



Splendid HD1

HDMI & Video upgrade card

User Guide

E3485

First Edition V1

January 2008

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Contents

- Contents iii
- Safety information v
- 1. Introduction 1
 - 1.1 Package Contents..... 1
 - 1.2 System Requirements..... 1
 - 1.3 Splendid HD1 Specifications summary 2
- 2. About Hardware 3
 - 2.1 Splendid HD1 Card layout 3
- 3. Installing the Hardware..... 4
 - 3.1 Preparing Your Computer 4
 - 3.2 Installing the Splendid HD1 card..... 5
- 4. Installing Software 11
 - 4.1 Installing the Splendid HD1 Card driver..... 11
 - 4.2 Installing the ASUS GamerOSD driver 11
- 5. Splendid HD 12
 - 5.1 Launching Splendid HD 12
 - 5.2 Using Splendid HD..... 12
- 6. ASUS GamerOSD 19
 - 6.1 Enabling ASUS GamerOSD..... 19
 - 6.2 Setting ASUS GamerOSD 20
 - 6.3 Using ASUS GamerOSD 22
 - 6.4 Broadcasting games with ASUS GamerOSD 26

Notices

Federal Communications Commission Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with manufacturer's instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

Canadian Department of Communications Statement

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

This class B digital apparatus complies with Canadian ICES-003.

Safety information

- Before installing the device on a motherboard, carefully read all the manuals that came with the package.
- To prevent electrical shock hazard or short circuits, switch off the power supply before installing the device on a motherboard or connecting any signal cables to the device.
- If the device is broken, do not try to fix it by yourself. Contact a qualified service technician or your retailer.
- Before using the product, make sure all cables are correctly connected. If you detect any damage, contact your dealer immediately.
- To avoid short circuits, keep paper clips, screws, and staples away from connectors, sockets and circuitry.
- Avoid dust, humidity, and temperature extremes. Do not place the product in any area where it may become wet.
- Place the product on a stable surface.
- If you encounter technical problems with the product, contact a qualified service technician or your retailer.



This symbol of the crossed out wheeled bin indicates that the product (electrical, electronic equipment, and mercury-containing button cell battery) should not be placed in municipal waste. Check local regulations for disposal of electronic products.

1. Introduction

1.1 Package Contents

- ASUS Splendid HD1 card
- ASUS Splendid HD1 support CD
- Coaxial cable
- DVI-to-HDMI adapter
- USB cable
- DVI cable
- User Guide

1.2 System Requirements

- Expansion slot for the Splendid HD1 card
- One graphics card
- One available 4-pin ATX power cable from computer's power supply unit
- Microsoft® Windows® Vista/XP(32/64bit) / MCE2005
- Intel® Pentium® 4 1.4GHz or AMD Athlon 1400 CPU or faster CPU
- 256 MB DRAM system memory
- 60 MB available HDD space for driver installation package
- Optical Drive (CD/DVD) for software installation

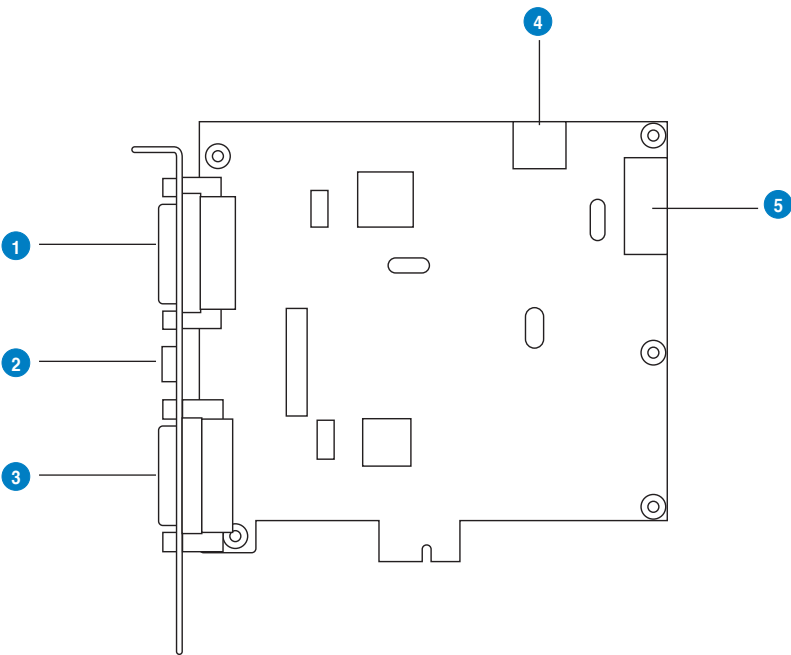
1.3 Splendid HD1 Specifications summary

Supported resolution	DTV resolution: 480i, 576i, 480p, 576p, 720p, 1080i up to 1080p
	PC resolution: graphics, XGA, SXGA, UXGA
Pixel rates	25MHz to 165MHz
I/O ports	DVI-I In port
	Coaxial S/PDIF Out port
	DVI-I Out port (Splendid™ HD technology support)
	4-pin USB Input header
Compatibility	Compliant with HDMI 1.2, HDCP 1.1 and DVI 1.0 specifications
Digital audio input interface	Audio sample rate: 32~192 kHz
	Sample size: 16~24 bits
	Up to four I2S interface supporting 8-channel audio
	S/PDIF interface supporting PCM, Dolby Digital, DTS digital audio transmission for up to 192kHz
	Compatible with IEC 60958 and IEC 61937
	Audio down-sampling of 2X and 4X
HDCP Security	Integrated/External pre-programmed HDCP keys at customers' requests
	Built-in HDCP engine increasing the robustness and security of HDCP operation
Smart detection	Monitor detection through Hot Plug Detection and Receiver Termination Detection

*Specifications are subject to change without notice.

2. About Hardware

2.1 Splendid HD1 Card layout

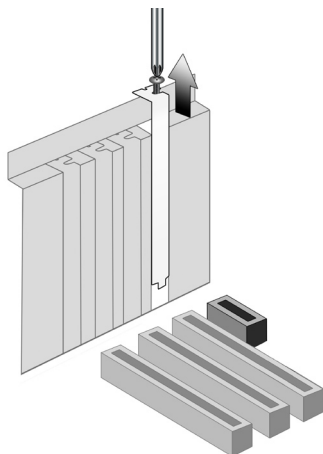


No	Item	Description
1	DVI-I In port	This port connects to a graphics card with DVI-I output support.
2	Coaxial S/PDIF Out port	This port connects to an external digital decoder or digital speaker system, Home Theater system, AV receiver for digital audio output including PCM, Dolby Digital, DTS, or WMA-Pro.
3	DVI-I Out port (Splendid™ support)	This port connects to a monitor with DVI/HDMI output support.
4	USB Input header	Connects to the USB connector on your motherboard using a USB cable.
5	ATX power connector	This connector is for an ATX power supply plug.

3. Installing the Hardware

3.1 Preparing Your Computer

1. Power off your computer and disconnect the power cord.
2. Open the computer chassis.
3. Remove the metal cover of an available PCI Express x1 expansion slot.



3.2 Installing the Splendid HD1 card

Securing the Splendid HD card:

1. Carefully insert the Splendid HD1 card into the PCI Express x1 slot. Ensure that the card sits properly in place.
2. Secure the card with a screw or a metal bracket.

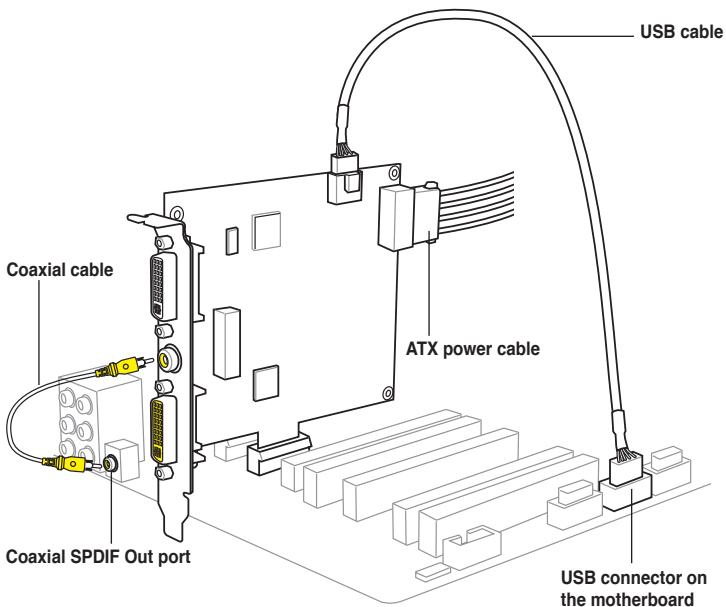
Connecting cables:

1. Connect one end of the USB cable to the USB port of the card and connect the other end to a USB connector on your motherboard.
2. Connect a 4-pin ATX power cable to the ATX power connector on the card.



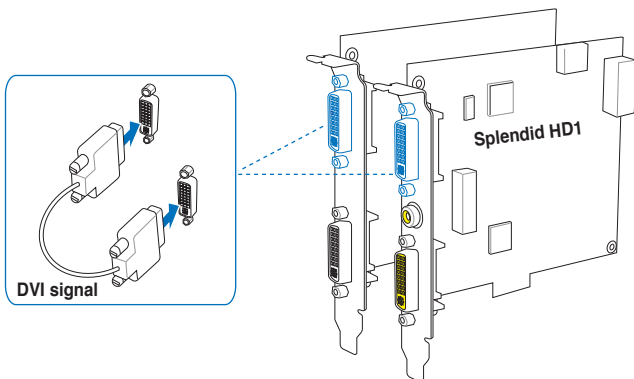
The Splendid HD1 requires additional power to work. Ensure that you connect the ATX power connector to the card to provide ample power.

3. Using the bundled coaxial cable, connect one end to the S/PDIF port on Splendid HD1 and connect the other end to the S/PDIF out port of your motherboard.

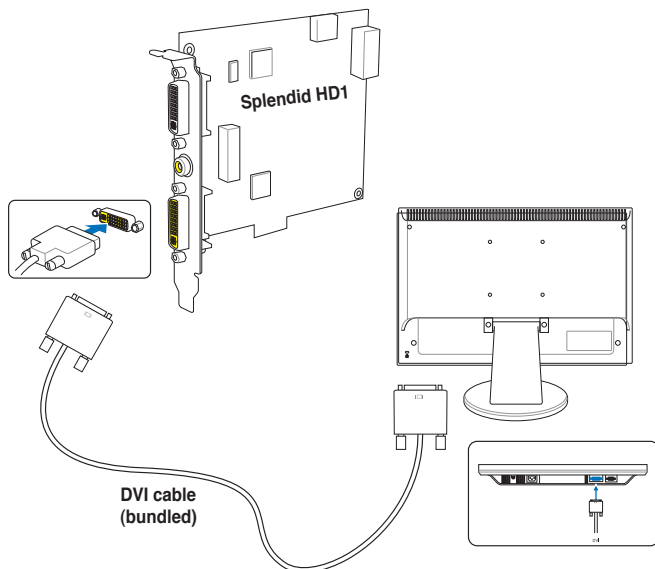


3.2.1 Connecting to a graphics card with DVI support and monitor with DVI port

1. Using the bundled DVI cable, connect the Splendid HD1 with your graphics card.

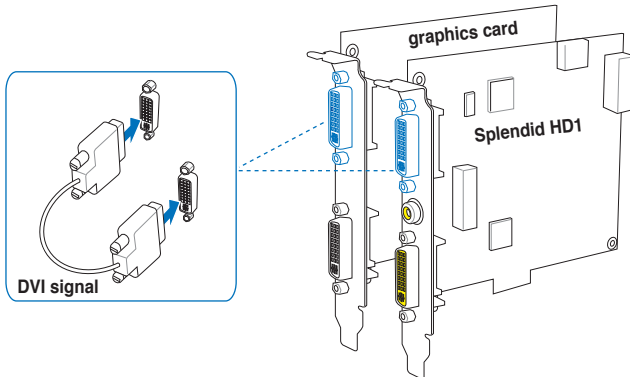


2. Connect your monitor with the Splendid HD1 using a DVI cable. Plug one end of the DVI cable to the yellow-colored DVI-I port on the Splendid HD1 and connect the other end to your monitor.

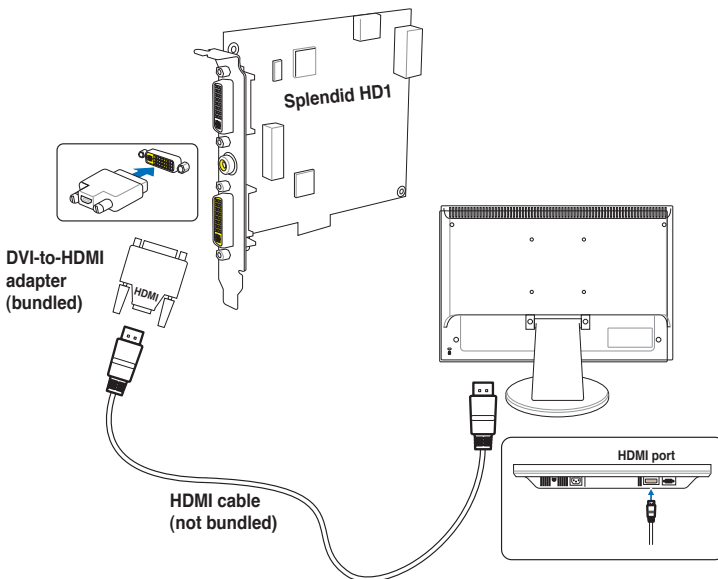


3.2.2 Connecting to graphics card with DVI support and monitor with HDMI port

1. Using the bundled DVI cable, connect the Splendid HD1 with your graphics card.

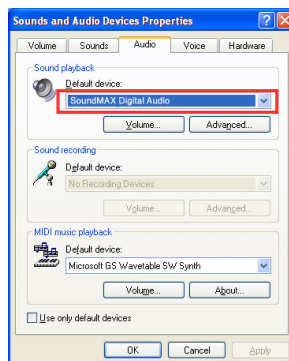


2. Plug the DVI-to-HDMI adapter into the yellow-colored DVI-I Out port, then connect the adapter and the monitor with an HDMI cable.



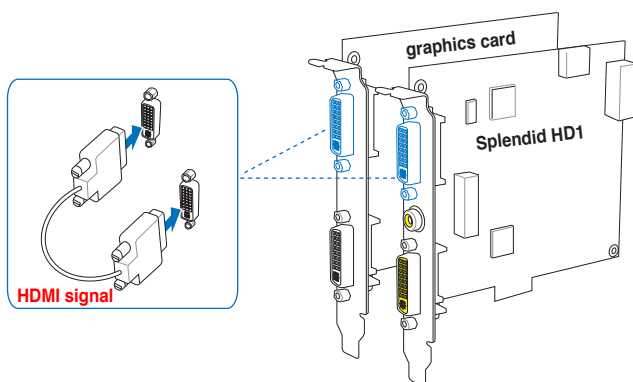
- HDMI output supports the following resolutions only: 480i, 480p, 576i, 576p, 720p, 1080i, 1080p. You may lose audio output if you use resolutions other than resolutions listed above.
- Use the DVI-to-HDMI adapter that comes with the Splendid HD1 card package.

3. After hardware installation is complete, select the audio source from the Windows® desktop by clicking **Start > Control Panel > Sounds, Speech, and Audio Devices > Sounds and Audio Devices Properties**.
4. Click the **Audio** tab, then click the Sound playback dropdown list to select the **onboard audio source**.
5. Restart your computer.
6. Select the sampling rate that corresponds to (or exceeds) your playback sources for optimal audio fidelity. Refer to page 14 for details on audio settings.

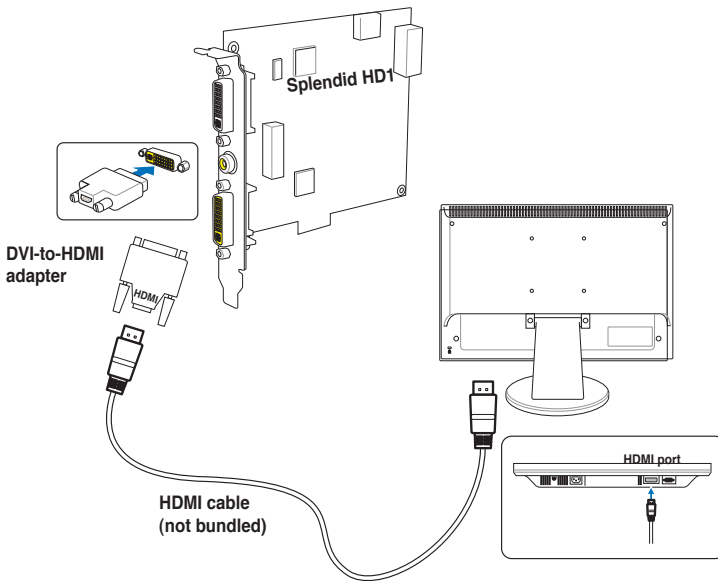


3.2.3 Connecting to a graphics card with HDMI support and monitor with HDMI port

1. Using the bundled DVI cable, connect the Splendid HD1 with your graphics card.

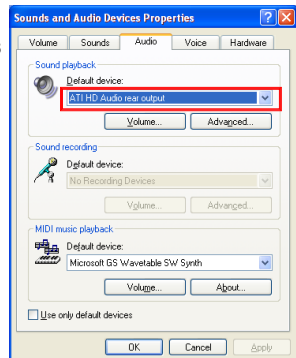


2. Plug the DVI-to-HDMI adapter into the yellow-colored DVI-I Out port, then connect the adapter and the monitor with an HDMI cable.



Use the DVI-to-HDMI adapter that comes with your graphics card package.

3. After hardware installation is complete, select the audio source from the Windows® desktop by clicking **Start > Control Panel > Sounds, Speech, and Audio Devices > Sounds and Audio Devices Properties**.
4. Click the **Audio** tab, then click the **Sound playback** dropdown list to select the **graphics card audio source**.
5. Restart your computer.

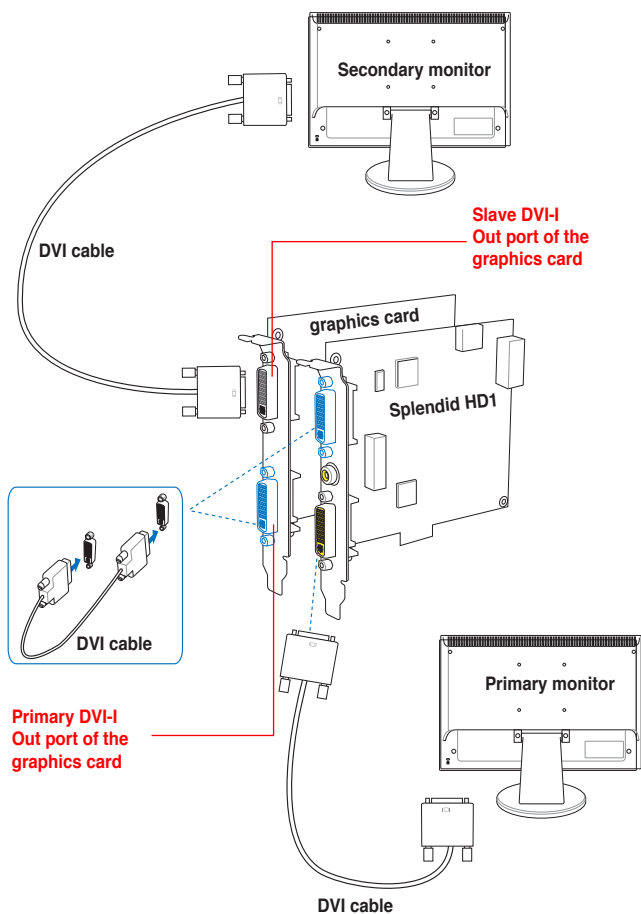


3.2.4 Connecting to two monitors



If you use two monitors, always connect the primary monitor to the Splendid HD1 card to ensure the correct signal transmission.

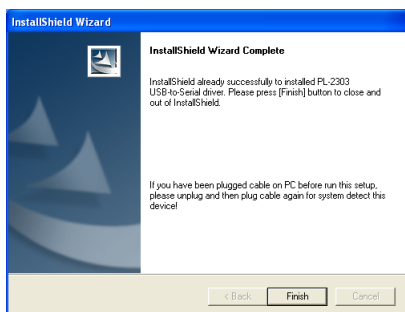
1. Using a DVI cable, connect the primary DVI-I out port of your graphics card to the DVI in port of the Splendid HD1.
2. Connect one end of the DVI cable to the primary monitor and connect the other end to the yellow-colored DVI-I out port of the Splendid HD1.
3. Using another DVI cable, connect one end of the DVI cable to the secondary monitor, then connect the other end to the DVI-I out port of your graphics card.



4. Installing Software

4.1 Installing the Splendid HD1 Card driver

1. After you have installed the Splendid HD1 card, turn on your computer. Windows® automatically detects the Splendid HD1 card and searches for device drivers. When prompted for the drivers, click **Cancel**.
2. Insert the support CD into the optical drive. If Autorun is enabled in your system, the setup starts automatically. If not, run **setup.exe** from your support CD.
3. Follow the on-screen instructions to finish the installation.
4. The following screen is displayed after the installation is completed.



4.2 Installing the ASUS GamerOSD driver

1. From the support CD menu, double-click the **ASUS GamerOSD** to start installation.
2. Follow the succeeding screen instructions to complete installation.
3. When installation is completed, click **Finish**.

5. Splendid HD

Splendid HD is a utility that upgrades the visual performance for your LCD monitor or LCD TV with the advanced HDMI (High-Definition Multimedia interface) output.

5.1 Launching Splendid HD

If the Splendid HD utility is correctly installed, you will find the blue-colored Splendid HD icon on the taskbar.

Double-click the icon to launch the utility and display the Splendid HD main screen.



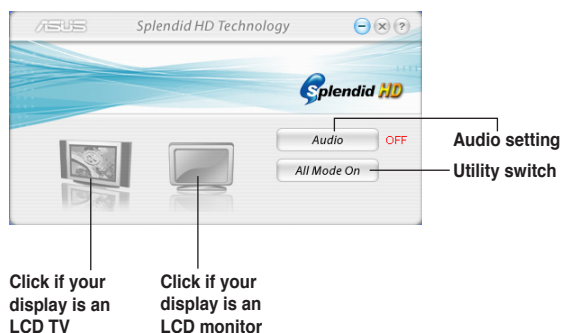
The Splendid HD icon turns red if the Splendid HD1 card is not detected. To solve this problem, do the following:

1. Ensure that the USB cable is plugged to the 4-pin USB connector on the motherboard.
2. Restart the utility.

5.2 Using Splendid HD

Main menu

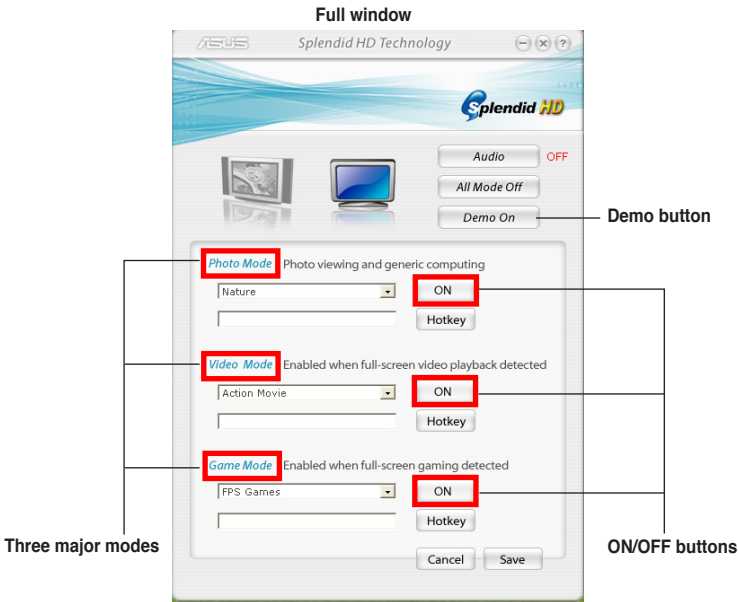
The Splendid HD main menu allows you to view the status of the utility configurations. Click the **LCD monitor / LCD TV** icon depending on which display you use.



Click **All Mode On/Off** to enable or disable this utility. The utility is enabled when the utility switch is set to **All Mode Off**, and the full window is displayed.

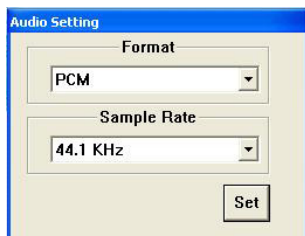
The Splendid HD utility provides three modes that allow you to change the configurations according to different viewing conditions, such as viewing photos, watching movies, and playing games.

Click **ON / OFF** to enable or disable the mode you like.



Audio setting

Click  to configure the audio format and sample rate.



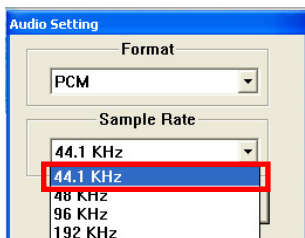
- Click the Format dropdown list to select the audio format from PCM and Non-PCM.



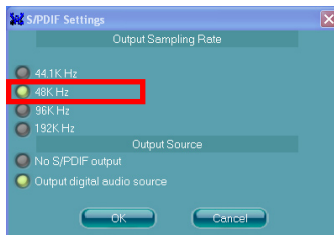
Set the audio format in the Splendid HD1 utility to PCM when using 2 speakers only (such as TV speakers), or to Non-PCM when watching contents with Dolby Digital or DTS Surround audio on multi-channel Dolby/DTS decoder amplifiers.



- Click the Sample Rate list down arrow to select the sample rate that corresponds to (or exceeds) your playback sources for optimal audio fidelity. The Splendid HD1 card supports sample rates up to 192 KHz.



Audio sample rate setting in the Splendid HD utility



S/PDIF output sample rate setting in your playback source.

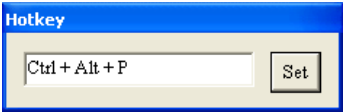


Make sure to match Splendid HD1's audio sample rate to your soundcard's output sample rate, such as 44.1K, 48K, 96K, or 192K. Otherwise, the HDMI audio from Splendid HD1 will not function properly.

You can also set hotkeys for each mode, which enables you to switch modes quickly.

To set a hotkey:

- 1. Click **Hotkey** to display the following:

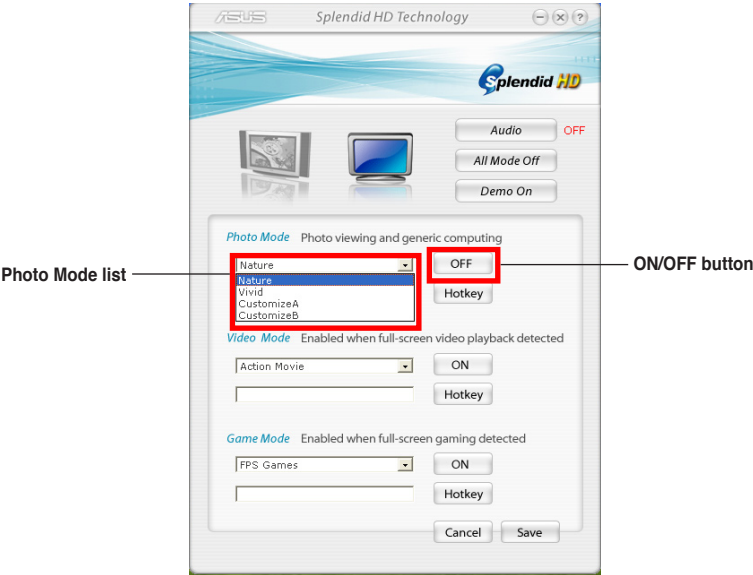


- 2. Click on the Hotkey textbox then press desired keys. **Ctrl** and **Alt** keys are the default keys.
- 3. Click **Set** to apply settings.

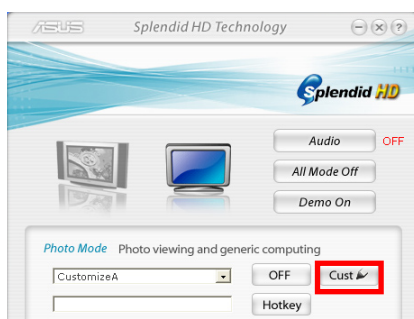
Photo Mode

To enable the Photo Mode, click the corresponding **ON/OFF** button. The button displays **OFF** when Photo Mode is on. Select desired settings from the two default color-enhanced settings: **Nature** and **Vivid**.

If you want to see the comparison between the original screen and the color-enhanced screen, set the **Demo** button to **Demo Off**. When the demo starts, a vertical green line divides the screen. The left side of the green line is the original screen and the right side the color-enhanced screen. Click **Demo** again to stop scanning.

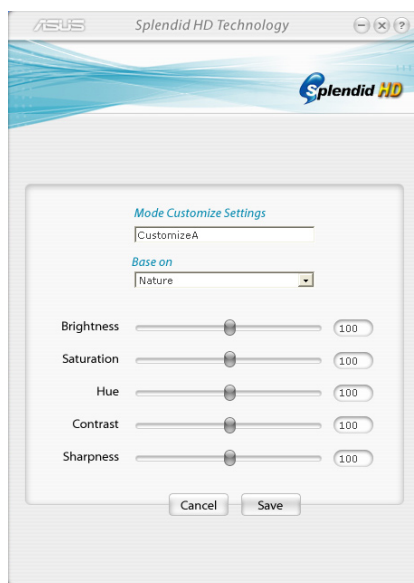


You can customize two more settings based on your needs.



To add customized settings, select **CustomizeA / Customize B** then click the pencil icon **Cust**.

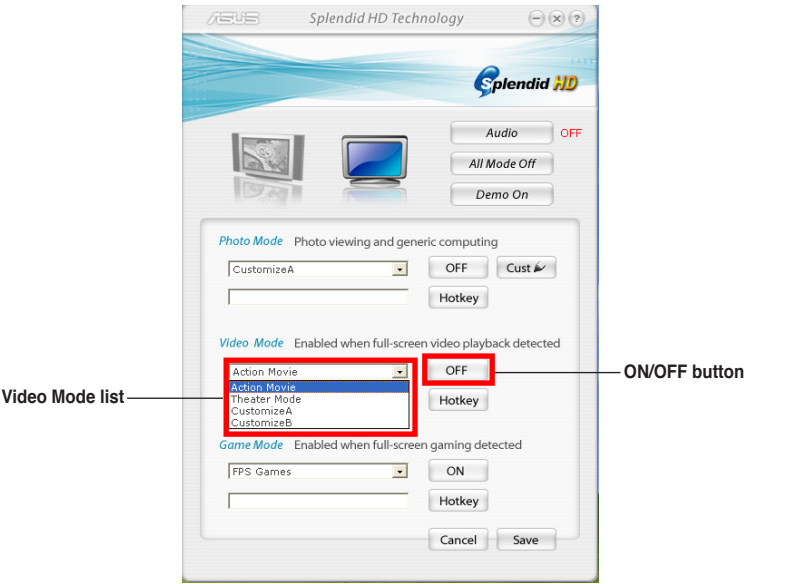
From the customize settings screen, adjust the brightness, saturation, hue, contrast, and sharpness according to your desired settings. Click **Save** then done.



Video Mode

To enable the Video Mode, click the corresponding **ON/OFF** button. The button displays **OFF** when Video Mode is on. Select desired settings from the two default color-enhanced settings: **Action Movie** and **Theater Mode**.

You can customize two more settings based on your configuration. Follow the instructions in the **Photo Mode** section on how to create customized settings.



Game Mode

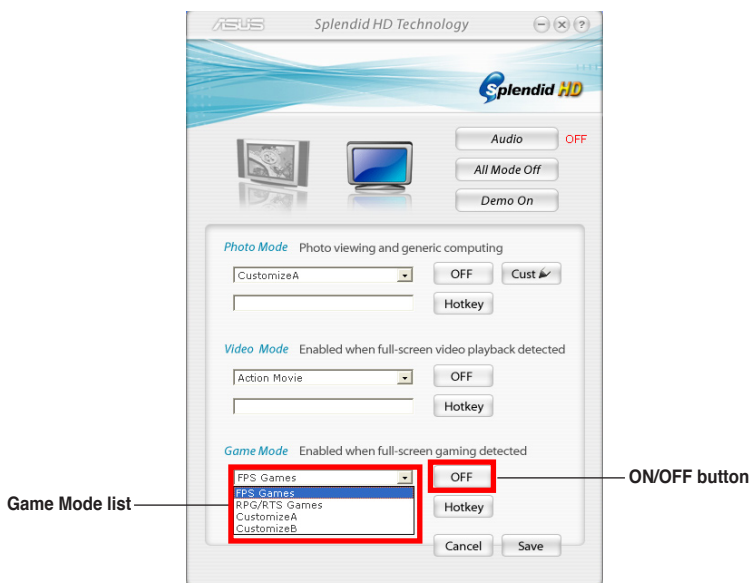


Your system must have the following two items installed before using Game Mode:

1. ASUS graphics card
2. ASUS GamerOSD utility.

To enable the Game Mode, click the corresponding **ON/OFF** button. The button displays **OFF** when Game Mode is on. Select desired settings from the two default color-enhanced settings: **FPS Games** (First Personal Shooting Game) and **RPG** (Role-Playing Game) / **RTS Games** (Real-Time Strategy Game).

You can customize two more settings based on your needs. Follow the instructions in the **Photo Mode** section on how to create customized settings.



6. ASUS GamerOSD

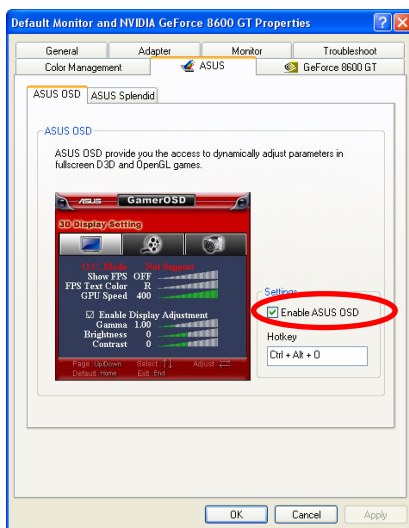
ASUS GamerOSD allows you to share real-time gaming experience while playing full-screen games. Users can remotely monitor a live broadcast using the Internet Explorer.

6.1 Enabling ASUS GamerOSD

Enable ASUS GamerOSD after installing the utility from the support CD.


To launch ASUS GamerOSD:

1. Right click on an empty space of the Windows® desktop and select **Properties**. From the Display Properties dialog box, select the **Settings** tab then click **Advanced**.
2. Select the **ASUS** tab then **ASUS OSD** to display the properties window.
3. Click the **Enable ASUS OSD** check box.



4. Click on the Hotkey textbox then press desired keys. **Ctrl** and **Alt** keys are the default keys.
5. Click **Apply** to apply settings or click **OK** to apply settings then exit. Click **Cancel** if you want to discard settings and exit.

6.2 Setting ASUS GamerOSD

After installing and enabling ASUS GamerOSD, click on the GamerOSD icon  on the Windows® taskbar and select **Setting** to display the setup menu. If you exit the utility, go to **Start > Programs > ASUS > GamerOSD AP > GamerOSD** to relaunch the program.

The GamerOSD setup menu is as follows:



Capture Mode

Broadcast

Select to have live broadcasts of the games you are playing on the Internet.


Movie

Select to record games and save the videos.

Advanced Setting

Allows you to set the Video Capture Size, Video Capture Frame Rate, Sound Capture Device, Broadcast Port, and Movie Format.

Start Broadcasting

Click to start live broadcasts of games. When selected, the broadcasting icon  appears on the Windows® taskbar. This item is disabled when you select Movie.



For detailed instructions on how to broadcast games and the related Internet Explorer security settings, refer to section **6.4 Broadcasting games with ASUS GamerOSD**.


HotKeys

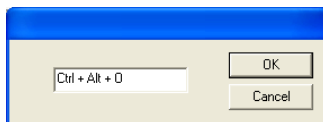
Allows you to set the hotkeys to launch GamerOSD in full-screen games, to start/stop recording games, and to capture game screens.

The default hotkeys are:

- GamerOSD: **Ctrl + Alt + O**
- Record Movie: **Ctrl + Alt + S**
- Screen Shot: **Ctrl + Alt + C**

To set a hotkey:

1. Click the pencil icon  to display the hotkey textbox.
2. Click on the hotkey textbox then press desired keys. **Ctrl** and **Alt** keys are the default keys.
3. Click **OK** to apply or click **Cancel** to discard settings.



View

Movie

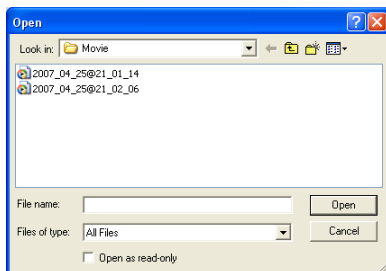
Click to open the Movie folder where the recorded games are saved. Double-click an item to play.

Screen Shot

Click to open the ScreenShot folder where the captured images are saved. Double-click an item to view.



The Movie and Screenshot folders are stored in **\\My Documents\\ASUS\\GamerOSD.**



6.3 Using ASUS GamerOSD

In a full-screen game, launch ASUS GamerOSD using the GamerOSD hotkeys.

6.3.1 3D Display Setting



Show FPS

Allows you to show/hide FPS on your monitor and choose where to display FPS. Configuration options: OFF, L/T (left top), R/T (right top), R/B (right bottom), L/B (left bottom).



Even if you choose not to display FPS on your monitor, you can see the FPS from the OC GEAR screen.

FPS Text Color

Changes the text color of FPS.

Configuration options: R (red), G (green), B (blue), Y (yellow), W (white).

GPU Speed

Allows you to adjust the GPU speed.

Enable Display Adjustment

Click the right arrow key to enable and the left arrow key to disable this function. The following three items become configurable when you enable Display Adjustment.

Gamma

Adjusts the current Gamma value of the game.

Brightness

Adjusts the current brightness of the game.

Contrast

Adjusts the current contrast of the game.

6.3.2 Video Capturing



The items in this menu are mostly controlled by the GamerOSD setup menu. Refer to section **6.2 Setting ASUS GamerOSD** for further information.

Capture Mode

Displays Movie if you select Movie in the GamerOSD setup menu. This item shows Broadcast if you previously selected **Broadcast**.

Start/Stop

When Movie mode is selected, this item shows the hotkeys for starting/stopping recording games. In Broadcast mode, this item shows N/A.

Current Client(s)

Shows 0 in Movie mode. In Broadcast mode, this item shows the number of connected viewers watching your broadcast.

Capture Size

Shows the resolution of the captured videos. This item is set in Advanced Setting in the GamerOSD setup menu.

Capture Rate

Shows the frame rate of the captured videos. This item is set in Advanced Setting of the GamerOSD setup menu.

Start Capturing

In Movie mode, press the right/left arrow key or the set hotkeys to start/stop recording games. A red blinking dot appears on the bottom left corner of your screen when recording. The recorded videos are automatically saved in the Movie folder and named by date.



In Broadcast mode, press the right/left arrow key to start/stop broadcasting games.



For detailed instructions on how to broadcast games and the related Internet Explorer security settings, refer to section **6.4 Broadcasting games with ASUS GamerOSD**.

6.3.3 Screenshots



Screenshot Mode

Allows you to shift the image capturing mode between Single and Multiple.

Files Format

Allows you to select the image files format.

Configuration options: bmp, gif, jpg.



The following two items are enabled when you select Multiple screenshot mode.

Capture Numbers

Allows you to set the number of screenshots captured consecutively.

Configuration options: 3, 4, – 9, 10.

Capture Interval (sec)

Allows you to set the capture interval in seconds.

Configuration options: 1, 2, – 5.

Hot Key

Shows the hotkeys for capturing screens. Press the hotkeys to capture screens. The images are automatically saved in the ScreenShot folder and named by date.

6.4 Broadcasting games with ASUS GamerOSD

ASUS GamerOSD allows you to broadcast the games you are playing live on the Internet. Before broadcasting, you need to configure your Internet Explorer security options.

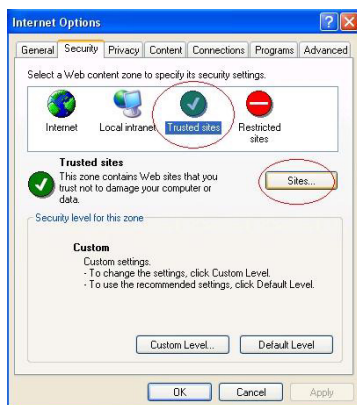
6.4.1 Internet Explorer browser setup

To configure your IE browser:

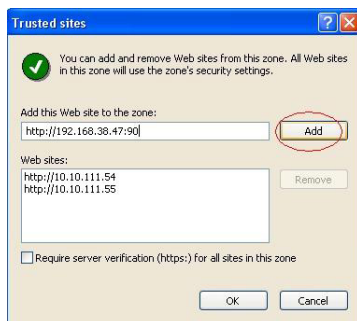
1. Launch Internet Explorer.
2. Go to **Tools > Internet Options**.



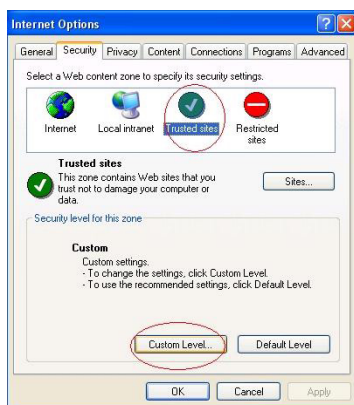
3. From the Internet Options dialog box, select the **Security** tab then click the **Trusted Sites** icon.
4. Click **Sites** to display the Trusted sites window.



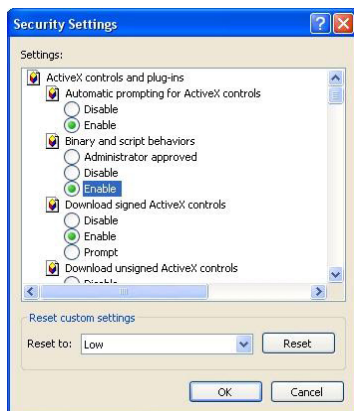
5. Key in the Internet Protocol (IP) of the broadcast host on the text box then click **Add**.
6. Click **OK** when done or **Cancel** to discard changes.



7. Click **Custom Level** to display the Security Settings window.





8. Enable all items then click **OK**.
9. Click **OK** to exit the Internet Options dialog box.



6.4.2 GamerOSD broadcast setup

To enable broadcasting in GamerOSD:

1. Click on the GamerOSD icon  on the Windows® taskbar and select **Setting** to display the setup menu.
2. Select **Broadcast**. Click **Advanced Setting** to configure related settings and click **Start Broadcasting**. A broadcasting icon  appears on the Windows® taskbar.



3. Start a full-screen game. Launch the GamerOSD using the hotkeys.
4. Press the Page Up/Down key to go to the **Video Capturing** menu and use the Up/Down arrow key to highlight **Start Capturing**.
5. Press the right arrow key to start broadcasting.

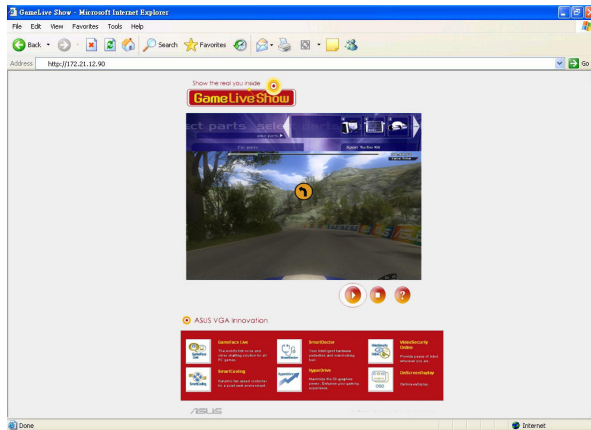


6.4.3 Watching broadcasts

Remote clients can watch the game you're playing via live broadcast on the Internet.

To watch broadcasts:

1. From the IE Address box, key in the IP address of the computer that is broadcasting a game.



2. Click the play button  to start preview.

