FWS-2200

Desktop Network Appliance Platform 2.5" SATA HDD, CF SATA Socket 6 LAN Ports 2 USB2.0, 1 COM for Console 1 Mini PCI

> FWS-2200 Manual 4th Ed. April 30, 2014

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Caution

There is a danger of explosion if the battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions and your local government's recycling or disposal directives.

Attention:

Il y a un risque d'explosion si la batterie est remplacée de façon incorrecte. Ne la remplacer qu'avec le même modèle ou équivalent recommandé par le constructeur. Recycler les batteries usées en accord avec les instructions du fabricant et les directives gouvernementales de recyclage.

Packing List

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

- FWS-2200
- CD-ROM for manual (in PDF format) and drivers
- D-sub 9-pin Cable x 1
- Rubber Foots
- 60W Power Adapter
- SATA Power Cable x 1
- SATA Cable x 1

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

Note:

VGA Cable is an optional accessory. Please purchase those cables according to the following item numbers.

 M0422000020
 Ear Bracket

 1700160253
 VGA Cable

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Chapter

General Information

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1.1 Introduction

FWS-2200 adopts the Intel[®] Dual Core Atom[™] D525 Processor and equips with Intel[®] Atom[™] D525 + ICH8M chipset. The system memory features two 204-pin single channel DDR3 800MHz SODIMM slots up to 4GB. It deploys six Gigabit Ethernet LAN ports with one pair LAN bypass function (two pairs bypass function is optional). FWS-2200 condensed appearance features desktop form factor that fits nicely into a space-limited environment.

This compact FWS-2200 is equipped with one 2.5" SATA HDD and and CF-SATA socket. In addition, it offers flexible expansion with network products and features one Mini-PCI expansion slot, two USB2.0 ports and one RS-232 console port on the rear panel. The console port deploys console re-direction that increases the network security via remote control. All of these designs provide for a more user-friendly solution.

1.2 Features

- Desktop platform 6 LAN ports Network Appliance
- Onboard Intel[®] Dual-Core Atom[™] D525 processor
- Intel[®] Atom[™]D525 + ICH8M
- Two 204-pin Single Channel DDR3 800MHz SODIMM Up to 4GB
- 10/100/1000Base-TX Ethernet Port x 6 With One Pair LAN Bypass Function (Two Pairs Bypass Function Is Optional)
- 2.5" SATA HDD x 1 and CF-SATA socket
- COM for Console x 1, USB2.0 x 2
- DC 12V Power Input Requirement
- Mini PCI Slot x 1

1.3 Specifications

System	
Form Factor	Desktop 6 LAN ports Network Appliance
Processor	Onboard Intel [®] Atom™ D525 processor
System Memory	204-pin single channel DDR3 800MHz
	SODIMM slot x 2, up to 4GB
Chipset	Intel [®] Atom™ D525 + ICH8M
Ethernet	Intel [®] 82574L controller, Gigabit Ethernet
	$x\ 6$ with 1 pair LAN bypass function (two
	pairs LAN bypass function is optional)
BIOS	AMI BIOS
Serial ATA	SATA 3.0Gb/s x 1
SSD	CF-SATA x 1
Expansion Interface	Mini PCI slot x 1
Watchdog Timer	System reset: 1~255 steps by software
	programming
RTC	Internal RTC
Storage	2.5" SATA HDD x 1 and CF-SATA socket
System Fan	4cm ball bearing fan x 2
Front I/O Panel	Power LED x 1, Bypass LED x 1 (2 for
	optional), Status LED x 1, HDD Active
	LED x 1, LAN LED x 12
Rear I/O Panel	LAN x 6 (the 3^{rd} and 4^{th} LAN port with
	bypass function), USB x 2, DB-9

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	connector x 1, DC power input x 1,
	Software programmable button x 1
Color	Black
Power Supply	60W AC/DC power adapter
Dimension	10.24"(W) x 7.01"(D) x 1.73"(H) (260mm x
	178mm x 44mm)

Power Consumption 29W

Display

Chipset	Intel [®] Atom™ D525 + ICH8M
Graphic Engine	Intel [®] Atom [™] D525 integrated GMA 3150
	graphic engine
Resolution	2048x1536
Output Interface	VGA internal box header

I/0

Serial Port	COM x 2 (Internal pin header x 1):
	COM1: RS-232
	COM2: RS-232 (Box Header)
Keyboard & Mouse	Reserved pin header
USB	USB2.0 x 4: Dual Type-A connector on the
	front panel x 2, Pin header x 2 (Internal)

Environment

Operating	32°F~104°F (0°C ~40°C)
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Network	Appliance
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Temperature	
Storage	-4°F~104°F (-20°C ~60°C)
Temperature	
Operating Humidity	10%~80% relative humidity,
	non-condensing
Storage Humidity	10%~80% @ 40°C, non-condensing
Vibration	$0.5g\ \text{rms/}5{\sim}500\text{Hz}/\ \text{operation}\ (2.5"\ \text{HDD})$
	1.5g rms/5~500Hz/ non-operation
Shock	10G peak acceleration (11m sec.
	duration), operation
	20G peak acceleration (11m sec.
	duration), non operation

1.4 General System Information







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Quick Installation Guide

Chapter 2 Quick Installation Guide 2-1

2.1 Safety Precautions

The installation is intended for technically qualified personnel who have experience installing and configuring system boards.

The equipment can be installed in a restricted access location (RAL) only.

A restricted access location is a site location for equipment where the following criteria apply:

01. Access can only be gained by service persons or by users who have been trained on the restrictions and the precautions for this specific site.

02. Access is by means of at least one of the following, special tool, lock and key, or other means of security, and is controlled by the authority responsible for the location.

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 of Main Board



LEDs on Front Panel of FWS-2200



Connectors on Rear Panel of FWS-2200



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2.3 Mechanical Drawing of Main Board

2.4 List of Jumpers

The board has a number of jumpers that allow you to configure your system to suit your application.

The table below shows the function of each of the board's jumpers:

Label	Function
JP3	CMOS Setting Selection
JP6	Auto PWRBTN Selection

2.5 List of Connectors

The board has a number of connectors that allow you to configure your system to suit your application. The table below shows the function of each board's connectors:

Label	Function
SO-DIMM1	DDR3 SOCKET
SO-DIMM2	DDR3 SOCKET
ATX1	4P ATX POWER SUPPLY INPUT
CN6	3P FAN
CN14	KB/MS
COM1	COM PORT
COM2	COM PORT
VGA1	Analog Display
USB1	USB 2.0 *2
USB2	USB 2.0 *2
FP1	Front Panel Pin Header

MPCI1	Mini PCI Slot
SATA1	SATA INTERFACE
CN2	SATA POWER
SYSFAN1	4-PIN Fan Connector
SYSFAN2	4-PIN Fan Connector
CPUFAN1	4-PIN Fan Connector
GPIO1	Digital I/O
CFD1	CF-SATA CARD SOCKET
LLED1	LAN LED Pin Header
BPLED1	Bypass LED Pin Header
PSW1	Power On/Off Switch
RSW1	Software Programmable Button

2.6 Setting Jumpers

You configure your card to match the needs of your application by setting jumpers. A jumper is the simplest kind of electric switch. It consists of two metal pins and a small metal clip (often protected by a plastic cover) that slides over the pins to connect them. To "close" a jumper you connect the pins with the clip.

To "open" a jumper you remove the clip. Sometimes a jumper will have three pins, labeled 1, 2 and 3. In this case you would connect either pins 1 and 2 or 2 and 3.



A pair of needle-nose pliers may be helpful when working with jumpers.

If you have any doubts about the best hardware configuration for your application, contact your local distributor or sales representative before you make any change.

Generally, you simply need a standard cable to make most connections.

2.7 CMOS Setting Selection (JP3)

JP3	Function
1-2	Normal (Default)
2-3	Clear CMOS

2.8 Auto PWRBTN Selection (JP6)

JP6	Function	
1-2	Don't use Auto PWRBTN (Default)	
2-3	Use Auto PWRBTN	

2.9 4-pin ATX Power Connector (CN9)

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

2.10 Front Panel Connector (FP1)

Pin	Signal	Pin	Signal
1	Power On Button (-)	2	Power On Button (+)
3	HDD LED(-)	4	HDD LED(+)
5	External Speaker (-)	6	External Speaker (+)
7	Power LED (-)	8	Power LED (+)
9	Reset Switch (-)	10	Reset Switch (+)

Din	Signal	Din	Signal
FIII	Signal	FIN	Signal
1	+5V	2	GND
3	USBD1-	4	GND
5	USBD1+	6	USBD2+
7	GND	8	USBD2-
9	GND	10	+5V
11	CD-L		

2.12 RS-232 Box Header (COM2)

Pin	Signal	Pin	Signal
1	DCD	2	RXD
3	TXD	4	DTR
5	GND	6	DSR
7	RTS	8	CTS
9	RI	10	N.C

2.13 SATA Connector (SATA 1)

Pin	Signal	Pin	Signal
1	GND	2	ТХР
3	TXN	4	GND
5	RXN	6	RXP
7	GND		

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2.14 CF-SATA Connector (CFD1)

Pin	Signal	Pin	Signal
1	GND	26	GND
2	PDD3	27	PDD11
3	PDD4	28	PDD12
4	PDD5	29	PDD13
5	PDD6	30	PDD14
6	PDD7	31	PDD15
7	CS1	32	CS#3
8	GND	33	GND
9	GND	34	PDIOR
10	SATA_RXP	35	PDIOW
11	SATA_RXN	36	WE#
12	GND	37	INTRQ
13	VCC	38	VCC
14	GND	39	CSEL
15	SATA_TXN	40	CF-SATA_WE
16	SATA_TXP	41	RESET
17	GND	42	PDIORDY
18	PDA2	43	PDDREQ
19	PDA1	44	PDDACK
20	PDA0	45	DASP
21	PDD0	46	PDIAG

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Network Appliance			FWS-2200
22	PDD1	47	PDD8
23	PDD2	48	PDD9
24	NC	49	PDD10
25	GND	50	GND

2.15 Software Programmable Button (RSW1)

Pin	Signal	Pin	Signal
1	SOFTWAREPRGM-	2	GND

Button status: I/O Space 0x4BA bit 0

2.16 Analog Display (VGA1)

Pin	Signal	Pin	Signal
1	RED	2	CRTVCC
3	GREEN-	4	GND
5	BLUE	6	CRT_PLUG
7	NC	8	DDC_SDA
9	GND	10	HSYNC
11	GND	12	VSYNC
13	GND	14	DDC_SCL
15	GND	16	NC

2.17 Installing the Hard Disk Drive

Step1: Unscrew the upper cover and isolate the cover from the Classis <u>Note:</u> Push and remove the upper cover until see the screw on the HDD Box



Step2: Take out the Hard Disk Drive Case from the chassis



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Step3: Turn the screw to open the HDD case



Step4: Fasten the four screws of the Hard DISK Drive Bracket







Step6: Put the HDD with cable onto the HDD Bracket



Step7: Close the upper bracket of the HDD case and make sure the rubber feet are locked by the flutes on the brackets





Step8: Fasten the screw conversely to lock the HDD

Step9: Plug the SATA cable & Power cable in the SATA socket & Power socket on the main board



Step10: Insert the HDD to the chassis horizontally and lock the HDD case







Step11: Close and screw the upper cover of the chassis_



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Below Table for China RoHS Requirements 产品中有毒有害物质或元素名称及含量

AAEON Boxer/ Industrial System

	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	0	0	0			
及其电子组件									
外部信号	×	0	0	0	0	Ο			
连接器及线材									
外売	×	0	0	0	0	0			
中央处理器	×	0	0	0	0	0			
与内存									
硬盘	×	0	0	ο	0	0			
电源	×	0	0	0	0	0			
			「 <u> </u>						
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:									

一、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。 二、上述部件物质中央处理器、内存、硬盘、电源为选购品。

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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 FWS-2200 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 or <F2> immediately. This will allow you to enter Setup.
Setup Menu

Main

Aptio Setu; Main Advanced Chipset) Utility – Copyright (C) 2011 American Boot Security Save & Exit	Megatrends, Inc.
BIOS Information FWS-2200 R1.0(FW22AM:	10) (04/25/2012)	Set the Date. Use Tab to switch between Data elements.
BIOS Vendor Core Version Compliancy	American Megatrends 4.6.4.0 x64 UEFI 2.0	
System Date System Time	[Thu 01/01/2009] [19:08:39]	
Access Level	Administrator	
		+: 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.	11.1210. Copyright (C) 2011 American M	legatrends, Inc.

Advanced

Aptio Setup Utility – Copyright (C) 20 Main Advanced Chipset Boot Security Save & Exi	11 American Megatrends, Inc. t
 ACPI Settings CPU Configuration IDE Configuration LAN Bypass Configuration Intel IGD SMSCI OpRegion USB Configuration Super IO Configuration H/X Monitor Serial Port Console Redirection 	System ACPI Parameters.
	11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.11.1210. Copyright (C) 2011	American Megatrends, Inc.

ACPI Settings

Aptio Setup Utility Advanced	– Copyright (C) 2011 America	n Megatrends, Inc.
ACPI Sleep State	[S1 & S3 (Auto)]	Select the highest ACPI sleep state the system will enter, when the SUSPEND button is pressed. +*: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.11.1210.	Copyright (C) 2011 American	Megatrends, Inc.

Suspend mode	Supend Disabled	
	S1 (CPU Stop Clock)	
	S3 (Suspend to RAM)	
	S1 & S3 (Auto)	Default
Select the ACPI state	used for System Suspend	

CPU Configuration

Aptio Setup Utility – Advanced	Copyright (C) 2011 American	Megatrends, Inc.
CPU Configuration		Enabled for Windows XP and Linux (OS optimized for
Processor Type EMT64 Processor Speed System Bus Speed Ratio Status Actual Ratio System Bus Speed Processor Stepping	Intel(R) Atom(TM) CPU Supported 1800 MHz 800 MHz 9 9 800 MHz 106ca	Hyper-Threading Technology) and Disabled for other OS (OS not optimized for Hyper-Threading Technology).
Microcode Revision L1 Cache RAM L2 Cache RAM	263 2x56 k 2x512 k	
Processor Core Hyper-Threading	Dual Supported	↔: Select Screen 1↓: Select Item Enter: Select
Hyper-Threading	[Enabled]	+/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.11.1210. Co	pyright (C) 2011 American M	egatrends, Inc.

Hyper-Threading	Disabled	
	Enabled	Default
En/Disable Intel Hyper-Threading Technology.		

IDE Configuration

Aptio Setup Utility - Advanced	- Copyright (C) 2011 America	n Megatrends, Inc.
PATA Master PATA Slave	Not Present Not Present	Select ATA or IDE configuration.
SATA Port0 SATA Port1 SATA Port2	Not Present TOSHIBA MK1665 (160.0 Not Present	
ATA Or IDE Configuration Configure SATA As	[Enhanced] [IDE]	
		++: Select Screen 14: Select Item Enter: Select
		F1: General Help F2: Previous Values F3: Optimized Defaults
		F4: Save & Exit ESC: Exit
Version 2.11.1210. (copyrignt (ε) 2011 American	Megatrends, Inc.

ATA Or IDE	Disabled	
Configuration	Compatible	
	Enhanced	Default
Select ATA or IDE Configuration.		
Configure SATA As	IDE	Default
	AHCI	
Select SATA Controller mode.		

LAN Bypass Configuration

Aptio Set Advanced	up Utility – Copyright (C) 2011 Ame	erican Megatrends, Inc.
LAN1_2 Power ON LAN1_2 Power OFF LAN3_4 Power ON LAN3_4 Power OFF NDT	(PassTru) (PassTru) (PassTru) (PassTru) (Reset)	LAN1_2 Power ON help. ++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version :	2.11.1210. Copyright (C) 2011 Amer	ican Megatrends, Inc.

LAN1_2 Power ON	ByPass	
	PassTru	Default
Select LAN1 / 2 operation mode when system is Power On.		er On.
LAN1_2 Power OFF	ByPass	
	PassTru	Default
Select LAN1 / 2 operation mode when system is Power Off.		
LAN3_4 Power ON	ByPass	
	PassTru	Default
Select LAN3 / 4 operation mode when system is Power On.		

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LAN3_4 Power OFF	ByPass	
	PassTru	Default
Select LAN3 / 4 opera	tion mode when system is Pow	er Off.
WDT	ByPass	
	Reset	Default
Select Watch Dog function as normal system reset or LAN ByPass.		LAN ByPass.
WDT BYPASS	LAN1_2	Default
SELECT	LAN3_4	
	LAN1_2 AND LAN3_4	
Select which pair LAN	ByPass control by WDT.	

Intel IGD SWSCI OpRegion

Aptio Setup Utility - Advanced	Copyright (C) 2011 American	Megatrends, Inc.
Intel IGD SWSCI OpRegion Configurati	on	Select DVMT Mode/Fixed Mode
DVHT Mode Select DVHT/FIXED Hemory	[DVMT Mode] [Maximum]	++: Select Screen T4: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.11.1210. Co	pyright (C) 2011 American M	egatrends, Inc.

DVMT Mode Select	Fixed Mode	
	DVMT Mode	Default
Select DVMT Mode/Fixed Mode		
DVMT/FIXED Memory	128MB	
	256MB	
	Maximum	Default
Select DVMT/FIXED Mode Memory size used by Internal Graphics		
Device.		

USB Configuration

Aptio Setup Util: Advanced	ity – Copyright (C) 2011 Am	erican 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: InnostorInnostor 1.00	[Auto]	
		<pre>++: Select Screen f4: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version 2.11.12:	10. Copyright (C) 2011 Amer	ican Megatrends, Inc.

Options summary :

Legacy USB Support	Enabled	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

Super IO Configuration

Aptio Setup Utility - Advanced	· Copyright (C) 2011 American	Megatrends, Inc.
Super IO Configuration		Set Parameters of Serial Port
Super IO Chip ▶ Serial Port O Configuration ▶ Serial Port 1 Configuration	Winbond W83627DHG	
		++: Select Screen 14: Select Item Enter: Select +/-: Change Opt, F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.11.1210. C	opyright (C) 2011 American M	egatrends, Inc.

Serial Port Configuration

Aptio Setup Utility Advanced	y – Copyright (C) 2011 Ame	erican Megatrends, Inc.
Serial Port O Configuration		Enable or Disable Serial Port
Serial Port Device Settings	[Enabled] IO=3F8h; IRQ=4;	
Change Settings	[Auto]	
		++: Select Screen
		Enter: Select +/-: Change Opt.
		F1: General Help F2: Previous Values F2: Optimized Defaulto
		F4: Save & Exit ESC: Exit
Version 2.11.1210	. Copyright (C) 2011 Amer.	ican Megatrends, Inc.

Aptio Setup Utilit Advanced	ty – Copyright (C) 2011 Amer	rican Megatrends, Inc.
Serial Port 1 Configuration		Enable or Disable Serial Port
Serial Port Device Settings	[Enabled] IO=2F8h; IRQ=3;	(Gon)
Change Settings	[Auto]	
		++: Select Screen 1↓: Select Item
		Enter: Select +/-: Change Opt.
		F1: General Help F2: Previous Values F3: Optimized Defaults
		F4: Save & Exit ESC: Exit
Vancian 2 11 1210) Comuniant (C) 2011 Amonia	con Magatranda Tra

Serial Port	Disabled	
	Enabled	Default
Allows BIOS to En/Disable	correspond serial port.	
Change Settings	Auto	Default
(Serial Port 1)	IO=3F8h; IRQ=4;	
	IO=3F8h; IRQ=3,4,5,6,7,10,11,12;	
	IO=2F8h;	
	IRQ=3,4,5,6,7,10,11,12;	
	IO=3E8h;	
	IRQ=3,4,5,6,7,10,11,12;]

	IO=2E8h; IRQ=3,4,5,6,7,10,11,12;]
Allows BIOS to Select Seria	al Port resource.	
Change Settings	Auto	Default
(Serial Port 2)	IO=2F8h; IRQ=3;	
	IO=3F8h; IRQ=3,4,5,6,7,10,11,12;	
	IO=2F8h;	
	IRQ=3,4,5,6,7,10,11,12;	
	IO=3E8h;	
	IRQ=3,4,5,6,7,10,11,12;	
	IO=2E8h; IRQ=3,4,5,6,7,10,11,12;	
Allows BIOS to Select Seria	al Port resource.	

H/W Monitor

Aptio Setup Uti: Advanced	lity – Copyright (C) 2011 An	merican Megatrends, Inc.
Pc Health Status		Smart Fan Mode Select
▶ Smart Fan Mode Configuration		
System temperature CPUTIN temperature SYSFAN1 Speed CPUFAN1 Speed CPUVCORE +1.SV_DDR AVCC 3VCC 3VCC +5V +1.8V +12V 3VSB VBAT	: +29 C : +29 C : N/A : 4551 RPM : N/A : +1.176 V : +1.512 V : +3.376 V : +3.376 V : +3.376 V : +1.840 V : +12.144 V : +3.392 V : +3.104 V	++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.11.12	210. Copyright (C) 2011 Amer	rican Megatrends, Inc.

Smart Fan Mode Configuration

Aptio Setup Utility – Advanced	Copyright (C) 2011 American	n Megatrends, Inc.
Smart Fan Mode Configuration		SYSFAN2 Smart Fan Mode Select
SYSFAN2 Smart Fan Mode SYSFAN2 expect PWM Output/DC Volta	[Manual Mode] 255	
SYSFAN1 Smart Fan Mode CPUFAN1 expect PWM Output/DC Volta	(Manual Mode) 255	
CPUFAN1 Smart Fan Mode CPUFAN1 expect PWM Output/DC Volta	[Manual Mode] 255	
		++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.11.1210. Co	opyright (C) 2011 American M	legatrends, Inc.

SYSFAN2	Manual Mode	
SYSFAN1	Thermal Cruise Mode	
CPUFAN1 Mode	SMART FAN III Mode	Default
SYSFAN2/SYSFAN1/CPUFAN1 Mode Select		
SYSFAN2	91 (Default)	
SYSFAN1		
CPUFAN1 PWM Value		
Input expect PWM Output Value (Range:0 - 255)		

SYSFAN2	75 (Default)
SYSFAN1	
CPUFAN1 Target	
Temperature	
Input SYSFAN2/SYSFAN1/	CPUFAN1 Target Temperature
-127)	
SYSFAN2	2 (Default)
SYSFAN1	
CPUFAN1 Tolerance	
Input Tolerance of Target Te	emperature (Range:0 -15)
SYSFAN2	255 (Default)
SYSFAN1	
CPUFAN1 Max Output	
SYSFAN2/SYSFAN1/CPU	FAN1 PWM max output value (
SYSFAN2	14 (Default)

 SYSFAN1

 CPUFAN1 Max Output

 SYSFAN2/SYSFAN1/CPUFAN1 PWM max output value (Range:0 -255)

 SYSFAN2

 14 (Default)

 SYSFAN1

 CPUFAN1 Output Step

 SYSFAN2/SYSFAN1/CPUFAN1 output step value (Range:0 -255)

 SYSFAN2

 SYSFAN2

 SYSFAN2

 SYSFAN2

 SYSFAN1

 CPUFAN1 Step down Time

 SYSFAN2/SYSFAN1/CPUFAN1 step down time value, unit is 0.1, default

 is 1 second (Range:0 -255)

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(Range:0

SYSFAN2	10 (Default)
SYSFAN1	
CPUFAN1 Step up Time	
SYSFAN2/SYSFAN1/CPUF	AN1 step up time value,unit is 0.1,default is 1
second (Range:0 -255)	

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Serial Port Console Redirection

Network Appliance

Aptio Advanced	Setup Utility –	Copyright	(C) 2011	l American	Megatrends, Inc.
Advanced COMO Console Redirection ▶ Console Redirection	Settings	[Enabled]			Console Redirection Enable or Disable. ++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults
Vers	ion 2.11.1210. C	opyright (C) 2011 F	imerican Me	F4: Save & Exit ESC: Exit egatrends, Inc.

Console Redirection	Disabled	
	Enabled	Default
Console Redirection Enable	or Disable.	

Console Redirection Settings

Aptio Setup Utility - Advanced	- Copyright (C) 2011	American Megatrends, Inc.
COMO Console Redirection Settings	ΓΔΝΙΩΤΙ	Emulation: ANSI: Extended ASCII char set. VT100: ASCII char set. VT100+: Extends VT100 to support color
Bits per second	[115200]	function keys, etc. VT–UTF8:
Data Bits	[8]	Uses UTF8 encoding to map
Parity Ston Bits	[None]	Unicode chars onto 1 or more hutes
Flow Control	[None]	5,000
Resolution 100x31	[Disabled]	
Legacy OS Redirection Resolution	[80×24]	
		++: Select Screen
		T4: Select Item
		+/-: Change Opt.
		F1: General Help
		F2: Previous Values
		F4: Save & Exit
		ESC: Exit
Version 2.11.1210. (Copyright (C) 2011 A	merican Megatrends, Inc.

Terminal Type	VT100	
	VT100+	
	VT-UTF8	
	ANSI	Default
Emulation: ANSI: Extended ASCII char VT100: ASCII char set. VT100+: Extends VT100 to VT-UTF8: Uses UTF8 enco bytes.	set. support color, functionkeys, etc. ding to map Unicode chars onto 1 or n	nore
Bits per second	9600	
	19200	

	38400		
	57600		
	115200	Default	
Selects serial port transmiss	sion speed. The speed must be match	ed on	
the other side. Long or nois	y lines may require lower speeds.		
Dat Bits	7		
	8	Default	
Set Serial Port transmissior	a data bits		
Parity	None	Default	
	Even		
	Odd		
	Mark		
	Space		
A parity bit can be sent with the data bits to detect some transmission			
errors. Even: Parity bit is 0 i	f the num of 1's in the data bits is even	n.	
Odd: Partiy bit is 0 if num of	1's in the data bits is odd.		
Mark: Parity bit is always 1.			
Space: Parity bit is always 0.			
Mark and Space Parity do not allow for error detection.			
Stop Bits	1	Default	
	2		

Stop bits indicate the end of a serial data packet. (A start bit indicates the beginning).

The standard setting is 1 stop bit. Communication with slow devices may require more than 1 stop bit.

Flow Control	None	Default		
	Hardware RTS/CTS			
Flow control can prevent da	ta loss from buffer overflow. When set	nding		
data, if the receiving buffers	are full, a 'stop' signal can be sent to	stop the		
data flow. Once the buffers	are empty, a 'start' signal can be sent	to		
re-start the flow. Hardware f	low control uses two wires to send sta	art/stop		
signals.				
VT-UTF8 Combo Key	Disabled			
Support	Enabled	Default		
Enable VT-UTF8 Combination Key Support for ANSI/VT100 terminals.				
Recorder Mode	Disabled	Default		
	Enabled			
On this mode enabled only	text will be send. This is to capture Te	rminal		
data.				
Resolution 100x31	Disabled	Default		
	Enabled			
Enables or disables extended terminal resolution.				
Legacy OS Redirection	80x24	Default		
Resolution	80x25			
On Legacy OS, the Number of Rows and Columns supported redirection.				

Putty Keypad	VT100	Default		
	LINUX			
	XTERMR6			
	sco			
	ESCN			
	VT400			
Select FunctionKey and KeyPad on Putty.				
Redirection After BIOS	Always Enable	Default		
POST	BootLoader			
The Settings spectify if BootLoader is selected than Legacy console				
redirection is disabled before booting to Legacy OS. Default value is				
Always Enable which means Legacy Console Redirection is enabled for				
Legacy OS.				

Chipset

Main f	Aptio Setup U Idvanced Chipset B	tility – Copyri oot Security	ght (C) 2011 Save & Exit	American	Megatrends, Inc.	
▶ Host Brj ▶ South Br	dge idge				Host Bridge parameters ++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F3: Soptimized Defaults F3: Soptimized Sexit ESC: Exit	
	Version 2.11	.1210. Copyrigh	t (C) 2011 Am	merican Me	egatrends, Inc.	

North Bridge

Aptio Setup Utility - Chipset	Copyright (C) 2011 Americar	n Megatrends, Inc.
▶ OnChip VGA Configuration		Config On Chip VGA Settings.
жжжжжж Memory Information жжжжжж		
Memory Frequency	800 Mhz	
Total Memory	2048 MB	
DIMM#0 DIMM#1	Not Present 2048 MB	
		<pre>+: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version 2.11.1210. Cc	pyright (C) 2011American M	legatrends, Inc.

OnChip VGA Configuration

OnChip VGA Configuration Select Share Memory Size. Share Memory Size [8 MB] ++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit	Aptio Setu; Chipset) Utility – Copyright (C) 2011	American Megatrends, Inc.
Share Memory Size [8 MB]	OnChip VGA Configuration		Select Share Memory Size.
+: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit	Share Memory Size		
			+: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

Share Memory Size	Disabled	
	1 MB	
	8 MB	Default
Select Share Memory Size.	·	

South Bridge

Aptio Setup Uti Chipset	lity – Copyright (C) 2011 A	merican Megatrends, Inc.
Power Mode	[ATX Type]	Select power supply mode.
USB Function USB 2.0(EHCI) Support Restore on Power Loss	[Enabled] [Enabled] [Last State]	
STATUS LED CTRL	[LED OFF]	
Resume on PCIe Wake Resume on PCI PME Resume on Ring	(Enabled) (Enabled) (Enabled)	
		<pre>++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version 2.11.1	.210. Copyright (C) 2011 Ame	rican Megatrends, Inc.

Power Mode	ATX	Default	
	AT		
Select Power supply mode:			
ATX: Normal ACPI support			
AT: Suspend/Sleep disabled, and Always On when restoring from power			
failure.			
USB Function	Disabled		
	Enabled	Default	
Enable or disable USB Function.			

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USB 2.0(EHCI) Support	Enabled	Default	
	Disabled		
Enable or disable USB 2.0 (EHC	Enable or disable USB 2.0 (EHCI) Support.		
Restore on Power Loss	Power Off		
	Power On		
	Last State	Default	
Select power state when power	is re-applied after a p	ower failure.	
STATUS LED CTRL	LED OFF	Default	
	RED LED ON		
	RED LED BLINK		
	RED LED FAST		
	BLINK		
	GREEN LED ON		
	GREEN LED BLINK		
	GREEN LED FAST		
	BLINK		
Select the Status LED default ac	ction.		
Resume on PCIe Wake	Disabled		
	Enabled	Default	
Enables or Disables resuming fr	om PCIe wake mess	age and WAKE#	
signal.			
Resume on PCI PME	Disabled		
	Enabled	Default	
Enables or Disables resuming from PCI PME# signal.			

Resume on Ring	Disabled	
	Enabled	Default
Enables or Disables resuming fr	om RI# signal.	

Boot

Aptio Setup Main Advanced Chipset	Utility – Copyright (C) 2011 American Boot Security Save & Exit	Megatrends, Inc.
Boot Configuration Quiet Boot Launch I82574L PXE OpROM	[Enabled] [Disabled]	Enables or disables Quiet Boot option
Boot Option Priorities Boot Option #1 Boot Option #2 Hard Drive BBS Priorities	[UEFI: InnostorInno] [SATA SM: TOSHIBA]	
		++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.1	1.1210. Copyright (C) 2011 American M	egatrends, Inc.

Quiet Boot	Disabled	
	Enabled	Default
En/Disable showing boot logo.		
Launch I82574L PXE	Disabled	Default
OpROM	Enabled	
En/Disable Boot Option for Legacy Network Devices		

BBS Priorities

Aptio Setup Utility – Copyright (C) 2011 American Megatrends, Inc. Boot		
Boot Option #1 Boot Option #2	[SATA SM: TOSHIBA] [InnostorInnostor 1.00]	Sets the system boot order ++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.11.1	210. Copyright (Ć) 2011 American	Megatrends, Inc.

Security

Aptio Setup Utility — Copyright (C) 2011 American Main Advanced Chipset Boot <mark>Security</mark> Save & Exit	Megatrends, Inc.
Password Description If ONLY the Administrator's password is set, then this only limits access to Setup and is only asked for when entering Setup. If ONLY the User's password is set, then this is a power on password and must be entered to boot or enter Setup. In Setup the User will have Administrator rights. The password must be 3 to 20 characters long.	Set Administrator Password
Administrator Password User Password HDD Security Configuration: HDD 0:TOSHIBA MK16	++: Select Screen †4: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.11.1210. Copyright (C) 2011 American M	egatrends, Inc.

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

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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.

Exit



Save Changes and Reset

Reset the system after saving the changes. This is the suggested method to exit BIOS setup menu that if you have modify any settings. **Discard Changes and Reset**

Reset system setup without saving any changes. It will continue system booting without reset.

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

Driver Installation

Chapter 4 Driver Installation 4-1

The FWS-2200 comes with an AutoRun CD-ROM that contains all drivers and utilities that can help you to install the driver automatically.

Insert the driver CD, the driver CD-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 AHCI Driver

Please read instructions below for further detailed installations.

4.1 Installation:

Insert the FWS-2200 CD-ROM into the CD-ROM drive and install the drivers from Step 1 to Step 4 in order.

Step 1 – Install INF Driver

- 1. Click on the **Step 1-Chipset** folder and double click on the **infinst_autol.exe**
- 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 –VGA** folder and select the OS folder your system is
 - 2. Double click on .exe 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 –LAN** folder and select the OS folder your system is
 - 2. Double click on .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 AHCI Driver

Please refer to Appendix D AHCI Setting

Appendix A

Programming the Watchdog Timer

Appendix A Programming the Watchdog Timer A-1

A.1 Programming

FWS-2200 utilizes W83627DHG chipset as its watchdog timer controller.

Below are the procedures to complete its configuration and the AAEON initial watchdog timer program is also attached based on which you can develop customized program to fit your application.

Configuring Sequence Description



There are three steps to complete the configuration setup:

- (1) Enter the W83627DHG config Mode
- (2) Modify the data of configuration registers
(3) Exit the W83627DHG config Mode. Undesired result may occur if the config Mode is not exited normally.

(1) Enter the W83627DHG config Mode

To enter the W83627DHG config Mode, two special I/O write operations are to be performed during Wait for Key state. To ensure the initial state of the key-check logic, it is necessary to perform two write operations to the Special Address port (2EH). The different enter keys are provided to select configuration ports (2Eh/2Fh) of the next step.

	Address Port	Data Port
87h,87h:	2Eh	2Fh

(2) Modify the Data of the Registers

All configuration registers can be accessed after entering the config Mode. Before accessing a selected register, the content of Index 07h must be changed to the LDN to which the register belongs, except some Global registers.

(3) Exit the W83627DHG config Mode

The exit key is provided to select configuration ports (2Eh/2Fh) of the next step.

	Address Port	Data Port
0aah:	2Eh	2Fh

CR 30h. (Default 02h)

BIT	READ/WRITE	D	ESCRIPTION
7~3	Reserved.		
2	R/W	0: GPIO6 is inactive.	1: GPIO6 is active.

Appendix A Programming the Watchdog Timer A-3

1	R/W	0: GPIO5 is inactive. 1: GPIO5 is active.
0	R/W	0: WDTO# and PLED are inactive. 1: WDTO# and PLED are inactive.

CR F5h. (WDTO# and KBC P20 Control Mode Register; Default 00h)

BIT	READ/WRITE	DESCRIPTION
7~5	Reserved.	
4	R/W	 1000 time faster in WDTO# count mode. 0: Disable. 1: Enable. (If bit-3 is Second Mode, the count mode is 1/1000 Sec.) (If bit-3 is Minute Mode, the count mode is 1/1000 Min.)
3	R/W	Select WDTO# count mode. 0: Second Mode. 1: Minute Mode.
2	R/W	Enable the rising edge of KBC reset (P20) to issue time-out event. 0: Disable. 1: Enable.
1	R/W	Disable/ Enable the WDTO# output low pulse to the KBRST# pin (PIN60) 0: Disable. 1: Enable.
0	Reserved.	

CR F6h. (WDTO# Counter Register; Default 00h)

BIT	READ/WRITE	DESCRIPTION
7~0	R/W	Watch Dog Timer Time-out value. Writing a non-zero value to this register causes the counter to load the value to Watch Dog Counter and start counting down. If bits 7 and 6 of CR F7h are set, any Mouse Interrupt or Keyboard Interrupt event will also cause the reload of previously-loaded non-zero value to Watch Dog Counter and start counting down. Reading this resigter returns current value in Watch Dog Counter instead of Watch Dog Timer Time-out value. 00h: Time-out Disable

Appendix A Programming the Watchdog Timer A-4

01h: Time-out occurs after 1 second/minute 02h: Time-out occurs after 2 second/minutes 03h: Time-out occurs after 3 second/minutes
FFh: Time-out occurs after 255 second/minutes

CR F7h. (WDTO# Control & Status Register; Default 00h)

BIT	READ/WRITE	DESCRIPTION	
7	R/W	Mouse interrupt reset watch-dog timer enable 0: Watchdog timer is not affected by mouse interrupt. 1: Watchdog timer is reset by mouse interrupt.	
6	R/W	Keyboard interrupt reset watch-dog timer enable 0: Watchdog timer is not affected by keyboard interrupt. 1: Watchdog timer is reset by keyboardd interrupt.	
5	Write "1" Only	Trigger WDTO# event. This bit is self-clearing.	
4	R/W Write"0"Clear	WDTO# status bit 0: Watchdog timer is running. 1: Watchdog timer issue time-out event.	
3~0	R/W	These bits select IRQ resource for WDTO#. (02h for SMI# event.)	

A.2 W83627DHG Watchdog Timer Initial Program

	LDN	Register	Bit	Description
WDT Timer value	0x07	0xF6	Bit [7-0]	00h: Time-out Disable 01h: Time-out occurs after 1 minute only. 02h: Time-out occurs after 2 second/minutes 03h: Time-out occurs after 3 second/minutes FFh: Time-out occurs after 255 second/minutes (The deviation is approx 1 second.)
WDT Unit	0x07	0xF5	Bit3	Select WDTO# count mode. 0: Second Mode. 1: Minute Mode.

#include <stdio.h>

#include <conio.h>

#define SIOIndex 0x2E //Modify for project support 2E/4E #define SIOData 0x2F //Modify for project support 2F/4F #define void AaeonWDTConfig(void); #define void AaeonWDTEnable(Byte Timer, boolean Unit);

void Main(){

}

// Procedure : AaeonWDTConfig

 $\ensuremath{\textit{//}}\xspace$ This procudure will enable the WDT counting.

AaeonWDTConfig (void);

```
// Procedure : AaeonWDTEnable
// (byte)Timer : Time of WDT timer.(0x00~0xFF)
// (boolean)Unit : Select time unit(0: second, 1: minute).
AaeonWDTEnable(Byte Timer, boolean Unit);
```

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// Procedure : AaeonWDTConfig

void AaeonWDTConfig (void){
 Byte val;
 //Super I/O Entry Key
 outportb(SIOIndex,0x87);
 outportb(SIOIndex,0x87);

//Setting WDT Pin.

outportb(SIOIndex,0x2D); val = inportb((SIOData); outportb(SIOIndex,0x2D); outportb(SIOData,val & 0xFE);

// Enable WatchDog function

outportb(SIOIndex,0x07); outportb(SIOData,0x08); outportb(SIOIndex,0x30); outportb(SIOData, 0x01); }

**

// Procedure :

void AaeonWDTEnable (Byte Timer, boolean Unit){ Byte val;

//Super I/O Entry Key

outportb(SIOIndex,0x87); outportb(SIOIndex,0x87);

// Select Logic Device Number Register
outportb(SIOIndex,0x07);
outportb(SIOData,0x08);

// Setting WDT Operation Mode

outportb(SIOIndex,0xF5); val = inportb((SIOData); outportb(SIOIndex,0xF5); outportb(SIOData, val | Unit << 3);</pre>

// Setting WDT Counter

outportb(SIOIndex,0xF6); outportb(SIOData,Timer); }

Appendix B

I/O Information

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B.1 I/O Address Map

4 -	Input/output (IO)
	[00000000 - 0000000F] Direct memory access controller
	[00000020 - 00000021] Programmable interrupt controller
	15 [00000022 - 0000003F] Motherboard resources
	[00000044 - 0000005F] Motherboard resources
	[00000060 - 00000060] Standard PS/2 Keyboard
	[00000084 - 00000086] Motherboard resources
	[00000087 - 00000087] Direct memory access controller
	[00000088 - 00000088] Motherboard resources
	[00000089 - 0000008B] Direct memory access controller
	[0000008F - 0000008F] Direct memory access controller
	[00000090 - 0000009F] Motherboard resources
	[000000A0 - 000000A1] Programmable interrupt controller
	[000000A2 - 000000BF] Motherboard resources
	[000000C0 - 000000DF] Direct memory access controller
	[000000E0 - 000000EF] Motherboard resources
	1 [00000480 - 000004BF] Motherboard resources
	15 [000004D0 - 000004D1] Motherboard resources
	[00009000 - 00009FFF] Intel(R) ICH8 Family PCI Express Root Port 6 - 2849
	[0000A000 - 0000AFFF] Intel(R) ICH8 Family PCI Express Root Port 5 - 2847
	[0000B000 - 0000BFFF] Intel(R) ICH8 Family PCI Express Root Port 4 - 2845
	[0000C000 - 0000CFFF] Intel(R) ICH8 Family PCI Express Root Port 3 - 2843
	[0000D000 - 0000DFFF] Intel(R) ICH8 Family PCI Express Root Port 2 - 2841
	[0000E000 - 0000EFFF] Intel(R) ICH8 Family PCI Express Root Port 1 - 283F

Appendix B I/O Information B-2

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	····]	[00000080 - 00000080] Motherboard resources
	j	[00000081 - 00000083] Direct memory access controller
	j	[00000084 - 00000086] Motherboard resources
	j	[00000087 - 00000087] Direct memory access controller
	j	[00000088 - 00000088] Motherboard resources
	j	[00000089 - 0000008B] Direct memory access controller
	j	[0000008C - 0000008E] Motherboard resources
	j	[0000008F - 0000008F] Direct memory access controller
	<u>]</u>	[00000090 - 0000009F] Motherboard resources
	····]	[000000A0 - 000000A1] Programmable interrupt controller
] L	[000000A2 - 000000BF] Motherboard resources
	j🖳	[000000C0 - 000000DF] Direct memory access controller
	j	[000000E0 - 000000EF] Motherboard resources
	j	[000000F0 - 000000FF] Numeric data processor
		[00000170 - 00000177] ATA Channel 1
		[000001F0 - 000001F7] ATA Channel 0
	····]	[00000295 - 000002A4] Motherboard resources
		[000002F8 - 000002FF] Communications Port (COM2)
		[00000376 - 00000376] ATA Channel 1
		[000003B0 - 000003BB] Intel(R) Graphics Media Accelerator 3150
		[000003C0 - 000003DF] Intel(R) Graphics Media Accelerator 3150
		[000003F6 - 000003F6] ATA Channel 0
		[000003F8 - 000003FF] Communications Port (COM1)
	····]	[00000480 - 000004BF] Motherboard resources
	····]	[000004D0 - 000004D1] Motherboard resources
		[00000800 - 0000087F] Motherboard resources
	····]	[00000D00 - 0000FFFF] PCI bus
	1 F	[00009000 - 00009FFF] Intel(R) ICH8 Family PCI Express Root Port 6 - 2849
	····1	[0000A000 - 0000AFFF] Intel(R) ICH8 Family PCI Express Root Port 5 - 2847
	····I	[0000B000 - 0000BFFF] Intel(R) ICH8 Family PCI Express Root Port 4 - 2845
	····I	[0000C000 - 0000CFFF] Intel(R) ICH8 Family PCI Express Root Port 3 - 2843
	····]	[0000D000 - 0000DFFF] Intel(R) ICH8 Family PCI Express Root Port 2 - 2841
	····]	[0000E000 - 0000EFFF] Intel(R) ICH8 Family PCI Express Root Port 1 - 283F
		[0000F000 - 0000F01F] Intel(R) ICH8 Family SMBus Controller - 283E
	📱	[0000F020 - 0000F03F] Intel(R) ICH8 Family USB Universal Host Controller - 2832
	📱	[0000F040 - 0000F05F] Intel(R) ICH8 Family USB Universal Host Controller - 2831
	📱	[0000F060 - 0000F0/F] Intel(R) ICH8 Family USB Universal Host Controller - 2830
	🕎	[0000F080 - 0000F09F] Intel(R) ICH8 Family USB Universal Host Controller - 2835
	···· 🛡	[0000F0A0 - 0000F0BF] Intel(K) ICH8 Family USB Universal Host Controller - 2834
	C	[0000F0C0 - 0000F0CF] Intel(R) ICH8M 3 port Serial ATA Storage Controller - 2828
		[UUUUFUUU - UUUUFUUF] Intel(K) ICH8M 3 port Serial ATA Storage Controller - 2828
		[UUUUFUEU - UUUUFUE3] INTEI(K) ICH8INI 3 port Serial ATA Storage Controller - 2828
	C	[UUUUFUFU - UUUUFUF/] Intel(K) ICH8M3 port Serial ATA Storage Controller - 2828
		[UUUUFIUU - UUUUFIU3] INTEI(K) ICH8MI3 port Serial ATA Storage Controller - 2828
	-	[UUUUFIIU - UUUUFII/] Intel(K) ICH8/VI 3 port Serial ATA Storage Controller - 2828
		[UUUUF120 - UUUUF12F] Intel(K) ICH8MI UItra ATA Storage Controllers - 2850
1		UUUUF170 - UUUF177] Intel(K) Graphics Media Accelerator 3150

B.2 Memory Address Map

A Memory
■ Incentery ■ IO00 Δ0000 - 000BEEEE1 Intel(R) Graphics Media Accelerator 3150
I I I I I I I I I I I I I I I I I I I
I TETODOO - FEFEFEE PCI bus
IFO000000 - EFEFEFEI Intel/R) Graphics Media Accelerator 3150
IF0000000 - E3FFFFF1 System board
[FE300000 - FE3FFFFF] Intel(R) Graphics Media Accelerator 3150
IFF400000 - FF4FFFFF1 Intel(R) ICH8 Family PCI Express Root Port 6 - 2849
FF440000 - FF45FFFF1 Intel(R) Gigabit CT Desktop Adapter #2
FF460000 - FF463FFF1 Intel(R) Gigabit CT Desktop Adapter #2
[FE500000 - FE5FFFF] Intel(R) ICH8 Family PCI Express Root Port 5 - 2847
FE540000 - FE55FFFF1 Intel(R) Gigabit CT Desktop Adapter #6
FE560000 - FE563FFF1 Intel(R) Gigabit CT Desktop Adapter #6
[FE600000 - FE6FFFFF] Intel(R) ICH8 Family PCI Express Root Port 4 - 2845
[FE640000 - FE65FFFF] Intel(R) Gigabit CT Desktop Adapter #5
[FE660000 - FE663FFF] Intel(R) Gigabit CT Desktop Adapter #5
[FE700000 - FE7FFFFF] Intel(R) ICH8 Family PCI Express Root Port 3 - 2843
[FE740000 - FE75FFFF] Intel(R) Gigabit CT Desktop Adapter #4
[FE760000 - FE763FFF] Intel(R) Gigabit CT Desktop Adapter #4
📜 [FE800000 - FE8FFFFF] Intel(R) ICH8 Family PCI Express Root Port 2 - 2841
[FE840000 - FE85FFFF] Intel(R) Gigabit CT Desktop Adapter #3
🛒 [FE860000 - FE863FFF] Intel(R) Gigabit CT Desktop Adapter #3
📲 [FE900000 - FE9FFFFF] Intel(R) ICH8 Family PCI Express Root Port 1 - 283F
📲 [FE940000 - FE95FFFF] Intel(R) Gigabit CT Desktop Adapter
🔤 [FE960000 - FE963FFF] Intel(R) Gigabit CT Desktop Adapter
🛶 🏺 [FEB01000 - FEB013FF] Intel(R) ICH8 Family USB2 Enhanced Host Controller - 2836
🔲 🖣 [FEB02000 - FEB023FF] Intel(R) ICH8 Family USB2 Enhanced Host Controller - 283A
[FFC00000 - FFFFFFF] Motherboard resources

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B.3 IRQ Mapping Chart

4 - ∎	Int	errupt	t request (IR	Q)	
	<u>1</u>	(ISA)	0x00000000	(00)	High precision event timer
	@	(ISA)	0x0000001	(01)	Standard PS/2 Keyboard
	🖓	(ISA)	0x0000003	(03)	Communications Port (COM2)
		(ISA)	0x00000004	(04)	Communications Port (COM1)
	<u>, I</u>	(ISA)	0x0000008	(08)	High precision event timer
		(ISA)	0x0000000C	(12)	Microsoft PS/2 Mouse
	<u>j</u>	(ISA)	0x000000D	(13)	Numeric data processor
		(ISA)	0x000000E	(14)	ATA Channel 0
		(ISA)	0x000000F	(15)	ATA Channel 1
		(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
	,1	(ISA)	0x0000060	(96)	Microsoft ACPI-Compliant System
	j	(ISA)	0x00000061	(97)	Microsoft ACPI-Compliant System
	, I	(ISA)	0x0000062	(98)	Microsoft ACPI-Compliant System
	<u>,</u>	(ISA)	0x0000063	(99)	Microsoft ACPI-Compliant System
	<u>,</u>	(ISA)	0x0000064	(100)	Microsoft ACPI-Compliant System
		(ISA)	0x0000065	(101)	Microsoft ACPI-Compliant System
		(ISA)	0x0000066	(102)	Microsoft ACPI-Compliant System
	<u>, I</u>	(ISA)	0x0000067	(103)	Microsoft ACPI-Compliant System
	<u>1</u>	(ISA)	0x0000068	(104)	Microsoft ACPI-Compliant System
	<u>1</u>	(ISA)	0x0000069	(105)	Microsoft ACPI-Compliant System
	<u>1</u>	(ISA)	0x000006A	(106)	Microsoft ACPI-Compliant System
	<u>I</u>	(ISA)	0x000006B	(107)	Microsoft ACPI-Compliant System
		(ISA)	0x000006C	(108)	Microsoft ACPI-Compliant System
	····	(ISA)	0x000006D	(109)	Microsoft ACPI-Compliant System
	····{1	(ISA)	0x000006E	(110)	Microsoft ACPI-Compliant System
	<u>1</u>	(ISA)	0x000006F	(111)	Microsoft ACPI-Compliant System
	<u>1</u>	(ISA)	0x00000070	(112)	Microsoft ACPI-Compliant System
	<u>j</u>	(ISA)	0x00000071	(113)	Microsoft ACPI-Compliant System
	<u>j</u> Ę	(ISA)	0x0000072	(114)	Microsoft ACPI-Compliant System
	<u>1</u>	(ISA)	0x0000073	(115)	Microsoft ACPI-Compliant System
	1	(ISA)	0x00000074	(116)	Microsoft ACPI-Compliant System
	1	(ISA)	0x00000075	(117)	Microsoft ACPI-Compliant System
	j 🖳	(ISA)	0x00000076	(118)	Microsoft ACPI-Compliant System
		(ISA)	0x00000077	(119)	Microsoft ACPI-Compliant System

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ISA) 0x00000078 (120) Microsoft ACPI-Compliant System (ISA) 0x00000079 (121) Microsoft ACPI-Compliant System ...ISA) 0x0000007A (122) Microsoft ACPI-Compliant System ...ISA) 0x0000007C (124) Microsoft ACPI-Compliant System ISA) 0x0000007F (127) Microsoft ACPI-Compliant System (ISA) 0x00000080 (128) Microsoft ACPI-Compliant System (ISA) 0x0000081 (129) Microsoft ACPI-Compliant System ISA) 0x00000083 (131) Microsoft ACPI-Compliant System (ISA) 0x00000087 (135) Microsoft ACPI-Compliant System ISA) 0x000008E (142) Microsoft ACPI-Compliant System ISA) 0x00000090 (144) Microsoft ACPI-Compliant System ISA) 0x00000092 (146) Microsoft ACPI-Compliant System ISA) 0x00000096 (150) Microsoft ACPI-Compliant System (ISA) 0x0000009D (157) Microsoft ACPI-Compliant System (ISA) 0x0000009F (159) Microsoft ACPI-Compliant System ISA) 0x000000A1 (161) Microsoft ACPI-Compliant System ...ISA) 0x000000A5 (165) Microsoft ACPI-Compliant System (ISA) 0x000000A7 (167) Microsoft ACPI-Compliant System

Appendix B I/O Information B-6

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ISA) 0x000000A8 (168) Microsoft ACPI-Compliant System (ISA) 0x000000A9 (169) Microsoft ACPI-Compliant System ISA) 0x000000B0 (176) Microsoft ACPI-Compliant System ISA) 0x000000B7 (183) Microsoft ACPI-Compliant System ISA) 0x000000B8 (184) Microsoft ACPI-Compliant System ISA) 0x000000BB (187) Microsoft ACPI-Compliant System (PCI) 0x00000005 (05) Intel(R) ICH8 Family SMBus Controller - 283E (PCI) 0x00000010 (16) Intel(R) ICH8 Family USB Universal Host Controller - 2834 (PCI) 0x00000012 (18) Intel(R) ICH8 Family USB Universal Host Controller - 2832 (PCI) 0x00000012 (18) Intel(R) ICH8 Family USB2 Enhanced Host Controller - 283A (PCI) 0x00000012 (18) Intel(R) ICH8M 3 port Serial ATA Storage Controller - 2828 (PCI) 0x00000013 (19) Intel(R) ICH8 Family USB Universal Host Controller - 2831 (PCI) 0x00000015 (21) Intel(R) ICH8 Family USB Universal Host Controller - 2835 (PCI) 0x00000017 (23) Intel(R) ICH8 Family USB Universal Host Controller - 2830 (PCI) 0x00000017 (23) Intel(R) ICH8 Family USB2 Enhanced Host Controller - 2836 (PCI) 0xFFFFFE1 (-31) Intel(R) Gigabit CT Desktop Adapter #2 (PCI) 0xFFFFFE2 (-30) Intel(R) Gigabit CT Desktop Adapter #2 (PCI) 0xFFFFFE3 (-29) Intel(R) Gigabit CT Desktop Adapter #2 (PCI) 0xFFFFFE4 (-28) Intel(R) Gigabit CT Desktop Adapter #2 (PCI) 0xFFFFFE5 (-27) Intel(R) Gigabit CT Desktop Adapter #6 (PCI) 0xFFFFFE6 (-26) Intel(R) Gigabit CT Desktop Adapter #6 (PCI) 0xFFFFFF7 (-25) Intel(R) Gigabit CT Desktop Adapter #6 (PCI) 0xFFFFFE8 (-24) Intel(R) Gigabit CT Desktop Adapter #6 (PCI) 0xFFFFFE9 (-23) Intel(R) Gigabit CT Desktop Adapter #5 (PCI) 0xFFFFFEA (-22) Intel(R) Gigabit CT Desktop Adapter #5 (PCI) 0xFFFFFEB (-21) Intel(R) Gigabit CT Desktop Adapter #5 (PCI) 0xFFFFFEC (-20) Intel(R) Gigabit CT Desktop Adapter #5 (PCI) 0xFFFFFED (-19) Intel(R) Gigabit CT Desktop Adapter #4 (PCI) 0xFFFFFEE (-18) Intel(R) Gigabit CT Desktop Adapter #4 (PCI) 0xFFFFFFFF (-17) Intel(R) Gigabit CT Desktop Adapter #4

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	(PCI) 0xFFFFFF6	(-16)	Intel(R) Gigabit CT Desktop Adapter #4
	(PCI) 0xFFFFFFF1	(-15)	Intel(R) Gigabit CT Desktop Adapter #3
	(PCI) 0xFFFFFFF2	(-14)	Intel(R) Gigabit CT Desktop Adapter #3
	(PCI) 0xFFFFFFF3	(-13)	Intel(R) Gigabit CT Desktop Adapter #3
	(PCI) 0xFFFFFFF4	(-12)	Intel(R) Gigabit CT Desktop Adapter #3
	(PCI) 0xFFFFFF55	(-11)	Intel(R) Gigabit CT Desktop Adapter
	(PCI) 0xFFFFFF6	(-10)	Intel(R) Gigabit CT Desktop Adapter
	(PCI) 0xFFFFFFF7	(-9)	Intel(R) Gigabit CT Desktop Adapter
	(PCI) 0xFFFFFF8	(-8)	Intel(R) Gigabit CT Desktop Adapter
	(PCI) 0xFFFFFF9	(-7)	Intel(R) ICH8 Family PCI Express Root Port 6 - 2849
	(PCI) 0xFFFFFFF	(-6)	Intel(R) ICH8 Family PCI Express Root Port 5 - 2847
	(PCI) 0xFFFFFFE	(-5)	Intel(R) ICH8 Family PCI Express Root Port 4 - 2845
<u>I</u>	(PCI) 0xFFFFFFF	C (-4)	Intel(R) ICH8 Family PCI Express Root Port 3 - 2843
<u>I</u>	(PCI) 0xFFFFFFF) (-3)	Intel(R) ICH8 Family PCI Express Root Port 2 - 2841
	(PCI) 0xFFFFFFF	(-2)	Intel(R) ICH8 Family PCI Express Root Port 1 - 283F

B.4 DMA Channel Assignments

Direct memory access (DMA)
 June 4 Direct memory access controller



Standard Firewall Platform Setting

Appendix C Standard Firewall Platform Setting C-1

C.1 Standard Firewall Platform Setting

Status LED Control Table.

	I/O 0x048E bit1	I/O 0x048E bit4	I/O 0x048F bit3
LED Off	0	0	0
Red LED On	1	0	0
Red LED Blink	0	0	1
Red LED Fast			
Blink	1	0	1
Green LED On	1	1	1
Green LED			
Blink	1	1	0
Green LED			
Fast Blink	0	1	1

LAN ByPass Config Table

	I/O 0x048C	I/O 0x048C	I/O 0x048D	I/O 0x4B8
	bit6	bit7	bit0	bit5
LAN1_2 Power On ByPass Mode	Х	Х	1	0
LAN1_2 Power On Pass Through Mode	Х	Х	0	0
LAN1_2 Power Off ByPass Mode	Х	1	Х	0
LAN1_2 Power Off Pass Through Mode	Х	0	Х	0
LAN3_4 Power On	Х	Х	1	1

Appendix C Standard Firewall Platform Setting C-2

	Ν	etw	orl	κA	рр	lia	nce
--	---	-----	-----	----	----	-----	-----

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ByPass Mode				
LAN3_4 Power On Pass Through Mode	Х	Х	0	1
LAN3_4 Power Off ByPass Mode	Х	1	Х	1
LAN3_4 Power Off Pass Through Mode	Х	0	Х	1
WDT for LAN1_2 ByPass	1	Х	Х	0
WDT for LAN3_4 ByPass	1	Х	Х	1
WDT for system Reset Mode	0	Х	Х	0 or 1

Note : "X" means that no affected.

```
C.2 Status LED Sample Code
```

#define LED_BASE_ADDR 0x48E

```
// LED Off
```

VOID LED_OFF()

{

UINT16 TEMP16;

```
TEMP16 = IoIn16(LED_BASE_ADDR) & 0xF7ED;
IoOut16(LED_BASE_ADDR, TEMP16);
```

}

```
// Red LED On
```

```
VOID RED_LED_ON()
```

{

UINT16 TEMP16;

```
TEMP16 = IoIn16(LED_BASE_ADDR) & 0xF7ED;
TEMP16 |= 0x0002;
IoOut16(LED_BASE_ADDR, TEMP16);
```

}

// Red LED Blink

```
VOID RED_LED_BLINK()
```

Appendix C Standard Firewall Platform Setting C-4

```
{
```

```
UINT16 TEMP16;
```

```
TEMP16 = IoIn16(LED_BASE_ADDR) & 0xF7ED;
TEMP16 |= 0x0800;
IoOut16(LED_BASE_ADDR, TEMP16);
```

}

```
// Red LED Fast Blink
```

```
VOID RED_LED_FBLINK()
```

{

UINT16 TEMP16;

```
TEMP16 = IoIn16(LED_BASE_ADDR) & 0xF7ED;
TEMP16 |= 0x0802;
IoOut16(LED_BASE_ADDR, TEMP16);
```

}

// Green LED On

```
VOID GREEN_LED_ON()
```

```
{
```

UINT16 TEMP16;

```
TEMP16 = IoIn16(LED_BASE_ADDR) & 0xF7ED;
```

TEMP16 |= 0x0812;

```
IoOut16(LED_BASE_ADDR, TEMP16);
```

}

```
// Green LED Blink
```

```
VOID GREEN_LED_BLINK()
```

{

UINT16 TEMP16;

```
TEMP16 = loln16(LED_BASE_ADDR) & 0xF7ED;
TEMP16 |= 0x0012;
loOut16(LED_BASE_ADDR, TEMP16);
```

}

// Green LED Fast Blink

```
VOID GREEN_LED_FBLINK()
```

{

UINT16 TEMP16;

```
TEMP16 = loln16(LED_BASE_ADDR) & 0xF7ED;
TEMP16 |= 0x0810;
loOut16(LED_BASE_ADDR, TEMP16);
```

}

```
C.3 LAN Bypass Mode Sample Code
    #define LANBP_BASE_ADDR
                                   0x48C
    #define PAIR_SEL_BASE_ADDR
                                   0x4B8
/*
Select LAN Pair I or II
PAIR NUM = 0x00 - PAIR I
                0x01 - PAIR II
*/
VOID SEL PAIR(
                    PAIR_NUM;
     IN
          UINT8
)
{
               TEMP8;
     UINT8
     PAIR_NUM = PAIR_NUM << 5;
     TEMP8 = IoIn8(PAIR_SEL_BASE_ADDR) & 0xDF;
     TEMP8 |= PAIR_NUM;
     IoOut8(PAIR_SEL_BASE_ADDR, TEMP8);
}
```

/*

Execute LAN ByPass Settings

```
*/
VOID EXE_SET()
{
    UINT8 TEMP8;
    TEMP8 = IoIn8(LANBP_BASE_ADDR + 3) | 0x10;
    IoOut8(LANBP_BASE_ADDR + 3, TEMP8);
    Sleep(500);
    IoOut8(LANBP_BASE_ADDR + 3, TEMP8 & 0xEF);
}
```

```
/*

LAN1 & 2 Power On ByPass Mode Set

BP_MODE = 0x00 - Pass Through Mode

= 0x01 - By Pass Mode

*/

VOID LAN12_PWRON_BP()

{

UINT8 TEMP8;

SEL_PAIR(0x00) ; // Select Pair I

TEMP8 = IoIn8(LANBP_BASE_ADDR + 1) & 0xFE;

TEMP8 |= BP_MODE;
```

```
IoOut8(LANBP_BASE_ADDR + 1, TEMP8);
     EXE_SET();
                               // Execute Set
}
/*
LAN1 & 2 Power Off ByPass Mode Set
BP MODE = 0x00 - Pass Through Mode
          = 0x01 - By Pass Mode
*/
VOID LAN12_PWROFF_BP()
{
               TEMP8;
     UINT8
    SEL_PAIR(0x00); // Select Pair I
     TEMP8 = IoIn8(LANBP_BASE_ADDR) & 0x7F;
     TEMP8 \mid= BP_MODE << 7;
     IoOut8(LANBP_BASE_ADDR, TEMP8);
     EXE_SET();
                               // Execute Set
}
```

/*

```
LAN3 & 4 Power On ByPass Mode Set
BP_MODE = 0x00 - Pass Through Mode
          = 0x01 - By Pass Mode
*/
VOID LAN34 PWRON BP()
{
     UINT8
               TEMP8:
    SEL_PAIR(0x01);
                      // Select Pair II
     TEMP8 = IoIn8(LANBP_BASE_ADDR + 1) & 0xFE;
     TEMP8 |= BP_MODE;
     IoOut8(LANBP_BASE_ADDR + 1, TEMP8);
     EXE_SET();
                              // Execute Set
}
/*
LAN3 & 4 Power Off ByPass Mode Set
BP_MODE = 0x00 - Pass Through Mode
          = 0x01 - By Pass Mode
*/
VOID LAN34_PWROFF_BP()
{
     UINT8
               TEMP8:
```

Appendix C Standard Firewall Platform Setting C-10

```
SEL_PAIR(0x01); // Select Pair II
     TEMP8 = IoIn8(LANBP_BASE_ADDR) & 0x7F;
     TEMP8 |= BP MODE << 7;
     IoOut8(LANBP_BASE_ADDR, TEMP8);
     EXE SET();
                              // Execute Set
}
/*
Set Watch Dog as LAN1 & 2 By Pass mode
*/
VOID WDT_LAN12_BP()
{
               TEMP8;
     UINT8
    SEL PAIR(0x00) : // Select Pair I
     TEMP8 = IoIn8(LANBP_BASE_ADDR) | 0x40;
     IoOut8(LANBP_BASE_ADDR, TEMP8);
     EXE_SET();
                              // Execute Set
}
```

```
/*
```

```
Set Watch Dog as LAN3 & 4 By Pass mode
*/
VOID WDT LAN34 BP()
{
     UINT8
               TEMP8:
    SEL PAIR(0x01); // Select Pair II
     TEMP8 = IoIn8(LANBP_BASE_ADDR) | 0x40;
     IoOut8(LANBP_BASE_ADDR, TEMP8);
     EXE_SET();
                              // Execute Set
}
/*
Set Watch Dog as system reset mode
*/
VOID WDT_RESET()
{
     UINT8
               TEMP8:
    SEL_PAIR(0x00); // Select Pair I
     TEMP8 = IoIn8(LANBP_BASE_ADDR) & 0xBF;
     IoOut8(LANBP_BASE_ADDR, TEMP8);
```

SEL_PAIR(0x00); // Select Pair II IoOut8(LANBP_BASE_ADDR, TEMP8);

EXE_SET();

}

// Execute Set

C.4 Console Redirection

Console redirection allows you to maintain a system from a remote location by re-directing keyboard input and text output through the serial port. This section will tell you how to use the console redirection.

- 1. Please insert console cable between on FWS-2200 and remote client system.
- 2. Setup BIOS in FWS-2200
 BIOS >> Advanced >> Serial Port Console Redirection >>
 Console Redirection: Enabled (Default)
 Enabled Attempt to redirect console via COM port
 Disabled Console redirection function

BIOS >> Advanced >> Serial Port Console Redirection >> Serial Redirection Settings >> Bits per second: 115200 (Default)

- 3. Configure Console redirection on client system. This example is for Windows platform.
 - Step1 Click the Start button, point to programs >> Accessories >> Communication, and click Hyper Terminal
 - Step2 Enter any name for the new connection and select any icon

Step3 - Click OK

- Step4 From the connect to pull-down menu, select a COM port available on your client system and click OK
- Step5 Select Baud Rate >> 19200, Flow control >> None, Data bit >>8, Parity cheek >> None, Stop bit>>1
- 4. Power on FWS-2200 and it will display the BIOS information on the client system.

Appendix

AHCI Settings

Appendix D AHCI Settings D-1

FWS-2200

D.1 Setting AHCI

OS installation to setup AHCI Mode

Step 1: Copy the files below from "*Driver CD -> Step 4 - AHCI-> winxp_32* or winxp_64 to Disk



Step 2: Connect the USB Floppy (disk with RAID files) to the board



Step 3: The setting procedures " In BIOS Setup Menu" A: Advanced -> IDE Configuration -> ATA Or IDE Configuration -> Enhanced

B: Configure SATA As -> AHCI

Aptio Setup Utili Advanced	ty – Copyright (C)	2011 American
PATA Master	Not Present	
PATA Slave	Not Present	
SATA Porto SATA Port1 SATA Port2	ST380815AS Not Present Not Present	(80.0G
ATA Or IDE Configuration Configure SATA As	[Enhanced] [AHCI]	

Step 4: The setting procedures "In BIOS Setup Menu" B: Boot -> Boot Option #1 -> DVD-ROM Type

Aptio Setup Utility Main Edvanced Chipset Boot Se	– Copyright (C) 2011 Americ curity save a Exit
Boot Configuration Quiet Boot Launch I82574L PXE OpROM	[Enabled] [Disabled]
Boot Option Priorities	
Boot Option #1	[PIONEER DVD-RW DVR]
Boot Uption #2	[P0: ST380815AS]
Boot Option #3	[MITSUMI USB FDD 07]
Boot Option #4	[UEFI: FAT File System]
Hard Drive BBS Priorities	
CD/DVD ROM Drive BBS Priorities	

Step 5: The setting procedures "In BIOS Setup Menu" C: Save & Exit -> Save Changes and Exit

Aptio Setup Main Advanced Chipset	Utility – Copyright (C) 2011 Boot Security Save & Exit
Save Changes and Reset Discard Changes and Reset	
Restore Defaults Save as User Defaults Restore User Defaults	

Step 6: Setup OS



Appendix DAHCI Settings D-4

Step 7: Press "F6"



Step 8: Choose "S"



Step 9: Choose "Intel(R) ICH8-M-E/M SATA AHCI Controller"

Hindows Setup
You have chosen to configure a SCSI Adapter for use with Hindows, using a device support disk provided by an adapter manufacturer.
Select the SCSI Adapter you want from the following list, or press ESC to return to the previous screen.
Intel(R) ICH8M-E/M SATA AHCI Controller
Intel(R) ICH9M-E/M SATA AHCI Controller Intel(R) ICH9M-E/M SATA AHCI Controller Intel(R) ICH10D/DO SATA AHCI Controller
ENTER=Select F3=Exit

Step 10: It will show the model number you select and then press "ENTER"



Appendix DAHCI Settings D-6

Step 11: Setup is loading files

