NVR-CV

Network Video Recorder
Hot-Swappable Tray for
3.5" HDD x 4 or 2.5" HDD x 4
Gigabit Ethernet x 2
COM x 2, USB2.0 x 6
VGA x 1, DVI-D x 1

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Packing List

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

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

-     1   NVR-CV

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

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Chapter

1

**General
Information**

1.1 Introduction

NVR-CV adopts the Intel® Atom™ D2550 Dual Core Processor and equips with Intel® ICH10R chipset. Moreover, the system memory features two 204-pin Single Channel DDR3 1066/800 non-ECC, un-buffered DIMM memory up to 4GB.   It deploys two LAN ports that consist of 10/100/1000Base-TX Ethernet RJ-45 ports. NVR-CV features desktop form factor for network video recorder applications.

This NVR-CV supports up to four 3.5" Hard Disk Drive or four 2.5" SATA swappable HDD.   Moreover, the flexible expansion interface features one PCI-E[x4] slot.   In addition, this model supports two COM ports, and six USB2.0 ports (two USB2.0 ports on the ear and four USB2.0 ports on the rear.) Furthermore, the NVR-CV can support dual displays with one VGA and one DVI-D.

1.2 Features

- Intel® Atom™D2550 Dual Core Processor

- Intel® ICH10R Chipset

- 204-pin Single Channel DDR3 1066/800 Non-ECC, Un-buffered DIMM Memory Up To 4GB

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

- Hot-Swappable Tray for 3.5" HDD x 4 or 2.5" HDD x 4

- COM x 2

- USB2.0 x 6

- VGA x 1,DVI-D x 1

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

- RAID 0/1/5/10 support

- Supports Linux OS and Windows® XP embedded Standard (optional)

1.3 Specifications

System

● CPU	Intel® Atom™ D2550 Dual Core Processor, 1.83 GHz
● Chipset	Intel® ICH10R
● System Memory	204-pin Single Channel DDR3 1066/800 Non-ECC, Un-buffered Memory, support up to 4G
● LCD/CRT Controller	Intel® ICH10R
● Ethernet	Realtek 8111E for 10/100/1000Base-TX, RJ-45 x 2
● BIOS	AMI Plug & Play BIOS – 32MB SPI
● Serial ATA	SATA x 6
● Wake on LAN	No
● Hardware Status Monitoring	Supports Power Supply Voltage, Fan Speed and Temperature Monitoring
● Expansion Interface	PCI-E[x4] x 1
● Watchdog Timer	Programmable 1~255 steps System Reset
● Storage	Supports 3.5" or 2.5" removable SATA HDD tray x 4
● Front I/O Port	Power Button x 1 Reset Button x 1 Power & HDD LED USB2.0 x 2
● Rear I/O Port	VGA x 1 DVI-D x 1 RJ-45 x 2 USB2.0 x 4 Audio Jack x 3
● RAID Support	0/1/5/10

Mechanical

● Dimension	7.87" x 9.84" x 11.93" (200mm x 250mm x 303mm)
● Gross Weight	17.6 lb (8 Kg)
● Net Weight	15.4 lb (7 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
● Vibration	0.5 g rms/ 5~500Hz/ operation (2.5" HDD) 1.5 g rms/ 5~500Hz/ non-operation
● Shock	10 G peak acceleration (11 m sec. duration) operation 20 G peak acceleration (11 m sec. duration) non-operation

Power Supply

● DC Output	200W
● AC Input Voltage Range	100~240VAC, 47~63HZ, 3.5A

Chapter

2

Hardware Installation

2.1 Mechanical Drawing
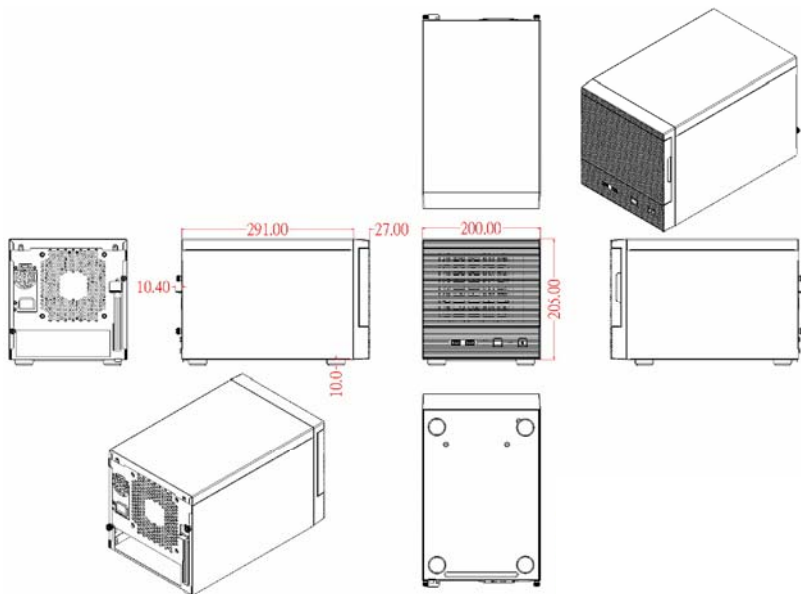
2.2 Installing the 3.5" Hard Disk Drive

Step 1: Press HDD to the right to remove the HDD tray

Step 2: Put the HDD to the HDD bracket (tray)

Step 3: Fasten the HDD on the bottom bracket with three screws

Step 4: Insert the HDD tray back to the chassis

Step 5: Push the HDD tray to the chassis until it has been firmly locked

Chapter

3

Driver
Installation

The NVR-CV 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 Audio Driver

       Step 5 – Install AHCI Driver

       Step 6 – Install Serial Port Driver (Optional)

Please read instructions below for further detailed installations.

3.1   Installation

Insert the NVR-CV CD-ROM into the CD -ROM drive and install the drivers from Step 1 to Step 6 in order.

Step 1 – Install Chipset Driver

1.   Click on the ***Step 1 - INF*** folder and double click on the ***infinst_autol*** 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 ***Step 2 - VGA*** folder and select the OS folder your system is

2.   Double click on the ***.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

Note: User has to install ***dotetfx35.exe*** before installing Windows[®] XP graphic driver

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 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 *Step 4 - 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 AHCI Driver

1. Click on the *Step 5 - 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

4. The system will help you install the driver automatically

Step 6 – Install Serial Port Driver (Optional)

1. Click on the *Step 6 - Serial Port Driver (Optional)* and double click on the *patch.bat* 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
    💻 [00000061 - 00000061]  Motherboard resources
    💻 [00000062 - 00000063]  Motherboard resources
    💻 [00000063 - 00000063]  Motherboard resources
    💻 [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
    💻 [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
```
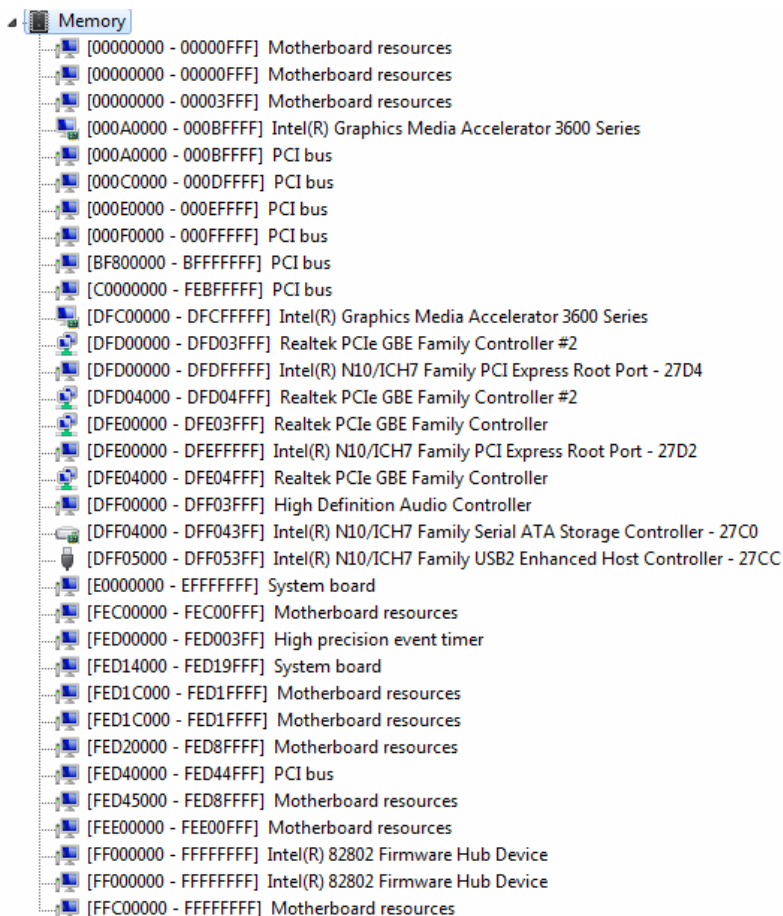
[000000E0 - 000000EF] Motherboard resources
[000000F0 - 000000F0] Numeric data processor
[00000290 - 0000029F] Motherboard resources
[000002E8 - 000002EF] Communications Port (COM4)
[000002F0 - 000002F7] Communications Port (COM5)
[000002F8 - 000002FF] Communications Port (COM2)
[00000378 - 0000037F] Printer Port (LPT1)
[000003B0 - 000003BB] Intel(R) Graphics Media Accelerator 3600 Series
[000003C0 - 000003DF] Intel(R) Graphics Media Accelerator 3600 Series
[000003E8 - 000003EF] Communications Port (COM3)
[000003F8 - 000003FF] Communications Port (COM1)
[00000400 - 0000047F] Motherboard resources
[00000400 - 0000047F] Motherboard resources
[000004D0 - 000004D1] Motherboard resources
[000004D0 - 000004D1] Programmable interrupt controller
[00000500 - 0000053F] Motherboard resources
[00000500 - 0000057F] Motherboard resources
[00000600 - 0000061F] Motherboard resources
[00000680 - 0000069F] Motherboard resources
[00000800 - 0000081F] Intel(R) N10/ICH7 Family SMBus Controller - 27DA
[00000A00 - 00000A1F] Motherboard resources
[00000A20 - 00000A2F] Motherboard resources
[00000D00 - 0000FFFF] PCI bus
[0000D000 - 0000D0FF] Realtek PCIe GBE Family Controller #2
[0000D000 - 0000DFFF] Intel(R) N10/ICH7 Family PCI Express Root Port - 27D4
[0000E000 - 0000E0FF] Realtek PCIe GBE Family Controller
[0000E000 - 0000EFFF] Intel(R) N10/ICH7 Family PCI Express Root Port - 27D2
[0000F000 - 0000F01F] Intel(R) N10/ICH7 Family USB Universal Host Controller - 27CB
[0000F020 - 0000F03F] Intel(R) N10/ICH7 Family USB Universal Host Controller - 27CA
[0000F040 - 0000F05F] Intel(R) N10/ICH7 Family USB Universal Host Controller - 27C9
[0000F060 - 0000F07F] Intel(R) N10/ICH7 Family USB Universal Host Controller - 27C8
[0000F080 - 0000F08F] Intel(R) N10/ICH7 Family Serial ATA Storage Controller - 27C0
[0000F090 - 0000F093] Intel(R) N10/ICH7 Family Serial ATA Storage Controller - 27C0
[0000F0A0 - 0000F0A7] Intel(R) N10/ICH7 Family Serial ATA Storage Controller - 27C0
[0000F0B0 - 0000F0B3] Intel(R) N10/ICH7 Family Serial ATA Storage Controller - 27C0
[0000F0C0 - 0000F0C7] Intel(R) N10/ICH7 Family Serial ATA Storage Controller - 27C0
[0000F0D0 - 0000F0D7] Intel(R) Graphics Media Accelerator 3600 Series
[0000FFFF - 0000FFFF] Motherboard resources
[0000FFFF - 0000FFFF] Motherboard resources
[0000FFFF - 0000FFFF] Motherboard resources

4.2 1st MB Memory Address Map

```
▲ 🖳 Memory
    ├─🖳 [00000000 - 00000FFF]  Motherboard resources
    ├─🖳 [00000000 - 00000FFF]  Motherboard resources
    ├─🖳 [00000000 - 00003FFF]  Motherboard resources
    ├─🖳 [000A0000 - 000BFFFF]  Intel(R) Graphics Media Accelerator 3600 Series
    ├─🖳 [000A0000 - 000BFFFF]  PCI bus
    ├─🖳 [000C0000 - 000DFFFF]  PCI bus
    ├─🖳 [000E0000 - 000EFFFF]  PCI bus
    ├─🖳 [000F0000 - 000FFFFF]  PCI bus
    ├─🖳 [BF800000 - BFFFFFFF]  PCI bus
    ├─🖳 [C0000000 - FEBFFFFF]  PCI bus
    ├─🖳 [DFC00000 - DFCFFFFF]  Intel(R) Graphics Media Accelerator 3600 Series
    ├─📇 [DFD00000 - DFD03FFF]  Realtek PCIe GBE Family Controller #2
    ├─🖳 [DFD00000 - DFDFFFFF]  Intel(R) N10/ICH7 Family PCI Express Root Port - 27D4
    ├─📇 [DFD04000 - DFD04FFF]  Realtek PCIe GBE Family Controller #2
    ├─📇 [DFE00000 - DFE03FFF]  Realtek PCIe GBE Family Controller
    ├─🖳 [DFE00000 - DFEFFFFF]  Intel(R) N10/ICH7 Family PCI Express Root Port - 27D2
    ├─📇 [DFE04000 - DFE04FFF]  Realtek PCIe GBE Family Controller
    ├─🖳 [DFF00000 - DFF03FFF]  High Definition Audio Controller
    ├─💾 [DFF04000 - DFF043FF]  Intel(R) N10/ICH7 Family Serial ATA Storage Controller - 27C0
    ├─🔌 [DFF05000 - DFF053FF]  Intel(R) N10/ICH7 Family USB2 Enhanced Host Controller - 27CC
    ├─🖳 [E0000000 - EFFFFFFF]  System board
    ├─🖳 [FEC00000 - FEC00FFF]  Motherboard resources
    ├─🖳 [FED00000 - FED003FF]  High precision event timer
    ├─🖳 [FED14000 - FED19FFF]  System board
    ├─🖳 [FED1C000 - FED1FFFF]  Motherboard resources
    ├─🖳 [FED1C000 - FED1FFFF]  Motherboard resources
    ├─🖳 [FED20000 - FED8FFFF]  Motherboard resources
    ├─🖳 [FED40000 - FED44FFF]  PCI bus
    ├─🖳 [FED45000 - FED8FFFF]  Motherboard resources
    ├─🖳 [FEE00000 - FEE00FFF]  Motherboard resources
    ├─🖳 [FF000000 - FFFFFFFF]  Intel(R) 82802 Firmware Hub Device
    ├─🖳 [FF000000 - FFFFFFFF]  Intel(R) 82802 Firmware Hub Device
    └─🖳 [FFC00000 - FFFFFFFF]  Motherboard resources
```

4.3 IRQ Mapping Chart

```
▲ 📵 Interrupt request (IRQ)
    📖 (ISA) 0x00000000 (00)   System timer
    📟 (ISA) 0x00000003 (03)   Communications Port (COM2)
    📟 (ISA) 0x00000004 (04)   Communications Port (COM1)
    📟 (ISA) 0x00000007 (07)   Communications Port (COM3)
    📖 (ISA) 0x00000008 (08)   System CMOS/real time clock
    📟 (ISA) 0x0000000A (10)   Communications Port (COM4)
    📟 (ISA) 0x0000000B (11)   Communications Port (COM5)
    📖 (ISA) 0x0000000D (13)   Numeric data processor
    📖 (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) 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) 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) 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) 0x0000000A (10)    Intel(R) N10/ICH7 Family SMBus Controller - 27DA
(PCI) 0x00000010 (16)    Intel(R) N10/ICH7 Family PCI Express Root Port - 27D0
(PCI) 0x00000010 (16)    Intel(R) N10/ICH7 Family USB Universal Host Controller - 27CB
(PCI) 0x00000011 (17)    Intel(R) N10/ICH7 Family PCI Express Root Port - 27D2
(PCI) 0x00000012 (18)    Intel(R) N10/ICH7 Family PCI Express Root Port - 27D4
(PCI) 0x00000012 (18)    Intel(R) N10/ICH7 Family USB Universal Host Controller - 27CA
(PCI) 0x00000013 (19)    Intel(R) N10/ICH7 Family PCI Express Root Port - 27D6
(PCI) 0x00000013 (19)    Intel(R) N10/ICH7 Family Serial ATA Storage Controller - 27C0
(PCI) 0x00000013 (19)    Intel(R) N10/ICH7 Family USB Universal Host Controller - 27C9
(PCI) 0x00000016 (22)    High Definition Audio Controller
(PCI) 0x00000017 (23)    Intel(R) N10/ICH7 Family USB Universal Host Controller - 27C8
(PCI) 0x00000017 (23)    Intel(R) N10/ICH7 Family USB2 Enhanced Host Controller - 27CC
(PCI) 0xFFFFFFFC (-4)    Realtek PCIe GBE Family Controller #2
(PCI) 0xFFFFFFFD (-3)    Realtek PCIe GBE Family Controller
(PCI) 0xFFFFFFFE (-2)    Intel(R) Graphics Media Accelerator 3600 Series
```

4.4 DMA Channel Assignments

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