Mini-TOP Series

User's Manual

No: G03-JC600EN3-F

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User's Notice

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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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Chapter 1 Brief Introduction

1.1 Product Features

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

Mini-TOP is not just a general barebone system, but a powerful system with competitively advantage in:

HTPC Experience:

Mini-TOP system has both DVI 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:

Mini-TOP 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:

Mini-TOP 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 Mini-TOP, or watching other shared videos stored in your PC via this function on high definition screen.



Mini-TOP has the following features besides other basic functions:

- ***HDMI:*** Mini-TOP series, an HTPC system, come 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:*** Mini-TOP series 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 Mini-TOP HTPC system.

- ***WiFi:*** the Mini PCI-E onboard socket in the board is integrated a 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 ION TOP system and take necessary data from it, thus reducing the complexity in network establishment.

- ***Giga LAN***: Mini-TOP series are integrated with Gigabit LAN network controller with ACPI management realizing efficient power management for the operating system.

- ***USB2.0***: Mini-TOP series support 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 Mini-TOP system with a 24'' LCD monitor to play files of different formats, GPU performances are excellent as well.

- ***dB Value:*** The design of Mini-TOP 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.

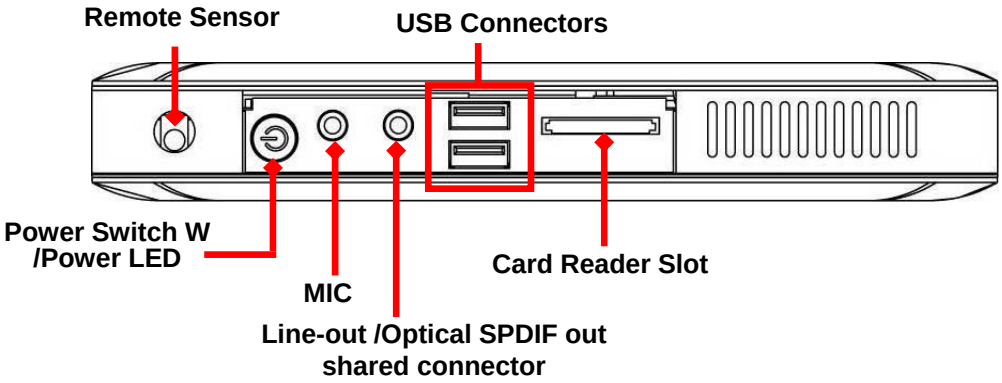
- **Remote Control**: The remote control makes it possible for users to power on/off and switch from different functions with ease.

1.2 Specification

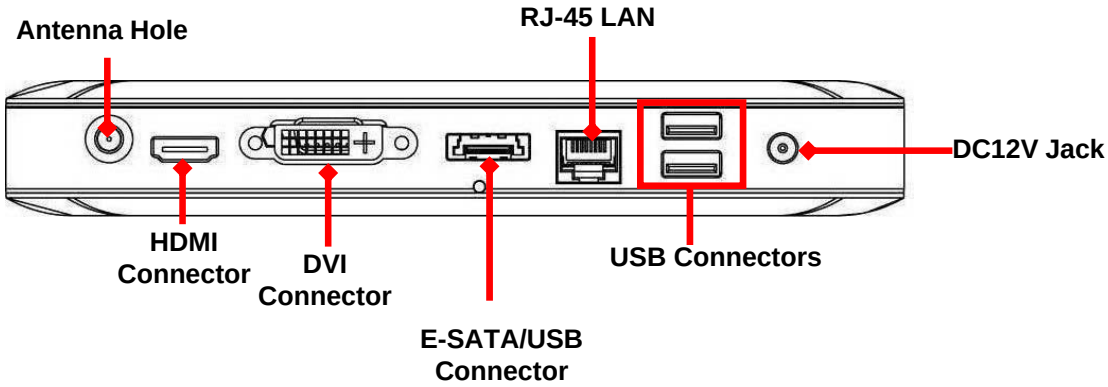
CPU	■ Intel Atom™ D525 dual core CPU ■ Clock: 1.80 GHz
Chipset	■ Intel NM10 + nVidia GT218 GPU
Memory Slots	■ 2 * SO-DIMM DDRIII Memory slots support 2 * SO-DIMM DDRIII 800 memory modules up to 4GB
Ethernet LAN	■ Realtek Gigabit LAN chip
Bios	■ AMI 8MB flash ROM
Product Size	■ 205(W)*185(D)*30(H)mm
Front I/O port	■ 2 * USB 2.0 ports ■ 1 * Power button ■ 1 * card reader(SDC/MMC/MS) ■ 1 * MIC and 1*headphone ■ 1 * power LED
Rear I/O port	■ 2 * USB 2.0 ports ■ 1 * HDMI + DVI-I port ■ 1 * LAN port ■ 1 * E-SATA/USB shared port ■ 1 * Antenna Hole ■ 1 * power connector
Power Supply	■ 1 * 12V DC-in
Standard Accessories	■ 1 * 60W AC-DC Adapter ■ 1 * power cord ■ 1 * remote control ■ 1* stand ■ WIFI antenna
Optional Accessories	■ Wireless keyboard/Wireless microphone/Wireless microphone receiver ■ VSEA mount bracket
Certificate	■ CE,FCC for barebone ■ CE,FCC,TUV,UL,CCC,CB for power adapter ■ Comply with Eup standards

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

1.3 Front Panel Diagram



1.4 Rear Panel Diagram



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





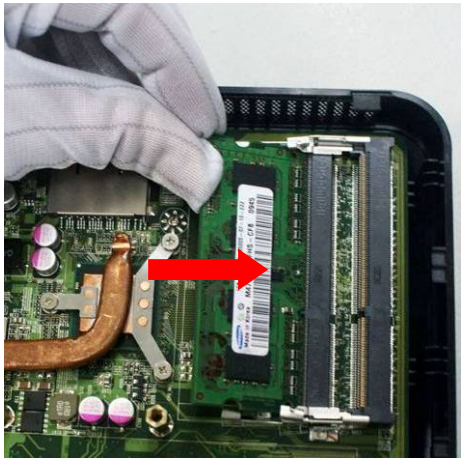
1. Place the system on a flat surface and put the side with removable cover upwards. Put down the front panel I/O shield.

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

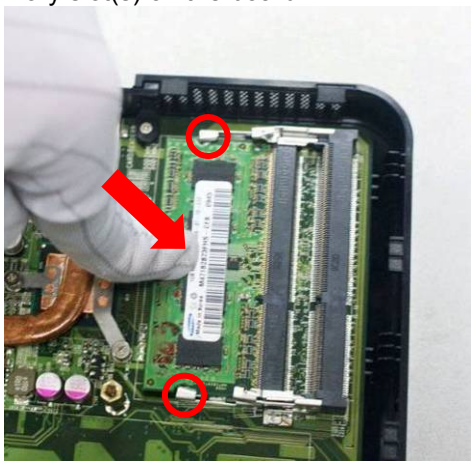
2.2 To Install Memory Module(s)



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.

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 indention 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).



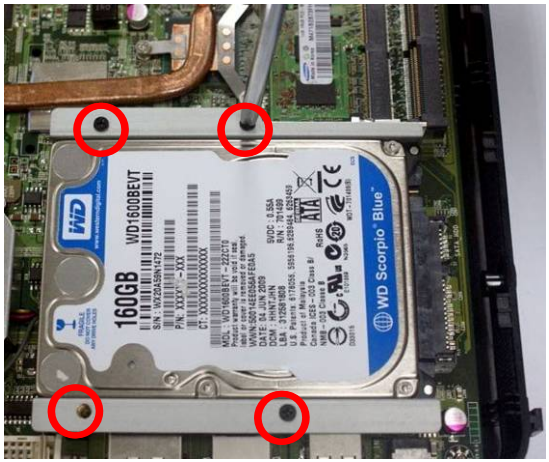
3. Lock the SATA hard disk to one of the racks by tightening the screws in the marked position.



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.

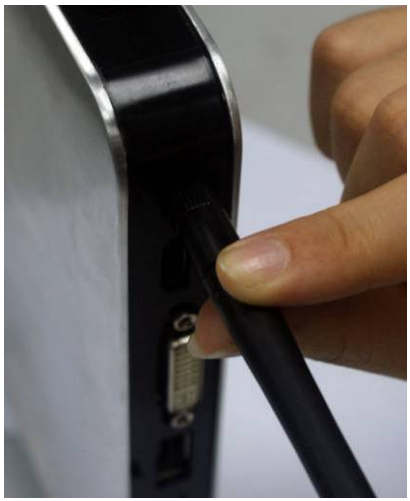


6. Lock the racks to the board by tightening up the screws in the marked position with a screwdriver.

2.4 To Install WIFI Antenna



1. Locate the marked antenna hole on back panel.

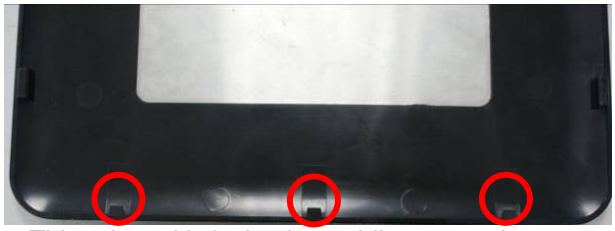


2. Then connect the external WiFi receiver antenna to it.

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.

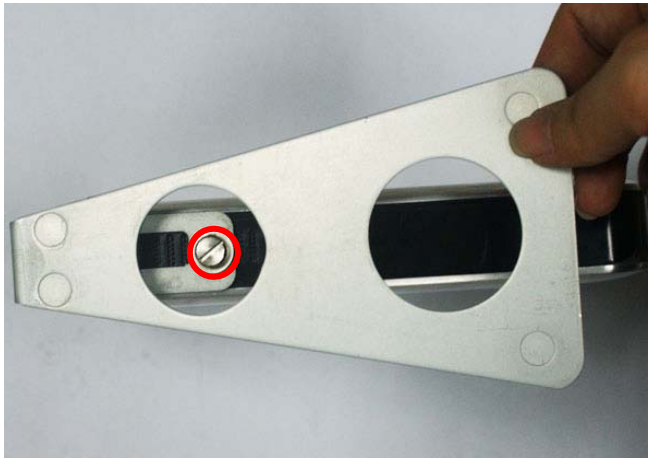
2.6 To Assemble the Stand



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.

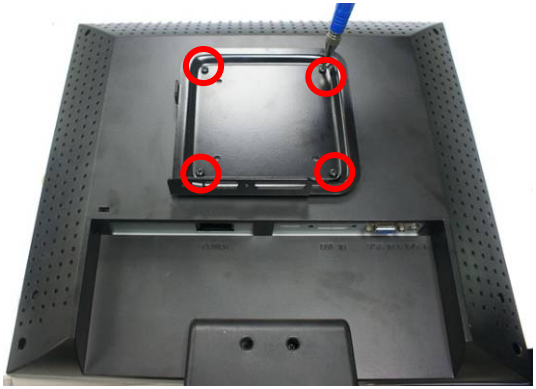


3. Lock the stand to the chassis by tightening up a screw to the marked place.



4. The photo of Mini-TOP with stand installed.

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.

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 to enjoy the using Mini-TOP.

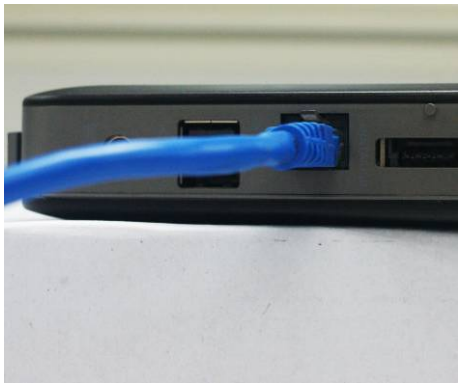
3.1 Rear Panel Connection





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.





DVI (Digital Visual Interface) Connector: This interface standard designed to maximize the visual quality of digital display devices such as flat panel LCD computer displays and digital projectors.





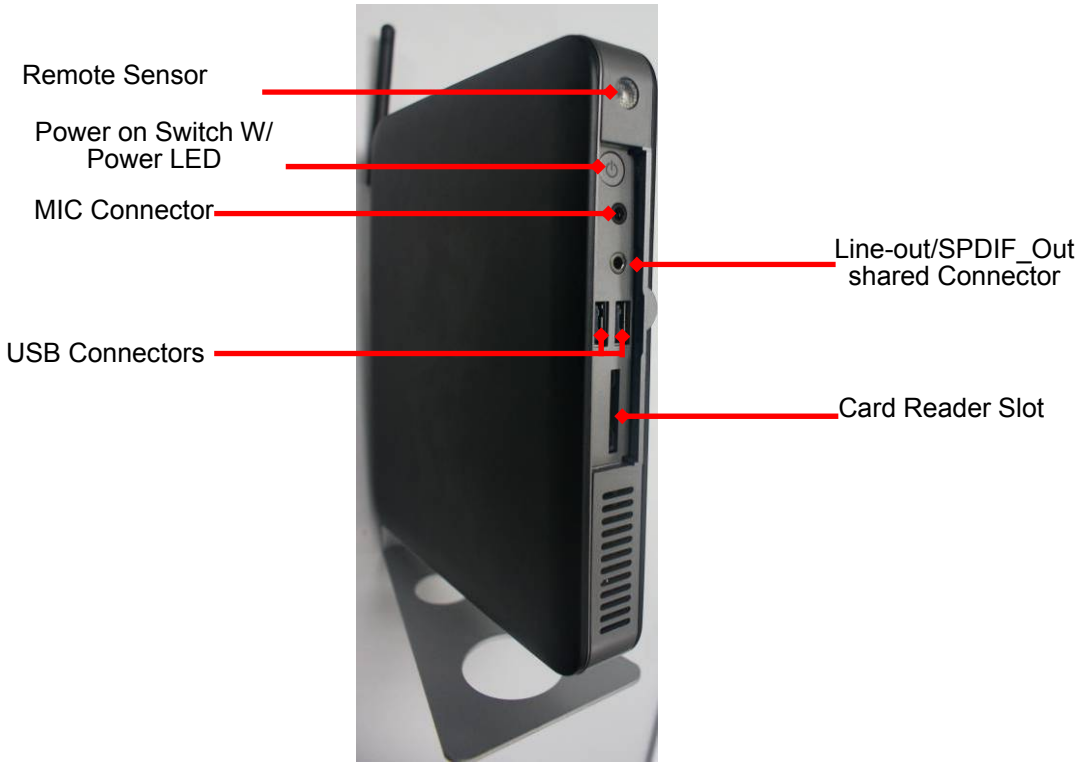
HDMI (High-Definition Multimedia Interface): This point-to-point interface is for audio and video signals designed as a single-cable solution for home theater and consumer electronics equipment.





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.

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 Mini-TOP brings to you.
Remote Sensor： to receive instruction signal from remote control.

3.3 Remote Control Diagram



The accessories of Mini-TOP include a remote control with which you could easily carry out a lot functions to bring you the friendly user-experience during HTPC watching, Karaoke, and other functions.

3.4 Function Description of the Remote Control

Icon	Function Description
 Power	Press this button to power on/shut down the computer.
 STANDBY	Press to set computer into sleep mode.
 ESC	The 'ESC' key on the keyboard.
 CLOSE	Close the currently activated dialog box or task.
 DVD MENU	Opens the play DVD window in the Windows Media Center or opens the main menu or a DVD movie, if available.
 PICTURES	Opens the Picture Library window in Windows Media Center.
 Music	Opens the Music Library window in Windows Media Center
 VIDEO	Opens the Videos Library windows in Windows Media Center.
 Mouse	Mouse Control PAD and left/right button.

 lock	This is to be used with mouse control buttons for drag operation. Press and hold “Lock” to select the object and move cursor at the same time to desired position press again to un-lock.
 OK	The ‘Enter’ key on the keyboard.
	The direction key that control the cursor movement.
 Magnifier	The magnifier functions under win7. If you want to close this function must use the mouse to click the magnifier logo. Click again to close the dialog.
 VOL +/-	Increase (+) and decrease (-) volume.
 Media Center	Opens the Windows Media Center main menu.
 PG(CH) +/-	Changes the TV channels or moves page up and down, depending on available options. Move to next DVD chapter.
	The Media player control button group.
 Back	Windows common dialog step backward function button.

 Forward	Windows common dialog forward function.
 WWW	Opens internet explorer.
 Full Screen	Full screen function button.
 Delete	To delete selected function.
 DeskTop	To fast return desktop button.
 Mic OSD	Press the Mic OSD button on remote control to invoke the on-screen-display Karaoke microphone/audio options during Karaoke.
 Windows Toggle	Windows select button, when multiple dialog boxes are open.
 Mute	Turns off computer sound. The word 'Mute' is displayed when Mute is turned on.

Chapter 4 New Vision User Interface

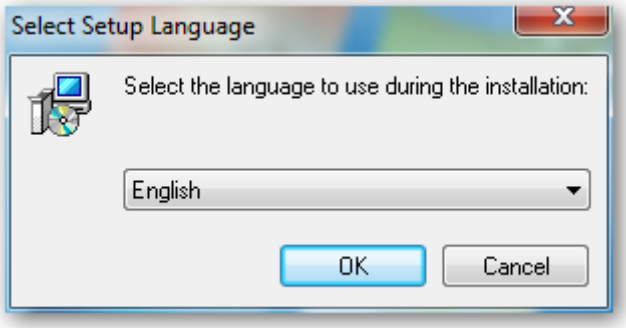
After necessary hardwares installed and needed connections made, please install the operating system and motherboard utility driver. There is also a 'New Vision' user interface disk attached in the package, please find and install it afterwards to enjoy more HTPC functions provided by Mini-top!

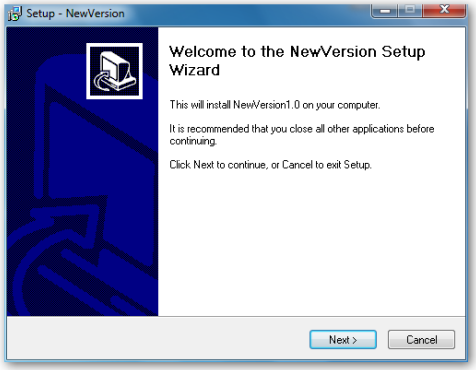
New Vision provide quick platform for user to play video, music and games or browse pictures easily. There are also functions specialized for KARAOKE enjoyment. User can also add new program to this platform.

4-1. To Install New Vision User Interface

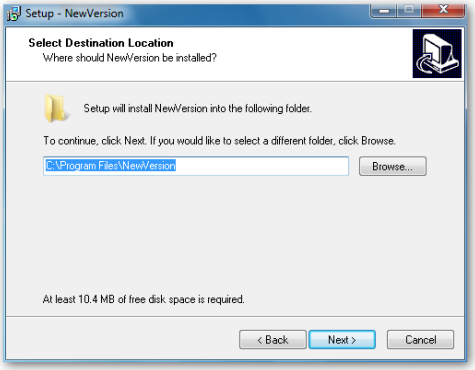
Notice: New Vision User Interface can only be run under 32-bit Windows Vista/7.

Double click the program 'New Vision' or right-click it then click 'Open' to activate the program. A menu as below shall appear to ask you to select setup language. Choose one then click 'OK' to begin installation.

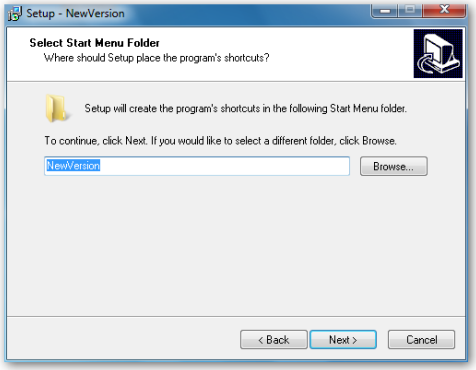




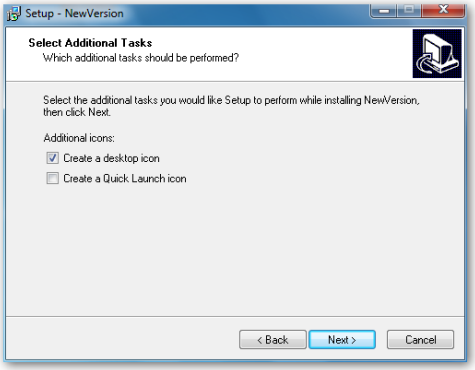
1. Click ‘Next’ on the welcom setup wizard menu.



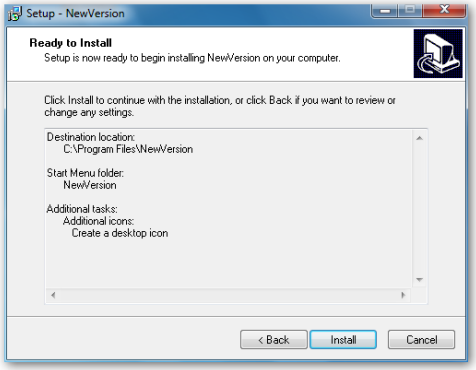
2. Select destination location, then click ‘Next’.



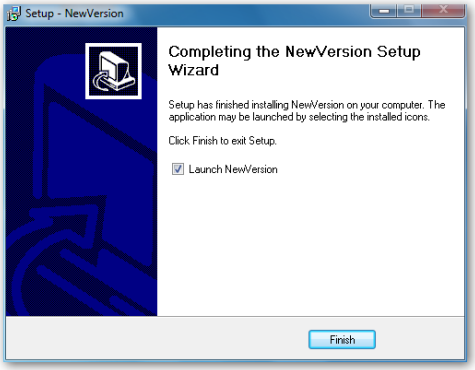
3. Click ‘Next’ to select a start menu folder. If you would like to select a different folder, click ‘Browse’.



4. Select the additional tasks you would like Setup to perform while installing New Vision, then click ‘Next’.



5. Click ‘Install’ to continue the installation, or click ‘Back’ if you want to review or change any previous settings.



6. Click ‘Finish’ to complete the setup. The application may be launched by selecting the installed icons.

Notice! Before you find the New Vision user interface program in the DVD that comes with the system and install it in default destination location, please install Windows operating system and motherboard driver.

4-2. To Activate New Vision Program

Double click New Vision shortcut or right-click on it, then click 'Open' to activate New Vision User Interface after installation completed. The following screen shall show up:



Click on the New Vision square frame to continue executing (User can use [Enter] on keyboard or [OK] on remote control to enter as well). User shall do this in 11 seconds; otherwise the program will exit automatically.

Notice! Click *Start/ Control Panel/ User Accounts and Family Safety/ User Account,* and then click *Make Changes to your user account*. The system will ask you to choose when to be notified about changes to your computer. Pull the scrollbar to the end of the pull-down menu so that system will ***Never Notify***. Click *OK* and restart computer to execute the settings.

4-3. New Vision User Interface Basic Operations

As shown in the photo below, you will see New Vision main menu. Before explaining the menu options, let's learn the function keys first listed on the bottom part of the screen.

- Press **direction key Up/Down** (↑ / ↓)on keyboard or remote control to select the options you wish to confirm or make changes.
- Press **direction key Left (←)** on keyboard or remote control to return to previous page.
- Press **[Delete]** on keyboard to delete the added programs, the default programs cannot be deleted.



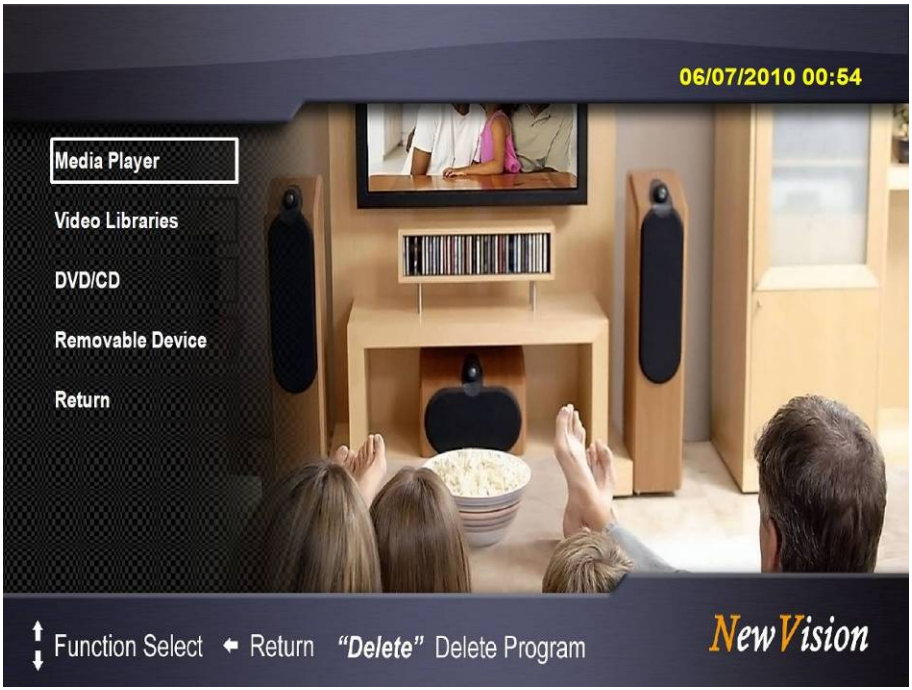
New Vision User Interface Main Menu

4-3-1. To Play Video



Play Video: Select this option to play Video

Use **direction key Up/Down** (↑/↓) on keyboard or remote control to select 'Play Video' on the main menu. Click [OK] on remote control (or the left button of the mouse, or press [Enter] on keyboard) to confirm.



When playing the video, use the following remote control buttons to change settings:



VOL+/-: Volume Up/Down; 

:Rewind ; 

: Forward; 

: Play/Pause; 

:Replay; 

: Skip; 

: Stop.

Media Player: use Windows Media Player to playback video.

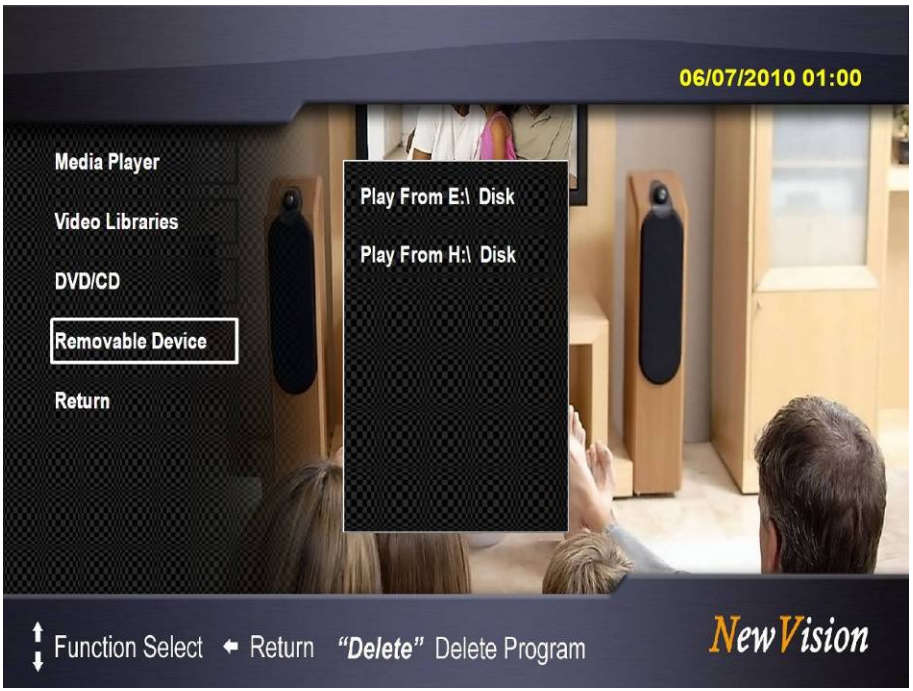
Video Libraries：playback video in Video Libraries of your system using user preset media player.

DVD/CD： play video from DVD/VD. User should install DVD/CD into the optical disk

drive in advance.

Removable Device： Playback video from removable devices. Press Up/Down to select the desired removable device.

Return： Press Left key "←" on remote control or keyboard) to return to previous page.



Notice! Please make sure that the removable device is properly connected to the system before playing video.

4-3-2. To Play Music



Play Music: Select this option to play music.

Use **Up/Down** (↑/↓) button on remote control or keyboard to select 'Play Music' on the main menu. Press [OK] on remote control (or click the left button of the mouse, or press [Enter] on keyboard or) to confirm.



Music Libraries：play music from Video Libraries of your system using user preset media player

DVD/CD：play music from DVD/VD. Insert DVD/CD into the optical disk drive in advance

Removable Device：Playback music from removable devices. Press Up/Down to select the desired removable device.

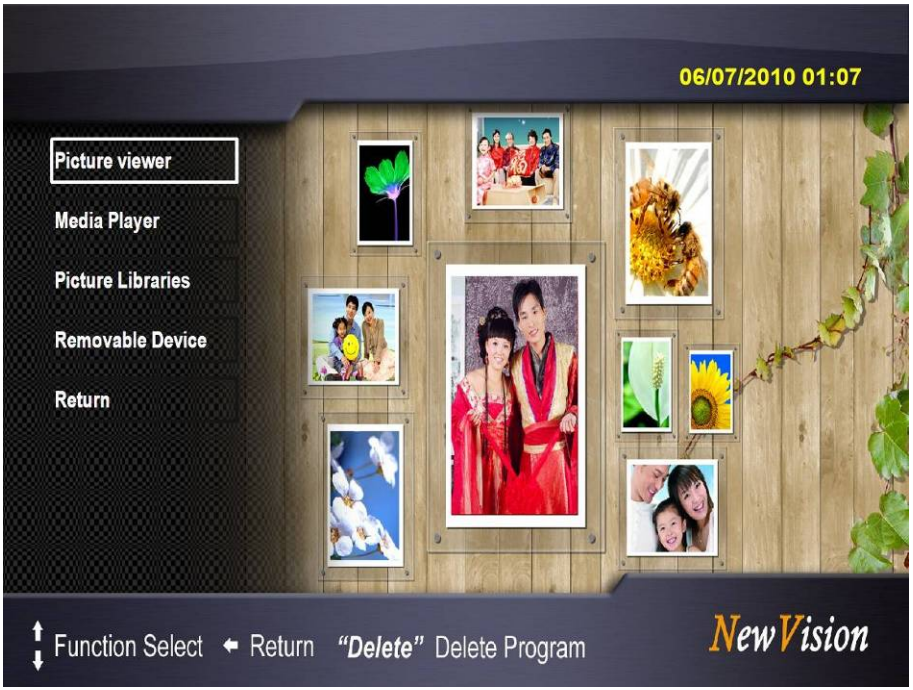
Return：Press Left key "←" on remote control or keyboard) to return to previous page.

4-3-3. To Browse Pictures



Browse Pictures: Select this option to browse pictures.

Press **Up/Down** (↑/↓) on remote control or keyboard to select 'Browse Pictures' on the main menu. Click [OK] on remote control (or the left button of the mouse, or press [Enter] on keyboard or) to confirm.



Picture Viewer: browse pictures stored in the computer by Microsoft Picture Viewer

Media Player: use Windows Media Player to browse pictures.

Picture Libraries：Browse pictures listed in Picture Libraries of Windows system.

Removable Device：Browse pictures stored in desired removable device.

Return：Press Left key "←" on remote control or keyboard) to return to previous page.

4-3-4. KARAOKE



KARAOKE: Enjoy the fun of Karaoke with interesting audio settings.

Press **Up/Down** (↑/↓) key on remote control or keyboard to select 'KARAOKE' function. Press [OK] on remote control (or the left button of the mouse, or [Enter] on keyboard) to confirm. Set up and connect the equipped wireless microphone first before using this function.



Video Libraries：Find and play music video in Videos Libraries.

KARAOKE：Play music video/music in DVD/CD. Insert DVD/CD into the optical disk drive in advance.

Removable Device：play music/music video in desired removable device.

Return：Press Left key "←" on remote control or keyboard) to return to previous page.

Delete: Press the DEL on keyboard to delete programs user added later to the menu (the default programs cannot be deleted).

Mic OSD: Press the Mic OSD button on remote control to invoke the on-screen-display Karaoke microphone/audio options during Karaoke.

Mic Onscreen Display has the following options:

- **Mic Volume:** increase or decrease the volume of MIC.
- **Mic Echo:** increase or decrease the echo effect of MIC.
- **Mic Magic Voice:** change MIC input voice into a desired magic voice.
- **Change Key:** change the key of the music upward or downward to meet singer's desired key.
- **Vocal Cancellation:** cancel vocal in the music or turn the vocal to background play.
- **Reset:** return to Mic OSD default settings.

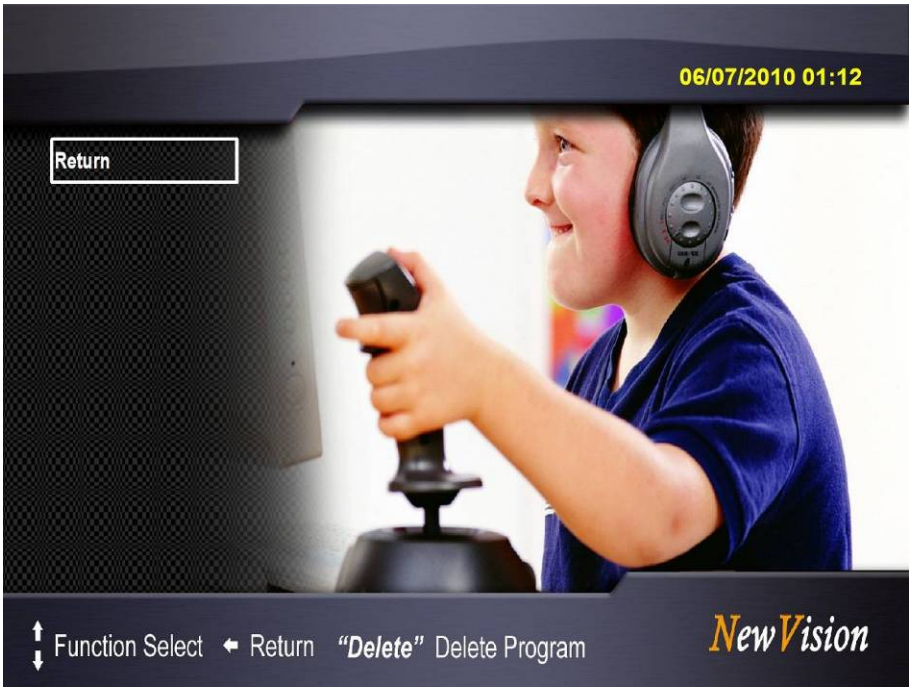
Press remote control or keyboard key **Up/Down** (↑/↓) to select options on OSD, **Left** (←**)** to decrease value, and **Right**(→**)** t**o** increase value.Press **[OK]** on remote control (or **[Enter] on the keyboard**) to enable or disable the selected options. Please take notice that Mic Echo, Mic Magic voice, Change Key and Vocal Cancellation functions are disabled as default settings. To enable these four options, user need to connect equipped wireless microphone to the system and install needed sound programs.

4-3-5. Game Menu



Game Menu: Select this option to play game listed on game menu.

Press **Up/Down** (↑/↓) on remote control or keyboard or to select 'Game Menu' on the main menu. Press [OK] on remote control (or the left button of the mouse, or press [Enter] on keyboard) to confirm.



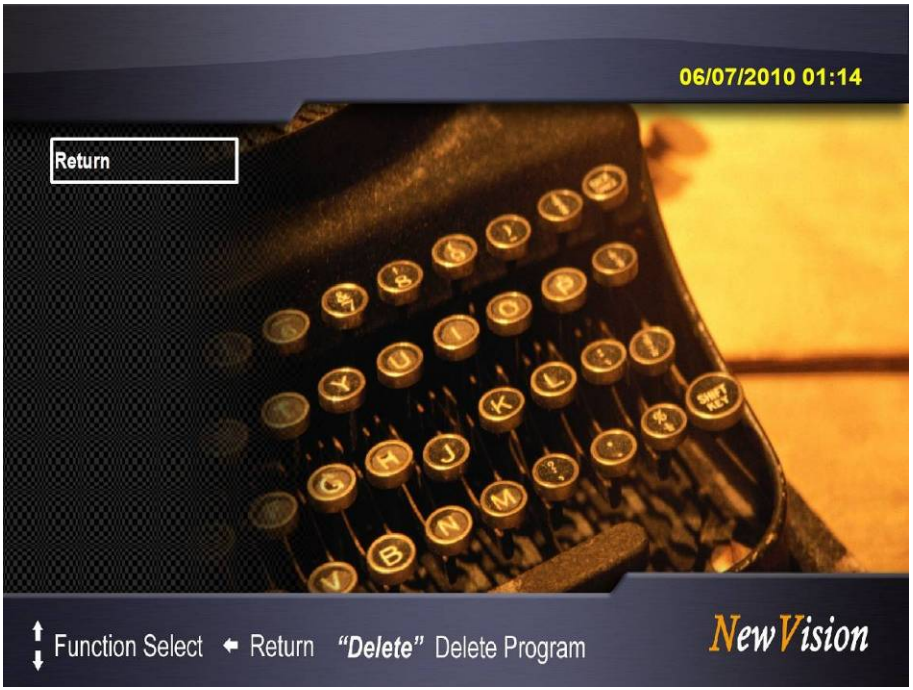
The packaged New Vision software has no game program added to the list by default. User shall add game programs as desired to the list through ‘Add Program’ option on main menu. For more detail on how to add program please refer to 4-3-7.

4-3-6. Other Program



Other Program：User can add programs to this list

Press **Up/Down** (↑/↓) on remote control or keyboard to select 'Other Program' on the main menu. Press [OK] on remote control (or the left button of the mouse, or press [Enter] on keyboard) to confirm.



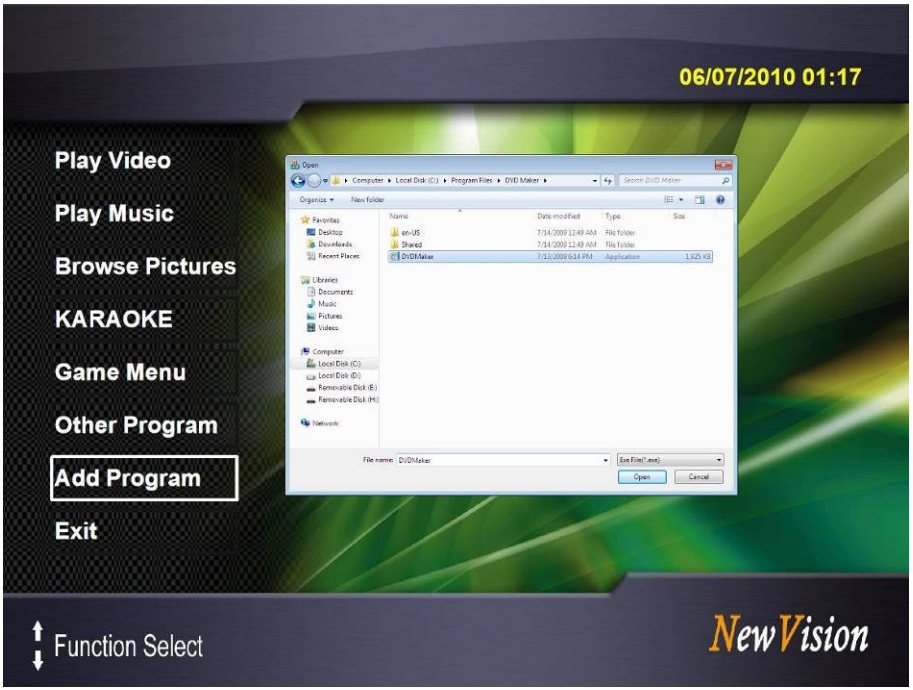
The default setting for New Vision has no program added to the list by default. User shall add other programs as desired to the list through ‘Add Program’ option on main menu. For more detail on how to add program please refer to 4-3-7.

4-3-7. To Add Program

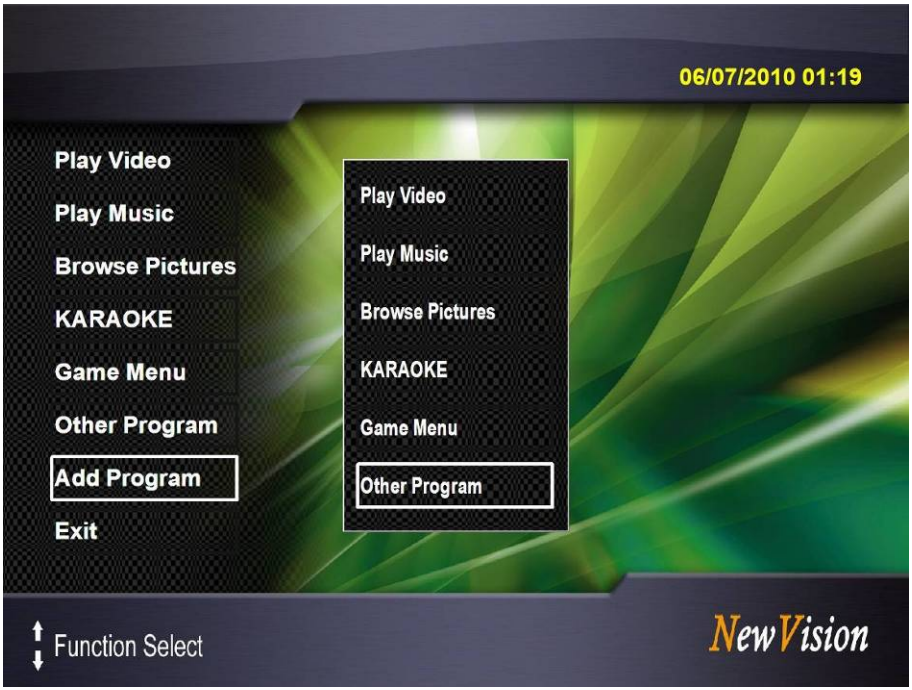


Add Program: Add programs to New Version User Interface

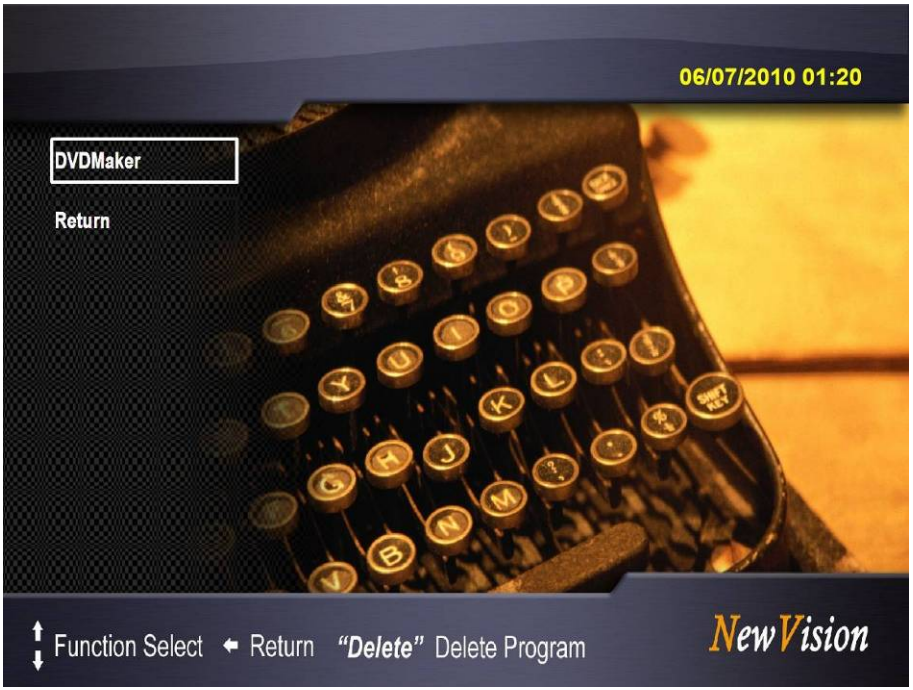
Press **Up/Down** (↑/↓) on remote control or keyboard to select 'Add Program' option. Press [OK] on remote control (or the left button of the mouse, or press [Enter] on keyboard) to confirm.



The “Open” dialog window will automatically appear. Select the file you wish to add from the dialog window. Click ‘Open’ to confirm the operation. Only programs with .exe file extension can be added. You will see the following screen pop up for you to decide where the .exe program to be added to.



Press **Up/Down** (↑/↓) on remote control or keyboard to select desired destination for the added program. For example, if you added 'DVDMaker' program to [Other Program], a newly added option 'DVDMaker' will appear in [Other Program] menu list. If you add it to 'Game Menu', it shall appear on the Game Menu list.



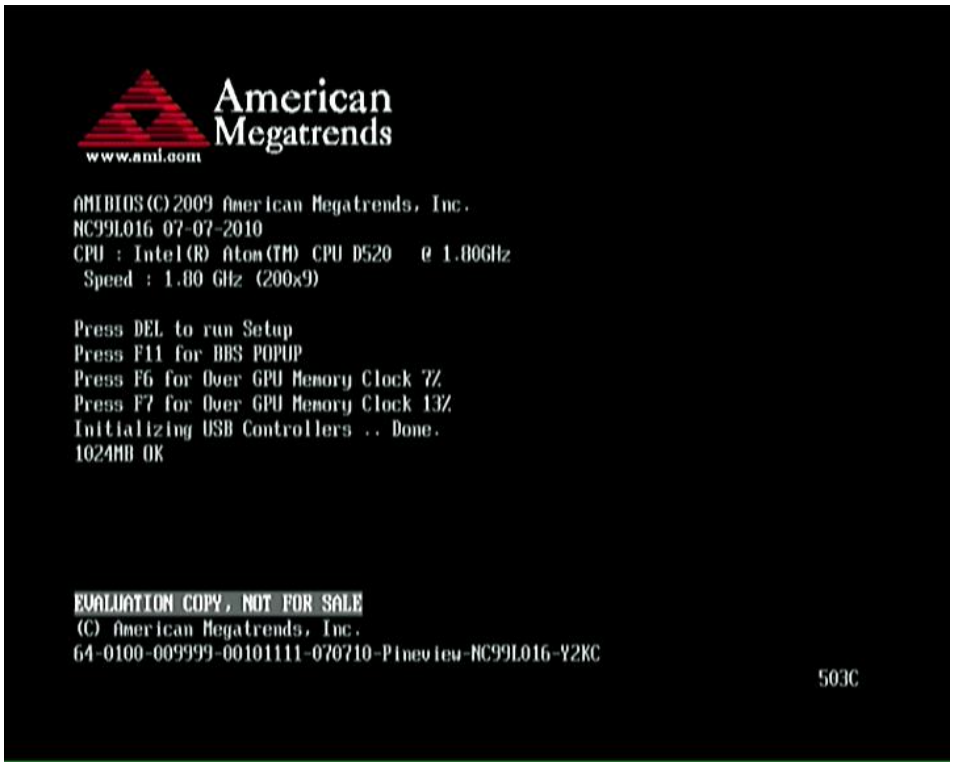
4-3-8. To Exit

Press **Up/Down** (↑/↓) on remote control or keyboard to select 'Play Music' on the main menu. Press [OK] on remote control (or the left button of the mouse, or press [Enter] on keyboard) to confirm. You can exit New Vision program now.

Appendix One To Overclock GPU Memory Clock

Use can overclock GPU memory clock through **One-Key Overclocking** function:

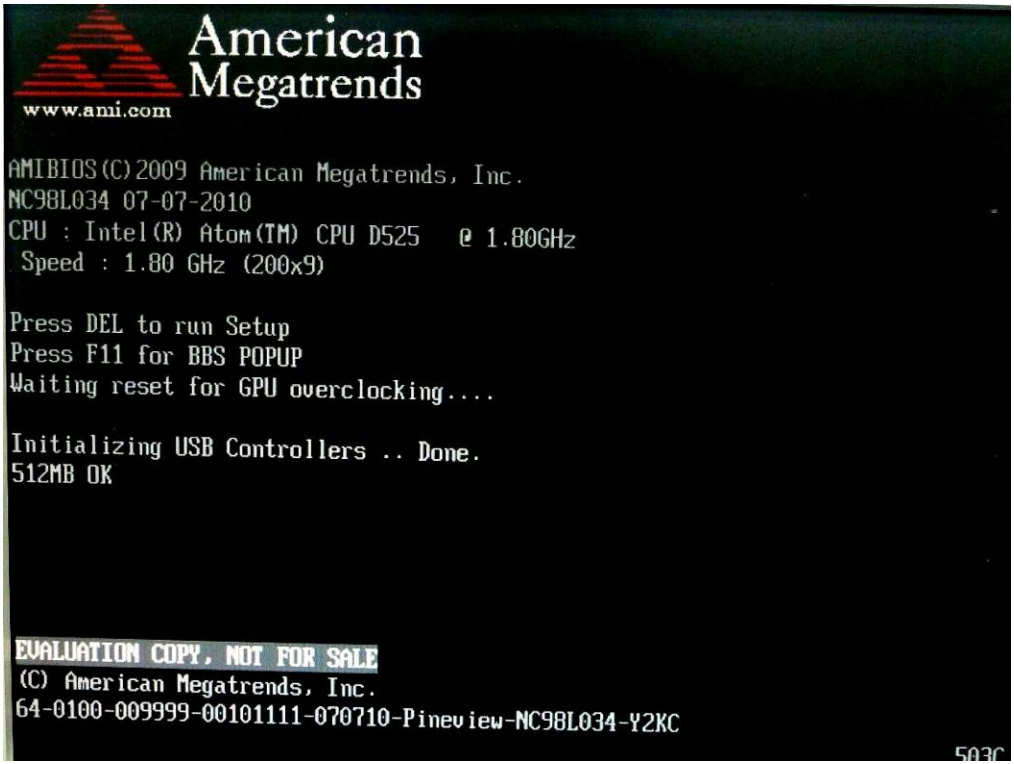
During normal POST process, the following picture will show for about 4 seconds:



During POST, user can:

- Press **[DEL]** to run Setup;
- Press **[F6]** to over GPU memory Clock 7%;
- Press **[F7]** to over GPU memory Clock 7%.

If you press [F6] to overclock GPU memory Clock 7% or [F7] to over GPU memory Clock 13% system, system will reset automatically to enable the setting.



Computer restarts automatically. If previous overclocking steps have taken effect, POST will not ask user to press**[F6]** or **[F7]** to overclock.

Notice!

1. One-Key Overclock GPU memory clock function will be removed if you clear CMOS.
2. BIOS setting/Miscellaneous Control/GPU Memory Clock should be the default setting 'Auto' to enable One-Key Overclock GPU memory clock function.
3. If you logout system previously-overcloked GPU memory will become invalid. To overclock again you need to press **[F6]** or **[F7]** during next POST.

Appendix Two 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

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

equipment.

FCC Rules and Regulations-Part 15

This devices 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.