NVR-B75

Network Appliance
3.5" Hot-Swappable SATA HDD Tray x 5
3.5" HDD bracket x 1
Gigabit Ethernet x 2
USB3.0 x 4, USB2.0 x 2
VGA x 1, HDMI x 3

NVR-B75 Manual 1st Ed.
August 2013

Copyright Notice

Acknowledgments

All other products' name or trademarks are properties of their respective owners.

- AMI is a trademark of American Megatrends Inc.

- CompactFlash™ is a trademark of the Compact Flash Association.

- Intel® is a trademark of Intel® Corporation.

- Microsoft Windows® is a registered trademark of Microsoft Corp.

- ITE is a trademark of Integrated Technology Express, Inc.

- IBM, PC/AT, PS/2, and VGA are trademarks of International Business Machines Corporation.

- SoundBlaster is a trademark of Creative Labs, Inc.

All other product names or trademarks are properties of their respective owners.

Packing List

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

- 1 CD-ROM for 4-port SATA Card driver

- 1 DVD-ROM for Manual (in PDF Format) and Drivers

- 1 NVR-B75

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

Contents

Chapter 1 General Information

Chapter 2 Hardware Installation

Chapter 3 Driver Installation

Chapter 4 I/O Information

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

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
印刷电路板 及其电子组件	×	○	○	○	○	○
外部信号 连接器及线材	×	○	○	○	○	○
外壳	×	○	○	○	○	○
中央处理器 与内存	×	○	○	○	○	○
硬盘	×	○	○	○	○	○
电源	×	○	○	○	○	○

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。

Chapter

1

General Information

1.1 Introduction

NVR-B75 adopts the Intel® Core™ i3/ i5 Processor and equips with Intel® B75 chipset. Moreover, the system memory features 4GB DDR3-1333 240pin DIMM Memory up to 16GB.   It deploys two LAN ports that consist of 10/100/1000Base-TX Ethernet RJ-45 ports.   NVR-B75 features desktop form factor for network appliance applications.

This NVR-B75 supports up to five 3.5" hot-swappable HDD trays and one 3.5" internal System HDD bracket. Moreover, the flexible expansion interfaces feature one PCI-E[x16].   In addition, this model supports two USB3.0 ports on the front; two USB2.0 ports and two USB3.0 ports on the rear. Furthermore, the NVR-B75 can support dual displays with one VGA and three HDMI ports.

1.2 Features

- Intel® LGA Socket 1155 with Intel Core™ i3-3220 Processor, Max TDP: 55W

- Intel® B75 Chipset

- 4GB DDR3-1333 240pin DIMM Memory, support up to 16GB

- 10/100/1000Base-TX Ethernet x 2

- Hot swappable SATA HDD tray x5, Internal 3.5" SATA HDD x 1

- Front: USB3.0 x 2, Rear: USB2.0 x 2 + USB3.0 x2

- Display: HDMI x 3, VGA x 1

- Audio Line-out, Line-in, Mic-in

- Windows® 7 Embedded Standard (optional)

1.3 Specifications

System

● CPU	Intel® LGA Socket 1155 with Intel Core™ i3-3220 Processor, Max TDP: 55W
● Chipset	Intel B75
● System Memory	4GB DDR3-1333 240pin DIMM Memory, support up to 16GB
● LCD/CRT Controller	Integrated in Processor, shared memory up to 256MB
● Ethernet	10/100/1000Base-TX, RJ-45 x 2
● Rear I/O Port	USB 2.0 x 2 USB 3.0 x 2 Audio Line-out, Line-in, Mic-in x 1 VGA x 1 HDMI x 3 PS/2 x 1(Keyboard + Mouse)
● Storage	3.5" SATA System Hard Disk x 5 + 1 x 3.5" system HDD bracket
● Expansion Slot	PCIe [x16] x 1 (SATA expansion card)

Mechanical

● Front Door	Front door cover with lock for HDD security
● Dimension	10.83" x 8.07" x 11.81" (275mm x

	205mm x 300 mm)
● Gross Weight	22 lb (10 Kg)
● Net Weight	19.8 lb (9 Kg)

Environmental

● Operating Temperature	32°F ~ 104°F (0°C ~ 40°C)
● Storage Temperature	-4°F ~ 140°F (-20°C ~ 60°C)
● Storage Humidity	10%~80% @40°C; non-condensing

Power Supply

● DC Output	400W SFX type
● AC Input Voltage Range	100~240VAC, 50~60HZ, 6-3A

Chapter

2

Hardware Installation

2.1 Mechanical Drawing
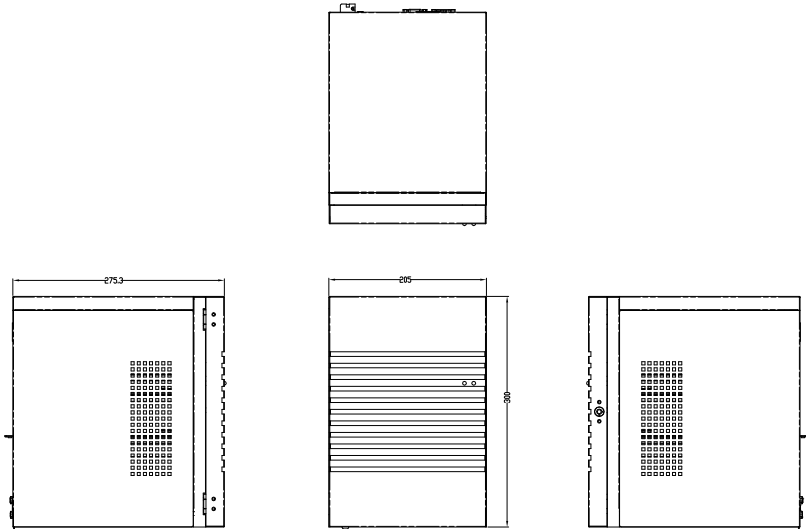
2.2 Installing the Front 3.5" Hard Disk Drive

Step 1: Insert the Key and turn left.

Step 2: Plug the key into the hole and the door will open.
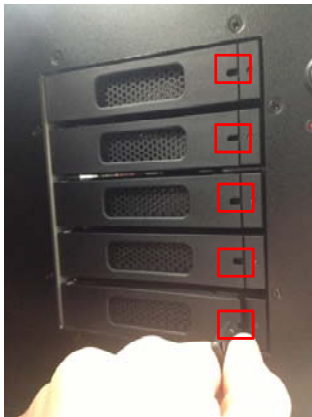
Step 3: Unfasten the 2 screws of each side and remove the black cover.
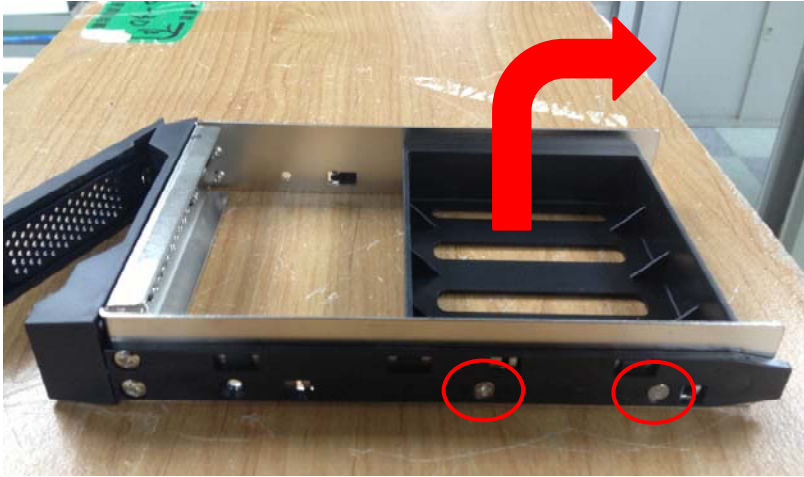
Step 4: Fasten the 2 screws on each side of the HDD.

Step 5: Put the HDD into the bay.

Step 6: Close the door. Then, Insert the key and tern right to lock the door

2.3 Installing the 3.5" HDD to the internal HDD bracket

Step 1: Release the screws.

Step 2: Shift the HDD upper bracket from right to left and remove it.
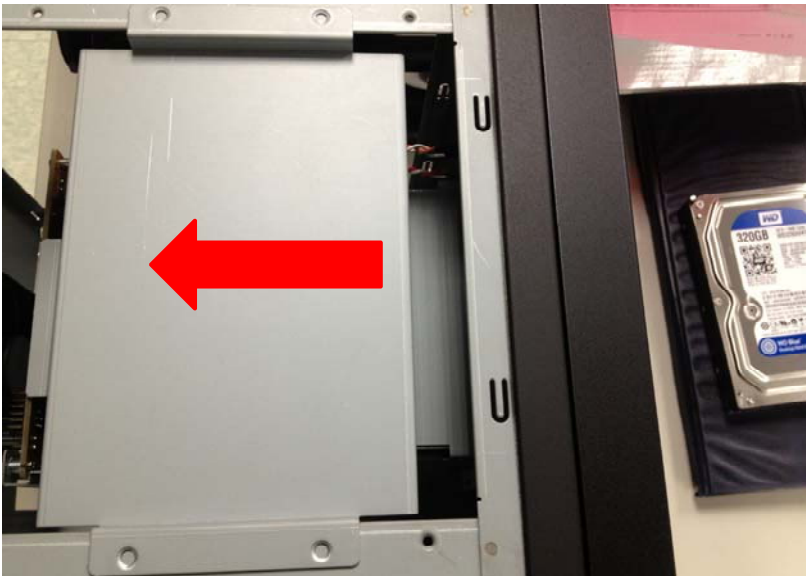
Step 3: Put the hard disk into the drive bay and lock it with four screws

Step 4: Put back the HDD bracket and push it to the right until it's locked in position.
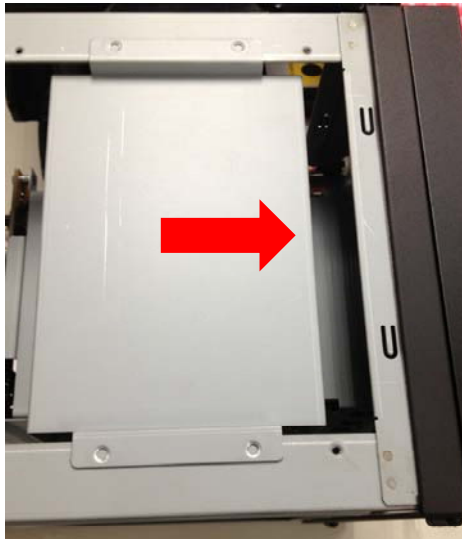
Step 5: Firmly lock the HDD bracket with 4 screws.

Chapter

3
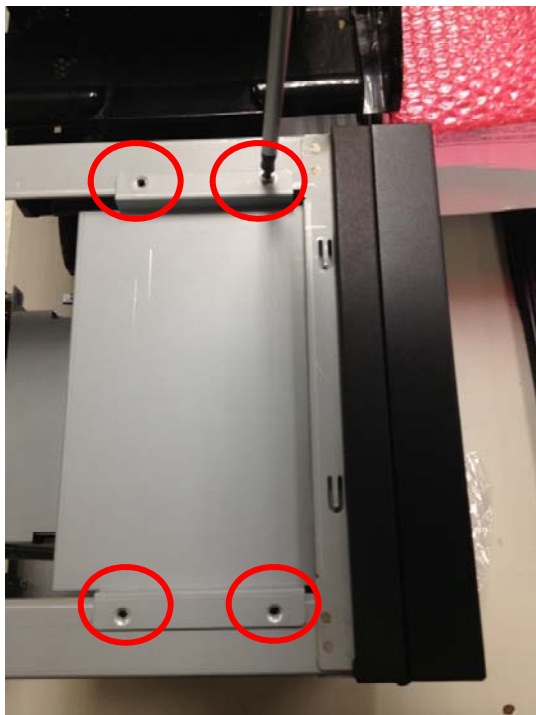
Driver Installation

The NVR-B75 comes with an AutoRun DVD-ROM that contains all drivers and utilities that can help you to install the driver automatically.

Insert the driver DVD, the driver DVD-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 Audio Driver

Step 5 – Install ME Driver

Step 6 – Install USB3.0 Driver

Step 7 – Install AHCI Driver

Step 8 – Install TPM Driver

Please read instructions below for further detailed installations.

3.1   Installation

Insert the NVR-B75 DVD-ROM into the DVD -ROM drive and install the drivers from Step 1 to Step 8 in order.

Step 1 – Install Chipset Driver

1.   Click on the *Chipset* folder and double click on the *Setup.exe* file

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 *VGA* folder and select the OS your system is

2.   Double click on the *Setup.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 3 – Install LAN Driver

For Intel LAN Chip

1.   Click on the *LAN* folder and select the *Intel* folder

2.   Double click on the *Autorun.exe* file

3.   Follow the instructions that the window shows

4.   The system will help you install the driver automatically

For Realtek LAN Chip

1. Click on the *LAN* folder and select the *Realtek* folder

2. Select the OS folder your system is and double click on the *setup.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 Audio Driver

1. Click on the *Audio* folder and double click on the *SETUP.exe* file

2. Follow the instructions that the window shows

3. The system will help you install the driver automatically

Step 5 – Install ME Driver

1. Click on the *ME* folder and double click on the *Setup.exe* file

2. Follow the instructions that the window shows

3. The system will help you install the driver automatically

Step 6 – Install USB3.0 Driver

1. Click on the *USB3.0* folder and double click on the *setup.exe* file

2. Follow the instructions that the window shows

3. The system will help you install the driver automatically

Step 7 – Install AHCI Driver

1. Click on the *AHCI* folder and select the folder of *AP*

2. Double click on the *iata_cd.exe* file

3. Follow the instructions that the window shows

The system will help you install the driver automatically

Step 8 – Install TPM Driver
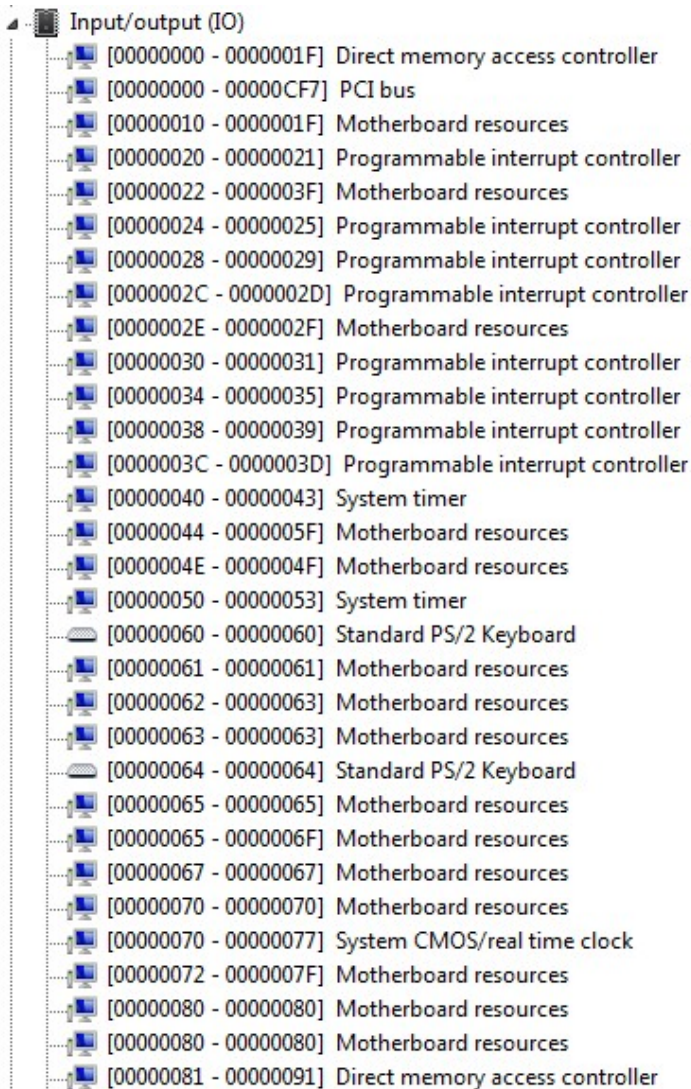
1. Click on the *TPM* folder and double click on the *Setup.exe* file

2. Follow the instructions that the window shows

3. The system will help you install the driver automatically

Chapter

4

I/O Information

4.1 I/O Address Map

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

[00000081 - 00000091] Direct memory access controller
[00000084 - 00000086] Motherboard resources
[00000088 - 00000088] Motherboard resources
[0000008C - 0000008E] Motherboard resources
[00000090 - 0000009F] Motherboard resources
[00000092 - 00000092] Motherboard resources
[00000093 - 0000009F] Direct memory access controller
[000000A0 - 000000A1] Programmable interrupt controller
[000000A2 - 000000BF] Motherboard resources
[000000A4 - 000000A5] Programmable interrupt controller
[000000A8 - 000000A9] Programmable interrupt controller
[000000AC - 000000AD] Programmable interrupt controller
[000000B0 - 000000B1] Programmable interrupt controller
[000000B2 - 000000B3] Motherboard resources
[000000B4 - 000000B5] Programmable interrupt controller
[000000B8 - 000000B9] Programmable interrupt controller
[000000BC - 000000BD] Programmable interrupt controller
[000000C0 - 000000DF] Direct memory access controller
[000000E0 - 000000EF] Motherboard resources
[000000F0 - 000000FF] Numeric data processor
[00000170 - 00000177] ATA Channel 1
[000001F0 - 000001F7] ATA Channel 0
[000002F8 - 000002FF] Communications Port (COM2)
[00000376 - 00000376] ATA Channel 1
[000003B0 - 000003BB] Intel(R) HD Graphics
[000003C0 - 000003DF] Intel(R) HD Graphics
[000003F6 - 000003F6] ATA Channel 0
[000003F8 - 000003FF] Communications Port (COM1)
[00000400 - 00000453] Motherboard resources
[00000454 - 00000457] Motherboard resources
[00000458 - 0000047F] Motherboard resources
[000004D0 - 000004D1] Motherboard resources

[000004D0 - 000004D1] Motherboard resources
[000004D0 - 000004D1] Programmable interrupt controller
[00000500 - 0000057F] Motherboard resources
[00000680 - 0000069F] Motherboard resources
[00000A00 - 00000A1F] Motherboard resources
[00000A20 - 00000A2F] Motherboard resources
[00000A30 - 00000A3F] Motherboard resources
[00000D00 - 0000FFFF] PCI bus
[00001000 - 0000100F] Motherboard resources
[0000164E - 0000164F] Motherboard resources
[0000D000 - 0000D0FF] Realtek PCIe GBE Family Controller #2
[0000D000 - 0000DFFF] Intel(R) 7 Series/C216 Chipset Family PCI Express Root Port 2 - 1E12
[0000E000 - 0000E0FF] Realtek PCIe GBE Family Controller
[0000E000 - 0000EFFF] Intel(R) 7 Series/C216 Chipset Family PCI Express Root Port 1 - 1E10
[0000F000 - 0000F03F] Intel(R) HD Graphics
[0000F040 - 0000F05F] Intel(R) 7 Series/C216 Chipset Family SMBus Host Controller - 1E22
[0000F060 - 0000F06F] Intel(R) 7 Series/C216 Chipset Family 2 port Serial ATA Storage Controller - 1E08
[0000F070 - 0000F07F] Intel(R) 7 Series/C216 Chipset Family 2 port Serial ATA Storage Controller - 1E08
[0000F080 - 0000F083] Intel(R) 7 Series/C216 Chipset Family 2 port Serial ATA Storage Controller - 1E08
[0000F090 - 0000F097] Intel(R) 7 Series/C216 Chipset Family 2 port Serial ATA Storage Controller - 1E08
[0000F0A0 - 0000F0A3] Intel(R) 7 Series/C216 Chipset Family 2 port Serial ATA Storage Controller - 1E08
[0000F0B0 - 0000F0B7] Intel(R) 7 Series/C216 Chipset Family 2 port Serial ATA Storage Controller - 1E08
[0000F0C0 - 0000F0CF] Intel(R) 7 Series/C216 Chipset Family 4 port Serial ATA Storage Controller - 1E00
[0000F0D0 - 0000F0DF] Intel(R) 7 Series/C216 Chipset Family 4 port Serial ATA Storage Controller - 1E00
[0000FFFF - 0000FFFF] Motherboard resources
[0000FFFF - 0000FFFF] Motherboard resources

4.2 1st MB Memory Address Map

```
Memory
    [000A0000 - 000BFFFF]  Intel(R) HD Graphics
    [000A0000 - 000BFFFF]  PCI bus
    [000D0000 - 000D3FFF]  PCI bus
    [000D4000 - 000D7FFF]  PCI bus
    [000D8000 - 000DBFFF]  PCI bus
    [000DC000 - 000DFFFF]  PCI bus
    [000E0000 - 000E3FFF]  PCI bus
    [000E4000 - 000E7FFF]  PCI bus
    [20000000 - 201FFFFF]  System board
    [40004000 - 40004FFF]  System board
    [DFA00000 - DFA00FFF]  Motherboard resources
    [DFA00000 - FEAFFFFF]  PCI bus
    [E0000000 - EFFFFFFF]  Intel(R) HD Graphics
    [F0000000 - F0003FFF]  Realtek PCIe GBE Family Controller #2
    [F0000000 - F00FFFFF]  Intel(R) 7 Series/C216 Chipset Family PCI Express Root Port 2 - 1E12
    [F0004000 - F0004FFF]  Realtek PCIe GBE Family Controller #2
    [F0100000 - F0103FFF]  Realtek PCIe GBE Family Controller
    [F0100000 - F01FFFFF]  Intel(R) 7 Series/C216 Chipset Family PCI Express Root Port 1 - 1E10
    [F0104000 - F0104FFF]  Realtek PCIe GBE Family Controller
    [F7800000 - F7BFFFFF]  Intel(R) HD Graphics
    [F7C00000 - F7C0FFFF]  Intel(R) USB 3.0 eXtensible Host Controller
    [F7C10000 - F7C13FFF]  High Definition Audio Controller
    [F7C15000 - F7C150FF]  Intel(R) 7 Series/C216 Chipset Family SMBus Host Controller - 1E22
    [F7C16000 - F7C163FF]  Intel(R) 7 Series/C216 Chipset Family USB Enhanced Host Controller - 1E26
    [F7C17000 - F7C173FF]  Intel(R) 7 Series/C216 Chipset Family USB Enhanced Host Controller - 1E2D
    [F7C1A000 - F7C1A00F]  Intel(R) Management Engine Interface
    [F8000000 - FBFFFFFF]  Motherboard resources
    [FED00000 - FED003FF]  High precision event timer
    [FED10000 - FED17FFF]  Motherboard resources
    [FED18000 - FED18FFF]  Motherboard resources
    [FED19000 - FED19FFF]  Motherboard resources
    [FED1C000 - FED1FFFF]  Motherboard resources
    [FED1C000 - FED1FFFF]  Motherboard resources
    [FED20000 - FED3FFFF]  Motherboard resources
    [FED40000 - FED44FFF]  System board
    [FED45000 - FED8FFFF]  Motherboard resources
    [FED90000 - FED93FFF]  Motherboard resources
    [FEE00000 - FEEFFFFF]  Motherboard resources
    [FF000000 - FFFFFFFF]  Intel(R) 82802 Firmware Hub Device
    [FF000000 - FFFFFFFF]  Motherboard resources
```

4.3 IRQ Mapping Chart

```
▲ ▮ Interrupt request (IRQ)
     🖳 (ISA) 0x00000000 (00)    System timer
     ▱ (ISA) 0x00000001 (01)    Standard PS/2 Keyboard
     📠 (ISA) 0x00000003 (03)    Communications Port (COM2)
     📠 (ISA) 0x00000004 (04)    Communications Port (COM1)
     🖳 (ISA) 0x00000008 (08)    System CMOS/real time clock
     🖱 (ISA) 0x0000000C (12)    Microsoft PS/2 Mouse
     🖳 (ISA) 0x0000000D (13)    Numeric data processor
     🖴 (ISA) 0x0000000E (14)    ATA Channel 0
     🖴 (ISA) 0x0000000F (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
     🖳 (ISA) 0x00000060 (96)    Microsoft ACPI-Compliant System
     🖳 (ISA) 0x00000061 (97)    Microsoft ACPI-Compliant System
     🖳 (ISA) 0x00000062 (98)    Microsoft ACPI-Compliant System
     🖳 (ISA) 0x00000063 (99)    Microsoft ACPI-Compliant System
     🖳 (ISA) 0x00000064 (100)    Microsoft ACPI-Compliant System
     🖳 (ISA) 0x00000065 (101)    Microsoft ACPI-Compliant System
     🖳 (ISA) 0x00000066 (102)    Microsoft ACPI-Compliant System
     🖳 (ISA) 0x00000067 (103)    Microsoft ACPI-Compliant System
```

(ISA) 0x00000067 (103)   Microsoft ACPI-Compliant System
(ISA) 0x00000068 (104)   Microsoft ACPI-Compliant System
(ISA) 0x00000069 (105)   Microsoft ACPI-Compliant System
(ISA) 0x0000006A (106)   Microsoft ACPI-Compliant System
(ISA) 0x0000006B (107)   Microsoft ACPI-Compliant System
(ISA) 0x0000006C (108)   Microsoft ACPI-Compliant System
(ISA) 0x0000006D (109)   Microsoft ACPI-Compliant System
(ISA) 0x0000006E (110)   Microsoft ACPI-Compliant System
(ISA) 0x0000006F (111)   Microsoft ACPI-Compliant System
(ISA) 0x00000070 (112)   Microsoft ACPI-Compliant System
(ISA) 0x00000071 (113)   Microsoft ACPI-Compliant System
(ISA) 0x00000072 (114)   Microsoft ACPI-Compliant System
(ISA) 0x00000073 (115)   Microsoft ACPI-Compliant System
(ISA) 0x00000074 (116)   Microsoft ACPI-Compliant System
(ISA) 0x00000075 (117)   Microsoft ACPI-Compliant System
(ISA) 0x00000076 (118)   Microsoft ACPI-Compliant System
(ISA) 0x00000077 (119)   Microsoft ACPI-Compliant System
(ISA) 0x00000078 (120)   Microsoft ACPI-Compliant System
(ISA) 0x00000079 (121)   Microsoft ACPI-Compliant System
(ISA) 0x0000007A (122)   Microsoft ACPI-Compliant System
(ISA) 0x0000007B (123)   Microsoft ACPI-Compliant System
(ISA) 0x0000007C (124)   Microsoft ACPI-Compliant System
(ISA) 0x0000007D (125)   Microsoft ACPI-Compliant System
(ISA) 0x0000007E (126)   Microsoft ACPI-Compliant System
(ISA) 0x0000007F (127)   Microsoft ACPI-Compliant System
(ISA) 0x00000080 (128)   Microsoft ACPI-Compliant System
(ISA) 0x00000081 (129)   Microsoft ACPI-Compliant System
(ISA) 0x00000082 (130)   Microsoft ACPI-Compliant System
(ISA) 0x00000083 (131)   Microsoft ACPI-Compliant System
(ISA) 0x00000084 (132)   Microsoft ACPI-Compliant System
(ISA) 0x00000085 (133)   Microsoft ACPI-Compliant System
(ISA) 0x00000086 (134)   Microsoft ACPI-Compliant System
(ISA) 0x00000087 (135)   Microsoft ACPI-Compliant System

(ISA) 0x00000087 (135)	Microsoft ACPI-Compliant System
(ISA) 0x00000088 (136)	Microsoft ACPI-Compliant System
(ISA) 0x00000089 (137)	Microsoft ACPI-Compliant System
(ISA) 0x0000008A (138)	Microsoft ACPI-Compliant System
(ISA) 0x0000008B (139)	Microsoft ACPI-Compliant System
(ISA) 0x0000008C (140)	Microsoft ACPI-Compliant System
(ISA) 0x0000008D (141)	Microsoft ACPI-Compliant System
(ISA) 0x0000008E (142)	Microsoft ACPI-Compliant System
(ISA) 0x0000008F (143)	Microsoft ACPI-Compliant System
(ISA) 0x00000090 (144)	Microsoft ACPI-Compliant System
(ISA) 0x00000091 (145)	Microsoft ACPI-Compliant System
(ISA) 0x00000092 (146)	Microsoft ACPI-Compliant System
(ISA) 0x00000093 (147)	Microsoft ACPI-Compliant System
(ISA) 0x00000094 (148)	Microsoft ACPI-Compliant System
(ISA) 0x00000095 (149)	Microsoft ACPI-Compliant System
(ISA) 0x00000096 (150)	Microsoft ACPI-Compliant System
(ISA) 0x00000097 (151)	Microsoft ACPI-Compliant System
(ISA) 0x00000098 (152)	Microsoft ACPI-Compliant System
(ISA) 0x00000099 (153)	Microsoft ACPI-Compliant System
(ISA) 0x0000009A (154)	Microsoft ACPI-Compliant System
(ISA) 0x0000009B (155)	Microsoft ACPI-Compliant System
(ISA) 0x0000009C (156)	Microsoft ACPI-Compliant System
(ISA) 0x0000009D (157)	Microsoft ACPI-Compliant System
(ISA) 0x0000009E (158)	Microsoft ACPI-Compliant System
(ISA) 0x0000009F (159)	Microsoft ACPI-Compliant System
(ISA) 0x000000A0 (160)	Microsoft ACPI-Compliant System
(ISA) 0x000000A1 (161)	Microsoft ACPI-Compliant System
(ISA) 0x000000A2 (162)	Microsoft ACPI-Compliant System
(ISA) 0x000000A3 (163)	Microsoft ACPI-Compliant System
(ISA) 0x000000A4 (164)	Microsoft ACPI-Compliant System
(ISA) 0x000000A5 (165)	Microsoft ACPI-Compliant System
(ISA) 0x000000A6 (166)	Microsoft ACPI-Compliant System
(ISA) 0x000000A7 (167)	Microsoft ACPI-Compliant System

```
(ISA) 0x000000A7 (167)   Microsoft ACPI-Compliant System
(ISA) 0x000000A8 (168)   Microsoft ACPI-Compliant System
(ISA) 0x000000A9 (169)   Microsoft ACPI-Compliant System
(ISA) 0x000000AA (170)   Microsoft ACPI-Compliant System
(ISA) 0x000000AB (171)   Microsoft ACPI-Compliant System
(ISA) 0x000000AC (172)   Microsoft ACPI-Compliant System
(ISA) 0x000000AD (173)   Microsoft ACPI-Compliant System
(ISA) 0x000000AE (174)   Microsoft ACPI-Compliant System
(ISA) 0x000000AF (175)   Microsoft ACPI-Compliant System
(ISA) 0x000000B0 (176)   Microsoft ACPI-Compliant System
(ISA) 0x000000B1 (177)   Microsoft ACPI-Compliant System
(ISA) 0x000000B2 (178)   Microsoft ACPI-Compliant System
(ISA) 0x000000B3 (179)   Microsoft ACPI-Compliant System
(ISA) 0x000000B4 (180)   Microsoft ACPI-Compliant System
(ISA) 0x000000B5 (181)   Microsoft ACPI-Compliant System
(ISA) 0x000000B6 (182)   Microsoft ACPI-Compliant System
(ISA) 0x000000B7 (183)   Microsoft ACPI-Compliant System
(ISA) 0x000000B8 (184)   Microsoft ACPI-Compliant System
(ISA) 0x000000B9 (185)   Microsoft ACPI-Compliant System
(ISA) 0x000000BA (186)   Microsoft ACPI-Compliant System
(ISA) 0x000000BB (187)   Microsoft ACPI-Compliant System
(ISA) 0x000000BC (188)   Microsoft ACPI-Compliant System
(ISA) 0x000000BD (189)   Microsoft ACPI-Compliant System
(ISA) 0x000000BE (190)   Microsoft ACPI-Compliant System
(PCI) 0x00000005 (05)    Intel(R) 7 Series/C216 Chipset Family SMBus Host Controller - 1E22
(PCI) 0x00000010 (16)    Intel(R) 7 Series/C216 Chipset Family USB Enhanced Host Controller - 1E2D
(PCI) 0x00000010 (16)    Intel(R) 7 Series/C216 Chipset Family PCI Express Root Port 1 - 1E10
(PCI) 0x00000010 (16)    Intel(R) Management Engine Interface
(PCI) 0x00000010 (16)    Xeon(R) processor E3-1200 v2/3rd Gen Core processor PCI Express Root Port - 0151
(PCI) 0x00000011 (17)    Intel(R) 7 Series/C216 Chipset Family PCI Express Root Port 2 - 1E12
(PCI) 0x00000013 (19)    Intel(R) 7 Series/C216 Chipset Family 2 port Serial ATA Storage Controller - 1E08
(PCI) 0x00000016 (22)    High Definition Audio Controller
(PCI) 0x00000017 (23)    Intel(R) 7 Series/C216 Chipset Family USB Enhanced Host Controller - 1E26
(PCI) 0x00000017 (23)    Intel(R) 7 Series/C216 Chipset Family USB Enhanced Host Controller - 1E26
(PCI) 0xFFFFFFFB (-5)    Realtek PCIe GBE Family Controller #2
(PCI) 0xFFFFFFFC (-4)    Realtek PCIe GBE Family Controller
(PCI) 0xFFFFFFFD (-3)    Intel(R) USB 3.0 eXtensible Host Controller
(PCI) 0xFFFFFFFE (-2)    Intel(R) HD Graphics
```

4.4 DMA Channel Assignments

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