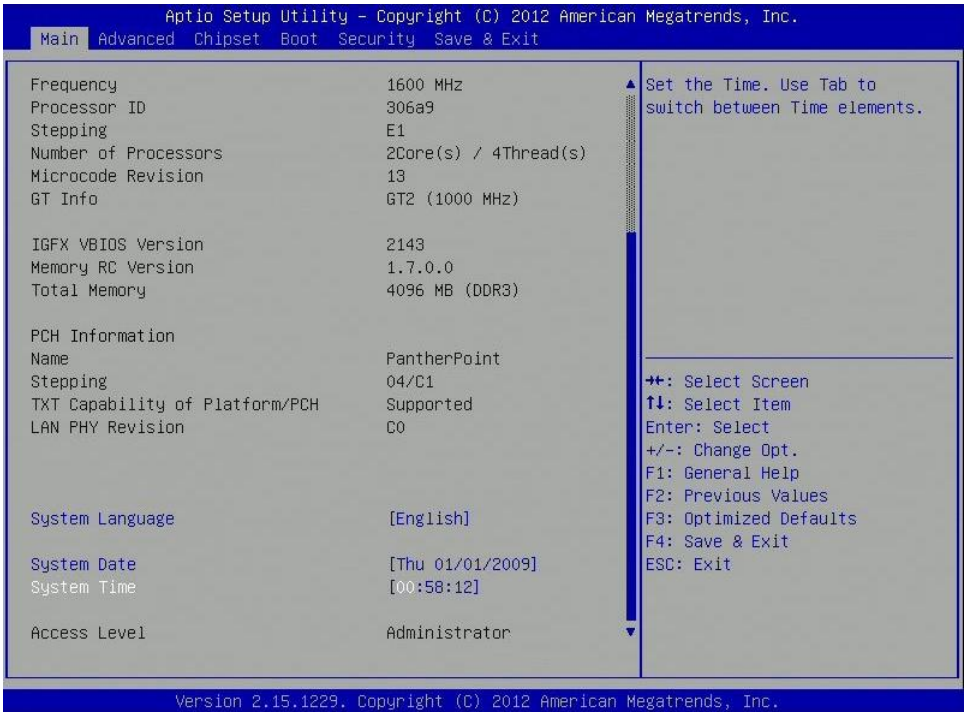
Some of the navigation keys may differ from one screen to another.

Left/Right	The Left and Right <Arrow> keys moves the cursor to select a menu.
Up/Down	The Up and Down <Arrow> keys moves the cursor to select a setup screen or sub-screen.
+– Plus/Minus	The Plus and Minus <Arrow> keys changes the field value of a particular setup setting.
Tab	The <Tab> key selects the setup fields.
F1	The <F1> key displays the General Help screen.
F10	The <F10> key saves any changes made and exits the BIOS setup utility.
Esc	The <Esc> key discards any changes made and exits the BIOS setup utility.
Enter	The <Enter> key displays a sub-screen or changes a selected or highlighted option in each menu.

3.3 Main Menu

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





System Language

Choose the system default language.

System Date

Set the Date. Use Tab to switch between Date elements.

Select System Date using the Up and Down <Arrow> keys. Enter the new values through the keyboard. Press the Left and Right <Arrow> keys to move between fields.

The date setting must be entered in MM/DD/YY format.

System Time

Set the Time. Use Tab to switch between Time elements.

Select System Time using the Up and Down <Arrow> keys. Enter the new values through the keyboard. Press the Left and Right <Arrow> keys to move between fields.

The time setting is entered in HH:MM:SS format.

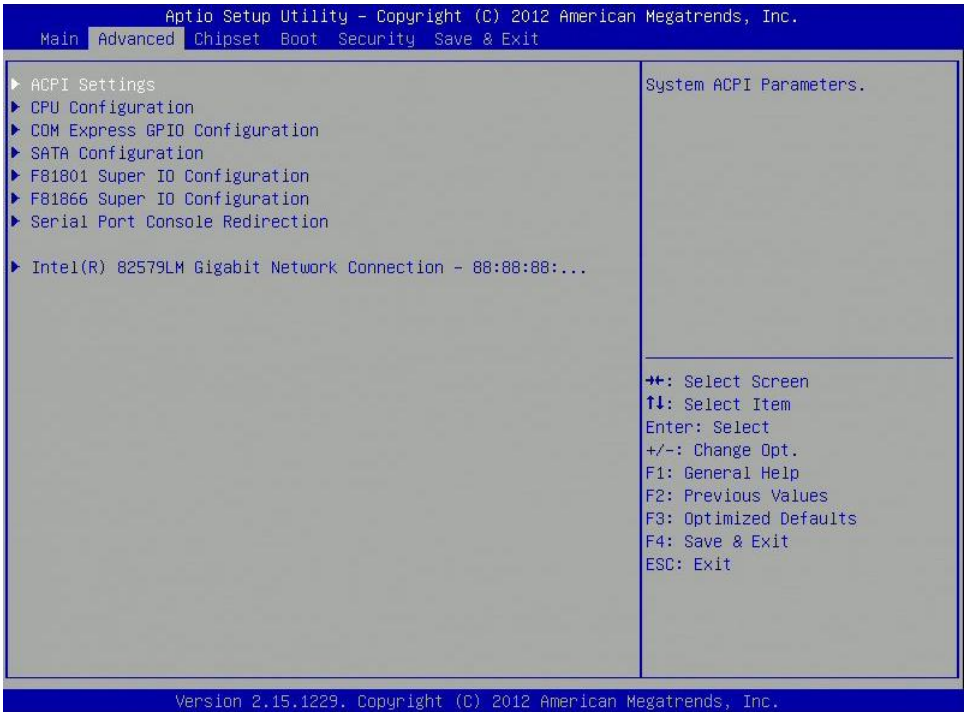
Note: The time is in 24-hourformat. For example, 5:30 A.M. appears as 05:30:00, and 5:30 P.M. as 17:30:00.

Access Level

Displays the access level of the current user in the BIOS.

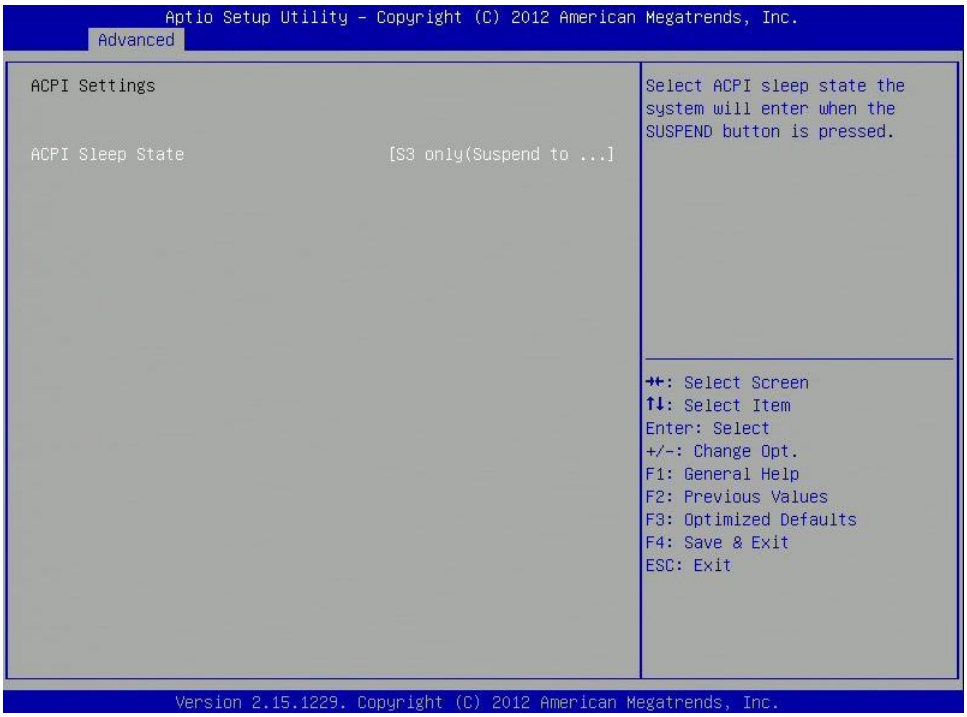
3.4 Advanced Menu

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



3.4.1 ACPI Settings

System ACPI parameters

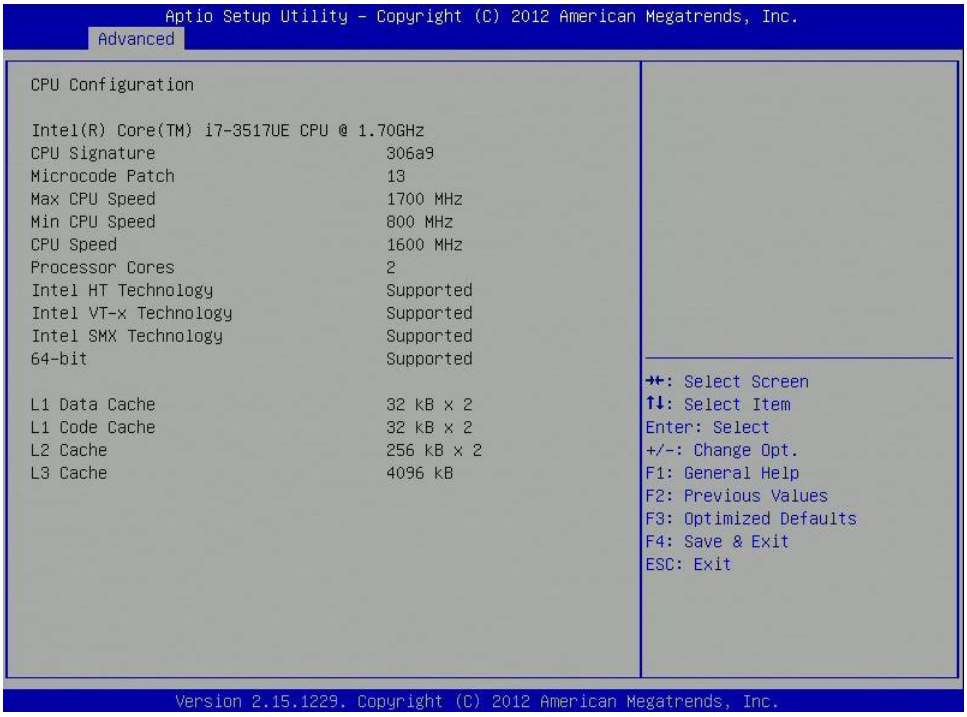


ACPI Sleep State

Select ACPI sleep state the system will enter when the SUSPEND button is pressed.

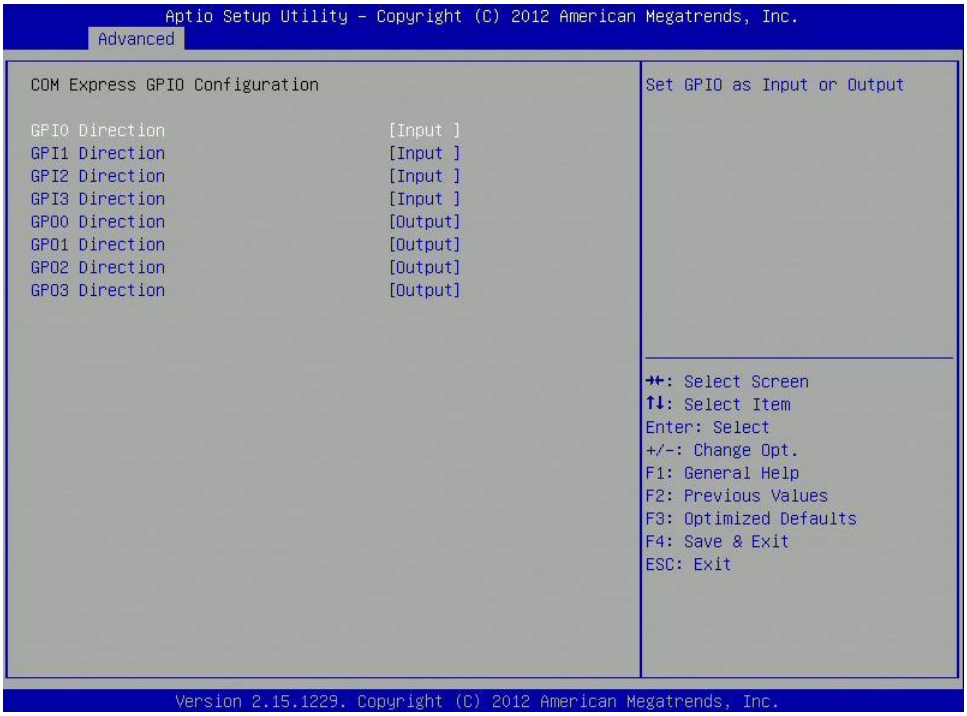
3.4.2 CPU Configuration

This section is used to configure the CPU.



3.4.3 COM Express GPIO Configuration

COM Express GPIO configuration settings

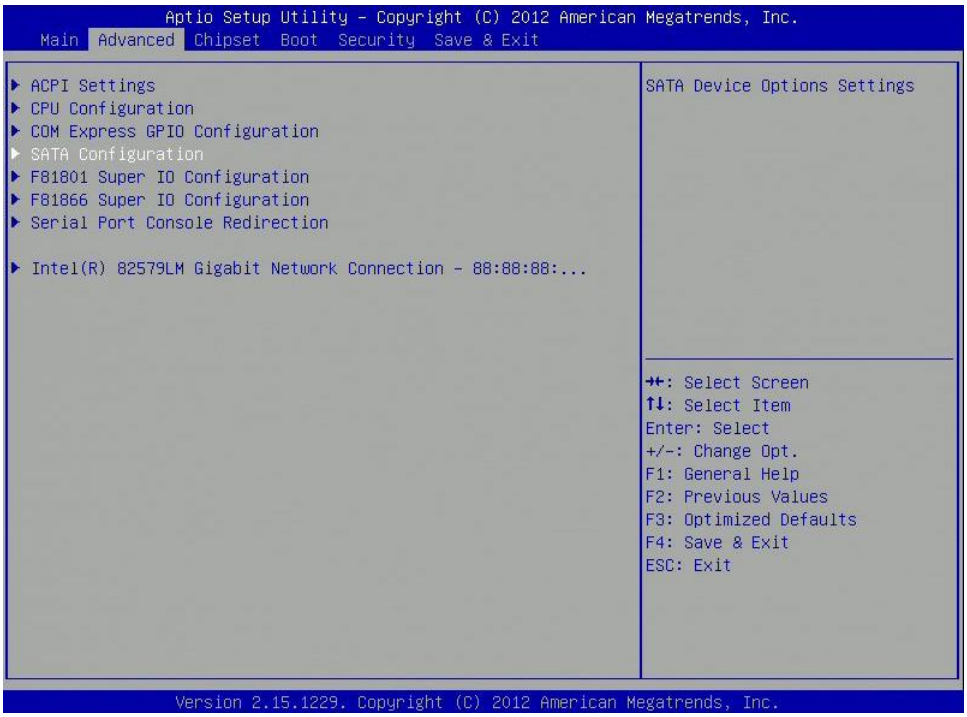


GPIO Direction

Set GPIO as Input or Output

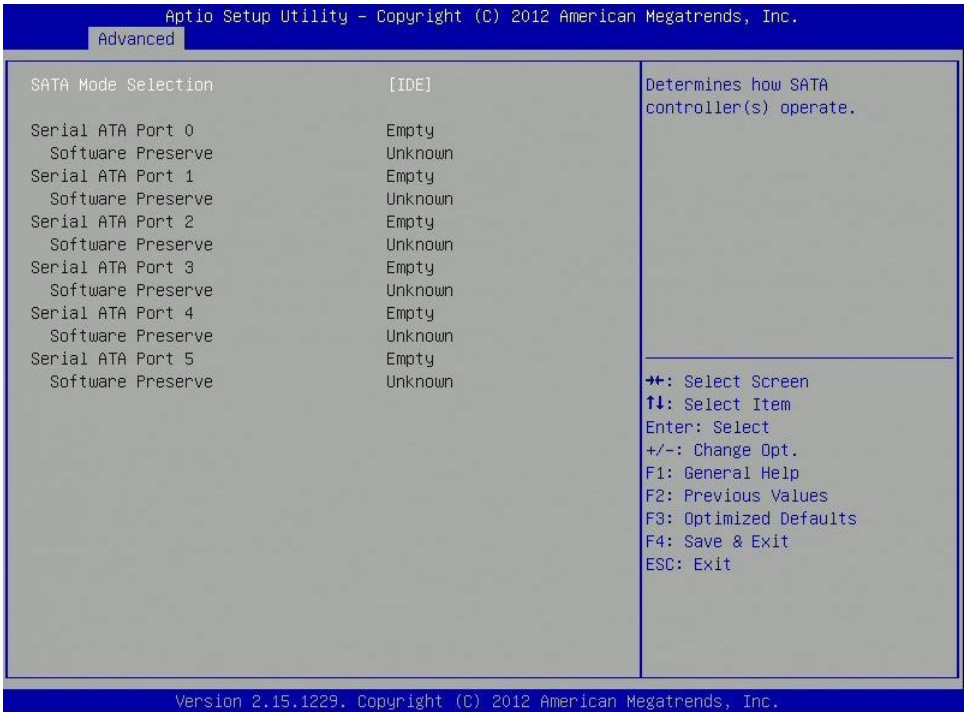
3.4.4 SATA Configuration

SATA device options settings



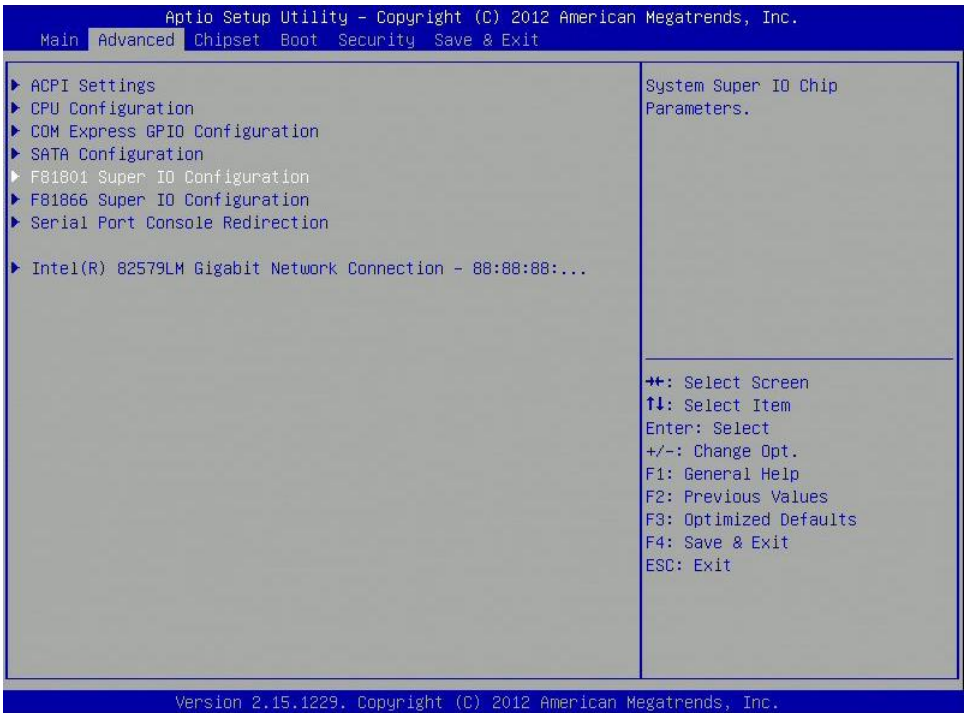
3.4.4.1 SATA Mode Selection

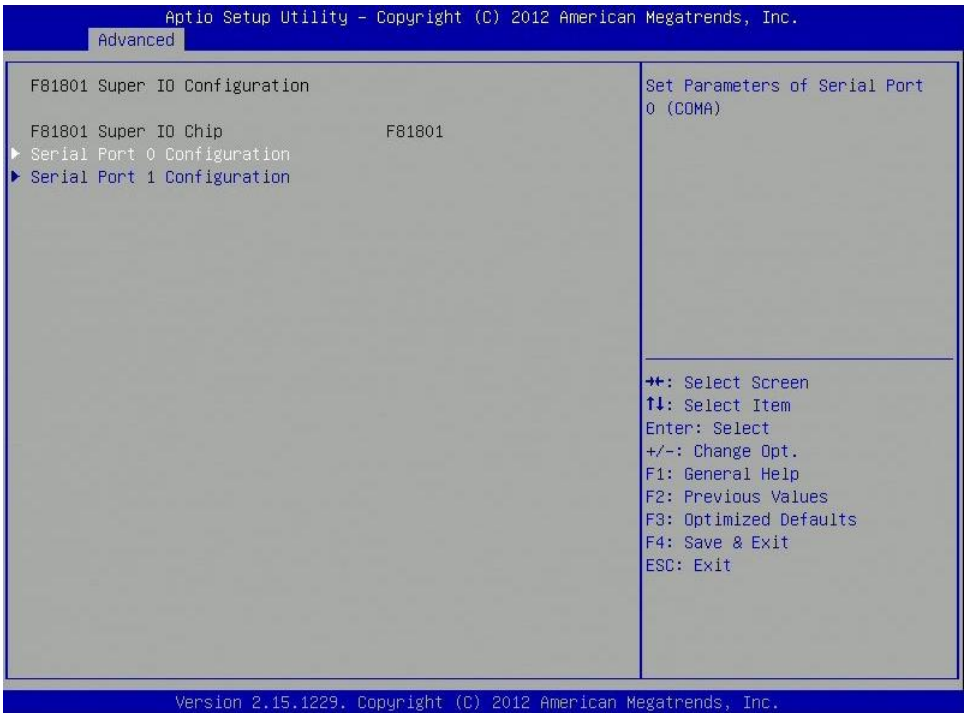
Determines how SATA controllers operate



3.4.5 F81801 Super IO Configuration

System Super IO chip parameters.





3.4.5.1 Serial Port 0 configuration

Set parameters of serial port 0 (COMA)

Serial Port

Enable or Disable serial port (COM)

Change settings

Select an optimal setting for Super IO device.

3.4.5.2 Serial Port 1 configuration

Set parameters of serial port 1 (COMB)

Serial Port

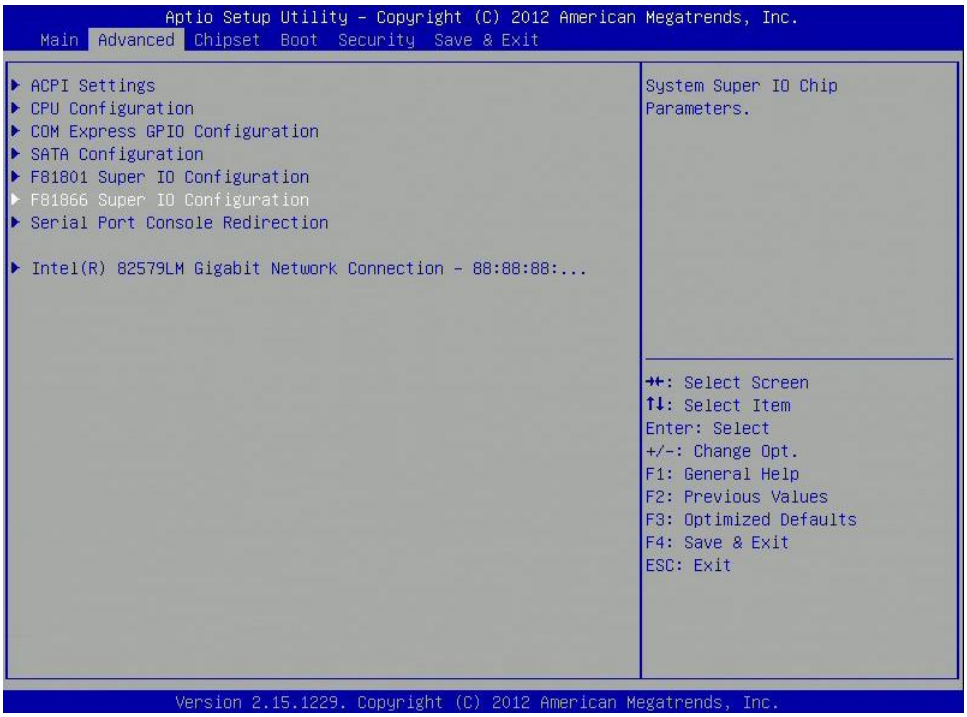
Enable or Disable serial port (COM)

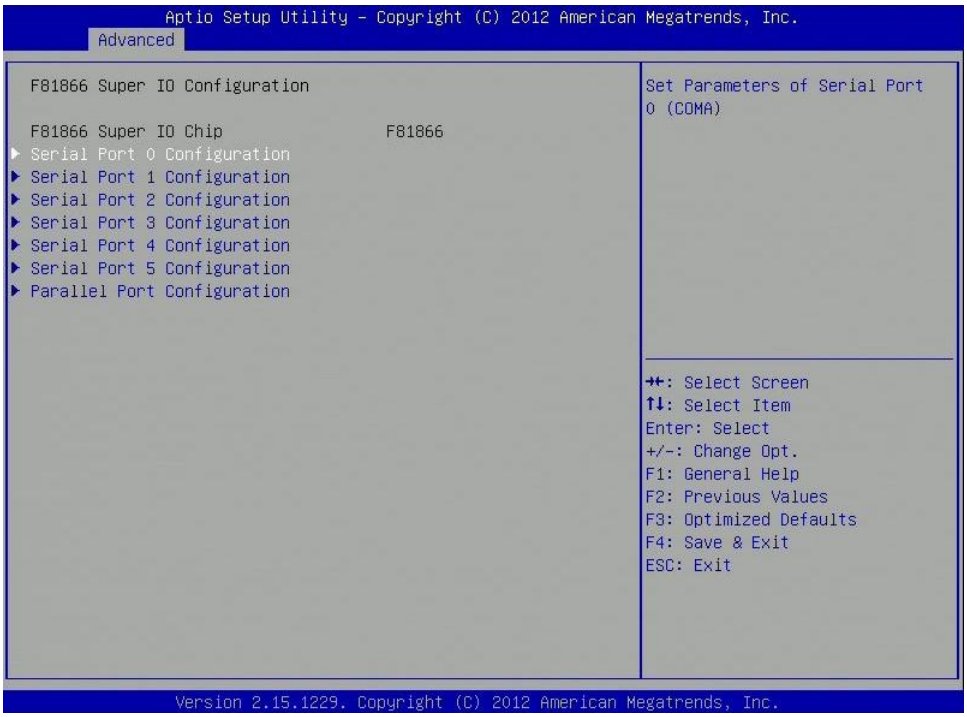
Change settings

Select an optimal setting for Super IO device.

3.4.6 F81866 Super IO Configuration

System Super IO chip parameters.





Serial Port Configuration

Set parameters of serial port (COM)

Parallel port configuration

Set parameters of parallel port (LPT/LPTE)

3.4.6.1 Serial Port 0 Configuration

Serial Port

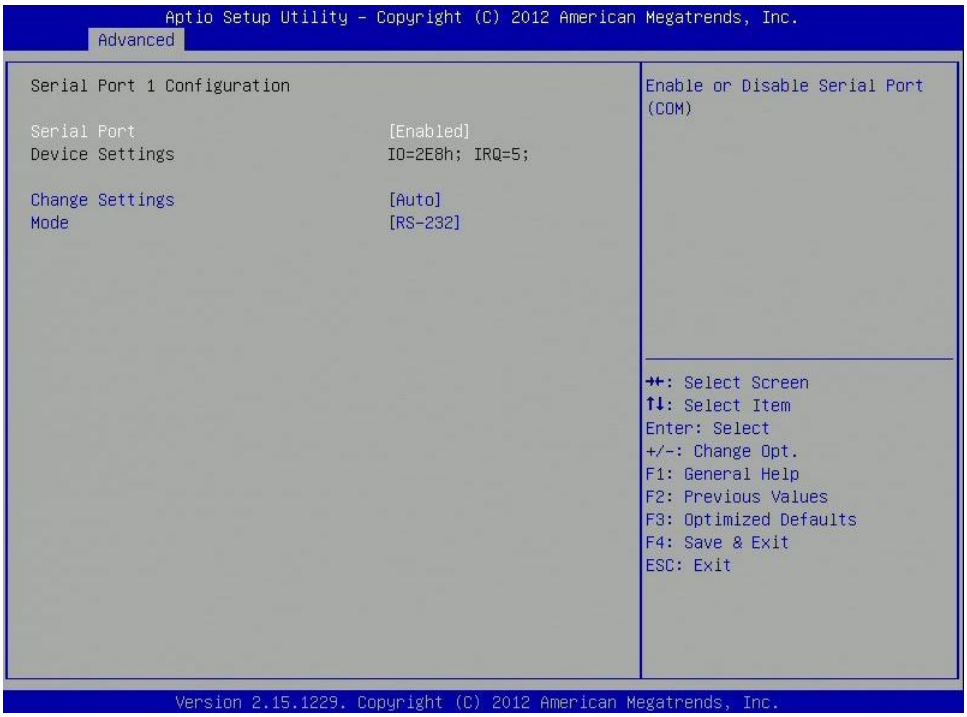
Enable or Disable serial port (COM)

Change settings

Select an optimal setting for Super IO device.

3.4.6.2 Serial Port 1 Configuration

Enable or disable serial port (COM)



Serial Port

Enable or Disable serial port (COM)

Change settings

Select an optimal setting for Super IO device.

Mode

RS232, RS-422, RS-485 selection.

3.4.6.3 Serial Port 2 Configuration

Enable or disable serial port (COM)

Serial Port

Enable or Disable serial port (COM)

3.4.6.4 Serial Port 3 Configuration

Enable or disable serial port (COM)

Serial Port

Enable or Disable serial port (COM)

3.4.6.5 Serial Port 4 Configuration

Enable or disable serial port (COM)

Serial Port

Enable or Disable serial port (COM)

3.4.6.6 Serial Port 5 Configuration

Enable or disable serial port (COM)

Serial Port

Enable or Disable serial port (COM)

3.4.6.7 Parallel port configuration

Enable or disable parallel port (LPT/LPTE)

Parallel Port

Enable or Disable parallel port (LPT/LPTE)

Change settings

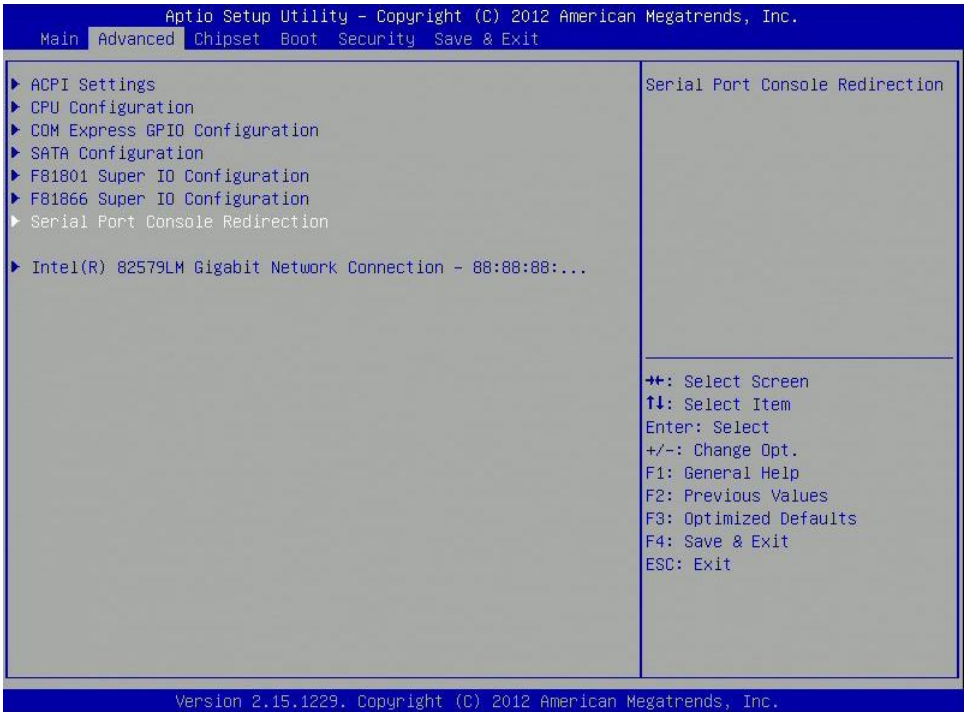
Select an optimal setting for Super IO device.

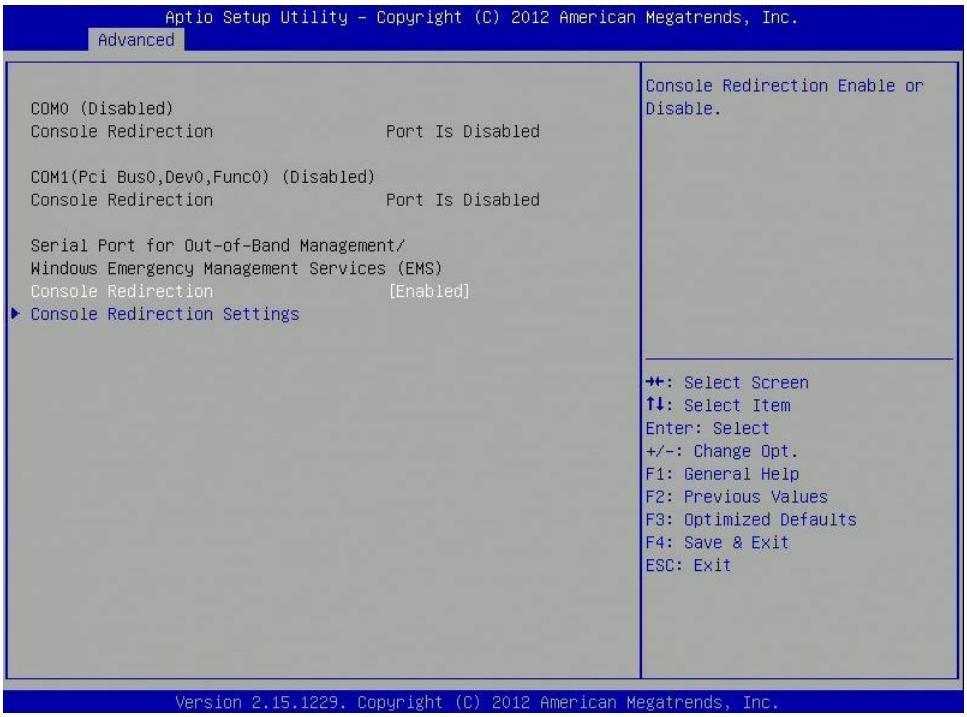
Device Mode

Change the printer port mode

3.4.7 Serial Port Console Redirection

Serial port console redirection





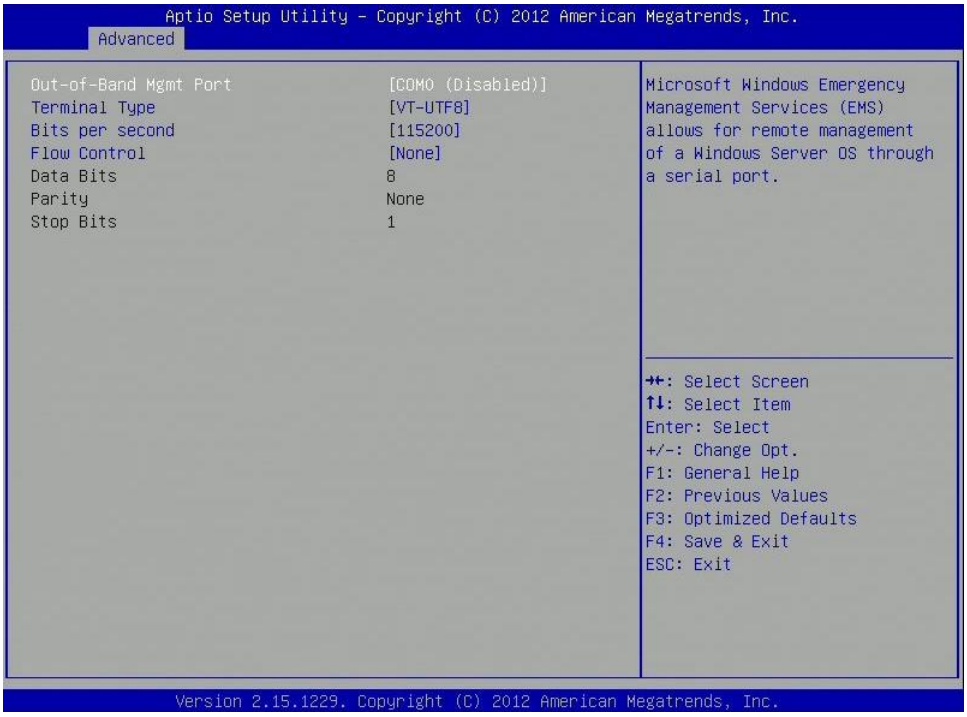
Console Redirection

Console Redirection enable or disable

Console redirection settings

The settings specify how the host computer and the remote computer (which the user is using) will exchange data. Both computers should have the same or compatible settings.

3.4.7.1 Console redirection settings



Out-of Band Mgmt Port

Microsoft Windows Emergency Management Services (EMS) allows for remote management of a Windows Server OS through a serial port.

Terminal Type

VT-UTF8 is the preferred terminal type for out-of-band management. The next best choice is VT100+ and then VT100. See above, in Console Redirection Settings page, for more help with terminal type/emulation.

Bits per second

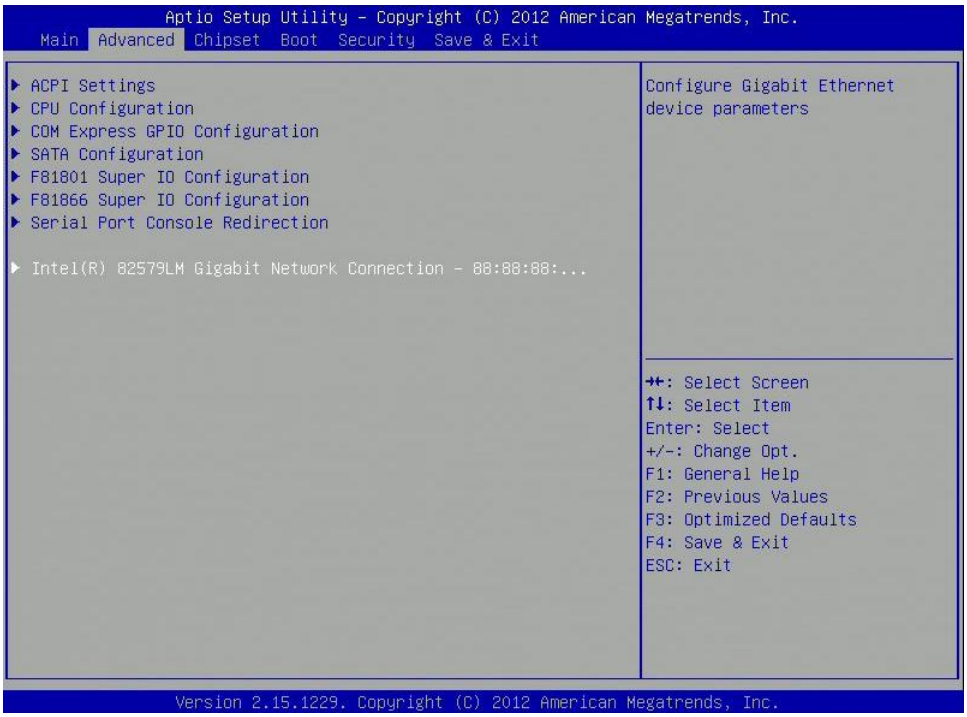
Select serial port transmission speed. The speed must be matched on the other side. Long or noisy lines may require lower speeds.

Flow Control

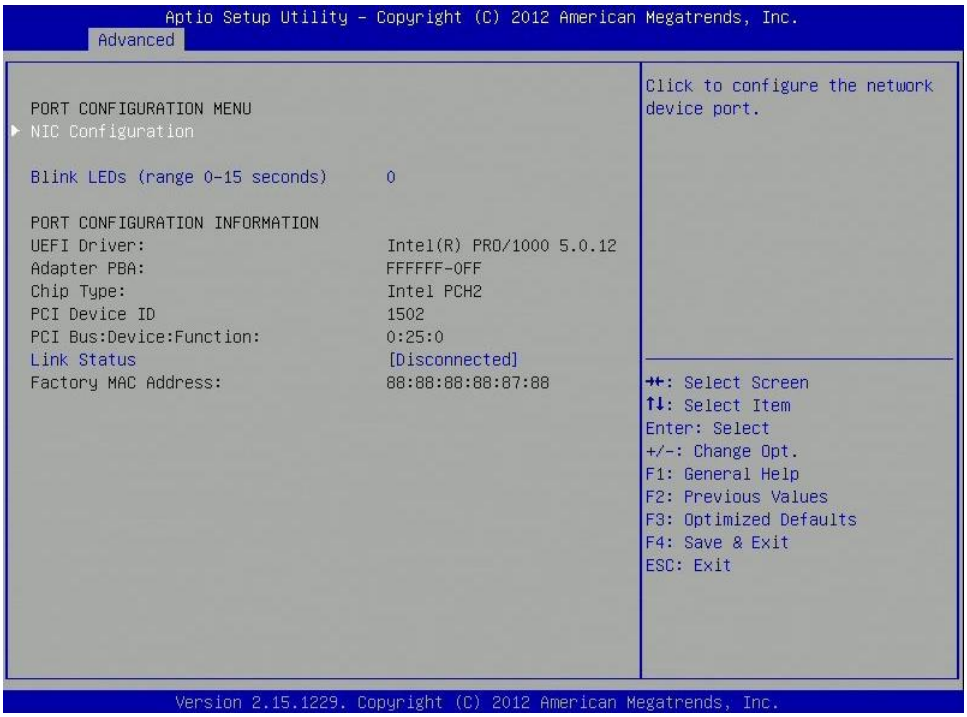
Flow control can prevent data loss from buffer overflow. When sending data, if the receiving buffers are full, a 'stop' signal can be sent to stop the data flow. Once the buffers are empty, a 'start' signal can be sent to re-start the flow. Hardware flow control uses two wires to send star/stop signals.

3.4.8 Intel(R) 82579LM Gigabit Network Connection

Configure Gigabit Ethernet device parameters



3.4.8.1 PORT CONFIGURATION MENU



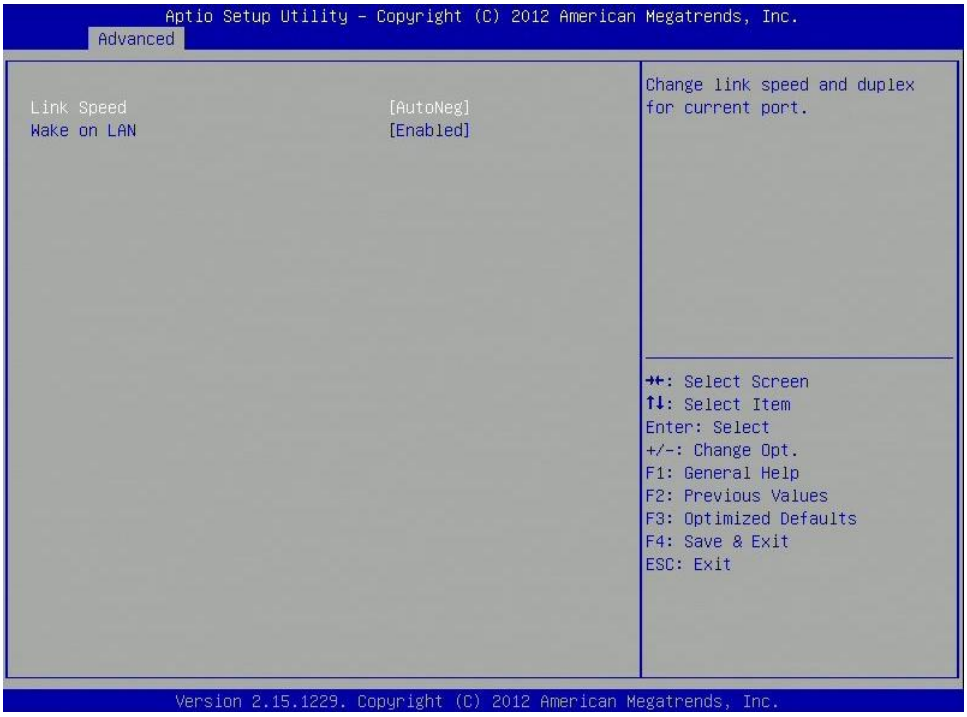
NIC Configuration

Click to configure the network device port

Blink LEDs (range 0-15 seconds)

Blink LEDs for the specified duration (up to 15 seconds)

3.4.8.1.1 NIC Configuration



Link Speed

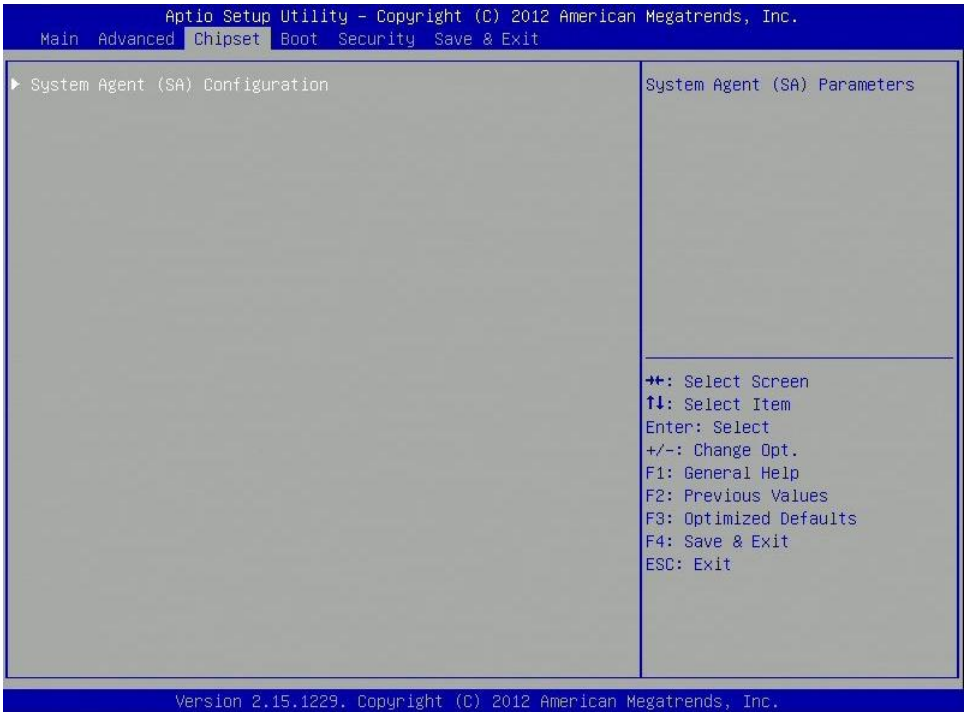
Change link speed and duplex for current port.

Wake on LAN

Enable this option to wake the system with a magic packet.

3.5 Chipset

This section gives you functions to configure the system based on the specific features of the chipset. The chipset manages bus speeds and access to system memory resources.



3.5.1 System Agent (SA) configuration

System Agent (SA) parameters

VT-d

Check to enable VT-d function on MCH.

Graphics configuration

Config graphics settings

Memory Configuration

Memory configuration parameters

3.5.1.1 Graphics configuration

3.5.1.1.1 LCD Control

Primary IGFX Boot Display

Select the Video Devide which will be activated during POST. This has no effect if external graphics present. Secondary boot display selection will appear based on your selection. VGA modes will be supported only on primary display.

Secondary IGFX Boot Display

Select secondary display device.

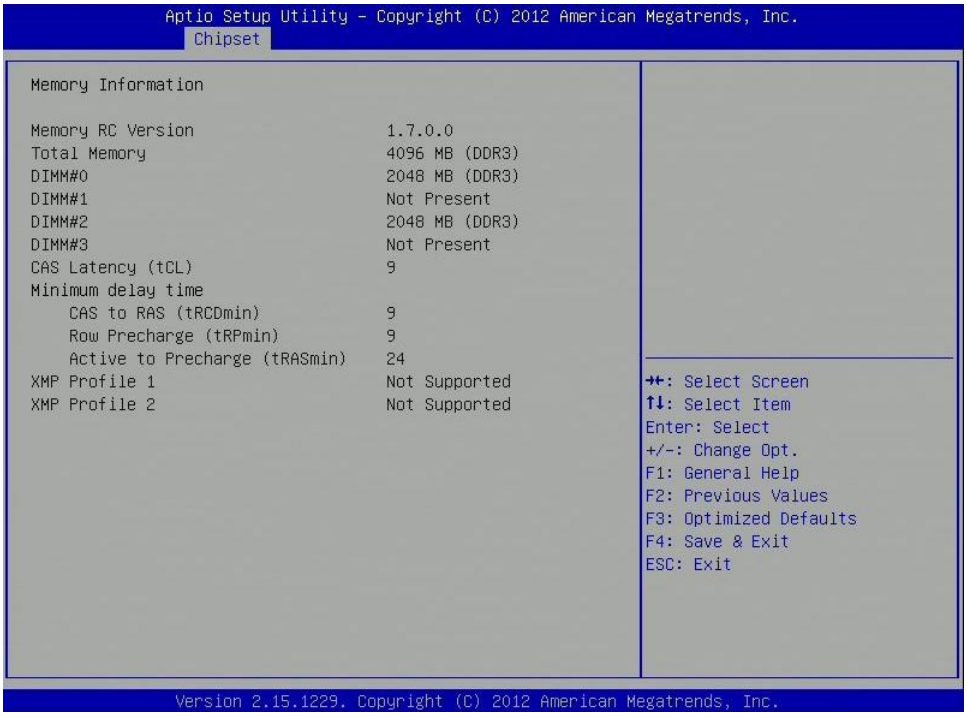
LCD Panel Type

Select LCD panel used by Internal Graphics device by selexting the appropriate setup item.

Panel Color Depth

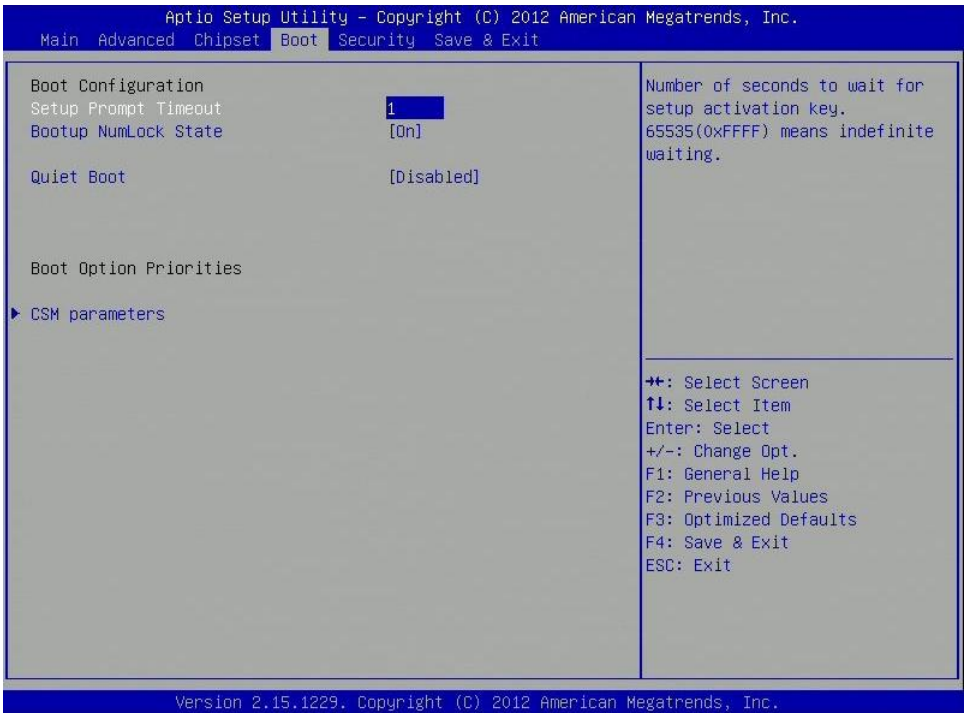
Select the LFP panel color depth

3.5.1.2 Memory Information



3.6 Boot Setting

This section is used to configure the boot features.



Setup Prompt Timeout

Number of seconds to wait for setup activation key. 65535 (0xFFFF) means idenfinite waiting

Bootup NumLock State

Select the keyboard NumLock State

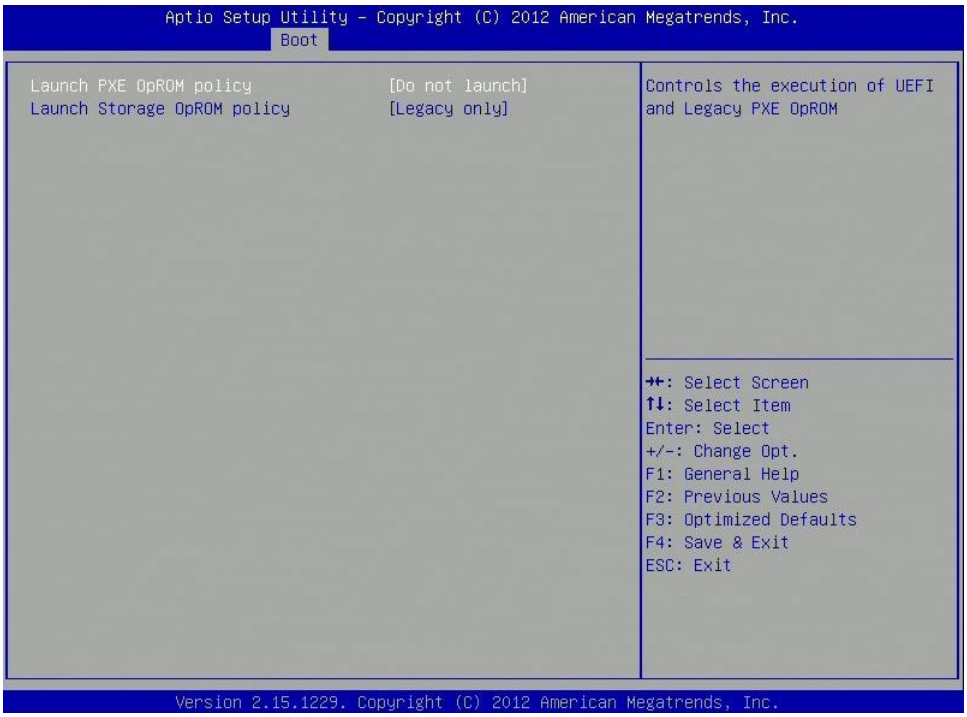
Quiet Boot

Enables or diables Quite Boot option

CSM parametes

Enables or disables Quite Boot option

3.6.1 CSM parametes



Launch PXE OpROM policy

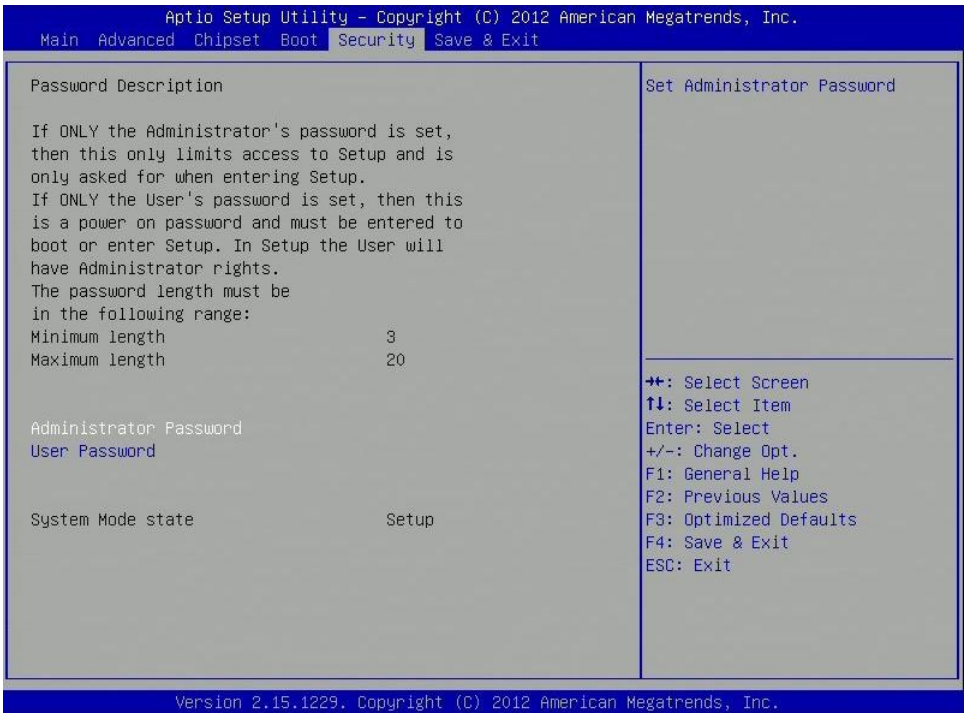
Controls the execution of UEFI and Legacy PXE OpROM

Launch Storage OpROM policy

Controls the execution of UEFI and Legacy Storage OpROM

3.7 Security

Use the Security Menu to establish system passwords



Administrator Password

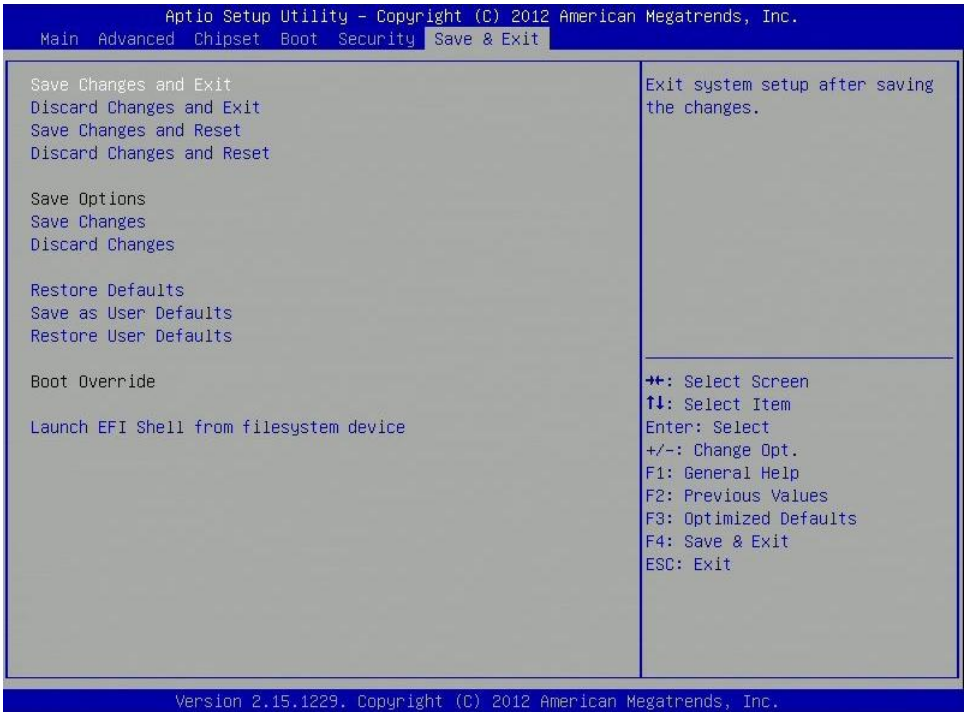
Set administrator password

User Password

Set user password

3.8 Save & Exit

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



Save Changes and Exit

Exit system setup after saving the changes

Discard Changes and Exit

Exit system setup without saving any changes

Save Changes and Reset

Reset the system after saving the changes

Discard Changes and Reset

Reset system setup without saving any changes

Save Changes

Save changes done so far to any of the setup options

Discard Changes

Discard changes done so far to any of the setup options

Restore Defaults

Restore/Load Default values for all the setup options.

Save as User Defaults

Save the changes done so far as User Defaults.

Restore User Defaults

Restore the User Defaults to all the setup options.

Launch EFI Shell from filesystem device

Attemps to Launch EFI Shell application (Shellx64.efi) from one of the available filesystem devices.