XTX-CV-A11

Intel® Atom™ D2550/N2600 Processor

Intel® NM10

10/100Base-TX Ethernet

2 SATA 3.0Gb/s, 6 USB2.0

1 PATA, 4 PCI-E[x1], 4 PCI

XTX-CV-A11 Manual 1st Ed.
November 2012

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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 CD-ROM for manual (in PDF format) and drivers
- 1 XTX-CV-A11

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 XTX CPU Module—XTX-CV-A11. The XTX-CV-A11 is a cutting-edge product that provides high performance and low power consumption in the embedded market.

XTX-CV adopts the latest Intel® Atom™ D2550/N2600 processor. The system memory deploys with onboard 204-pin DDR3 800/1066 memory up to 4 GB (D2550: Max. 4 GB; N2600: Max. 2 GB). In addition, Realtek RTL 8105E supports 10/100Base-TX Ethernet that allows network connections. This model applies four PCI-Express[x1], four PCI, one LPC bus, and one SMBus. Moreover, two SATA 3.0Gb/s are configured on the XTX-CV-A11. XTX-CV-A11 also equips six USB2.0 and one parallel port for flexible I/O expansions.

The display of XTX-CV-A11 supports CRT/LCD simultaneous and dual view displays. This brand new XTX CPU 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® Atom™ D2550(1.86GHz)/N2600(1.6HGHz) Processor
- Intel® NM10
- SODIMM DDR3 1066 Memory, Max. 4 GB
- 10/100Base-TX Ethernet
- CRT, Up to 24-bit Dual Channel LVDS LCD
- High Definition Audio Interface
- PATA x 1, SATA 3.0Gb/s x 2
- USB2.0 x 6
- PCI-Express[x1] x 4, PCI x 4
- +5V Operating Voltage

1.3 Specifications

System

Form Factor	XTX
Processor	Intel® Atom™ D2550/N2600 processor, D2550: 1.86 GHz N2600: 1.6 GHz
System Memory	204-pin DDR3 800/1066 SODIMM x 1, Max. 4 GB D2550: DDR3 1066, Max. 4 GB N2600: DDR3 800, Max. 2 GB
Chipset	Intel® NM10
I/O Chipset	Winbond W83627DHG/PT
Ethernet	Realtek RTL8105E, 10/100Base-TX
BIOS	AMI BIOS SPI type, 8MB ROM
EEPROM	Atmel® AT24C02, save BIOS and configuration data (Optional)
Wake On LAN	Yes
Watchdog Timer	Winbond W83627DHG/PT
H/W Status Monitoring	Supports CPU temperature monitoring
Expansion Interface	PCI-Express [x1] x 4 32-bit PCI x 4 LPC bus x 1 SMBus x 1
Power Requirement	Nominal: +5V
Board Size	4.49”(L) x 3.74”(W) (114mm x 95mm)
Gross Weight	0.66 lb (0.3 Kg)
Operating Temperature	32˚F ~ 140˚F (0˚C ~ 60˚C)

- **Storage Temperature** -40˚F ~ 176˚F (-40˚C ~ 85˚C)
- **Operating Humidity** 0% ~ 90% relative humidity, non-condensing

Display: Supports CRT/LCD Simultaneous/ dual view displays

- **Chipset** Intel® Atom™ D2550/N2600 processor integrated, includes AVC/H.264, VC1/WMV9, MPEG2 decoder
- **Memory** Shared system memory up to 256MB/ DVMT 4.0
- **Resolution** Up to 1920x1200 for CRT
  Up to 1920x1080 for LCD (D2550)
  Up to 1600x1200 for LCD (N2600)
- **LCD Interface** Up to 18/24-bit dual-channel LVDS

I/O

- **Storage** SATA 3.0Gb/s x 2, IDE x 1 (shared with SATA)
- **Serial Port** UART x 2
- **USB** USB2.0 x 6
- **Audio** High definition audio
- **Parallel Port** 1

Chapter

2

Quick Installation Guide

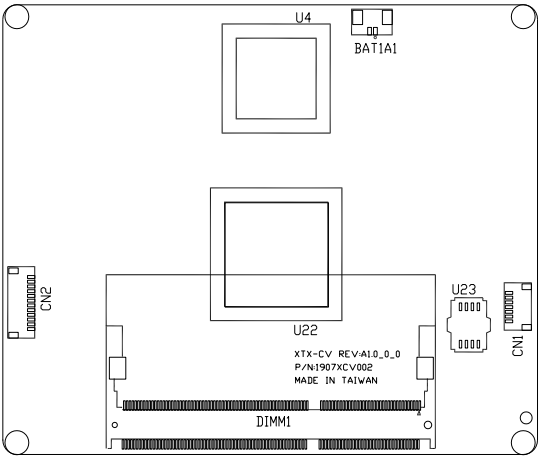
2.1 Safety Precautions

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 Location of Connectors and Switches

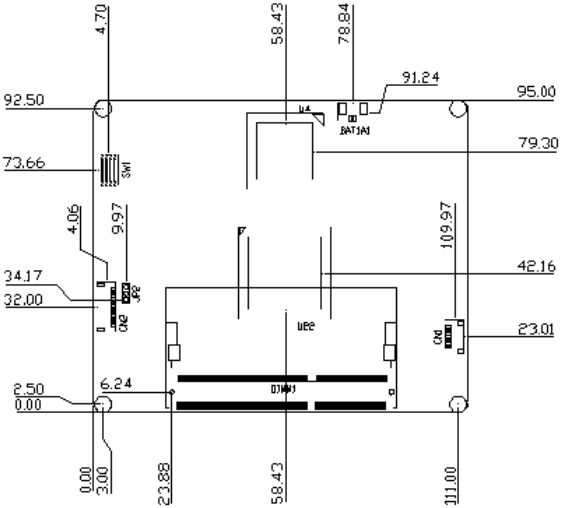
Component Side



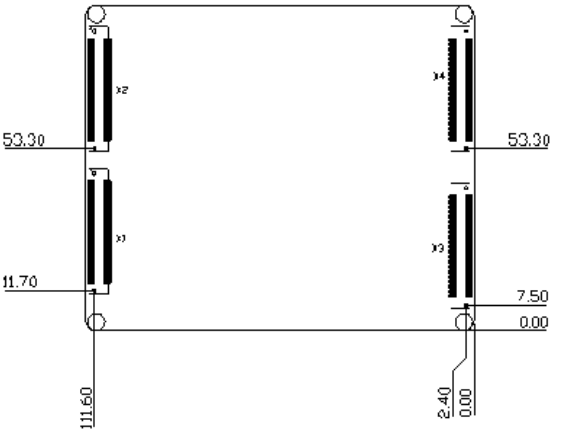
Solder Side

2.3 Mechanical Drawings of Connectors and Switches

Component Side



Solder Side



2.4 List of Switch

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.

Label	Function
SW1	ATX/AT Mode & Clear CMOS & SATA/PATA Selection

2.5 List of Connectors

There are a number of connectors of the board that allow you to configure your system to suit your application. The table below shows the function of each connector in the board:

Label	Function
CN1	BIOS Programming Connector
CN2	LPC Expansion I/F
X1	X1 Connector
X2	X2 Connector
X3	X3 Connector
X4	X4 Connector
DIMM1	DDR3 SODIMM connector

2.6 ATX/AT Mode & CMOS & SATA/PATA Selection (SW1)

Label	Function
1(OFF)	ATX Mode (Default)
1(ON)	AT Mode
2(OFF)	Normal (Default)
2(ON)	Clear CMOS
3(OFF)	SATA Mode (Default)
3(ON)	PATA Mode

Note1: If IDE device is not use , position 3 need switch to OFF.

Note2: IDE device support Master only.

2.7 BIOS Programming Connector (CN1)

Pin	Signal
1	SPI_SO
2	GND
3	SPI_CLK
4	+3V3
5	SPI_SI
6	SPI_CS#
7	N/C

2.8 LPC Expansion I/F Connector (CN2)

Pin	Signal
1	LPC_AD0

2	LPC_AD1
3	LPC_AD2
4	LPC_AD3
5	+3V3
6	LPC_FRAME#
7	PLTRST#
8	GND
9	LPC_ CLK
10	LPC_DRQ#0
11	LPC_DRQ#1
12	SERIRQ

2.9 X1 Connector (X1)

Pin	Signal	Pin	Signal
1	GND	2	GND
3	PCICLK3	4	PCICLK4
5	GND	6	GND
7	PCICKL1	8	PCICLK2
9	PCI_REQ#3	10	PCI_GNT#3
11	PCI_GNT#2	12	N/C
13	PCI_REQ#2	14	PCI_GNT#1
15	PCI_REQ#1	16	N/C
17	PCI_GNT#0	18	N/C
19	+5V_EXT	20	+5V_EXT

21	SERIRQ	22	PCI_REQ#0
23	PCI_AD0	24	N/C
25	PCI_AD1	26	PCI_AD2
27	PCI_AD4	28	PCI_AD3
29	PCI_AD6	30	PCI_AD5
31	PCI_C/BE#0	32	PCI_AD7
33	PCI_AD8	34	PCI_AD9
35	GND	36	GND
37	PCI_AD10	38	LIN_L
39	PCI_AD11	40	MIC_IN
41	PCI_AD12	42	LIN_R
43	PCI_AD13	44	ASVCC
45	PCI_AD14	46	LOUT_L
47	PCI_AD15	48	ASGND
49	PCI_C/BE#1	50	LOUT_R
51	+5V_EXT	52	+5V_EXT
53	PCI_PAR	54	PCI_SERR#
55	PCI_PERR#	56	N/C
57	PCI_PME#	58	USBP2N
59	PCI_LOCK#	60	PCI_DEVSEL#
61	PCI_TRDY#	62	USBP3N
63	PCI_IRDY#	64	PCI_STOP#
65	PCI_FRAME#	66	USBP2P
67	GND	68	GND

69	PCI_AD16	70	PCI_C/BE#2
71	PCI_AD17	72	USBP3P
73	PCI_AD19	74	PCI_AD18
75	PCI_AD20	76	USBP0N
77	PCI_AD22	78	PCI_AD21
79	PCI_AD23	80	USBP1N
81	PCI_AD24	82	PCI_C/BE#3
83	+5V_EXT	84	+5V_EXT
85	PCI_AD25	86	PCI_AD26
87	PCI_AD28	88	USBP0P
89	PCI_AD27	90	PCI_AD29
91	PCI_AD30	92	USBP1P
93	PCIRST#	94	PCI_AD31
95	INT_PIRQ#C	96	INT_PIRQ#D
97	INT_PIRQ#A	98	INT_PIRQ#B
99	GND	100	GND

2.10 X2 Connector (X2)

Pin	Signal	Pin	Signal
1	GND	2	GND
3	PCIE_CLK	4	SATA0_RXP
5	PCIE_CLK#	6	SATA0_RXN
7	GND	8	GND
9	PCIE_TXP3	10	SATA0_TXN

11	PCIE_TXN3	12	SATA0_TXP
13	GND	14	+5VSB_EXT
15	PCIE_RXP3	16	SATA1_RXP
17	PCIE_RXN3	18	SATA1_RXN
19	+5V_EXT	20	+5VSB_EXT
21	EXC1_CPPE#	22	SATA1_TXN
23	EXC1_RST#	24	SATA1_TXP
25	USBP5P	26	GND
27	USBP5N	28	N/C
29	GND	30	N/C
31	PCIE_TXP2	32	SUS_STAT#
33	PCIE_TXN2	34	CLKRUN#
35	GND	36	GND
37	PCIE_RXP2	38	N/C
39	PCIE_RXN2	40	N/C
41	EXC0_CPPE#	42	GND
43	EXC0_RST#	44	N/C
45	USBP4P	46	N/C
47	USBP4N	48	N/C
49	SLP_S3#	50	SATA_LED#
51	+5V_EXT	52	+5V_EXT
53	PCIE_RXN1	54	N/C
55	PCIE_RXP1	56	N/C
57	GND	58	IL_SATA#

59	PCIE_TXN1	60	N/C
61	PCIE_TXP1	62	N/C
63	WAKE#	64	N/C
65	SLP_S5#	66	N/C
67	GND	68	GND
69	PCIE_RXN0	70	N/C
71	PCIE_RXP0	72	N/C
73	GND	74	+5V_EXT
75	PCIE_TXN0	76	N/C
77	PCIE_TXP0	78	N/C
79	N/C	80	+5V_EXT
81	HDA_RST#	82	HDA_SDOUT
83	+5V_EXT	84	+5V_EXT
85	HDA_SYNC	86	N/C
87	N/C	88	N/C
89	HDA_BIT_CLK	90	FAN_TAC
91	LPC_AD0	92	FAN_CTL
93	LPC_AD1	94	LPC_FRAME#
95	LPC_AD2	96	LPC_DRQ#0
97	LPC_AD3	98	LPC_DRQ#1
99	GND	100	GND

2.11 X3 Connector (X3)

Pin	Signal	Pin	Signal
1	GND	2	GND
3	CRT_RED	4	CRT_BLUE
5	HSYNC	6	CRT_GREEN
7	VSYNC	8	CRT_DDC_CLK
9	N/C	10	CRT_DDC_DATA
11	LVDS_B_CLKN	12	LVDS_B_TX#3
13	LVDS_B_CLKP	14	LVDS_B_TX3
15	GND	16	GND
17	LVDS_B_TX1	18	LVDS_B_TX2
19	LVDS_B_TX#1	20	LVDS_B_TX#2
21	GND	22	GND
23	LVDS_A_TX#3	24	LVDS_B_TX0
25	LVDS_A_TX3	26	LVDS_B_TX#0
27	GND	28	GND
29	LVDS_A_TX#2	30	LVDS_A_CLKP
31	LVDS_A_TX2	32	LVDS_A_CLKN
33	GND	34	GND
35	LVDS_A_TX0	36	LVDS_A_TX1
37	LVDS_A_TX#0	38	LVDS_A_TX#1
39	+5V_EXT	40	+5V_EXT
41	LVDS_DDC_DATA	42	N/C
43	LVDS_DDC_CLK	44	BLON
45	LVDS_BKLCTL	46	LVDS_VDDEN

47	N/C	48	N/C
49	N/C	50	N/C
51	N/C	52	N/C
53	+5V_EXT	54	GND
55	STB#	56	AFD#
57	N/C	58	PD7
59	N/C	60	ERR#
61	N/C	62	PD6
63	RXDB	64	INIT#
65	GND	66	GND
67	RTSB#	68	PD5
69	DTRB#	70	SLIN#
71	DCDB#	72	PD4
73	DSRB#	74	PD3
75	CTSB#	76	PD2
77	TXDB	78	PD1
79	RIB#	80	PD0
81	+5V_EXT	82	+5V_EXT
83	RXDA	84	ACK#
85	RTSA#	86	BUSY
87	DTRA#	88	PE
89	DCDA#	90	SLCT
91	DSRA#	92	MSCLK
93	CTSA#	94	MSDAT

95	TXDA	96	KBCLK
97	RIA#	98	KBDAT
99	GND	100	GND

2.12 X4 Connector (X4)

Pin	Signal	Pin	Signal
1	GND	2	GND
3	+5VSB_EXT	4	HWRST#
5	PSON#	6	SPKR
7	PWRBTN#	8	RTCBAT
9	N/C	10	LINK_LED#
11	N/C	12	ACT_LED#
13	N/C	14	10_100_LED#
15	N/C	16	N/C
17	+5V_EXT	18	+5V_EXT
19	OC#	20	N/C
21	N/C	22	N/C
23	SMBCLK	24	SMBDATA
25	N/C	26	SMBALERT#
27	N/C	28	DASP_S
29	N/C	30	IDE_CS3#
31	N/C	32	IDE_CS1#
33	GND	34	GND
35	N/C	36	IDE_A2
37	N/C	38	IDE_A0
39	N/C	40	IDE_A1
41	N/C	42	N/C

43	N/C	44	IDE_INTRQ
45	N/C	46	IDE_ACK#
47	N/C	48	IDE_RDY
49	+5V_EXT	50	+5V_EXT
51	N/C	52	IDE_IOR#
53	N/C	54	IDE_IOW#
55	N/C	56	IDE_DRQ
57	N/C	58	IDE_D15
59	N/C	60	IDE_D0
61	N/C	62	IDE_D14
63	N/C	64	IDE_D1
65	GND	66	GND
67	N/C	68	IDE_D13
69	N/C	70	IDE_D2
71	N/C	72	IDE_D12
73	N/C	74	IDE_D3
75	N/C	76	IDE_D11
77	N/C	78	IDE_D4
79	N/C	80	IDE_D10
81	+5V_EXT	82	+5V_EXT
83	N/C	84	IDE_D5
85	N/C	86	IDE_D9
87	N/C	88	IDE_D6
89	NM_RI#	90	CBLID_P#

91	RDN	92	IDE_D8
93	RDP	94	N/C
95	TDN	96	IDE_D7
97	TDP	98	IDE_RST#
99	GND	100	GND

2.13 DDR3 SODIMM Connector (DIMM1)

Standard DDR3 SODIMM Connector

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 Iinitialization

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 XTX-CVA 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

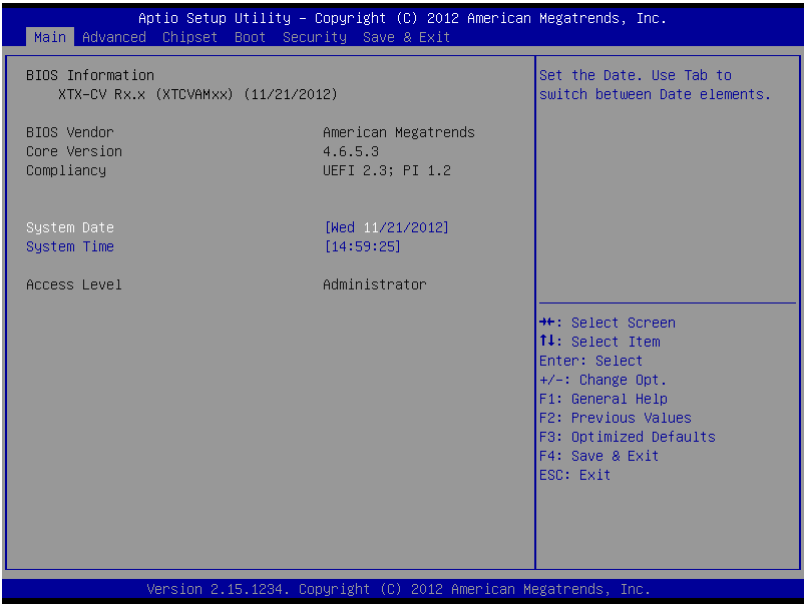
Set setup administrator password.

Save & Exit

Exit system setup after saving the changes.

Setup Menu

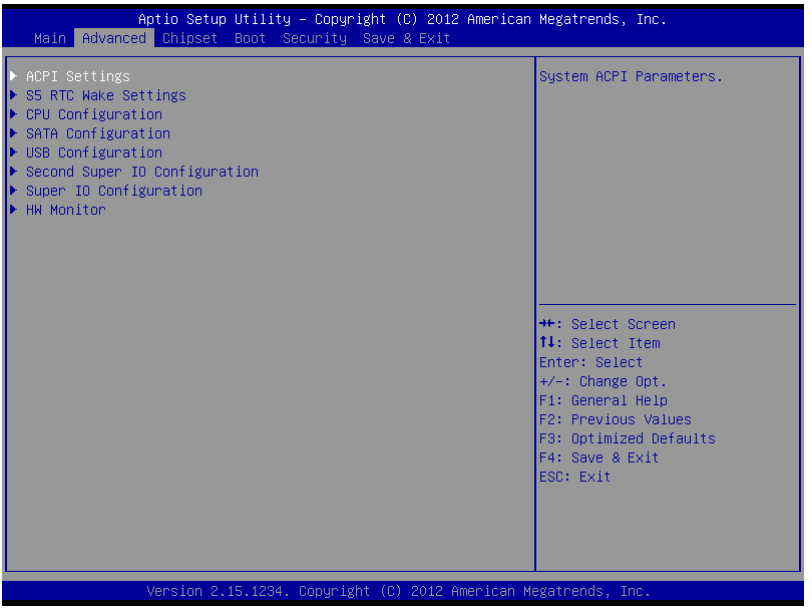
Setup submenu: Main



Options summary: (***default setting***)

System Date	Day MM:DD:YYYY	
Change the month, year and century. The 'Day' is changed automatically.		
System Time	HH : MM : SS	
Change the clock of the system.		

Setup submenu: Advanced

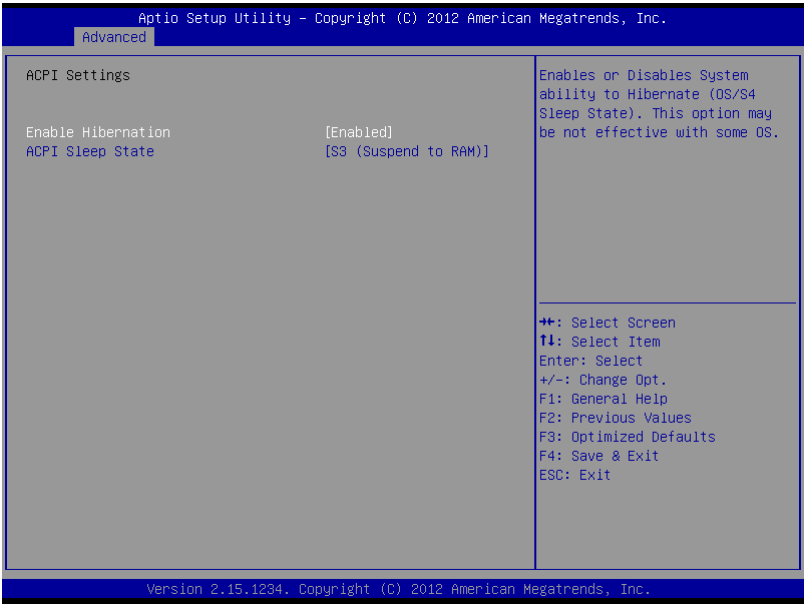


Options summary: (***default setting***)

ACPI Settings		
System ACPI Parameters		
S5 RTC Wake Settings		
Support S5 RTC Wake Function		
CPU Configuration		
CPU Configuration Parameters		
SATA Configuration		
SATA Device Options Settings		

USB Configuration		
USB Configuration Parameters		
Second Super IO Configuration		
IT8712 2nd Super IO Configuration Parameters (With ECB-910M Carrier Board)		
Super IO Configuration		
W83627DHG Super IO Configuration Parameters		
H/W Monitor		
Monitor hardware status		

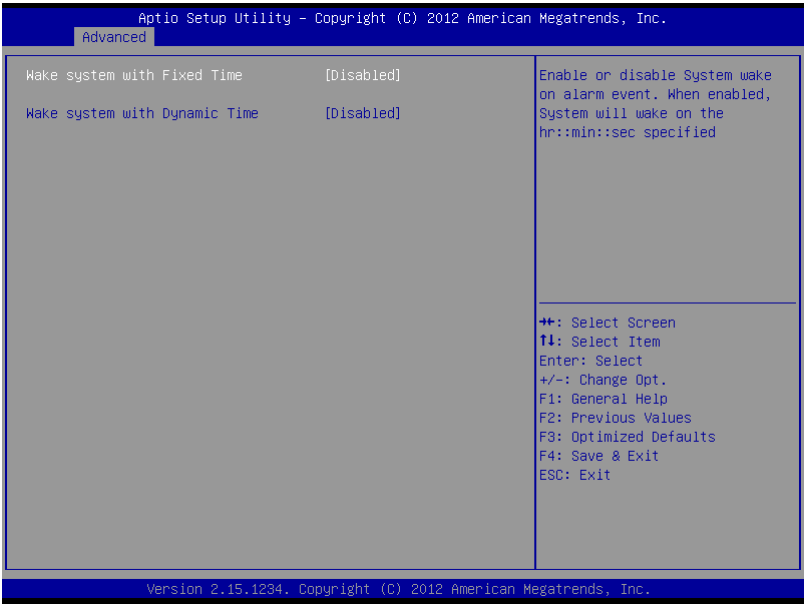
ACPI Settings



Options summary: (***default setting***)

Enable Hibernation	Disabled	
	Enabled	
Enable/Disable Hibernation function		
ACPI Sleep State	Suspend Disabled	
	S1 (CPU Stop Clock)	
	S3 (Suspend to RAM)	
Select the ACPI state used for System Suspend		

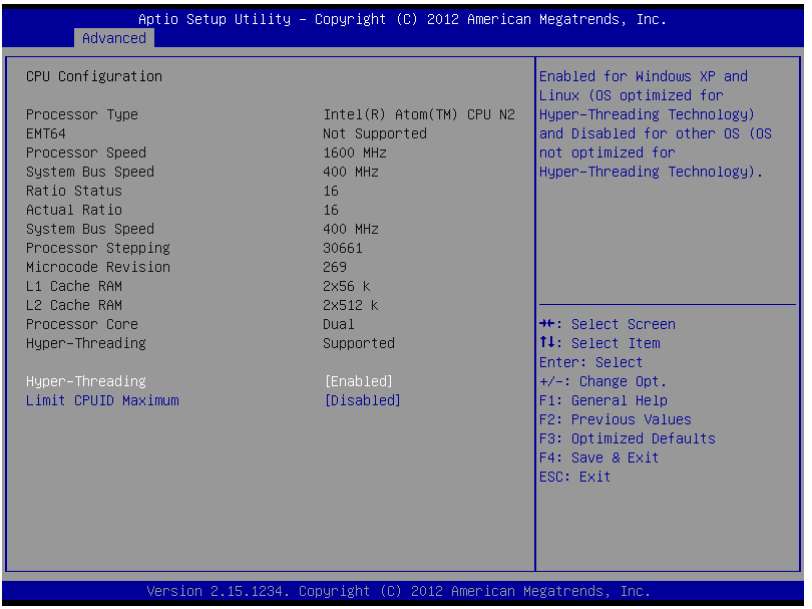
S5 RTC Wake Settings



Options summary: (***default setting***)

Wake system with Fixed Time	***Disabled***	
	Enabled	
Enable or disable System wake on alarm event. Wake up time is setting by following settings.		
Wake up day	0-31	
Select 0 for daily system wake up 1-31 for which day of the month that you would like the system to wake up		
Wake up hour	0-23	
Wake up minute	0-59	
Wake up second	0-59	
Wake system with Dynamic Time	***Disabled***	
	Enabled	
Enable or disable System wake on alarm event. Wake up time is current time + Increase minutes.		
Wake up minute increase	1-5	

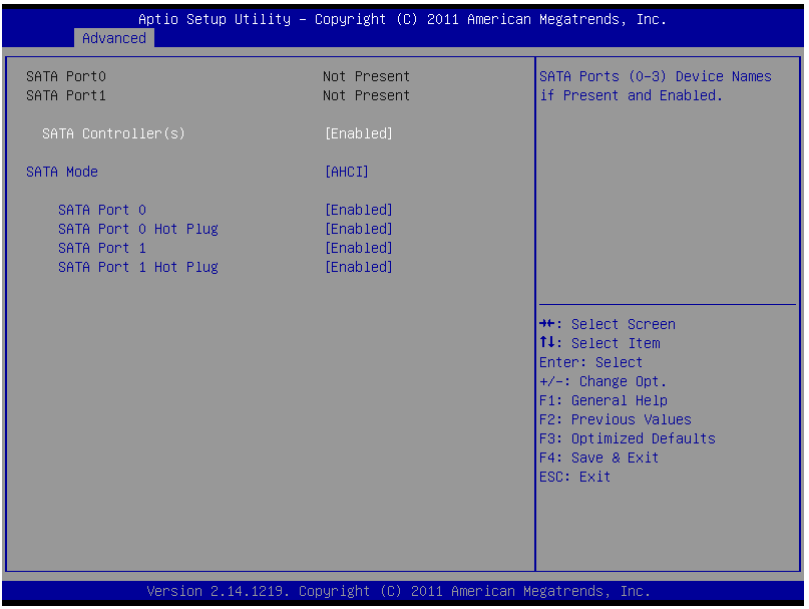
CPU Configuration



Options summary: (***default setting***)

Hyper-Threading	Disabled	
	Enabled	
CPU Hyper-Threading Technology support or not		
Limit CPUID Maximum	***Disabled***	
	Enabled	
Disabled for Windows XP		

SATA Configuration

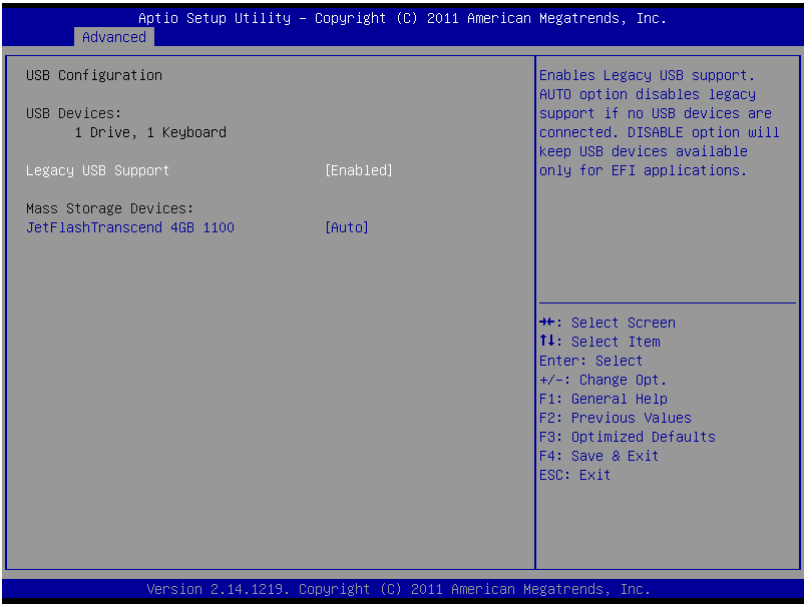


Options summary: (***default setting***)

SATA Controller(s)	***Enabled***	
	Disabled	
SATA Controller Enable/Disable		
SATA Mode	IDE	
	AHCI	
Configure SATA controller operating as IDE/AHCI mode.		
SATA PORTx	***Enabled***	
	Disabled	

Enable / Disable SATA Portx		
SATA Portx Hot Plug	***Enabled***	
	Disabled	
Enable / Disable SATA Portx Hot Plug function		

USB Configuration

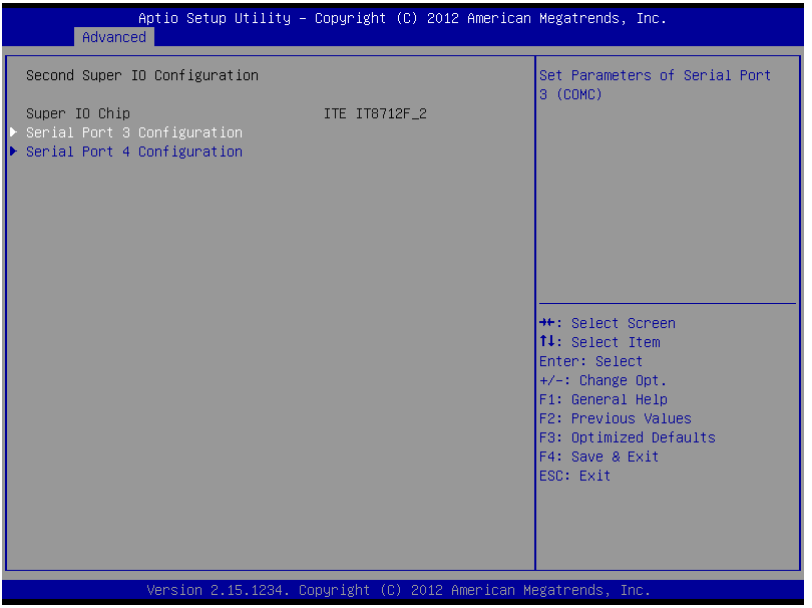


Options summary: (***default setting***)

Legacy USB Support	***Enabled***	
	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. DISABLE option will keep USB devices available only for EFI application		
Device Name (Emulation Type)	**Auto**	
	Floppy	
	Forced FDD	
	Hard Disk	
	CD-ROM	
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)		

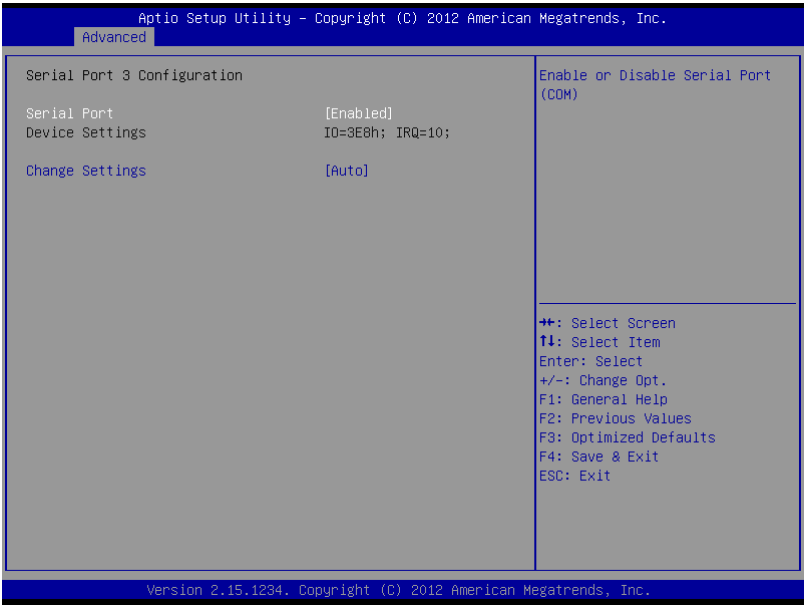
Second Super IO Configuration (Support with ECB-910M Carrier Board)



Options summary: (***default setting***)

Serial Port 3/4 Configuration		
Set Parameters of Serial Port 3/4		

Serial Port 3 Configuration

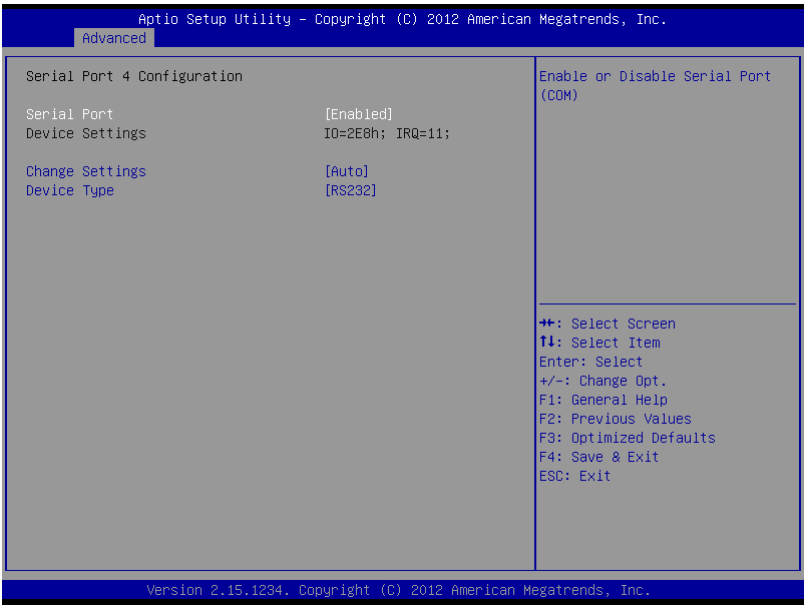


Options summary: (***default setting***)

Serial Port	Disabled	
	Enabled	
En/Disable specified serial port.		
Change Settings	***Auto***	
	IO=3F8h; IRQ=3;	
	IO=3F8h; IRQ=3,4,5,6,7,9,10,11,12;	

	IO=2F8h; IRQ=3,4,5,6,7,9,10,11,12;	
	IO=3E8h; IRQ=3,4,5,6,7,9,10,11,12;	
	IO=2E8h; IRQ=3,4,5,6,7,9,10,11,12;	
Select COM3 Resource		

Serial Port 4 Configuration

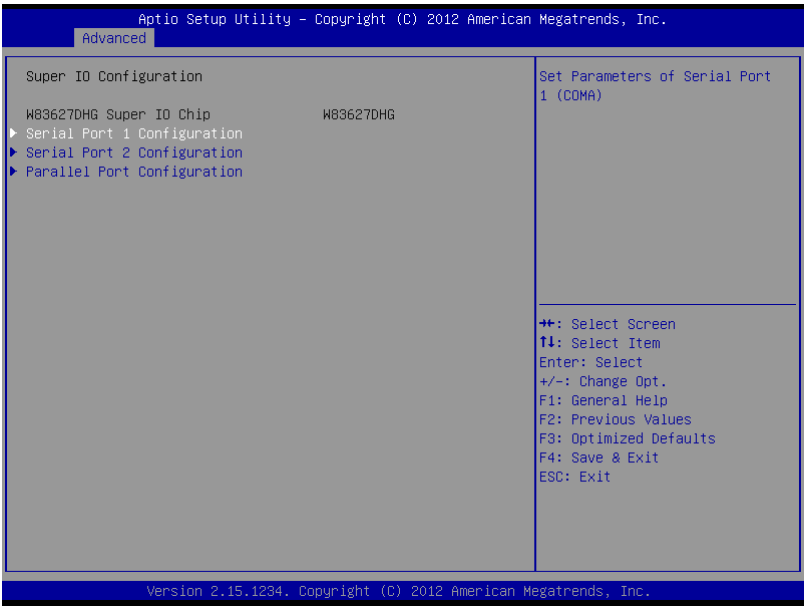


Options summary: (***default setting***)

Serial Port	Disabled	

	Enabled	
En/Disable specified serial port.		
Change Settings	***Auto***	
	IO=3F8h; IRQ=3;	
	IO=3F8h; IRQ=3,4,5,6,7,9,10,11,12;	
	IO=2F8h; IRQ=3,4,5,6,7,9,10,11,12;	
	IO=3E8h; IRQ=3,4,5,6,7,9,10,11,12;	
	IO=2E8h; IRQ=3,4,5,6,7,9,10,11,12;	
Select COM4 Resource		
Device Type	***RS232***	
	RS422	
	RS485	
Select COM4 Device Type		

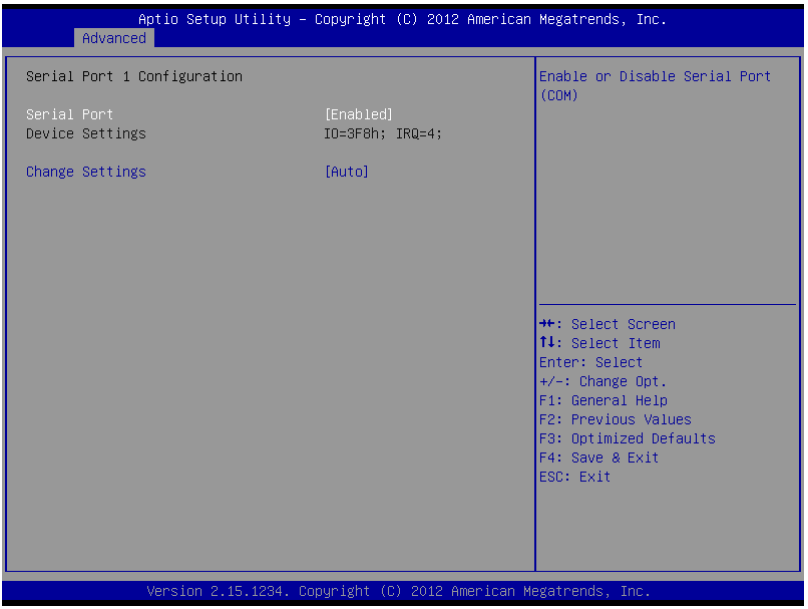
Super IO Configuration



Options summary: (***default setting***)

Serial Port 1/2 Configuration		
Set Parameters of Serial Port 1/2		
Parallel Port Configuration		
Set Parallel Port Configuration		

Serial Port 1 Configuration

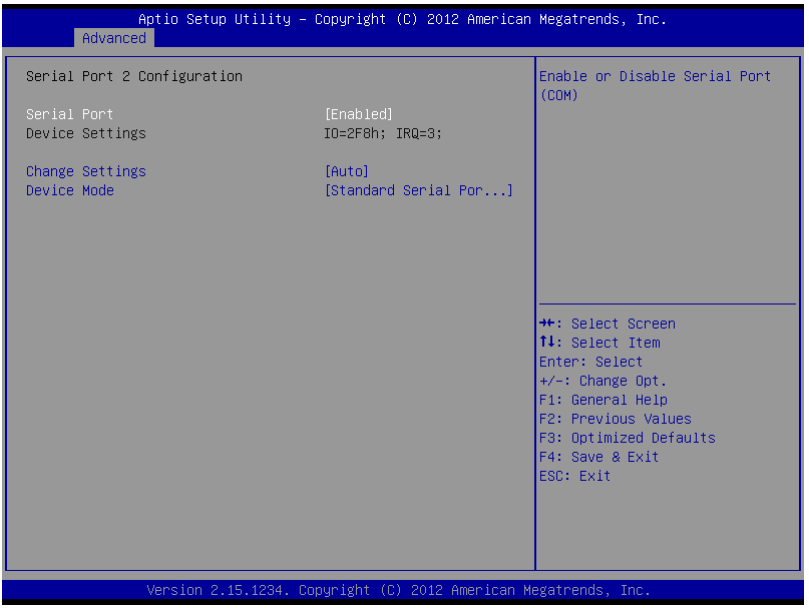


Options summary: (***default setting***)

Serial Port	Disabled	
	Enabled	
En/Disable specified serial port.		
Change Settings	***Auto***	
	IO=3F8h; IRQ=4;	
	IO=3F8h; IRQ=3,4,5,7,10,11,12;	
	IO=2F8h; IRQ=3,4,5,7,10,11,12;	
	IO=3E8h; IRQ=3,4,5,7,10,11,12;	

	IO=2E8h; IRQ=3,4,5,7,10,11,12;	
Select a resource setting for Super IO device.		

Serial Port 2 Configuration

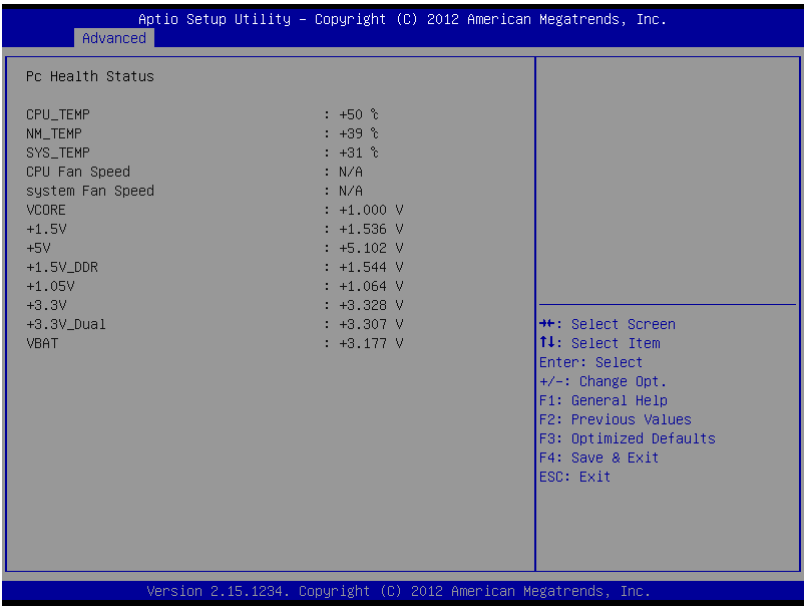


Options summary: (***default setting***)

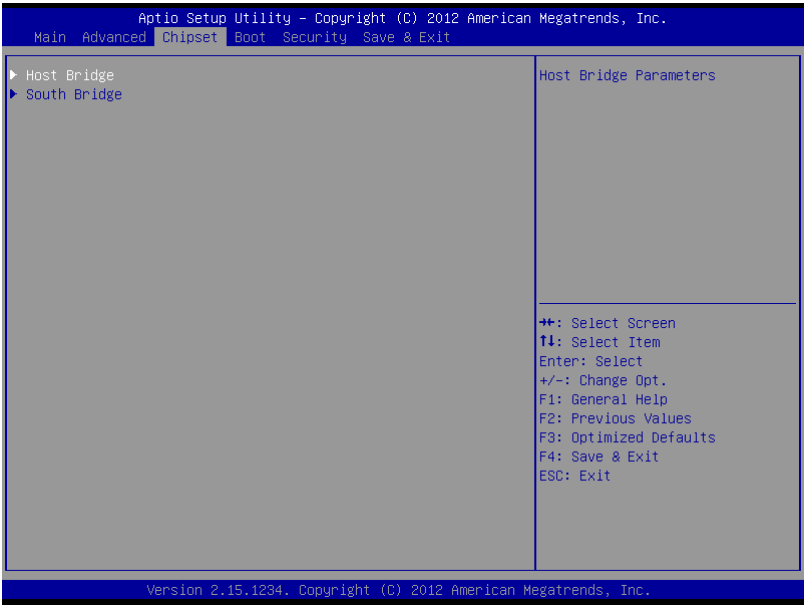
Serial Port	Disabled	
	Enabled	
En/Disable specified serial port.		
Change Settings	***Auto***	
	IO=2F8h; IRQ=3;	

	IO=3F8h; IRQ=3,4,5,7,10,11,12;	
	IO=2F8h; IRQ=3,4,5,7,10,11,12;	
	IO=3E8h; IRQ=3,4,5,7,10,11,12;	
	IO=2E8h; IRQ=3,4,5,7,10,11,12;	
Select a resource setting for Super IO device.		
COM2 Type Option	***RS232***	
	RS422	
	RS485	
Configure COM2 operated as RS232, RS422 or RS485.		
Device Mode	***Standard Serial Port Mode***	
	IrDA Active pulse 1.6 us	
	IrDA Active pulse 3/16 bit time	
	ASK-IR Inverting IRTX, Routed to IRRX	
	ASK-IR Inverting IRTX 8500KHz, Routed to IRRX	
	ASK-IR Inverting IRTX, Demodulation to IRRX	
	ASK-IR inverting IRTX&8500KHz, Demodulation to IRRX	
Change the Serial Port mode.		

H/W Monitor


Aptio Setup Utility – Copyright (C) 2012 American Megatrends, Inc.
Advanced
Pc Health Status
CPU_TEMP : +50 %
NM_TEMP : +39 %
SYS_TEMP : +31 %
CPU Fan Speed : N/A
system Fan Speed : N/A
VCORE : +1.000 V
+1.5V : +1.536 V
+5V : +5.102 V
+1.5V_DDR : +1.544 V
+1.05V : +1.064 V
+3.3V : +3.328 V
+3.3V_Dual : +3.307 V
VBAT : +3.177 V
→←: Select Screen
↑↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit
Version 2.15.1234. Copyright (C) 2012 American Megatrends, Inc.

Setup submenu: Chipset



Options summary: (***default setting***)

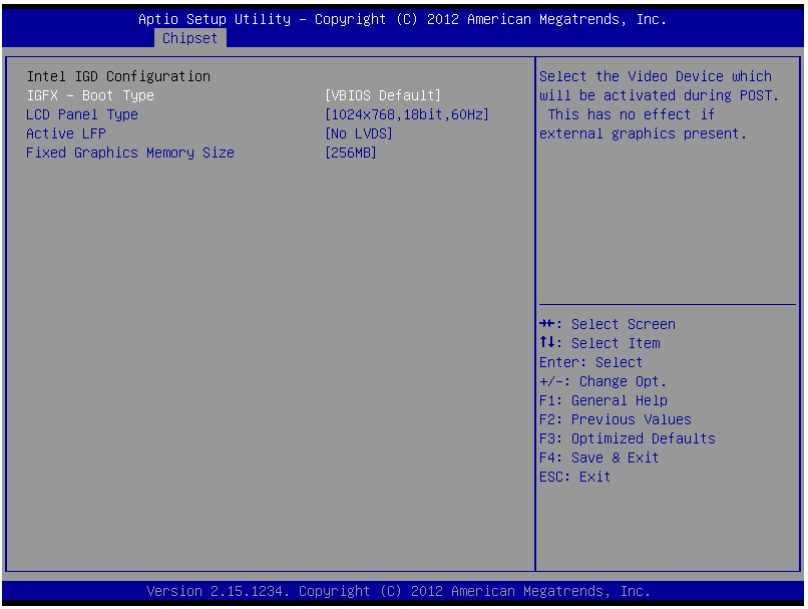
Host Bridge		
Host Bridge Parameters		
South Bridge		
South Bridge Parameters		

Host Bridge

Options summary: (***default setting***)

Intel IGD Configuration		
Enter to set Graphic Configuration		
Memory Information		
Show current memory information		

Intel IGD Configuration

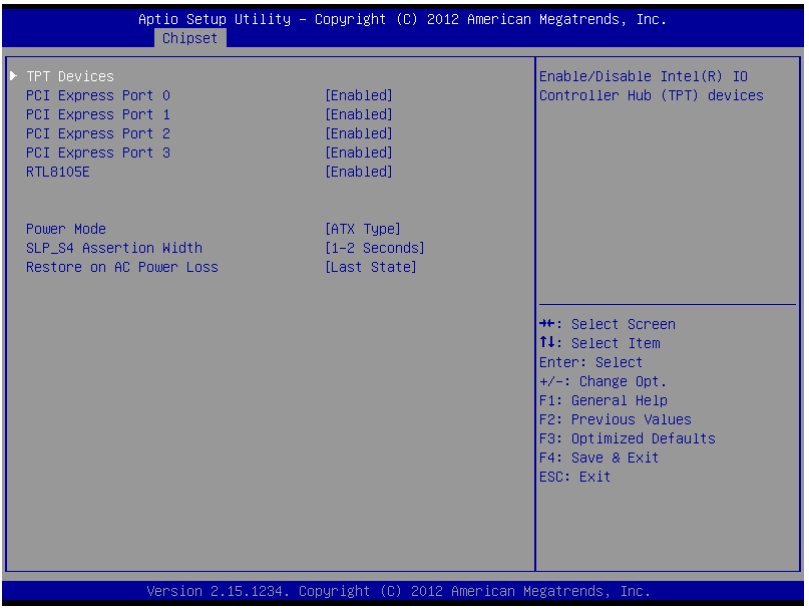


Options summary: (***default setting***)

IGFX – Boot Type	***VBIOS Default***	
	CRT	
	EFP	
Select the Video Device which will be activated during POST (**EFP:** DP0 to LVDS)		
LCD Panel Type	800x480,18bit,60Hz	
	800x600,18bit,60Hz	
	1024x768,18bit,60Hz	
	1024x768,24bit,60Hz	
	1366x768,24bit,60Hz	

	1600x1200,36bit,60Hz	
	1600x1200,48bit,60Hz	
	1920x1080,48bit,60Hz	
Select panel native resolution.		
Active LFP	***No LVDS***	
	Int-LVDS	
Select the Active LFP Configuration. No LVDS: VBIOS does not enable LVDS. Int-LVDS: VBIOS enables LVDS driver by Integrated encoder.		
Fixed Graphics Memory Size	128MB	
	256MB	
Configure Fixed Graphics Memory Size		

South Bridge

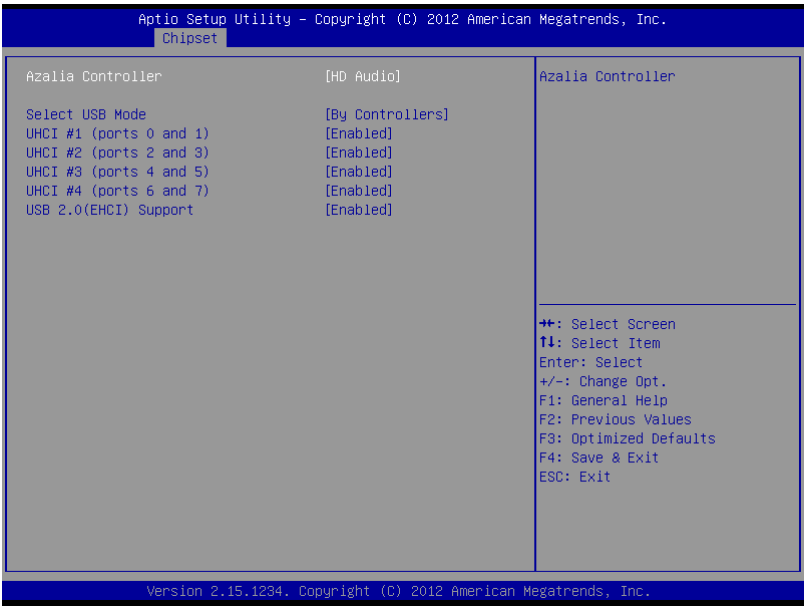


Options summary: (***default setting***)

TPT Devices		
Configure onboard TPT Devices		
PCI Express Port x	Disabled	
	Enabled	
Enable/Disable PCI Express Port 0 - 3		
RTL8105E	Disabled	
	Enabled	
Enable/Disable onboard RTL8105E LAN		

Power Mode		
Select AT/ATX Power Mode		
SLP_S4 Assertion Width	***1-2 Seconds***	
	2-3 Seconds	
	3-4 Seconds	
	4-5 Seconds	
Select a minimum assertion width of the SLP_S4# signal		
Restore on AC Power Loss	Power Off	
	Power On	
	Last State	
Select AC power state when power is re-applied after a power failure.		

TPT Devices

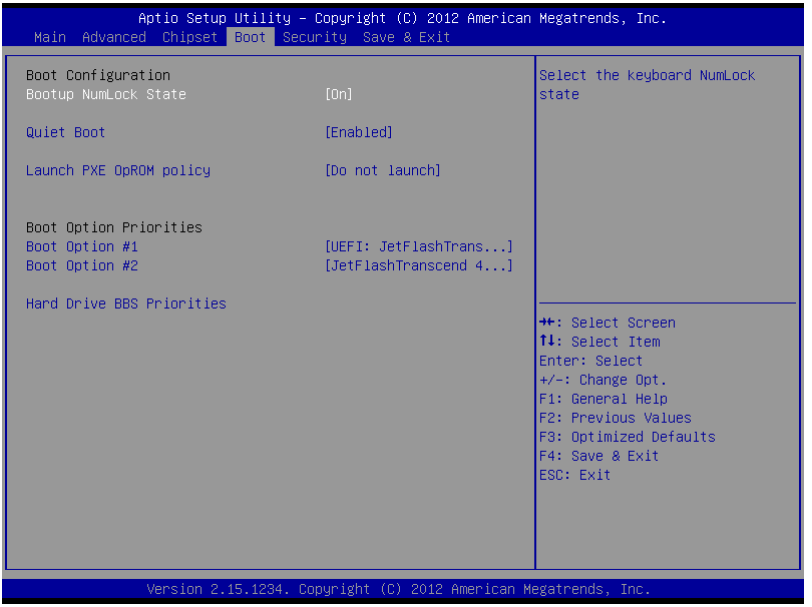


Options summary: (***default setting***)

Azalia Controller	Disabled	
	HD Audio	
Azalia Controller Enable/Disable		
Select USB Mode	By Ports	
	By Controllers	
Select USB mode to control USB ports By Ports: Enable by total USB port numbers By Controllers: Enable by UHCI #x		

USB 2.0(EHCI) Support	Disabled	
	Enabled	
Enable/Disable USB 2.0 (EHCI) Support		

Boot Configuration

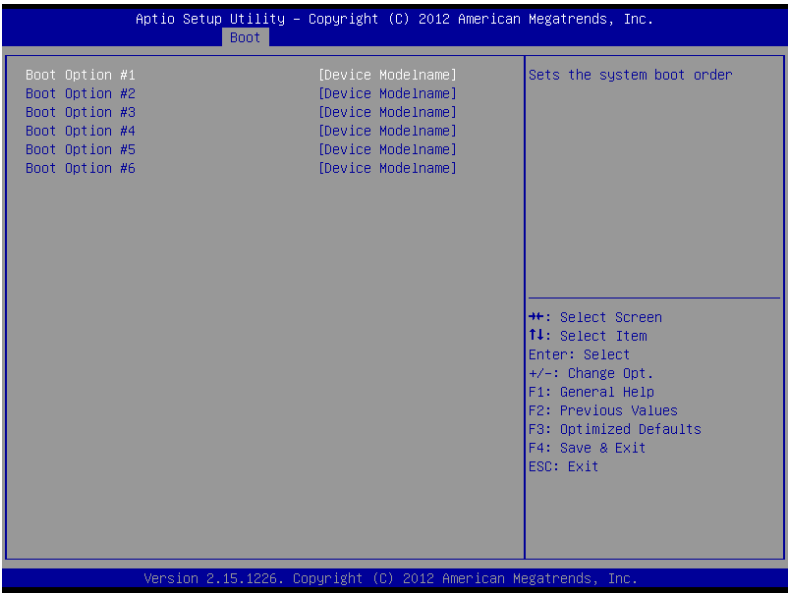


Options summary: (***default setting***)

Bootup NumLock State	***On***	
	Off	
Select the keyboard NumLock state		
Quiet Boot	Disabled	

	Enabled	
Enables or disables Quiet Boot option		
Launch PXE OpROM policy	***Do not launch***	
	UEFI only	
	Legacy only	
En/Disable PXE boot for onboard RTL8105E LAN		
Boot Option #X XXXX Drive BBS Priorities		
The order of boot priorities.		

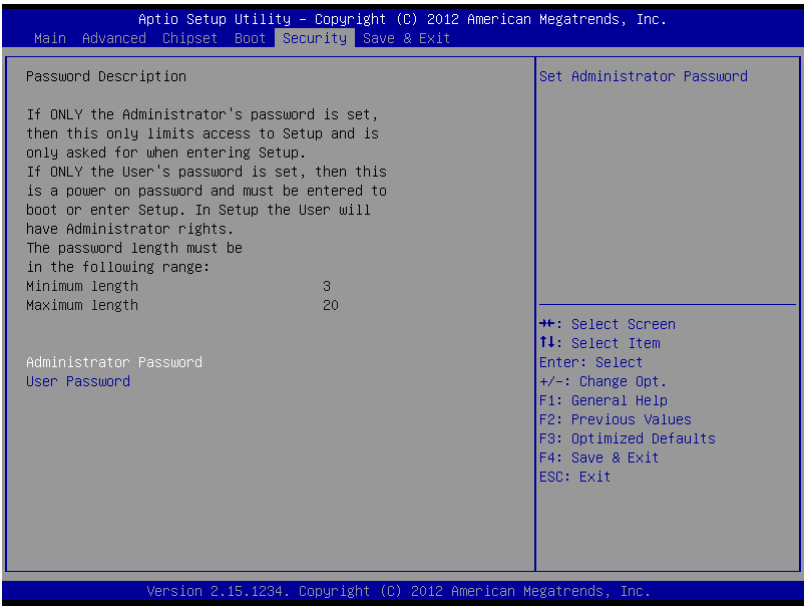
BBS Priorities



Options summary: (***default setting***)

Boot Option #x	Disabled	
	Device name	
Sets the system boot order		

Setup submenu: Security



Options summary: (***default setting***)

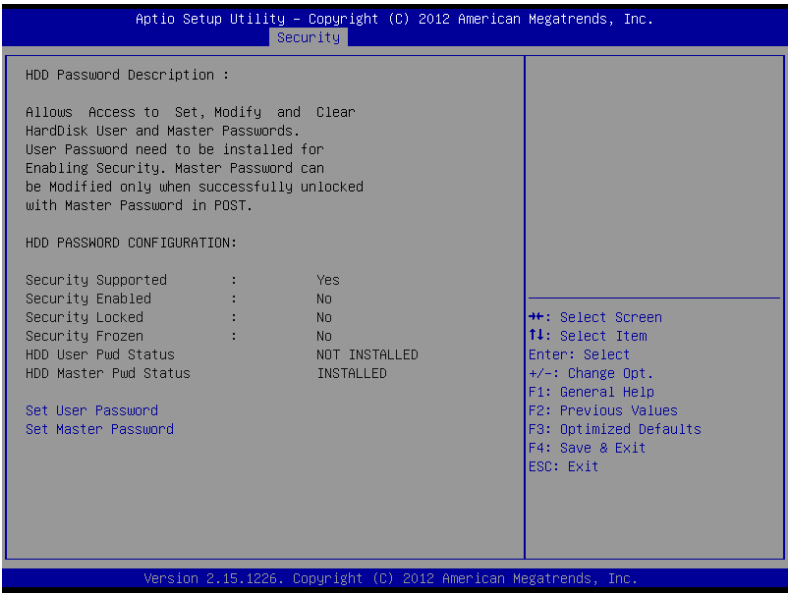
Administrator Password/ User Password	***Not set***	
You can install a Supervisor password, and if you install a supervisor password, you can then install a user password. A user password does not provide access to many of the features in the Setup utility. *Install the Password:* Press Enter on this item, 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.

HDD Security



Options summary: (***default setting***)

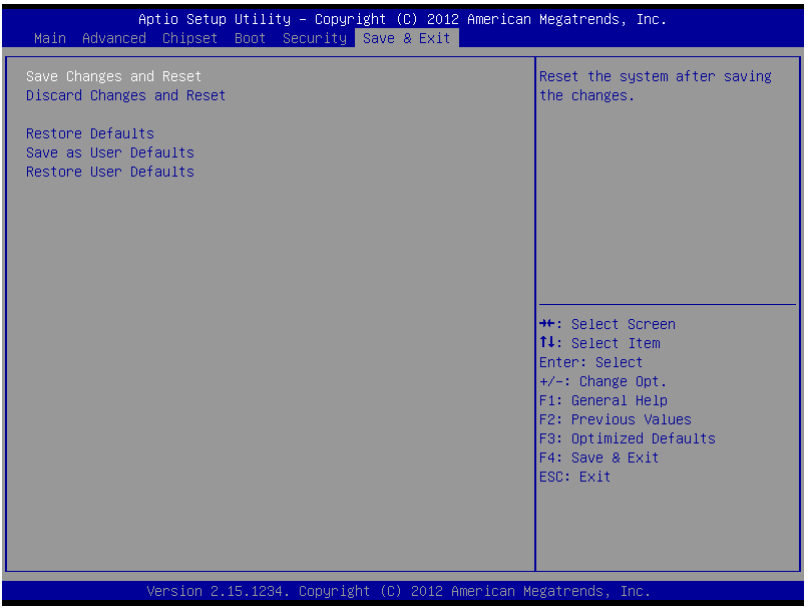
Set User Password/	***Not set***	
Set Master Password		
You can install a Master and User password. Before booting to OS, HDD will be set to frozen state. On S3 resume HDD will be unlocked using the HDD Password we entered while system booting. *Install the Password:* Press Enter on this item, a dialog 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: Exit



Options summary: (***default setting***)

Save Changes and Reset		
Reset the system after saving the changes		
Discard Changes and Reset		
Reset system setup without saving any changes		
Restore Defaults		
Restore/Load Default values for all the setup options.		
Save as User Defaults		
Save the changes done so far as User Defaults		

Restore User Defaults		
Restore the User Defaults to all the setup options		

Chapter

4

Driver Installation

The XTX-CV comes with a CD-ROM that contains all drivers your need.

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 Audio Driver

Step 5 – Install AHCI Driver

Please read following instructions for detailed installations.

4.1 Installation:

Insert the XTX-CV CD-ROM into the CD-ROM Drive. And install the drivers from Step 1 to Step 6 in order.

Step 1 – Install Chipset Driver

1. Click on the ***STEP1 - CHIPSET*** folder and select the OS you are currently using, double click on the ***.exe*** file
2. Follow the instructions that the window shows
3. The system will help you to install the driver automatically

Step 2 – Install VGA Driver

1. Click on the ***STEP2 - VGA*** folder and select the OS you are currently using, double click on the ***.exe*** file
2. Follow the instructions that the window shows
3. The system will help you to install the driver automatically

Step 3 – Install LAN Driver

1. Click on the ***STEP3 - LAN_RTL8105E*** folder and select the OS you are currently using, double click on the ***.exe*** file
2. Follow the instructions that the window shows
3. The system will help you to install the driver automatically

Step 4 – Install Audio Driver

1. Click on the ***STEP4 - AUDIO*** folder and select the OS you are currently using, double click on the ***.exe*** file

2. Follow the instructions that the window shows
3. The system will help you to install the driver automatically

Step 5 – Install AHCI Driver

1. Click on the ***STEP5 - AHCI*** folder d select the OS you are currently using, double click on the ***.exe*** file
2. Follow the instructions that the window shows
3. The system will help you to install the driver automatically

Appendix

A

Programming the Watchdog Timer

A.1 W83627DHG Watchdog Timer Initial Program

```
;Enter Config mode
mov dx, 2Eh
mov al, 87h
out dx, al
out dx, al

;Set LDN 08 for WDTO#
mov al, 07h
out dx, al
inc dx
mov al, 08h
out dx, al

;Set Pin77 as WDTO#
dec dx
mov al, 2Dh
out dx, al
inc dx
```

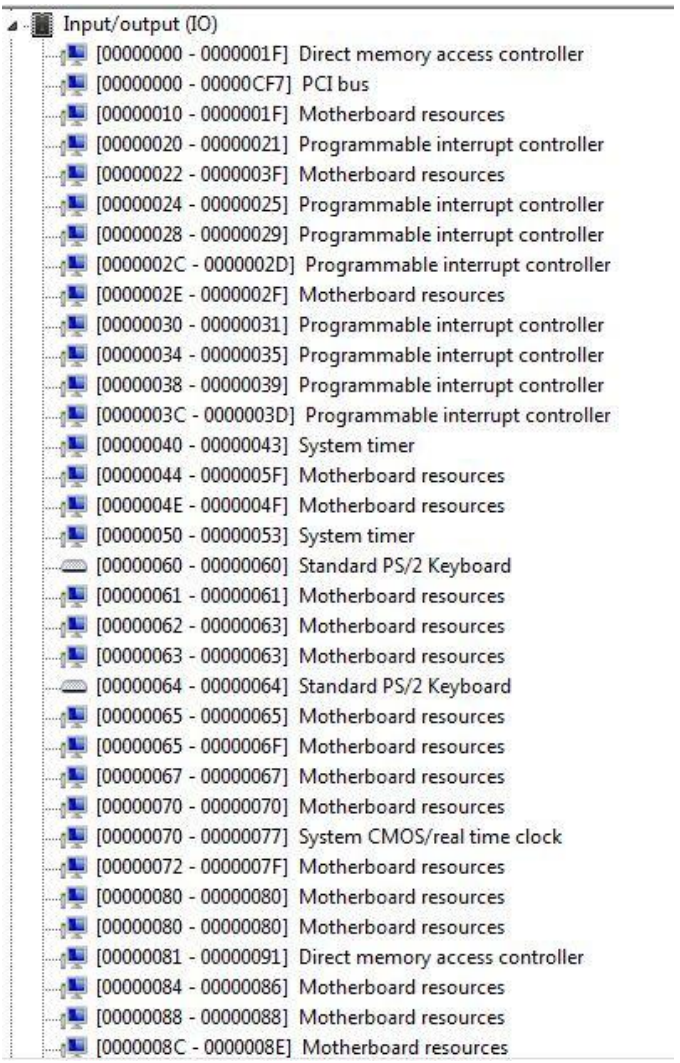
```
in al, dx
    and al, 0FEh
out dx, al

;Set WDTO# timer
dec dx
mov al, 0F6h
out dx, al
inc dx
mov al, 05h
out dx, al

;Exit Config mode
dec dx
mov al, 0AAh
out dx, al
```

Appendix

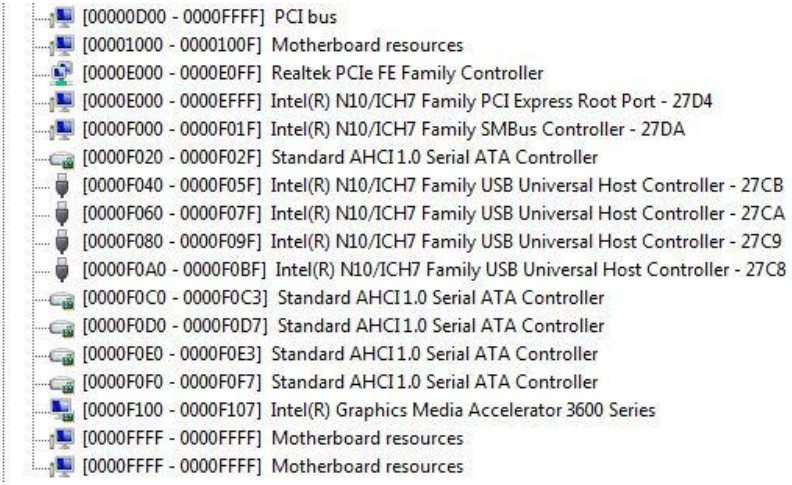
B

I/O Information

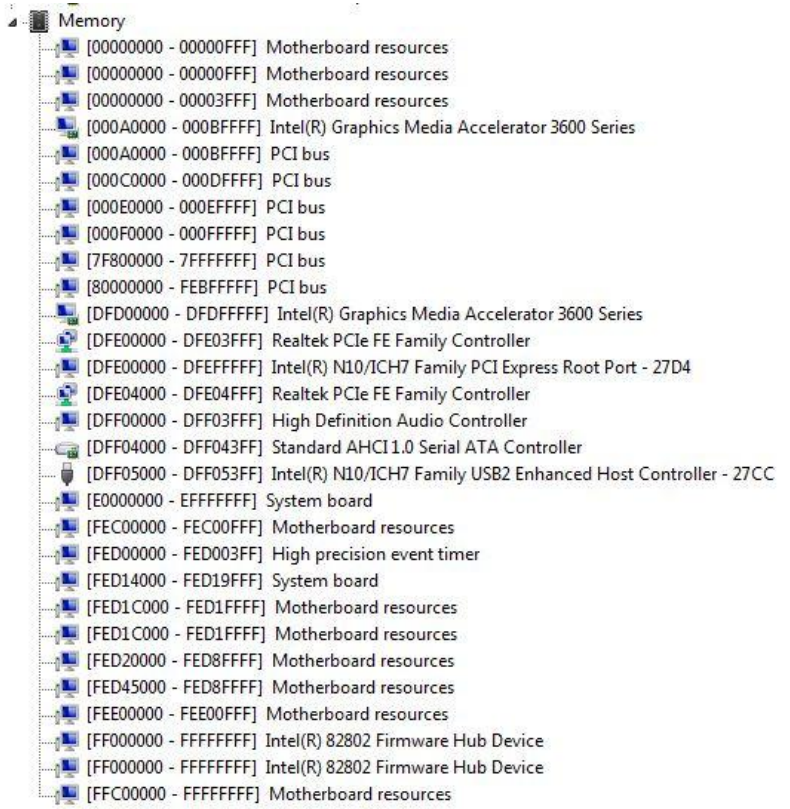
B.1 I/O Address Map



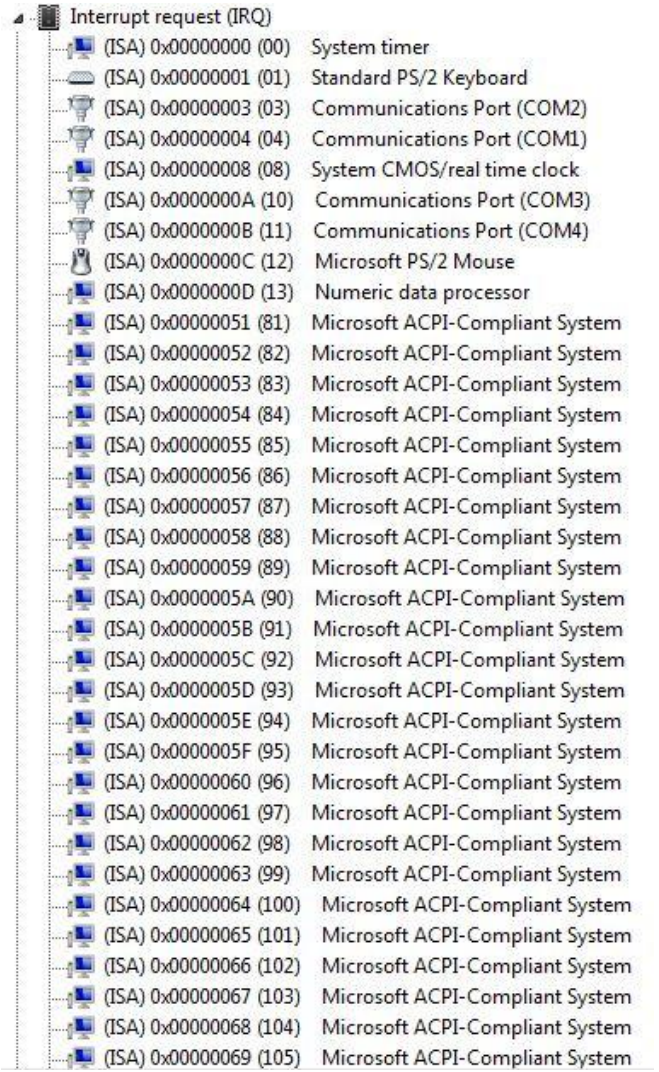
- [00000090 - 0000009F] Motherboard resources
- [00000092 - 00000092] Motherboard resources
- [00000093 - 0000009F] Direct memory access controller
- [000000A0 - 000000A1] Programmable interrupt controller
- [000000A2 - 000000BF] Motherboard resources
- [000000A4 - 000000A5] Programmable interrupt controller
- [000000A8 - 000000A9] Programmable interrupt controller
- [000000AC - 000000AD] Programmable interrupt controller
- [000000B0 - 000000B1] Programmable interrupt controller
- [000000B2 - 000000B3] Motherboard resources
- [000000B4 - 000000B5] Programmable interrupt controller
- [000000B8 - 000000B9] Programmable interrupt controller
- [000000BC - 000000BD] Programmable interrupt controller
- [000000C0 - 000000DF] Direct memory access controller
- [000000E0 - 000000EF] Motherboard resources
- [000000F0 - 000000F0] Numeric data processor
- [000002E8 - 000002EF] Communications Port (COM4)
- [000002F8 - 000002FF] Communications Port (COM2)
- [00000378 - 0000037F] Printer Port (LPT1)
- [000003B0 - 000003BB] Intel(R) Graphics Media Accelerator 3600 Series
- [000003C0 - 000003DF] Intel(R) Graphics Media Accelerator 3600 Series
- [000003E8 - 000003EF] Communications Port (COM3)
- [000003F8 - 000003FF] Communications Port (COM1)
- [00000400 - 0000047F] Motherboard resources
- [00000400 - 0000047F] Motherboard resources
- [000004D0 - 000004D1] Motherboard resources
- [000004D0 - 000004D1] Programmable interrupt controller
- [00000500 - 0000053F] Motherboard resources
- [00000500 - 0000057F] Motherboard resources
- [00000600 - 0000061F] Motherboard resources
- [00000680 - 0000069F] Motherboard resources
- [000006A0 - 000006AF] Motherboard resources
- [000006B0 - 000006EF] Motherboard resources
- [00000A00 - 00000A0F] Motherboard resources
- [00000A10 - 00000A1F] Motherboard resources

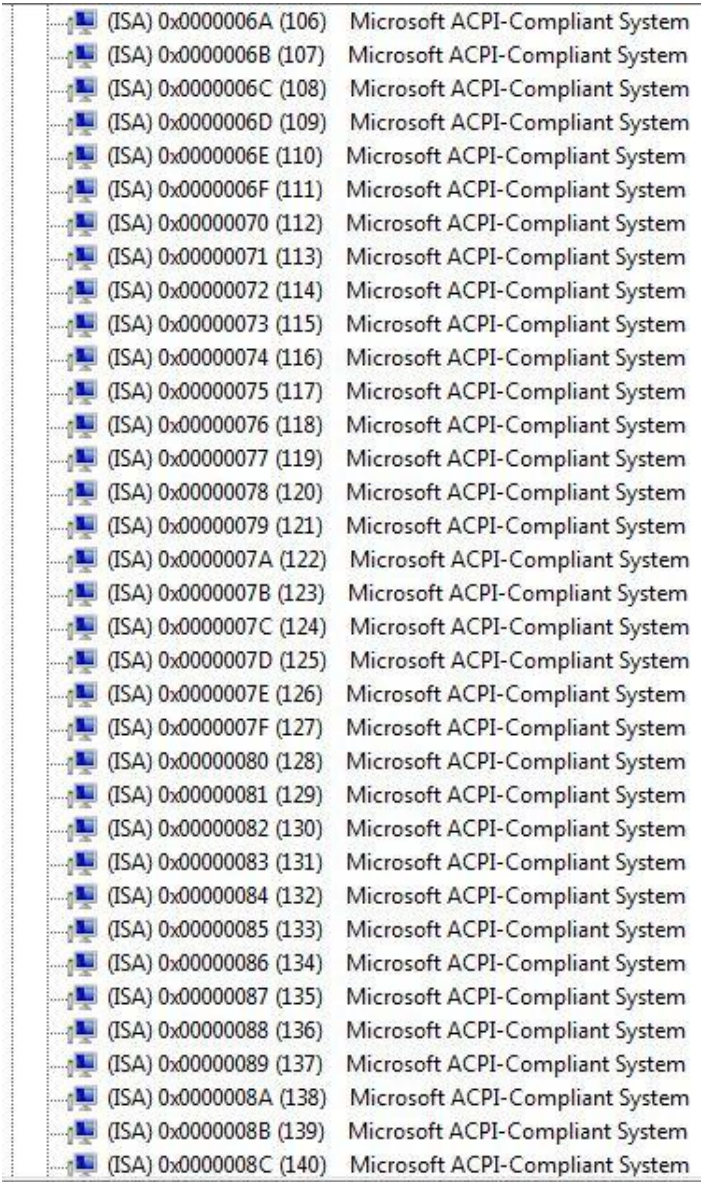

[00000D00 - 0000FFFF] PCI bus
[00001000 - 0000100F] Motherboard resources
[0000E000 - 0000E0FF] Realtek PCIe FE Family Controller
[0000E000 - 0000EFFF] Intel(R) N10/ICH7 Family PCI Express Root Port - 27D4
[0000F000 - 0000F01F] Intel(R) N10/ICH7 Family SMBus Controller - 27DA
[0000F020 - 0000F02F] Standard AHCI 1.0 Serial ATA Controller
[0000F040 - 0000F05F] Intel(R) N10/ICH7 Family USB Universal Host Controller - 27CB
[0000F060 - 0000F07F] Intel(R) N10/ICH7 Family USB Universal Host Controller - 27CA
[0000F080 - 0000F09F] Intel(R) N10/ICH7 Family USB Universal Host Controller - 27C9
[0000F0A0 - 0000F0BF] Intel(R) N10/ICH7 Family USB Universal Host Controller - 27C8
[0000F0C0 - 0000F0C3] Standard AHCI 1.0 Serial ATA Controller
[0000F0D0 - 0000F0D7] Standard AHCI 1.0 Serial ATA Controller
[0000F0E0 - 0000F0E3] Standard AHCI 1.0 Serial ATA Controller
[0000F0F0 - 0000F0F7] Standard AHCI 1.0 Serial ATA Controller
[0000F100 - 0000F107] Intel(R) Graphics Media Accelerator 3600 Series
[0000FFFF - 0000FFFF] Motherboard resources
[0000FFFF - 0000FFFF] Motherboard resources

B.2 Memory Address Map



B.3 IRQ Mapping Chart




(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
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(ISA) 0x00000071 (113) Microsoft ACPI-Compliant System
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(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
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(ISA) 0x00000088 (136) Microsoft ACPI-Compliant System
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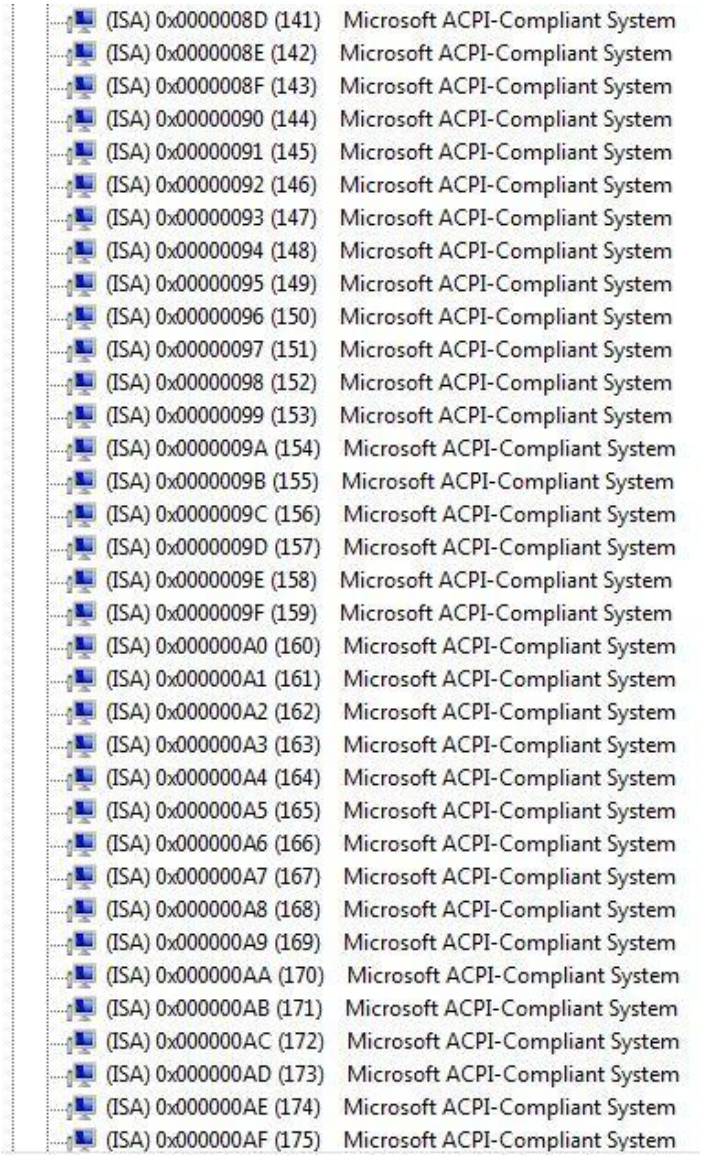
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(ISA) 0x000000B9 (185) Microsoft ACPI-Compliant System
(ISA) 0x000000BA (186) Microsoft ACPI-Compliant System
(ISA) 0x000000BB (187) Microsoft ACPI-Compliant System
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(ISA) 0x000000BD (189) Microsoft ACPI-Compliant System
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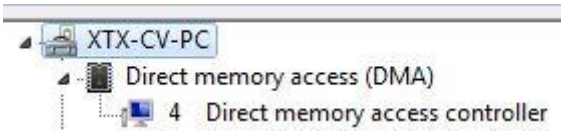
(PCI) 0x00000007 (07) Intel(R) N10/ICH7 Family SMBus Controller - 27DA
(PCI) 0x00000010 (16) Intel(R) N10/ICH7 Family PCI Express Root Port - 27D0
(PCI) 0x00000010 (16) Intel(R) N10/ICH7 Family USB Universal Host Controller - 27CB
(PCI) 0x00000012 (18) Intel(R) N10/ICH7 Family PCI Express Root Port - 27D4
(PCI) 0x00000012 (18) Intel(R) N10/ICH7 Family USB Universal Host Controller - 27CA
(PCI) 0x00000013 (19) Intel(R) N10/ICH7 Family USB Universal Host Controller - 27C9
(PCI) 0x00000013 (19) Standard AHCI 1.0 Serial ATA Controller
(PCI) 0x00000016 (22) High Definition Audio Controller
(PCI) 0x00000017 (23) Intel(R) N10/ICH7 Family USB Universal Host Controller - 27C8
(PCI) 0x00000017 (23) Intel(R) N10/ICH7 Family USB2 Enhanced Host Controller - 27CC
(PCI) 0xFFFFFFFD (-3) Realtek PCIe FE Family Controller
(PCI) 0xFFFFFFFE (-2) Intel(R) Graphics Media Accelerator 3600 Series

B.4 DMA Channel Assignments



Appendix

C

AHCI Setting

D.1 Setting AHCI

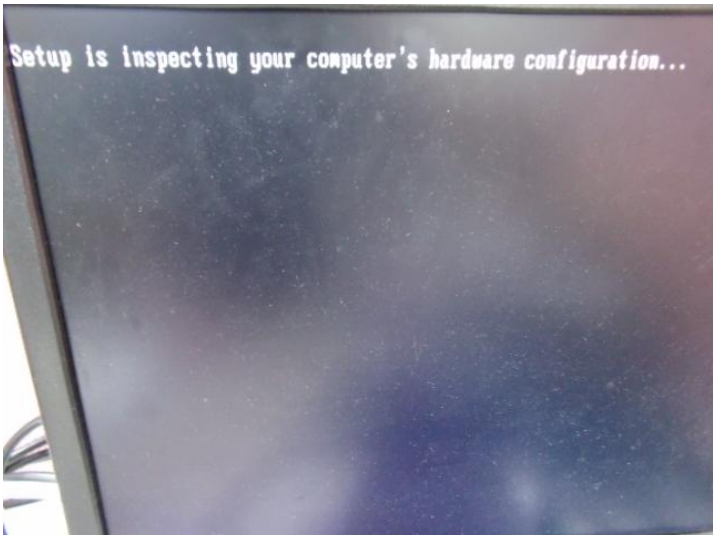
OS installation to setup AHCI Mode.

Step 1: Copy the files below from “Driver CD -> STEP5-AHCI\WINXP_32\F

Install Floppy Create for 32 and 64 bit Windows” to Disk

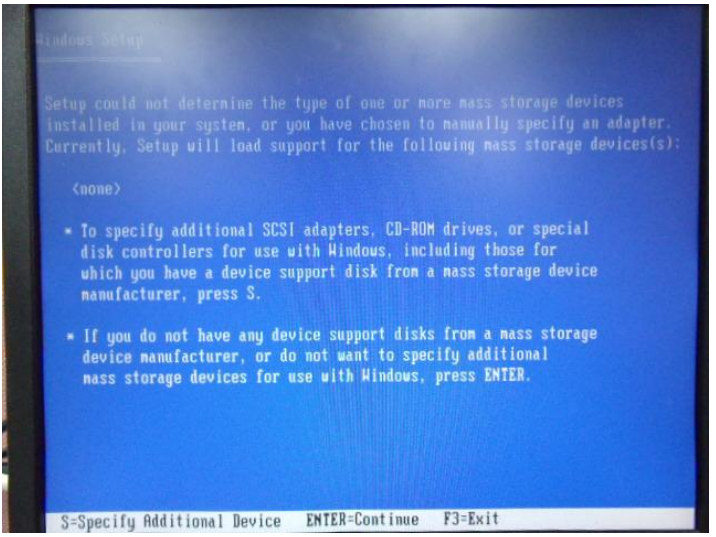
Step 2: Connect the USB Floppy to the board

Step 3: Setup OS

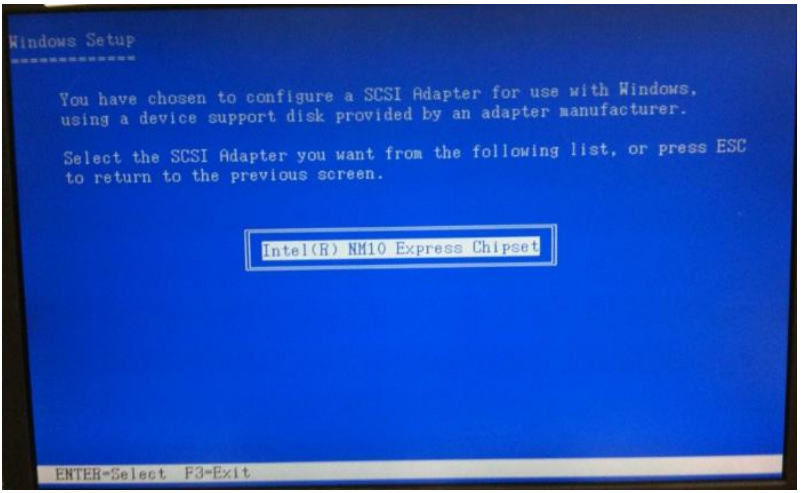


Step 4: Press “**F6**”

Step 5: Choose “**S**”



Step 6: Choose "**Intel(R) NM10 Express Chipset**"



Step 7: It will show the model number you select and then press "**ENTER**

Step 8: Setup is loading files