FWA8207 Series

Networking Appliance

User's Manual

Version: 1.3

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Foreword

To prevent damage to the system board, please handle it with care and follow the measures below, which are generally sufficient to protect your equipment from static electricity discharge:

When handling the board, use a grounded wrist strap designed for static discharge elimination grounded to a metal object before removing the board from the antistatic bag. Handle the board by its edges only; do not touch its components, peripheral chips, memory modules or gold contacts.

When handling processor chips or memory modules, avoid touching their pins or gold edge fingers. Return the Network Appliance system board and peripherals back into the antistatic bag when not in use or not installed in the chassis.

Some circuitry on the system board can continue to operate even though the power is switched off. Under no circumstances should the Lithium battery cell used to power the real-time clock be allowed to be shorted. The battery cell may heat up under these conditions and present a burn hazard.

WARNING!

- "CAUTION: DANGER OF EXPLOSION IF BATTERY IS INCORRECTLY REPLACED. REPLACE ONLY WITH SAME OR EQUIVALENT TYPE RECOMMENDED BY THE MANUFACTURER. DISCARD USED BATTERIES ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS"
- 2. This guide is for technically qualified personnel who have experience installing and configuring system boards. Disconnect the system board power supply from its power source before you connect/disconnect cables or install/remove any system board components. Failure to do this can result in personnel injury or equipment damage.
- 3. Avoid short-circuiting the lithium battery; this can cause it to superheat and cause burns if touched.
- 4. Do not operate the processor without a thermal solution. Damage to the processor can occur in seconds.
- 5. Do not block air vents at least minimum 1/2-inch clearance required.

Chapter 1 Introduction

FWA8207 series was specifically designed for the network security & management market.

Network Security Applications:

- Firewall
- Unified Threat Management (UTM)
- Virtual Private Network (VPN)
- Proxy Server
- Caching Server

Network Management Applications:

- Load balancing
- Quality of Service
- Remote Access Service

The FWA networking appliance product line covers the spectrum from offering platforms designed for:

- SOHO
- SMB
- Enterprise

Each product is designed to address the distinctive requirements of its respective market segment from cost effective entry-level solutions to high throughput and performance-bound systems for the Enterprise level.

Chapter 2 System Specification

Product Name	FWA8207		
Form Factor	19" 1U Mainstream Networking Product		
Motherboard	MB966		
CPU	Intel® LGA1156 Series Processors		
Chipset	Intel® 3450 PCH		
Supported CPUs	 Intel® Xeon X3450, X3430 Intel® Core i7-860 Intel® Core i5-750 Intel® Core i5-660 (FWA8207-G) Intel® Core i3-540 (FWA8207-G) Intel® Pentium G6950 (FWA8207-G) 		
Network	 Six onboard GLAN + one Management (ATM 6.0) Two segments hardware Bypass 		
Expansion Slot	 One PCI-e x8 Golden Finger One PCI-e x16 (x8 Link) Golden Finger CF Card Socket Mini PCI-e Socket (m-SATA compatible) 		
Storage	One internal 2.5" HDD (FWA8207) or One internal 3.5" HDD (FWA8207-2SLOT & FWA8207-G)		
Front Panel	 DB-9 Console Port (COM1) 2x USB 2.0 type A connector 1x RJ-45 for Management port (ATM 6.0) 6x RJ-45 with Link/Act, Speed LED for 10/100/1000M Ethernet 3x LED (Power, Status) 		
Rear Panel	 PSU inlet 1x or 2x Slot (Depend on product SKU) 		
USB 2.0	Two in frontTwo pin header on board		
ATM	ATM 6.0		
ТРМ	Winbond WPCT200 TPM1.2 controller for Trust Platform 1.2		
VGA	Pin header on board (FWA8207-G)		
LCM	2x16 characters LCM		
Watchdog Timer	256 segments, 0, 1, 2255 sec/min		
Power Supply	300W Single PSU		
Dimensions	44 (H) x 440 (W) x 406.5 (D) mm		
Operation Temperature	0 ~ 45 °C		
Storage Temperature	-20 ~ 70 °C		
Operation Humidity	5% ~ 95%		
Certifications	CE, FCC		
Optional Front Expansion Cards	• IBP161: 4-port RJ-45 10/100/1000 Copper Ethernet Card		

MB966 Motherboard Layout



Jumper Setting

- JP1: TPM Enable/Disable Setting
- JP2, JP3: Watchdog Timer & CN11~CN14 LAN Bypass Settings
- JP4: Clear CMOS Contents
- JP5: ME (Intel[®] Management Engine) Enable/Disable
- JP6: ATX / AT Power Mode Setting
- JP7: PCIE1 & PCIE2 Golden Finger PCIe Configuration

JP1: TPM Enable/Disable Setting

JP1	Setting	Function
123	Pin 1-2 Short/Closed	Enable
123	Pin 2-3 Short/Closed	Disable

JP2, JP3: Watchdog Timer & LAN Bypass Settings

JP2, JP3	Setting	Function	Power Off	Power On OS Run Software
	JP2 Pin 2-3 Closed	System LAN bypass function is controlled by Super I/O GP23		GP23 Active: Low: Bypass High: Normal
	<u>JP3</u> Pin 1-2 Open & 3-4 Closed	System will reboot upon the time out of watchdog timer.		WDT Reboot System
	<u>JP2</u> Pin 1-2 Closed <u>JP3</u> Pin 1-2 & 3-4 Open	System will bypass LAN upon the time out of watchdog timer.	LAN Byrnass	
1 1 1 1 1 1 1 1 2 2 (Default)	<u>JP2</u> Pin 2-3 Closed <u>JP3</u> Pin 1-2 & 3-4 Open	System LAN bypass function is controlled by Super I/O GP23.	LAN Dypass	GP23 Active: Low: Bypass High: Normal
	JP2 Pin 1-2 Closed JP3 Pin 1-2 & 3-4 Closed	System LAN is at normal		LAN Always Normal
		System will reboot upon the time out of watchdog timer.	LAN Bypass	WDT Reboot System

JP4: Clear CMOS Contents

Use JP4 to clear the CMOS contents.

Note that the ATX-power connector should be disconnected from the board before clearing CMOS.

JP4	Setting	Function
123	Pin 1-2 Short/Closed	Normal
123	Pin 2-3 Short/Closed	Clear CMOS

JP5: ME (Intel[®] Management Engine) Enable/Disable

JP5	Setting	Function
o o Open	Open	Enable
Short	Short/Closed	Disable

JP6: ATX / AT Power Mode Setting

JP1	Setting	Function
123	Pin 1-2 Short/Closed	ATX
123	Pin 2-3 Short/Closed	AT

JP7: PCIE1 & PCIE2 Golden Finger PCIe Configuration

JP7	Setting	Function	Remarks		
	Open	Combine to 1x16	For CPU		
Open	Open		with Integrated Graphics support		
Short	Short/Closed		Default Setting		
		Separate to2x8	for CPU		
			without Integrated Graphics support		

Rear Panel Features





Chapter 4 Console Mode Information

FWA8207 supports output information via Console in BIOS level.

Prepare a computer as client loaded with an existing OS such Windows XP. Connect client computer and FWA8207 with NULL Modem cable. Follow the steps below to configure the Windows Hyper Terminal application setting:

- 1. Execute Hyper Terminal. Issue command "hypertrm".
- 2. Customize your name for the new connection.

onnection De	escription	?
New Col	nnection	
Enter a name ar	d choose an icon for the conn	ection:
Name:		
Console		
Icon:		1
) 🔅 🌇 🍪	
	ОК	Cancel
hoose COM p	ort on the client compute	er for the conn
Connect To		? 🛛
Console		
Enter details for	the phone number that you wa	nt to dial:
	United States (1)	14 C
Country/region:		110
Country/region: Area code:	2	
Country/region: Area code: Phone number:	2	
Country/region: Area code: Phone number: Connect using:	2 СОМ1	

4. Please make the port settings to Baud rate 19200, Parity None, Data bits 8, Stop bits 1



5. Power up FWA8207. The screen will display the following information.



 Press <Tab> key to enter BIOS setup screen in Console mode. Press key to enter BIOS setup screen in VGA mode.

Chapter 5 Open the Chassis

Loosen six screws on sides and rear of chassis, and slide backward to remove the top lead.



Fig. 5-1 Take off screws



Fig. 5-2 The top lead



Fig. 5-3 The base stand

Chapter 6 Installing DDR3 Memory

Install system memory by pulling the socket's arm and pressing it into the slot gently.



Fig. 6-1 Open both arms on DIMM socket



Fig. 6-2 Install DIMM

Notice:

1. MB966 supports two groups of dual channels memory.

One group is on the black DIMM sockets, and the other one is blue DIMM sockets.

2. The recommended height of memory module doesn't exceed 30 mm.

Chapter 7 Installing CompactFlash Card

Insert CompactFlash card into the socket.



Fig. 7-1 Insert CompactFlash Card into the CF interface



Fig. 7-2 Completion of CompactFlash Card connection

Chapter 8 Removing and Installing the Battery

- 1. Press the metal clip back to eject the button battery.
- 2. Replace it with a new one by pressing the battery with fingertip to restore the battery



Fig. 8-1 Eject the battery and replace with new one

Chapter 9 Installing 2.5" HDD (FWA8207)



Fig. 9- Take off two screws on bottom to remove 2.5" HDD bracket.



Fig. 9-2 Fasten the four screws to lock HDD and bracket together.



Fig. 9-3 Push HDD into connector

Fig. 9-4 Completion of HDD connection



Fig. 9-5 Fix HDD bracket with two screws

Chapter 10 Installing Optional Dual 2.5" HDD Kit

The following is for optional Dual 2.5" HDD kit:



Fig. 10-1 Push eight shock-absorbent pads to fasten HDD bracket.



Fig. 10-2 Fasten the screws to lock 2.5" HDD bracket and bracket together.



Fig. 10-3 Fix HDD bracket on chassis with four screws

Chapter 11 Installing Add-on Card



Fig. 11-1 Loosen screw on slot bracket.



Fig. 11-2 Slide in PCI-e add-on card.



Fig. 11-3 Fix the add-on card

Chapter 12 Installing Mini PCI-e Card



Fig. 12-1 Insert Mini PCI-e card.

Fig. 12-2 Push down Mini PCI-e card.

This setup allows you to view processor configuration used in your computer system and set the system time and date.

		BIOS SET OF OTH	-111	
Main Advanced	PCIPnP	Boot	Security	/ Chipset Exit
Processor Intel(R) Core(TM) i5 CPU Speed : 3333MHz Count : 1		660 @ 3.33GHz		Use[ENTER], [TAB] or [SHIFT-TAB] to select a field.
System Memory Size : 8056MB				Use [+] or [-] to configure system Time.
System Time System Date		[02:29:50] [Fri 01/02/2009]		<pre><- Select Screen</pre>

- **Notice**: If the system cannot boot after making and saving system changes with Setup, the AMI BIOS supports an override to the CMOS settings that resets your system to its default.
- *Warning:* It is strongly recommended that you avoid making any changes to the chipset defaults. These defaults have been carefully chosen by both AMI and your system manufacturer to provide the absolute maximum performance and reliability. Changing the defaults could cause the system to become unstable and crash in some cases.

Advanced Settings

Main	Advanced	PCIPnP	Boot	Security	Chipset Exit
Adva	nced Settings				Configure CPU.
WARN	ING: Setting wron may cause s	g values in b ystem to mal	elow sections function.		
CPU C	onfigurations				
IDE Co	onfiguration				
Superle	O Configuration				
Hardwa	are Health Configura	ation			
ACPI C	Configuration				<- Select Screen
AHCI C	Configuration				↑↓ Select Item
Event I	og Configuration				+- Change Field
Intel Al	VT Configuration				Tab Select Field
Intel V	F-d Configuration				F1 General Help
MPS C	onfiguration				F10 Save and Exit
PCIEx	press Configuration				ESC Exit
Remote	e Access Configurat	ion			
Irusted	d Computing				
USBC	onfiguration				
Clock (Jenerator Configura	tion			

The Advanced BIOS Settings configurations are shown in the following pages, as seen in the computer screen. Please note that setting the wrong values may cause the system to malfunction.

	BIOS SETUP UTILITY							
Main	Advanced	PCIPnP	Boot	Securit	y	Chipset	Exit	
Configure advanced CPU settings Module Version: 01.08						figure CP	U.	
Manufa Intel(R Freque BLCK Cache Cache	acturer: Intel) Core(TM) i5 CPU incy : 3. Speed : 13 L1 : 128KB L2 : 512KB	33GHz 33MHz	660 @ 3.:	33GHz				
Cache Ratio Ratio A	L3 : 4096KB Status: Unlocked Actual Value: 9.5	(Min:09, Max:25	5)		<- ↑↓ +-	Select Select Change	Screen Item Field	
Ratio C MPS a Max Cl Intel(R Active A20M ► Intel	CMOS Setting nd ACPI MADT order PUID Value Limit) Virtualization Tech Processor Cores PPM Configuration	ering	25 Modern o Disabled Disabled All Diabled	ordering	Tab F1 F10 ESC	Select General Save an Exit	Field Help d Exit	

The CPU Configuration menu shows the following CPU details including the manufacturer, CPU type, its frequency and cache levels. Other options include:

Ratio CMOS Setting

Sets the ratio between CPU core clock and the FSB frequency.

MPS and ACPI MADT ordering

Modern ordering for Windows XP or later OSes. Legacy ordering for Windows 2000 or earlier OSes.

Max CPU ID Value Limit

Disabled for Windows XP.

Intel Virtualization Tech

When enabled, a VMM can utilize the additional HW Caps. Provided by Intel® Vitualization Tech. Note: A full reset is required to change the setting.

Active Processor Cores

Number of cores to enable in each processor package.

A20M

Legacy OSes and Aps may need A20 M enabled.

Intel® PPM Configuration

This configuration includes the following options:

Intel SpeedStep tech Disable: Disable GV3 Enable: Enable GV3 Intel TurboMode tech Turbo mode allows processor cores to run faster than marked frequency in specific condition. Intel C-STATE tech CState: CPU idle is set to C2/C3/C4. C State package limit setting Selected option will program into C State package limit register. C3 State / C6 State Nehalem C state action select. C1 Auto Demotion When enabled, CPU will conditionally demote C3/C6/C7 requests to C1 based on uncore auto-demote information. C3 Auto Demotion When enabled, CPU will conditionally demote C6/C7 requests to C3 based on uncore auto-demote information. BIOS SETUP UTILITY

Main	Advanced	PCIPnP	Boot	Security	/	Chipset	Exit
IDE C	Configuration						
Mirrored Config SATA#1 SATA#2	IDER Configuration ure SATA#1 as IDE Configuration IDE Configuration		[Disabled] [IDE] [Compatible [Enhanced]]			
 Prima Prima Secor Secor Third Fourth 	ry IDE Master ry Slave Master ndary IDE Master ndary IDE Slave IDE Master i IDE Master		: [Hard Disk] : [Not Detec : [Not Detec : [Not Detec : [Not Detec : [Not Detec	l ted] ted] ted] ted]	<- ↑↓ +- Tab	Select Select Change Select	Screen Item Field Field
Hark Dis IDE Dete ATA(PI)	k Write Protect ect Time Out (Sec) 80Pin Cable Detection	on	{Disabled} [35] [Host & Dev	ice]	F1 F10 ESC	General Save ar Exit	l Help nd Exit

The IDE Configuration menu is used to change and/or set the configuration of the IDE devices installed in the system.

Hard Disk Write Protect

Disable/Enable device write protection. This will be effective only if device is accessed through BIOS.

IDE Detect Time Out (Sec)

Select the time out value for detecting ATA/ATAPI device(s).

ATA(PI) 80pin Cable Detection

Select the mechanism for detecting 80pin ATA(PI) cable.

			BIOS SETUP UTILI	ТҮ			
Main	Advanced	PCIPnP	Boot	Security		Chipset	Exit
Confi	gure Win627L	JHG Supe	er IO Chipset				
Serial Po	rt1 Address		[3F8]				
Serial Po	rt2 Address		[2F8]				
Restore of	on AC Power Loss		[Power Off]				
Power Or	n Function		[None]				
				•	<-	Select	Screen
					1↓	Select	Item
				·	+-	Change	Field
					Tab	Select	Field
				1	F1	General	Help
				1	F10	Save an	d Exit
				1	ESC	Exit	

Onboard Serial Port/Parallel Port

These fields allow you to select the onboard serial ports and their addresses. The default values for these ports are: Serial Port 1 3F8

Serial Port 2 2F8/

Restore on AC Power Loss

This field sets the system power status whether *on or off* when power returns to the system from a power failure situation.

Power On Function

This field is related to how the system is powered on. The options are *None, Mouse Left, Mouse Right,* and *Any Key.*

	BIOS SETUP UTILITY							
Main	Advanced	PCIPnP	Boot	Security		Chipset	Exit	
Hardw	vare Health C	onfiguratio	on					
System Te CPU Temp PCH Temp Fan1 Spee FAN2 Spe FAN3 Spe	emperature berature berature ed ed ed		:34°C/93°F :38°C/100°F :38°C/100°F :0 RPM :1074RPM :0RPM					
FAN4 Spe VcoreA 3VCC 12V VcoreB	ed		:0RPM :1.176 V :3.472 V :12.408 V :1.552 V		<- ↑↓ +- Tab	Select Select Change Select	Screen Item Field Field	
VCCIN VSB SYS SMAI CPU SMA ACPI Shut	RT FAN Setting RT FAN Setting : down Temperatur	Ena Ena	:5.196 V .0.150V able : Disabled : Disabled : Disabled]	F1 F10 ESC	General Save an Exit	Help d Exit	

The Hardware Health Configuration menu is used to show the operating temperature, fan speeds and system voltages.

SYS smart fan

The options are Disabled and Enabled (Default)

CPU smart fan

The options are Disabled and Enabled (Default)

ACPI Shutdown Temperature

The options are *Disabled*, 70°C/158°F, 75°C/167°F, 80°C/176°F, 85°C/185°F, 90°C/194°F, and 95°C/203°F.

		В	IOS SETUP U	TILITY		
Main	Advanced	PCIPnP	Boot	Security	Chipset E	xit
ACPI	Settings				General ACPI	
► Gene	eral ACPI Configura	ation			Configuration settir	igs
					< Onlast Course	
					<- Select Scree	en
					+- Change Field	i
					Tab Select Field	1
					F1 General Help	,
					F10 Save and Ex:	it
					ESC Exit	

BIOS SETUP UTILITY

Main Advanced	PCIPnP	Boot	Security	y Chipset Exit
General ACPI Cor	nfiguration			General ACPI
Suspend mode		[S1 (POS)]		Configuration settings
				<- Select Screen
				+- Change Field
				Tab Select Field F1 General Help
				F10 Save and Exit
				ESC Exit

Suspend Mode

The options of this field are S1, S3.

Determines whether to invoke VGA BIOS POST on S3/STR resume.

Main Advanced	PCIPnP	Boot	Security	/	Chipset	Exit
AHCI Settings						
AHCI BIOS Support		Enabled				
AHCI Port0 [Not Detecte	d]					
AHCI Port1 [Not Detected	d]			<-	Select	Screen
AHCI Port2 [Not Detecte	d]			↑ ↓	Select	Ttem
AHCI Port3 [Not Detected	d]			+-	Change	Field
AHCI Port4 [Not Detected]	d]			Tab	Select	Field
► AHCI Port05[Not Detected	ed]			F1	General	Help
				F10	Save ar	nd Exit
				ESC	Exit	

AHCI BIOS Support

Enables for supporting AHCI controller operates in AHCI mode during BIOS control otherwise operates in IDE mode

AHCI Port

While entering setup, BIOS auto detects the presence of IDE devices. This displays the status of auto detection of IDE devices.

		-			
Main	Advanced	PCIPnP	Boot	Security	/ Chipset Exit
Eve	nt Logging deta	ails			view all upread events on the
View Mark Clear	Event Log all events as read Event Log				Event Log
ECC I PCIE	Event Logging Error Log		[Disabled] [Disabled]		<- Select Screen

BIOS SETUP UTILITY

Main Adva	nced	PCIPnP	Boot	Security	v Chipset Exit	
Intel AMT Co	onfigur	ation			Options:	
Intel AMT Suppo	rt		[Enabled]		Disabled Enabled	
AMT/ME BIOS EX	tension (MEBx) Config	guration			
ME BIOS Extensi	on (MEB)	()	[Enabled]		<- Select Screen	
Unconfigure AMT	/ME		[Disabled]		↑↓ Select Item	
MEBx Ctrl+P Dela	ay (Secor	ids)	256		+- Change Field	
					Tab Select Field	
					F1 General Help	
					F10 Save and Exit	
					ESC Exit	

The Intel® AMT Configuration configures the Intel® Active Management Technology (AMT) options.

Main Advan	ced	PCIPnP	Boot	Security	y Chipset Exit
					Options:
Intel VT-d			[Disabled]		Disabled Enabled
					<- Select Screen † ↓ Select Item +- Change Field Tab Select Field F1 General Help F10 Save and Exit ESC Exit

Virtualization solutions allow multiple operating systems and applications to run in independent partitions all on a single computer. Using virtualization capabilities, one physical computer system can function as multiple "virtual" systems.

Main Advanced	PCIPnP	Boot	Security	Chipset Exit
MPS Configuration	ı			Select MPS
MPS Revision VT-d		[1.4]		Revision
				<- Select Screen
				↑↓ Select Item
				+- Change Field
				Tab Select Field
				F1 General Help
				F10 Save and Exit
				ESC Exit

MPS Version Control for OS

This option is specifies the MPS (Multiprocessor Specification) version for your operating system. MPS version 1.4 added extended configuration tables to improve support for multiple PCI bus configurations and improve future expandability.

The default setting is 1.4.

BIOS SETUP UTILITY

Main Advanced	PCIPnP	Boot	Security	y Chipset Exit
PCI Express Config	juration			Enable/Disable
Active State Power Manag	gement	[Disabled]		PCI Express L0s and L1 link power states
				<pre><- Select Screen</pre>

BIOS SETUP UTILITY

Main Advance	d PCIPnP	Boot	Security	/ Chipset Exit
Configure Remo	Select Remote Access			
Remote Access		Enabled		type.
Serial port number Base Address, IRC Serial Port Mode Flow Control Redirection After BIOS Terminal Type VT-UTF& Combo Key Su Sredir Memory Display D	POST opport elay	[COM1] [3F8h, 4] [1115200 [None] Always ANSI Enabled No Delay	8,n,1]	<- Select Screen

When enabled, the Remote Access type and parameters are shown:

Serial port number - Select Serial Port for console redirection.

Serial port mode - Select Serial Port settings.

Flow Control - Select Flow Control for console redirection.

Redirection After BIOS POST

Disable: Turns off the redirection after POST.

Boot Loader. Redirection is active during POST and during Boot Loader.

Always: Redirection is always active. (Some OSs may not work if set to Always.)

Terminal Type - Select the target terminal type.

VT-UTF8 Combo Key Support – Enable VT-UTF8 Combination Key Support for ANSI/VT100 terminals.

Sredir Memory Display Delay - Gives the delay in seconds to display memory information.

BIOS SETUP UTILITY

Main Advan	ced PCIP	nP Boot	Security	v Chipset Exit
Trusted Comp	Enable/Disable TPM			
TCG/TPM SUPPORT		No		TCG (TPM 1.1/1.2) supp in BIOS
				<- Select Screen

USB Configuration

This option is used to configure USB mass storage class devices.

Main Advanced	PCIPnP	Boot	Security	/ Chipset Exit
USB Configuration				Enables support for
Module Version – 2.24.5.14. USB Devices Enabled: 2 Hubs			legacy USB. AUTO option disables legacy support if no USB devices are connected.	
Legacy USB Support USB 2.0 Controller Mode BIOS EHCI Hand-Off Legacy USB1.1 HC Support USB Beep Message		[Enabled] [HiSpeed] [Disabled] [Enabled] [Disabled]		<- Select Screen

Legacy USB Support

Enables support for legacy USB. AUTO option disables legacy support if no USB devices are connected.

Legacy USB1.1 HC Support

Support USB 1.1 HC.

USB Beep Message

Enable the beep during USB device enumeration.

Clock Generator Configuration

,	BIOS SETUP UTILITY							
Main	Advanced	PCIPnP	Boot	Security	y Chipset Exit			
Spectrum	n Enable/Disable		[Disable]		Spectrum Enable/Disable			
					<- Select Screen			

PCIPnP Settings

		BI	OS SETUP UTILI	IY	
Main	Advanced	PCIPnP	Boot	Security	y Chipset Exit
Advar WARNII	nced PCI/Pn NG: Setting wro	P Settings	low sections		Clear NVRAM during System Boot
Clear NV	may cause RAM	system to main	[No]		
Plug & Pl PCI Later Allocate I	ay O/S ncy Timer RQ to PCI VGA		[No] [64] [Yes]		
PCI IDE E OffBoard	BusMaster I PCI/ISA IDE Ca	rd	[Disabled] [Enabled] [Auto]		
IRQ3 IRQ4			[Available] [Available]		
IRQ3 IRQ7 IRQ9 IRQ10			[Available] [Available] [Available] [Available]		<- Select Screen + Select Item +- Change Field
IRQ11 IRQ14 IRQ15			[Available] [Available] [Available] [Available]		Tab Select Field F1 General Help F10 Save and Exit
DMA Cha DMA Cha DMA Cha DMA Cha DMA Cha DMA Cha	innel 0 innel 1 innel 3 innel 5 innel 6 innel 7		[Available] [Available] [Available] [Available] [Available] [Available]		ESC Exit
Reserved	d Memory Size		[Disabled]		

Clear NVRAM

This item is used for clearing NVRAM during system boot.

Plug & Play O/S

This lets BIOS configure all devices in the system or lets the OS configure PnP devices not required for boot if your system has a Plug and Play OS.

PCI Latency Timer

This item sets value in units of PCI clocks for PCI device latency timer register. Options are: 32, 64, 96, 128, 160, 192, 224, 248.

Allocate IRQ to PCI VGA

This assigns IRQ to PCI VGA card if card requests IRQ or doesn't assign IRQ to PCI VGA card even if card requests an IRQ.

Palette Snooping

This informs the PCI devices that an ISA graphics device is installed in the system so the card will function correctly.

PCI IDE BusMaster

This uses PCI busmastering for BIOS reading / writing to IDE devices.

OffBoard PCI/ISA IDE Card

Some PCI IDE cards may require this to be set to the PCI slot number that is holiding the card. **AUTO**: Works for most PCI IDE cards.

IRQ#

Use the IRQ# address to specify what IRQs can be assigned to a particular peripheral device.

Reserved Memory Size

Size of memory block to reserve legacy ISA devices.

Boot Settings

This option configures the settings during system boot including boot device priority and HDD/CD/DVD drives.

	BIOS SETUP UTILITY							
Main	Advanced	PCIPnP	Boot	Security	Chipset E	Exit		
Boot ► Boo	Settings ot Settings Cor	nfiguration			Configure Settings during System Boo	ot.		
 ▶ Boot De ▶ Hard D 	evice Priority bisk Drives				<- Select Scre † ↓ Select Item +- Change Fiel Tab Select Fiel F1 General Hel F10 Save and Ex ESC Exit	en d d p it		

Boot Settings Configuration

This configuration includes the following items:

Quick Boot - Allows BIOS to skip certain tests while booting. This will decrease the time needed to boot the system. **Quite Boot** – *Disabled*: Displays normal POST messages. *Enabled*: Displays OEM Logo instead of POST messages.

Bootup Num-Lock – Select Power-on state for Numlock.

PS/2 Mouse Support – Select support for PS/2 Mouse.

Wait for 'F1' If Error – Wait for F1 key to be pressed if error occurs.

Hit 'DEL' Message Display – Displays "Press DEL to run Setup" in POST.

Interrupt 19 Capture – This allows option ROMS to trap interrupt 19.

Boot Device Priority

This specifies the boot sequence from the available devices. A device enclosed in parenthesis has been disabled in the corresponding type menu.

Hard Disk Drives

This specifies the Boot Device Priority sequence from available Hard Drives.

Security Settings

This setting comes with two options set the system password. Supervisor Password sets a password that will be used to protect the system and Setup utility. User Password sets a password that will be used exclusively on the system. To specify a password, highlight the type you want and press <Enter>. The Enter Password: message prompts on the screen. Type the password and press <Enter>. The system confirms your password by asking you to type it again. After setting a password, the screen automatically returns to the main screen.

To disable a password, just press the <Enter> key when you are prompted to enter the password. A message will confirm the password to be disabled. Once the password is disabled, the system will boot and you can enter Setup freely.

	BIOS SETUP UTILITY							
Main	Advanced	PCIPnP	Boot	Security	Chipset Exit			
Secu Super User	rity Settings rvisor Password Password	1 : 1 1 :	Not Installed Not Installed	ln: Pa	stall or Change the issword.			
Chang Chang	ge Supervisor Pa ge User Passwor	ssword d		<-	 Select Screen ↓ Select Item Change Field 			
Boot Sector Virus Protection			isabled]	Ta F1 F1 ES	b Select Field General Help O Save and Exit C Exit			

Advanced Chipset Settings

This setting configures the north bridge, south bridge and the ME subsystem. WARNING! Setting the wrong values may cause the system to malfunction. -

BIOS SETUP UTILITY

Main	Advanced	PCIPnP	Boot	Security	Chipset Exit
Adva warn	anced Chipse IING: Setting wro may cause	t Settings ng values in be system to mali	elow sections function.		Configure North Bridge features.
► Nori ► Sou ► ME	th Bridge Configu th Bridge Configura Subsystem Configu	ration ation uration			<- Select Screen

BIOS SETUP UTILITY

Main	Advanced	PCIPnP	Boot	Security	y Chipset Exit
Nort	h Bridge Chip		Disabled		
Memory Remap Feature PCI MMIO Allocation: 4GB To 307 DRAM Frequency			[Enabled] 2 MB		15MB-16MB
Confi Mem	ا) gure DRAM Timi ory Hole [Disabled]	Auto] ing by SPD	[Auto]		<- Select Screen
Initiat IGD (32ME	e Graphic Adapt [PEG/PCI] Graphics Mode S 3]	er Select	[Enable	ed,	F10 Save and Exit ESC Exit
NB P PEC PEC ► Vic	CIE Configuratio 9 Port [Auto] 9 Force GEN1 [Disabled] leo Function Con	n figuration			

Memory Remap Feature

This allows remapping of overlapped PCI memory above the total physical memory.

DRAM Frequency The options are *Auto*, *1067 MHz* and *1333 MHz*.

Configure DRAM Timing by SPD

The options are *Auto* and *Manual*.

Memory Hole

This option is used to reserve memory space between 15MB and 16MB for ISA expansion cards that require a specified area of memory to work properly.

Initiate Graphic Adapter

This option selects which graphics controller to use as the primary boot device.

IGD Graphics Mode Select

This option selects the amount of system memory used by the internal graphics device.

PEG Port

The options are *Auto* and *Disabled*.

PEG Force GEN1

Some non-graphics PCI-E devices may not follow PCI-E specifications and may incorrectly report their GEN capability or link width.

The configuration allows setting to DVMT/FIXED memory.

Main	Advanced	PCIPnP	Boot	Security	y Chipset Exit
Video	Function Co	DVMT Mode			
DVMT	Mode Select		[DVMT Mode]		
DVM	T/FIXED Memory	<i>,</i>	[256MB	8]	
PAVP	Mode	[Lite]			
					<- Select Screen
Boot D	Display Device	[CRT]			↑↓ Select Item +- Change Field
					Tab Select Field
					F1 General Help
					F10 Save and Exit
					ESC Exit

			BIOS SETUP UT	ILITY	
Main	Advanced	PCIPnP	Boot	Securit	y Chipset Exit
South	n Bridge Chip	set Conf	iguration		Enabled
USB F	unction		[Enabled]		Disabled
EHCI	Controller#1		[Enabled]		
EHCI	Controller#2		[Enabled]		
GbE C	ontroller		[Enabled]		
Wake	On PCIE LAN		[En	abled]	
Wake	On RTC Alarm		[Dis	abled]	
SLP_S	4# Min. Asserti	on Width	[4 to 5 second	s]	<pre><- Select Screen</pre>

Exit Setup

The exit setup has the following settings that are:

Main	Advanced	PCIPnP	Boot	Security	Chipset	Exit
Exit	Options				Exit system se after saving the	tup)
Save	Changes and I	Exit			changes.	
Disca	rd Changes and	Exit				
Disca	rd Changes				<- Select S	creen
Load	Load Optimal Defaults					item Mield
Load	Failsafe Default	S			Tab Select H	lield
					F1 General	Help
					F10 Save and	l Exit
					ESC Exit	

Save Changes and Exit

This option allows you to determine whether or not to accept the modifications and save all changes into the CMOS memory before exit.

Discard Changes and Exit

This option allows you to exit the Setup utility without saving the changes you have made in this session.

Discard Changes

This option allows you to discard all the changes that you have made in this session.

Load Optimal Defaults

This option allows you to load the default values to your system configuration. These default settings are optimal and enable all high performance features.

Load Failsafe Defaults

This option allows you to load the troubleshooting default values permanently stored in the BIOS ROM. These default settings are non-optimal and disable all high-performance features.

Chapter 14 Watchdog Timer Configuration

The WDT is used to generate a variety of output signals after a user programmable count. The WDT is suitable for use in the prevention of system lock-up, such as when software becomes trapped in a deadlock. Under these sorts of circumstances, the timer will count to zero and the selected outputs will be driven. Under normal circumstance, the user will restart the WDT at regular intervals before the timer counts to zero.

SAMPLE CODE:

This code and information is provided "as is" without warranty of any kind, either expressed or implied, including but not limited to the implied warranties of merchantability and/or fitness for a particular purpose.

Filename : Main.cpp

//-----// // THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY // KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE // IMPLIED WARRANTIES OF MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR // PURPOSE. // //----_____ #include <dos.h> #include <conio.h> #include <stdio.h> #include <stdlib.h> #include "W627DHG.H" //----int main (void); void WDTInitial(void); void WDTEnable(unsigned char); void WDTDisable(void); //---int main (void) { char SIO; SIO = Init_W627DHG(); if (SIO == 0){ printf("Can not detect Winbond 83627DHG, program abort.\n"); return(1): } WDTInitial(); WDTEnable(10); WDTDisable(); return 0: //void WDTInitial(void) { unsigned char bBuf; bBuf = Get_W627DHG_Reg(0x2D); bBuf &= (~0x01); Set_W627DHG_Reg(0x2D, bBuf); //Enable WDTO ļ 11void WDTEnable(unsigned char NewInterval) { unsigned char bBuf; Set_W627DHG_LD(0x08); //switch to logic device 8 Set_W627DHG_Reg(0x30, 0x01); //enable timer bBuf = Get_W627DHG_Reg(0xF5); bBuf &= (~0x08); Set_W627DHG_Reg(0xF5, bBuf); //count mode is second Set_W627DHG_Reg(0xF6, NewInterval); //set timer 11void WDTDisable(void) {

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Filename : W627DHG.cpp //-- \parallel // THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY // KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE // IMPLIED WARRANTIES OF MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR // PURPOSE. \parallel //-------#include "W627DHG.H" #include <dos.h> //-----_____ unsigned int W627DHG_BASE; void Unlock_W627DHG (void); void Lock_W627DHG (void); //----_____ unsigned int Init_W627DHG(void) { unsigned int result; unsigned char ucDid; W627DHG_BASE = 0x4E; result = W627DHG_BASE; ucDid = Get_W627DHG_Reg(0x20); if (ucDid == 0xA0)//W83627DHG goto Init_Finish; } { else if (ucDid == 0xB0) //W83627DHG-P goto Init_Finish; { } W627DHG_BASE = 0x2E; result = W627DHG_BASE; ucDid = Get_W627DHG_Reg(0x20); if (ucDid == 0xA0)//W83627DHG goto Init_Finish; } ł else if (ucDid == $0 \times B0$) //W83627DHG-P goto Init_Finish; { } W627DHG_BASE = 0x00;result = W627DHG_BASE; Init_Finish: return (result); 3 //void Unlock_W627DHG (void) { outportb(W627DHG_INDEX_PORT, W627DHG_UNLOCK); outportb(W627DHG_INDEX_PORT, W627DHG_UNLOCK); } //----void Lock_W627DHG (void) { outportb(W627DHG_INDEX_PORT, W627DHG_LOCK); } //void Set_W627DHG_LD(unsigned char LD) { Unlock_W627DHG(); outportb(W627DHG_INDEX_PORT, W627DHG_REG_LD); outportb(W627DHG_DATA_PORT, LD); Lock_W627DHG(); } -----//void Set_W627DHG_Reg(unsigned char REG, unsigned char DATA) { Unlock_W627DHG(); outportb(W627DHG_INDEX_PORT, REG); outportb(W627DHG_DATA_PORT, DATA); Lock_W627DHG(); 11 unsigned char Get_W627DHG_Reg(unsigned char REG)

{

unsigned char Result; Unlock_W627DHG(); outportb(W627DHG_INDEX_PORT, REG); Result = inportb(W627DHG_DATA_PORT); Lock_W627DHG(); return Result;

//-----

Filename : W627DHG.h

}

//----- $^{\prime\prime}$ // THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY // KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE // IMPLIED WARRANTIES OF MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR // PURPOSE. // //-----#ifndef __W627DHG_H #define ___W627DHG__H 1 //-----#define W627DHG_INDEX_PORT (W627DHG_BASE) #define W627DHG_DATA_PORT (W627DHG_BASE+1) //-----#define W627DHG_REG_LD 0x07 //-----#define W627DHG_UNLOCK 0x87 #define W627DHG_LOCK 0xAA -----//----unsigned int Init_W627DHG(void); void Set_W627DHG_LD(unsigned char); void Set_W627DHG_Reg(unsigned char, unsigned char); unsigned char Get_W627DHG_Reg(unsigned char); //----

#endif //__W627DHG_H

Chapter 15 LED GPIO Definition

This chapter describes GPIO definition of three LEDs on front panel.



Status1 LED	GPIO35	GPIO21
RED	Н	L
YELLOW	L	Н

Status2 / Alarm LED	GPIO34	GPIO32
RED	Н	L
GREEN	L	Н

Power LED	GPIO37	GPIO36
RED	Н	L
GREEN	L	Н

Digital I/O Sample Configuration

Filename : Main.cpp //---// // THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY // KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE // IMPLIED WARRANTIES OF MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR // PURPOSE. \parallel //-----_____ #include <dos.h> #include <conio.h> #include <stdio.h> #include <stdlib.h> #include "W627DHG.H" //-----_____ int main (void); void Dio2Initial(void); void Dio2SetOutput(unsigned char); unsigned char Dio2GetInput(void); void Dio2SetDirection(unsigned char); unsigned char Dio2GetDirection(void); void Dio3Initial(void); void Dio3SetOutput(unsigned char); unsigned char Dio3GetInput(void); void Dio3SetDirection(unsigned char); unsigned char Dio3GetDirection(void); //---int main (void) { char SIO; SIO = Init_W627DHG(); if (SIO == 0){ printf("Can not detect Winbond 83627DHG, program abort.\n"); return(1); } Dio2Initial(); Dio3Initial(); //for GPIO30..37 Dio3SetDirection(0x0F); //GP30..33 = input, GP34..37=output printf("Current DIO direction = 0x%X\n", Dio3GetDirection()); printf("Current DIO status = 0x%X\n", Dio3GetInput()); printf("Set DIO output to high\n"); Dio3SetOutput(0x0F); printf("Set DIO output to low\n"); Dio3SetOutput(0x00); return 0; } //void Dio2Initial(void) { unsigned char ucBuf; //switch GPIO multi-function pin ucBuf = Get_W627DHG_Reg(0x24); ucBuf &= 0xFE; Set_W627DHG_Reg(0x24, ucBuf); Set_W627DHG_LD(0x09); //switch to logic device 9 //enable the GP2 group ucBuf = Get_W627DHG_Reg(0x30); ucBuf |= 0x01; Set_W627DHG_Reg(0x30, ucBuf); } //----void Dio2SetOutput(unsigned char) { Set_W627DHG_LD(0x09); //switch to logic device 9 Set_W627DHG_Reg(0xE4, NewData);

```
11
unsigned char Dio2GetInput(void)
{
        unsigned char result;
        Set_W627DHG_LD(0x09);
                                                                             //switch to logic device 9
        result = Get_W627DHG_Reg(0xE4);
        return (result);
}
//-----
void Dio2SetDirection(unsigned char)
{
        //NewData : 1 for input, 0 for output
        Set_W627DHG_LD(0x09);
                                                                             //switch to logic device 9
        Set_W627DHG_Reg(0xE3, NewData);
}
//----
          unsigned char Dio2GetDirection(void)
{
        unsigned char result;
        Set_W627DHG_LD(0x09);
                                                                             //switch to logic device 9
        result = Get_W627DHG_Reg(0xE0);
        return (result);
                   -----
1/--
void Dio3Initial(void)
{
        unsigned char ucBuf;
        //switch GPIO multi-function pin
        ucBuf = Get_W627DHG_Reg(0x2C);
        ucBuf &= 0x1F;
        Set_W627DHG_Reg(0x2C, ucBuf);
                                                                             //clear
        Set_W627DHG_LD(0x09);
                                                                             //switch to logic device 9
        //enable the GP3 group
ucBuf = Get_W627DHG_Reg(0x30);
        ucBuf |= 0x02;
        Set_W627DHG_Reg(0x30, ucBuf);
        //input detect type
        Set_W627DHG_Reg(0xFE, 0xFF);
}
//-----
void Dio3SetOutput(unsigned char NewData)
{
        Set_W627DHG_LD(0x09);
                                                                             //switch to logic device 9
        Set_W627DHG_Reg(0xF1, NewData);
}
//-
unsigned char Dio3GetInput(void)
{
        unsigned char result;
        Set_W627DHG_LD(0x09);
                                                                             //switch to logic device 9
        result = Get_W627DHG_Reg(0xF1);
        return (result);
//----
     _____
void Dio3SetDirection(unsigned char NewData)
{
        //NewData : 1 for input, 0 for output
        Set_W627DHG_LD(0x09);
                                                                             //switch to logic device 9
        Set_W627DHG_Reg(0xF0, NewData);
}
//-
unsigned char Dio3GetDirection(void)
{
        unsigned char result;
        Set_W627DHG_LD(0x09);
                                                                             //switch to logic device 9
        result = Get_W627DHG_Reg(0xF0);
        return (result);
}
           _____
```

Filename : W627DHG.cpp

//-----

```
\parallel
// THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY
// KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE
// IMPLIED WARRANTIES OF MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR
// PURPOSE.
//
//-
                  _____
#include "W627DHG.H"
#include <dos.h>
unsigned int W627DHG_BASE;
void Unlock_W627DHG (void);
void Lock_W627DHG (void);
//-
unsigned int Init_W627DHG(void)
{
        unsigned int result;
        unsigned char ucDid;
        W627DHG BASE = 0x4E;
        result = W627DHG BASE;
        ucDid = Get_W627DHG_Reg(0x20);
        if (ucDid == 0xA0)
                                                                  //W83627DHG
                goto Init_Finish;
                                 }
        else if (ucDid == 0xB0)
                                                                  //W83627DHG-P
                goto Init_Finish;
        {
                                 }
        W627DHG_BASE = 0x2E;
        result = W627DHG_BASE;
        ucDid = Get_W627DHG_Reg(0x20);
        if (ucDid == 0xA0)
                                                                  //W83627DHG
                goto Init_Finish;
                                 }
        {
        else if (ucDid == 0 \times B0)
                                                                  //W83627DHG-P
                goto Init_Finish;
                                 }
        {
        W627DHG_BASE = 0x00;
        result = W627DHG_BASE;
Init_Finish:
        return (result);
}
//-----
void Unlock_W627DHG (void)
{
        outportb(W627DHG_INDEX_PORT, W627DHG_UNLOCK);
        outportb(W627DHG_INDEX_PORT, W627DHG_UNLOCK);
}
//--
          _____
void Lock_W627DHG (void)
{
        outportb(W627DHG_INDEX_PORT, W627DHG_LOCK);
//-----
void Set_W627DHG_LD( unsigned char LD)
{
        Unlock_W627DHG();
        outportb(W627DHG_INDEX_PORT, W627DHG_REG_LD);
        outportb(W627DHG_DATA_PORT, LD);
        Lock_W627DHG();
}
//-----
          _____
void Set_W627DHG_Reg( unsigned char REG, unsigned char DATA)
{
        Unlock_W627DHG();
        outportb(W627DHG_INDEX_PORT, REG);
outportb(W627DHG_DATA_PORT, DATA);
        Lock_W627DHG();
}
//-
unsigned char Get_W627DHG_Reg(unsigned char REG)
{
        unsigned char Result;
        Unlock_W627DHG();
        outportb(W627DHG_INDEX_PORT, REG);
        Result = inportb(W627DHG_DATA_PORT);
        Lock_W627DHG();
        return Result;
}
    _____
11
```

Filename : W627DHG.h

//-----//

// THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY // KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE // IMPLIED WARRANTIES OF MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR // PURPOSE.

//		
// #ifndef #define _ //	_W627DHG_H _W627DHG_H	1
#define #define //	W627DHG_INDEX_PORT W627DHG_DATA_PORT	(W627DHG_BASE) (W627DHG_BASE+1
,, #define //	W627DHG_REG_LD	0x07
#define V #define	V627DHG_UNLOCK W627DHG_LOCK	0x87 0xAA
unsigned	int Init_W627DHG(void); W627DHG_D(unsigned char);	

#endif //__W627DHG_H

Chapter 16 Drivers Installation

This section describes the installation procedures for software and drivers under the Windows. The software and drivers are included with the board. If you find the items missing, please contact the vendor where you made the purchase. The contents of this section include the following:

Intel® Chipset Software Installation Utility Intel® Graphics Driver Installation LAN Drivers Installation Intel® Management Engine Interface

IMPORTANT NOTE:

After installing your Windows operating system, you must install first the Intel® Chipset Software Installation Utility before proceeding with the drivers installation.

Intel® Chipset Software Installation Utility

The Intel® Chipset Drivers should be installed first before the software drivers to enable Plug & Play INF support for Intel® chipset components. Follow the instructions below to complete the. (Before installed Intel® Chipset Software Installation Utility.

1. Insert the DVD that comes with the board. Click Intel and then Intel(R) Chipset Software Installation Utility.



- 3. When the Welcome screen appears, click *Next* to continue.
- 4. Click Yes to accept the software license agreement and proceed with the installation process.
- 5. On the Readme Information screen, click Next to continue the installation.
- 6. When the Setup Progress screen appears, click *Next* to continue.



7. The Setup process is now complete. Click *Finish* then restart the computer and for changes to take effect.



Intel® Graphics Driver Installation

1. Insert the DVD that comes with the board. Click Intel -> Intel® Q57 Chipset Family Graphics Driver.



- 2. When the InstallShield Wizard screen appears, click Next.
- 3. When the Welcome screen appears, click *Next* to continue.

🕈 Intel(R) Chipset Graphics Driver Software - InstallShield Wizard
<pre>************************************</pre>

- 4. Click Yes to accept the software license agreement and proceed with the installation process.
- 5. On Readme File Information screen, click *Next* to continue.

6. On Setup Progress screen, click *Next* to continue the installation.



7. The Setup process is now complete. Click Finish to restart the computer and for changes to take effect.

LAN Drivers Installation

Follow the steps below to start installing the Intel® LAN drivers.

- 1. Insert the DVD that comes with the board. Click Intel and then Intel(R) PRO LAN Network Drivers.
- 2. Click Intel(R) PRO LAN Network Drivers.



- 3. On the next screen, click Install Drivers to start the drivers installation.
- 4. When the Welcome screen appears, click *Next* to continue.
- 5. In the License Agreement screen, click *I accept the terms in license agreement* and *Next* to accept the software license agreement and proceed with the installation process.

6. When the Setup Options appears, click *Drivers* as shown below and *Next* to continue.

Intel(R) Network Connections	
Setup Options Select the program features you want installed.	(intel)
Install:	
Intel(R) PROSet for Windows* Device Manager Advanced Network Services Intel(R) Network Connections SNMP Agent	
Feature Description	
< <u>B</u> ack	t > Cancel

7. When the Ready to Install the Program screen appears, click *Install* to continue.

i Intel(R) Network Connections - InstallShield Wizar	rd 🛛 🔀
Ready to Install the Program The wizard is ready to begin installation.	(intel)
Click Install to begin the installation. If you want to review or change any of your installation setting exit the wizard.	gs, click Back. Click Cancel to
InstallShield	Install Cancel

8. The Setup process is now complete (InstallShield Wizard Completed). Click *Finish* to restart the computer and for changes to take effect.

Intel® Management Engine Interface

1. Insert the drivers disc that comes with the motherboard. Click Intel and then Intel(R) AMT 6.0 Drivers. When the welcome screen of the Intel® Management Engine Components appears, click Next to continue. On the next screen, click *Next* to agree to the license agreement.



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The Software contains pre-release "alpha" or "beta" code, which may not be fully functional and which Intel Corporation ("Intel") may substantially modify in producing any "final" version of the Software. Intel can provide no assurance that it will ever produce or make generally

< Back

Yes

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No Intel® Installation Framewo 2. On the next screen, the Readme File Information shows the system requirements and installation information, click *Next*.



3. When the Setup Progress screen appears, click *Next* to continue. Then, click *Finish* when the setup progress has been successfully installed to restart the computer.



Intel® Installation Framewo

Appendix-A FWA8207 Series Configurations

The following lists the available SKUs of FWA8207 for different system requirement.

FWA8207 2.5" HDD x1, PCI-e add-on card rear expansion x1, front panel expansion card x1, 300W PSU

- > MB966 x1
- > IP327 x1: 1-to-1 Riser Card
- > IP328 x1: PCI-e Adapter
- Single 2.5" HDD Bracket x1
- > 4-pin Smart Fan x3
- > 300W Single PSU

FWA8207 Optional Items

- > IBP161: 4-port GLAN Card
- > PS2G PS/2 Keyboard /Mouse Cable
- > Dual 2.5" HDD Kit

FWA8207-2SLOT 3.5" HDD x1, PCI-e add-on card rear expansion x2, 300W PSU

- > MB966 x1
- > IP329 x1: 2-to-2 Riser Card
- Single 3.5" HDD Bracket x1
- > SATA Cable x1
- > 4-pin Smart Fan x3
- > 300W Single PSU

FWA8207-2SLOT Optional Items

- > PS2G PS/2 Keyboard /Mouse Cable
- > Dual 2.5" HDD Kit





FWA8207-G Supports Integrated Graphics CPUs, 3.5" HDD x1, PCI-e add-on card rear expansion x1, 300W PSU

- > MB966 x1
- IP327 x1: 1-to-1 Riser Card
- > Single 3.5" HDD Bracket x1
- > SATA Cable x1
- 4-pin Smart Fan x3
- > 300W Single PSU

FWA8207-G Optional Items

- > PS2G PS/2 Keyboard /Mouse Cable
- VGA4 Cable
- > Dual 2.5" HDD Kit



FWA8207-G-NB No Bypass function MB966, Supports Integrated Graphics CPUs, 3.5" HDD x1, PCI-e add-on card rear expansion x1, 300W PSU

- > MB966-NB x1
- > IP327 x1: 1-to-1 Riser Card
- Single 3.5" HDD Bracket x1
- SATA Cable x1
 4-pin Smart Fan x3
- > 300W Single PSU

FWA8207-G-NB Optional Items

- > PS2G PS/2 Keyboard /Mouse Cable
- > VGA4 Cable
- > Dual 2.5" HDD Kit

