COM-BT

Intel® Celeron® J1900, N2930, N2807
and Atom™ E3800 Series Processor
Gigabit Ethernet
2 SATA 3.0Gb/s
6 USB2.0, 1 USB3.0 (combine USB2.0)
3 PCI-E[x1]
COM Express Compact Module

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Packing List

Before you begin installing your card, please make sure that the following materials have been shipped:

- 4 M2.5 Screw
- 1 DVD-ROM for manual (in PDF format) and drivers
- 1 COM-BT

If any of these items should be missing or damaged, please contact your distributor or sales representative immediately.

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Chapter

1

General Information

1.1 Introduction

AAEON, a leading embedded board manufacturer, is pleased to announce the debut of their new generation COM Express Module-COM-BT. The COM-BT is a cutting-edge product that provides high performance and low power consumption in the embedded market.

COM-BT adopts the latest Intel® Celeron® J1900, N2930, N2807 and Atom™ E3800 Series product family. The system memory deploys with one DDR3L 1066/1333 MHz SODIMM up to 8 GB (4GB max for E3815/E3825/N2807). In addition, Intel® I211 supports Gigabit Ethernet that allows faster network connections. This model applies four PCI-Express[x1] (one shared with Gigabit LAN). Moreover, two SATA 3.0Gb/s are configured on the COM-BT. COM-BT also equips USB2.0 x6, USB3.0 x1(combine USB2.0 x1) for flexible I/O expansions.

The display of COM-BT supports up to two independent displays simultaneously. This brand new COM Express Module is developed to cater to the requirements of Automation, Medical, ticket machine, transportation, gaming, KIOSK, and POS/POI applications.

1.2 Features

- Onboard Intel® Celeron® J1900, N2930, N2807 and Atom™ E3800 Series
- DDR3L 1066/1333 MHz SODIMM x 1, Up to 8 GB (4GB max for E3815/E3825/N2807)
- Intel® Gigabit Ethernet
- CRT, Up to 24-bit Dual-channel LVDS LCD, DP/HDMI
- High Definition Audio Interface
- SATA 3.0Gb/s x 2,
- USB2.0 x6, USB3.0 x1(combine USB2.0 x1)
- PCI-Express [x1] x 3
- COM Express Compact Module, Pin-out Type 6, COM.0 Rev. 2.1

1.3 Specifications

System

Form Factor	COM Express Compact module, Pin-out Type 6, COM. 0 Rev. 2.1
Processor	Onboard Intel® Celeron® J1900 (2.0GHz), N2930 (1.83GHz), N2807(1.58GHz); Intel® Atom™ Processor E3800 series: Quad core: E3845 (1.91 GHz) Dual core: E3827 (1.75 GHz) Single core: E3815 (1.46 GHz)
System Memory	DDR3L 1066/ 1333 MHz SODIMM x 1, Max. 8GB (Max. 4GB for E3815/E3825/N2807)
Chipset	Intel® Celeron® J1900, N2930, N2807 and Atom™ E3800 Series
I/O Chipset	Intel® Celeron® J1900, N2930, N2807 and Atom™ E3800 Series
Ethernet	Intel® I211, Gigabit Ethernet
TPM	v1.2 (Optional)
BIOS	AMI BIOS SPI type, 8MB ROM
Wake On LAN	Yes
Watchdog Timer	ITE IT8528, 255 levels
H/W Status Monitoring	Supports CPU Temperature Monitoring
Expansion Interface	PCI-Express [x1] x 4 (one shared with Gigabit LAN)
Power Requirement	Nominal: +12V
Board Size	3.74" (L) x 3.74"(W) (95mm x 95mm)
Gross Weight	0.55 lb (0.25kg)
Operating	32°F ~ 140°F (0°C ~ 60°C)

Temperature

- **Storage Temperature** -40°F ~ 176°F (-40°C ~ 80°C)
- **Operating Humidity** 0% ~ 90% relative humidity, non-condensing
- **MTBF** 81,000 hours
- **OS Support** Windows® 7, Windows® 8, Linux Fedora

Display: Supports CRT/LVDS simultaneous/ dual view displays

- **Chipset** Intel® Celeron® J1900, N2930, N2807 and Atom™ E3800 Series
- **Memory** Shared system memory up to 512MB/ DVMT 5.0
- **Resolution** Up to 2560 x 1600 for HDMI, DisplayPort, VGA
- **LCD Interface** Up to18/24 bits dual-channel LVDS

I/O

- **Storage** SATA 3.0Gb/s x 2
- **Serial Port** 2 (Tx/ Rx only)
- **USB** USB2.0 x6, USB3.0 x1(combine USB2.0 x1)
- **Audio** High definition audio
- **GPIO** Up to 4 in and 4 out

Chapter

2

Quick Installation Guide

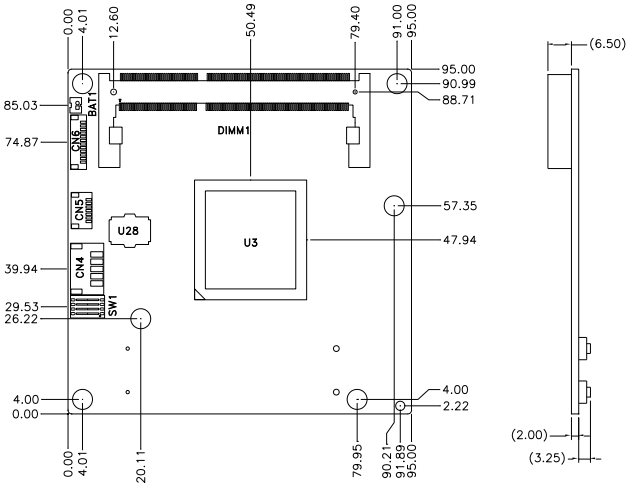
2.1 Safety Precautions

Always completely disconnect the power cord from your board whenever you are working on it. Do not make connections while the power is on, because a sudden rush of power can damage sensitive electronic components.

Always ground yourself to remove any static charge before touching the board. Modern electronic devices are very sensitive to static electric charges. Use a grounding wrist strap at all times. Place all electronic components on a static-dissipative surface or in a static-shielded bag when they are not in the chassis

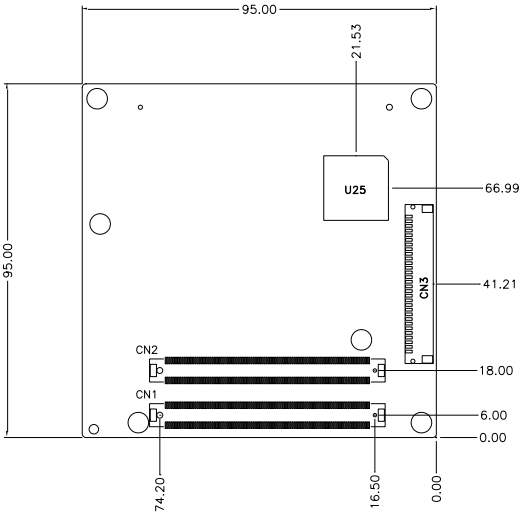
2.2 Mechanical Drawings of Connectors and Switches

Component Side



Solder Side

Component Side



Solder Side

2.3 List of Switch and Connectors

There is a switch on the board that allows you to configure your system to suit your application. The table below shows the function of the switch and connectors:

Label	Function
SW1	1. Carrier Board DP/HDMI Function 2. LVDS Function 3. AT & ATX mode 4. RCT Rest setting
BAT1	RTC Battery
CN1	ROW A/B
CN2	ROW C/D
CN3	eDP Connector
CN4	eDP Backlight
CN5	SPI Connector
CN6	LPC Connector
DIMM1	DDR3L Socket

2.4 Carrier Board DP/HDMI Function, LVDS Function, AT & ATX Mode, RCT Rest Setting (SW1)

	OFF	ON
1	DP/HDMI[1](Default)	eDP on MB(Optional)
2	DP/HDMI[2](Optional)	LVDS(Default)
3	ATX (Default)	AT
4	Normal(Default)	Clear CMOS

2.5 COM Express ROW A/B Connector (CN1)

Row A

Pin	COMe 2.1 SPEC Type 6	COM-BT Signal
A1	GND	GND
A2	GBE0_MDI3-	GBE0_MDI3-
A3	GBE0_MDI3+	GBE0_MDI3+
A4	GBE0_LNIK100#	GBE0_LNIK100#
A5	GBE0_LNIK1000#	GBE0_LNIK1000#
A6	GBE0_MDI2-	GBE0_MDI2-
A7	GBE0_MDI2+	GBE0_MDI2+
A8	GBE0_LINK#	GBE0_LINK#
A9	GBE0_MDI1-	GBE0_MDI1-
A10	GBE0_MDI1+	GBE0_MDI1+
A11	GND	GND
A12	GBE0_MDI0-	GBE0_MDI0-

A13	GBE0_MDI0+	GBE0_MDI0+
A14	GBE0_CTREF	GBE0_CTREF
A15	SUS_S3#	SUS_S3#
A16	SATA0_TX+	SATA0_TX+
A17	SATA0_TX-	SATA0_TX-
A18	SUS_S4#	SUS_S4#
A19	SATA0_RX+	SATA0_RX+
A20	SATA0_RX-	SATA0_RX-
A21	GND	GND
A22	SATA2_TX+	NC
A23	SATA2_TX-	NC
A24	SUS_S5#	SUS_S5#
A25	SATA2_RX+	NC
A26	SATA2_RX-	NC
A27	BATLOW#	BATLOW#
A28	(S)ATA_ACT#	(S)ATA_ACT#
A29	AC/HDA_SYNC	AC/HDA_SYNC
A30	AC/HDA_RST#	AC/HDA_RST#
A31	GND	GND
A32	AC/HDA_BITCLK	AC/HDA_BITCLK
A33	AC/HDA_SDOUT	AC/HDA_SDOUT
A34	BIOS_DIS0#	BIOS_DIS0#
A35	THRMTRIP#	THRMTRIP#
A36	USB6-	USB6-

A37	USB6+	USB6+
A38	USB_6_7_OC#	USB_6_7_OC#
A39	USB4-	USB4-
A40	USB4+	USB4+
A41	GND	GND
A42	USB2-	USB2-
A43	USB2+	USB2+
A44	USB_2_3_OC#	USB_2_3_OC#
A45	USB0-	USB0-
A46	USB0+	USB0+
A47	VCC_RTC	VCC_RTC
A48	EXCD0_PERST#	EXCD0_PERST#
A49	EXCD0_CPPE#	EXCD0_CPPE#
A50	LPC_SERIRQ	LPC_SERIRQ
A51	GND	GND
A52	PCIE_TX5+	NC
A53	PCIE_TX5-	NC
A54	GPI0	GPI0
A55	PCIE_TX4+	NC
A56	PCIE_TX4-	NC
A57	GND	GND
A58	PCIE_TX3+	PCIE_TX3+
A59	PCIE_TX3-	PCIE_TX3-
A60	GND	GND

A61	PCIE_TX2+	PCIE_TX2+
A62	PCIE_TX2-	PCIE_TX2-
A63	GPI1	GPI1
A64	PCIE_TX1+	PCIE_TX1+
A65	PCIE_TX1-	PCIE_TX1-
A66	GND	GND
A67	GPI2	GPI2
A68	PCIE_TX0+	PCIE_TX0+
A69	PCIE_TX0-	PCIE_TX0-
A70	GND	GND
A71	LVDS_A0+	LVDS_A0+
A72	LVDS_A0-	LVDS_A0-
A73	LVDS_A1+	LVDS_A1+
A74	LVDS_A1-	LVDS_A1-
A75	LVDS_A2+	LVDS_A2+
A76	LVDS_A2-	LVDS_A2-
A77	LVDS_VDD_EN	LVDS_VDD_EN
A78	LVDS_A3+	LVDS_A3+
A79	LVDS_A3-	LVDS_A3-
A80	GND	GND
A81	LVDS_A_CK+	LVDS_A_CK+
A82	LVDS_A_CK-	LVDS_A_CK-
A83	LVDS_I2C_CK	LVDS_I2C_CK
A84	LVDS_I2C_DAT	LVDS_I2C_DAT

A85	GPI3	GPI3
A86	RSVD	NC
A87	RSVD	NC
A88	PCIE_CLK_REF+	PCIE_CLK_REF+
A89	PCIE_CLK_REF-	PCIE_CLK_REF-
A90	GND	GND
A91	SPI_POWER	SPI_POWER
A92	SPI_MISO	SPI_MISO
A93	GPO0	GPO0
A94	SPI_CLK	SPI_CLK
A95	SPI_MOSI	SPI_MOSI
A96	TPM_PP	TPM_PP
A97	TYPE10#	NC
A98	SER0_TX	SER0_TX
A99	SER0_RX	SER0_RX
A100	GND	GND
A101	SER1_TX	SER1_TX
A102	SER1_RX	SER1_RX
A103	LID#	LID#
A104	VCC_12V	VCC_12V
A105	VCC_12V	VCC_12V
A106	VCC_12V	VCC_12V
A107	VCC_12V	VCC_12V
A108	VCC_12V	VCC_12V

A109	VCC_12V	VCC_12V
A110	GND	GND

Row B

Pin	COMe 2.1 SPEC Type 6	COM-BT Signal
B1	GND	GND
B2	GBE0_ACT#	GBE0_ACT#
B3	LPC_FRAME#	LPC_FRAME#
B4	LPC_AD0	LPC_AD0
B5	LPC_AD1	LPC_AD1
B6	LPC_AD2	LPC_AD2
B7	LPC_AD3	LPC_AD3
B8	LPC_DRQ0#	NC
B9	LPC_DRQ1#	NC
B10	LPC_CLK	LPC_CLK
B11	GND	GND
B12	PWRBTN#	PWRBTN#
B13	SMB_CK	SMB_CK
B14	SMB_DAT	SMB_DAT
B15	SMB_ALERT#	SMB_ALERT#
B16	SATA1_TX+	SATA1_TX+
B17	SATA1_TX-	SATA1_TX-
B18	SUS_STAT#	SUS_STAT#
B19	SATA1_RX+	SATA1_RX+
B20	SATA1_RX-	SATA1_RX-

B21	GND	GND
B22	SATA3_TX+	NC
B23	SATA3_TX-	NC
B24	PWR_OK	PWR_OK
B25	SATA3_RX+	NC
B26	SATA3_RX-	NC
B27	WDT	WDT
B28	AC/HDA_SDIN2	AC/HDA_SDIN2
B29	AC/HDA_SDIN1	AC/HDA_SDIN1
B30	AC/HDA_SDIN0	AC/HDA_SDIN0
B31	GND	GND
B32	SPKR	SPKR
B33	I2C_CK	I2C_CK
B34	I2C_DAT	I2C_DAT
B35	THRM#	THRM#
B36	USB7-	NC
B37	USB7+	NC
B38	USB_4_5_OC#	USB_4_5_OC#
B39	USB5-	USB5-
B40	USB5+	USB5+
B41	GND	GND
B42	USB3-	USB3-
B43	USB3+	USB3+
B44	USB_0_1_OC#	USB_0_1_OC#

B45	USB1-	USB1-
B46	USB1+	USB1+
B47	EXCD1_PERST#	EXCD1_PERST#
B48	EXCD1_CPPE#	EXCD1_CPPE#
B49	SYS_RESET#	SYS_RESET#
B50	CB_RESET#	CB_RESET#
B51	GND	GND
B52	PCIE_RX5+	NC
B53	PCIE_RX5-	NC
B54	GPO1	GPO1
B55	PCIE_RX4+	NC
B56	PCIE_RX4-	NC
B57	GPO2	GPO2
B58	PCIE_RX3+	PCIE_RX3+
B59	PCIE_RX3-	PCIE_RX3-
B60	GND	GND
B61	PCIE_RX2+	PCIE_RX2+
B62	PCIE_RX2-	PCIE_RX2-
B63	GPO3	GPO3
B64	PCIE_RX1+	PCIE_RX1+
B65	PCIE_RX1-	PCIE_RX1-
B66	WAKE0#	WAKE0#
B67	WAKE1#	WAKE1#
B68	PCIE_RX0+	PCIE_RX0+

B69	PCIE_RX0-	PCIE_RX0-
B70	GND	GND
B71	LVDS_B0+	LVDS_B0+
B72	LVDS_B0-	LVDS_B0-
B73	LVDS_B1+	LVDS_B1+
B74	LVDS_B1-	LVDS_B1-
B75	LVDS_B2+	LVDS_B2+
B76	LVDS_B2-	LVDS_B2-
B77	LVDS_B3+	LVDS_B3+
B78	LVDS_B3-	LVDS_B3-
B79	LVDS_BKLT_EN	LVDS_BKLT_EN
B80	GND	GND
B81	LVDS_B_CK+	LVDS_B_CK+
B82	LVDS_B_CK-	LVDS_B_CK-
B83	LVDS_BKLT_CTRL	LVDS_BKLT_CTRL
B84	VCC_5V_SBY	VCC_5V_SBY
B85	VCC_5V_SBY	VCC_5V_SBY
B86	VCC_5V_SBY	VCC_5V_SBY
B87	VCC_5V_SBY	VCC_5V_SBY
B88	BIOS_DIS1#	BIOS_DIS1#
B89	VGA_RED	VGA_RED
B90	GND	GND
B91	VGA_GRN	VGA_GRN
B92	VGA_BLU	VGA_BLU

B93	VGA_HSYNC	VGA_HSYNC
B94	VGA_VSYNC	VGA_VSYNC
B95	VGA_I2C_CK	VGA_I2C_CK
B96	VGA_I2C_DAT	VGA_I2C_DAT
B97	SPI_CS#	SPI_CS#
B98	RSVD	SMI#
B99	RSVD	SCI#
B100	GND	GND
B101	FAN_PWMOUT	FAN_PWMOUT
B102	FAN_TACHIN	FAN_TACHIN
B103	SLEEP#	SLEEP#
B104	VCC_12V	VCC_12V
B105	VCC_12V	VCC_12V
B106	VCC_12V	VCC_12V
B107	VCC_12V	VCC_12V
B108	VCC_12V	VCC_12V
B109	VCC_12V	VCC_12V
B110	GND	GND

2.6 COM Express ROW C/D Connector (CN2)

Row C

Pin	COMe 2.1 SPEC Type 6	COM-BT Signal
C1	GND	GND
C2	GND	GND

C3	USB_SSRX0-	USB_SSRX0-
C4	USB_SSRX0+	USB_SSRX0+
C5	GND	GND
C6	USB_SSRX1-	NC
C7	USB_SSRX1+	NC
C8	GND	GND
C9	USB_SSRX2-	NC
C10	USB_SSRX2+	NC
C11	GND	GND
C12	USB_SSRX3-	NC
C13	USB_SSRX3+	NC
C14	GND	GND
C15	DDI1_PAIR6+	NC
C16	DDI1_PAIR6-	NC
C17	RSVD	NC
C18	RSVD	NC
C19	PCIE_RX6+	NC
C20	PCIE_RX6-	NC
C21	GND	GND
C22	PCIE_RX7+	NC
C23	PCIE_RX7-	NC
C24	DDI1_HPD	DDI1_HPD
C25	DDI1_PAIR4+	NC
C26	DDI1_PAIR4-	NC

C27	RSVD	NC
C28	RSVD	NC
C29	DDI1_PAIR5+	NC
C30	DDI1_PAIR5-	NC
C31	GND	GND
C32	DDI2_CTRLCLK_AUX+	DDI2_CTRLCLK_AUX+
C33	DDI2_CTRLDATA_AUX-	DDI2_CTRLDATA_AUX-
C34	DDI2_DDC_AUX_SEL	DDI2_DDC_AUX_SEL
C35	RSVD	NC
C36	DDI3_CTRLCLK_AUX+	NC
C37	DDI3_CTRLDATA_AUX-	NC
C38	DDI3_DDC_AUX_SEL	NC
C39	DDI3_PAIR0+	NC
C40	DDI3_PAIR0-	NC
C41	GND	GND
C42	DDI3_PAIR1+	NC
C43	DDI3_PAIR1-	NC
C44	DDI3_HPD	NC
C45	RSVD	NC
C46	DDI3_PAIR2+	NC
C47	DDI3_PAIR2-	NC
C48	RSVD	NC
C49	DDI3_PAIR3+	NC
C50	DDI3_PAIR3-	NC

C51	GND	GND
C52	PEG_RX0+	NC
C53	PEG_RX0-	NC
C54	TYPE0#	NC
C55	PEG_RX1+	NC
C56	PEG_RX1-	NC
C57	TYPE1#	NC
C58	PEG_RX2+	NC
C59	PEG_RX2-	NC
C60	GND	GND
C61	PEG_RX3+	NC
C62	PEG_RX3-	NC
C63	RSVD	NC
C64	RSVD	NC
C65	PEG_RX4+	NC
C66	PEG_RX4-	NC
C67	RSVD	NC
C68	PEG_RX5+	NC
C69	PEG_RX5-	NC
C70	GND	GND
C71	PEG_RX6+	NC
C72	PEG_RX6-	NC
C73	GND	GND
C74	PEG_RX7+	NC

C75	PEG_RX7-	NC
C76	GND	GND
C77	RSVD	NC
C78	PEG_RX8+	NC
C79	PEG_RX8-	NC
C80	GND	GND
C81	PEG_RX9+	NC
C82	PEG_RX9-	NC
C83	RSVD	NC
C84	GND	GND
C85	PEG_RX10+	NC
C86	PEG_RX10-	NC
C87	GND	GND
C88	PEG_RX11+	NC
C89	PEG_RX11-	NC
C90	GND	GND
C91	PEG_RX12+	NC
C92	PEG_RX12-	NC
C93	GND	GND
C94	PEG_RX13+	NC
C95	PEG_RX13-	NC
C96	GND	GND
C97	RSVD	NC
C98	PEG_RX14+	NC

C99	PEG_RX14-	NC
C100	GND	GND
C101	PEG_RX15+	NC
C102	PEG_RX15-	NC
C103	GND	GND
C104	VCC_12V	VCC_12V
C105	VCC_12V	VCC_12V
C106	VCC_12V	VCC_12V
C107	VCC_12V	VCC_12V
C108	VCC_12V	VCC_12V
C109	VCC_12V	VCC_12V
C110	GND	GND

Row D

Pin	COMe 2.1 SPEC Type 6	COM-BT Signal
D1	GND	GND
D2	GND	GND
D3	USB_SSTX0-	USB_SSTX0-
D4	USB_SSTX0+	USB_SSTX0+
D5	GND	GND
D6	USB_SSTX1-	NC
D7	USB_SSTX1+	NC
D8	GND	GND
D9	USB_SSTX2-	NC
D10	USB_SSTX2+	NC

D11	GND	GND
D12	USB_SSTX3-	NC
D13	USB_SSTX3+	NC
D14	GND	GND
D15	DDI1_CTRLCLK_AUX+	DDI1_CTRLCLK_AUX+
D16	DDI1_CTRLDATA_AUX-	DDI1_CTRLDATA_AUX-
D17	RSVD	NC
D18	RSVD	NC
D19	PCIE_TX6+	NC
D20	PCIE_TX6-	NC
D21	GND	GND
D22	PCIE_TX7+	NC
D23	PCIE_TX7-	NC
D24	RSVD	NC
D25	RSVD	NC
D26	DDI1_PAIR0+	DDI1_PAIR0+
D27	DDI1_PAIR0-	DDI1_PAIR0-
D28	RSVD	NC
D29	DDI1_PAIR1+	DDI1_PAIR1+
D30	DDI1_PAIR1-	DDI1_PAIR1-
D31	GND	GND
D32	DDI1_PAIR2+	DDI1_PAIR2+
D33	DDI1_PAIR2-	DDI1_PAIR2-
D34	DDI1_DDC_AUX_SEL	DDI1_DDC_AUX_SEL

D35	RSVD	NC
D36	DDI1_PAIR3+	DDI1_PAIR3+
D37	DDI1_PAIR3-	DDI1_PAIR3-
D38	RSVD	NC
D39	DDI2_PAIR0+	DDI2_PAIR0+
D40	DDI2_PAIR0-	DDI2_PAIR0-
D41	GND	GND
D42	DDI2_PAIR1+	DDI2_PAIR1+
D43	DDI2_PAIR1-	DDI2_PAIR1-
D44	DDI2_HPD	DDI2_HPD
D45	RSVD	NC
D46	DDI2_PAIR2+	DDI2_PAIR2+
D47	DDI2_PAIR2-	DDI2_PAIR2-
D48	RSVD	NC
D49	DDI2_PAIR3+	DDI2_PAIR3+
D50	DDI2_PAIR3-	DDI2_PAIR3-
D51	GND	GND
D52	PEG_TX0+	NC
D53	PEG_TX0-	NC
D54	PEG_LANE_RV#	NC
D55	PEG_TX1+	NC
D56	PEG_TX1-	NC
D57	TYPE2#	TYPE2#
D58	PEG_TX2+	NC

D59	PEG_TX2-	NC
D60	GND	GND
D61	PEG_TX3+	NC
D62	PEG_TX3-	NC
D63	RSVD	NC
D64	RSVD	NC
D65	PEG_TX4+	NC
D66	PEG_TX4-	NC
D67	GND	GND
D68	PEG_TX5+	NC
D69	PEG_TX5-	NC
D70	GND	GND
D71	PEG_TX6+	NC
D72	PEG_TX6-	NC
D73	GND	GND
D74	PEG_TX7+	NC
D75	PEG_TX7-	NC
D76	GND	GND
D77	RSVD	NC
D78	PEG_TX8+	NC
D79	PEG_TX8-	NC
D80	GND	GND
D81	PEG_TX9+	NC
D82	PEG_TX9-	NC

D83	RSVD	NC
D84	GND	GND
D85	PEG_TX10+	NC
D86	PEG_TX10-	NC
D87	GND	GND
D88	PEG_TX11+	NC
D89	PEG_TX11-	NC
D90	GND	GND
D91	PEG_TX12+	NC
D92	PEG_TX12-	NC
D93	GND	GND
D94	PEG_TX13+	NC
D95	PEG_TX13-	NC
D96	GND	GND
D97	RSVD	NC
D98	PEG_TX14+	NC
D99	PEG_TX14-	NC
D100	GND	GND
D101	PEG_TX15+	NC
D102	PEG_TX15-	NC
D103	GND	GND
D104	VCC_12V	VCC_12V
D105	VCC_12V	VCC_12V
D106	VCC_12V	VCC_12V

D107	VCC_12V	VCC_12V
D108	VCC_12V	VCC_12V
D109	VCC_12V	VCC_12V
D110	GND	GND

2.7 eDP Connector (CN3)

Pin	Signal
1	+VLCD
2	+VLCD
3	GND
4	GND
5	EDP_TX2_N
6	EDP_TX2_P
7	GND
8	EDP_TX1_N
9	EDP_TX1_P
10	GND
11	EDP_TX0_N
12	EDP_TX0_P
13	GND
14	EDP_TX3_N
15	EDP_TX3_P
16	GND
17	EDP_AUX_N
18	EDP_AUX_P

19	GND
20	BKLT_CTRL_3.3S
21	NC
22	BKLT_EN_3.3S
23	EDP_HPD
24	GND
25	GND
26	GND
27	+VLED
28	+VLED
29	+VLED
30	+VLED

2.8 eDP Backlight (CN4)

Pin	Signal
1	+VLED
2	BKLT_CTRL_3.3S
3	GND
4	GND
5	BKLT_EN_3.3S

2.9 SPI Connector (CN5)

Pin	Signal
1	SPI_SO_F
2	GND

3	SPI_CLK_F
4	+V3.3A_SPI
5	SPI_SI_F
6	SPI_CE0#_F
7	SPI_CE1#_F

2.10 LPC Connector (CN6)

Pin	Signal
1	LPC_AD0
2	LPC_AD1
3	LPC_AD2
4	LPC_AD3
5	+V3.3S
6	LPC_FRAME#
7	BUF_PLT_RST#
8	GND
9	PCI_CLK_SIO
10	NC
11	NC
12	INT_SERIRQ

Below Table for China RoHS Requirements

产品中有毒有害物质或元素名称及含量

AAEON Main Board/ Daughter Board/ Backplane

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
印刷电路板及其电子组件	×	○	○	○	○	○
外部信号连接器及线材	×	○	○	○	○	○

O：表示该有毒有害物质在该部件所有均质材料中的含量均在 **SJ/T 11363-2006** 标准规定的限量要求以下。

X：表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 **SJ/T 11363-2006** 标准规定的限量要求。

备注：此产品所标示之环保使用期限，系指在一般正常使用状况下。

Chapter

3

AMI BIOS Setup

3.1 System Test and Initialization

These routines test and initialize board hardware. If the routines encounter an error during the tests, you will either hear a few short beeps or see an error message on the screen. There are two kinds of errors: fatal and non-fatal. The system can usually continue the boot up sequence with non-fatal errors.

System configuration verification

These routines check the current system configuration stored in the CMOS memory and BIOS NVRAM. If system configuration is not found or system configuration data error is detected, system will load optimized default and re-boot with this default system configuration automatically.

There are four situations in which you will need to setup system configuration:

1. You are starting your system for the first time
2. You have changed the hardware attached to your system
3. The system configuration is reset by Clear-CMOS jumper
4. The CMOS memory has lost power and the configuration information has been erased.

The COM-BT CMOS memory has an integral lithium battery backup for data retention. However, you will need to replace the complete

unit when it finally runs down.

3.2 AMI BIOS Setup

AMI BIOS ROM has a built-in Setup program that allows users to modify the basic system configuration. This type of information is stored in battery-backed CMOS RAM and BIOS NVRAM so that it retains the Setup information when the power is turned off.

Entering Setup

Power on the computer and press <Del>or <F2> immediately. This will allow you to enter Setup.

Main

Set the date, use tab to switch between date elements.

Advanced

Enable disable boot option for legacy network devices.

Chipset

Host bridge parameters.

Boot

Enables/disable quiet boot option.

Security

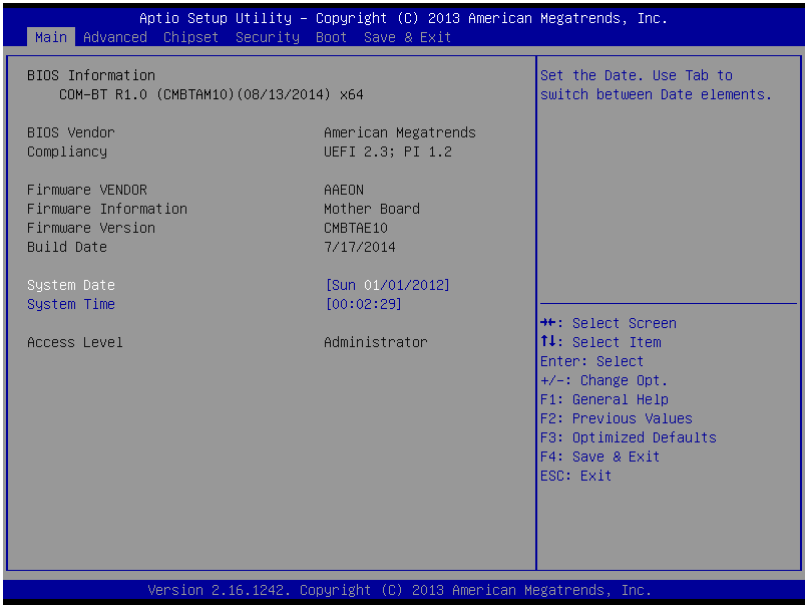
Set setup administrator password.

Save & Exit

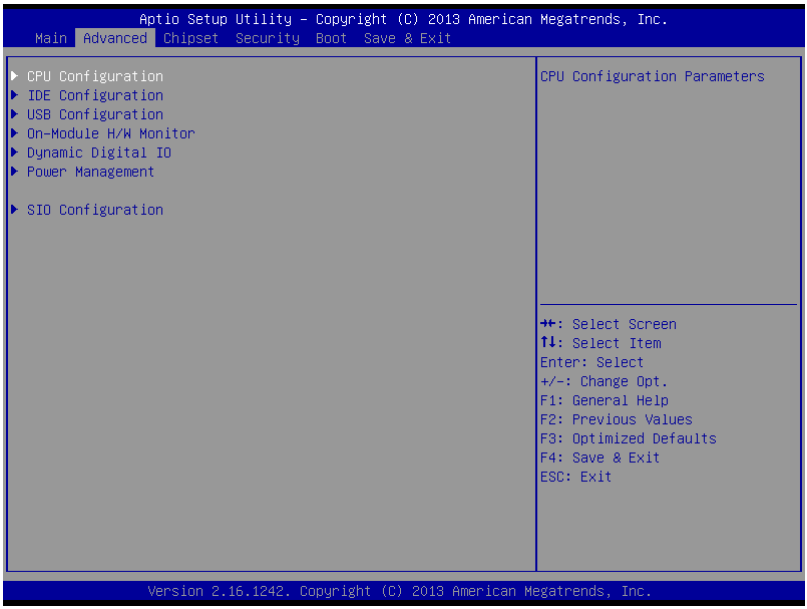
Exit system setup after saving the changes.

Setup Menu

Setup submenu: Main



Setup submenu: Advanced



CPU Configuration

```
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Advanced

CPU Configuration                                  When enabled, a VMM can
                                                   utilize the additional
Intel(R) Celeron(R) CPU N2920 @ 1.86GHz            hardware capabilities provided
CPU Signature                    30673             by Vanderpool Technology
Microcode Patch                  322
BayTrail SoC                     B3 Stepping
Max CPU Speed                    1860 MHz
Min CPU Speed                    533 MHz
Processor Cores                  4
Intel HT Technology              Not Supported
Intel VT-x Technology            Supported
L1 Data Cache                    24 kB x 4
L1 Code Cache                    32 kB x 4
L2 Cache                         1024 kB x 2       →←: Select Screen
L3 Cache                         Not Present       ↑↓: Select Item
                                                   Enter: Select
Intel Virtualization Technology  [Enabled]         +/-: Change Opt.
EIST                             [Enabled]         F1: General Help
                                                   F2: Previous Values
                                                   F3: Optimized Defaults
                                                   F4: Save & Exit
                                                   ESC: Exit

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```
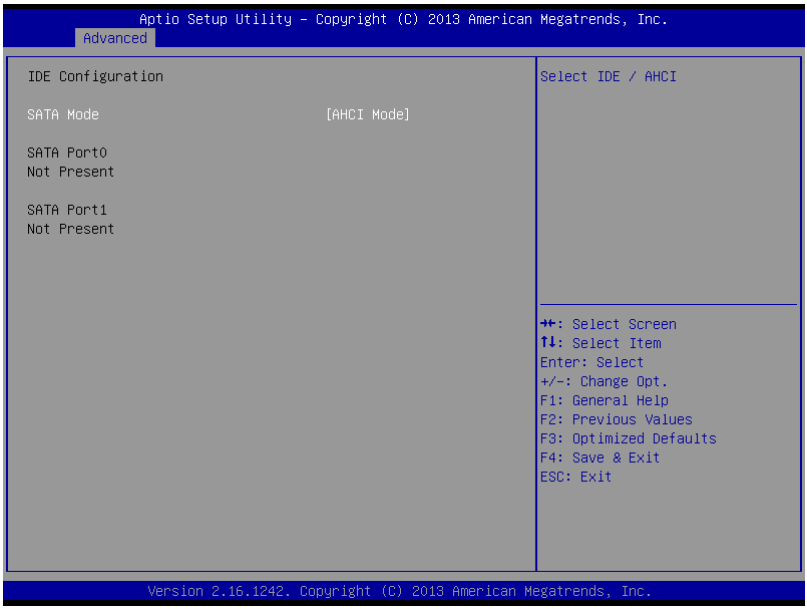

Options summary:

Intel Virtualization Technology	Disabled	
	Enabled	Optimal Default, Failsafe Default
EIST	Disabled	
	Enabled	Optimal Default, Failsafe Default

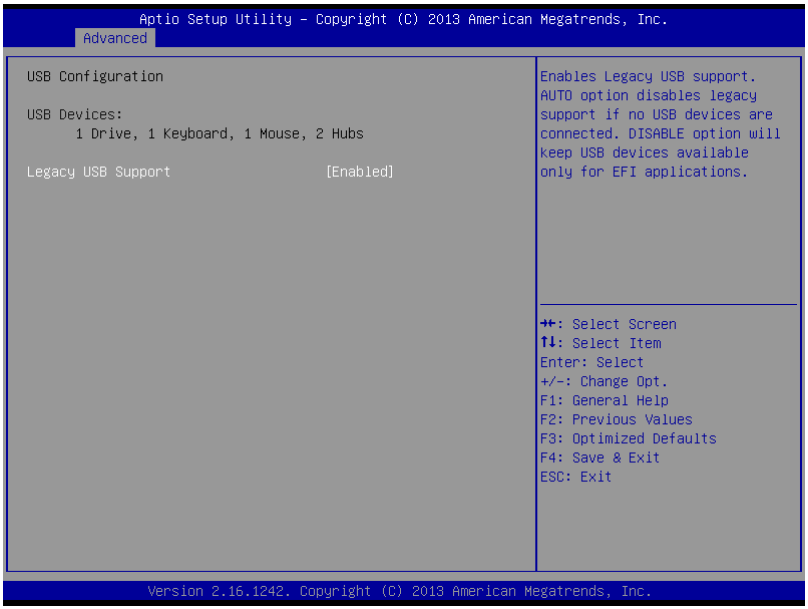
IDE Configuration (IDE)



Options summary:

SATA Mode	IDE Mode	
	AHCI Mode	Optimal Default, Failsafe Default

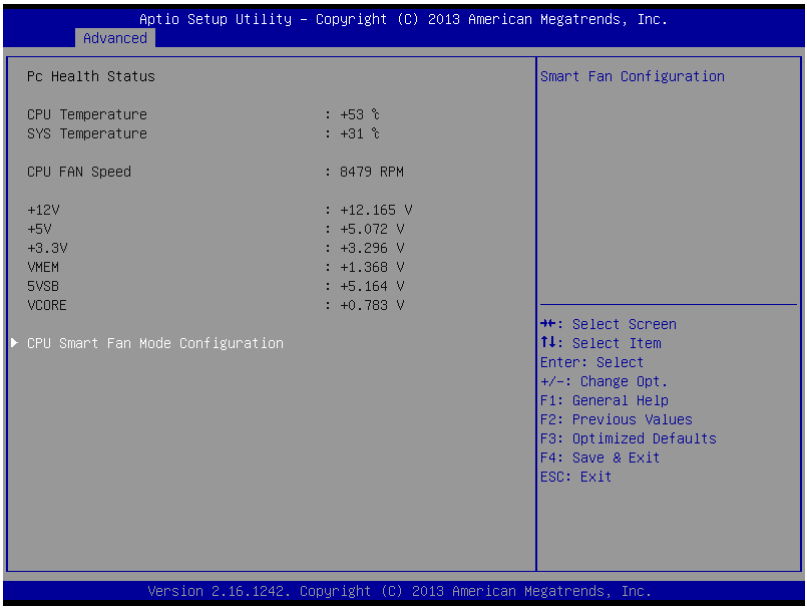
USB Configuration



Options summary:

Legacy USB Support	Enabled	Optimal Default, Failsafe Default
	Disabled	
	Auto	
Enables BIOS Support for Legacy USB Support. When enabled, USB can be functional in legacy environment like DOS. AUTO option disables legacy support if no USB devices are connected		
Device Name (Emulation Type)	Auto	Optimal Default, Failsafe Default
	Floppy	
	Forced FDD	
	Hard Disk	
	CDROM	
If Auto. USB devices less than 530MB will be emulated as Floppy and remaining as Floppy and remaining as hard drive. Forced FDD option can be used to force a HDD formatted drive to boot as FDD(Ex. ZIP drive)		
USB Port 0/1 function routing	FCH USB port 8/9	Optimal Default, Failsafe Default
	FCH USB port 0/1	

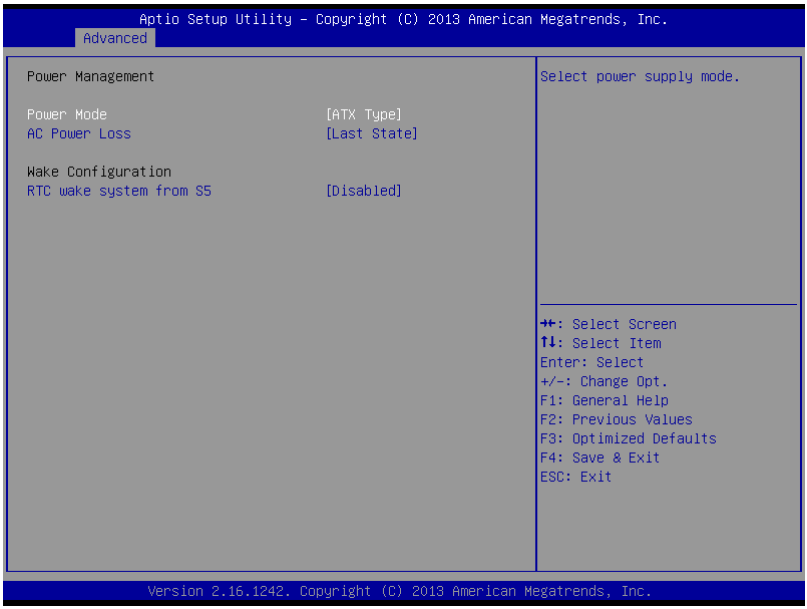
Hardware Monitor



Options summary:

CPU Smart Fan Mode Configuration	Disabled	Optimal Default, Failsafe Default
	Enabled	

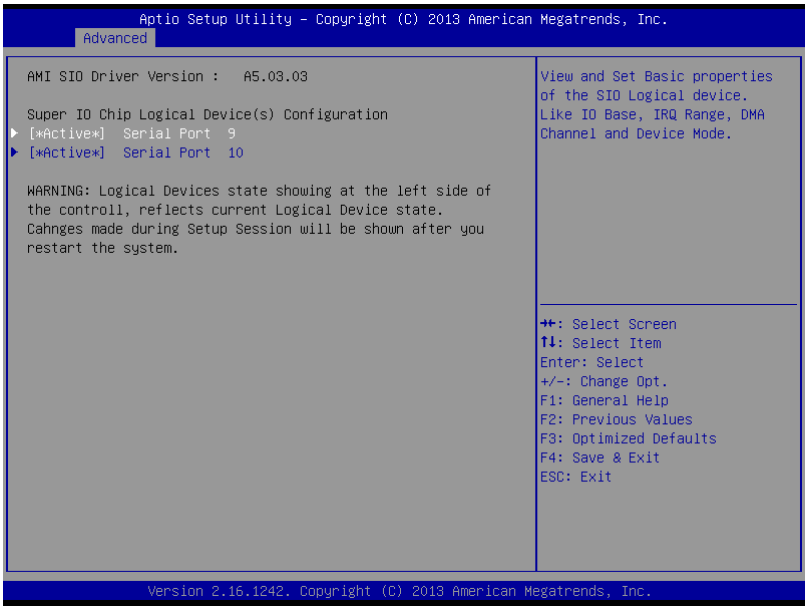
Power Management



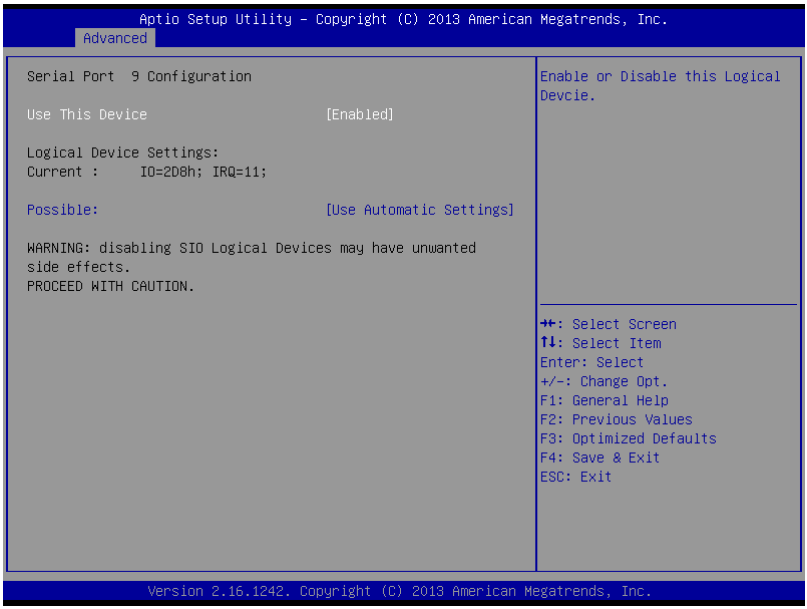
Options summary:

Power Mode	ATX Type	Optimal Default, Failsafe Default
	AT Type	
Select power supply mode.		
Restore on Power Loss	Last State	Optimal Default, Failsafe Default
	Power On	
	Power Off	
Select power state when power is re-applied after a power failure.		
RTC wake system from S5	Disabled	Optimal Default, Failsafe Default
	Fixed Time	
	Dynamic Time	
Enable or disable System wake on alarm event. When enabled, System will wake on the hr::min::sec specified		

SIO Configuration



Serial Port Configuration



Options summary:

Use This Device	Disabled	Optimal Default, Failsafe Default
	Enabled	
En/Disable Serial Port (COM)		
Possible:	Use Automatic Settings	Optimal Default, Failsafe Default
	IO=2D8; IRQ=11;	
	IO=2C8; IRQ=11;	
Select an optimal setting for IO device		

Serial Port Configuration

```
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Advanced

Serial Port  10 Configuration                    Enable or Disable this Logical
                                                 Devcie.
Use This Device                    [Enabled]

Logical Device Settings:
Current :     IO=2C8h; IRQ=10;

Possible:                          [Use Automatic Settings]

WARNING: disabling SIO Logical Devices may have unwanted
side effects.
PROCEED WITH CAUTION.                            →←: Select Screen
                                                 ↑↓: Select Item
                                                 Enter: Select
                                                 +/-: Change Opt.
                                                 F1: General Help
                                                 F2: Previous Values
                                                 F3: Optimized Defaults
                                                 F4: Save & Exit
                                                 ESC: Exit

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```

Options summary:

Use This Device	Disabled	Optimal Default, Failsafe Default
	Enabled	
En/Disable Serial Port (COM)		
Possible:	Use Automatic Settings	Optimal Default, Failsafe Default
	IO=2D8; IRQ=11;	
	IO=2C8; IRQ=11;	
Select an optimal setting for IO device		

PS2 Keyboard

```
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Advanced

PS2 Keyboard  Configuration                    Enable or Disable this Logical
                                               Devcie.
Use This Device                  [Enabled]

Logical Device Settings:
Current :     IO=60h; IO=64h; IRQ=1;

Possible:                        [Use Automatic Settings]

WARNING: disabling SIO Logical Devices may have unwanted
side effects.
PROCEED WITH CAUTION.                          →←: Select Screen
                                               ↑↓: Select Item
                                               Enter: Select
                                               +/-: Change Opt.
                                               F1: General Help
                                               F2: Previous Values
                                               F3: Optimized Defaults
                                               F4: Save & Exit
                                               ESC: Exit

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```
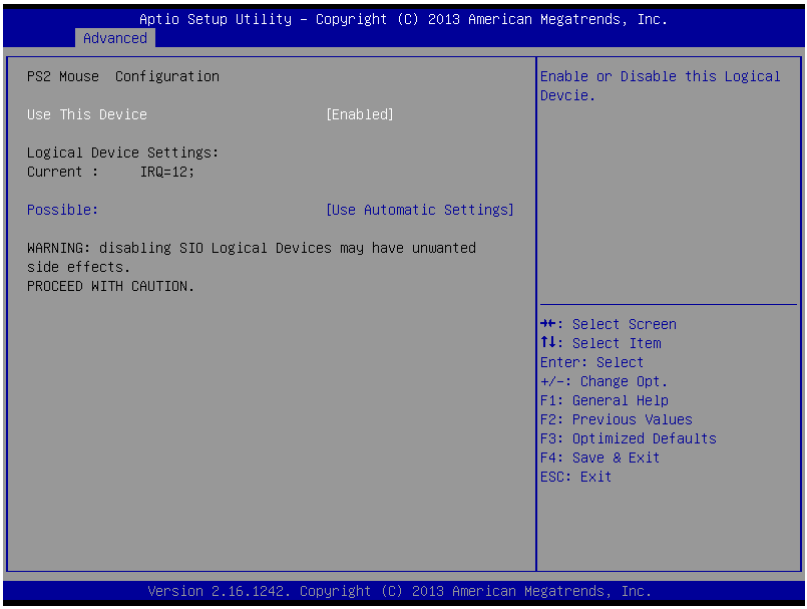

Options summary:

Use This Device	Disabled	Optimal Default, Failsafe Default
	Enabled	
Possible:	Use Automatic Settings	Optimal Default, Failsafe Default
	IO=60h; IO=64h; IRQ=1;	

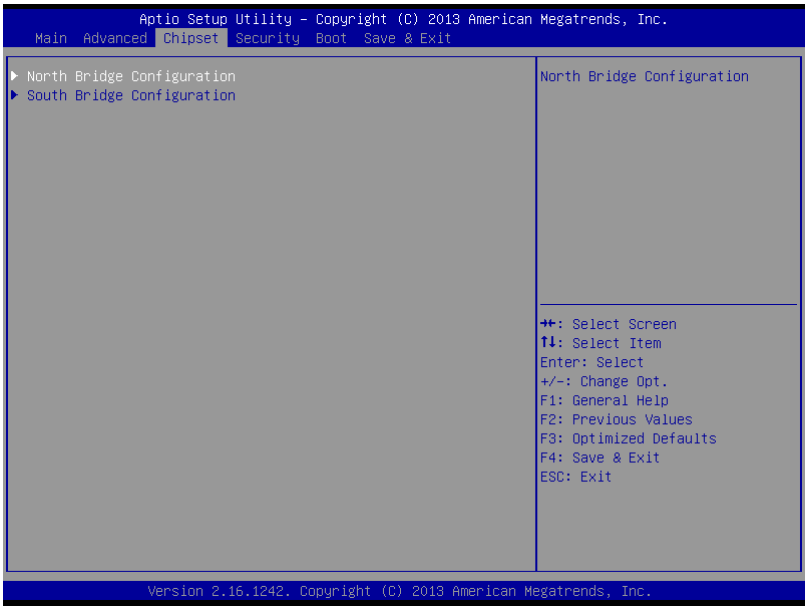
PS2 Mouse



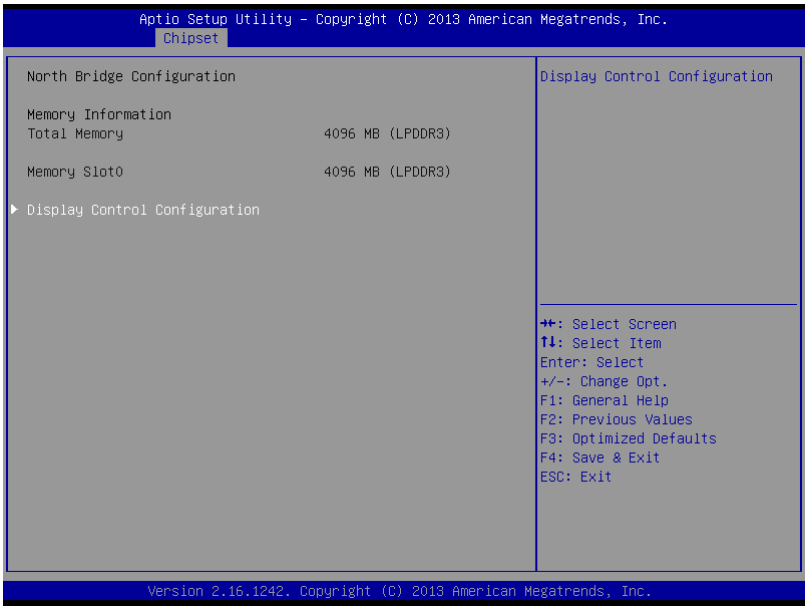
Options summary:

Use This Device	Disabled	Optimal Default, Failsafe Default
	Enabled	
Possible:	Use Automatic Settings	Optimal Default, Failsafe Default
	IRQ=12;	

Setup submenu: Chipset



North Bridge



Display Control Configuration

```
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Chipset

Display Control Configuration                    Select DVMT 5.0 Pre-Allocated
                                                 (Fixed) Graphics Memory size
DVMT Pre-Allocated              [64M]            used by the Internal Graphics
DVMT Total Gfx Mem              [256MB]          Device.

Primary IGFX Boot Display       [VBIOS Default]

LVDS Panel Type                 [1024x768,18bit,60Hz]
Color Depth                     [24bit]
Panel Mode                      [Dual channel]
Data enable polarity            [Active low]
LVDS Backlight Level            [ 80%]
LVDS Backlight Type             [Normal]

                                                 →←: Select Screen
                                                 ↑↓: Select Item
                                                 Enter: Select
                                                 +/-: Change Opt.
                                                 F1: General Help
                                                 F2: Previous Values
                                                 F3: Optimized Defaults
                                                 F4: Save & Exit
                                                 ESC: Exit

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```

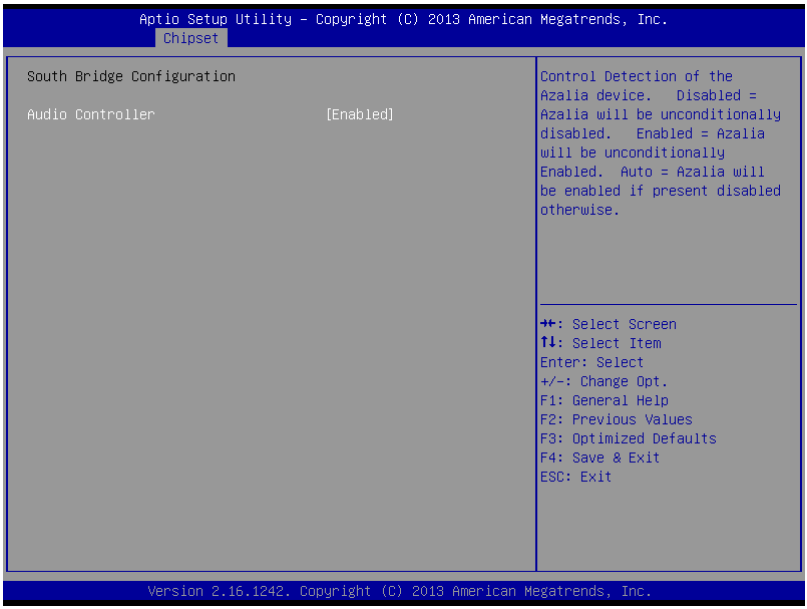
Options summary:

DVMT Pre-Allocated	64M	Optimal Default, Failsafe Default
	96M	
	128M	
	160M …	
	512M	
DVMT Total Gfx Mem	128MB	Optimal Default, Failsafe Default
	256MB	
	Max	

Primary IGFX Boot Display	VBIOS Default	Optimal Default, Failsafe Default
	CRT	
	LVDS	
	DP/HDMI	
Select the Video Device 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	Disabled	Optimal Default, Failsafe Default
	CRT	
	LVDS	
	DP/HDMI	
Select Secondary Display Device		
LVDS Panel Type	640x480,18bit,60Hz	Optimal Default, Failsafe Default
	800x480,18bit,60Hz	
	800x600,18bit,60Hz	
	1024x600,18bit,60Hz	
	1024x768,18bit,60Hz	
	1024x768,24bit,60Hz	
	1280x768,24bit,60Hz	
	1280x1024,48bit,60Hz	
	1366x768,24bit,60Hz	
	1440x900,48bit,60Hz	
	1600x1200,48bit,60Hz	
	1920x1080,48bit,60Hz	
	1920x1200,48bit,60Hz	
Color Depth	24bit	Optimal Default, Failsafe Default
	18bit	
Panel Mode	Single Channel	Optimal Default, Failsafe Default
	Dual Channel	
Data enable polarity	Active Low	Optimal Default, Failsafe Default
	Active High	

LVDS Backlight Type	Normal	Optimal Default, Failsafe Default
	Inverted	
LVDS Backlight Level	100%	Optimal Default, Failsafe Default
	90%	
	80%	
	70%	
	60%	
	50%	
	40%	
	30%	
	20%	
	10%	
	0%	

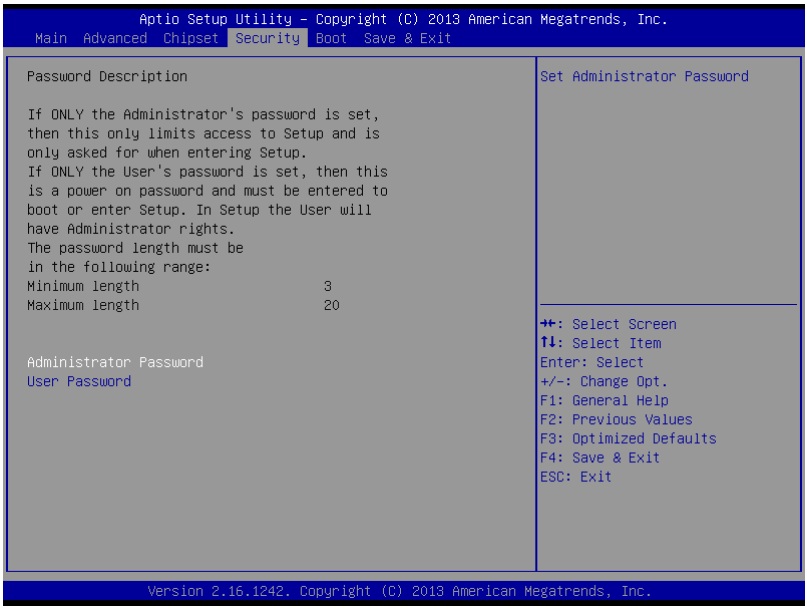
South Bridge



Options summary:

Audio Controller	Enabled	Optimal Default, Failsafe Default
	Disabled	

Security



Change User/Supervisor Password

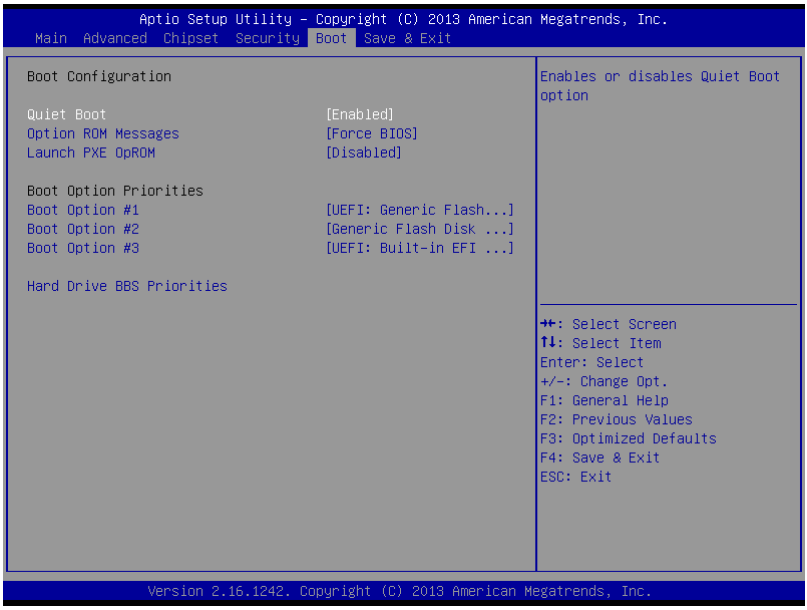
You can install a Supervisor password, and if you install a supervisor password, you can then install a user password. A user password does not provide access to many of the features in the Setup utility.

If you highlight these items and press Enter, a dialog box appears which lets you enter a password. You can enter no more than six letters or numbers. Press Enter after you have typed in the password. A second dialog box asks you to retype the password for confirmation. Press Enter after you have retyped it correctly. The password is required at boot time, or when the user enters the Setup utility.

Removing the Password

Highlight this item and type in the current password. At the next dialog box press Enter to disable password protection.

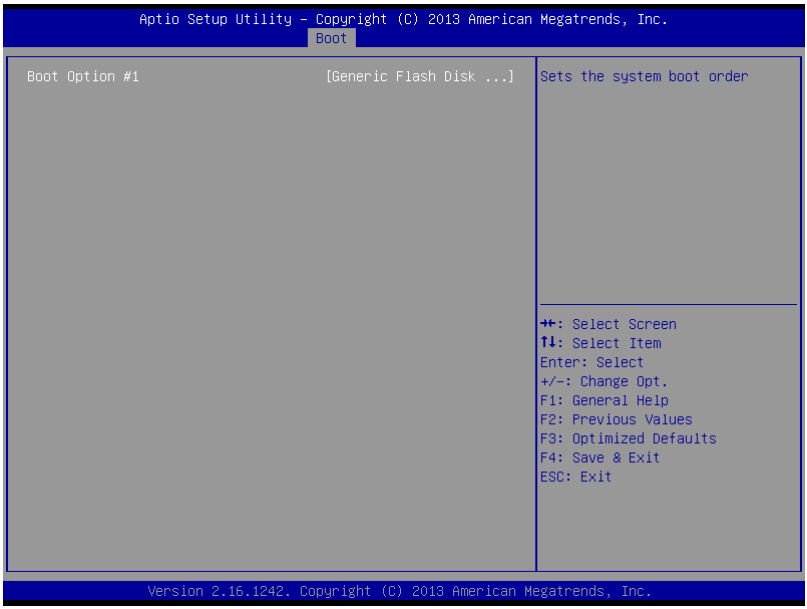
Setup submenu: Boot



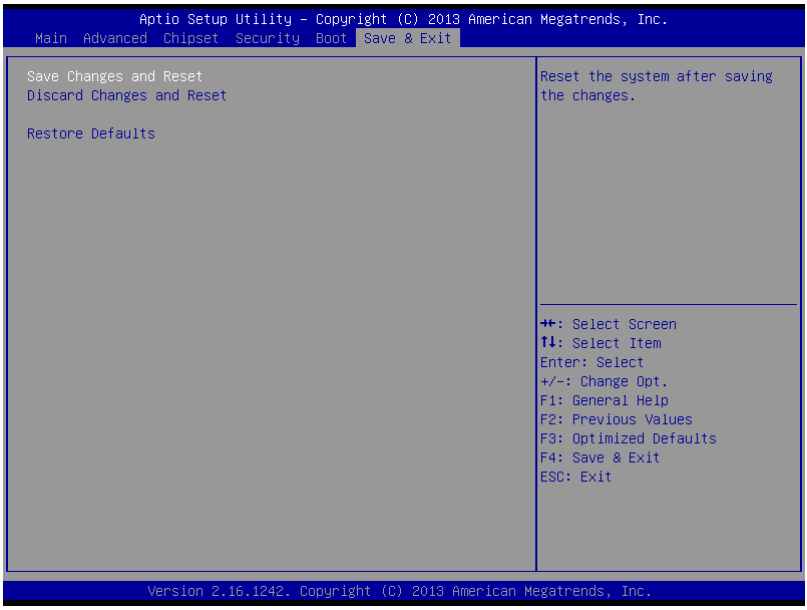
Options summary:

Quiet Boot	Disabled	
	Enabled	Default
En/Disable showing boot logo.		
Option ROM Messages	Force BIOS	Default
	Keep Current	
Set display mode for Option ROM		
Launch PXE OpROM	Disabled	Default
	Enabled	
En/Disable Legacy Boot Option		

BBS Priorities



Setup submenu: Exit



Chapter

4

Driver Installation

.

The COM-BT comes with an AutoRun DVD-ROM that contains all drivers and utilities that can help you to install the driver automatically.

Insert the driver DVD, the driver DVD-title will auto start and show the installation guide. If not, please follow the sequence below to install the drivers.

Follow the sequence below to install the drivers:

Step 1 – Install Chipset Driver

Step 2 – Install VGA Driver

Step 3 – Install LAN Driver

Step 4 – Install xHCI Driver

Step 5 – Install Intel Sideband Fabric Device Driver

Step 6 – Install TPM Driver

Please read instructions below for further detailed installations.

4.1 Installation:

Insert the COM-BT DVD-ROM into the DVD-ROM drive. And install the drivers from Step 1 to Step 6 in order.

Step 1 – Install Chipset Driver

1. Click on the ***Step 1 - Chipset*** folder and double click on the ***SetupChipset.exe*** file
2. Follow the instructions that the window shows
3. The system will help you install the driver automatically

Step 2 – Install VGA Driver

1. Click on the ***Step 2 - Graphics*** folder and select the OS folder your system is
2. Double click on the ***Setup.exe*** file located in each OS folder
3. Follow the instructions that the window shows
4. The system will help you install the driver automatically

Step 3 –Install LAN Driver

1. Click on the ***Step 3 - Network*** folder and select the OS folder your system is
2. Double click on the ***19.1_20140410.exe*** file located in each OS folder
3. Follow the instructions that the window shows
4. The system will help you install the driver automatically

Step 4 –Install xHCI Driver

1. Click on the ***Step 4 - xHCI*** folder and double click on the ***Setup.exe*** file
2. Follow the instructions that the window shows
3. The system will help you install the driver automatically

Step 5 –Install Intel Sideband Fabric Device Driver

1. Click on the ***Step 5 - Intel Sideband Fabric Device*** folder double click on the ***Setup.exe*** file
2. Follow the instructions that the window shows
3. The system will help you install the driver automatically

Step 6 – Install TPM Driver

1. Click on the ***Step 6 - TPM*** folder and double click on the ***Setup.exe*** file
2. Follow the instructions that the window shows
3. The system will help you install the driver automatically

Appendix

A

Programming the Watchdog Timer

A.1 Watchdog Timer Initial Program

Table 1 : Embedded BRAM relative register table		
	Default Value	**Note**
Index	**0x284**(Note1)	BRAM Index Register
Data	**0x285**(Note2)	BRAM Data Register
Logical Device Number	**0xA8**(Note3)	Watch dog Logical Device Number
Function and Device Number	**0x00**(Note4)	Watch dog Function/Device Number

Table 2 : Watchdog relative register table				
	Option Register	**BitNum**	**Value**	**Note**
Timer Counter	**0x00**(Note5)		(Note10)	Time of watchdog timer (0~255)
Counting Unit	**0x01**(Note6)	**0**(Note7)	**0**(Note11)	Select time unit. 0: second 1: minute
Watchdog RST pulse width	**0x01**(Note8)	**[3:2]**(Note9)	**0**(Note12)	0: 20ms 1: 60ms 2: 100ms 3: 250ms

```
*****************************************************************************************
// Embedded BRAM relative definition (Please reference to Table 1)
#define byte    EcBRAMIndex    //This parameter is represented from Note1
#define byte    EcBRAMData     //This parameter is represented from Note2
#define byte    BRAMLDNReg     //This parameter is represented from Note3
#define byte    BRAMFnDataReg  //This parameter is represented from Note4
#define   void   EcBRAMWriteByte(byte Offset, byte Value);
#define   byte   EcBRAMReadByte(byte Offset);
#define   void   IOWriteByte(byte Offset, byte Value);
#define   byte   IOReadByte(byte Offset);
// Watch Dog relative definition (Please reference to Table 2)
#define byte    TimerReg    //This parameter is represented from Note5
#define byte    TimerVal    // This parameter is represented from Note10
#define byte    UnitReg     //This parameter is represented from Note6
#define byte    UnitBit     //This parameter is represented from Note7
#define byte    UnitVal     //This parameter is represented from Note11
#define byte    RSTReg      //This parameter is represented from Note8
#define byte    RSTBit      //This parameter is represented from Note9
#define byte    RSTVal      //This parameter is represented from Note12
*****************************************************************************************
```

```
*****************************************************************************
VOID    Main(){
        // Procedure : AaeonWDTConfig
        // (byte)Timer : Time of WDT timer.(0x00~0xFF)
        // (boolean)Unit : Select time unit(0: second, 1: minute).
        AaeonWDTConfig();

        // Procedure : AaeonWDTEnable
        // This procudure will enable the WDT counting.
        AaeonWDTEnable();
}
*****************************************************************************
```

```
*****************************************************************************************
// Procedure : AaeonWDTEnable
VOID    AaeonWDTEnable (){
        WDTEnableDisable(1);
}

// Procedure : AaeonWDTConfig
VOID    AaeonWDTConfig (){
         // Disable WDT counting
         WDTEnableDisable(0);
         // WDT relative parameter setting
         WDTParameterSetting();
}

VOID    WDTEnableDisable(byte Value){
        ECBRAMWriteByte(TimerReg , Value);
}

VOID    WDTParameterSetting(){
        Byte TempByte;

         // Watchdog Timer counter setting
        ECBRAMWriteByte(TimerReg , TimerVal);
        // WDT counting unit setting
        TempByte = ECBRAMReadByte(UnitReg);
        TempByte |= (UnitVal << UnitBit);
        ECBRAMWriteByte(UnitReg , TempByte);
        // WDT RST pulse width setting
        TempByte = ECBRAMReadByte(RSTReg);
        TempByte |= (RSTVal << RSTBit);
        ECBRAMWriteByte(RSTReg , TempByte);
}
*****************************************************************************************
```

```
*****************************************************************************
VOID    ECBRAMWriteByte(byte OPReg, byte OPBit, byte Value){
        IOWriteByte(EcBRAMIndex, 0x10);
        IOWriteByte(EcBRAMData, BRAMLDNReg);
        IOWriteByte(EcBRAMIndex, 0x11);
        IOWriteByte(EcBRAMData, BRAMFnDataReg);

        IOWriteByte(EcBRAMIndex, 0x13 + OPReg);
        IOWriteByte(EcBRAMData, Value);

        IOWriteByte(EcBRAMIndex, 0x12);
        IOWriteByte(EcBRAMData, 0x30);              //Write start
}

Byte    ECBRAMReadByte(byte OPReg){
        IOWriteByte(EcBRAMIndex, 0x10);
        IOWriteByte(EcBRAMData, BRAMLDNReg);
        IOWriteByte(EcBRAMIndex, 0x11);
        IOWriteByte(EcBRAMData, BRAMFnDataReg);

        IOWriteByte(EcBRAMIndex, 0x12);
        IOWriteByte(EcBRAMData, 0x10);              //Read start

        IOWriteByte(EcBRAMIndex, 0x13 + OPReg);
        Return IOReadByte(EcBRAMData, Value);
}
*****************************************************************************
```

Appendix

B

I/O Information

B.1 I/O Address Map

Input/output (IO)

- [0000000000000000 - 000000000000006F] PCI Express Root Complex
- [0000000000000020 - 0000000000000021] Programmable interrupt controller
- [0000000000000024 - 0000000000000025] Programmable interrupt controller
- [0000000000000028 - 0000000000000029] Programmable interrupt controller
- [000000000000002C - 000000000000002D] Programmable interrupt controller
- [000000000000002E - 000000000000002F] Motherboard resources
- [0000000000000030 - 0000000000000031] Programmable interrupt controller
- [0000000000000034 - 0000000000000035] Programmable interrupt controller
- [0000000000000038 - 0000000000000039] Programmable interrupt controller
- [000000000000003C - 000000000000003D] Programmable interrupt controller
- [0000000000000040 - 0000000000000043] System timer
- [000000000000004E - 000000000000004F] Motherboard resources
- [0000000000000050 - 0000000000000053] System timer
- [0000000000000061 - 0000000000000061] Motherboard resources
- [0000000000000063 - 0000000000000063] Motherboard resources
- [0000000000000065 - 0000000000000065] Motherboard resources
- [0000000000000067 - 0000000000000067] Motherboard resources
- [0000000000000070 - 0000000000000070] Motherboard resources
- [0000000000000070 - 0000000000000077] System CMOS/real time clock
- [0000000000000078 - 0000000000000CF7] PCI Express Root Complex
- [0000000000000080 - 000000000000008F] Motherboard resources
- [0000000000000092 - 0000000000000092] Motherboard resources
- [00000000000000A0 - 00000000000000A1] Programmable interrupt controller
- [00000000000000A4 - 00000000000000A5] Programmable interrupt controller
- [00000000000000A8 - 00000000000000A9] Programmable interrupt controller
- [00000000000000AC - 00000000000000AD] Programmable interrupt controller
- [00000000000000B0 - 00000000000000B1] Programmable interrupt controller
- [00000000000000B2 - 00000000000000B3] Motherboard resources
- [00000000000000B4 - 00000000000000B5] Programmable interrupt controller
- [00000000000000B8 - 00000000000000B9] Programmable interrupt controller
- [00000000000000BC - 00000000000000BD] Programmable interrupt controller
- [00000000000002C8 - 00000000000002CF] Communications Port (COM10)
- [00000000000002D8 - 00000000000002DF] Communications Port (COM9)
- [00000000000003B0 - 00000000000003BB] Intel(R) HD Graphics
- [00000000000003C0 - 00000000000003DF] Intel(R) HD Graphics
- [0000000000000400 - 000000000000047F] Motherboard resources
- [00000000000004D0 - 00000000000004D1] Programmable interrupt controller
- [0000000000000500 - 00000000000005FE] Motherboard resources
- [0000000000000600 - 000000000000061F] Motherboard resources
- [0000000000000680 - 000000000000069F] Motherboard resources
- [0000000000000D00 - 0000000000000FFFF] PCI Express Root Complex
- [000000000000D000 - 000000000000DFFF] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor PCI Express - Root Port 4 - 0F4E
- [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
- [000000000000E040 - 000000000000E043] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor AHCI - 0F23
- [000000000000E050 - 000000000000E057] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor AHCI - 0F23
- [000000000000E060 - 000000000000E063] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor AHCI - 0F23
- [000000000000E070 - 000000000000E077] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor AHCI - 0F23
- [000000000000E080 - 000000000000E087] Intel(R) HD Graphics

B.2 Memory Address Map

Memory
- [00000000000A0000 - 00000000000BFFFF] Intel(R) HD Graphics
- [00000000000A0000 - 00000000000BFFFF] PCI Express Root Complex
- [00000000000C0000 - 00000000000DFFFF] PCI Express Root Complex
- [00000000000E0000 - 00000000000FFFFF] PCI Express Root Complex
- [00000000C0000000 - 00000000CFFFFFFF] Intel(R) HD Graphics
- [00000000C0000000 - 00000000D0716FFE] PCI Express Root Complex
- [00000000D0000000 - 00000000D03FFFFF] Intel(R) HD Graphics
- [00000000D0400000 - 00000000D04FFFFF] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor Trusted Execution Engine Interface - 0F18
- [00000000D0500000 - 00000000D05FFFFF] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor Trusted Execution Engine Interface - 0F18
- [00000000D0600000 - 00000000D061FFFF] Intel(R) I211 Gigabit Network Connection
- [00000000D0600000 - 00000000D06FFFFF] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor PCI Express - Root Port 4 - 0F4E
- [00000000D0620000 - 00000000D0623FFF] Intel(R) I211 Gigabit Network Connection
- [00000000D0700000 - 00000000D070FFFF] Intel(R) USB 3.0 eXtensible Host Controller - 0100 (Microsoft)
- [00000000D0710000 - 00000000D0713FFF] High Definition Audio Controller
- [00000000D0714000 - 00000000D071401F] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor Platform Control Unit - SMBus Port - 0F12
- [00000000D0716000 - 00000000D07167FF] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor AHCI - 0F23
- [00000000E0000000 - 00000000EFFFFFFF] Motherboard resources
- [00000000E00000D0 - 00000000E00000DB] Intel(R) Sideband Fabric Device
- [00000000FED00000 - 00000000FED003FF] High precision event timer
- [00000000FED01000 - 00000000FED01FFF] Motherboard resources
- [00000000FED03000 - 00000000FED03FFF] Motherboard resources
- [00000000FED04000 - 00000000FED04FFF] Motherboard resources
- [00000000FED08000 - 00000000FED08FFF] Motherboard resources
- [00000000FED1C000 - 00000000FED1CFFF] Motherboard resources
- [00000000FEE00000 - 00000000FEEFFFFF] Motherboard resources
- [00000000FEF00000 - 00000000FEFFFFFF] Motherboard resources
- [00000000FF000000 - 00000000FFFFFFFF] Intel(R) 82802 Firmware Hub Device

B.3 IRQ Mapping Chart

Interrupt request (IRQ)
- (ISA) 0x00000000 (00) System timer
- (ISA) 0x00000008 (08) High precision event timer
- (ISA) 0x0000000A (10) Communications Port (COM10)
- (ISA) 0x0000000B (11) Communications Port (COM9)
- (ISA) 0x00000051 (81) Microsoft ACPI-Compliant System
- (ISA) 0x00000052 (82) Microsoft ACPI-Compliant System
- (ISA) 0x00000053 (83) Microsoft ACPI-Compliant System
- (ISA) 0x00000054 (84) Microsoft ACPI-Compliant System
- (ISA) 0x00000055 (85) Microsoft ACPI-Compliant System
- (ISA) 0x00000056 (86) Microsoft ACPI-Compliant System
- (ISA) 0x00000057 (87) Microsoft ACPI-Compliant System
- (ISA) 0x00000058 (88) Microsoft ACPI-Compliant System
- (ISA) 0x00000059 (89) Microsoft ACPI-Compliant System
- (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) 0x0000008D (141) 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
(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
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(ISA) 0x0000010F (271) Microsoft ACPI-Compliant System
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(ISA) 0x00000111 (273) Microsoft ACPI-Compliant System
(ISA) 0x00000112 (274) Microsoft ACPI-Compliant System
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(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
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(ISA) 0x0000012F (303) Microsoft ACPI-Compliant System
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(ISA) 0x0000013A (314) Microsoft ACPI-Compliant System
(ISA) 0x0000013B (315) Microsoft ACPI-Compliant System
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(ISA) 0x0000013F (319) Microsoft ACPI-Compliant System
(ISA) 0x00000140 (320) Microsoft ACPI-Compliant System
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(ISA) 0x0000014B (331) Microsoft ACPI-Compliant System
(ISA) 0x0000014C (332) Microsoft ACPI-Compliant System
(ISA) 0x0000014D (333) Microsoft ACPI-Compliant System
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(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
(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
(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
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(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
(ISA) 0x000001FF (511) Microsoft ACPI-Compliant System
(PCI) 0x00000005 (05) Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor Trusted Execution Engine Interface - 0F18
(PCI) 0x00000005 (05) Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor Platform Control Unit - SMBus Port - 0F12
(PCI) 0x00000010 (16) Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor PCI Express - Root Port 1 - 0F48
(PCI) 0x00000011 (17) Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor PCI Express - Root Port 2 - 0F4A
(PCI) 0x00000012 (18) Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor PCI Express - Root Port 3 - 0F4C
(PCI) 0x00000013 (19) Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor AHCI - 0F23
(PCI) 0x00000013 (19) Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor PCI Express - Root Port 4 - 0F4E
(PCI) 0x00000016 (22) High Definition Audio Controller
(PCI) 0xFFFFFFF7 (-9) Intel(R) USB 3.0 eXtensible Host Controller - 0100 (Microsoft)
(PCI) 0xFFFFFFF8 (-8) Intel(R) HD Graphics
(PCI) 0xFFFFFFF9 (-7) Intel(R) I211 Gigabit Network Connection
(PCI) 0xFFFFFFFA (-6) Intel(R) I211 Gigabit Network Connection
(PCI) 0xFFFFFFFB (-5) Intel(R) I211 Gigabit Network Connection
(PCI) 0xFFFFFFFC (-4) Intel(R) I211 Gigabit Network Connection
(PCI) 0xFFFFFFFD (-3) Intel(R) I211 Gigabit Network Connection
(PCI) 0xFFFFFFFE (-2) Intel(R) I211 Gigabit Network Connection

Appendix

C

Programming the Digital I/O

C.1 DIO Programming

COM-BT utilizes ITE8518 chipset as its Digital I/O controller. Below are the procedures to complete its configuration which you can develop customized program to fit your application.

D.2 Digital I/O Register

Table 1 : Embedded BRAM relative register table		
	Default Value	**Note**
Index	**0x284**(Note1)	BRAM Index Register
Data	**0x285**(Note2)	BRAM Data Register
Logical Device Number	**0xA2**(Note3)	Watch dog Logical Device Number
Input/Output Function and Device Number	**0x00**(Note4)	DIO Input/Output Function/Device Number
Output Data Function and Device Number	**0x01**(Note5)	DIO Output Data Function/Device Number

Table 2 : Digital I/O relative register table				
	Register			
	Option Register	**BitNum**	**Value**	**Note**
GPI0 Pin Status	**0x00**(Note6)	**0**(Note7)	(Note15)	GPA2
GPI1 Pin Status	**0x00**(Note6)	**1**(Note8)	(Note16)	GPA3
GPI2 Pin Status	**0x00**(Note6)	**2**(Note9)	(Note17)	GPA4
GPI3 Pin Status	**0x00**(Note6)	**3**(Note10)	(Note18)	GPA5
GPO0 Pin Status	**0x00**(Note6)	**4**(Note11)	(Note19)	GPJ0
GPO1 Pin Status	**0x00**(Note6)	**5**(Note12)	(Note20)	GPJ1
GPO2 Pin Status	**0x00**(Note6)	**6**(Note13)	(Note21)	GPJ2
GPO3 Pin Status	**0x00**(Note6)	**7**(Note14)	(Note22)	GPJ3

D.3 Digital I/O Sample Program

```
*****************************************************************************************
// Embedded BRAM relative definition (Please reference to Table 1)
#define byte    EcBRAMIndex    //This parameter is represented from Note1
#define byte    EcBRAMData    //This parameter is represented from Note2
#define byte    BRAMLDNReg    //This parameter is represented from Note3
#define byte    BRAMFnData0Reg    //This parameter is represented from Note4
#define byte    BRAMFnData1Reg    //This parameter is represented from Note5
#define    void    EcBRAMWriteByte(byte Offset, byte Value);
#define    byte    EcBRAMReadByte(byte Offset);
#define    void    IOWriteByte(byte Offset, byte Value);
#define    byte    IOReadByte(byte Offset);
// Digital Input Status relative definition (Please reference to Table 2)
#define byte    DIO0ToDIO7Reg    // This parameter is represented from Note6
#define byte    DIO0Bit    // This parameter is represented from Note7
#define byte    DIO1Bit    // This parameter is represented from Note8
#define byte    DIO2Bit    // This parameter is represented from Note9
#define byte    DIO3Bit    // This parameter is represented from Note10
#define byte    DIO4Bit    // This parameter is represented from Note11
#define byte    DIO5Bit    // This parameter is represented from Note12
#define byte    DIO6Bit    // This parameter is represented from Note13
#define byte    DIO7Bit    // This parameter is represented from Note14
#define byte    DIO0Val    // This parameter is represented from Note15
#define byte    DIO1Val    // This parameter is represented from Note16
#define byte    DIO2Val    // This parameter is represented from Note17
#define byte    DIO3Val    // This parameter is represented from Note18
#define byte    DIO4Val    // This parameter is represented from Note19
#define byte    DIO5Val    // This parameter is represented from Note20
#define byte    DIO6Val    // This parameter is represented from Note21
#define byte    DIO7Val    // This parameter is represented from Note22
*****************************************************************************************
```

```
*****************************************************************************************
VOID   Main(){
        Boolean PinStatus ;

        // Procedure : AaeonReadPinStatus
        // Input :
        //        Example, Read Digital I/O Pin 3 status
        // Output :
        //        InputStatus :
        //                0: Digital I/O Pin level is low
        //                1: Digital I/O Pin level is High
        PinStatus = AaeonReadPinStatus(DIO0ToDIO7Reg, DIO3Bit);

        // Procedure : AaeonSetOutputLevel
        // Input :
        //        Example, Set Digital I/O Pin 6 level
        AaeonSetOutputLevel(DIO0ToDIO7Reg, DIO6Bit, DIO6Val);
}
*****************************************************************************************
```

```
*****************************************************************************************
Boolean    AaeonReadPinStatus(byte OptionReg, byte BitNum){
        Byte TempByte;

        TempByte = ECBRAMReadByte(BRAMFnData1Reg, OptionReg);
        If (TempByte & BitNum == 0)
                Return 0;
        Return 1;
}
VOID    AaeonSetOutputLevel(byte OptionReg, byte BitNum, byte Value){
        Byte TempByte;

        TempByte = ECBRAMReadByte(BRAMFnData1Reg, OptionReg);
        TempByte |= (Value << BitNum);
        ECBRAMWriteByte(OptionReg, BitNum, Value);
}

*****************************************************************************************
```

```
*****************************************************************************************
VOID    ECBRAMWriteByte(byte OPReg, byte OPBit, byte Value){
        IOWriteByte(EcBRAMIndex, 0x10);
        IOWriteByte(EcBRAMData, BRAMLDNReg);
        IOWriteByte(EcBRAMIndex, 0x11);
        IOWriteByte(EcBRAMData, BRAMFnDataReg);

        IOWriteByte(EcBRAMIndex, 0x13 + OPReg);
        IOWriteByte(EcBRAMData, Value);

        IOWriteByte(EcBRAMIndex, 0x12);
        IOWriteByte(EcBRAMData, 0x30);                  //Write start
}

Byte    ECBRAMReadByte(byte FnDataReg, byte OPReg){
        IOWriteByte(EcBRAMIndex, 0x10);
        IOWriteByte(EcBRAMData, BRAMLDNReg);
        IOWriteByte(EcBRAMIndex, 0x11);
        IOWriteByte(EcBRAMData, FnDataReg);

        IOWriteByte(EcBRAMIndex, 0x12);
        IOWriteByte(EcBRAMData, 0x10);                  //Read start

        IOWriteByte(EcBRAMIndex, 0x13 + OPReg);
        Return  IOReadByte(EcBRAMData, Value);
}
*****************************************************************************************
```