

# FWA6204 Series Network Appliance

## User's Manual

Version: 1.0



## Table of Contents

<b>Chapter 1</b>	<b>Introduction .....</b>	<b>3</b>
<b>Chapter 2</b>	<b>System Specification.....</b>	<b>4</b>
<b>Chapter 3</b>	<b>Hardware Configuration.....</b>	<b>5</b>
<b>Chapter 4</b>	<b>Console Mode Information.....</b>	<b>7</b>
<b>Chapter 5</b>	<b>Opening the chassis.....</b>	<b>10</b>
<b>Chapter 6</b>	<b>Removing and Installing DIMM .....</b>	<b>11</b>
<b>Chapter 7</b>	<b>Removing and Installing CompactFlash Card.....</b>	<b>12</b>
<b>Chapter 8</b>	<b>Removing and Installing the Battery .....</b>	<b>13</b>
<b>Chapter 9</b>	<b>Installing the 3.5” HDD .....</b>	<b>14</b>
<b>Chapter 10</b>	<b>System Architecture .....</b>	<b>15</b>

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!**

1. "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.

The FWA6204 series was specifically designed for the network security & management market.

Network Security Applications:

- Firewall
- Virtual Private Network
- Proxy Server
- Caching Server

Network Management Applications:

- Load balancing
- Quality of Service
- Remote Access Service

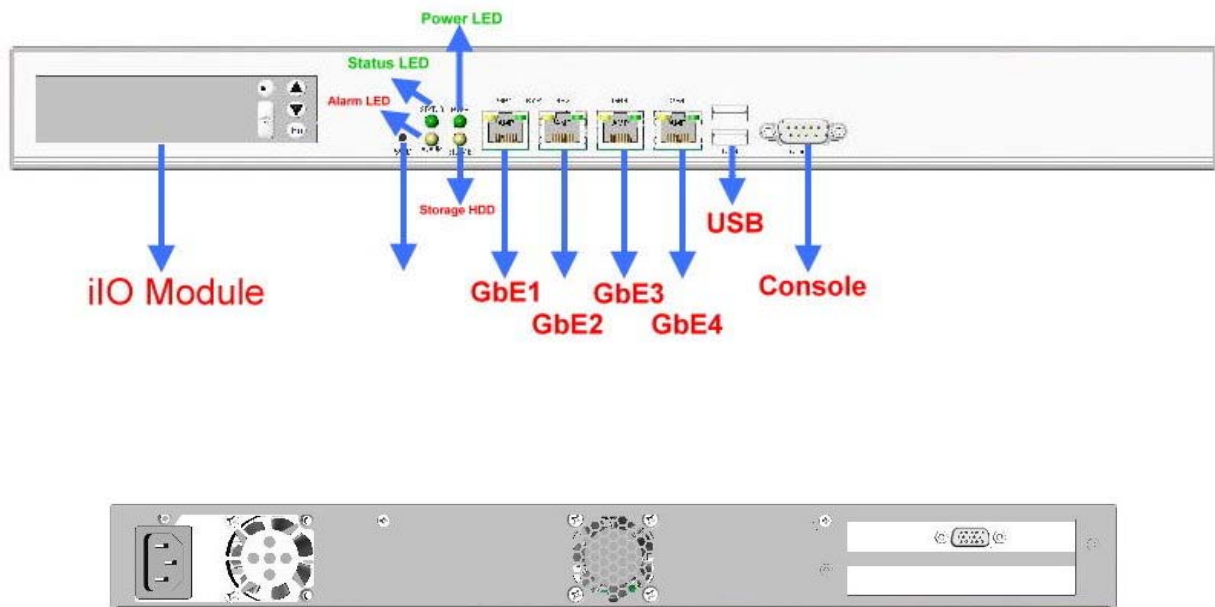
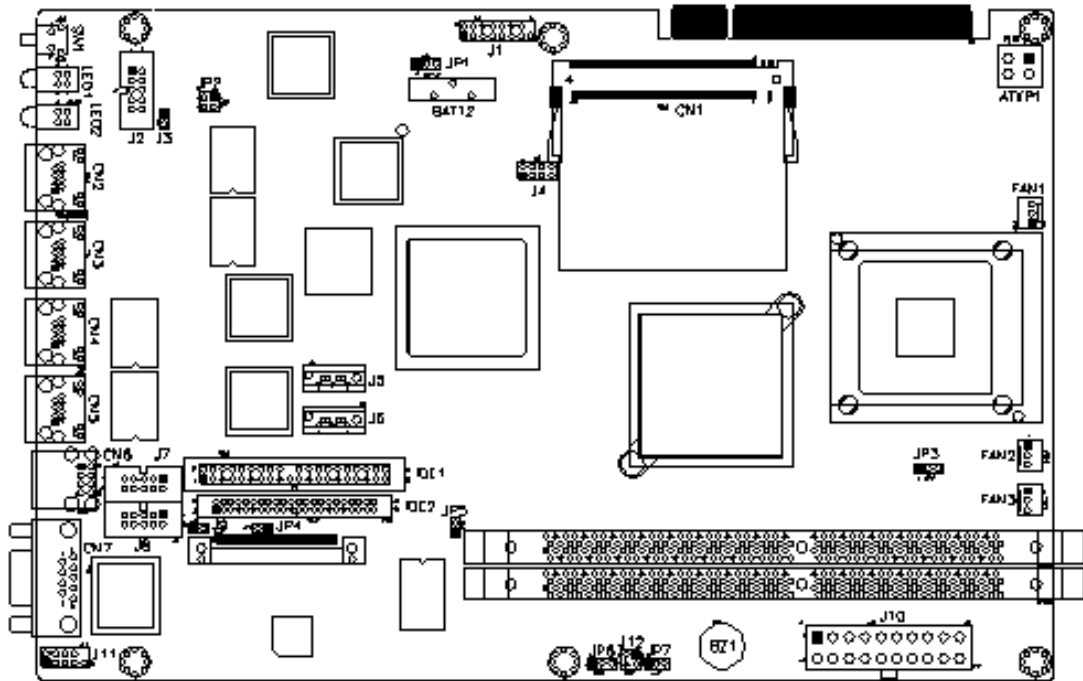
The FWA network appliance product line covers the spectrum from offering platforms designed for :

- 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.

<b>Project Name</b>	FWA6204
<b>Construction</b>	1U Rackmount
<b>Processor</b>	Celeron M 600MHz with BGA type
<b>Memory</b>	DDR 266 DIMMs x 2, up to 2 GB
<b>Chipset</b>	Intel® Intel 852GM Intel® ICH4
<b>Ethernet</b>	Onboard: Intel 82541PI Gigabit controllers with 4 x RJ-45 Option : [ Eth0 & 1 support hardware by-pass ]
<b>Expansion slots</b>	PCI32 expansion slot x 2 Mini-PCI slot x 1
<b>Storages</b>	3.5" SATA IDE x 1 Compact Flash type II socket x 1
<b>Front I/O</b>	USB 2.0 ports x 2 DB-9 x 1 for Console Power LED HDD Access LED GPO LED 1/2 ( status / alarm ) Factory Default Switch Support LCM/Key pad module (IBASE proprietary)
<b>Hardware Monitor</b>	Voltage, Temperature
<b>Power Supply</b>	ATX 200W, full range 100-240V
<b>Dimensions</b>	44 mm (H) x 430mm (W) x 311mm (D)



CPU board layout



# Jumper Setting

## JP1: Clear CMOS Contents



Use JP1 to clear the CMOS contents. *Note that the ATX-power connector should be disconnected from the board before clearing CMOS.*

JBAT1	Setting	Function
 1 2 3	Pin 1-2 Short/Closed	Normal
 1 2 3	Pin 2-3 Short/Closed	Clear CMOS



## JP2 :

- 1-3 & 2-4 Short : Ethernet default : Eth0 & Eth1 None Bypass  
System will **bypass** LANs upon the timeout of WATCHDOG timer
- 1,2,3,4 Open : Ethernet default : Eth0 & Eth1 Bypass mode  
System will **not bypass** LANs upon the timeout of WATCHDOG timer
- 1-2 & 3-4 Short : System will **reboot** upon the timeout of WATCHDOG timer. (Default)



## JP3: VCCA\_PLL

JP3	Setting	Function
 1 2 3	Pin 1-2 Short/Closed	1.8V DEFAULT
 1 2 3	Pin 2-3 Short/Closed	1.5V



## JP4: Compact Flash Slave/Master

JP4	Compact Flash
 Open	Slave
 Close	Master

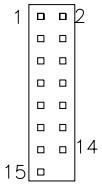
## JP7: AT / ATX Power Select

JP1	Power Supply Select
 1 2 3	ATX
 1 2 3	AT

## JP15: Processor Operating Frequency

JP5	CPU Operating Frequency
 Open	133MHz
 Close	100MHz (default)

**J1: VGA CRT Connector**



Signal Name	Pin	Pin	Signal Name
R	1	2	+5V
G	3	4	GND
B	5	6	NC
GND	7	8	SPD1
GND	9	10	Hsync
GND	11	12	Vsync
GND	13	14	SPCLK
GND	15		

**J11: Keyboard and Mouse Connector**

Signal Name	Pin	Pin	Signal Name
Ground	1	6	Ground
Vcc	2	7	Vcc
MS_Data	3	8	KB_Data
MS_CLK	4	9	KB_CLK
NC	5	10	Protect pin

**J12: POWER ON & RESET**

Pin #	Signal Name
1	PS_ON#
2	Ground

**RESET CONNECT**

Pin #	Signal Name
3	RESET#
4	Ground



FWA6204 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 FWA6204 with NULL Modem cable.

Follow the steps below to configure the Windows Hyper Terminal application setting:

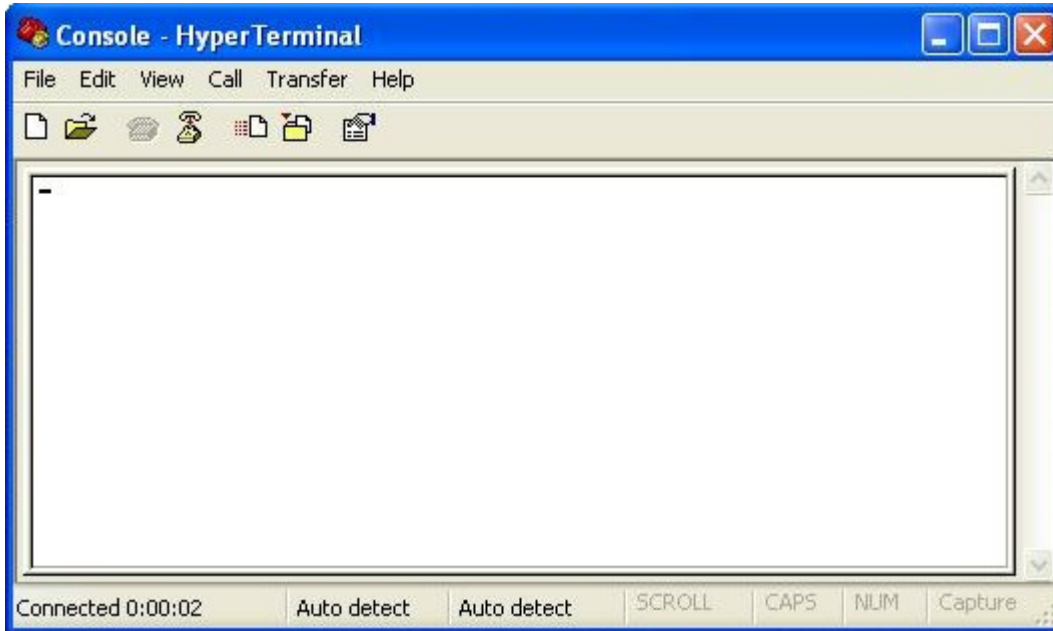
1. For executing the Hyper Terminal, issue command "hypertrm".
2. Customize your name for the new connection.



3. Choose the COM port on the client computer for the connection.



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



5. Power up the FWA6204, and the screen will display the following information.

```
Phoenix - AwardBIOS v6.00PG, An Energy Star Ally
Copyright (C) 1984-2003, Phoenix Technologies, LTD

(6A79DILB) EVALUATION ROM - NOT FOR SALE

Main Processor : Intel(R) Pentium(R) 4 CPU 2.80GHz(200x14.0)
Memory Testing : 2088960K OK + 8M shared memory
CPU Brand Name : Intel(R) Pentium(R) 4 CPU 2.80GHz

Hyper-Threading Technology CPU Detected (Hyper-Threading Technology Enabled)

Memory Frequency For DDR 333 (Dual Channel Mode Enabled)
IDE Channel 0 Master : None
IDE Channel 0 Slave : None

IDE Channel 2 Master : ST3160023AS 3.18
IDE Channel 2 Slave : None
IDE Channel 3 Master : None
IDE Channel 3 Slave : None

Press DEL/TAB(console) to enter SETUP
```

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

1. Loosen the six screws of the chassis on the back to remove the top lead (**Fig. 5-1**).



**Fig. 5-1** Take off screws

2. The top lead (**Fig. 5-2**) can be removed from the base stand (**Fig. 5-3**).



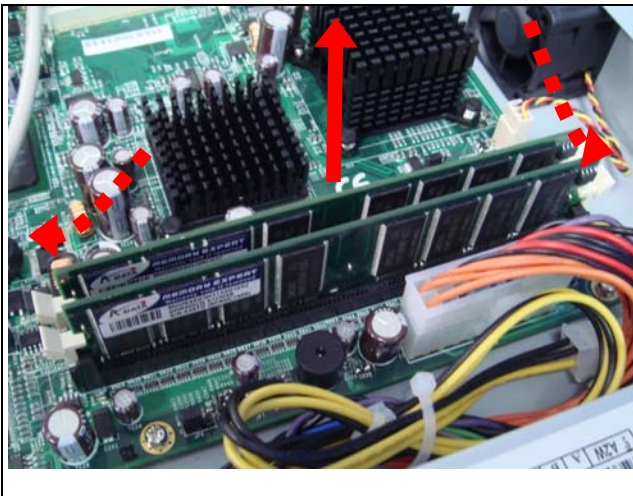
**Fig. 5-2** The top lead



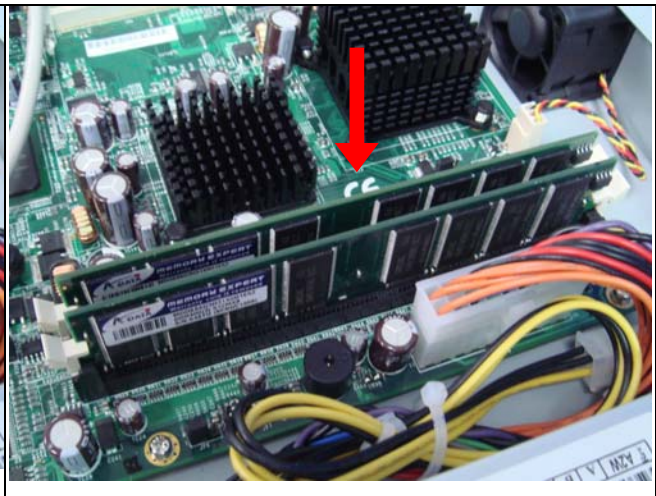
**Fig. 5-3** The base stand

Follow these steps to upgrade RAM module:

1. Install the system memory by pulling the socket's arm and pressing it into the slot gently. (**Fig. 6-1, 6-2**)

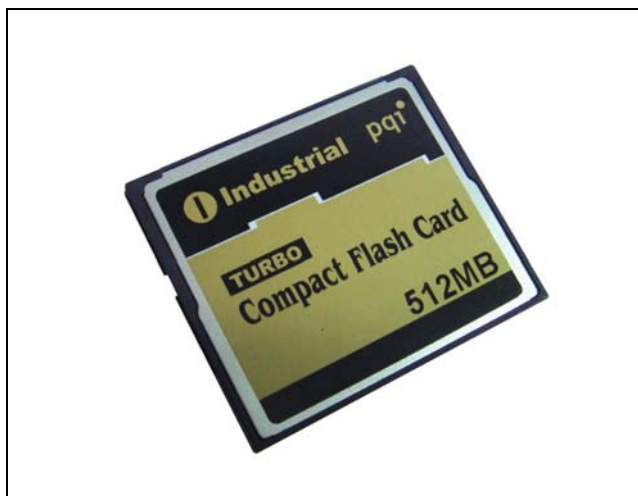


**Fig. 6-1** Eject a DIMM module



**Fig. 6-2** Install DIMM

1. Insert the Compact Flash Card (**Fig. 7-1**) into the CF interface (**Fig. 7-2**).

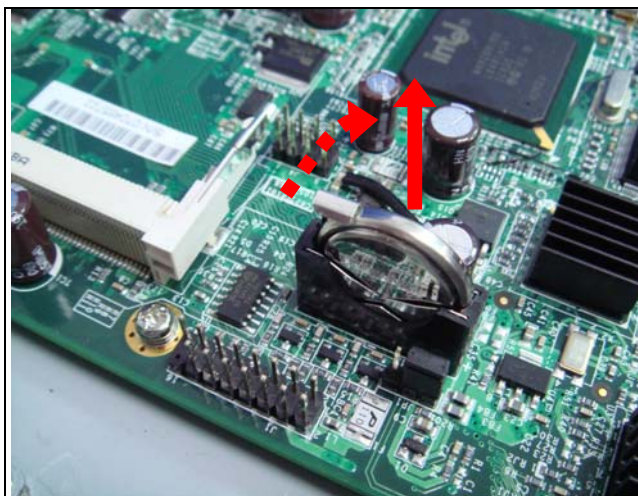


**Fig. 7-1** Compact Flash Card

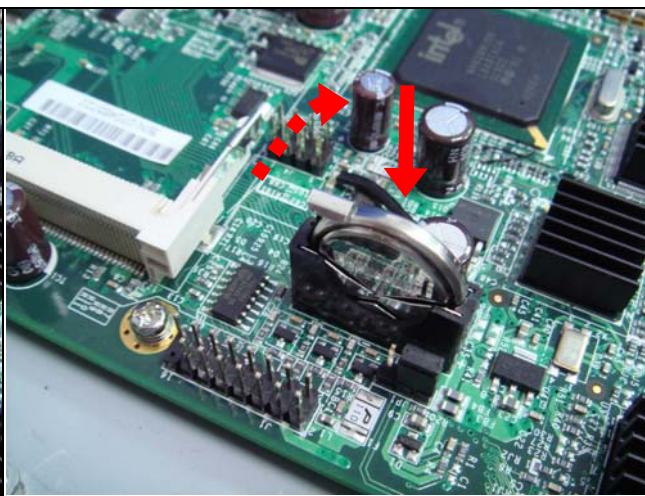


**Fig. 7-2** Insert Compact Flash Card into the CF interface

1. Press the metal clip back to eject the button battery (**Fig. 8-1**).
2. Replace it with a new one by pressing the battery with fingertip to restore the battery (**Fig. 8-2**).

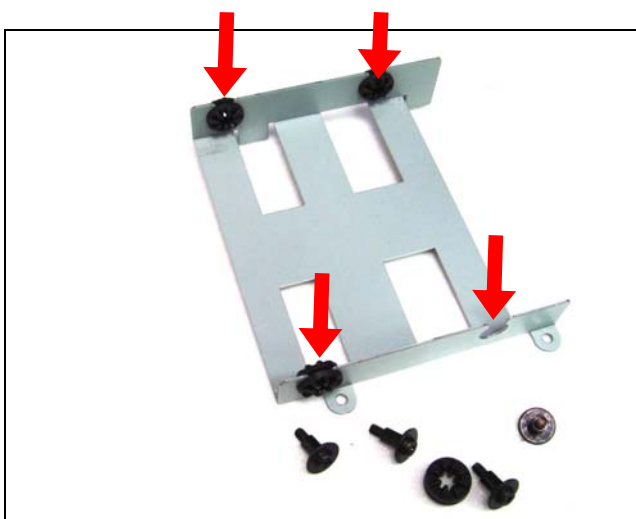


**Fig. 8-1** Eject the battery

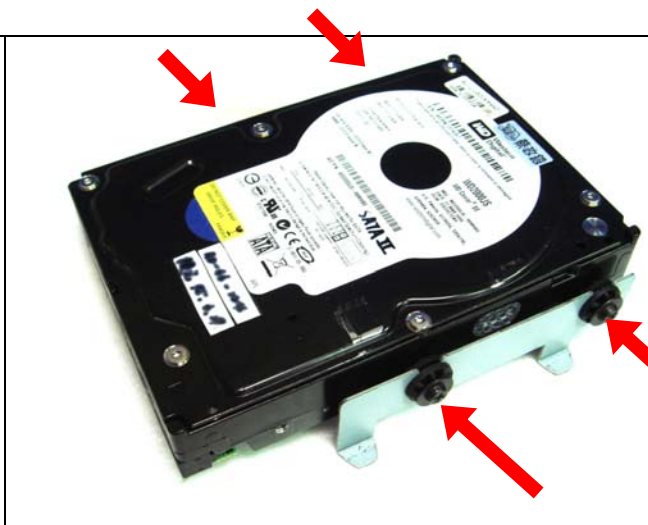


**Fig. 8-2** Restore the battery

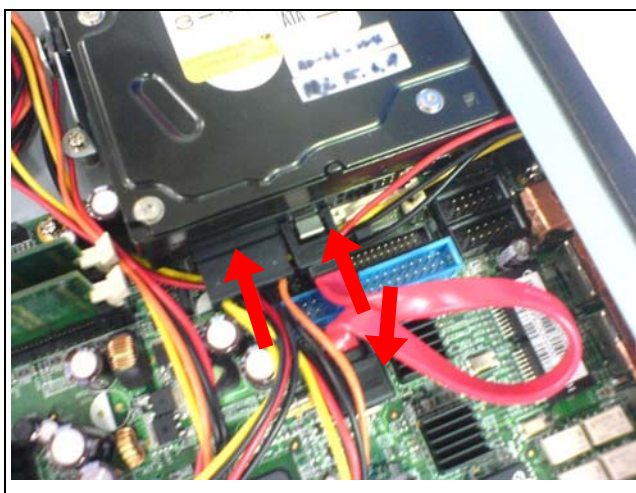
Follow the steps below to install the 3.5" HDD:



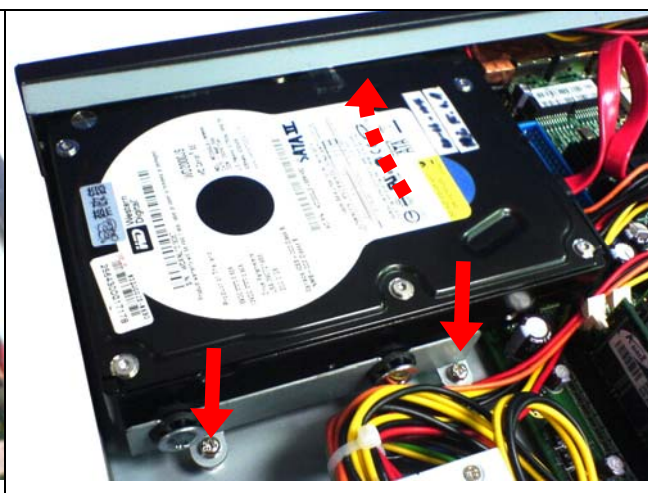
**Fig. 9-1** Push the four shock-absorbent pads to fasten HDD bracket.



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



**Fig. 9-3** Connect SATA cable and power connector to both 3.5" HDD and MB875



**Fig. 9-4** Follow the direction to install the HDD and then fix two screws

## Chapter 10 System Architecture

The following block diagram illustrates a basic design reference of MB875, a highly integrated system solution.

