#### XTX-CV-A11

Intel<sup>®</sup> Atom<sup>™</sup> D2550/N2600 Processor Intel<sup>®</sup> 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 1<sup>st</sup> 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

### General Information

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#### **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<sup>®</sup> Atom<sup>™</sup> 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<sup>®</sup> Atom<sup>™</sup> D2550(1.86GHz)/N2600(1.6HGHz)
   Processor
- Intel<sup>®</sup> 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

#### X T X - C V - A 1 1

#### **1.3 Specifications**

#### System

•	Form Factor	XTX
•	Processor	Intel <sup>®</sup> 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 <sup>®</sup> NM10
•	I/O Chipset	Winbond W83627DHG/PT
•	Ethernet	Realtek RTL8105E, 10/100Base-TX
•	BIOS	AMI BIOS SPI type, 8MB ROM
•	EEPROM	Atmel <sup>®</sup> 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)

	хт	X CPU Module	X T X - C V - A 1 1
	•	Storage Temperature Operating Humidity	-40°F ~ 176°F (-40°C ~ 85°C) 0% ~ 90% relative humidity, non-condensing
D	isplay: S	upports CRT/LCD Sim	ultaneous/ dual view displays
	•	Chipset	Intel <sup>®</sup> 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/	0		
	•	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



## 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.

Caution!



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
Х3	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

XIX CPU Module
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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

Х	TX CPU Module		X T X - C V - A 1 1
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

Х	TX CPU Module		X T X - C V - A 1 1
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#

X T X - C V - A 1 1

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

X T X - C V - A 1 1

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

XTX CPU Module			X T X - C V - A 1 1
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

хтх	CPU	Module

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#

х	TX CPU Module		X T X - C V - A 1 1
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

	有毒有害物质或元素					
部件名称	铅	汞	镉	六价铬	多溴联苯	多溴二苯醚
	(Pb)	(Hg)	(Cd)	(Cr(VI))	(PBB)	(PBDE)
印刷电路板	~				0	0
及其电子组件		0	0		0	0
外部信号	~				0	0
连接器及线材	^	0	0		0	0
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/I TI303-2000 怀住然正的附重安水以下。						
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						
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。						

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# Chapter 3

# AMI BIOS Setup

Chapter 3 AMI BIOS Setup 3-1

#### 3.1 System Test and linitialization

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.

#### <u>Setup Menu</u> Setup submenu: Main

Aptio Setup Utility – Copyright (C) 2012 American Megatrends, Inc. Main Advanced Chipset Boot Security Save & Exit			
BIOS Informati XTX-CV Rx.	.on × (XTCVAM×x) (11/21/2012)	Set the Date. Use Tab to switch between Date elements.	
BIOS Vendor Core Version Compliancy	American Megatrends 4.6.5.3 UEFI 2.3; PI 1.2		
System Date System Time	[Hed 11/21/2012] [14:59:25]		
	Humanasti akoj	<pre>++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save &amp; Exit ESC: Exit</pre>	
	Version 2.15.1234. Copyright (C) 2012 Americ	can Megatrends, Inc.	

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.			

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#### Setup submenu: Advanced

Aptio Setup Utility - Main Advanced Chipset Boot Sec	pyright (C) 2012 American Megatrends, Inc. ty Save & Exit
<ul> <li>ACPI Settings</li> <li>SS RTC Wake Settings</li> <li>CPU Configuration</li> <li>SATA Configuration</li> <li>USB Configuration</li> <li>Second Super IO Configuration</li> <li>Super IO Configuration</li> <li>HW Monitor</li> </ul>	System ADPI Parameters. ++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.15.1234. 0	right (C) 2012 American Megatrends, Inc.

#### 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 Parameter	USB Configuration Parameters				
Second Super IO					
Configuration					
IT8712 2 <sup>nd</sup> 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)

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

#### S5 RTC Wake Settings

Aptio Setup Utilit Advanced	y – Copyright (C) 2012 Ar	merican Megatrends, Inc.
Wake system with Fixed Time	[Disabled]	Enable or disable System wake
Wake system with Dynamic Time	[Disabled]	on alarm event. When enabled, System will wake on the hr::min::sec specified ++: Select Screen 14: 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 Amer	rican Megatrends, Inc.
Wake system with Fixed	Disabled	
--	---------------------------	-----------------------------------
Time	Enabled	
Enable or disable System v	vake on alarm event. Wake	e up time is setting by following
settings.		
Wake up day	0-31	
Select 0 for daily system wa	ake 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	Disabled	
Dynamic Time	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

Aptio Setup Utility - Advanced	Copyright (C) 2012 American	Megatrends, Inc.
CPU Configuration		Enabled for Windows XP and
Processor Type EMT64 Processor Speed System Bus Speed Ratio Status Actual Ratio System Bus Speed Processor Stepping Microcode Revision	Intel(R) Atom(TM) CPU N2 Not Supported 1600 MHz 400 MHz 16 16 400 MHz 30661 269	Hyper-Threading Technology) and Disabled for other OS (OS not optimized for Hyper-Threading Technology).
L1 Cache RAM L2 Cache RAM	2x56 k 2x512 k	
Processor Core Hyper-Threading	Dual Supported	↔: Select Screen 1↓: Select Item Enter: Select
Hyper-Threading Limit CPUID Maximum	[Enabled] [Disabled]	+/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
	pyright (C) 2012 American M	

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

#### SATA Configuration

Aptio Setup Util Advanced	ity – Copyright (C) 2011 f	American Megatrends, Inc.
SATA PortO SATA Port1	Not Present Not Present	SATA Ports (0–3) Device Names if Present and Enabled.
SATA Controller(s)		
SATA Mode	[AHCI]	
SATA Port 0 SATA Port 0 Hot Plug SATA Port 1 SATA Port 1 Hot Plug	[Enabled] [Enabled] [Enabled] [Enabled]	<pre>+: Select Screen 11: Select Item Enter: Select +/-: Change Opt, F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save &amp; Exit ESC: Exit</pre>
Version 2.14.12	19. Copyright (C) 2011 Ame	erican Megatrends, Inc.

SATA Controller(s)	Enabled	
	Disabled	
SATA Controller Enable/D	sable	
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

Aptio Setup Utility Advanced	– Copyright (C) 2011 America	n Megatrends, Inc.
USB Configuration		Enables Legacy USB support.
USB Devices: 1 Drive, 1 Keyboard		Support if no USB devices are connected. DISABLE option will keen USB devices available
Legacy USB Support		only for EFI applications.
Mass Storage Devices: JetFlashTranscend 4GB 1100	[Auto]	
		++: Select Screen
		Enter: Select
		+/−: Change Opt. F1: General Help
		F2: Previous Values F3: Ontimized Defaults
		F4: Save & Exit
		ESC. EXIL
Version 2.14.1219.	Copyright (C) 2011 American	Megatrends, Inc.

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	Auto	
(Emulation Type)	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)

Aptio Setup Utility - Advanced	Copyright (C) 2012 American	Megatrends, Inc.
Second Super IO Configuration		Set Parameters of Serial Port 3 (COMC)
Super IO Chip ▶ Serial Port 3 Configuration ▶ Serial Port 4 Configuration	ITE IT8712F_2	
		++: Select Screen T4: Select Item Enter: Select +/-: Change Opt, F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2 15 1234 Co	nuright (C) 2012 American M	evatrends Inc

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

#### **Serial Port 3 Configuration**

Aptio Setup Utility - Advanced	- Copyright (C) 2012 American	n Megatrends, Inc.
Serial Port 3 Configuration		Enable or Disable Serial Port
Serial Port Device Settings	[Enabled] IO=3E8h; IRQ=10;	(604)
Change Settings	[Auto]	
		++: Select Screen
		Enter: Select +/-: Change Opt.
		F1: General Help F2: Previous Values
		F3: Optimized Defaults F4: Save & Exit FSC: Exit
Version 2.15.1234.	Copyright (C) 2012 American M	√egatrends, Inc.

Serial Port	Disabled	
	Enabled	
En/Disable specified serial p	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**

Aptio Setup Utility - Advanced	Copyright (C) 2012 American	Megatrends, Inc.
Serial Port 4 Configuration		Enable or Disable Serial Port
Serial Port Device Settings	[Enabled] IO=2E8h; IRQ=11;	(600)
Change Settings Device Type	[Auto] [RS232]	
		++: Select Screen f4: Select Item
		Enter: Select +/−: Change Opt. F1: General Help
		F2: Previous Values F3: Optimized Defaults
		F4: Save & Exit ESC: Exit
Version 2.15.1234. Co	pyright (C) 2012 American M	egatrends, Inc.

Serial Port	Disabled	
	•	

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	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

Aptio Setup Utility - Advanced	- Copyright (C) 2012 Americar	n Megatrends, Inc.
Super IO Configuration		Set Parameters of Serial Port
<ul> <li>H836270HG Super IO Chip</li> <li>Serial Port 1 Configuration</li> <li>Serial Port 2 Configuration</li> <li>Parallel Port Configuration</li> </ul>	W83627DHG	<pre>i (COMA)  ++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save &amp; Exit ESC: Exit</pre>
Version 2.15.1234. (	Copyright (C) 2012American ⊧	legatrends, Inc.

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

#### **Serial Port 1 Configuration**

Aptio Setup Utility - Advanced	- Copyright (C) 2012 America	n Megatrends, Inc.
Serial Port 1 Configuration		Enable or Disable Serial Port
Serial Port Device Settings	[Enabled] IO=3F8h; IRQ=4;	
Change Settings	[Auto]	
		++: Select Screen ↑↓: Select Item
		Enter: Select +/-: Change Opt.
		F1: General Help F2: Previous Values
		F4: Save & Exit ESC: Exit
Version 2.15.1234. 0	Copyright (C) 2012 American	Megatrends, Inc.

Serial Port	Disabled	
	Enabled	
En/Disable specified serial p	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**

Aptio Setup Utility - Advanced	Copyright (C) 2012 American	Megatrends, Inc.
Serial Port 2 Configuration		Enable or Disable Serial Port
Serial Port Device Settings	[Enabled] IO=2F8h; IRQ=3;	(660)
Change Settings Device Mode	[Auto] [Standard Serial Por]	
		++: Select Screen
		<pre>I+: Select item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values</pre>
		F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.15.1234. Co	pyright (C) 2012 American M	

Serial Port	Disabled	
	Enabled	
En/Disable specified seria		
Change Settings	Auto	
	IO=2F8h; IRQ=3;	

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	IO=3F8h; IRQ=3,4,5,7,10,11,1	2;
	IO=2F8h; IRQ=3,4,5,7,10,11,1	2;
	IO=3E8h; IRQ=3,4,5,7,10,11,1	2;
	IO=2E8h; IRQ=3,4,5,7,10,11,1	2;
Select a resource setting	for Super IO device.	<b>i</b>
COM2 Type Option	RS232	
	RS422	_
	RS485	
Configure COM2 operate	ed 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 n	node.	

#### H/W Monitor

Aptio Setup U Advanced	tility – Copyright (C) 2012 Amer	rican Megatrends, Inc.
Pc Health Status		
CPU_TEMP	: +50 °c	
NM_TEMP	: +39 °c	
SYS_TEMP	: +31 °C	
CPU Fan Speed	: N/H	
venes	: NZH	
TI EV	. +1.000 V	
+1.5V	· +1.550 V	
+1 5V DDR	· +1 544 V	
+1 05V	· +1 064 V	
+3 3V	: +3 328 V	
+3.3V Dual	: +3.307 V	++: Select Screen
VBAT	: +3.177 V	↑↓: 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 Americ	an Megatrends, Inc.

#### Setup submenu: Chipset

Aptio Setup Utility – Copyright (C) 2012 American Main Advanced <mark>Chipset</mark> Boot Security Save & Exit	Megatrends, Inc.
▶ Host Bridge ▶ South Bridge	Host Bridge Parameters ++: Select Screen 11: 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 Me	egatrends, inc.

Host Bridge	
Host Bridge Parameters	
South Bridge	
South Bridge Parameters	

#### Host Bridge

Aptio Setup Utility - Chipset	Copyright (C) 2012 American	Megatrends, Inc.
<ul> <li>Intel IGD Configuration</li> <li>******** Memory Information *******</li> <li>Memory Frequency</li> <li>Total Memory</li> <li>DIMM#1</li> </ul>	800 MH2(DDR3) 2048 MB 2048 MB	Config Intel IGD Settings. ++: Select Screen T4: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.15.1234. Co	ppyright (C) 2012 American M	egatrends, Inc.

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

#### Intel IGD Configuration

Aptio Setup Utility - Chipset	Copyright (C) 2012 Americar	n Megatrends, Inc.
Intel IGD Configuration IGFX - Boot Type LCD Panel Type Active LFP Fixed Graphics Memory Size	[VBIOS Default] [1024x766,18bit,60Hz] [No LVDS] [256MB]	Select the Video Device which will be activated during POST. This has no effect if external graphics present. +*: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.15.1234. C	opyright (C) 2012American ⊧	legatrends, Inc.

IGFX – Boot Type	VBIOS Default	
	CRT	
	EFP	
Select the Video Device wh	nich will be activated during l	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 resolut	ion.	
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	128MB	
Size	256MB	
Configure Fixed Graphics Memory Size		

#### South Bridge

Aptio Setup Uti Chipset	lity – Copyright (C) 2012 Ame	erican Megatrends, Inc.
TPT Devices     PCI Express Port 0     PCI Express Port 1     PCI Express Port 2     PCI Express Port 3     RTL8105E	(Enabled) (Enabled) (Enabled) (Enabled) (Enabled)	Enable/Disable Intel(R) IO Controller Hub (TPT) devices
Power Mode SLP_S4 Assertion Width Restore on AC Power Loss	[ATX Type] [1-2 Seconds] [Last State]	
		↔: Select Screen 11: 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.		

TPT Devices		
Configure onboard TPT D	evices	
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 Mo	de	
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	Power Off	
Loss	Power On	
	Last State	
Select AC power state when power is re-applied after a power failure.		

#### **TPT Devices**

Aptio Setup Ut Chipset	ility – Copyright (C) 2012 Am	merican Megatrends, Inc.
Azalia Controller Select USB Mode UHCI #1 (ports 0 and 1)	[HD Audio] [By Controllers] [Enabled]	Azalia Controller
UHCI #2 (ports 2 and 3) UHCI #3 (ports 4 and 5) UHCI #4 (ports 6 and 7) USB 2.0(EHCI) Support	(Enabled) (Enabled) (Enabled) (Enabled)	
		14: Select Trem Enter: Select +/-: Change Opt. F1: General Helo
		F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
version 2.15.	1234. COPYR19NT (C) 2012 Amer	ican megatrends, inc.

#### 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		

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

#### **Boot Configuration**

Aptio Setup Uti Main Advanced Chipset Boot	lity – Copyright (C) 2012 Americar Security Save & Exit	n Megatrends, Inc.
Boot Configuration Bootup NumLock State	[0n]	Select the keyboard NumLock state
Quiet Boot	[Enabled]	
Launch PXE OpROM policy	[Do not launch]	
Boot Option Priorities Boot Option #1 Boot Option #2 Hard Drive BBS Priorities	[UEFI: JetFlashTrans] [JetFlashTranscend 4]	+: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.15.12	234. Copyright (C) 2012 American ⊧	legatrends, Inc.

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

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	Enabled	
Enables or disables Quiet B	Boot option	
Launch PXE OpROM	Do not launch	
policy	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

	Aptio Setup Utility – Copyrig Boot	ht (C) 2012 American	Megatrends, Inc.
Boot Option # Boot Option # Boot Option # Boot Option # Boot Option #	Boot 1 [Devic 2 [Devic 3 [Devic 4 [Devic 5 [Devic 6 [Devic	e Modelname] e Modelname] e Modelname] e Modelname] e Modelname] e Modelname]	Sets the system boot order ++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help
			F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
	Version 2.15.1226. Copyright	(C) 2012 American M	egatrends, Inc.

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

#### Setup submenu: Security

Aptio Setup Uti Main Advanced Chipset Boo	l <mark>ity – Copyright (C)</mark> 2012 t Security Save & Exit	American Megatrends, Inc.
Password Description		Set Administrator Password
If ONLY the Administrator's p then this only limits access only asked for when entering If ONLY the User's password i is a power on password and mu boot or enter Setup. In Setup have Administrator rights. The password length must be in the following range: Minimum length	assword is set, to Setup and is Setup. s set, then this st be entered to the User will	
Maximum length	20	
		14: Select Item
Administrator Password		Enter: Select
User Password		+/-: Change Opt. E1: General Heln
		F2: Previous Values
		F3: Optimized Defaults
		F4: Save & Exit
		LOOP LAT
Version 2.15.1	234. Copyright (C) 2012 A	merican Megatrends, Inc.

#### Options summary: (default setting)

Administrator Password/	Not set	
User Password		
You can install a Supervisor	password, and if you insta	all 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 dial	og box asks you to retype	the password for

Chapter 3 AMI BIOS Setup 3-32

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

Aptio Se	tup Utilit	t <mark>y – Copyright (C) 2012 A</mark> r Security	merican Megatrends, Inc.
HDD Password Descripti Allows Access to Set HardDisk User and Mast User Password need to Enabling Security. Mas be Modified only when with Master Password i HDD PASSWORD CONFIGURE	on : , Modify er Passwor be instal: ter Passwo successfu: n POST. TION:	and Clear ds. Led for and can Lly unlocked	
Security Supported Security Enabled Security Locked Security Frozen HOD User Pwd Status HOD Master Pwd Status Set User Password Set Master Password	: : :	Yes No No NOT INSTALLED INSTALLED	++: Select Screen fl: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version	2.15.1226	5. Copyright (C) 2012 Amer	rican Megatrends, Inc.

#### Options summary: (default setting)

Set User Password/	Not set	
Set Master Password		
You can install a Master and	d User password. Before boo	oting 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 dia	log box asks you to retype th	ne password for

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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

Aptio Setup Utility – Copyright (C) 2012 American Main Advanced Chipset Boot Security Save & Exit	Megatrends, Inc.
Save Changes and Reset Discard Changes and Reset	Reset the system after saving the changes.
Restore Defaults Save as User Defaults Restore User Defaults	
	++: Select Screen t4: Select Item
	Enter: Select +/-: Change Opt.
	F1: General help F2: Previous Values F3: Optimized Defaulto
	F4: Save & Exit ESC: Exit
Version 2.15.1234. Copyright (C) 2012 American Me	egatrends, Inc.

#### 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		

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#### Restore User Defaults

Restore the User Defaults to all the setup options

X T X - C V - A 1 1

# Chapter

### Driver Installation

Chapter 4 Driver Installation 4-1

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

- 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

XTX CPU Module
----------------

- 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

X T X - C V - A 1 1

# Appendix A

## Programming the Watchdog Timer

Appendix A Programming the Watchdog Timer A-1

#### 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

Appendix A Programming the Watchdog Timer A-2
#### X T X - C V - A 1 1

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

4 -	nput/output (IO)
	📮 [00000000 - 0000001F] Direct memory access controller
-	🌉 [00000000 - 00000CF7] PCI bus
1	🖳 [00000010 - 0000001F] Motherboard resources
-	💺 [00000020 - 00000021] Programmable interrupt controller
-	🖳 [00000022 - 0000003F] Motherboard resources
	🖳 [00000024 - 00000025] Programmable interrupt controller
-	🖳 [00000028 - 00000029] Programmable interrupt controller
	[0000002C - 0000002D] Programmable interrupt controller
	[0000002E - 0000002F] Motherboard resources
	툊 [00000030 - 00000031] Programmable interrupt controller
	🖳 [00000034 - 00000035] Programmable interrupt controller
-1	🍹 [00000038 - 00000039] Programmable interrupt controller
-1	[0000003C - 0000003D] Programmable interrupt controller
-1	📮 [00000040 - 00000043] System timer
-1	[00000044 - 0000005F] Motherboard resources
-1	[0000004E - 0000004F] Motherboard resources
-1	📮 [00000050 - 00000053] System timer
	[00000060 - 00000060] Standard PS/2 Keyboard
-1	uction [00000061 - 00000061] Motherboard resources
1	[00000062 - 00000063] Motherboard resources
-1	[00000063 - 00000063] Motherboard resources
6	[00000064 - 00000064] Standard PS/2 Keyboard
1	[00000065 - 00000065] Motherboard resources
-1	[00000065 - 0000006F] Motherboard resources
-1	[00000067 - 00000067] Motherboard resources
-1	[00000070 - 00000070] Motherboard resources
-1	📮 [00000070 - 00000077] System CMOS/real time clock
-1	🖳 [00000072 - 0000007F] Motherboard resources
-1	[00000080 - 00000080] Motherboard resources
-	[00000080 - 00000080] Motherboard resources
-1	🖳 [00000081 - 00000091] Direct memory access controller
-1	[00000084 - 00000086] Motherboard resources
-1	[00000088 - 00000088] Motherboard resources
-	툊 [0000008C - 0000008E] Motherboard resources

# X T X - C V - A 1 1

	[0000000 0000005] Mathematican discourses
	[00000090 - 00000097] Motherboard resources
	[00000092 - 00000092] Motherboard resources
1	[00000093 - 0000009F] Direct memory access controller
	[000000A0 - 000000A1] Programmable interrupt controller
1	[000000A2 - 000000BF] Motherboard resources
	[000000A4 - 000000A5] Programmable interrupt controller
12	[000000A8 - 000000A9] Programmable interrupt controller
1	[000000AC - 000000AD] Programmable interrupt controller
<b>j</b> 🖳	[000000B0 - 000000B1] Programmable interrupt controller
	[000000B2 - 000000B3] Motherboard resources
( <b>P</b>	[000000B4 - 000000B5] Programmable interrupt controller
<u>1</u>	[000000B8 - 000000B9] Programmable interrupt controller
<u>j</u>	[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)
1	[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



# **B.2 Memory Address Map**

A Memory
100000000 - 00000FFF1 Motherboard resources
100000000 - 00000FF1 Motherboard resources
100000000 - 00003FFF1 Motherboard resources
I000A0000 - 000BFFFF1 Intel(R) Graphics Media Accelerator 3600 Series
1000A0000 - 000BFFFF1 PCI bus
[000C0000 - 000DFFFF] PCI bus
1000E0000 - 000EFFFF1 PCI bus
1000F0000 - 000FFFFF1 PCI bus
[7F800000 - 7FFFFFF] PCI bus
[80000000 - FEBFFFFF] PCI bus
[DFD00000 - DFDFFFFF] Intel(R) Graphics Media Accelerator 3600 Series
[DFE00000 - DFE03FFF] Realtek PCIe FE Family Controller
[DFE00000 - DFEFFFFF] Intel(R) N10/ICH7 Family PCI Express Root Port - 27D4
[DFE04000 - DFE04FFF] Realtek PCIe FE Family Controller
[DFF00000 - DFF03FFF] High Definition Audio Controller
🔄 [DFF04000 - DFF043FF] Standard AHCI 1.0 Serial ATA Controller
[DFF05000 - DFF053FF] Intel(R) N10/ICH7 Family USB2 Enhanced Host Controller - 27CC
📲 [E0000000 - EFFFFFF] System board
FEC00000 - FEC00FFF] Motherboard resources
FED14000 - FED19FFF] System board
FED20000 - FED8FFFF] Motherboard resources
FEE00000 - FEE00FFF] Motherboard resources
FFC00000 - FFFFFFF] Motherboard resources

#### X T X - C V - A 1 1

# **B.3 IRQ Mapping Chart**

a 📕 Interrupt request (IRQ)	
	System timer
	Standard PS/2 Keyboard
	Communications Port (COM2)
	Communications Port (COM1)
	System CMOS/real time clock
	Communications Port (COM3)
	Communications Port (COM4)
	Microsoft PS/2 Mouse
	Numeric data processor
	Microsoft ACPI-Compliant System
1 (ISA) 0x00000052 (82)	Microsoft ACPI-Compliant System
<mark>1</mark> , (ISA) 0x00000053 (83)	Microsoft ACPI-Compliant System
<u>1</u> , (ISA) 0x00000054 (84)	Microsoft ACPI-Compliant System
	Microsoft ACPI-Compliant System
19 (ISA) 0x00000056 (86)	Microsoft ACPI-Compliant System
<u>1</u> , (ISA) 0x00000057 (87)	Microsoft ACPI-Compliant System
	Microsoft ACPI-Compliant System
19 (ISA) 0x00000059 (89)	Microsoft ACPI-Compliant System
19 (ISA) 0x000005A (90)	Microsoft ACPI-Compliant System
	Microsoft ACPI-Compliant System
<u>1</u> (ISA) 0x0000005C (92)	Microsoft ACPI-Compliant System
19 (ISA) 0x0000005D (93)	Microsoft ACPI-Compliant System
19 (ISA) 0x0000005E (94)	Microsoft ACPI-Compliant System
	Microsoft ACPI-Compliant System
(ISA) 0x00000069 (105)	Microsoft ACPI-Compliant System

1	(ISA) 0x0000006A (106)	1
	(ISA) 0x0000006B (107)	N
	(ISA) 0x0000006C (108)	1
	(ISA) 0x0000006D (109)	١
	(ISA) 0x0000006E (110)	N
	(ISA) 0x0000006F (111)	N
	(ISA) 0x00000070 (112)	N
<b>j</b>	(ISA) 0x00000071 (113)	N
	(ISA) 0x00000072 (114)	Ν
	(ISA) 0x00000073 (115)	N
	(ISA) 0x00000074 (116)	٨
<b>j</b>	(ISA) 0x00000075 (117)	Ν
<b>1</b>	(ISA) 0x00000076 (118)	N
	(ISA) 0x00000077 (119)	N
<b>I</b>	(ISA) 0x00000078 (120)	N
- <b>j</b>	(ISA) 0x00000079 (121)	N
	(ISA) 0x0000007A (122)	1
📳	(ISA) 0x0000007B (123)	N
<b>I</b>	(ISA) 0x0000007C (124)	1
	(ISA) 0x0000007D (125)	ſ
( <b>U</b>	(ISA) 0x0000007E (126)	N
<b>I</b>	(ISA) 0x0000007F (127)	٨
<b>j</b>	(ISA) 0x00000080 (128)	N
	(ISA) 0x00000081 (129)	N
	(ISA) 0x00000082 (130)	N
	(ISA) 0x00000083 (131)	N
<b>1</b>	(ISA) 0x00000084 (132)	N
	(ISA) 0x00000085 (133)	N
	(ISA) 0x00000086 (134)	N
	(ISA) 0x00000087 (135)	N
<b>I</b>	(ISA) 0x00000088 (136)	N
- <b>j</b>	(ISA) 0x00000089 (137)	N
( <b>L</b>	(ISA) 0x000008A (138)	1
- 📳	(ISA) 0x0000008B (139)	N
1	(ISA) 0x0000008C (140)	1

Microsoft ACPI-Compliant System Microsoft ACPI-Compliant System Microsoft ACPI-Compliant System Microsoft ACPI-Compliant System Aicrosoft ACPI-Compliant System Microsoft ACPI-Compliant System Microsoft ACPI-Compliant System Microsoft ACPI-Compliant System Microsoft ACPI-Compliant System Aicrosoft ACPI-Compliant System Microsoft ACPI-Compliant System Microsoft ACPI-Compliant System **Microsoft ACPI-Compliant System** 







Microsoft ACPI-Compliant System ISA) 0x000000AA (170) Microsoft ACPI-Compliant System ISA) 0x000000AF (175) Microsoft ACPI-Compliant System

#### X T X - C V - A 1 1

1	(ISA) 0x000000B0 (1	76)	Microsoft ACPI-Compliant System
	(ISA) 0x000000B1 (1	77)	Microsoft ACPI-Compliant System
- <u>1</u>	(ISA) 0x000000B2 (1	78)	Microsoft ACPI-Compliant System
1	(ISA) 0x000000B3 (1	79)	Microsoft ACPI-Compliant System
1	(ISA) 0x000000B4 (13	.80)	Microsoft ACPI-Compliant System
	(ISA) 0x000000B5 (1	81)	Microsoft ACPI-Compliant System
- 🔎	(ISA) 0x000000B6 (13	82)	Microsoft ACPI-Compliant System
1	(ISA) 0x000000B7 (1	83)	Microsoft ACPI-Compliant System
	(ISA) 0x000000B8 (1	.84)	Microsoft ACPI-Compliant System
	(ISA) 0x000000B9 (1)	.85)	Microsoft ACPI-Compliant System
	(ISA) 0x000000BA (1	186)	Microsoft ACPI-Compliant System
-1	(ISA) 0x000000BB (1	.87)	Microsoft ACPI-Compliant System
1	(ISA) 0x00000BC (1	188)	Microsoft ACPI-Compliant System
	(ISA) 0x000000BD (1	189)	Microsoft ACPI-Compliant System
1	(ISA) 0x000000BE (1	.90)	Microsoft ACPI-Compliant System
1	(PCI) 0x00000007 (0	7)	Intel(R) N10/ICH7 Family SMBus Controller - 27DA
1	(PCI) 0x00000010 (10	6)	Intel(R) N10/ICH7 Family PCI Express Root Port - 27D0
	(PCI) 0x00000010 (1	6)	Intel(R) N10/ICH7 Family USB Universal Host Controller - 27CB
1	(PCI) 0x00000012 (1	8)	Intel(R) N10/ICH7 Family PCI Express Root Port - 27D4
🖗	(PCI) 0x00000012 (1	8)	Intel(R) N10/ICH7 Family USB Universal Host Controller - 27CA
🖗	(PCI) 0x00000013 (1	9)	Intel(R) N10/ICH7 Family USB Universal Host Controller - 27C9
	(PCI) 0x00000013 (1	9)	Standard AHCI 1.0 Serial ATA Controller
-	(PCI) 0x00000016 (2	2)	High Definition Audio Controller
	(PCI) 0x00000017 (2	3)	Intel(R) N10/ICH7 Family USB Universal Host Controller - 27C8
🖗	(PCI) 0x00000017 (2	3)	Intel(R) N10/ICH7 Family USB2 Enhanced Host Controller - 27CC
- <u>P</u>	(PCI) 0xFFFFFFFD (-	-3)	Realtek PCIe FE Family Controller
	(PCI) 0xFFFFFFFE (-2	2)	Intel(R) Graphics Media Accelerator 3600 Series

## **B.4 DMA Channel Assignments**





# **AHCI Setting**

X T X - C V - A 1 1

#### **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





iaahci



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 8: Setup is loading files