USER'S MANUAL

SIO-200 Series

Stainless Steel Panel PCs

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Prefaces

Revision

Revision	Description	Date
1.0	Manual Released	2020/07/21

Disclaimer

All specifications and information in this User's Manual are believed to be accurate and up to date. C&T Solution Inc. does not guarantee that the contents herein are complete, true, accurate or non-misleading. The information in this document is subject to change without notice and does not represent a commitment on the part of C&T Solution Inc.
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Environmental Protection Announcement

Do not dispose this electronic device into the trash while discarding. Please recycle to minimize pollution and ensure environment protection.

Safety Precautions

Before installing and using the equipment, please read the following precautions:

- Put this equipment on a reliable surface during installation. Dropping it or letting it fall could cause damage.
- The power outlet shall be installed near the equipment and shall be easily accessible.
- Turn off the system power and disconnect the power cord from its source before making any installation. Be sure both the system and the external devices are turned OFF. Sudden surge
- of power could ruin sensitive components. Make sure the equipment is properly grounded.
- When the power is connected, never open the equipment. The equipment should be opened only by qualified service personnel.
- Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
- Disconnect this equipment from the power before cleaning. Use a damp cloth. Do not use liquid or spray detergents for cleaning.
- Avoid the dusty, humidity and temperature extremes.
- Do not place heavy objects on the equipment.
- If the equipment is not used for long time, disconnect it from the power to avoid being damaged by transient over-voltage.
- The storage temperature shall be above -20°C and below 70°C.
- The computer is provided with a battery-powered real-time clock circuit. There is a danger of explosion if incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer.
- If one of the following situation arises, get the equipment checked be service personnel:
    - The power cord or plug is damaged.
    - Liquid has penetrated into the equipment.
    - The equipment has been exposed to moisture.
    - The equipment does not work well or it cannot work according the user's manual.
    - The equipment has been dropped and damaged.
    - The equipment has obvious signs of breakage.

Technical Support and Assistance

Contact your distributor, our technical support team or sales representative for technical support if you need additional assistance. Please have following information ready before you call:

- Model name and serial number
- Description of your peripheral attachments
- Description of your software (operating system, version, application software, etc.)
- A complete description of the problem
- The exact wording of any error messages

Conventions Used in this Manual

WARNING This indication alerts operators to an operation that, if not strictly observed, may result in severe injury.

CAUTION This indication alerts operators to an operation that, if not strictly observed, may result in safety hazards to personnel or damage to equipment.

NOTE This indication provides additional information to complete a task easily.

Package Contents

Before installation, please ensure all the items listed in the following table are included in the package.

Item	Description	Q'ty
1	SIO-2XX Series Stainless Steel Panel PC	1
2	Utility DVD Driver	1
3	Waterproof Connector Cover Set	1

Ordering Information

Model No.	Description
1-TPWR00027	Waterproof AC Power Input M12 A-CODE 4P PWR Cable to Plug Type_US L=3M
1-TPWR00028	Waterproof AC Power Input M12 A-CODE 4P PWR Cable to Plug Type_EU L=3M
1-TUSB00034	Waterproof USB 2.0 Cable 3M
1-TCOM00019	Waterproof COM Cable 3M
1-TLAN00015	Waterproof LAN Cable 3M

Available Models

Model No.	Description
SIO-212R-J1900	12.1" XGA Resistive Touch Stainless Steel Panel PC with Intel® Celeron® Processor J1900
SIO-212C-J1900	12.1" XGA Capacitive Touch Stainless Steel Panel PC with Intel® Celeron® Processor J1900
SIO-215R-J1900	15" XGA Resistive Touch Stainless Steel Panel PC with Intel® Celeron® Processor J1900
SIO-215C-J1900	15" XGA Capacitive Touch Stainless Steel Panel PC with Intel® Celeron® Processor J1900
SIO-W221R-J1900	21.5" 16:9 FHD Resistive Touch Stainless Steel Panel PC with Intel® Celeron® Processor J1900
SIO-W221C-J1900	21.5" 16:9 FHD Capacitive Touch Stainless Steel Panel PC with Intel® Celeron® Processor J1900
SIO-W215R-J1900	15.6" 16:9 FHD Resistive Touch Stainless Steel Panel PC with Intel® Celeron® Processor J1900
SIO-W215C-J1900	15.6" 16:9 FHD Capacitive Touch Stainless Steel Panel PC with Intel® Celeron® Processor J1900

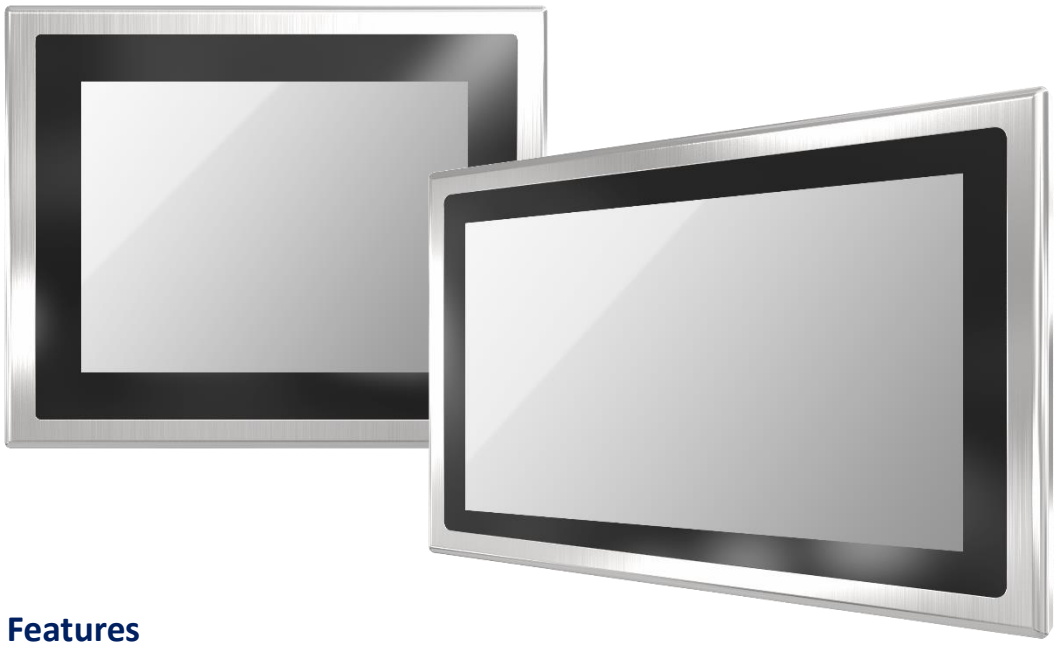
Chapter 1

Product Introductions

1.1 Overview

The SIO-200 series full IP66/IP69K Waterproof Touchscreen Computer for High-Pressure, High-Temperature Waterproof and Reliable connections resistant to humidity, water, dust, dirt and corrosion. The Rugged Stainless Steel Display for Hygienic Environments.

FHD Resistive / Capacitive Touch Stainless Steel Panel PC with Intel® Celeron® Processor J1900



1.1.1 Key Features

- Full HD 16:9 LCD with Resistive 5-wire / projected capacitive touch
- Intel® Celeron® processor J1900, 2.0 GHz
- 1x 4GB DDR3L SODIMM, 1x 64GB mSATA
- 1x M12 for 2x USB 2.0, 1x M12 for LAN, 1x M12 for COM
- 1x Full-size Mini PCIe for expansion
- Support 110V to 240V AC power input by M12 Power Connector
- -20˚C to 55˚C operating temperature
- -10˚C to 50˚C operating temperature (SIO-W221 only)
- Full system IP66/IP69K with Stainless Steel SUS316 construction
- Touch Function ON/OFF Switch

1.2 Hardware Specification

Display	SIO-212-J1900	SIO-215-J1900	SIO-W215-J1900	SIO-W221-J1900
LCD Size	12.1" (4:3)	15" (4:3)	15.6" (16:9)	21.5" (16:9)
Max. Resolution	1024 x 768	1024 x 768	1920 x 1080 (FHD)	1920 x 1080 (FHD)
Brightness (cd/m2)	600	300	450	300
Contrast Ratio	1,000:1	2,000:1	800:1	1,000:1
LCD Color	16.2M	16.2M	16.2M	16.7M
Pixel Pitch (mm)	0.24 (H) x 0.24 (V)	0.297 (H) x 0.297 (V)	0.17925 (H) x .17925 (V)	0.248 (H) x 0.248 (V)
Viewing Angle (H-V)	178 / 178	176 / 176	170 / 170	178 / 178
Backlight MTBF	50000 hrs (LED Backlight)	70000 hrs (LED Backlight)	50000 hrs (LED Backlight)	50000 hrs (LED Backlight)

Touch
- **Resistive 5-wire** For SIO-2XXR-J1900
- **Projected Capacitive** For SIO-2XXC-J1900

System
- **Processor**
  Intel® Celeron® Processor J1900, Quad Core, 2MB Cache, 2.0 GHz
- **System Chipset** SoC integrated
- **LAN Chipset**
  GbE1: Intel® I210-IT (Support Wake-on-LAN and PXE)
  GbE2: Intel® I210-IT (Support Wake-on-LAN and PXE)
- **Audio Codec** Realtek ALC886
- **System Memory** 4GB DDR3L SODIMM
- **BIOS** AMI uEFI 8Mbit SPI BIOS
- **Watchdog** Software Programmable Supports 1~255 sec. System Reset

Storage
- **mSATA** 64GB mSATA SSD
- **SIM Socket** 1x Internal SIM socket

Expansion
- **Mini PCI Express** 1x Full-size Mini PCIe

I/O
- **COM** 1x RS-232/422/485 by M12 A-Code 8-pin
- **USB** 2x USB 2.0 by M12 A-code 8-pin
- **LAN** 1x LAN by M12 X-Code 8-pin
- **Other I/O By Option**
  1x Additional RS-232/422/485 by M12 A-Code 8-pin
  2x Additional USB 2.0 by M12 A-Code 8-pin
  1x Additional LAN by M12 X-Code 8-pin
  2x WiFi Antenna

Other Features
- **OSD** Power On/Off, Reset
- **Touch** On/Off switch

Operating System
- **Windows** Windows 10
- **Linux** Linux kernel 3.X

Power
- **Power Mode** ATX
- **Power Supply Voltage**
  110 ~ 240V AC Input
  Optional 12V DC Input
- **Power Connector** M12 A-code 4-pin
- **Power Adaptor**
  Optional AC/DC 12V/5A, 60W
  Optional Waterproof Power Input Cable

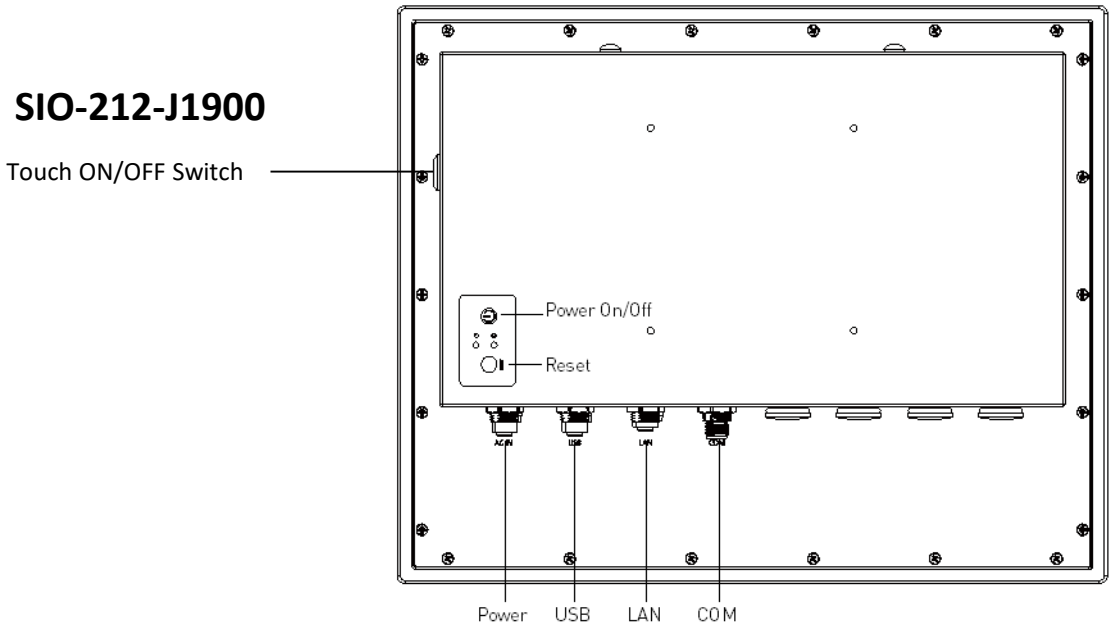
Environment
- **Operating Temp**
  -20˚C to 55˚C optional wide Temp. -20˚C to 60˚C
  -10˚C to 50˚C (SIO-W221 only)
- **Storage Temp** -20˚C to 70˚C
- **Relative Humidity** 10%~80% (non-condensing)
- **Vibration**
  With SSD: 2.4 Grms, 5 - 500 Hz, 0.5 hr/axis,
  With HDD: 1 Grms, 5 - 500 Hz, 0.5 hr/axis
- **Shock** With SSD: 20G, half sine, 11ms
- **IP Level** Full System IP66/IP69K
- **Standards / Certification** CE, FCC Class A

Physical
- **Front Panel Construction** Stainless Steel SUS316
- **Dimension**
  SIO-212 : 350 (W) x 285 (H) x 49.5 (D) mm
  SIO-215 : 385 (W) x 310 (H) x 49.5 (D) mm
  SIO-W215 : 425 (W) x 276(H) x 49.5 (D) mm
  SIO-W221 : 588.5 (W) x 380 (H) x 52.8 (D) mm
- **Weight**
  SIO-212R：5.03Kg, SIO-212C：5.11Kg
  SIO-215R：5.83Kg, SIO-215C：5.96Kg
  SIO-W215R：7.39Kg, SIO-W215C：7.25Kg
  SIO-W221R：12.11Kg, SIO-W221C：11.97Kg
- **Mounting**
  VESA Mounting Holes 100 x 100mm
  VESA Mounting Holes 200 x 100mm (SIO-W221 only)
  Optional Yoke Mount, Panel Mount

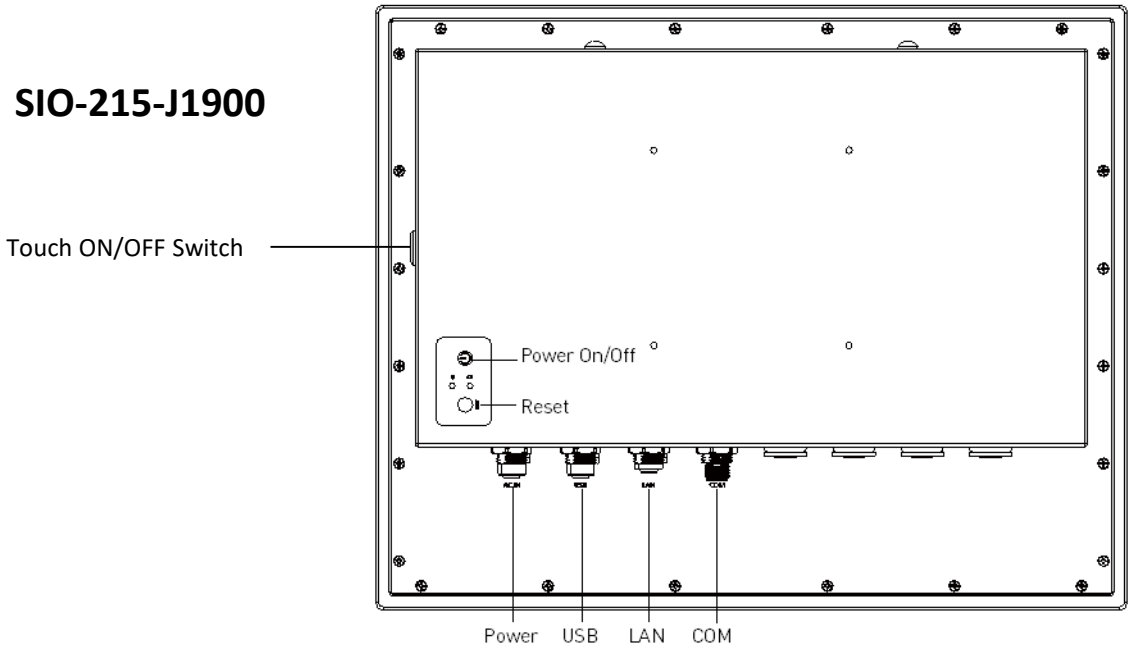
1.3 System I/O

Rear Panel

SIO-212-J1900



SIO-215-J1900



Power
Power Supply Voltage 110 ~ 240V AC Input by M12 A-Code 4pin

USB
2x USB 2.0 by M12 A-code 8-pin

OSD
Power On/Off, Reset

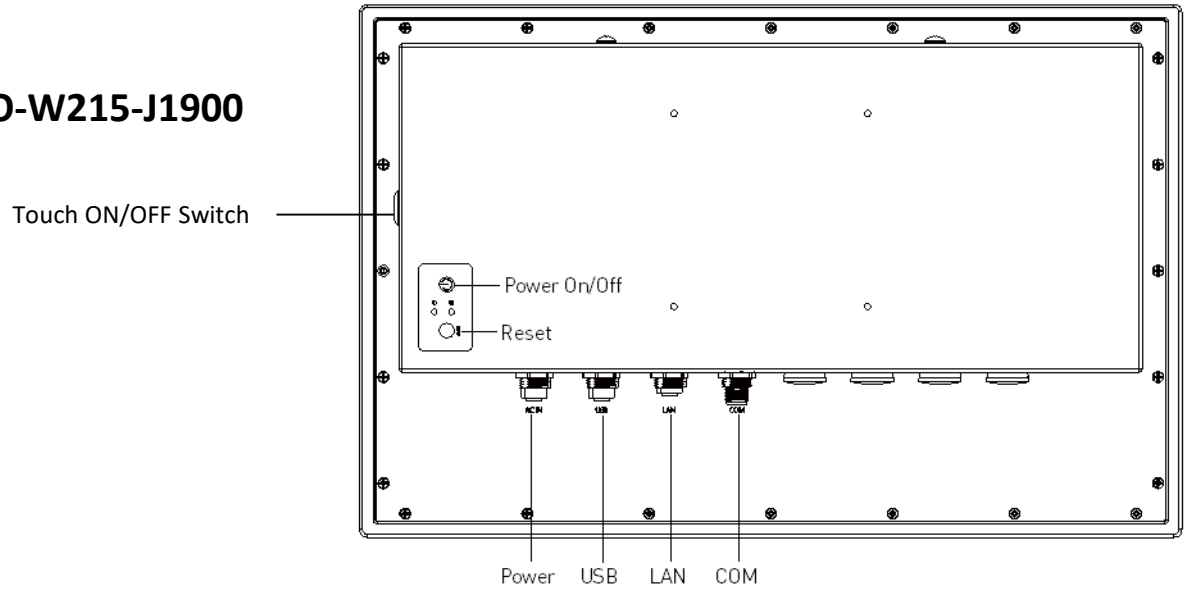
LAN
1x LAN by M12 X-Code 8-pin

COM
1x RS-232/422/485 by M12 A-Code 8-pin

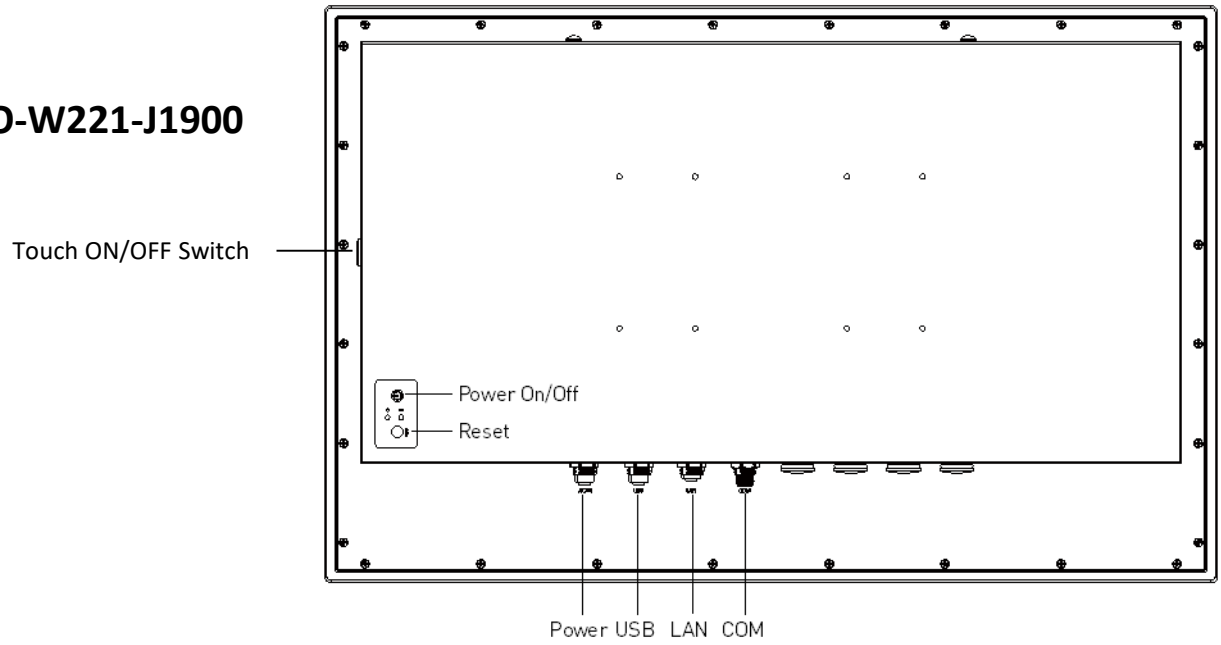
Touch
Touch ON/OFF Switch

Rear Panel

SIO-W215-J1900



SIO-W221-J1900



Power
Power Supply Voltage 110 ~ 240V AC Input by M12 A-Code 4pin

USB
2x USB 2.0 by M12 A-code 8-pin

OSD
Power On/Off, Reset

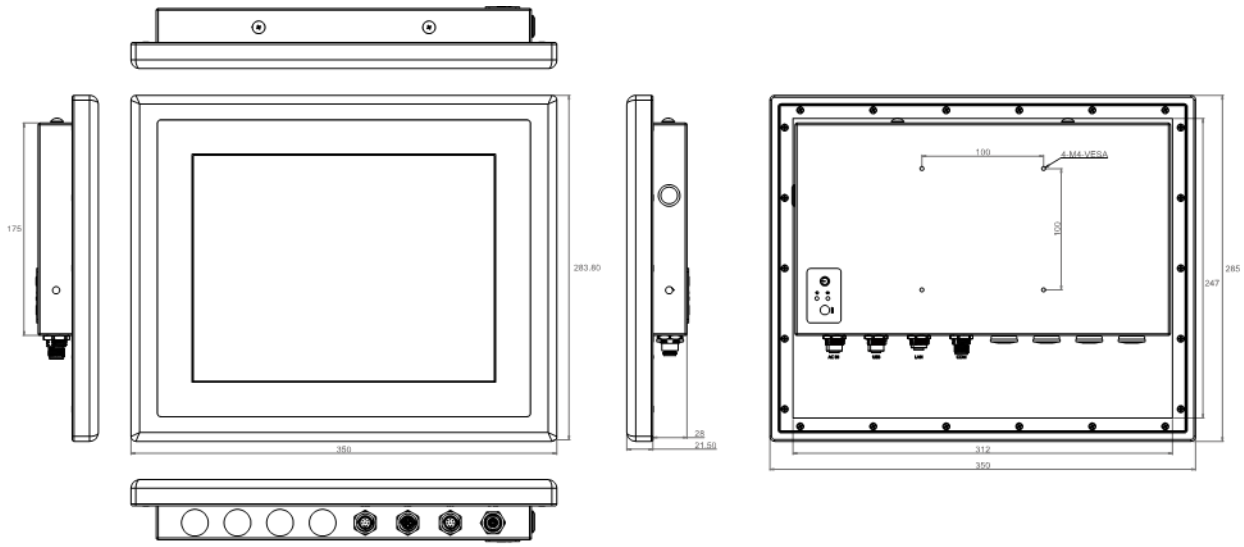
LAN
1x LAN by M12 X-Code 8-pin

COM
1x RS-232/422/485 by M12 A-Code 8-pin

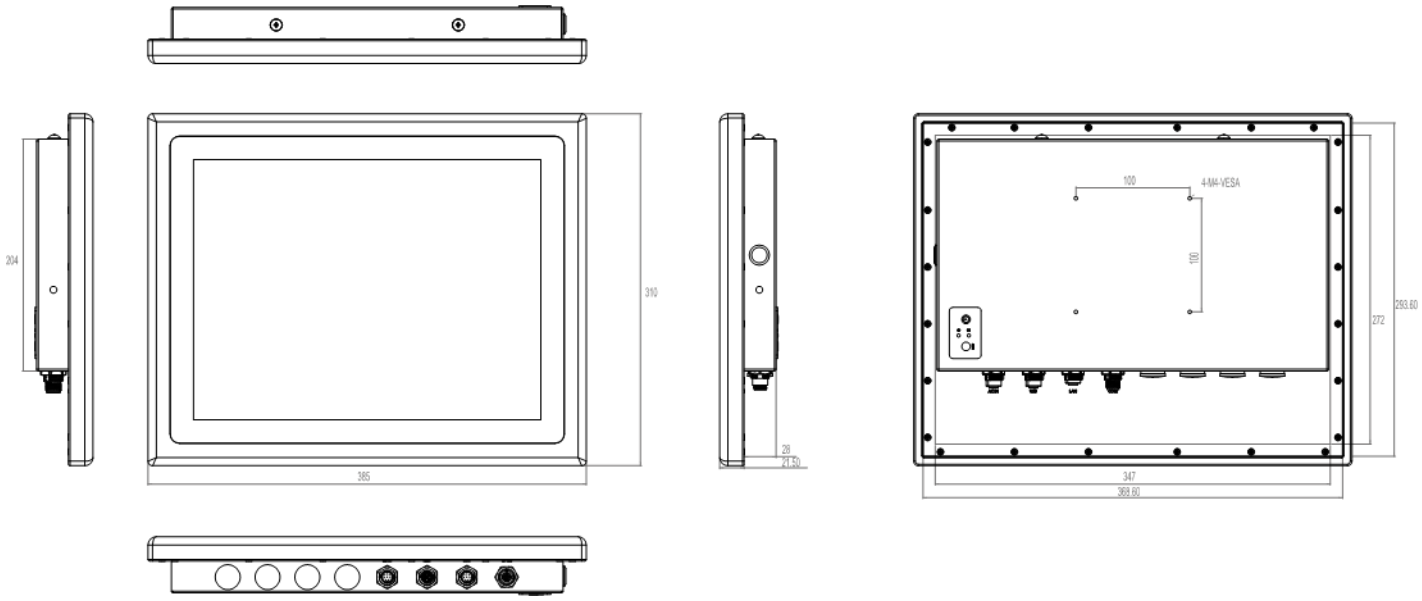
Touch
Touch ON/OFF Switch

1.4 Mechanical Dimensions

Unit: mm

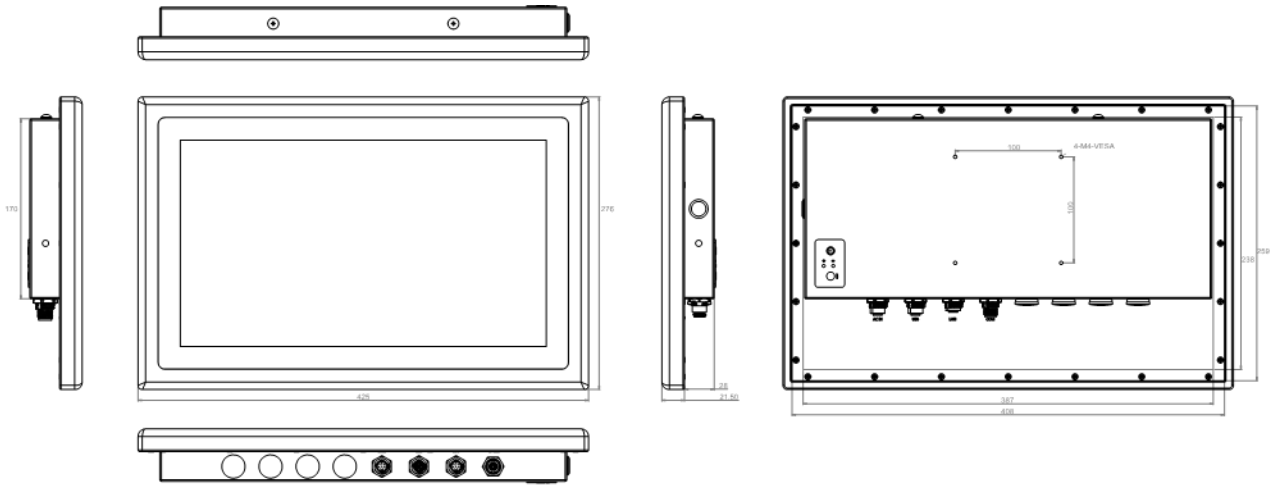


SIO-212-J1900

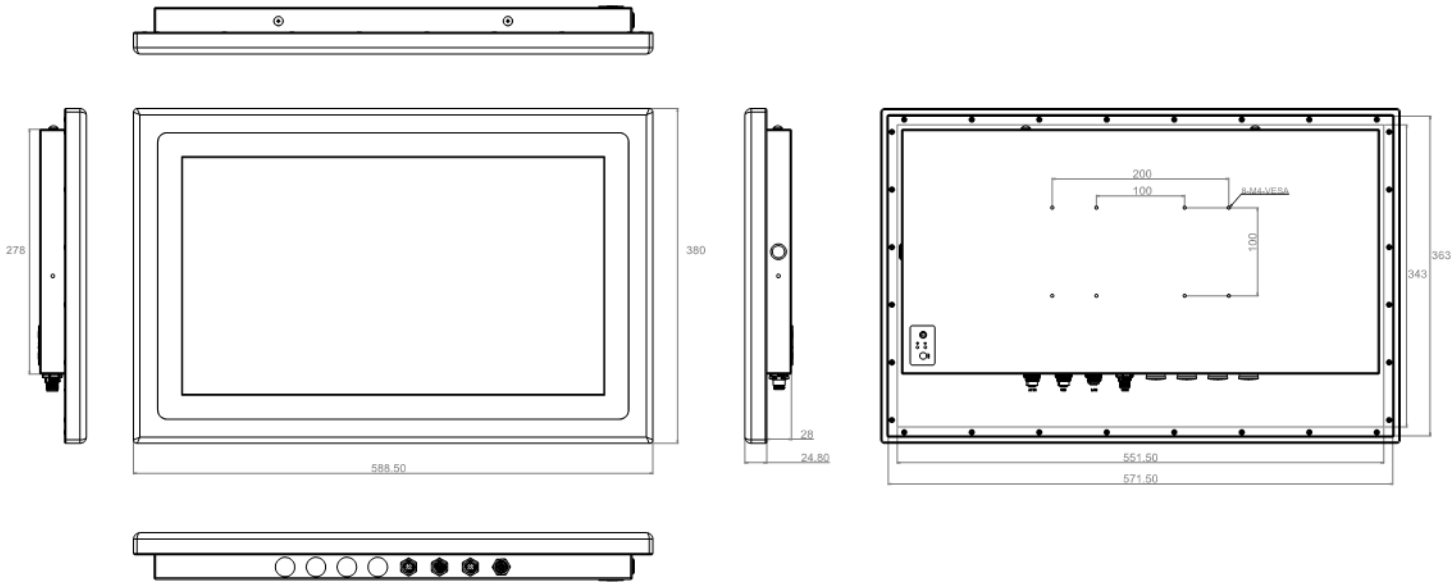


SIO-215-J1900

Unit: mm



SIO-W215-J1900



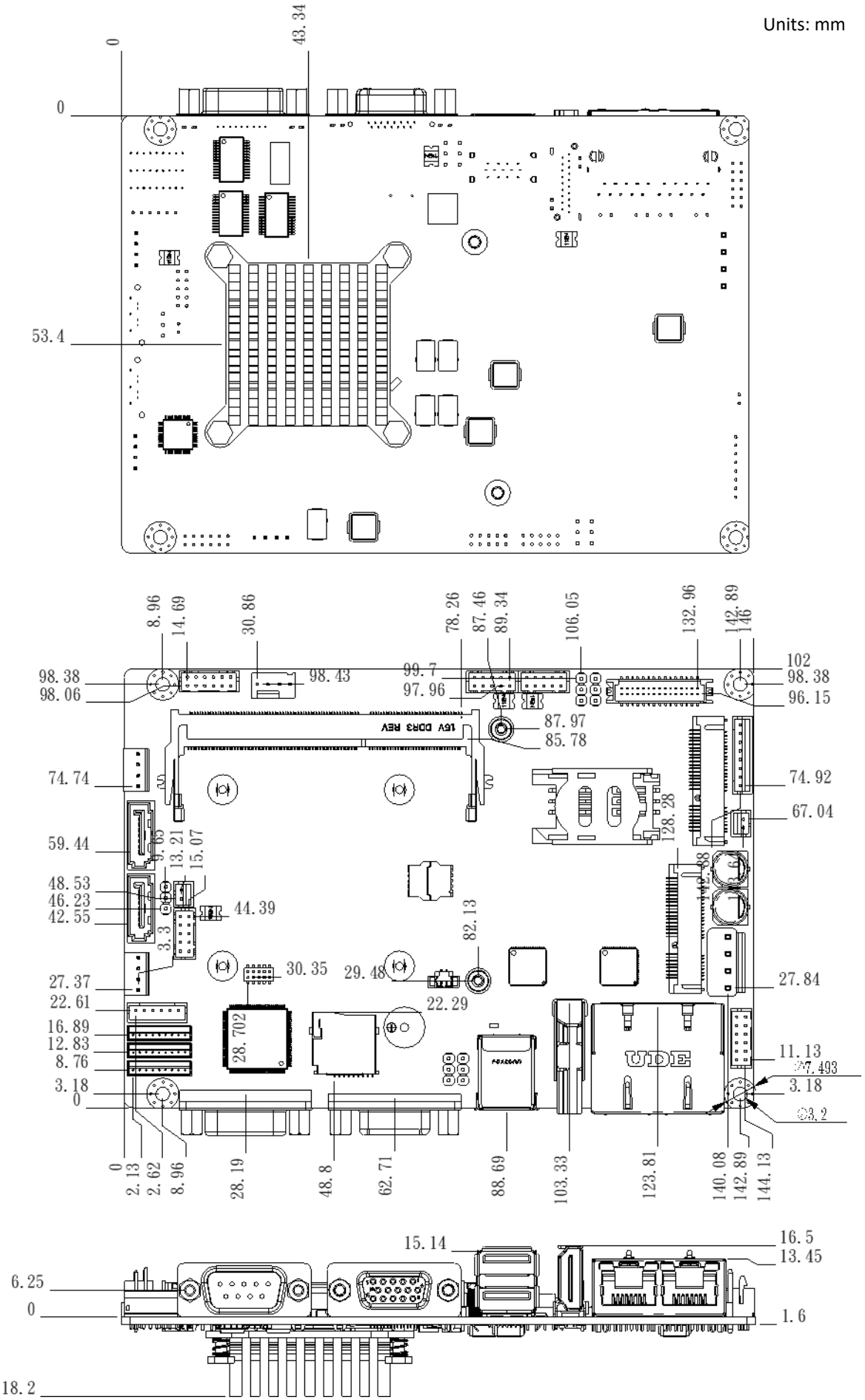
SIO-W221-J1900

Chapter 2

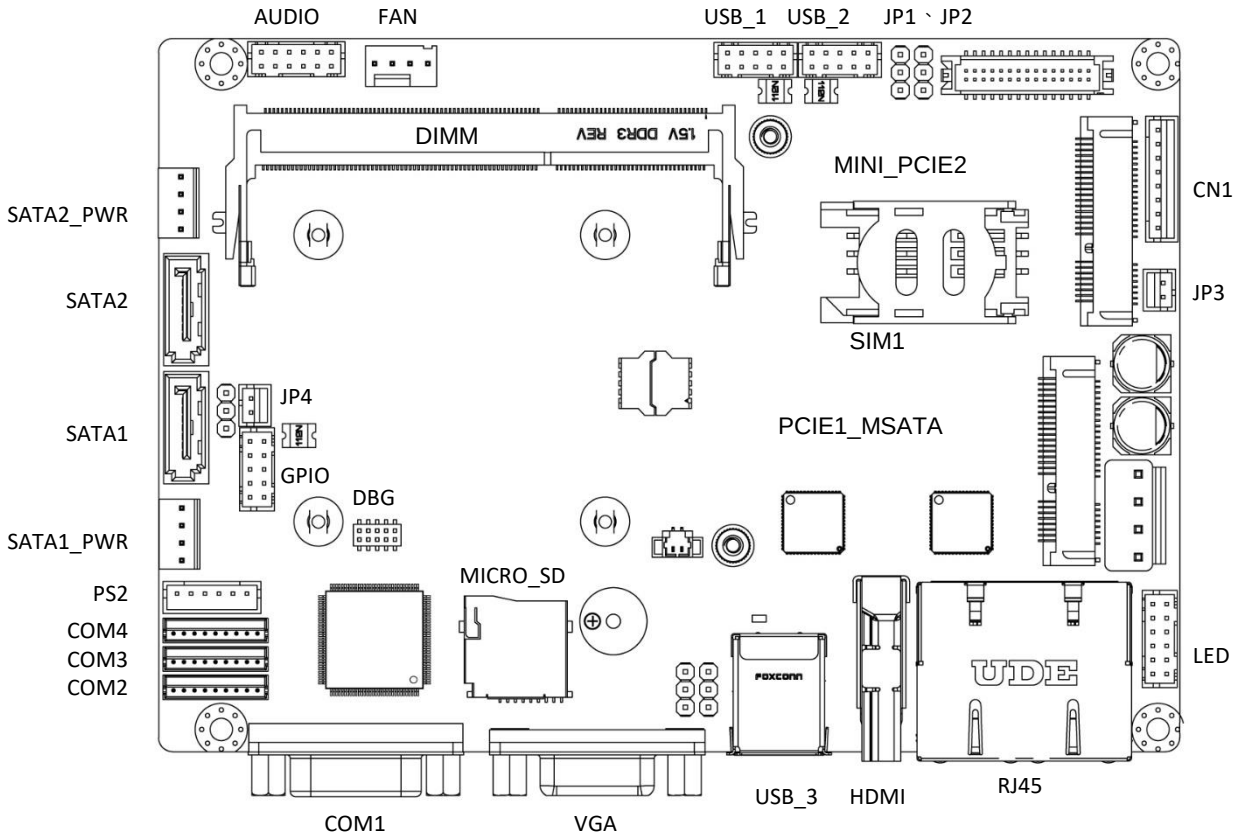
Switches and Connectors

2.1 Dimensions

Units: mm



2.2 Board Layout



2.2.1 Connectors & Jumpers

Connector	Description	Connector	Description
AUDIO	Front Audio connector	I2C1	I2C header
CN1	Backlight Control connector	LED	LED header
COM1	RS-232/422/485 DB9 connector	LVDS	LVDS connector
COM2-4	RS-232 COM2-4 headers	MICRO_SD	microSD card slot
DBG	LPC connector	MINI_PCIE2	Mini PCI Express slot 2
DIMM	240-pin SODIMM socket	PCIE1_MSATA	Mini PCI Express slot 1
FAN	Fan connector	POWER_CONN	ATX Power connector
GPIO	GPIO header	PS2	PS/2 KB/MS wafer connector
HDMI	HDMI port	RJ45	LAN ports
JP1	Backlight Power Select jumper	SATA1/2	SATA Port 1/2 signal connector
JP2	Panel Power Select jumper	SATA1/2_PWR	SATA Port 1/2 power connector
JP3	Power Button header	SIM1	SIM card slot
JP4	Reset Button header	USB_1/2	USB 2.0 headers
JP6	Battery connector	USB_3	USB 2/0/3.0 ports
JP8	Clear CMOS	VGA	VGA connector

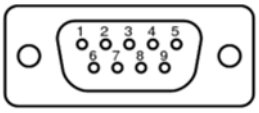
2.3 External Connectors

COM1 VGA USB 2.0 HDMI LAN

2.3.1 Serial Port COM1

2.3.1.1 RS-2332 Mode

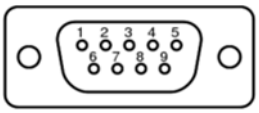
Pin	Signal	Pin	Signal
1	DCD, Data Carrier Detect	6	DSR, Data Set Ready
2	RXD, Receive Data	7	RTS, Ready To Send
3	TXD, Transmit Data	8	CTS, Clear To Send
4	DTR, Data Terminal Ready	9	RI, Ring Indicator
5	GND, Ground		



DB9 Male

2.3.1.2 RS-422 Mode

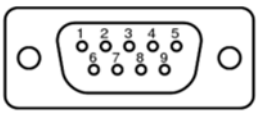
Pin	Signal	Pin	Signal
1	TXD-, Transmit Data	6	NA
2	RXD+, Receive Data	7	NA
3	TXD+, Transmit Data	8	NA
4	RXD-, Receive Data	9	NA
5	NA		



DB9 Male

2.3.1.3 RS-485 Mode

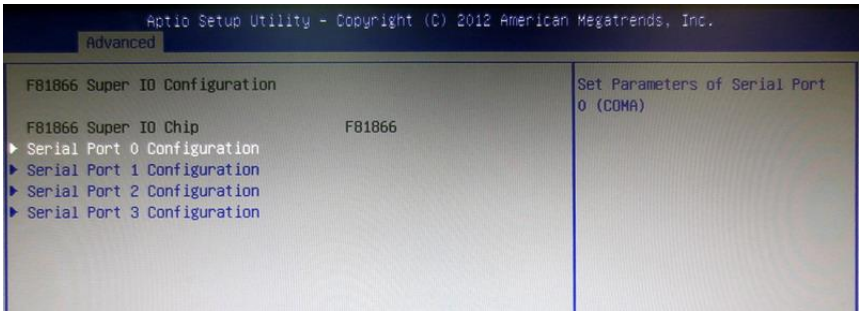
Pin	Signal	Pin	Signal
1	Data-	6	NA
2	Data+	7	NA
3	NA	8	NA
4	NA	9	NA
5	NA		



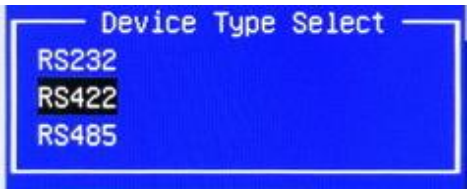
DB9 Male

2.3.1.4 COM1 RS-232/422/485 Mode Selection

To set the COM mode, boot the system into BIOS Setup Utility and select **Advanced > F81866 Super IO configuration**. You will see the following screen.



Select the COM port you wish to setup and choose from RS-232, RS-422 and RS-485.



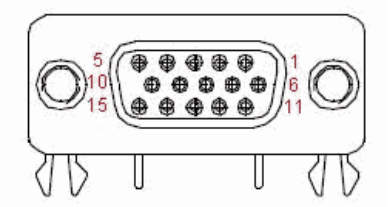
If RS-485 is selected, you can enable/disable the RS-485 Auto Flow Function which automatically handles half-duplex control.

Save the configuration and exit the BIOS Setup Utility ("F4" hotkey).

2.3.2 VGA Connector

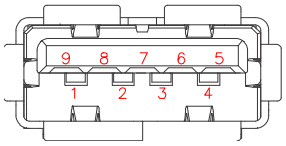
15-pin D-sub Female Connector

Pin	Signal	Pin	Signal
1	VGA_RED	9	VCC
2	VGA_GRN	10	GND
3	VGA_BLU	11	NC
4	NC	12	VGA_DDC_DAT
5	GND	13	VGA_HSYNC
6	GND	14	VGA_VSYNC
7	GND	15	VGA_DCC_CLK
8	GND		



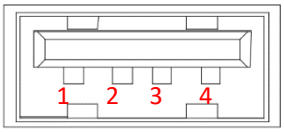
2.3.3 USB 3.0 Connector

Pin	Signal	Pin	Signal
1	USB +5V	5	USB_SSRX-
2	USB_D-	6	USB_SSRX+
3	USB_D+	7	GND_DRAIN
4	GND	8	USB_SSTX-
		9	USB_SSTX+



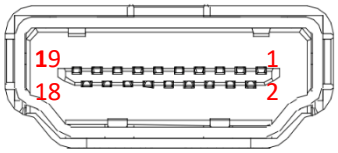
2.3.4 USB 2.0 Connector

Pin	Signal
1	USB +5V
2	USB_D-
3	USB_D+
4	GND



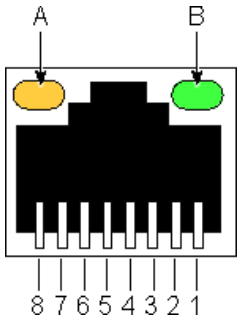
2.3.5 HDMI Connector

Pin	Signal	Pin	Signal
1	HDMI_TX2_DP_B	2	GND
3	HDMI_TX2_DN_B	4	HDMI_TX1_DP_B
5	GND	6	HDMI_TX1_DN_B
7	HDMI_TX0_DP_B	8	GND
9	HDMI_TX0_DN_B	10	HDMI_CLK_DP_B
11	GND	12	HDMI_CLK_DN_B
13	NC	14	NC
15	HDMI_SCLDDC_B	16	HDMI_SDADDC_B
17	GND	18	+5V



2.3.6 LAN Connector

Pin	Signal	Pin	Signal
1	MDI0+	5	MDI2-
2	MDI0-	6	MDI1-
3	MDI1+	7	MDI3+
4	MDI2+	8	MDI3-
A	Active LED (Yellow)	B	10 LAN LED (OFF) 100 LAN LED (Green) 1000 LAN LED (Orange)

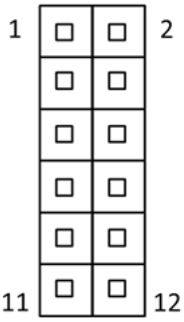


2.4 Internal Connectors

2.4.1 Front Panel Audio Connector (AUDIO)

Connector Type: 2x6-pin pitch 2.00mm wafer connector

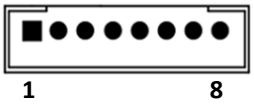
Pin	Signal	Pin	Signal
1	MICIN_L	2	MICIN_R
3	MIC1_JD	4	AGND
5	LOUT_L	6	LOUT_R
7	FRONT_JD	8	AGND
9	LIN_L	10	LIN_R
11	LINE1_JD	12	AGND



2.4.2 Backlight Control Connector (CN1)

Connector Type: 2x6-pin pitch 2.00mm wafer connector

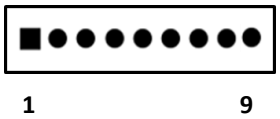
Pin	Signal	Pin	Signal
1	Backlight Enable	5	GND
2	Backlight CTRL	6	GND
3	Backlight PWR	7	NC
4	Backlight PWR	8	NC



2.4.3 COM2-4 Serial Ports (COM2-4)

Connector Type: 1x9-pin pitch 1.5mm wafer connector

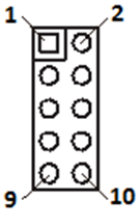
Pin	Signal
1	DCD, Data Carrier Detect
2	DSR, Data Set Ready
3	RXD, Receive Data
4	RTS, Request To Send
5	TXD, Transmit Data
6	CTS, Clear To Send
7	DTR, Data Terminal Ready
8	RI, Ring Indicator
9	GND



2.4.4 LPC Connector (DBG)

Connector Type: 2x5 pin pitch 1.27mm box header

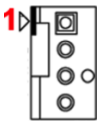
Pin	Signal	Pin	Signal
1	GND	2	+3.3V
3	LPC_AD3	4	NC
5	LPC_AD2	6	RESET_DBG
7	LPC_AD1	8	CLOCK_DEBUG
9	LPC_AD0	10	LPC_FRAME



2.4.5 Fan Connector (FAN)

Connector Type: 1x4 pin pitch 2.54mm wafer connector

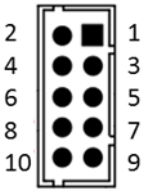
Pin	Signal
1	GND
2	+12V Fan Power
3	Fan Sensor
4	Fan PWM



2.4.6 GPIO Connector: GPIO

Connector Type: 2x5-pin pitch 2.0mm wafer connector

Pin	Signal	Pin	Signal
1	+5V	2	GND
3	GPO0	4	GPI0
5	GPO1	6	GPI1
7	GPO2	8	GPI2
9	GPO3	10	GPI3



2.4.7 Power Button Pin Header (JP3)

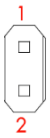
Connector Type: 1x2-pin pitch 2.00mm wafer connector

Pin	Signal
1	PS_ON_BUTTON_N
2	GND

2.4.8 Reset Button Pin Header (JP4)

Connector Type: 1x2-pin pitch 2.00mm wafer connector

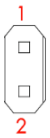
Pin	Signal
1	RESET_BUTTON_N
2	GND



2.4.9 Battery Pin Header (JP6)

Connector Type: 1x2-pin pitch 1.25mm wafer connector

Pin	Signal
1	GND
2	+3V



2.4.10 I2C Pin Header (I2C1)

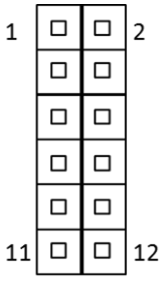
Connector Type: 1x3-pin pitch 2.54mm pin header connector

Pin	Signal
1	CLOCK
2	GND
3	DATA

2.4.11 Multi-LED Pin Header (LED)

Connector Type: 2x6-pin pitch 2.00mm wafer connector

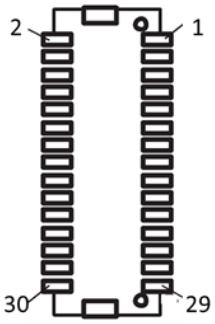
Pin	Signal	Pin	Signal
1	+5V	2	+5V
3	Power ON/OFF	4	HDD LINK/ACTIVE
5	+3.3V	6	LAN1 Speed 1000
7	LAN1 LINK/ACTIVE	8	LAN1 Speed 100
9	+3.3V	10	LAN2 Speed 1000
11	LAN2 LINK/ACTIVE	12	LAN2 Speed 100



2.4.12 LVDS Connector: LVDS

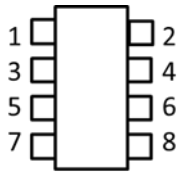
Connector Type: 2x15-pin pitch1.25mm LVDS connector

Pin	Signal	Pin	Signal
1	LVDS_B3-	2	LVDS_B3+
3	LVDS_B_CLK-	4	LVDS_B_CLK+
5	LVDS_B2-	6	LVDS_B2+
7	LVDS_B1-	8	LVDS_B1+
9	LVDS_B0-	10	LVDS_B0+
11	LVDS_I2C_DAT	12	LVDS_I2C_CK
13	GND	14	GND
15	GND	16	GND
17	LVDS_A3+	18	LVDS_A3-
19	LVDS_A_CLK+	20	LVDS_A_CLK-
21	LVDS_A2+	22	LVDS_A2-
23	LVDS_A1+	24	LVDS_A1-
25	LVDS_A0+	26	LVDS_A0-
27	Panel PWR	28	Panel PWR
29	Panel PWR	30	Panel PWR



2.4.13 microSD Connector (MICRO_SD)

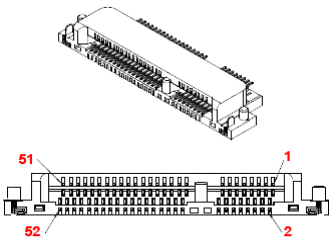
Pin	Signal	Pin	Signal
1	DAT2	2	CD/DAT3
3	CMD	4	VDD
5	CLK	6	VSS
7	DAT0	8	DAT1



2.4.14 Mini-PCIe Slot #1 (PCIE1_MSATA)

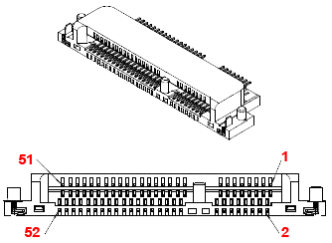
PCIe x1 only (CT-DBT01 BOM option)

Pin	Definition	Pin	Definition	Pin	Definition
1	WAKE#	19	Reserved	37	Reserved
2	+3.3V	20	Reserved	38	USB_D+
3	Reserved	21	GND	39	Reserved
4	GND	22	PERST#	40	GND
5	Reserved	23	PERn0	41	Reserved
6	+1.5V	24	+3.3Vaux	42	LED_WWAN#
7	CLKREQ#	25	PERp0	43	Reserved
8	UIM_PWR	26	GND	44	LED_WLAN#
9	GND	27	GND	45	Reserved
10	UIM_DATA	28	+1.5V	46	LED_WPAN#
11	REFCLK-	29	GND	47	Reserved
12	UIM_CLK	30	SMB_CLK	48	+1.5V
13	REFCLK+	31	PETn0	49	Reserved
14	UIM_RESET	32	SMB_DATA	50	GND
15	GND	33	PETp0	51	Reserved
16	UIM_VPP	34	GND	52	+3.3V
17	Reserved	35	GND		
18	GND	36	USB_D-		



mSATA only (CT-DBT02 BOM option)

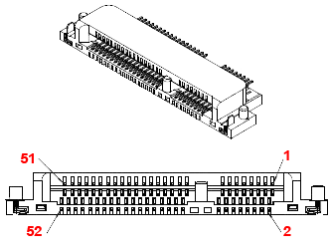
Pin	Definition	Pin	Definition	Pin	Definition
1	NC	19	NC	37	SATA GND
2	+3.3V	20	NC	38	NC
3	NC	21	SATA GND	39	+3.3V
4	DGND	22	NC	40	DGND
5	NC	23	TXP (out)	41	+3.3V
6	NC	24	+3.3V	42	NC
7	NC	25	TXN (out)	43	NC
8	NC	26	SATA GND	44	NC
9	DGND	27	SATA GND	45	NC
10	NC	28	NC	46	NC
11	NC	29	SATA GND	47	NC
12	NC	30	NC	48	NC
13	NC	31	RXN (in)	49	DA/DSS (option)
14	NC	32	NC	50	DGND
15	DGND	33	RXP (in)	51	GND
16	NC	34	DGND	52	+3.3V
17	NC	35	SATA GND		
18	DGND	36	NC		



2.4.15 Mini-PCIe Slot #2 (MINI_PCIE1)

PCIe x1 & USB 2.0

Pin	Definition	Pin	Definition	Pin	Definition
1	WAKE#	19	Reserved	37	Reserved
2	+3.3V	20	Reserved	38	USB_D+
3	Reserved	21	GND	39	Reserved
4	GND	22	PERST#	40	GND
5	Reserved	23	PERn0	41	Reserved
6	+1.5V	24	+3.3Vaux	42	LED_WWAN#
7	CLKREQ#	25	PERp0	43	Reserved
8	UIM_PWR	26	GND	44	LED_WLAN#
9	GND	27	GND	45	Reserved
10	UIM_DATA	28	+1.5V	46	LED_WPAN#
11	REFCLK-	29	GND	47	Reserved
12	UIM_CLK	30	SMB_CLK	48	+1.5V
13	REFCLK+	31	PETn0	49	Reserved
14	UIM_RESET	32	SMB_DATA	50	GND
15	GND	33	PETp0	51	Reserved
16	UIM_VPP	34	GND	52	+3.3V
17	Reserved	35	GND		
18	GND	36	USB_D-		



2.4.16 ATX Power Connector (POWER_CONN)

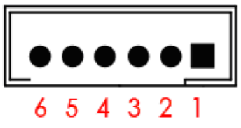
Connector Type: 1x4-pin pitch 3.96mm wafer connector

Pin	Signal	Pin	Signal
1	GND	3	+12V
2	GND	4	+12V

2.4.17 PS/2 Keyboard/Mouse Connector (PS2)

Connector Type: 1x6-pin pitch 2.0mm wafer connector

Pin	Signal	Pin	Signal
1	KB_DATA	2	KB_CLK
3	+5V	4	GND
5	MS_DATA	6	MS_CLK



2.4.18 SATA Signal Connectors: SATA1-2

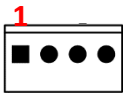
Connector Type: 1x4-pin pitch 3.96mm wafer connector

Pin	Signal
1	GND
2	SATA_TX+
3	SATA_TX-
4	GND
5	SATA_RX-
6	SATA_RX+
7	GND

2.4.19 SATA Power Connectors (SATA1/2_PWR)

Connector Type: 4-pin pitch 2.54mm connector

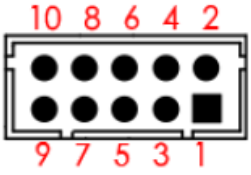
Pin	Signal
1	+5V
2	GND
3	GND
4	+12V



2.4.20 USB 2.0 Pin Header (USB_1/2)

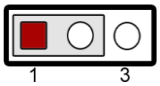
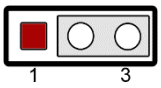
Connector Type: 2x5-pin pitch 2.0mm wafer header connector

Pin	Signal	Pin	Signal
1	USB +5V	2	USB +5V
3	USB_D-	4	USB_D-
5	USB_D+	6	USB_D+
7	GND	8	GND
9	KEY	10	NC

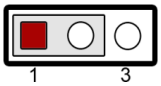
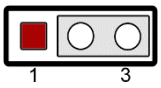


2.5 Jumper Settings

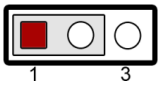
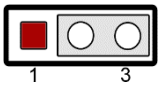
2.5.1 Backlight Power (JP1)

Function	Setting	Jumper
+12V	1-2 closed	
+5V (Default)	2-3 closed	

2.5.2 Panel Power (JP2)

Function	Setting	Jumper
+3.3V (Default)	1-2 closed	
+5V	2-3 closed	

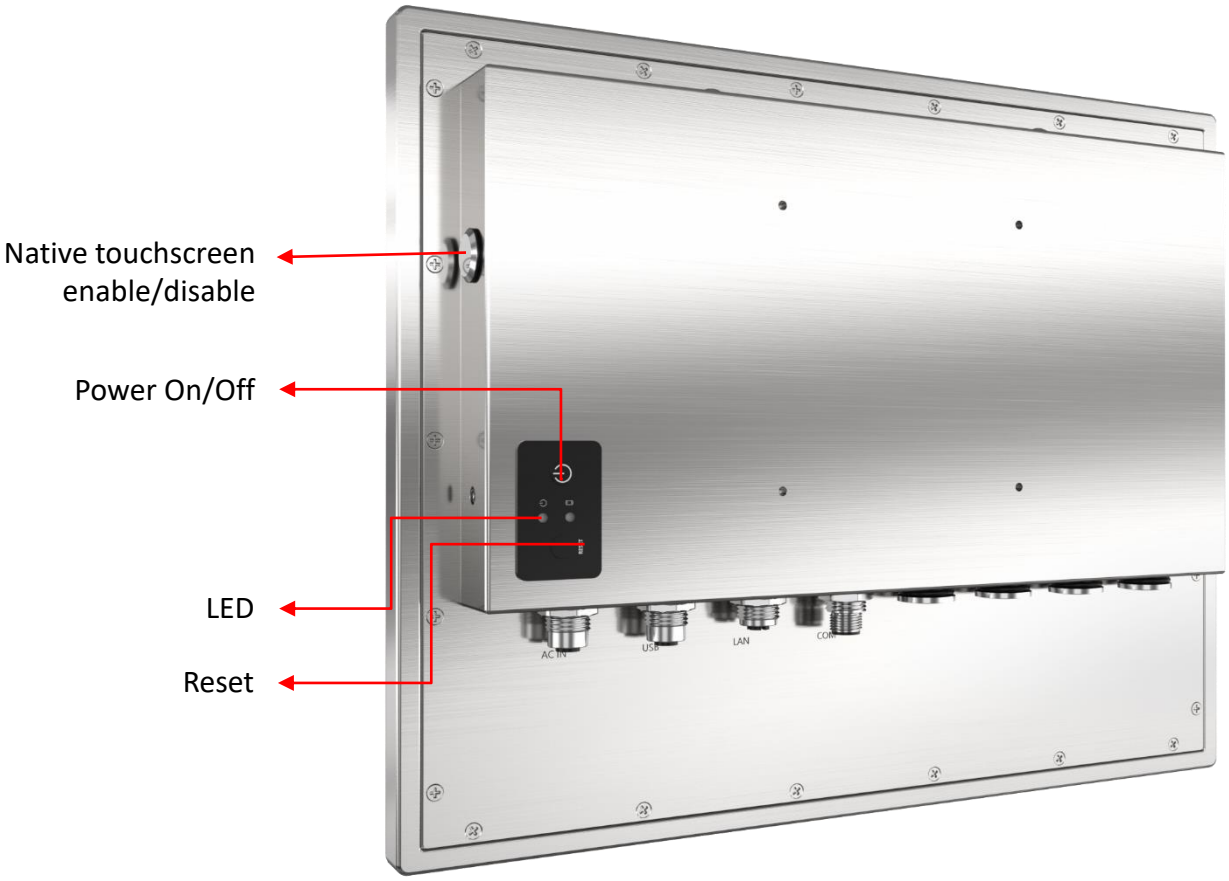
2.5.3 Clear CMOS (JP8)

Function	Setting	Jumper
Normal (Default)	1-2 closed	
Clear CMOS	2-3 closed	

Chapter 3

Front Panel Controls

3.1 Users Controls



3.1.1 Power Button
System power on or off.

3.1.2 LED
1. Yellow indicates power on.
2. Red indicates HDD access status.

3.1.3 Reset Button
Reset system to reboot.

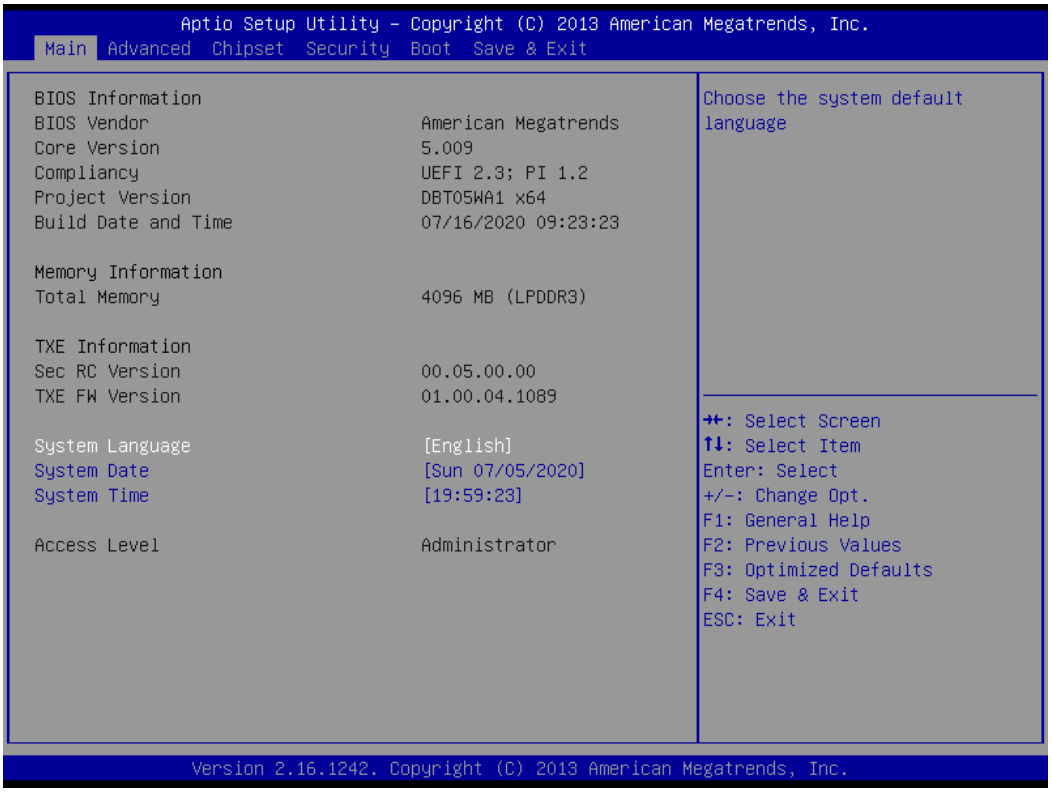
3.1.4 Native touchscreen enable/disable
Native touchscreen enable/disable for safe operation throughout IP69K washdowns during in-line automation.

Chapter 4

BIOS Setup

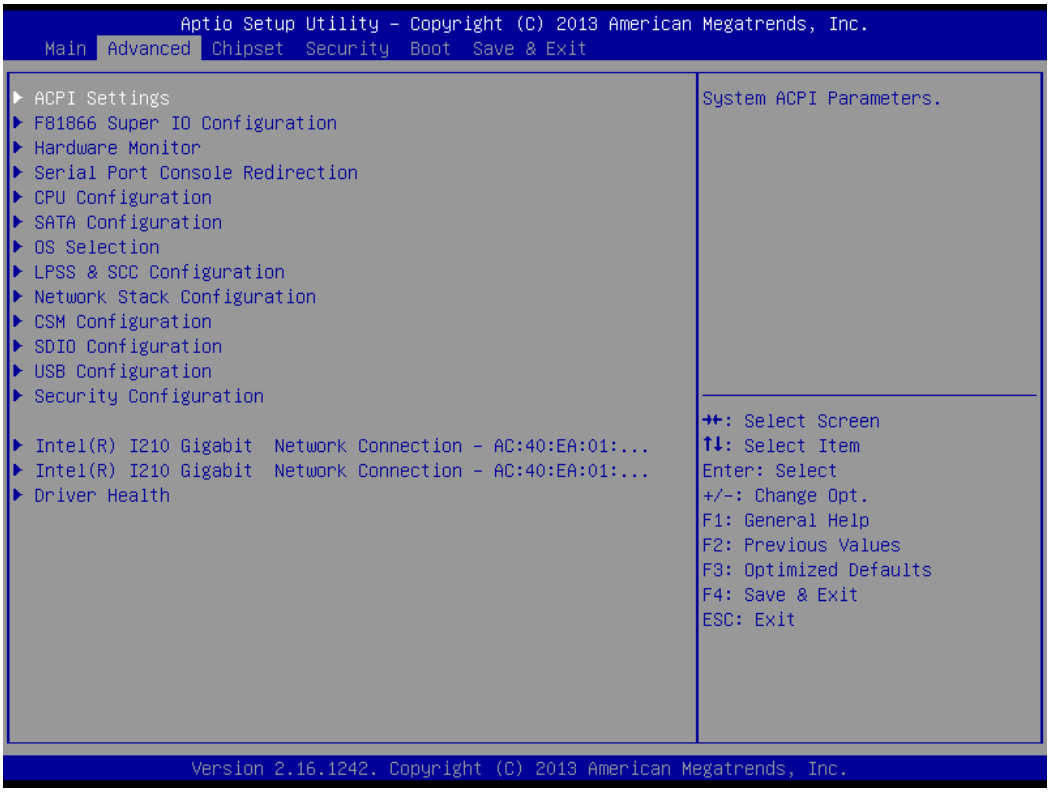
The BIOS provides an interface to modify the configuration. When the battery is removed, all the parameters will be reset.

Turn on the computer and press <DEL> to enter the setup screens.

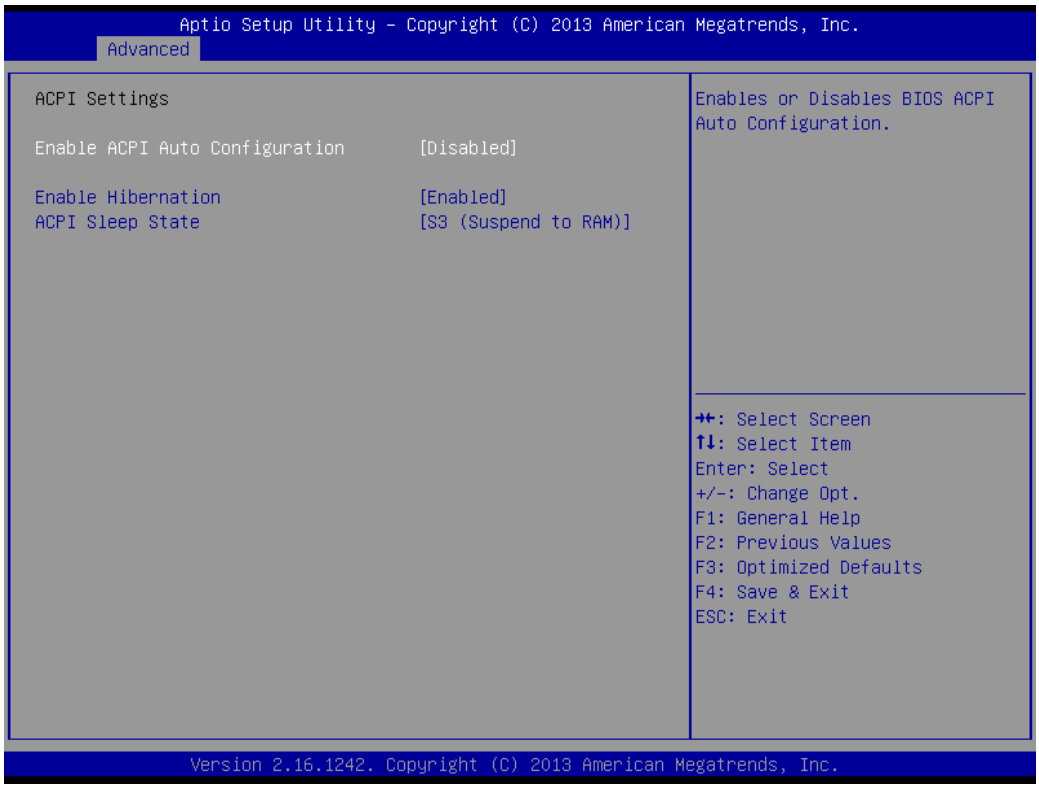


System Date: MM/DD/YYYY
System Time: HH:MM:SS
Use Tab to switch between Date and Time elements.

4.1 BIOS Introduction



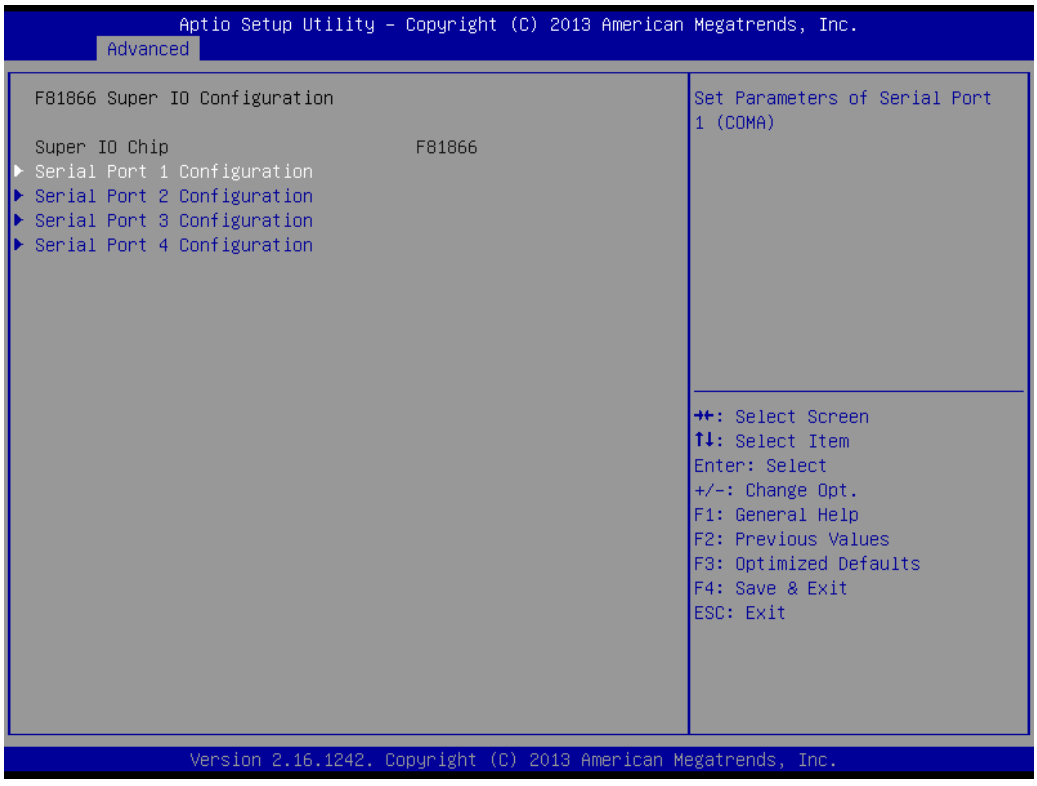
4.1.1 ACPI Settings



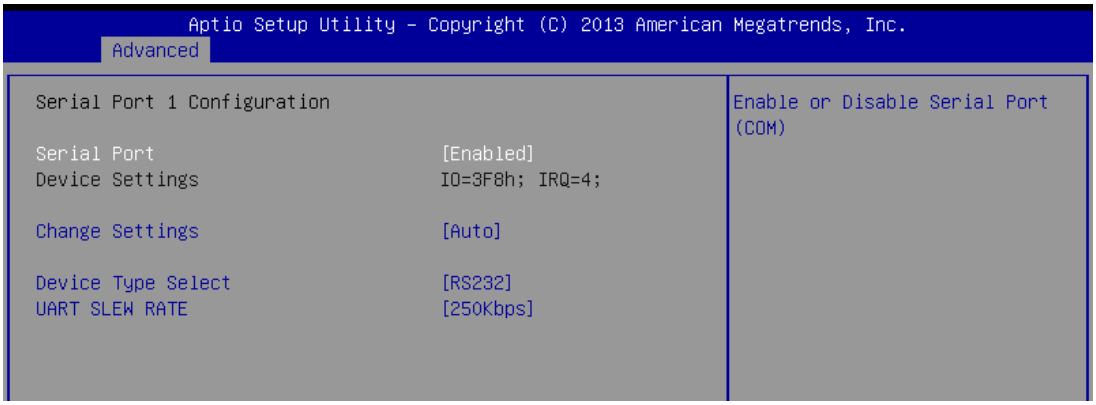
Enable ACPI Auto Configuration: Enables or Disables BIOS ACPI Auto Configuration.
Enable Hibernation: Enable or Disable system ability to Hibernate.
ACPI Sleep state: Select the highest ACPI sleep state the system will enter when the SUSPEND button is pressed. Options: Suspend Disable, S3 (Suspend to RAM).

4.1.2 F81866 Super IO Configuration

Enable/disable and configure the serial ports.

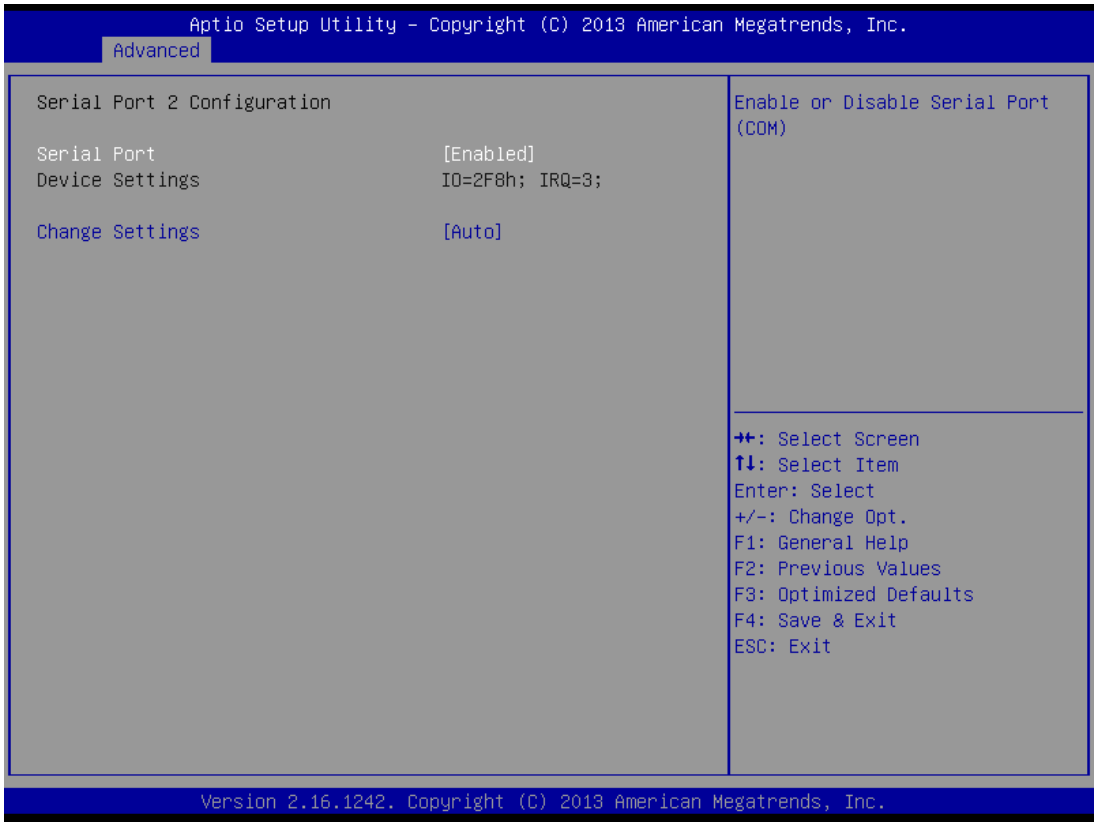


4.1.2.1 Serial Port 1 Configuration

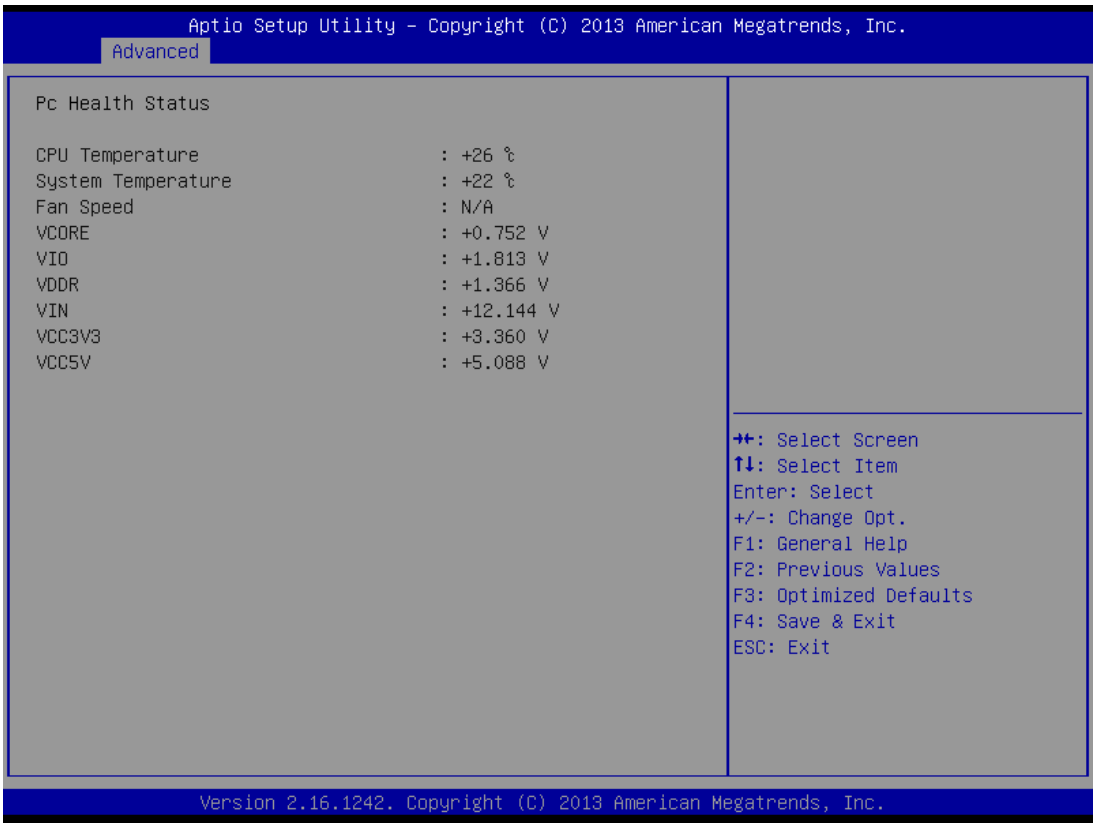


Device Type Select: Choose from RS-232, RS-422 and RS-485.

4.1.2.2 Serial Port 2-4 Configuration

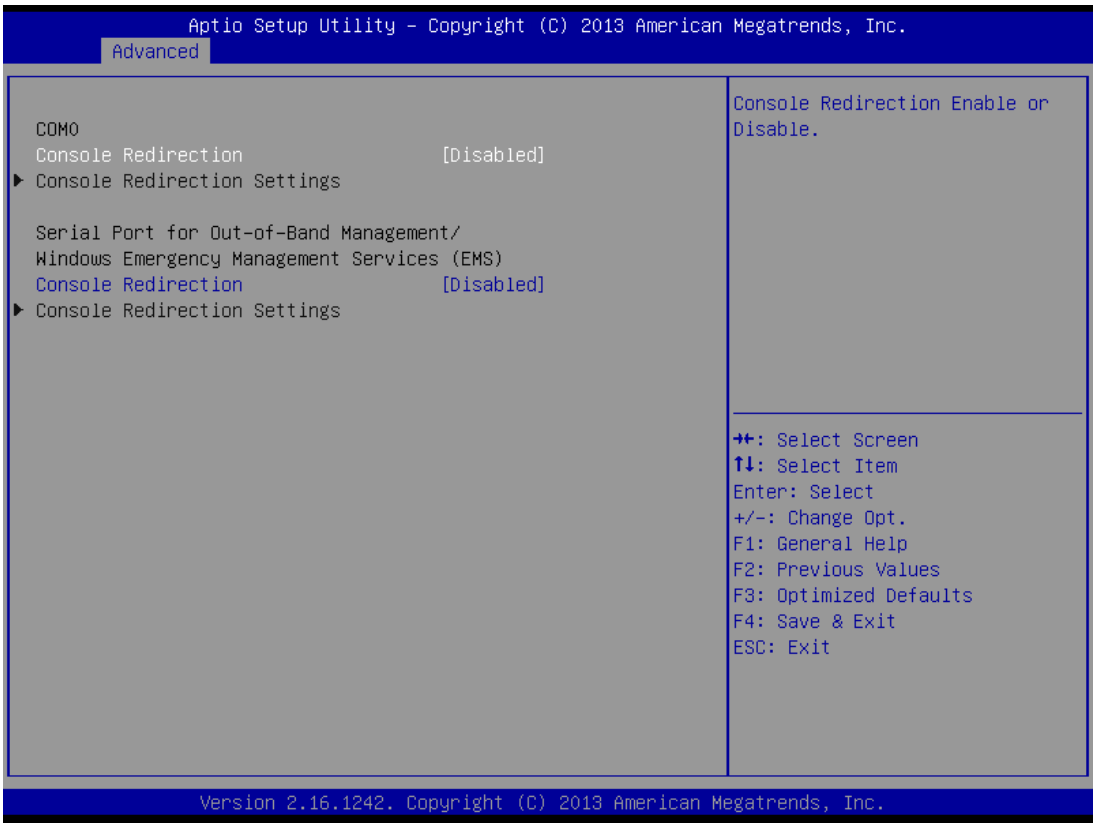


4.1.3 Hardware Monitor

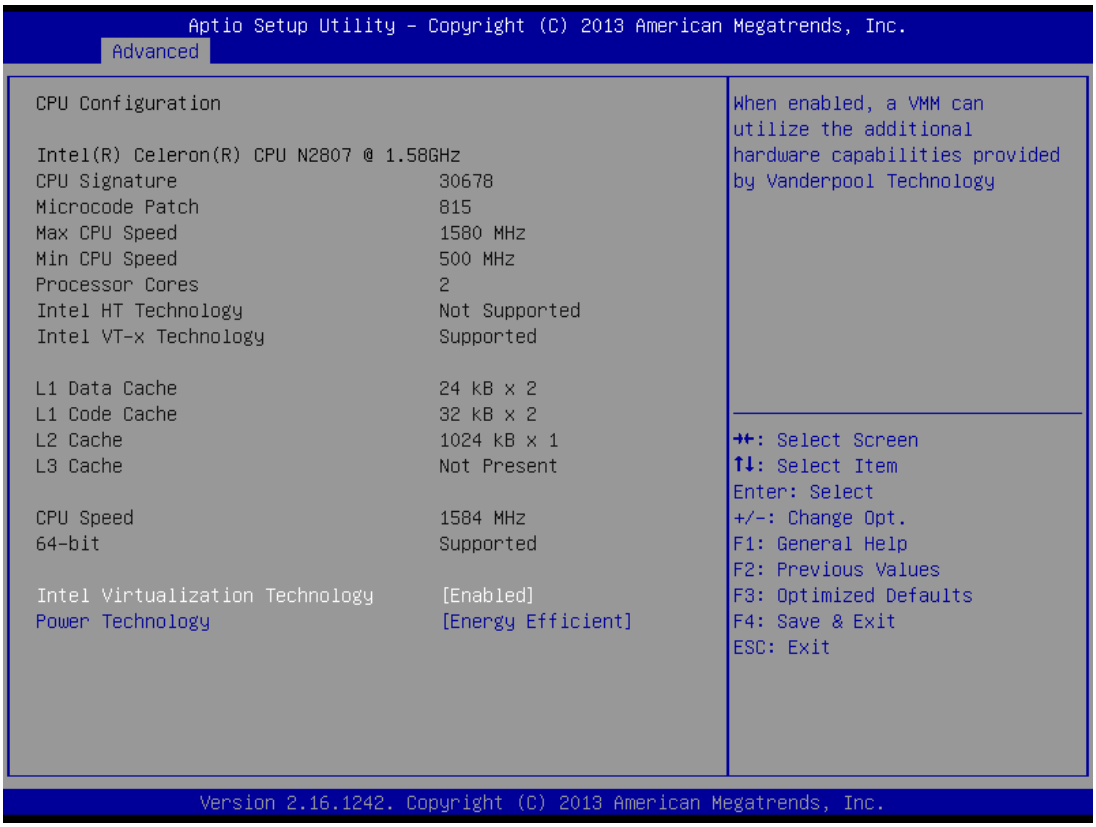


4.1.4 Serial Port Console Redirection

Serial port console redirection settings.



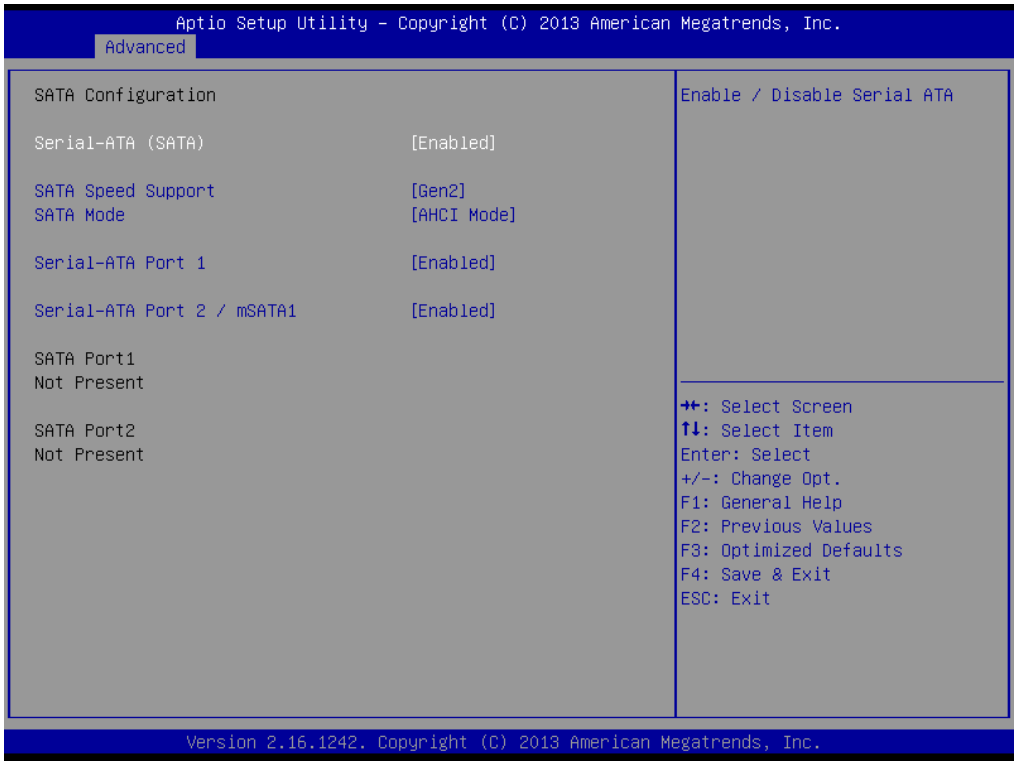
4.1.5 CPU Configuration



Intel Virtualization Technology: When enabled, a VMM can utilize the additional hardware capabilities provided by Vanderpool Technology
Power Technology: Configure the power management features.

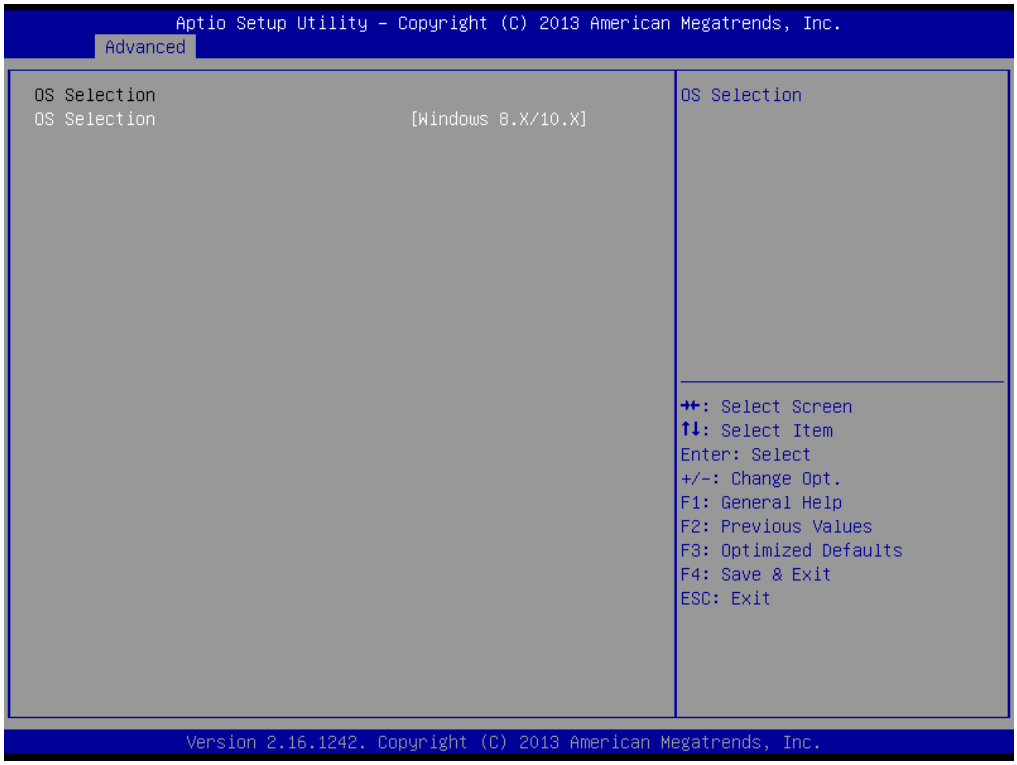
4.1.6 SATA Configuration

The BIOS automatically detects the presence of SATA device and the hardware installed in the SATA ports will be showed in the configuration. Each port can be enabled or disabled individually.



SATA Speed Support: Options: Gen 1, Gen 2.
SATA Mode: Select IDE or AHCI Mode

4.1.7 Miscellaneous Configuration

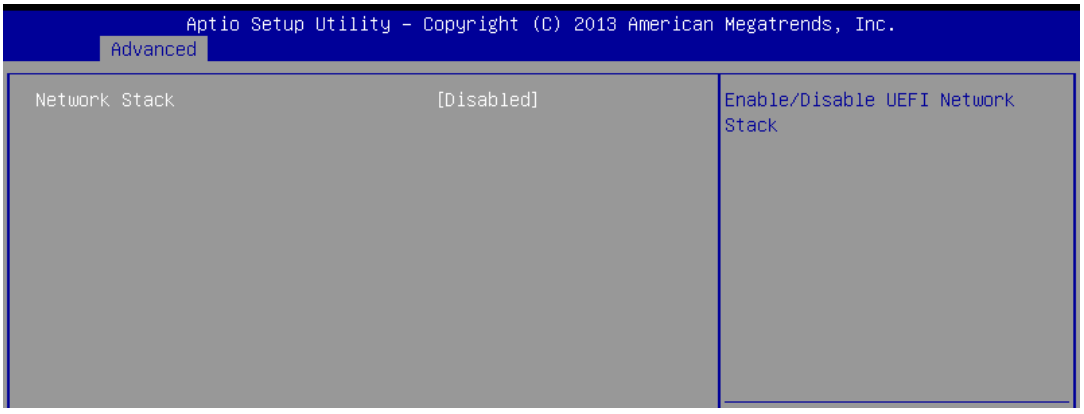


OS Selection: Select the OS.

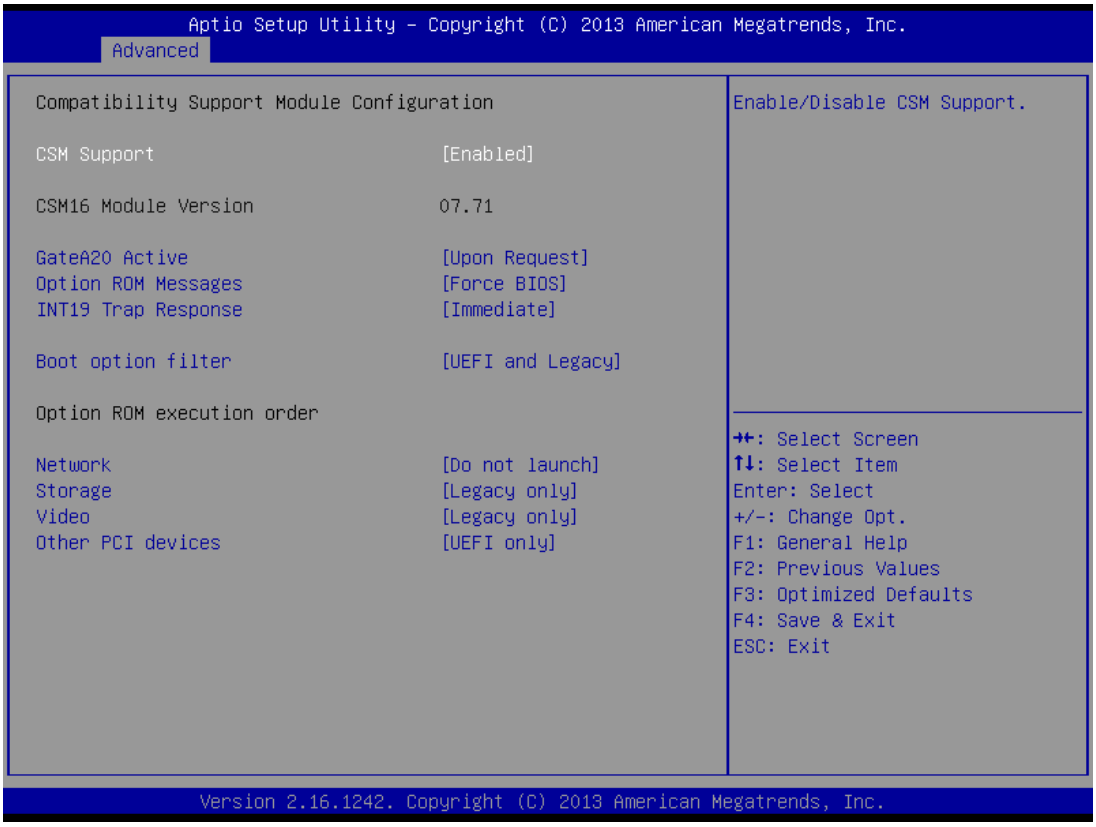
4.1.8 LPSS & SCC Configuration

SCC SD Card Support: Options: Disable, Enable.
LPSS I2C #2 Support: Options: Disable, Enable.

4.1.9 Network Stack Configuration



4.1.10 CSM Configuration

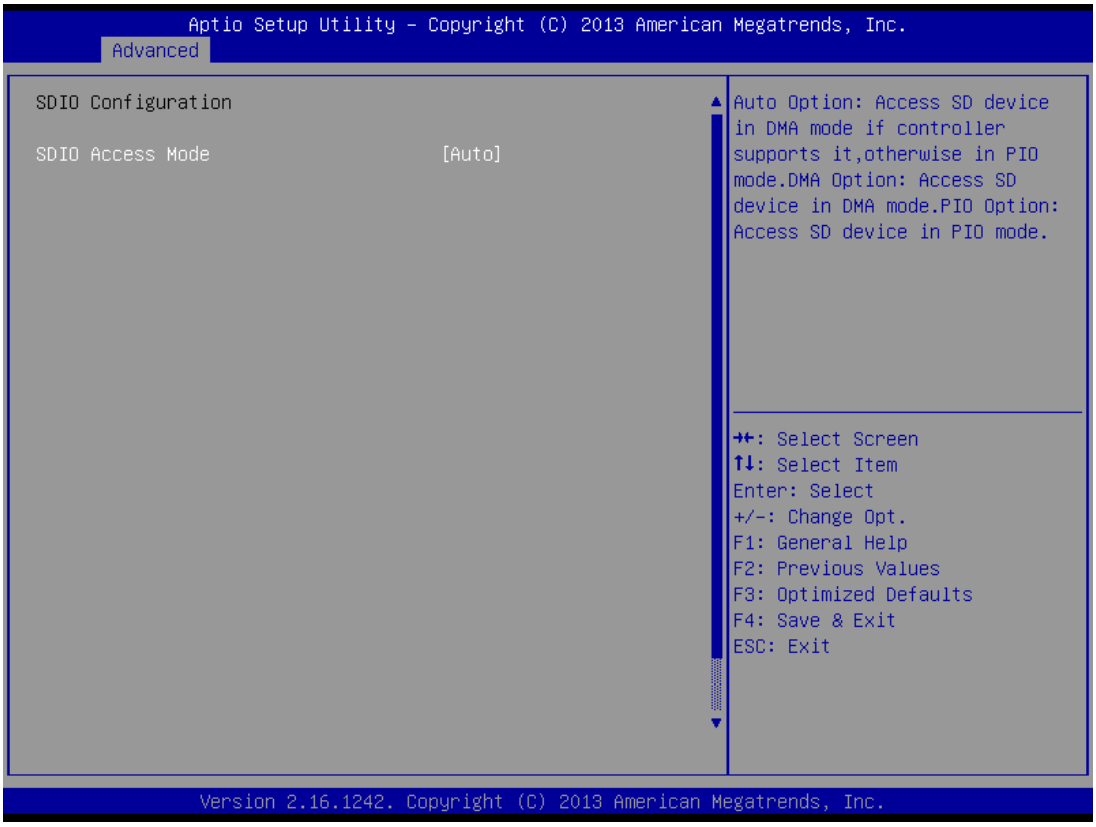


GateA20 Active:

[Upon Request] – GA20 can be disabled using BIOS services.
[Always] – do not allow disabling GA20; this option is useful when any RT code is executed above 1MB.

Option ROM Message: Set display mode [Force BIOS] or [Keep Current] for Option ROM.
INT19 Trap Response: BIOS reaction on INT19 trapping by Option ROM: IMMEDIATE – execute the trap right away; POSTPONED – execute the traps during legacy boot.
Boot option filter: This option controls what devices system can boot to [UEFI and Legacy], [Legacy only] or [UEFI only].
Option ROM Execution Order: Controls the execution Option ROM, [Do not launch], [UEFI only] or [Legacy only].

4.1.11 SDIO Configuration

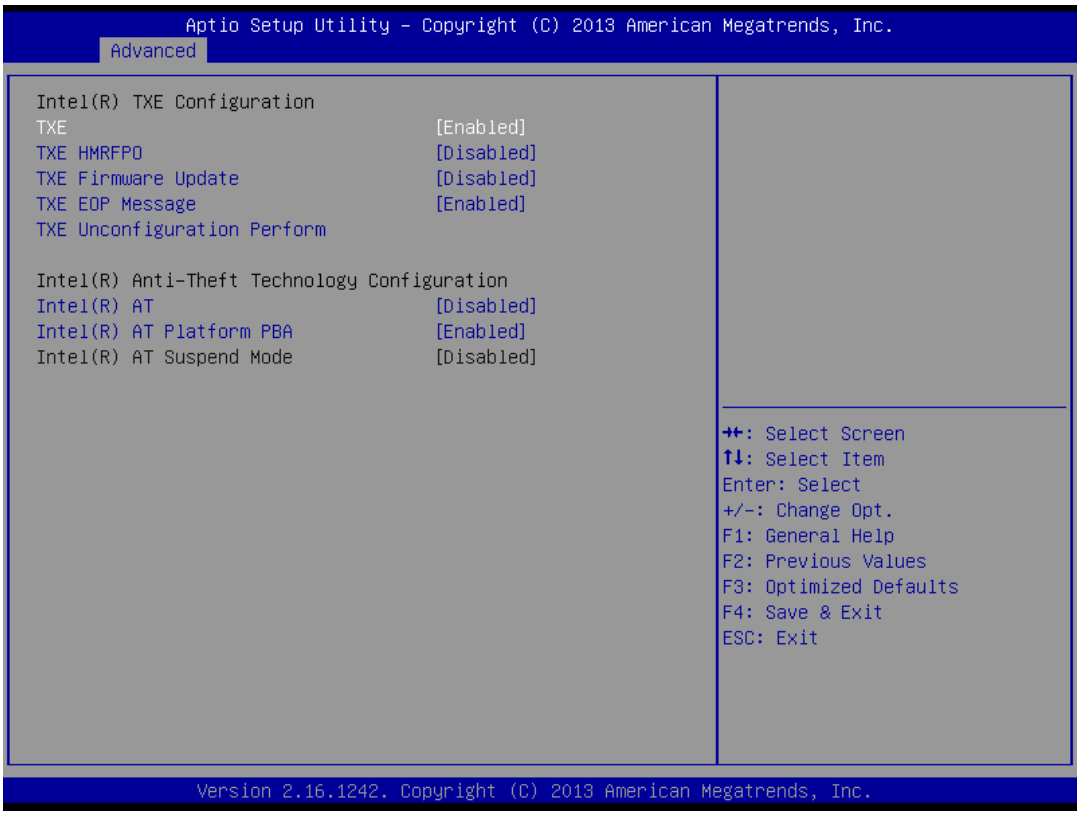


SDIO Access Mode:
Auto Option: Access SD device in DMA mode if controller supports it, otherwise in PIO mode. DMA Option: Access SD device in DMA mode.
PIO Option: Access SD device in PIO mode.

4.1.12 USB Configuration

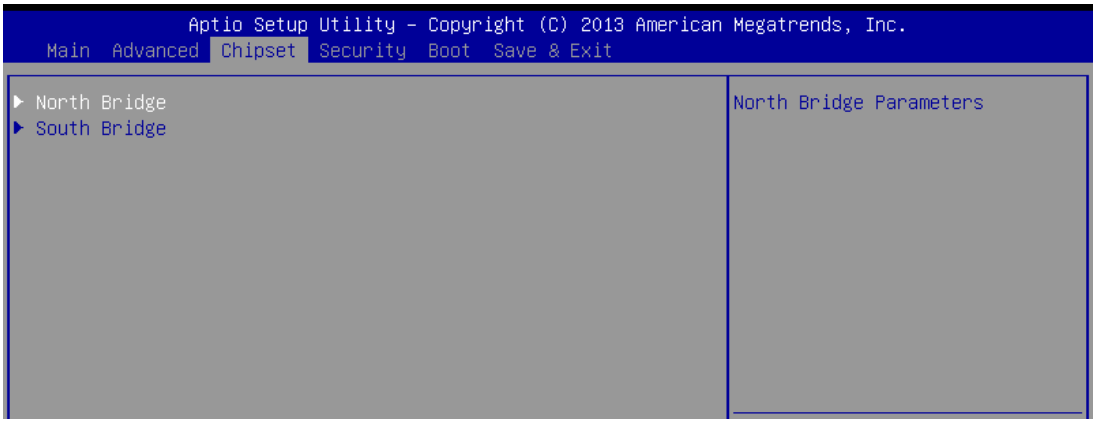
Legacy USB Support: Auto option disables legacy support if no USB devices are connected. Disable option will keep USB devices available only for EFI applications.
XHCI Hand-off: This is a workaround for OSes without XHCI hand-off support. The XHCI ownership change should be claimed by XHCI driver.
EHCI Hand-off: This is a workaround for OSes without EHCI hand-off support. The EHCI ownership change should be claimed by EHCI driver.
USB Mass Storage Driver Support: Enable/Disable USB Mass Storage Driver Support.
USB transfer time-out: The time-out value for Control, Bulk, and Interrupt transfers.
Device reset time-out: USB mass storage device Start Unit command time-out.
Device power-up delay: Maximum time the device will take before it properly reports itself to the Host Controller. "Auto" uses default value: for a Root port it is 100ms, for a Hub port the delay is taken from Hub descriptor.

4.1.13 Security Configuration



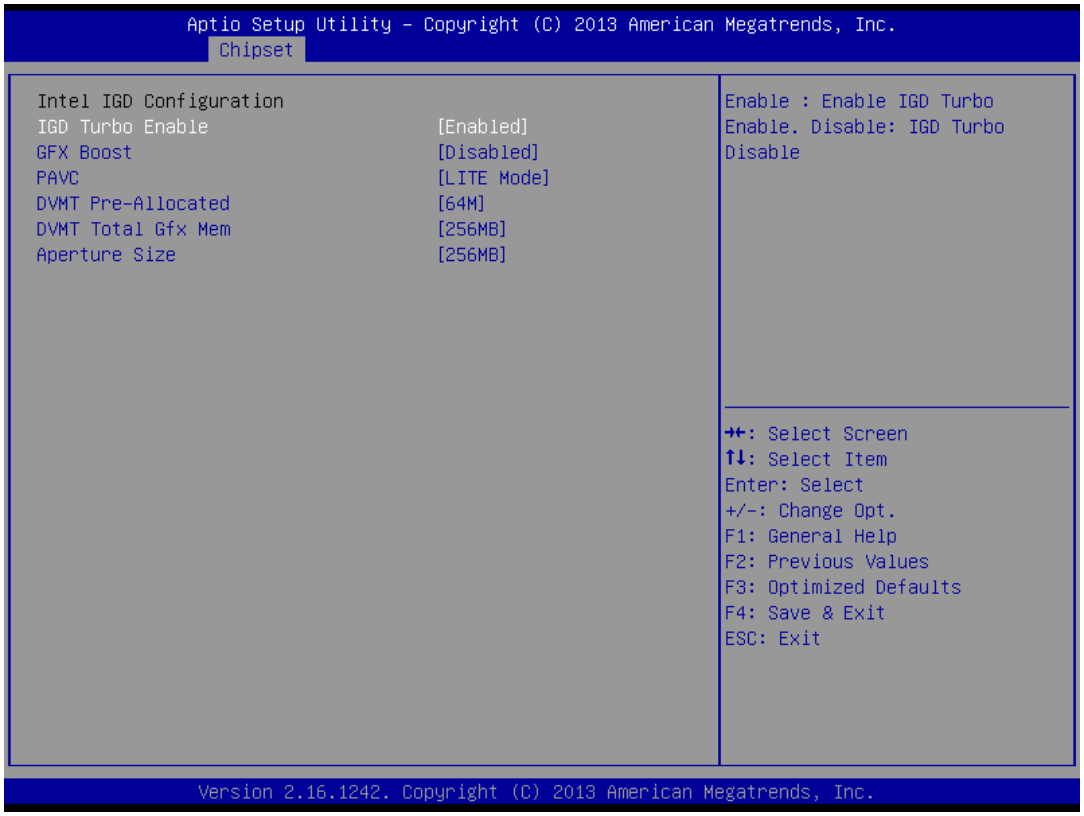
XE EOP Message: Send EOP Message Before Enter OS.
Intel® AT: Enable/Disable BIOS AT Code from Running.
Intel® AT Platform PBA: Enable/Disable BIOS AT Code from Running.

4.2 Chipset



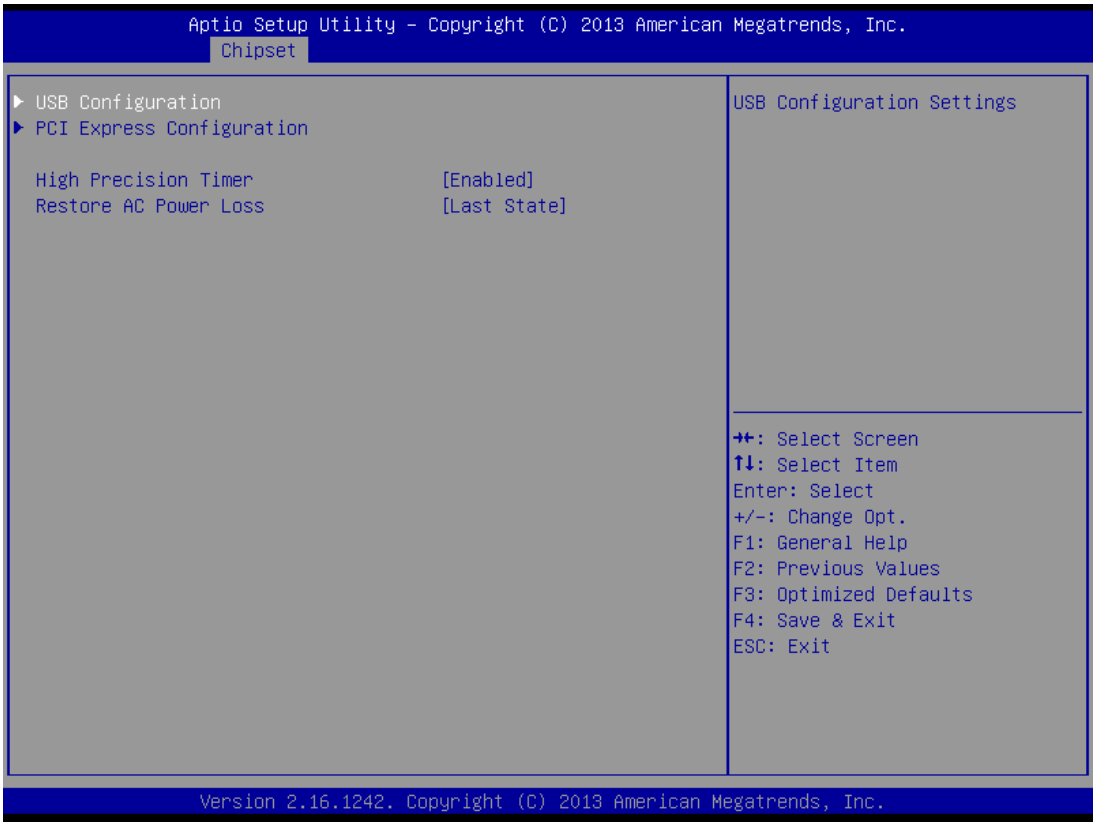
4.2.1 Northbridge Configuration

4.2.1.1 Intel IGD Configuration



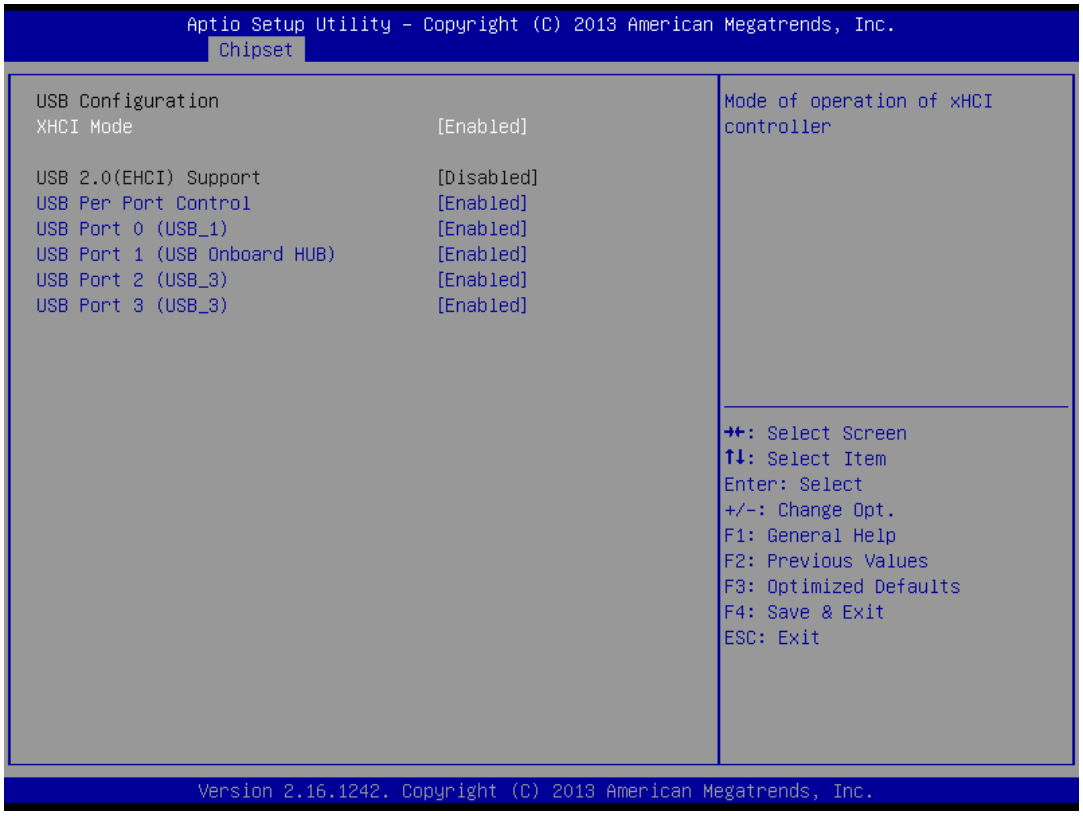
IGD Turbo Enable: Enable/Disable: IGD Turbo.
GFX Boost: Enable/Disable GFX Boost.
PAVC: Enable/Disable Protected Audio Video Control.
DVMT Pre-Allocated: Select DVMT 5.0 Pre-Allocated (Fixed) Graphics Memory size used by the Internal Graphics Device.
DVMT Total Gfx Mem: Select DVMT 5.0 Total Graphics Memory size used by the Internal Graphics Device.
Aperture Size: Select the Aperture Size.

4.2.2 Southbridge Configuration

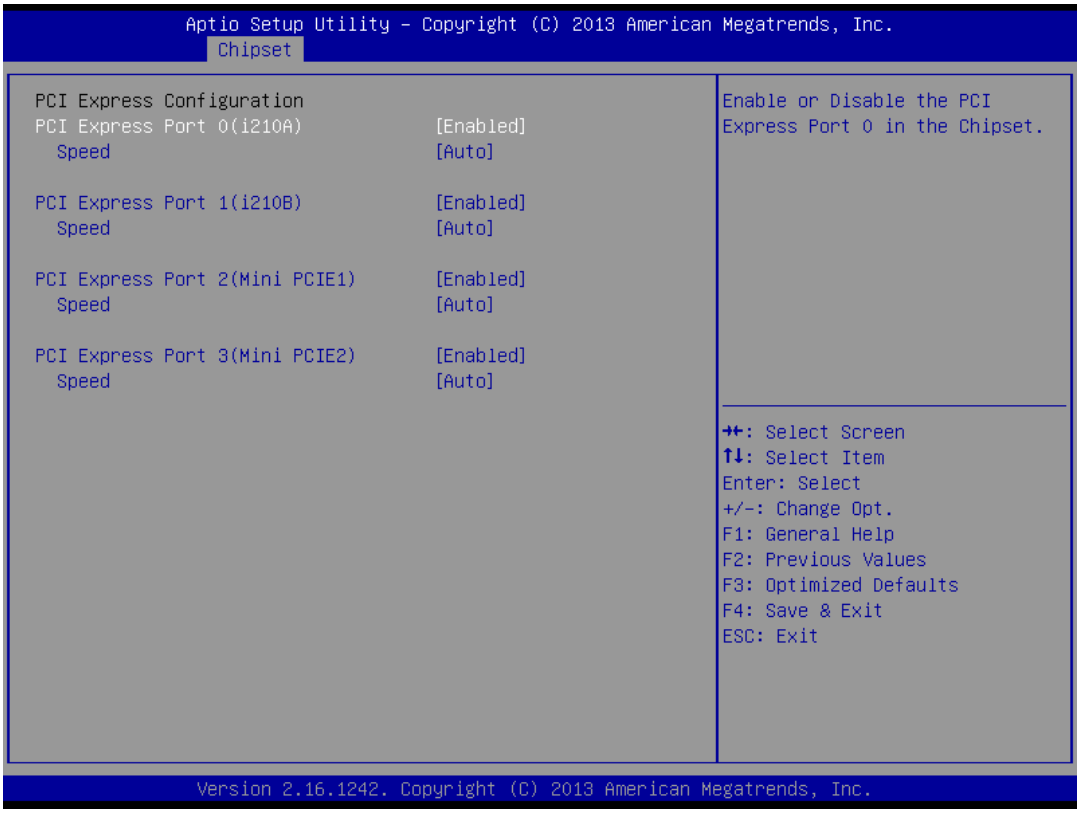


High Precision Timer: Enable or Disable the High Precision Event Timer.
Restore AC Power Loss: Select AC power state when power is re-applied after a power failure.

4.2.2.1 USB Configuration

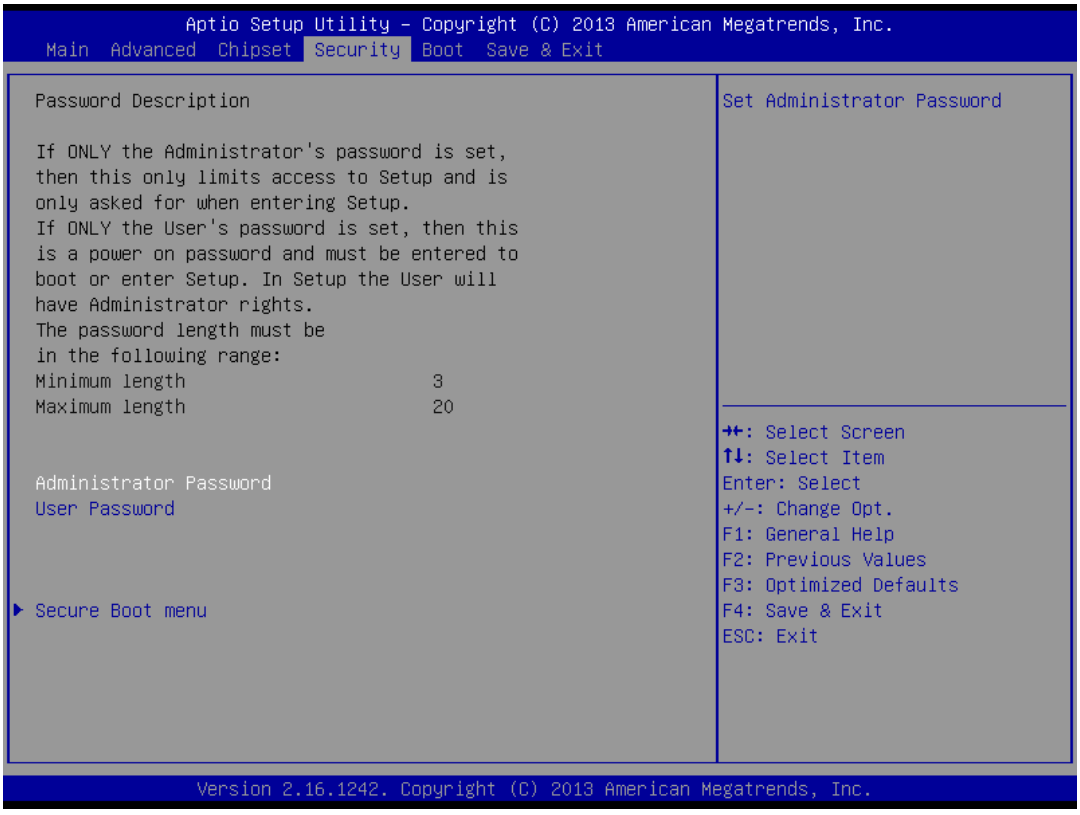


4.2.2.2 PCI Express Configuration

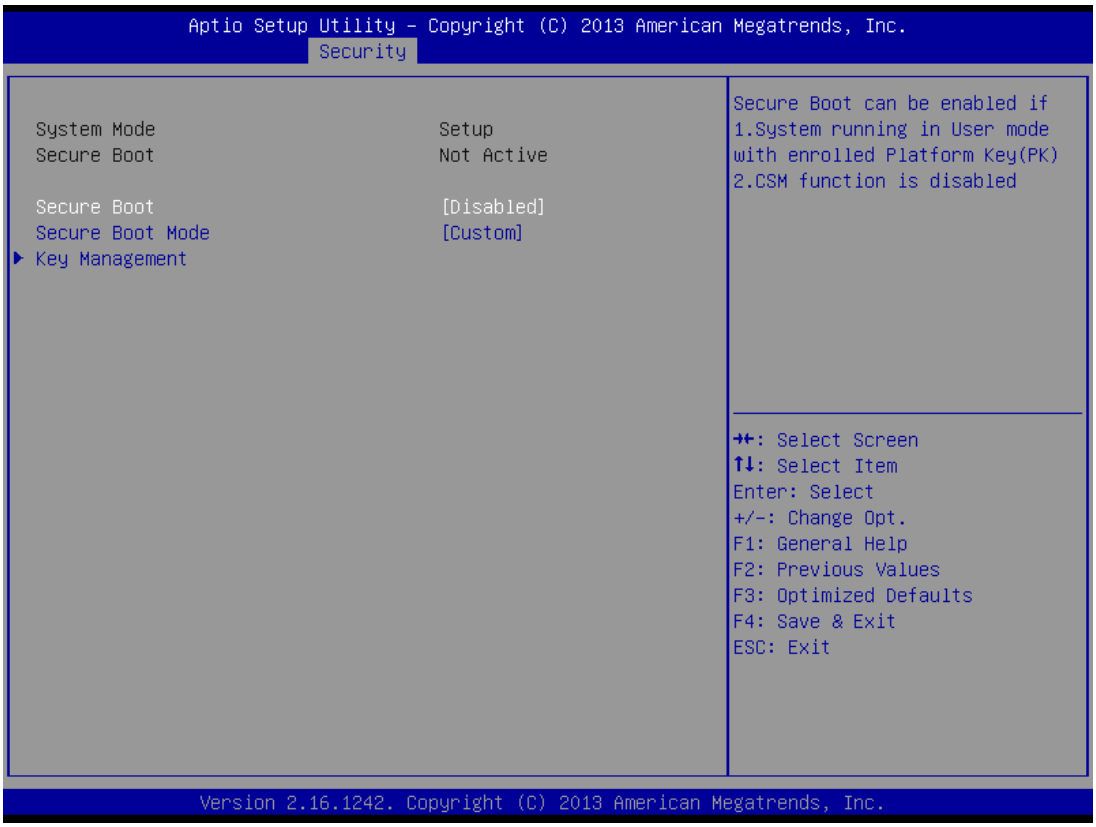


4.3 Security

Administrator's and User's passwords could be set.
If ONLY the Administrator's password is set, then this only limits access to Setup and is only asked for when entering Setup. If ONLY the User's password is set, then this is a power on password and must be entered to boot or enter Setup. In Setup, the user will have administrator rights. The minimum length of the password is 3 and the maximum length is 20.

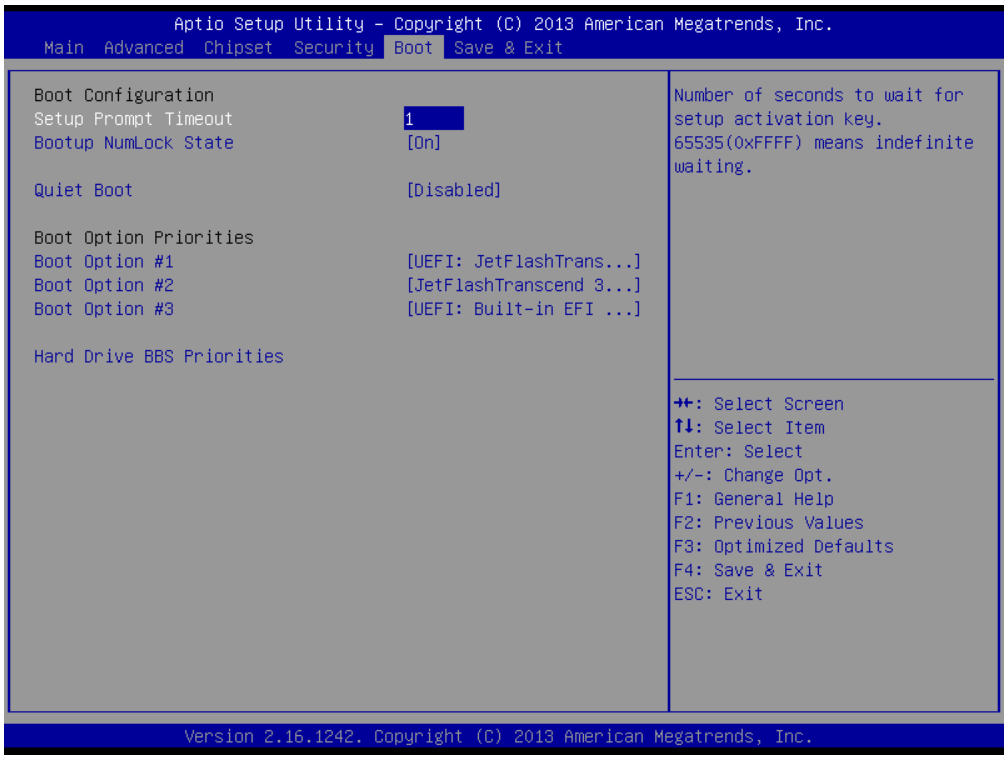


4.3.1 Security Boot Menu



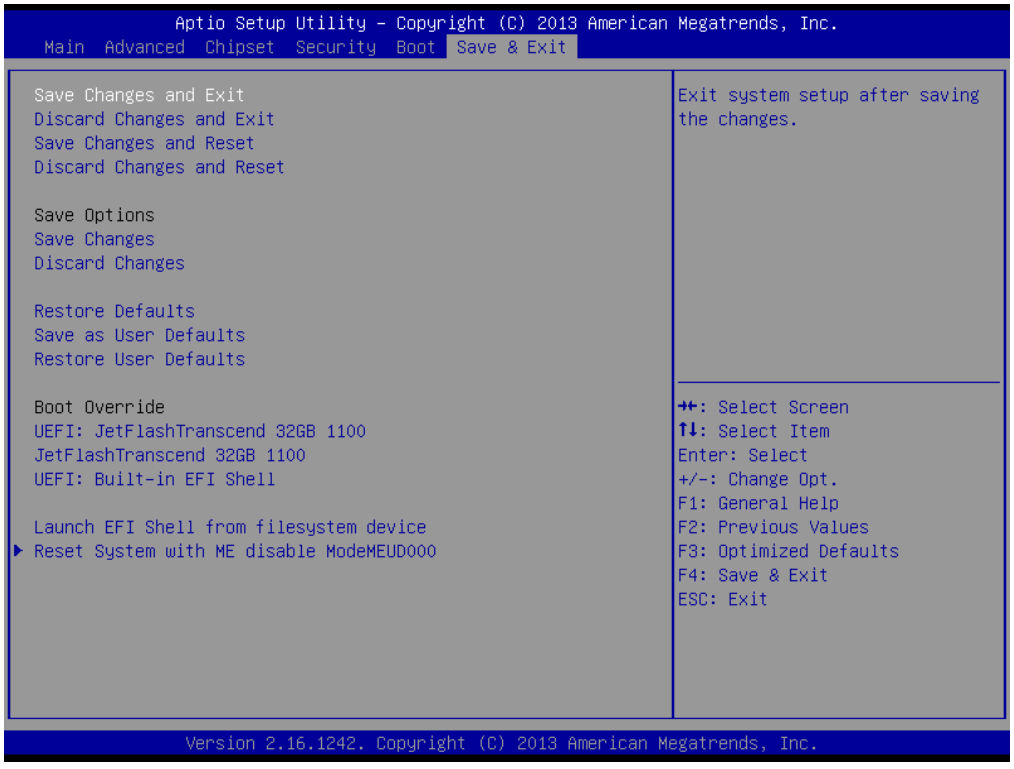
Secure Boot: Secure Boot can be enabled if the System running in User mode with enrolled Platform Key (PK) and CSM function is disabled.
Secure Boot Mode: Secure Boot mode selector. 'Custom' Mode enables users to change Image Execution policy and manage Secure Boot Keys.

4.4 Boot



Setup Prompt Timeout: Number of seconds to wait for setup activation key. 65535 (0xFFFF) means indefinite waiting.
Bootup NumLock State: Select [Enable] or [Disable] for the keyboard NumLock state.
Quiet Boot: Enables or Disables Quiet Boot option.
Boot Order Priorities: Set system boot order.
Hard Drive BBS Priorities: Set the order of the legacy devices in this group.

4.5 Save and Exit

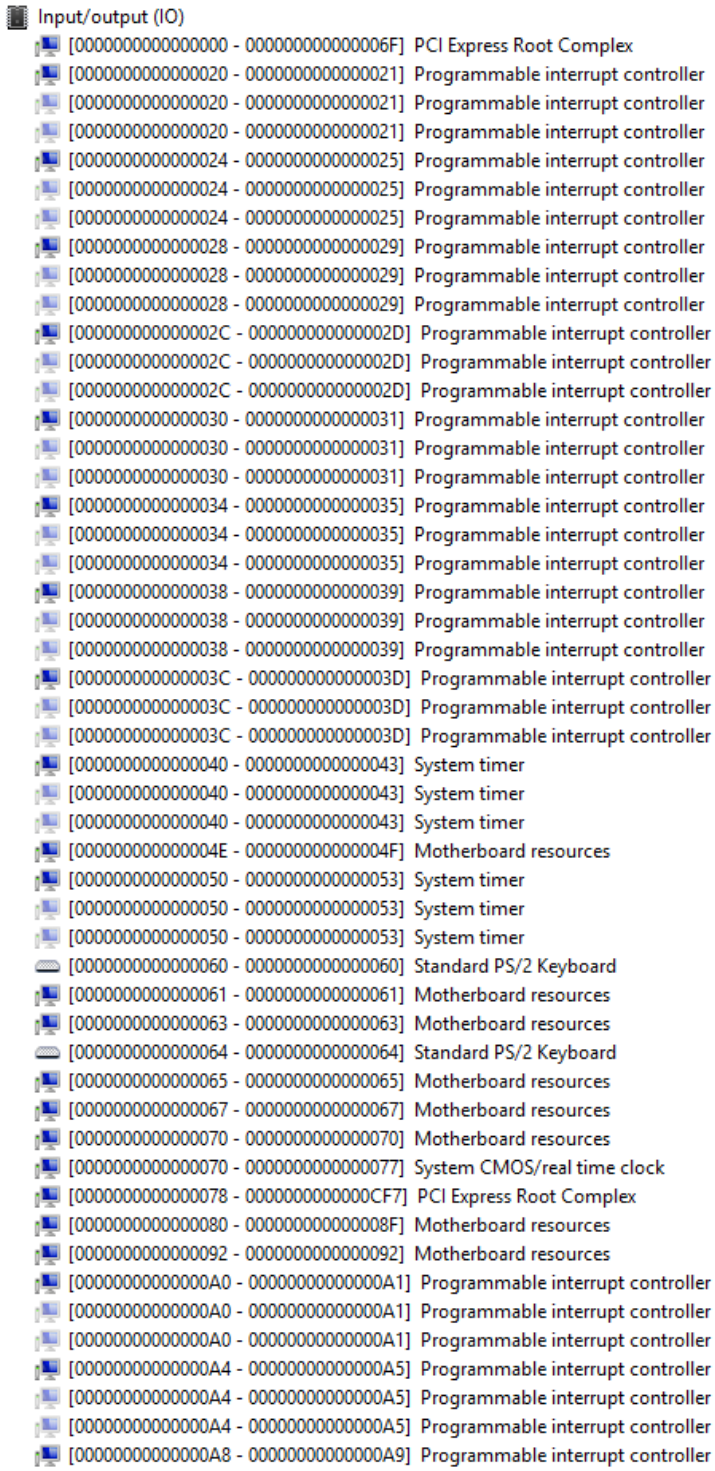


Chapter 5

Address Map

5.1 I/O Port Address Map

The assignments of the I/O port addresses for the CT-DBT0x under Windows® 7 Ultimate 64-bit are shown below.



I/O Port Address Map (cont'd)

[00000000000000A8 - 00000000000000A9] Programmable interrupt controller
[00000000000000AC - 00000000000000AD] Programmable interrupt controller
[00000000000000AC - 00000000000000AD] Programmable interrupt controller
[00000000000000AC - 00000000000000AD] Programmable interrupt controller
[00000000000000B0 - 00000000000000B1] Programmable interrupt controller
[00000000000000B0 - 00000000000000B1] Programmable interrupt controller
[00000000000000B0 - 00000000000000B1] Programmable interrupt controller
[00000000000000B2 - 00000000000000B3] Motherboard resources
[00000000000000B4 - 00000000000000B5] Programmable interrupt controller
[00000000000000B4 - 00000000000000B5] Programmable interrupt controller
[00000000000000B4 - 00000000000000B5] Programmable interrupt controller
[00000000000000B8 - 00000000000000B9] Programmable interrupt controller
[00000000000000B8 - 00000000000000B9] Programmable interrupt controller
[00000000000000B8 - 00000000000000B9] Programmable interrupt controller
[00000000000000BC - 00000000000000BD] Programmable interrupt controller
[00000000000000BC - 00000000000000BD] Programmable interrupt controller
[00000000000000BC - 00000000000000BD] Programmable interrupt controller
[00000000000002E8 - 00000000000002EF] Communications Port (COM4)
[00000000000002F8 - 00000000000002FF] Communications Port (COM2)
[00000000000003B0 - 00000000000003BB] Intel(R) HD Graphics
[00000000000003C0 - 00000000000003DF] Intel(R) HD Graphics
[00000000000003E8 - 00000000000003EF] Communications Port (COM3)
[00000000000003F8 - 00000000000003FF] Communications Port (COM1)
[0000000000000400 - 000000000000047F] Motherboard resources
[00000000000004D0 - 00000000000004D1] Programmable interrupt controller
[00000000000004D0 - 00000000000004D1] Programmable interrupt controller
[00000000000004D0 - 00000000000004D1] Programmable interrupt controller
[0000000000000500 - 00000000000005FE] Motherboard resources
[0000000000000680 - 000000000000069F] Motherboard resources
[0000000000000A00 - 0000000000000A0F] Motherboard resources
[0000000000000A10 - 0000000000000A1F] Motherboard resources
[0000000000000A20 - 0000000000000A2F] Motherboard resources
[0000000000000D00 - 000000000000FFFF] PCI Express Root Complex
[000000000000C000 - 000000000000C01F] Intel(R) I210 Gigabit Network Connection
[000000000000C000 - 000000000000C01F] Intel(R) I210 Gigabit Network Connection #3
[000000000000C000 - 000000000000CFFF] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor PCI Express - Root Port 2 - 0F4A
[000000000000C000 - 000000000000CFFF] PCI standard PCI-to-PCI bridge
[000000000000C000 - 000000000000CFFF] PCI standard PCI-to-PCI bridge
[000000000000D000 - 000000000000D01F] Intel(R) I210 Gigabit Network Connection #2
[000000000000D000 - 000000000000D01F] Intel(R) I210 Gigabit Network Connection #4
[000000000000D000 - 000000000000DFFF] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor PCI Express - Root Port 1 - 0F48
[000000000000D000 - 000000000000DFFF] PCI standard PCI-to-PCI bridge
[000000000000D000 - 000000000000DFFF] PCI standard PCI-to-PCI bridge
[000000000000E000 - 000000000000E01F] Intel Device
[000000000000E000 - 000000000000E01F] Intel Device
[000000000000E000 - 000000000000E01F] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor Platform Control Unit - SMBus Port - 0F12
[000000000000E020 - 000000000000E03F] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor AHCI - 0F23
[000000000000E020 - 000000000000E03F] Standard SATA AHCI Controller
[000000000000E020 - 000000000000E03F] Standard SATA AHCI Controller
[000000000000E040 - 000000000000E043] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor AHCI - 0F23

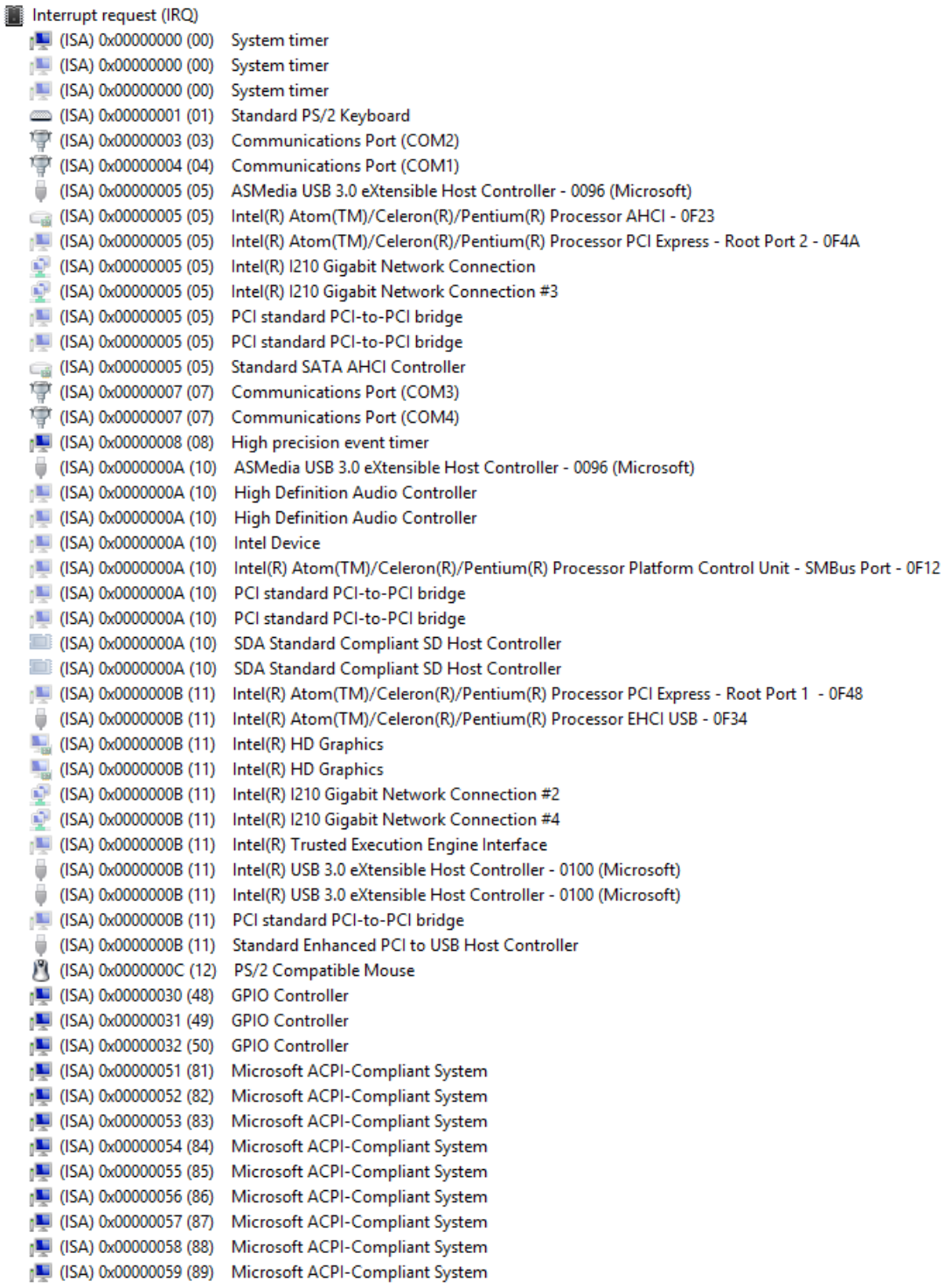
[00000000000000BC - 00000000000000BD] Programmable interrupt controller
[00000000000000BC - 00000000000000BD] Programmable interrupt controller
[00000000000002E8 - 00000000000002EF] Communications Port (COM4)
[00000000000002F8 - 00000000000002FF] Communications Port (COM2)
[00000000000003B0 - 00000000000003BB] Intel(R) HD Graphics
[00000000000003C0 - 00000000000003DF] Intel(R) HD Graphics
[00000000000003E8 - 00000000000003EF] Communications Port (COM3)
[00000000000003F8 - 00000000000003FF] Communications Port (COM1)
[0000000000000400 - 000000000000047F] Motherboard resources
[00000000000004D0 - 00000000000004D1] Programmable interrupt controller
[00000000000004D0 - 00000000000004D1] Programmable interrupt controller

I/O Port Address Map (cont'd)

[00000000000004D0 - 00000000000004D1] Programmable interrupt controller
[0000000000000500 - 00000000000005FE] Motherboard resources
[0000000000000680 - 000000000000069F] Motherboard resources
[0000000000000A00 - 0000000000000A0F] Motherboard resources
[0000000000000A10 - 0000000000000A1F] Motherboard resources
[0000000000000A20 - 0000000000000A2F] Motherboard resources
[0000000000000D00 - 000000000000FFFF] PCI Express Root Complex
[000000000000C000 - 000000000000C01F] Intel(R) I210 Gigabit Network Connection
[000000000000C000 - 000000000000C01F] Intel(R) I210 Gigabit Network Connection #3
[000000000000C000 - 000000000000CFFF] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor PCI Express - Root Port 2 - 0F4A
[000000000000C000 - 000000000000CFFF] PCI standard PCI-to-PCI bridge
[000000000000C000 - 000000000000CFFF] PCI standard PCI-to-PCI bridge
[000000000000D000 - 000000000000D01F] Intel(R) I210 Gigabit Network Connection #2
[000000000000D000 - 000000000000D01F] Intel(R) I210 Gigabit Network Connection #4
[000000000000D000 - 000000000000DFFF] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor PCI Express - Root Port 1 - 0F48
[000000000000D000 - 000000000000DFFF] PCI standard PCI-to-PCI bridge
[000000000000D000 - 000000000000DFFF] PCI standard PCI-to-PCI bridge
[000000000000E000 - 000000000000E01F] Intel Device
[000000000000E000 - 000000000000E01F] Intel Device
[000000000000E000 - 000000000000E01F] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor Platform Control Unit - SMBus Port - 0F12
[000000000000E020 - 000000000000E03F] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor AHCI - 0F23
[000000000000E020 - 000000000000E03F] Standard SATA AHCI Controller
[000000000000E020 - 000000000000E03F] Standard SATA AHCI Controller
[000000000000E040 - 000000000000E043] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor AHCI - 0F23
[000000000000E040 - 000000000000E043] Standard SATA AHCI Controller
[000000000000E040 - 000000000000E043] Standard SATA AHCI Controller
[000000000000E050 - 000000000000E057] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor AHCI - 0F23
[000000000000E050 - 000000000000E057] Standard SATA AHCI Controller
[000000000000E050 - 000000000000E057] Standard SATA AHCI Controller
[000000000000E060 - 000000000000E063] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor AHCI - 0F23
[000000000000E060 - 000000000000E063] Standard SATA AHCI Controller
[000000000000E060 - 000000000000E063] Standard SATA AHCI Controller
[000000000000E070 - 000000000000E077] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor AHCI - 0F23
[000000000000E070 - 000000000000E077] Standard SATA AHCI Controller
[000000000000E070 - 000000000000E077] Standard SATA AHCI Controller
[000000000000E080 - 000000000000E087] Intel(R) HD Graphics
[000000000000E080 - 000000000000E087] Intel(R) HD Graphics
[000000000000E080 - 000000000000E087] Intel(R) HD Graphics

5.2 Interrupt Controller (IRQ) Map

The interrupt controller map for the CT-DBT0x under Windows® 7 Ultimate 64-bit is shown below.



Interrupt Controller (IRQ) Map (cont'd)

(ISA) 0x0000005A (90) Microsoft ACPI-Compliant System
(ISA) 0x0000005B (91) Microsoft ACPI-Compliant System
(ISA) 0x0000005C (92) Microsoft ACPI-Compliant System
(ISA) 0x0000005D (93) Microsoft ACPI-Compliant System
(ISA) 0x0000005E (94) Microsoft ACPI-Compliant System
(ISA) 0x0000005F (95) Microsoft ACPI-Compliant System
(ISA) 0x00000060 (96) Microsoft ACPI-Compliant System
(ISA) 0x00000061 (97) Microsoft ACPI-Compliant System
(ISA) 0x00000062 (98) Microsoft ACPI-Compliant System
(ISA) 0x00000063 (99) Microsoft ACPI-Compliant System
(ISA) 0x00000064 (100) Microsoft ACPI-Compliant System
(ISA) 0x00000065 (101) Microsoft ACPI-Compliant System
(ISA) 0x00000066 (102) Microsoft ACPI-Compliant System
(ISA) 0x00000067 (103) Microsoft ACPI-Compliant System
(ISA) 0x00000068 (104) Microsoft ACPI-Compliant System
(ISA) 0x00000069 (105) Microsoft ACPI-Compliant System
(ISA) 0x0000006A (106) Microsoft ACPI-Compliant System
(ISA) 0x0000006B (107) Microsoft ACPI-Compliant System
(ISA) 0x0000006C (108) Microsoft ACPI-Compliant System
(ISA) 0x0000006D (109) Microsoft ACPI-Compliant System
(ISA) 0x0000006E (110) Microsoft ACPI-Compliant System
(ISA) 0x0000006F (111) Microsoft ACPI-Compliant System
(ISA) 0x00000070 (112) Microsoft ACPI-Compliant System
(ISA) 0x00000071 (113) Microsoft ACPI-Compliant System
(ISA) 0x00000072 (114) Microsoft ACPI-Compliant System
(ISA) 0x00000073 (115) Microsoft ACPI-Compliant System
(ISA) 0x00000074 (116) Microsoft ACPI-Compliant System
(ISA) 0x00000075 (117) Microsoft ACPI-Compliant System
(ISA) 0x00000076 (118) Microsoft ACPI-Compliant System
(ISA) 0x00000077 (119) Microsoft ACPI-Compliant System
(ISA) 0x00000078 (120) Microsoft ACPI-Compliant System
(ISA) 0x00000079 (121) Microsoft ACPI-Compliant System
(ISA) 0x0000007A (122) Microsoft ACPI-Compliant System
(ISA) 0x0000007B (123) Microsoft ACPI-Compliant System
(ISA) 0x0000007C (124) Microsoft ACPI-Compliant System
(ISA) 0x0000007D (125) Microsoft ACPI-Compliant System
(ISA) 0x0000007E (126) Microsoft ACPI-Compliant System
(ISA) 0x0000007F (127) Microsoft ACPI-Compliant System
(ISA) 0x00000080 (128) Microsoft ACPI-Compliant System
(ISA) 0x00000081 (129) Microsoft ACPI-Compliant System
(ISA) 0x00000082 (130) Microsoft ACPI-Compliant System
(ISA) 0x00000083 (131) Microsoft ACPI-Compliant System
(ISA) 0x00000084 (132) Microsoft ACPI-Compliant System
(ISA) 0x00000085 (133) Microsoft ACPI-Compliant System
(ISA) 0x00000086 (134) Microsoft ACPI-Compliant System
(ISA) 0x00000087 (135) Microsoft ACPI-Compliant System
(ISA) 0x00000088 (136) Microsoft ACPI-Compliant System
(ISA) 0x00000089 (137) Microsoft ACPI-Compliant System
(ISA) 0x0000008A (138) Microsoft ACPI-Compliant System
(ISA) 0x0000008B (139) Microsoft ACPI-Compliant System
(ISA) 0x0000008C (140) Microsoft ACPI-Compliant System
(ISA) 0x0000008E (142) Microsoft ACPI-Compliant System
(ISA) 0x0000008F (143) Microsoft ACPI-Compliant System
(ISA) 0x00000090 (144) Microsoft ACPI-Compliant System
(ISA) 0x00000091 (145) Microsoft ACPI-Compliant System
(ISA) 0x00000092 (146) Microsoft ACPI-Compliant System
(ISA) 0x00000093 (147) Microsoft ACPI-Compliant System
(ISA) 0x00000094 (148) Microsoft ACPI-Compliant System
(ISA) 0x00000095 (149) Microsoft ACPI-Compliant System
(ISA) 0x00000096 (150) Microsoft ACPI-Compliant System

Interrupt Controller (IRQ) Map (cont'd)

(ISA) 0x00000097 (151) Microsoft ACPI-Compliant System
(ISA) 0x00000098 (152) Microsoft ACPI-Compliant System
(ISA) 0x00000099 (153) Microsoft ACPI-Compliant System
(ISA) 0x0000009A (154) Microsoft ACPI-Compliant System
(ISA) 0x0000009B (155) Microsoft ACPI-Compliant System
(ISA) 0x0000009C (156) Microsoft ACPI-Compliant System
(ISA) 0x0000009D (157) Microsoft ACPI-Compliant System
(ISA) 0x0000009E (158) Microsoft ACPI-Compliant System
(ISA) 0x0000009F (159) Microsoft ACPI-Compliant System
(ISA) 0x000000A0 (160) Microsoft ACPI-Compliant System
(ISA) 0x000000A1 (161) Microsoft ACPI-Compliant System
(ISA) 0x000000A2 (162) Microsoft ACPI-Compliant System
(ISA) 0x000000A3 (163) Microsoft ACPI-Compliant System
(ISA) 0x000000A4 (164) Microsoft ACPI-Compliant System
(ISA) 0x000000A5 (165) Microsoft ACPI-Compliant System
(ISA) 0x000000A6 (166) Microsoft ACPI-Compliant System
(ISA) 0x000000A7 (167) Microsoft ACPI-Compliant System
(ISA) 0x000000A8 (168) Microsoft ACPI-Compliant System
(ISA) 0x000000A9 (169) Microsoft ACPI-Compliant System
(ISA) 0x000000AA (170) Microsoft ACPI-Compliant System
(ISA) 0x000000AB (171) Microsoft ACPI-Compliant System
(ISA) 0x000000AC (172) Microsoft ACPI-Compliant System
(ISA) 0x000000AD (173) Microsoft ACPI-Compliant System
(ISA) 0x000000AE (174) Microsoft ACPI-Compliant System
(ISA) 0x000000AF (175) Microsoft ACPI-Compliant System
(ISA) 0x000000B0 (176) Microsoft ACPI-Compliant System
(ISA) 0x000000B1 (177) Microsoft ACPI-Compliant System
(ISA) 0x000000B2 (178) Microsoft ACPI-Compliant System
(ISA) 0x000000B3 (179) Microsoft ACPI-Compliant System
(ISA) 0x000000B4 (180) Microsoft ACPI-Compliant System
(ISA) 0x000000B5 (181) Microsoft ACPI-Compliant System
(ISA) 0x000000B6 (182) Microsoft ACPI-Compliant System
(ISA) 0x000000B7 (183) Microsoft ACPI-Compliant System
(ISA) 0x000000B8 (184) Microsoft ACPI-Compliant System
(ISA) 0x000000B9 (185) Microsoft ACPI-Compliant System
(ISA) 0x000000BA (186) Microsoft ACPI-Compliant System
(ISA) 0x000000BB (187) Microsoft ACPI-Compliant System
(ISA) 0x000000BC (188) Microsoft ACPI-Compliant System
(ISA) 0x000000BD (189) Microsoft ACPI-Compliant System
(ISA) 0x000000BE (190) Microsoft ACPI-Compliant System
(ISA) 0x000000BF (191) Microsoft ACPI-Compliant System
(ISA) 0x00000100 (256) Microsoft ACPI-Compliant System
(ISA) 0x00000101 (257) Microsoft ACPI-Compliant System
(ISA) 0x00000102 (258) Microsoft ACPI-Compliant System
(ISA) 0x00000103 (259) Microsoft ACPI-Compliant System
(ISA) 0x00000104 (260) Microsoft ACPI-Compliant System
(ISA) 0x00000105 (261) Microsoft ACPI-Compliant System
(ISA) 0x00000106 (262) Microsoft ACPI-Compliant System
(ISA) 0x00000107 (263) Microsoft ACPI-Compliant System
(ISA) 0x00000108 (264) Microsoft ACPI-Compliant System
(ISA) 0x00000109 (265) Microsoft ACPI-Compliant System
(ISA) 0x0000010A (266) Microsoft ACPI-Compliant System
(ISA) 0x0000010B (267) Microsoft ACPI-Compliant System
(ISA) 0x0000010C (268) Microsoft ACPI-Compliant System
(ISA) 0x0000010D (269) Microsoft ACPI-Compliant System
(ISA) 0x0000010E (270) Microsoft ACPI-Compliant System
(ISA) 0x0000010F (271) Microsoft ACPI-Compliant System
(ISA) 0x00000110 (272) Microsoft ACPI-Compliant System
(ISA) 0x00000111 (273) Microsoft ACPI-Compliant System
(ISA) 0x00000112 (274) Microsoft ACPI-Compliant System
(ISA) 0x00000113 (275) Microsoft ACPI-Compliant System

Interrupt Controller (IRQ) Map (cont'd)

(ISA) 0x00000114 (276) Microsoft ACPI-Compliant System
(ISA) 0x00000115 (277) Microsoft ACPI-Compliant System
(ISA) 0x00000116 (278) Microsoft ACPI-Compliant System
(ISA) 0x00000117 (279) Microsoft ACPI-Compliant System
(ISA) 0x00000118 (280) Microsoft ACPI-Compliant System
(ISA) 0x00000119 (281) Microsoft ACPI-Compliant System
(ISA) 0x0000011A (282) Microsoft ACPI-Compliant System
(ISA) 0x0000011B (283) Microsoft ACPI-Compliant System
(ISA) 0x0000011C (284) Microsoft ACPI-Compliant System
(ISA) 0x0000011D (285) Microsoft ACPI-Compliant System
(ISA) 0x0000011E (286) Microsoft ACPI-Compliant System
(ISA) 0x0000011F (287) Microsoft ACPI-Compliant System
(ISA) 0x00000120 (288) Microsoft ACPI-Compliant System
(ISA) 0x00000121 (289) Microsoft ACPI-Compliant System
(ISA) 0x00000122 (290) Microsoft ACPI-Compliant System
(ISA) 0x00000123 (291) Microsoft ACPI-Compliant System
(ISA) 0x00000124 (292) Microsoft ACPI-Compliant System
(ISA) 0x00000125 (293) Microsoft ACPI-Compliant System
(ISA) 0x00000126 (294) Microsoft ACPI-Compliant System
(ISA) 0x00000127 (295) Microsoft ACPI-Compliant System
(ISA) 0x00000128 (296) Microsoft ACPI-Compliant System
(ISA) 0x00000129 (297) Microsoft ACPI-Compliant System
(ISA) 0x0000012A (298) Microsoft ACPI-Compliant System
(ISA) 0x0000012B (299) Microsoft ACPI-Compliant System
(ISA) 0x0000012C (300) Microsoft ACPI-Compliant System
(ISA) 0x0000012D (301) Microsoft ACPI-Compliant System
(ISA) 0x0000012E (302) Microsoft ACPI-Compliant System
(ISA) 0x0000012F (303) Microsoft ACPI-Compliant System
(ISA) 0x00000130 (304) Microsoft ACPI-Compliant System
(ISA) 0x00000131 (305) Microsoft ACPI-Compliant System
(ISA) 0x00000132 (306) Microsoft ACPI-Compliant System
(ISA) 0x00000133 (307) Microsoft ACPI-Compliant System
(ISA) 0x00000134 (308) Microsoft ACPI-Compliant System
(ISA) 0x00000135 (309) Microsoft ACPI-Compliant System
(ISA) 0x00000136 (310) Microsoft ACPI-Compliant System
(ISA) 0x00000137 (311) Microsoft ACPI-Compliant System
(ISA) 0x00000138 (312) Microsoft ACPI-Compliant System
(ISA) 0x00000139 (313) Microsoft ACPI-Compliant System
(ISA) 0x0000013A (314) Microsoft ACPI-Compliant System
(ISA) 0x0000013B (315) Microsoft ACPI-Compliant System
(ISA) 0x0000013C (316) Microsoft ACPI-Compliant System
(ISA) 0x0000013D (317) Microsoft ACPI-Compliant System
(ISA) 0x0000013E (318) Microsoft ACPI-Compliant System
(ISA) 0x0000013F (319) Microsoft ACPI-Compliant System
(ISA) 0x00000140 (320) Microsoft ACPI-Compliant System
(ISA) 0x00000141 (321) Microsoft ACPI-Compliant System
(ISA) 0x00000142 (322) Microsoft ACPI-Compliant System
(ISA) 0x00000143 (323) Microsoft ACPI-Compliant System
(ISA) 0x00000144 (324) Microsoft ACPI-Compliant System
(ISA) 0x00000145 (325) Microsoft ACPI-Compliant System
(ISA) 0x00000146 (326) Microsoft ACPI-Compliant System
(ISA) 0x00000147 (327) Microsoft ACPI-Compliant System
(ISA) 0x00000148 (328) Microsoft ACPI-Compliant System
(ISA) 0x00000149 (329) Microsoft ACPI-Compliant System
(ISA) 0x0000014A (330) Microsoft ACPI-Compliant System
(ISA) 0x0000014B (331) Microsoft ACPI-Compliant System
(ISA) 0x0000014C (332) Microsoft ACPI-Compliant System
(ISA) 0x0000014D (333) Microsoft ACPI-Compliant System
(ISA) 0x0000014E (334) Microsoft ACPI-Compliant System
(ISA) 0x0000014F (335) Microsoft ACPI-Compliant System

Interrupt Controller (IRQ) Map (cont'd)

(ISA) 0x00000150 (336) Microsoft ACPI-Compliant System
(ISA) 0x00000151 (337) Microsoft ACPI-Compliant System
(ISA) 0x00000152 (338) Microsoft ACPI-Compliant System
(ISA) 0x00000153 (339) Microsoft ACPI-Compliant System
(ISA) 0x00000154 (340) Microsoft ACPI-Compliant System
(ISA) 0x00000155 (341) Microsoft ACPI-Compliant System
(ISA) 0x00000156 (342) Microsoft ACPI-Compliant System
(ISA) 0x00000157 (343) Microsoft ACPI-Compliant System
(ISA) 0x00000158 (344) Microsoft ACPI-Compliant System
(ISA) 0x00000159 (345) Microsoft ACPI-Compliant System
(ISA) 0x0000015A (346) Microsoft ACPI-Compliant System
(ISA) 0x0000015B (347) Microsoft ACPI-Compliant System
(ISA) 0x0000015C (348) Microsoft ACPI-Compliant System
(ISA) 0x0000015D (349) Microsoft ACPI-Compliant System
(ISA) 0x0000015E (350) Microsoft ACPI-Compliant System
(ISA) 0x0000015F (351) Microsoft ACPI-Compliant System
(ISA) 0x00000160 (352) Microsoft ACPI-Compliant System
(ISA) 0x00000161 (353) Microsoft ACPI-Compliant System
(ISA) 0x00000162 (354) Microsoft ACPI-Compliant System
(ISA) 0x00000163 (355) Microsoft ACPI-Compliant System
(ISA) 0x00000164 (356) Microsoft ACPI-Compliant System
(ISA) 0x00000165 (357) Microsoft ACPI-Compliant System
(ISA) 0x00000166 (358) Microsoft ACPI-Compliant System
(ISA) 0x00000167 (359) Microsoft ACPI-Compliant System
(ISA) 0x00000168 (360) Microsoft ACPI-Compliant System
(ISA) 0x00000169 (361) Microsoft ACPI-Compliant System
(ISA) 0x0000016A (362) Microsoft ACPI-Compliant System
(ISA) 0x0000016B (363) Microsoft ACPI-Compliant System
(ISA) 0x0000016C (364) Microsoft ACPI-Compliant System
(ISA) 0x0000016D (365) Microsoft ACPI-Compliant System
(ISA) 0x0000016E (366) Microsoft ACPI-Compliant System
(ISA) 0x0000016F (367) Microsoft ACPI-Compliant System
(ISA) 0x00000170 (368) Microsoft ACPI-Compliant System
(ISA) 0x00000171 (369) Microsoft ACPI-Compliant System
(ISA) 0x00000172 (370) Microsoft ACPI-Compliant System
(ISA) 0x00000173 (371) Microsoft ACPI-Compliant System
(ISA) 0x00000174 (372) Microsoft ACPI-Compliant System
(ISA) 0x00000175 (373) Microsoft ACPI-Compliant System
(ISA) 0x00000176 (374) Microsoft ACPI-Compliant System
(ISA) 0x00000177 (375) Microsoft ACPI-Compliant System
(ISA) 0x00000178 (376) Microsoft ACPI-Compliant System
(ISA) 0x00000179 (377) Microsoft ACPI-Compliant System
(ISA) 0x0000017A (378) Microsoft ACPI-Compliant System
(ISA) 0x0000017B (379) Microsoft ACPI-Compliant System
(ISA) 0x0000017C (380) Microsoft ACPI-Compliant System
(ISA) 0x0000017D (381) Microsoft ACPI-Compliant System
(ISA) 0x0000017E (382) Microsoft ACPI-Compliant System
(ISA) 0x0000017F (383) Microsoft ACPI-Compliant System
(ISA) 0x00000180 (384) Microsoft ACPI-Compliant System
(ISA) 0x00000181 (385) Microsoft ACPI-Compliant System
(ISA) 0x00000182 (386) Microsoft ACPI-Compliant System
(ISA) 0x00000183 (387) Microsoft ACPI-Compliant System
(ISA) 0x00000184 (388) Microsoft ACPI-Compliant System
(ISA) 0x00000185 (389) Microsoft ACPI-Compliant System
(ISA) 0x00000186 (390) Microsoft ACPI-Compliant System
(ISA) 0x00000187 (391) Microsoft ACPI-Compliant System
(ISA) 0x00000188 (392) Microsoft ACPI-Compliant System
(ISA) 0x00000189 (393) Microsoft ACPI-Compliant System
(ISA) 0x0000018A (394) Microsoft ACPI-Compliant System
(ISA) 0x0000018B (395) Microsoft ACPI-Compliant System

Interrupt Controller (IRQ) Map (cont'd)

(ISA) 0x0000018C (396) Microsoft ACPI-Compliant System
(ISA) 0x0000018D (397) Microsoft ACPI-Compliant System
(ISA) 0x0000018E (398) Microsoft ACPI-Compliant System
(ISA) 0x0000018F (399) Microsoft ACPI-Compliant System
(ISA) 0x00000190 (400) Microsoft ACPI-Compliant System
(ISA) 0x00000191 (401) Microsoft ACPI-Compliant System
(ISA) 0x00000192 (402) Microsoft ACPI-Compliant System
(ISA) 0x00000193 (403) Microsoft ACPI-Compliant System
(ISA) 0x00000194 (404) Microsoft ACPI-Compliant System
(ISA) 0x00000195 (405) Microsoft ACPI-Compliant System
(ISA) 0x00000196 (406) Microsoft ACPI-Compliant System
(ISA) 0x00000197 (407) Microsoft ACPI-Compliant System
(ISA) 0x00000198 (408) Microsoft ACPI-Compliant System
(ISA) 0x00000199 (409) Microsoft ACPI-Compliant System
(ISA) 0x0000019A (410) Microsoft ACPI-Compliant System
(ISA) 0x0000019B (411) Microsoft ACPI-Compliant System
(ISA) 0x0000019C (412) Microsoft ACPI-Compliant System
(ISA) 0x0000019D (413) Microsoft ACPI-Compliant System
(ISA) 0x0000019E (414) Microsoft ACPI-Compliant System
(ISA) 0x0000019F (415) Microsoft ACPI-Compliant System
(ISA) 0x000001A0 (416) Microsoft ACPI-Compliant System
(ISA) 0x000001A1 (417) Microsoft ACPI-Compliant System
(ISA) 0x000001A2 (418) Microsoft ACPI-Compliant System
(ISA) 0x000001A3 (419) Microsoft ACPI-Compliant System
(ISA) 0x000001A4 (420) Microsoft ACPI-Compliant System
(ISA) 0x000001A5 (421) Microsoft ACPI-Compliant System
(ISA) 0x000001A6 (422) Microsoft ACPI-Compliant System
(ISA) 0x000001A7 (423) Microsoft ACPI-Compliant System
(ISA) 0x000001A8 (424) Microsoft ACPI-Compliant System
(ISA) 0x000001A9 (425) Microsoft ACPI-Compliant System
(ISA) 0x000001AA (426) Microsoft ACPI-Compliant System
(ISA) 0x000001AB (427) Microsoft ACPI-Compliant System
(ISA) 0x000001AC (428) Microsoft ACPI-Compliant System
(ISA) 0x000001AD (429) Microsoft ACPI-Compliant System
(ISA) 0x000001AE (430) Microsoft ACPI-Compliant System
(ISA) 0x000001AF (431) Microsoft ACPI-Compliant System
(ISA) 0x000001B0 (432) Microsoft ACPI-Compliant System
(ISA) 0x000001B1 (433) Microsoft ACPI-Compliant System
(ISA) 0x000001B2 (434) Microsoft ACPI-Compliant System
(ISA) 0x000001B3 (435) Microsoft ACPI-Compliant System
(ISA) 0x000001B4 (436) Microsoft ACPI-Compliant System
(ISA) 0x000001B5 (437) Microsoft ACPI-Compliant System
(ISA) 0x000001B6 (438) Microsoft ACPI-Compliant System
(ISA) 0x000001B7 (439) Microsoft ACPI-Compliant System
(ISA) 0x000001B8 (440) Microsoft ACPI-Compliant System
(ISA) 0x000001B9 (441) Microsoft ACPI-Compliant System
(ISA) 0x000001BA (442) Microsoft ACPI-Compliant System
(ISA) 0x000001BB (443) Microsoft ACPI-Compliant System
(ISA) 0x000001BC (444) Microsoft ACPI-Compliant System
(ISA) 0x000001BD (445) Microsoft ACPI-Compliant System
(ISA) 0x000001BE (446) Microsoft ACPI-Compliant System
(ISA) 0x000001BF (447) Microsoft ACPI-Compliant System
(ISA) 0x000001C0 (448) Microsoft ACPI-Compliant System
(ISA) 0x000001C1 (449) Microsoft ACPI-Compliant System
(ISA) 0x000001C2 (450) Microsoft ACPI-Compliant System
(ISA) 0x000001C3 (451) Microsoft ACPI-Compliant System
(ISA) 0x000001C4 (452) Microsoft ACPI-Compliant System
(ISA) 0x000001C5 (453) Microsoft ACPI-Compliant System
(ISA) 0x000001C6 (454) Microsoft ACPI-Compliant System
(ISA) 0x000001C7 (455) Microsoft ACPI-Compliant System

Interrupt Controller (IRQ) Map (cont'd)

(ISA) 0x000001C8 (456) Microsoft ACPI-Compliant System
(ISA) 0x000001C9 (457) Microsoft ACPI-Compliant System
(ISA) 0x000001CA (458) Microsoft ACPI-Compliant System
(ISA) 0x000001CB (459) Microsoft ACPI-Compliant System
(ISA) 0x000001CC (460) Microsoft ACPI-Compliant System
(ISA) 0x000001CD (461) Microsoft ACPI-Compliant System
(ISA) 0x000001CE (462) Microsoft ACPI-Compliant System
(ISA) 0x000001CF (463) Microsoft ACPI-Compliant System
(ISA) 0x000001D0 (464) Microsoft ACPI-Compliant System
(ISA) 0x000001D1 (465) Microsoft ACPI-Compliant System
(ISA) 0x000001D2 (466) Microsoft ACPI-Compliant System
(ISA) 0x000001D3 (467) Microsoft ACPI-Compliant System
(ISA) 0x000001D4 (468) Microsoft ACPI-Compliant System
(ISA) 0x000001D5 (469) Microsoft ACPI-Compliant System
(ISA) 0x000001D6 (470) Microsoft ACPI-Compliant System
(ISA) 0x000001D7 (471) Microsoft ACPI-Compliant System
(ISA) 0x000001D8 (472) Microsoft ACPI-Compliant System
(ISA) 0x000001D9 (473) Microsoft ACPI-Compliant System
(ISA) 0x000001DA (474) Microsoft ACPI-Compliant System
(ISA) 0x000001DB (475) Microsoft ACPI-Compliant System
(ISA) 0x000001DC (476) Microsoft ACPI-Compliant System
(ISA) 0x000001DD (477) Microsoft ACPI-Compliant System
(ISA) 0x000001DE (478) Microsoft ACPI-Compliant System
(ISA) 0x000001DF (479) Microsoft ACPI-Compliant System
(ISA) 0x000001E0 (480) Microsoft ACPI-Compliant System
(ISA) 0x000001E1 (481) Microsoft ACPI-Compliant System
(ISA) 0x000001E2 (482) Microsoft ACPI-Compliant System
(ISA) 0x000001E3 (483) Microsoft ACPI-Compliant System
(ISA) 0x000001E4 (484) Microsoft ACPI-Compliant System
(ISA) 0x000001E5 (485) Microsoft ACPI-Compliant System
(ISA) 0x000001E6 (486) Microsoft ACPI-Compliant System
(ISA) 0x000001E7 (487) Microsoft ACPI-Compliant System
(ISA) 0x000001E8 (488) Microsoft ACPI-Compliant System
(ISA) 0x000001E9 (489) Microsoft ACPI-Compliant System
(ISA) 0x000001EA (490) Microsoft ACPI-Compliant System
(ISA) 0x000001EB (491) Microsoft ACPI-Compliant System
(ISA) 0x000001EC (492) Microsoft ACPI-Compliant System
(ISA) 0x000001ED (493) Microsoft ACPI-Compliant System
(ISA) 0x000001EE (494) Microsoft ACPI-Compliant System
(ISA) 0x000001EF (495) Microsoft ACPI-Compliant System
(ISA) 0x000001F0 (496) Microsoft ACPI-Compliant System
(ISA) 0x000001F1 (497) Microsoft ACPI-Compliant System
(ISA) 0x000001F2 (498) Microsoft ACPI-Compliant System
(ISA) 0x000001F3 (499) Microsoft ACPI-Compliant System
(ISA) 0x000001F4 (500) Microsoft ACPI-Compliant System
(ISA) 0x000001F5 (501) Microsoft ACPI-Compliant System
(ISA) 0x000001F6 (502) Microsoft ACPI-Compliant System
(ISA) 0x000001F7 (503) Microsoft ACPI-Compliant System
(ISA) 0x000001F8 (504) Microsoft ACPI-Compliant System
(ISA) 0x000001F9 (505) Microsoft ACPI-Compliant System
(ISA) 0x000001FA (506) Microsoft ACPI-Compliant System
(ISA) 0x000001FB (507) Microsoft ACPI-Compliant System
(ISA) 0x000001FC (508) Microsoft ACPI-Compliant System
(ISA) 0x000001FD (509) Microsoft ACPI-Compliant System
(ISA) 0x000001FE (510) Microsoft ACPI-Compliant System

Interrupt Controller (IRQ) Map (cont'd)

(ISA) 0x000001FF (511) Microsoft ACPI-Compliant System
(PCI) 0x0000000A (10) Intel Device
(PCI) 0x00000010 (16) PCI standard PCI-to-PCI bridge
(PCI) 0x00000011 (17) PCI standard PCI-to-PCI bridge
(PCI) 0x00000012 (18) SDA Standard Compliant SD Host Controller
(PCI) 0x00000013 (19) Standard SATA AHCI Controller
(PCI) 0x00000016 (22) High Definition Audio Controller
(PCI) 0x00000017 (23) Standard Enhanced PCI to USB Host Controller
(PCI) 0xFFFFFFF1 (-15) Intel(R) I210 Gigabit Network Connection #5
(PCI) 0xFFFFFFF2 (-14) Intel(R) I210 Gigabit Network Connection #5
(PCI) 0xFFFFFFF3 (-13) Intel(R) I210 Gigabit Network Connection #5
(PCI) 0xFFFFFFF4 (-12) Intel(R) I210 Gigabit Network Connection #5
(PCI) 0xFFFFFFF5 (-11) Intel(R) I210 Gigabit Network Connection #5
(PCI) 0xFFFFFFF6 (-10) Intel(R) I210 Gigabit Network Connection #5
(PCI) 0xFFFFFFF7 (-9) Intel(R) I210 Gigabit Network Connection #6
(PCI) 0xFFFFFFF8 (-8) Intel(R) I210 Gigabit Network Connection #6
(PCI) 0xFFFFFFF9 (-7) Intel(R) I210 Gigabit Network Connection #6
(PCI) 0xFFFFFFFA (-6) Intel(R) I210 Gigabit Network Connection #6
(PCI) 0xFFFFFFFB (-5) Intel(R) I210 Gigabit Network Connection #6
(PCI) 0xFFFFFFFC (-4) Intel(R) I210 Gigabit Network Connection #6
(PCI) 0xFFFFFFFD (-3) Intel(R) Trusted Execution Engine Interface
(PCI) 0xFFFFFFFE (-2) Intel(R) HD Graphics

5.3 Memory Map

The memory map of DRAM for the CT-DBT0x under Windows® 7 Ultimate 64-bit is shown below.

Memory
- [00000000000A0000 - 00000000000BFFFF] Intel(R) HD Graphics
- [00000000000A0000 - 00000000000BFFFF] PCI Express Root Complex
- [00000000000C0000 - 00000000000DFFFF] PCI Express Root Complex
- [00000000000DF000 - 00000000000DFFFF] SDA Standard Compliant SD Host Controller
- [00000000000E0000 - 00000000000FFFFF] PCI Express Root Complex
- [00000000A0000000 - 00000000AFFFFFFF] Intel(R) HD Graphics
- [00000000A0000000 - 00000000AFFFFFFF] Intel(R) HD Graphics
- [00000000A0000000 - 00000000AFFFFFFF] Intel(R) HD Graphics
- [00000000A0000000 - 00000000B0808FFE] PCI Express Root Complex
- [00000000B0000000 - 00000000B03FFFFF] Intel(R) HD Graphics
- [00000000B0000000 - 00000000B03FFFFF] Intel(R) HD Graphics
- [00000000B0000000 - 00000000B03FFFFF] Intel(R) HD Graphics
- [00000000B0400000 - 00000000B04FFFFF] Intel(R) Trusted Execution Engine Interface
- [00000000B0400000 - 00000000B04FFFFF] Intel(R) Trusted Execution Engine Interface
- [00000000B0500000 - 00000000B05FFFFF] Intel(R) Trusted Execution Engine Interface
- [00000000B0500000 - 00000000B05FFFFF] Intel(R) Trusted Execution Engine Interface
- [00000000B0600000 - 00000000B0607FFF] ASMedia USB 3.0 eXtensible Host Controller - 0096 (Microsoft)
- [00000000B0600000 - 00000000B067FFFF] Intel(R) I210 Gigabit Network Connection #5
- [00000000B0600000 - 00000000B067FFFF] Intel(R) I210 Gigabit Network Connection
- [00000000B0600000 - 00000000B067FFFF] Intel(R) I210 Gigabit Network Connection #3
- [00000000B0600000 - 00000000B06FFFFF] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor PCI Express - Root Port 2 - 0F4A
- [00000000B0600000 - 00000000B06FFFFF] PCI standard PCI-to-PCI bridge
- [00000000B0600000 - 00000000B06FFFFF] PCI standard PCI-to-PCI bridge
- [00000000B0600000 - 00000000B06FFFFF] PCI standard PCI-to-PCI bridge
- [00000000B0680000 - 00000000B0683FFF] Intel(R) I210 Gigabit Network Connection #5
- [00000000B0680000 - 00000000B0683FFF] Intel(R) I210 Gigabit Network Connection
- [00000000B0680000 - 00000000B0683FFF] Intel(R) I210 Gigabit Network Connection #3
- [00000000B0700000 - 00000000B0707FFF] ASMedia USB 3.0 eXtensible Host Controller - 0096 (Microsoft)
- [00000000B0700000 - 00000000B077FFFF] Intel(R) I210 Gigabit Network Connection #6
- [00000000B0700000 - 00000000B077FFFF] Intel(R) I210 Gigabit Network Connection #2
- [00000000B0700000 - 00000000B077FFFF] Intel(R) I210 Gigabit Network Connection #4
- [00000000B0700000 - 00000000B07FFFFF] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor PCI Express - Root Port 1 - 0F48
- [00000000B0700000 - 00000000B07FFFFF] PCI standard PCI-to-PCI bridge
- [00000000B0700000 - 00000000B07FFFFF] PCI standard PCI-to-PCI bridge
- [00000000B0700000 - 00000000B07FFFFF] PCI standard PCI-to-PCI bridge
- [00000000B0780000 - 00000000B0783FFF] Intel(R) I210 Gigabit Network Connection #6
- [00000000B0780000 - 00000000B0783FFF] Intel(R) I210 Gigabit Network Connection #2
- [00000000B0780000 - 00000000B0783FFF] Intel(R) I210 Gigabit Network Connection #4
- [00000000B0800000 - 00000000B0803FFF] High Definition Audio Controller
- [00000000B0800000 - 00000000B0803FFF] High Definition Audio Controller
- [00000000B0800000 - 00000000B0803FFF] High Definition Audio Controller
- [00000000B0800000 - 00000000B080FFFF] Intel(R) USB 3.0 eXtensible Host Controller - 0100 (Microsoft)
- [00000000B0804000 - 00000000B080401F] Intel Device
- [00000000B0804000 - 00000000B080401F] Intel Device
- [00000000B0804000 - 00000000B080401F] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor Platform Control Unit - SMBus Port - 0F12
- [00000000B0805000 - 00000000B08053FF] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor EHCI USB - 0F34
- [00000000B0805000 - 00000000B08053FF] Standard Enhanced PCI to USB Host Controller
- [00000000B0805000 - 00000000B08053FF] Standard Enhanced PCI to USB Host Controller
- [00000000B0806000 - 00000000B08067FF] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor AHCI - 0F23
- [00000000B0806000 - 00000000B08067FF] Standard SATA AHCI Controller

Memory Map (cont'd)

[00000000B0600000 - 00000000B06FFFFF] PCI standard PCI-to-PCI bridge
[00000000B0600000 - 00000000B06FFFFF] PCI standard PCI-to-PCI bridge
[00000000B0600000 - 00000000B06FFFFF] PCI standard PCI-to-PCI bridge
[00000000B0680000 - 00000000B0683FFF] Intel(R) I210 Gigabit Network Connection #5
[00000000B0680000 - 00000000B0683FFF] Intel(R) I210 Gigabit Network Connection
[00000000B0680000 - 00000000B0683FFF] Intel(R) I210 Gigabit Network Connection #3
[00000000B0700000 - 00000000B0707FFF] ASMedia USB 3.0 eXtensible Host Controller - 0096 (Microsoft)
[00000000B0700000 - 00000000B077FFFF] Intel(R) I210 Gigabit Network Connection #6
[00000000B0700000 - 00000000B077FFFF] Intel(R) I210 Gigabit Network Connection #2
[00000000B0700000 - 00000000B077FFFF] Intel(R) I210 Gigabit Network Connection #4
[00000000B0700000 - 00000000B07FFFFF] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor PCI Express - Root Port 1 - 0F48
[00000000B0700000 - 00000000B07FFFFF] PCI standard PCI-to-PCI bridge
[00000000B0700000 - 00000000B07FFFFF] PCI standard PCI-to-PCI bridge
[00000000B0700000 - 00000000B07FFFFF] PCI standard PCI-to-PCI bridge
[00000000B0780000 - 00000000B0783FFF] Intel(R) I210 Gigabit Network Connection #6
[00000000B0780000 - 00000000B0783FFF] Intel(R) I210 Gigabit Network Connection #2
[00000000B0780000 - 00000000B0783FFF] Intel(R) I210 Gigabit Network Connection #4
[00000000B0800000 - 00000000B0803FFF] High Definition Audio Controller
[00000000B0800000 - 00000000B0803FFF] High Definition Audio Controller
[00000000B0800000 - 00000000B0803FFF] High Definition Audio Controller
[00000000B0800000 - 00000000B080FFFF] Intel(R) USB 3.0 eXtensible Host Controller - 0100 (Microsoft)
[00000000B0804000 - 00000000B080401F] Intel Device
[00000000B0804000 - 00000000B080401F] Intel Device
[00000000B0804000 - 00000000B080401F] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor Platform Control Unit - SMBus Port - 0F12
[00000000B0805000 - 00000000B08053FF] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor EHCI USB - 0F34
[00000000B0805000 - 00000000B08053FF] Standard Enhanced PCI to USB Host Controller
[00000000B0805000 - 00000000B08053FF] Standard Enhanced PCI to USB Host Controller
[00000000B0806000 - 00000000B08067FF] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor AHCI - 0F23
[00000000B0806000 - 00000000B08067FF] Standard SATA AHCI Controller
[00000000B0806000 - 00000000B08067FF] Standard SATA AHCI Controller
[00000000B0807000 - 00000000B0807FFF] SDA Standard Compliant SD Host Controller
[00000000B0807000 - 00000000B0807FFF] SDA Standard Compliant SD Host Controller
[00000000B0807000 - 00000000B0807FFF] SDA Standard Compliant SD Host Controller
[00000000B0808000 - 00000000B0808FFF] SDA Standard Compliant SD Host Controller
[00000000B0808000 - 00000000B0808FFF] SDA Standard Compliant SD Host Controller
[00000000B0A00000 - 00000000B0A0FFFF] Intel(R) USB 3.0 eXtensible Host Controller - 0100 (Microsoft)
[00000000E0000000 - 00000000EFFFFFFF] Motherboard resources
[00000000FED00000 - 00000000FED003FF] High precision event timer
[00000000FED01000 - 00000000FED01FFF] Motherboard resources
[00000000FED03000 - 00000000FED03FFF] Motherboard resources
[00000000FED04000 - 00000000FED04FFF] Motherboard resources
[00000000FED08000 - 00000000FED08FFF] Motherboard resources
[00000000FED0C000 - 00000000FED0CFFF] GPIO Controller
[00000000FED0D000 - 00000000FED0DFFF] GPIO Controller
[00000000FED0E000 - 00000000FED0EFFF] GPIO Controller
[00000000FED1C000 - 00000000FED1CFFF] Motherboard resources
[00000000FEE00000 - 00000000FEEFFFFF] Motherboard resources
[00000000FEF00000 - 00000000FEFFFFFF] Motherboard resources
[00000000FF000000 - 00000000FFFFFFFF] Intel(R) 82802 Firmware Hub Device
[00000000FF000000 - 00000000FFFFFFFF] Intel(R) 82802 Firmware Hub Device
[00000000FF000000 - 00000000FFFFFFFF] Intel(R) 82802 Firmware Hub Device