

**DSS-CV21**

Digital Signage System

2.5" HDD/ SDD x 1

1 Gigabit Ethernet Port/

1 RS-232/ 4 USB2.0 Ports

HD Audio Codec (2CH Audio)

1 VGA, 1 HDMI

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## Packing List

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

- 1 Gift Box (Including Power Adapter)
- 1 DVD-ROM for Manual (in PDF Format) and Drivers
- 1 DSS-CV21

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

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DSS-CV21 adopts the Intel® Atom™ D2550 Processor, up to 1.86GHz. The chipset is equipped with Intel® NM10. Moreover, the system memory features two 204-pin DDR3 1066 SODIMM up to 4GB. It deploys one LAN port that consist of 10/100/1000Base-TX Ethernet LAN RJ-45 port. DSS-CV21 condensed appearance features desktop and wallmount form factor that fits nicely into a space-limited environment.

This compact DSS-CV21 equipped with one 2.5" Hard Disk Drive/ Solid State Disk and one SD/SDHC/SDXC/MMC for expansion. In addition, it features one RS-232 COM port and four USB2.0 on the front panel. Furthermore, it equips up to 1920x1200 @ 60Hz for VGA and HDMI.

With the increasing demands of high performance in audio and video, AAEON released the specific Digital Signage system to fulfill the needs of multimedia and digital signage applications.

## 1.2 Features

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- Intel® Atom™ D2550 Processor (1M Cache, 1.86GHz)
- 2 x 204-pin Dual Channel DDR3 1066MHz up to 4GB
- Intel® Integrated Graphics Engine GMA3650 supports Dual View by VGA, HDMI
- Optional Wireless LAN (Wi-Fi 802.11b/g/n)
- Gigabit Ethernet x 1
- Slim (26.2mm) & Light (0.69kg)
- HDD/SSD x 1; SD/SDHC/SDXC/MMC x 1
- Max. Power Consumption 22W
- VESA Mount supported
- Fanless

### 1.3 Specifications

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#### *System*

<b>Form Factor</b>	Digital Signage
<b>Processor</b>	Intel® Atom D2550 1.86GHz
<b>System Memory</b>	204-pin DDR3 1066 SODIMM x 2, Max. 4GB
<b>Chipset</b>	Intel® NM10
<b>Ethernet</b>	10/100/1000Base-TX, RJ-45 x 1
<b>BIOS</b>	AMI BIOS
<b>I/O Chip</b>	NCT 5579D
<b>Storage</b>	2.5" HDD/SDD x 1
<b>Optical ROM</b>	--
<b>LED</b>	Power indicator x 1
<b>Expansion</b>	Card reader: SD/SDHC/SDXC/MMC
<b>Power Supply</b>	19V DC power adapter
<b>Dimension (WxHxD)</b>	9.45" x 1.26" x 6.69" (240mm x 32mm x 170mm)
<b>Weight</b>	2.2 lb (1Kg)
<b>Chassis Color</b>	Black
<b>OS Support</b>	Windows® 7 32-bit

#### *External I/O*

<b>Serial Port</b>	RS-232 x 1
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<b>Universal Serial Bus</b>	USB2.0 x 4 (on front panel)
<b>Audio</b>	Audio jack x 2 (S/PDIF & MIC-in)
<b>Ethernet</b>	RJ-45 x 2
<b>Display</b>	Up to 1920x1200/ 60Hz for VGA Up to 1920x1200/ 60Hz for HDMI
<b>Power Switch</b>	ATX Power Switch x 1

### *Environment*

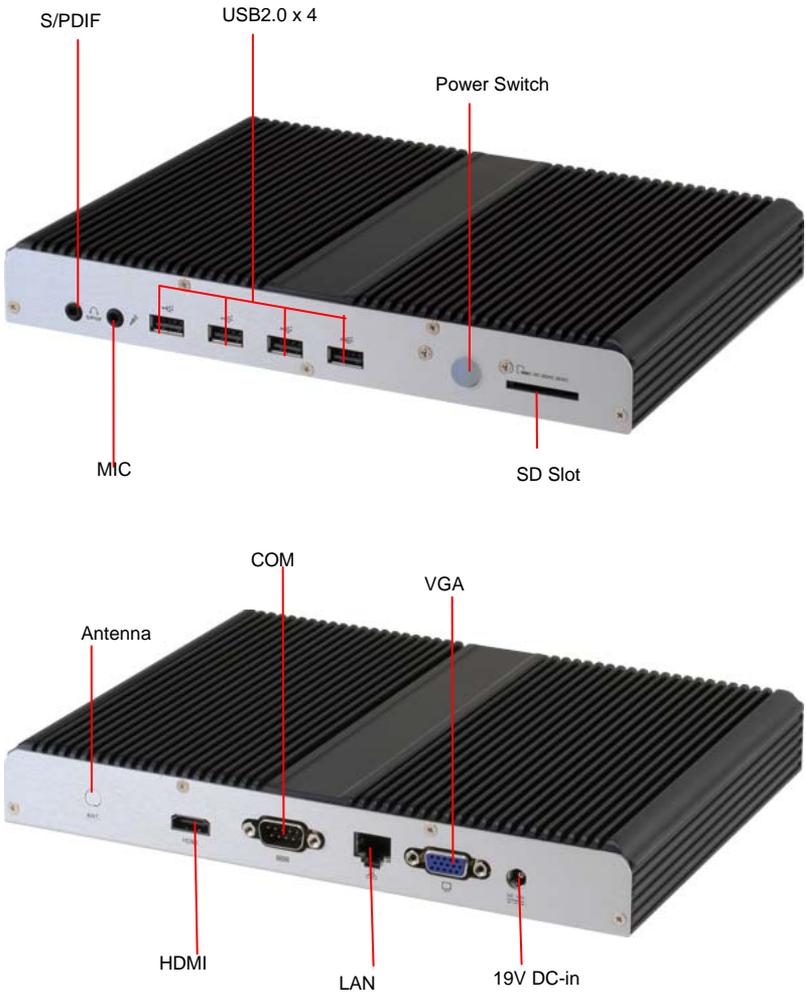
<b>Operating Temp.</b>	32°F~104 °F (0 °C ~40 °C)
<b>Storage Temp.</b>	-4°F~140 °F (-20 °C ~60 °C)
<b>Storage Humidity</b>	10~95% @ 40 °C, non-condensing
<b>Vibration</b>	1g rms/ 5~500Hz/ operation
<b>Shock</b>	20G peak acceleration (11 m sec. duration)
<b>Certification</b>	CE/ FCC Class A

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## 1.4 General System Information

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### Front Panel



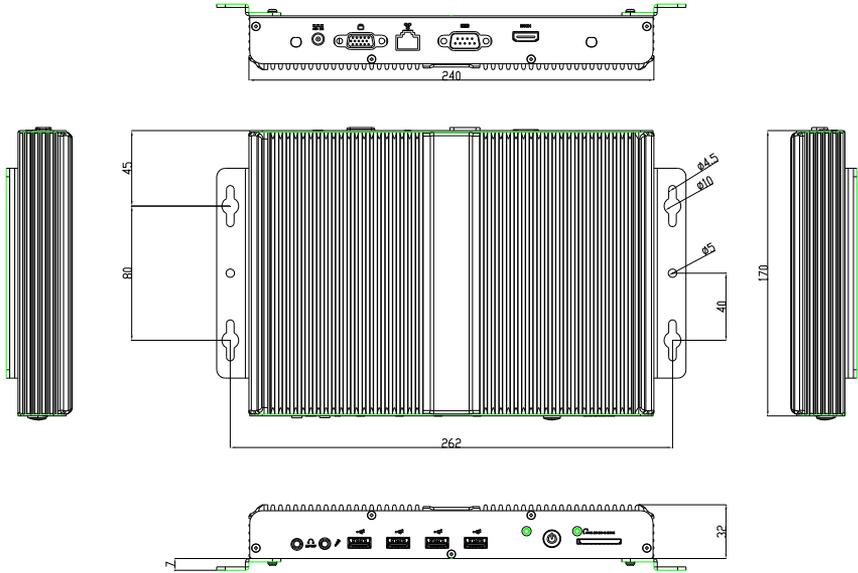
Chapter

2

# Hardware Installation

## 2.1 Mechanical Drawing

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## 2.2 Installing the 2.5" Hard Disk Drive

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Step 1: Unfasten the four screws on the bottom case of the DSS-CV21



Step 2: Unfasten the screw on the front panel



Step 3: Unfasten the four screws on the rear panel



Step 4: Pull up the case of DSS-CV21



Step 5: Loosen the Hard Disk Drive (HDD) bracket on the standoff with two screws



Step 6: Lock HDD on the HDD bracket with two screws



Step 7: Turn the HDD to another side and push it into the slot until connecting firmly



Step 9: Lock the bracket of HDD on the standoff with two screws



## 2.3 Installing the Antenna

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Step 1: Break the hole of antenna



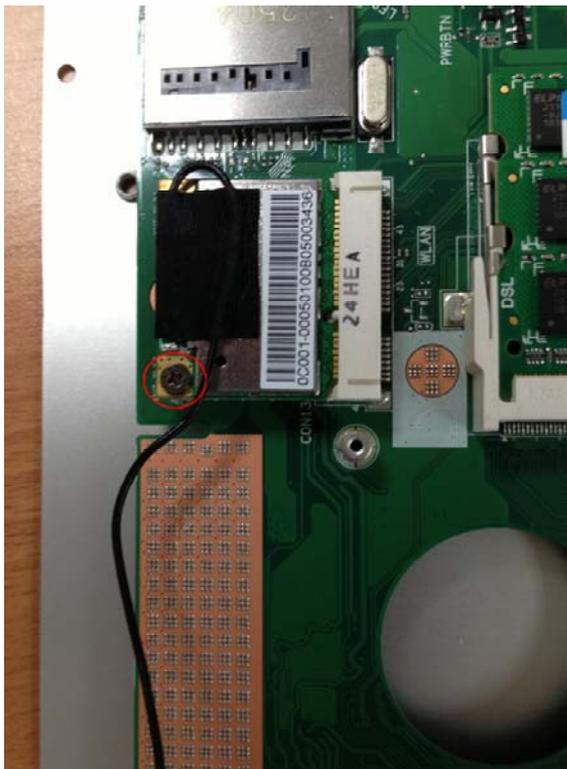
Step 2: Install the connector of antenna



Step 3: Screw the antenna on the connector



Step 4: Install the Wi-Fi module and fix it by a screw



Chapter

3

**Driver  
Installation**

The DSS-CV21 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 Audio Driver

Step 4 – Install LAN Driver

Please read instructions below for further detailed installations.

### 3.1 Installation

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Insert the DSS-CV21 CD-ROM into the CD-ROM drive and install the drivers from Step 1 to Step 4 in order.

#### Step 1 – Install Chipset Driver

1. Click on the **Step1 - CHIPSET** folder and double click on the **infinst\_autol.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 **Step2 - VGA** 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 3 – Install Audio Driver

1. Click on the **Step3 - 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 4 – Install LAN Driver

1. Click on the **Step4 - LAN** folder and double click on the **setup.exe** file

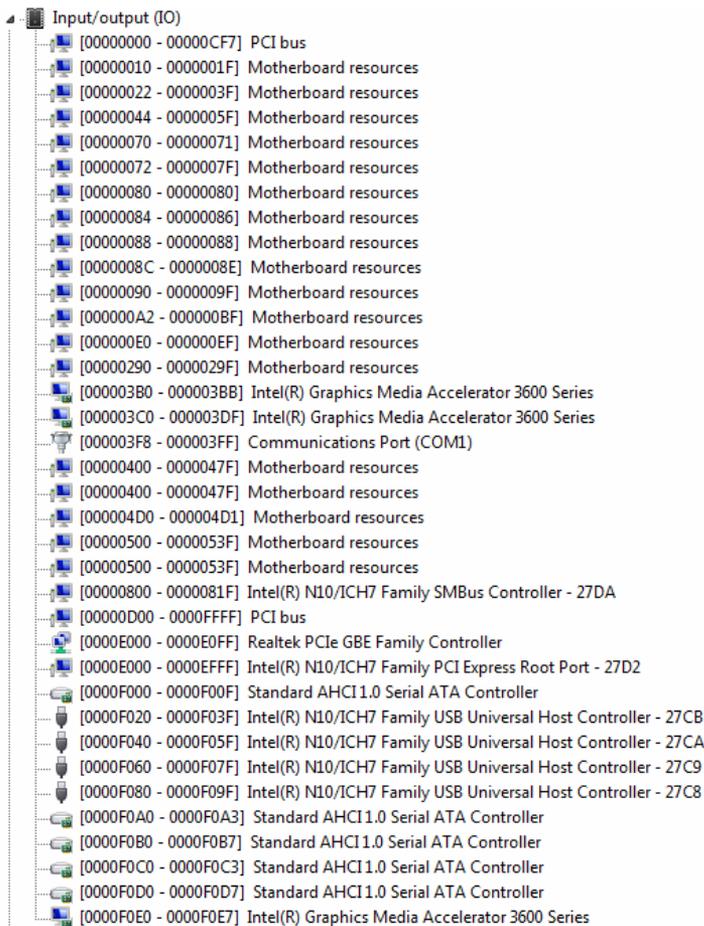
- 
2. Follow the instructions that the window shows
3. The system will help you install the driver automatically

Chapter

4

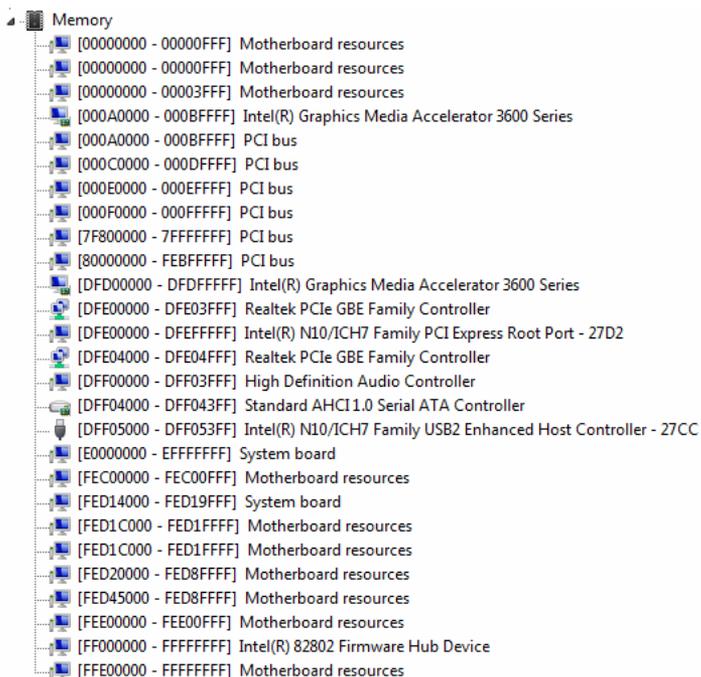
**I/O Information**

## 4.1 I/O Address Map



Address Range	Device Name
[00000000 - 00000CF7]	PCI bus
[00000010 - 0000001F]	Motherboard resources
[00000022 - 0000003F]	Motherboard resources
[00000044 - 0000005F]	Motherboard resources
[00000070 - 00000071]	Motherboard resources
[00000072 - 0000007F]	Motherboard resources
[00000080 - 00000080]	Motherboard resources
[00000084 - 00000086]	Motherboard resources
[00000088 - 00000088]	Motherboard resources
[0000008C - 0000008E]	Motherboard resources
[00000090 - 0000009F]	Motherboard resources
[000000A2 - 000000BF]	Motherboard resources
[000000E0 - 000000EF]	Motherboard resources
[00000290 - 0000029F]	Motherboard resources
[000003B0 - 000003BB]	Intel(R) Graphics Media Accelerator 3600 Series
[000003C0 - 000003DF]	Intel(R) Graphics Media Accelerator 3600 Series
[000003F8 - 000003FF]	Communications Port (COM1)
[00000400 - 0000047F]	Motherboard resources
[00000400 - 0000047F]	Motherboard resources
[000004D0 - 000004D1]	Motherboard resources
[00000500 - 0000053F]	Motherboard resources
[00000500 - 0000053F]	Motherboard resources
[00000800 - 0000081F]	Intel(R) N10/ICH7 Family SMBus Controller - 27DA
[00000D00 - 0000FFFF]	PCI bus
[0000E000 - 0000E0FF]	Realtek PCIe GBE Family Controller
[0000E000 - 0000EFFF]	Intel(R) N10/ICH7 Family PCI Express Root Port - 27D2
[0000F000 - 0000F00F]	Standard AHCI 1.0 Serial ATA Controller
[0000F020 - 0000F03F]	Intel(R) N10/ICH7 Family USB Universal Host Controller - 27CB
[0000F040 - 0000F05F]	Intel(R) N10/ICH7 Family USB Universal Host Controller - 27CA
[0000F060 - 0000F07F]	Intel(R) N10/ICH7 Family USB Universal Host Controller - 27C9
[0000F080 - 0000F09F]	Intel(R) N10/ICH7 Family USB Universal Host Controller - 27C8
[0000F0A0 - 0000F0A3]	Standard AHCI 1.0 Serial ATA Controller
[0000F0B0 - 0000F0B7]	Standard AHCI 1.0 Serial ATA Controller
[0000F0C0 - 0000F0C3]	Standard AHCI 1.0 Serial ATA Controller
[0000F0D0 - 0000F0D7]	Standard AHCI 1.0 Serial ATA Controller
[0000F0E0 - 0000F0E7]	Intel(R) Graphics Media Accelerator 3600 Series

## 4.2 1<sup>st</sup> MB Memory Address Map



The image shows a screenshot of the Windows System Information tool, specifically the 'Memory' section. It displays a list of memory addresses and their corresponding hardware components. The list is as follows:

Address Range	Component
[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 - 000FFFFFF]	PCI bus
[7F800000 - 7FFFFFFF]	PCI bus
[80000000 - FEBFFFFF]	PCI bus
[DFD00000 - DFDFFFFFF]	Intel(R) Graphics Media Accelerator 3600 Series
[DFE00000 - DFE03FFF]	Realtek PCIe GBE Family Controller
[DFE00000 - DFE03FFF]	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]	Standard AHCI 1.0 Serial ATA Controller
[DFF05000 - DFF053FF]	Intel(R) N10/ICH7 Family USB2 Enhanced Host Controller - 27CC
[E0000000 - EFFFFFFF]	System board
[FEC00000 - FEC00FFF]	Motherboard resources
[FED14000 - FED19FFF]	System board
[FED1C000 - FED1FFFF]	Motherboard resources
[FED1C000 - FED1FFFF]	Motherboard resources
[FED20000 - FED8FFFF]	Motherboard resources
[FED45000 - FED8FFFF]	Motherboard resources
[FEE00000 - FEE00FFF]	Motherboard resources
[FF000000 - FFFFFFFF]	Intel(R) 82802 Firmware Hub Device
[FFE00000 - FFFFFFFF]	Motherboard resources

## 4.3 IRQ Mapping Chart

Interrupt request (IRQ)	Device
(ISA) 0x00000004 (04)	Communications Port (COM1)
(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) 0x00000007 (07)	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 USB Universal Host Controller - 27C9
	(PCI) 0x00000013 (19)	Standard AHCI1.0 Serial ATA Controller
	(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) 0xFFFFFFFF (-3)	Realtek PCIe GBE Family Controller
	(PCI) 0xFFFFFFFF (-2)	Intel(R) Graphics Media Accelerator 3600 Series