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# User's Manual

**G03-JC610EN-F**

**Manual version: 2.0**

**Release Date: March, 2011**

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### User's Notice

Copyright of this manual belongs to the manufacturer. No part of this manual, including the products and software described in it may be reproduced, transmitted or translated into any language in any form or by any means without written permission of the manufacturer.

This manual contains all information required for the utilization of this product to meet the user's requirements. But it will change, correct at any time without notice. Manufacturer provides this manual "as is" without warranty of any kind, and will not be liable for any indirect, special, incidental or consequential damages (including damages for loss of profit, loss of business, loss of use of data, interruption of business and the like).

Products and corporate names appearing in this manual may or may not be registered trademarks or copyrights of their respective companies, and they are used only for identification or explanation and to the owner's benefit, without intent to infringe.

### Package Contents





## **CAUTION Safety Instruction**

- Operate the product according to the correct installation steps and with great care to make sure safety and comfort using experience. Please refer to the following safety instruction guide to avoid danger of electric shock or fire. Abide by the previous safety instruction guide to use and maintain the product and the hard disk to make sure of safe operating environment.
- Please follow the instruction manual for operation guide.
- The appropriate operating temperature ranges from 0 °C–35 °C (32 °F–95 °F)
- The operation humidity for this product is 5% to 80% RH.
- To avoid high temperature, please DO NOT overload the maximum power of the external power supply while the system is consuming high voltage. Be aware of the maximum temperature allowance of the power supply.
- See to it that the product is not working near the water.
- Always unplug power cable and other hardware cables from the system before cleaning.
- Apply only dry cloth for cleansing the product.
- Make sure that there is no heat source nearby when the product is working.
- Make sure that the thermal louver of the product is not blocked.
- Make sure to remove the power plug from the product when there is a thunder storm.
- Please remove the power plug from the product when you are not going to use the product for a long time.
- Make sure to set up or use the product on a stable surface.
- Make sure not to drop the product or strike it by any means.
- Make sure not to move the product when the power is on.
- Make sure not to step on the power cables and other cables or rest anything in them..
- Please contact qualified technician for maintenance or repair.
- Use only accessories and parts that are made by the qualified manufacturer.

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# **TABLE OF CONTENT**

USER'S NOTICE .....	ii
PACKAGE CONTENTS .....	ii
SAFETY INSTRUCTION .....	iii
<b>CHAPTER 1 BRIEF INTRODUCTION</b>	
1-1 PRODUCT FEATURES.....	1
1-2 SPECIFICATION .....	4
1-3 FRONT PANEL DIAGRAM.....	5
1-4 REAR PANEL DIAGRAM .....	5
<b>CHAPTER 2 HARDWARE INSTALLATION</b>	
2-1 TO OPEN THE CHASSIS .....	6
2-2 TO INSTALL MEMORY MODULE(S).....	7
2-3 TO INSTALL HARD DISK DRIVE .....	8
2-4 TO INSTALL WIFI ANTENNA .....	10
2-5 TO RESTORE REMOVABLE CHASSIS COVER .....	10
2-6 TO ASSEMBLE THE STAND .....	12
2-7 TO VESA MOUNT THE SYSTEM.....	13
<b>CHAPTER 3 I/O CONNECTION AND REMOTE CONTROL</b>	
3-1 REAR PANEL CONNECTION .....	15
3-2 FRONT PANEL CONNECTION .....	18
NOTICES .....	19

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# Chapter 1 Brief Introduction

## 1.1 Product Features

Thank you for purchasing the system, a new product developed, designed and manufactured under leading technical power and consistent dedication to fine workmanship. The system provides you HTPC enjoyment and stunning game-playing experience. It can also serve as home server for data gather with its expandable Wi-Fi function.

This product has functions of general barebone systems, also a powerful system with competitively advantage in:

### ***HTPC Experience:***

The system has both VGA and HDMI connector, supports optical SPDIF W/192KHz Audio output and true 1080P high resolution video playback with integrated ION Graphic processor the powerful chipset which ensures you brilliant video playback without lag at the same time CPU usage rate is pretty low.

### ***Game-Playing:***

The system supports most online games and PC games with smooth playback better than that of most average configured personal computer available on current market while CPU usage rate is much lower.

### ***Home Server:***

The system can work as WiFi home server in the family with WiFi antenna attached. With this WiFi network, computer in different rooms of the house can easily realize data sharing. You can easily access to the downloaded HD movies stored in the HDD of The system, or watching other shared videos stored in your PC via this function on high definition screen.



**The system has the following features besides other basic functions:**

- **HDMI:** The system comes with an HDMI output connector to realize full HD1080P high-definition multimedia home theatre enjoyment. User can enjoy seamless playback of HD DVD and Blu-ray disk in the living room by connecting system to LCD TV set with an HDMI cable for non-compressed, full digital audio and video movie transmission.
- **SPDIF W/192KHz Audio output:** The system supports optical SPDIF OUT 192KHz/24bit, auto detecting peripheral devices and multi-streaming technology that transferring audio signals in different directions. With this function you can enjoy playing games with multi-channel audio effect on and talking to your friend with a microphone at the same time. It makes you feel that you were right on the scene when you are watching HD movies with its multi-channel Hi-visual dramatic audio output. All these thrilling functions can be realized with the system.

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- **WiFi:** the Mini PCI-E onboard socket in the board is integrated with a WiFi card(802.11 b/g/n) that can act as a mini wireless modem when external antennas are connected. Different computers in the house can build wireless connections through the system and take necessary data from it, thus reducing the complexity in network establishment.
  - **Giga LAN:** The system is integrated with Gigabit LAN network controller with ACPI management realizing efficient power management for the operating system.
  - **USB2.0:** The system supports USB 2.0 function compatible for both USB 2.0 devices and USB 1.1 interface devices. Users can enjoy high speed data transmission rate up to 480Mb/s. Users can also connect USB 2.0 storage device to the system via USB cable to create a data bank for storage of download movies.
  - **MMC/SD/MS 3 in 1 card reader:** Users can easily insert the MMC/SD/MS card to the front panel 3 in 1 card reader to view the photos taken or video recorded. User can watch them through LCD TV screen and make certain edition when it is shown. With a LCD TV you can realize better picture quality for the video and photos.
  - **CPU Usage:** The CPU Usage diagram shows a beautiful data curve that indicate a pretty low CPU usage percentage for 1080p HD video playback when running the system with a 24" LCD monitor to play files of different formats, GPU performances are excellent as well.
  - **dB Value:** The design of the system takes into consideration the needed quiet operating environment in the living room and the average dB value is below 26 under normal operation to ensure the tranquility when you are absorbed in film watching.
  - **Remote Control:** The remote control makes it possible for users to power on/off and switch from different functions with ease.

## 1.2 Specification

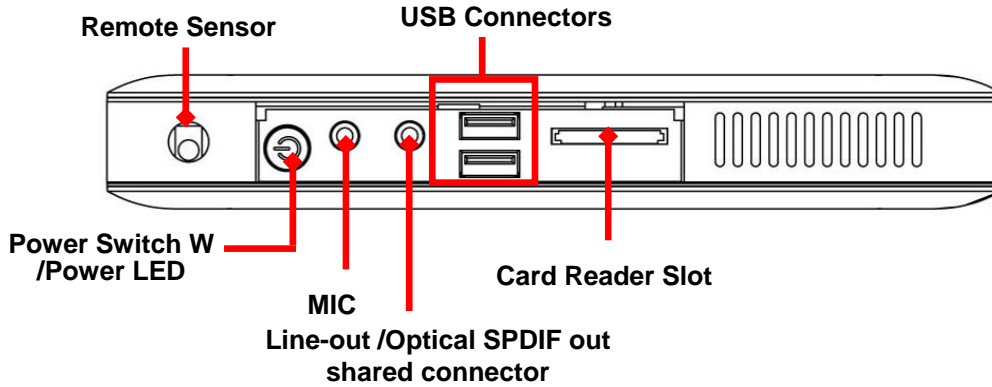
<b>CPU</b>	<ul style="list-style-type: none"> <li>■ VIA Nano CPU Series</li> </ul>
<b>Chipset</b>	<ul style="list-style-type: none"> <li>■ VIA VX900H W/HDCP</li> </ul>
<b>Memory Slots</b>	<ul style="list-style-type: none"> <li>■ 2 * SO-DIMM DDRIII Memory slots support 2 * SO-DIMM DDRIII 800 memory modules up to 4GB</li> </ul>
<b>Ethernet LAN</b>	<ul style="list-style-type: none"> <li>■ Realtek Gigabit LAN chip</li> </ul>
<b>Bios</b>	<ul style="list-style-type: none"> <li>■ AMI 8MB flash ROM</li> </ul>
<b>Product Size</b>	<ul style="list-style-type: none"> <li>■ 205(W)*185(D)*30(H)mm</li> </ul>
<b>Front I/O port</b>	<ul style="list-style-type: none"> <li>■ 2 * USB 2.0 ports</li> <li>■ 1 * Power button</li> <li>■ 1 * card reader(SDC/MMC/MS)</li> <li>■ 1 * MIC and 1*headphone</li> <li>■ 1 * power LED</li> </ul>
<b>Rear I/O port</b>	<ul style="list-style-type: none"> <li>■ 2 * USB 2.0 ports</li> <li>■ 1 * HDMI + VGA port</li> <li>■ 1 * LAN port</li> <li>■ 1 * E-SATA/USB shared port</li> <li>■ 1 * Antenna Hole</li> <li>■ 1 * power connector</li> </ul>
<b>Power Supply</b>	<ul style="list-style-type: none"> <li>■ 1 * 12V DC-in</li> </ul>
<b>Standard Accessories</b>	<ul style="list-style-type: none"> <li>■ 1 * 60W AC-DC Adapter</li> <li>■ 1 * power cord</li> <li>■ 1 * remote control</li> <li>■ 1* stand</li> <li>■ WIFI antenna</li> </ul>
<b>Optional Accessories</b>	<ul style="list-style-type: none"> <li>■ Wireless keyboard/Wireless microphone/Wireless microphone receiver</li> <li>■ VSEA mount bracket</li> </ul>
<b>Certificate</b>	<ul style="list-style-type: none"> <li>■ CE,FCC for barebone</li> <li>■ CE,FCC,TUV,UL,CCC,CB for power adapter</li> <li>■ Comply with Eup standards</li> </ul>

**Notice:** The following diagrams are for illustration use only. Please refer to the product you purchase for actual specification.

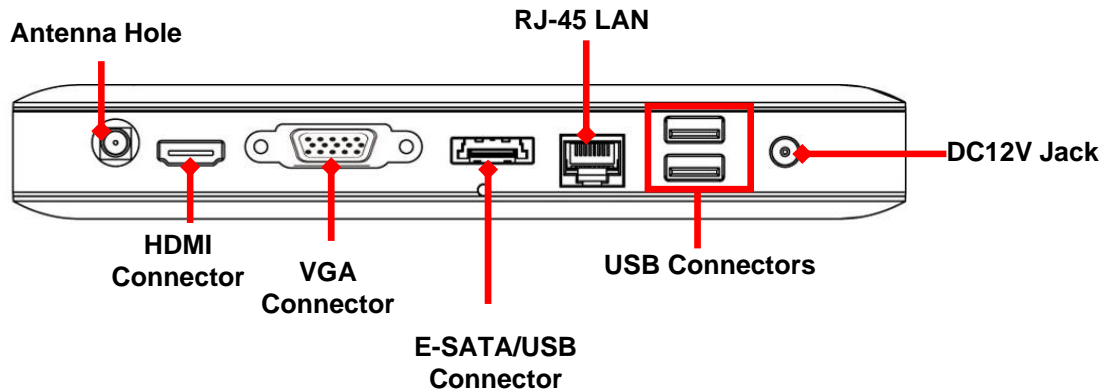
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### 1.3 Front Panel Diagram



### 1.4 Rear Panel Diagram



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## Chapter 2 Hardware Installation

**WARNING!**

Please turn off the system and make sure that power cord is unplugged before hardware installation to ensure safety.

### 2.1 To Open the Chassis



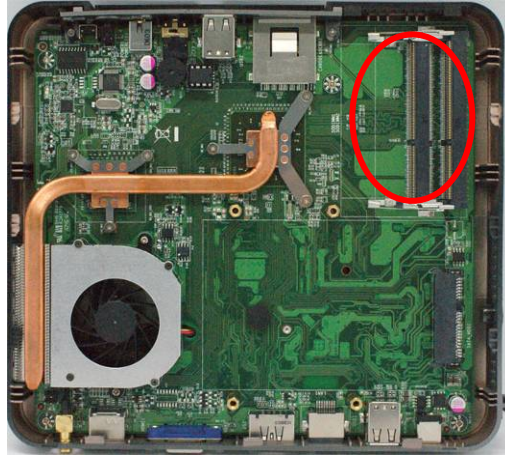
1. Place the system on a flat surface and put the 2. side with removable cover upwards. Put down the front panel I/O shield.

Push the removable panel in the direction towards the back panel. You can easily open the chassis in this way.

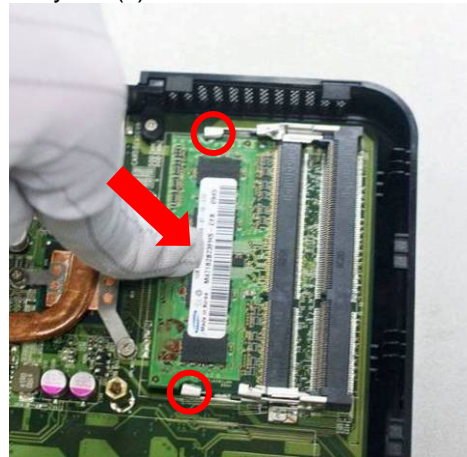
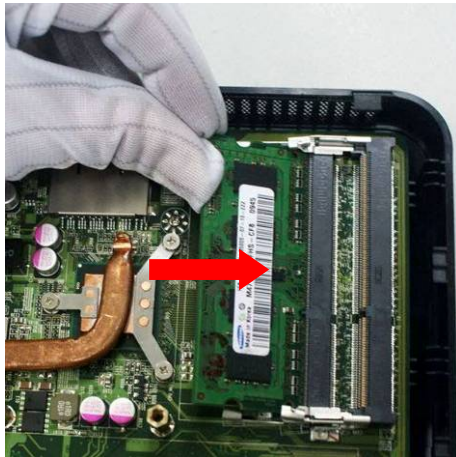
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## 2.2 To Install Memory Module(s)



1. Locate the SO-DIMM memory slot(s) on the board.



3. Insert the gold-figure side of the compatible DDRIII SO-DIMM into the slot at a 30 degree.
4. Press down as the photo shows. The eject tabs will lock it if installed correctly.

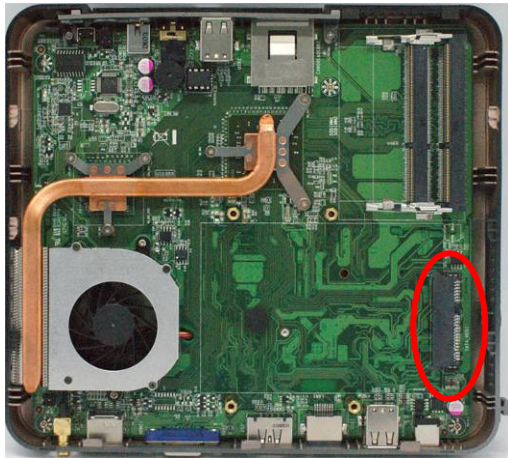
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**Notice:**

- When installing, align the notch on the module matches the break on the slot. Memory module can only be installed in such a direction. If not, it will cause serious damage to module and the board.
- When you install memory module fully into the DIMM socket the eject tab should be locked into the module very firmly and fit into its indentation on both sides.

## 2.3 To Install Hard Disk Drive



1. Locate HDD connector on the motherboard as the photo shows.



2. The SATA hard disk and the hard disk racks (see to it that the marked screw holes on rack and the corresponding holes on both edges of HDD).



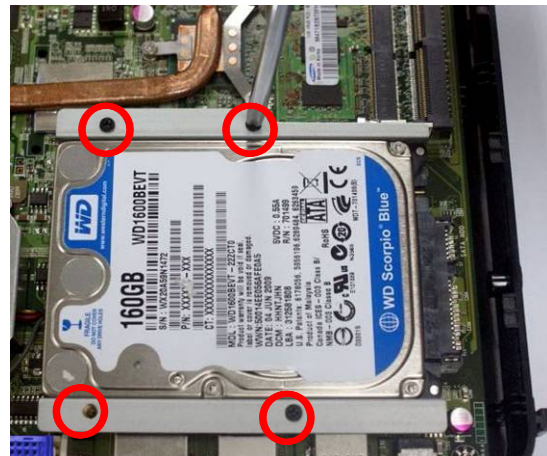
3. Lock the SATA hard disk to one of the racks by tightening the screws in the marked position.



4. Lock the SATA hard disk to the other rack by tightening the screws in the marked position.



5. Fit the hard disk into HDD connector on the motherboard in this direction.



6. Lock the racks to the board by tightening up the screws in the marked position with a screwdriver.

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## 2.4 To Install WIFI Antenna



1. Locate the marked antenna hole on back panel.
2. Then connect the external WiFi receiver antenna to it.

## 2.5 To Restore Removable Chassis Cover



1. Gently put the removable cover back to the chassis
2. This edge with 3 plastic equidistant notches should be parallel to edge of the chassis' back panel.



3. Place the removable cover upon the chassis. See to it that the left and right edges of the cover should be parallel to those of the chassis and there should be a distance of about 1 cm left between the front edge and the front panel of the chassis as the photo shows.



4. Put the side of I/O back panel towards you and push the removable cover of the chassis in the direction forwards.

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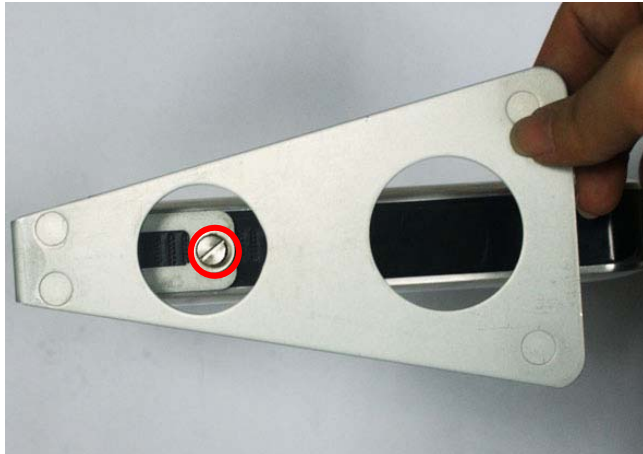
## 2.6 To Assemble the Stand



1. See to it that the marked square space fitted into the square notch on the chassis.



2. See to it that the marked tiny round space and the screw hole in on the chassis are in the same place.



3. Lock the stand to the chassis by tightening up a screw to the marked place.

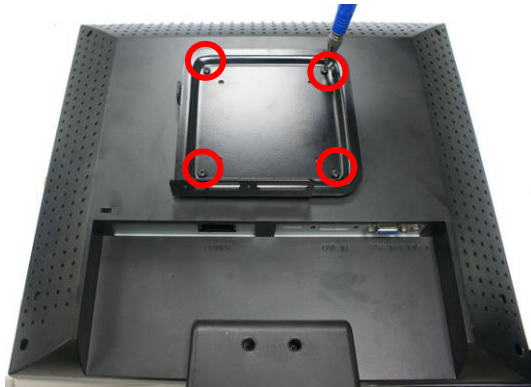


4. The photo of the system supports with stand installed.

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## 2.7 To VESA Mount the System



1. Attach the chassis rack to the back of monitor by tightening up the screws in the marked position.



2. See to it that the square notch on the chassis is fitted into the marked square space on the stand and marked notch on the back panel of the chassis fitted in the round space of the VESA mount rack.



3. The square notch on the chassis and the square space on the stand.



4. Lock the chassis to the rack by tightening up the screw in the marked position.

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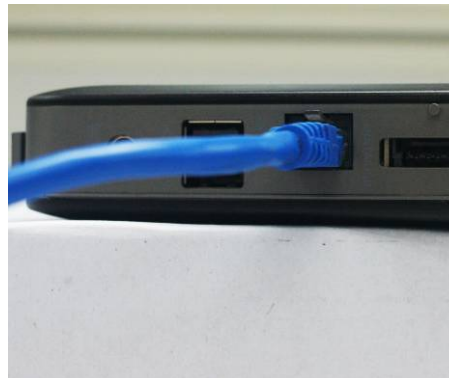
## Chapter 3 I/O Connection and Remote Control

After needed hardware installed inside the chassis, you can proceed on to connect cables to the rear panel and power on the system.

### 3.1 Rear Panel Connection



USB Connector: There are 3\*USB connectors on rear IO panel (one is USB/E-SATA shared connector that functions according to device connected) and 2\*USB connectors on the front panel to connect USB mouse, keyboard and other USB storage devices to the system.



RJ-45 Connector: The connector is standard RJ-45 connector for network. Please connect to the network cable to this connector.



**USB/E-SATA Shared Connector:** The function of this connector depends on different device connected to this connector through different cable.

It could function as:

- E-SATA connector when a compatible ESATA hard disk is connected to it through SATA cable.
- USB connector when a compatible USB device is connected to it through USB cable.



**VGA Connector:** VGA connector is the 15-pin D-sub female connector; it is for the display devices, such as the CRT monitor, LCD monitor and so on.



HDMI (High-Definition Multimedia Interface): This point-to-point interface is for audio and video signals designed as a single-cable solution for home theater and consumer electronics equipment.

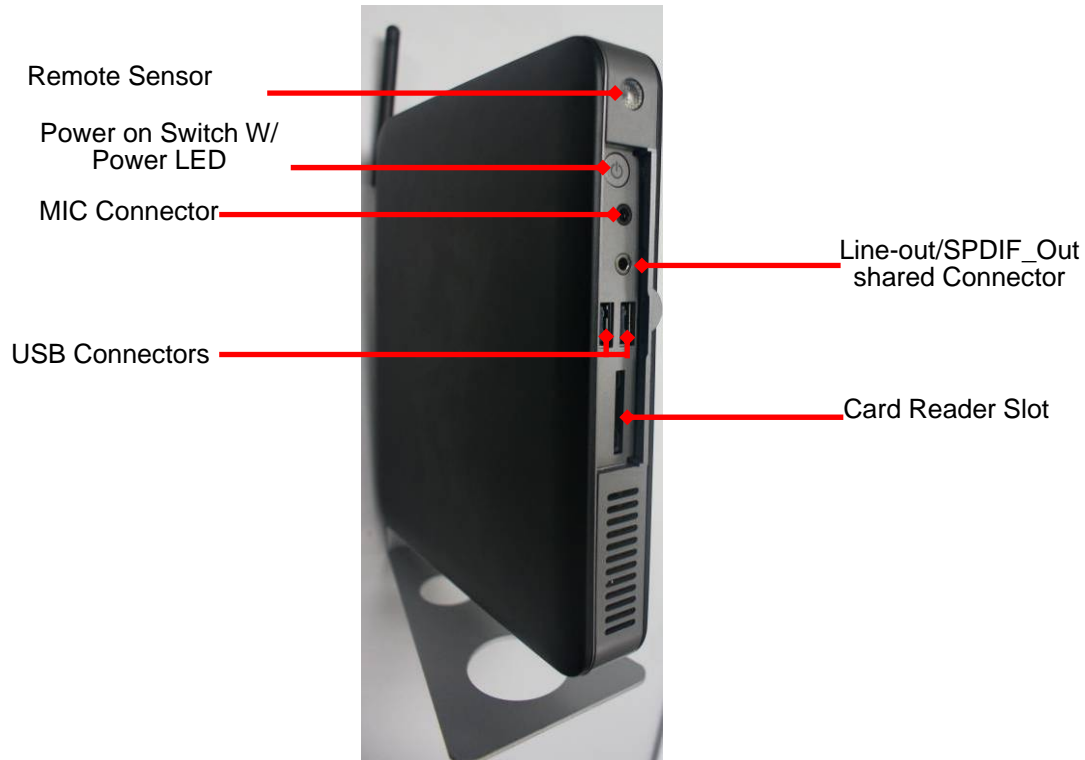


DC12V Jack: Connect the power adapter to DC12V jack after connecting connector power cord to adapter. Then Turn on the system either by power switch on front panel or remote control when all necessary configuration are made.

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## 3.2 Front Panel Connection



**Card Reader Slot:** to insert the MMC/SD/MS card to the front 3 in 1 card reader.

**USB Connectors:** to connect USB mouse, keyboard and other USB storage devices to the system.

**Line-Out /Optical SPDIF out shared Connector:** this connector can function as ordinary audio line-out connector or optical SPDIF out connector depending on different device connected to it:

- **Audio Line-out connector:** by connecting stereo speakers or headphones.
- **Optical SPDIF out connector:** by connecting Realtek 6-Channel HD Audio CODEC w/ SPDIF out audio output device for superior audio enjoyment.

**MIC Connector:** User can connect microphone device to this port.

**Power on Switch:** after needed hardware installed and correct configuration made, you can power on the system to enjoy multi-functions the system brings to you.

**Remote Sensor:** to receive instruction signal from remote control.

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# Notices

## General Notices

European Union CE Marking and Compliance Notices

Products intended for sale within the European Union are marked with the Conformity European (CE) Making, which indicates compliance with the applicable Directive and European standards and amendments identified.

### Shielded Cables Notice

All connections to other computing devices must be made using shielded cables to maintain compliance with FCC regulations.

### Peripheral Devices Notice

Only peripherals (input/out devices, terminals, printers, etc) certified to comply with Class B limits may be attached to this equipment. Operation with non-certified peripherals is likely to result in interference to radio and TV reception.

## Wireless Related Information

Wireless Interoperability

Wireless LAN PCI Express Mini Card is designed to be interoperable with any wireless LAN product that is based on Direct Sequence Spread Spectrum (DSSS), Complementary Code Keying (CKK), and/or Orthogonal Frequency Division Multiplexing (OFDM) radio technology, and is compliant to:

The IEEE802.11a/b/g/n Standard on Wireless LANs was defined and approved by the Institute of Electrical and Electronics Engineers.

The Wireless Fidelity (WiFi) certification as defined by the Wi-Fi Alliance.

### Usage Environment and Your Health

Wireless LAN PCI Express Mini Card emits radio frequency electromagnetic energy like other radio devices. However, the level of energy emitted is far much less than the electromagnetic energy emitted by wireless devices like for example mobile phones.

Due to the fact that Wireless LAN PCI Express Mini Card operates within the guidelines found in radio frequency safety standards and recommendations, we believe the integrated wireless cards are safe

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for use by consumers. These standards and recommendations reflect the consensus of the scientific community and result from deliberations of panels and committees of scientists who continually review and interpret the extensive research literature.

In some situation or environment, the use of Wireless LAN PCI Express

Mini Card may be restricted by the proprietor of the building or responsible representatives of the organization. These situations may for example include:

Using the integrated wireless cards on board of airplanes, or in hospitals

In any other environment that the risk of interference to other devices and service are perceived or identified to be harmful.

If you are uncertain of the policy that applies on the use of wireless devices in a specific organization (e.g., airport or hospital), you are encouraged to ask for authorization to use Wireless LAN PCI Express Mini Card prior to turning on the computer.

## **Electronic Emissions Notices**

### **European Union Compliance Statement Class B Compliance**

European Union – Compliance to the Electromagnetic Compatibility Directive

This product is in conformity with the protection requirements of EU Council Directive 2004/108/EC on the approximation of the laws of the Member States relating to electromagnetic compatibility. We cannot accept responsibility for any failure to satisfy the protection requirements resulting from a non-recommended modification of the product, including the installation of option cards from other manufacturers.

This product has been tested and found to comply with the limits Class B Information Technology Equipment according to European Standard EN55022. The limits for Class B equipment were derived for typical residential environments to provide reasonable protection against interference with licensed communication devices.

Properly shielded and grounded cables and connectors must be used in order to reduce the potential for causing interference to radio and TV communications and to other electrical or electronic

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equipment.

## **FCC Rules and Regulations-Part 15**

This device uses, generates and radiates radio frequency energy. The radio frequency energy produced by this device is well below the maximum exposure allowed by the Federal Communications Commission (FCC)

- This device complies with the limits for the Class B digital device pursuant to Part 15 subject to the following two conditions:
- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

The FCC limits are designed to provide reasonable protection against harmful interference when the equipment is installed and used in accordance with the instruction manual and operated in a commercial environment. However, there is no guarantee that interference will not occur in a particular commercial installation, or if operated in a residential area.

If harmful interference with radio or television reception occurs when the device is turned on, the user must correct the situation at the user's own expense. The user is encouraged to try one or more of the following corrective measures:

- Re-orient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that on which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**CAUTION:** The Part 15 radio device operates on a non-interference basis with other devices operating at this frequency. Any changes or modification to said product not expressly approved by Intel could void the user's authority to operate this device.