



**Splendid HD**

*Graphics card*

**User manual**

E3697

First Edition V1

June 2008

**Copyright © 2008 ASUSTeK COMPUTER INC. All Rights Reserved.**

No part of this manual, including the products and software described in it, may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language in any form or by any means, except documentation kept by the purchaser for backup purposes, without the express written permission of ASUSTeK COMPUTER INC. ("ASUS").

Product warranty or service will not be extended if: (1) the product is repaired, modified or altered, unless such repair, modification or alteration is authorized in writing by ASUS; or (2) the serial number of the product is defaced or missing.

ASUS PROVIDES THIS MANUAL "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL ASUS, ITS DIRECTORS, OFFICERS, EMPLOYEES OR AGENTS BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES (INCLUDING DAMAGES FOR LOSS OF PROFITS, LOSS OF BUSINESS, LOSS OF USE OR DATA, INTERRUPTION OF BUSINESS AND THE LIKE), EVEN IF ASUS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES ARISING FROM ANY DEFECT OR ERROR IN THIS MANUAL OR PRODUCT.

SPECIFICATIONS AND INFORMATION CONTAINED IN THIS MANUAL ARE FURNISHED FOR INFORMATIONAL USE ONLY, AND ARE SUBJECT TO CHANGE AT ANY TIME WITHOUT NOTICE, AND SHOULD NOT BE CONSTRUED AS A COMMITMENT BY ASUS. ASUS ASSUMES NO RESPONSIBILITY OR LIABILITY FOR ANY ERRORS OR INACCURACIES THAT MAY APPEAR IN THIS MANUAL, INCLUDING THE PRODUCTS AND SOFTWARE DESCRIBED IN IT.

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

# Contents

<b>Contents</b> .....	<b>iii</b>
<b>Notices</b> .....	<b>iv</b>
<b>Safety information</b> .....	<b>v</b>
<b>About this guide</b> .....	<b>vi</b>
<b>1. Introduction</b> .....	<b>1</b>
1.1 Package contents .....	1
1.2 Recommended system requirements .....	1
<b>2. About hardware</b> .....	<b>2</b>
<b>3. Installing the hardware</b> .....	<b>3</b>
3.1 Preparing your computer .....	3
3.2 Installing the Splendid HD graphics card .....	4
<b>4. Installing the software</b> .....	<b>8</b>
<b>5. Splendid HD</b> .....	<b>9</b>
5.1 Launching Splendid HD .....	9
5.2 Using Splendid HD .....	10
<b>6. ASUS GamerOSD</b> .....	<b>15</b>
6.1 Enabling ASUS GamerOSD .....	15
6.2 Setting ASUS GamerOSD .....	16
6.3 Using ASUS GamerOSD .....	18
6.4 Broadcasting games with ASUS GamerOSD .....	22
<b>7. ASUS SmartDoctor</b> .....	<b>26</b>
7.1 Functions .....	26
7.2 Launching ASUS SmartDoctor .....	26
7.3 Voltage status .....	27
7.4 Temperature status .....	27
7.5 Fan speed status .....	28
7.6 Engine and memory clock settings .....	28
7.7 Advanced setup features .....	29
<b>8. ASUS VideoSecurity Online</b> .....	<b>34</b>
8.1 System requirements .....	34
8.2 What's New .....	34
8.3 Launching ASUS VideoSecurity .....	35
8.4 Setup .....	37
8.5 Video Source .....	52
8.6 Set detect region .....	53
8.7 History .....	55
8.8 Limitations .....	56

# 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.



---

The use of shielded cables for connection of the monitor to the graphics card is required to assure compliance with FCC regulations. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

---

## 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

## Electrical safety

- When adding or removing devices to or from the system, ensure that the power cables for the devices are unplugged before the signal cables are connected. If possible, disconnect all power cables from the existing system before you add a device.
- Make sure that your power supply is set to the correct voltage in your area. If you are not sure about the voltage of the electrical outlet you are using, contact your local power company.
- If the power supply is broken, do not try to fix it by yourself. Contact a qualified service technician or your retailer.

## Operation safety

- Before installing devices on your motherboard, carefully read all the manuals that came with the package.
- Before using the product, make sure all cables are correctly connected and the power cables are not damaged. If you detect any damage, contact your dealer immediately.
- To avoid short circuits, keep paper clips, screws, and staples away from connectors, slots, 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.

---

# About this guide

## Conventions

To make sure that you perform certain tasks properly, take note of the following symbols used throughout this manual.



**WARNING:** Information to prevent injury to yourself when trying to complete a task.



**CAUTION:** Information to prevent damage to the components when trying to complete a task.



**IMPORTANT:** Instructions that you **MUST** follow to complete a task.



**NOTE:** Tips and information to aid in completing a task.

## Where to find more information

Refer to the following sources for additional information and for product and software updates.

### 1. ASUS Websites

The ASUS websites worldwide provide updated information on ASUS hardware and software products. The ASUS websites are listed in the ASUS Contact Information on the inside front cover of this installation guide.

### 2. Optional Documentation

Your product package may include optional documentation, such as warranty flyers, that may have been added by your dealer. These documents are not part of the standard package.

## Macrovision Corporation Product Notice

This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only **unless otherwise authorized by Macrovision Corporation**. Reverse engineering or disassembly is prohibited.

# **1. Introduction**

## **1.1 Package contents**

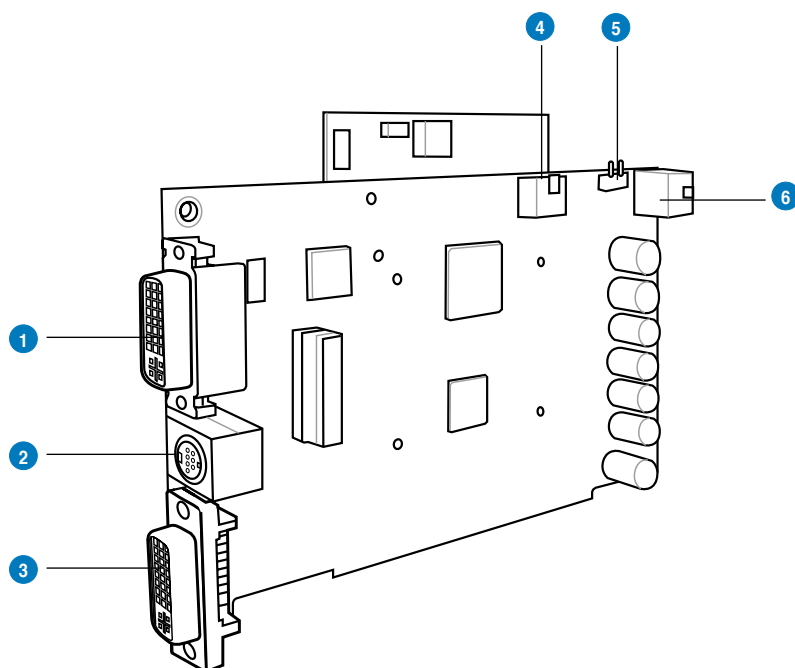
- ASUS Splendid HD graphics card
- ASUS Splendid HD graphics card support CD
- DVI-to-HDMI adapter x1
- USB cable x1
- S/PDIF cable x1 (only for some models)
- Quick installation guide

## **1.2 Recommended system requirements**

- PCI Express expansion slot
- One available 6-pin ATX power cable from the PC power supply unit (optional)
- Microsoft® Windows® 32-/64-bit Vista or Microsoft® Windows® 32-bit XP
- 512 MB DRAM system memory
- Optical Drive (CD/DVD) for software installation

## 2. About hardware

### Splendid HD graphics card layout



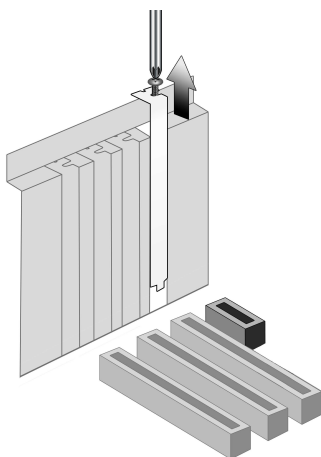
No	Item	Description
1	DVI-D Out port (Splendid HD support)	This port connects to a monitor with DVI/HDMI output support.
2	HDTV-out & TV-out port	This port connects to a video device with HDTV or TV input support such as TVs, DVD players, game consoles, etc.
3	DVI-I Out port	This port connects to a monitor with DVI-I output support.
4	USB Input header	Connects to the USB connector on your motherboard using a USB cable.
5	S/PDIF In connector (only for some models)	Connects to the S/PDIF Out connector on your motherboard using the bundled SPDIF cable.
6	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 expansion slot.



## 3.2 Installing the Splendid HD graphics card

### Securing the Splendid HD card:

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

### Connecting cables:

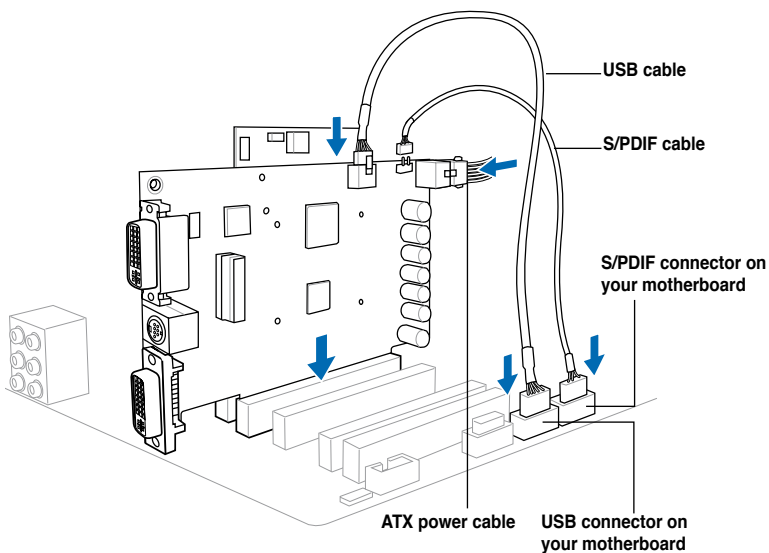
1. Connect one end of the bundled USB cable to the USB port of the card and connect the other end to a USB connector on your motherboard.
2. Connect one end of the bundled S/PDIF cable to the S/PDIF In connector of the card and connect the other end to a S/PDIF Out connector on your motherboard. (only for some models)
3. Connect a 6-pin ATX power cable to the ATX power connector on the card.



---

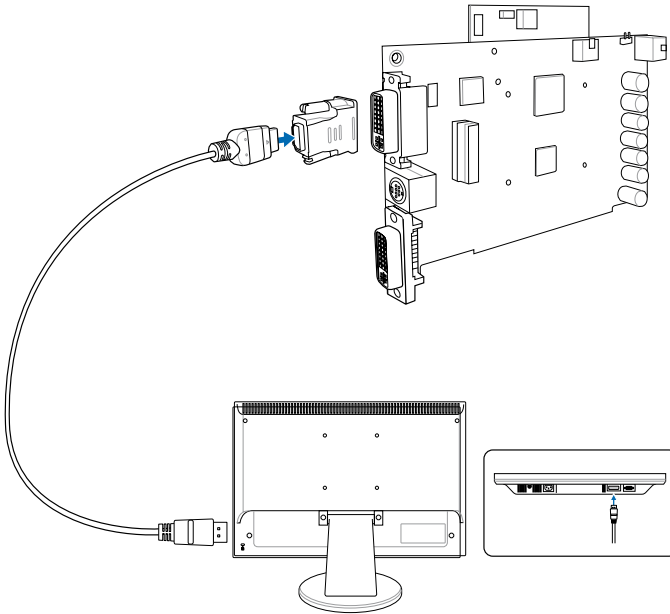
The Splendid HD graphics card requires additional power to work. Ensure that you connect the ATX power connector to the card to provide ample power.

---

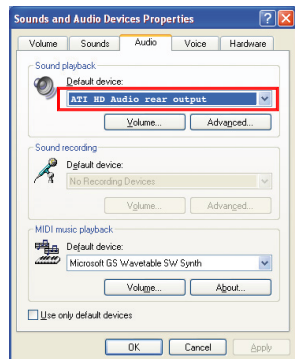


### 3.2.1 Connecting to your monitor with an HDMI port

1. Connect the bundled DVI-to-HDMI adapter to the DVI-D out port of the Splendid HD graphics card.
2. Using an HDMI cable, connect the DVI-to-HDMI adapter to your monitor with an HDMI port.

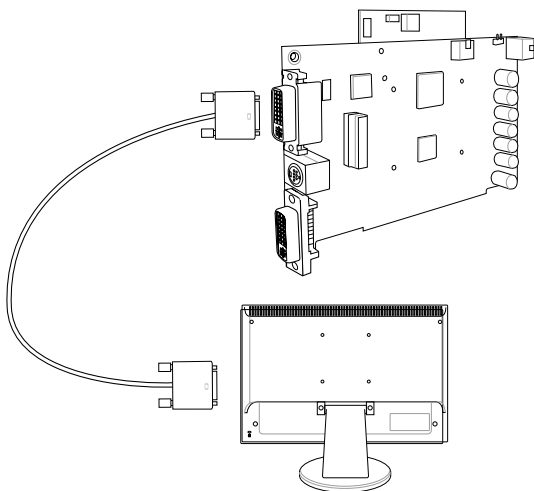


3. After hardware installation is complete, select the audio source from the Windows® desktop by clicking **Start > Control Panel > Sounds, Speech, and Audio Devices > Sounds and Audio Devices Properties**.
4. Click the **Audio** tab, then click the Sound playback dropdown list to select the **ATI HD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



### 3.2.2 Connecting to your monitor with a DVI port

1. Using a DVI cable, connect the DVI-D out port of the Splendid HD graphics card to your monitor with a DVI port.



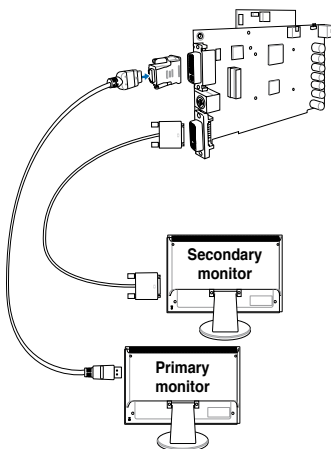
### 3.2.3 Connecting to two monitors



If you use two monitors, always connect the primary monitor to the DVI-D out port of the Splendid HD graphics card. Otherwise, the Splendid utility will not work.

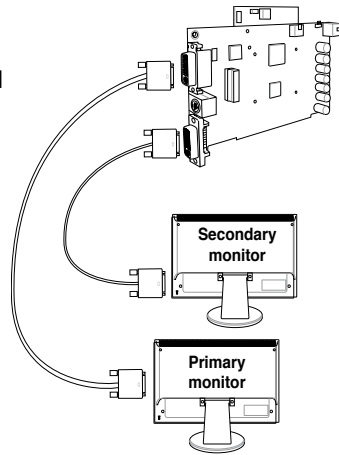
#### To connect one monitor with an HDMI port, the other with a DVI port

1. Follow step 1 and 2 in **section 3.2.1** to connect the Splendid HD graphics card to your primary monitor.
2. Using a DVI cable, connect one end to the DVI-I out port of the Splendid HD graphics card, and the other end to the secondary monitor.



### To connect two monitors with DVI ports

1. Follow step 1 and 2 in **section 3.2.2** to connect the Splendid HD graphics card to your primary monitor.
2. Using a DVI cable, connect one end to the DVI-I out port of the Splendid HD graphics card, and the other end to the secondary monitor.



---

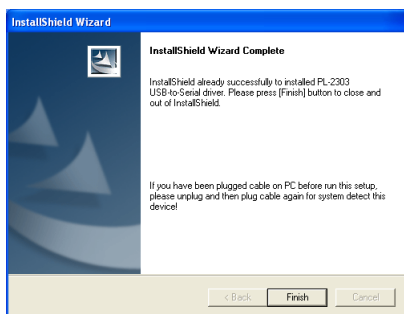
Some LCD TVs with HDMI inputs do not support PC video resolutions and may lose audio signals as well, excepting on such video resolutions as 480p, 720p, and 1080i/p. Hence, it is suggested that you set your LCD TV to one of these TV resolutions.

---

## 4. Installing the software

### Installing the Splendid HD graphics card driver

1. After you have installed the Splendid HD graphics card, turn on your computer. Windows® automatically detects the Splendid HD graphics 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, locate the setup.exe file in the support CD, then double-click the setup.exe file to start the installation.
3. Follow the screen instructions to finish the installation.
4. The following screen is displayed after the installation is completed.



## 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.

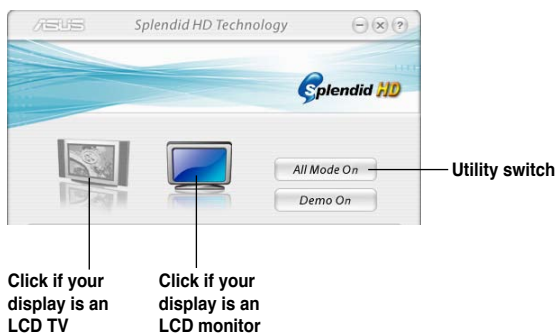
Double-click the icon to launch the utility and display the Splendid HD main screen.



The Splendid HD icon turns red if the Splendid HD graphics card is not detected.

To solve this problem, do the following:

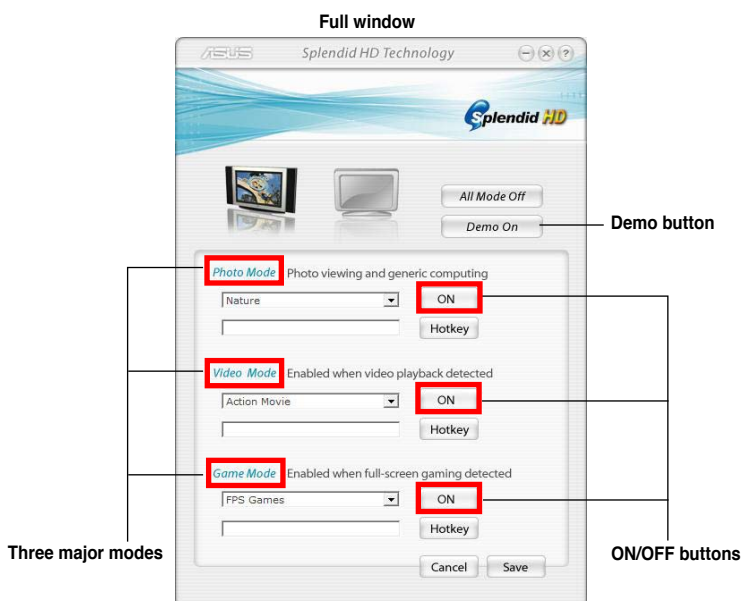
1. Ensure that the USB cable is plugged to the 8-pin USB connector on the motherboard.
2. Restart the utility.



## 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.

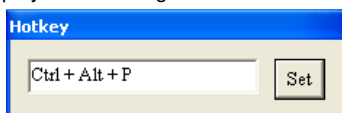
Click **ON / OFF** to enable or disable the mode you like.

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:

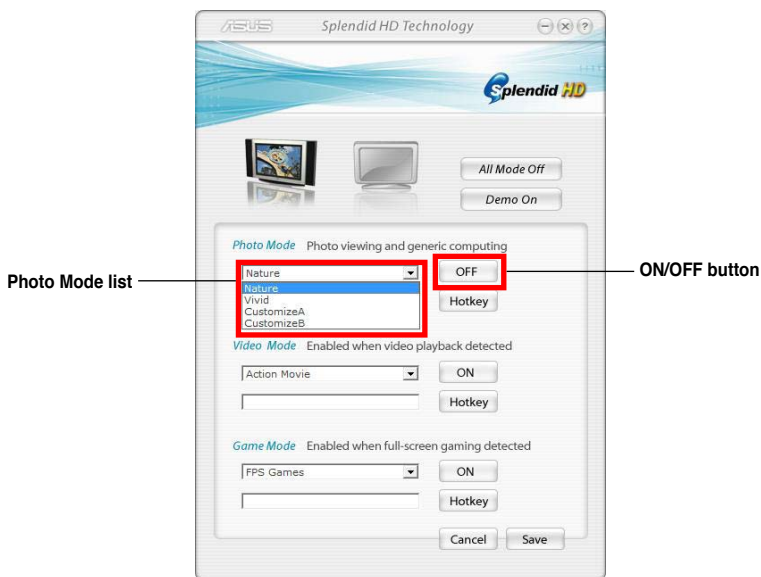


2. Click on the Hotkey textbox then press desired keys. **Ctrl** and **Alt** keys are the default keys.
3. Click **Set** to apply settings.

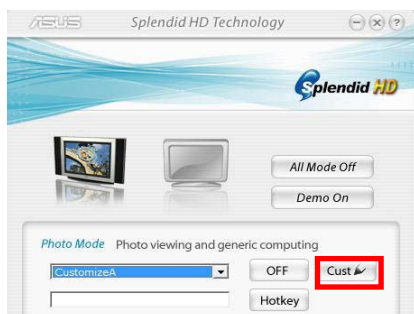
### Photo Mode

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.

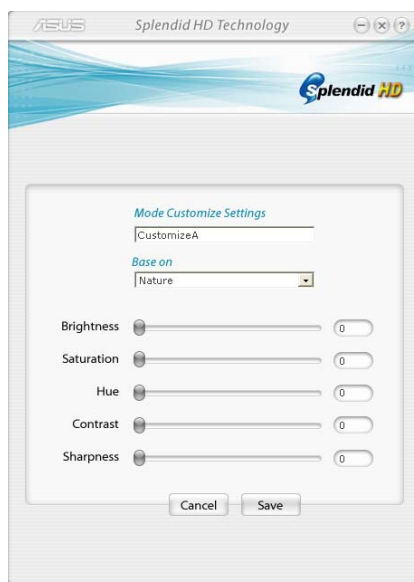


You can customize two more settings based on your needs.



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

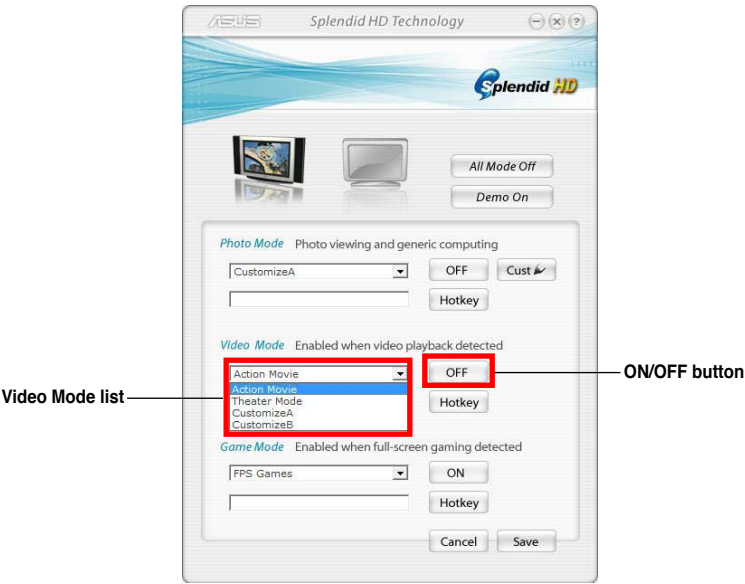
From the customize settings screen, adjust the brightness, saturation, hue, contrast, and sharpness according to your desired settings. Click **Save** then done.



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

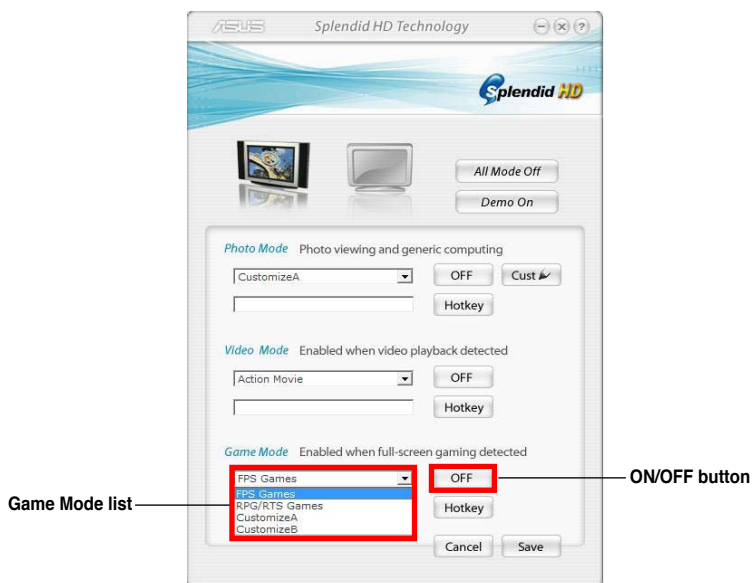


Your system must have the following two items installed before using Game Mode:

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 **6.8 Broadcasting games with ASUS GamerOSD**.

---


## HotKeys

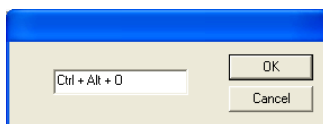
Allows you to set the hotkeys to launch GamerOSD in full-screen games, to start/stop recording games, and to capture game screens.

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

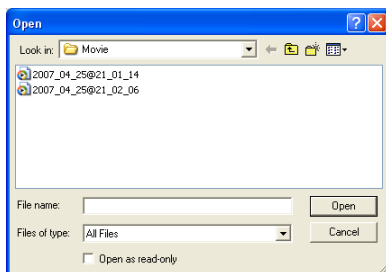
Click to open the Movie folder where the recorded games are saved. Double-click an item to play.

### Screen Shot

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



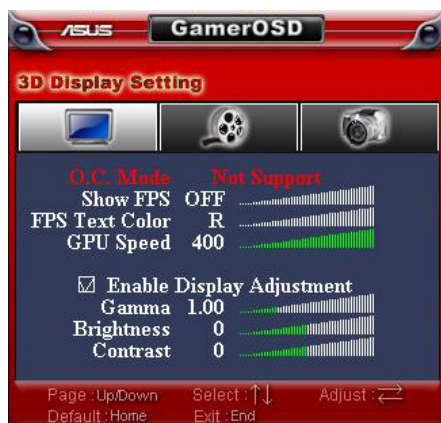
The Movie and Screenshot folders are stored in **\\My Documents\\ASUS\\GamerOSD.**



## 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 **6.8 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.

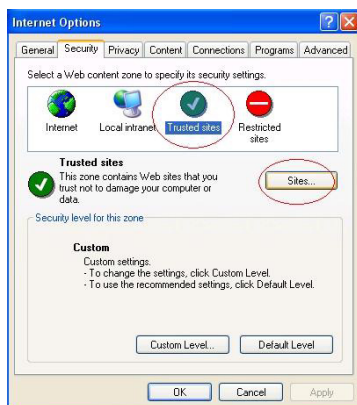
### 6.4.1 Internet Explorer browser setup

To configure your IE browser:

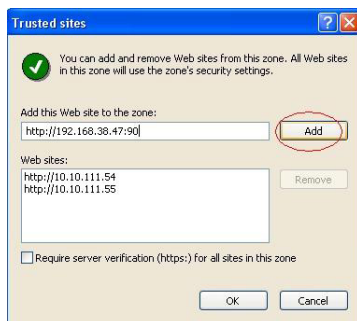
1. Launch Internet Explorer.
2. Go to **Tools > Internet Options**.



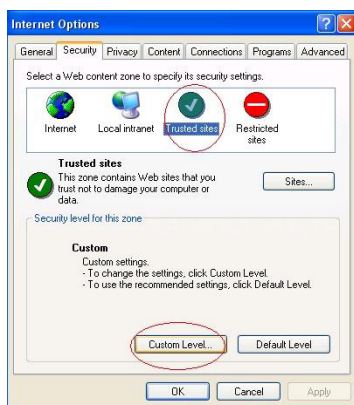
3. From the Internet Options dialog box, select the **Security** tab then click the **Trusted Sites** icon.
4. Click **Sites** to display the Trusted sites window.



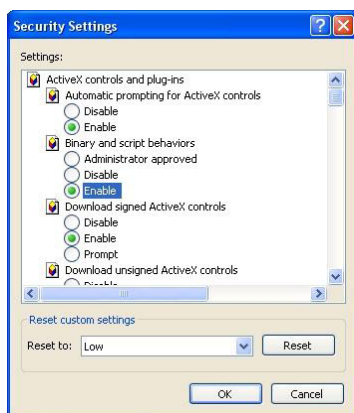
5. Key in the Internet Protocol (IP) of the broadcast host on the text box then click **Add**.
6. Click **OK** when done or **Cancel** to discard changes.



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.

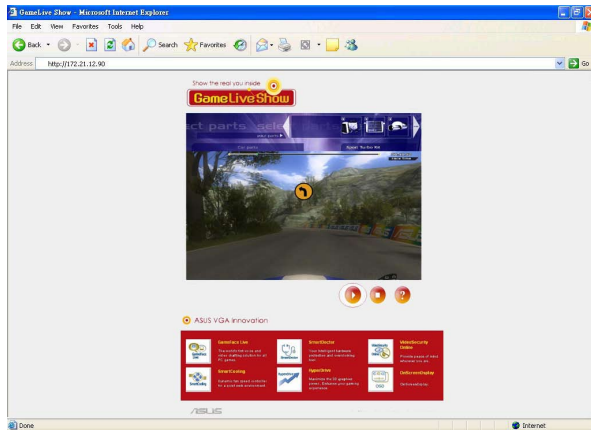


### 6.4.3 Watching broadcasts

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.

## 7. ASUS SmartDoctor


ASUS SmartDoctor is designed to monitor the temperature, voltage and fan condition of your graphics card. This utility also smartly cools down your Graphics Processing Unit (GPU) temperature and allows you to adjust the graphics card clock settings.

### 7.1 Functions

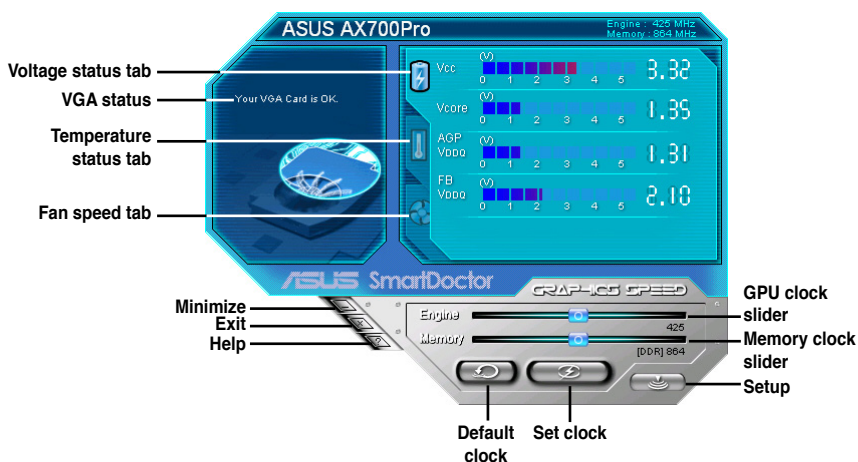
- Monitors graphic chip temperature, fan speed and voltage.
- Notifies user of irregular hardware events, such as overheating, fan malfunction and out-of-safe-range voltage.
- Smartly cools down the graphic chip when its temperature is over the limit.
- Automatically adjusts the fan speed according to the GPU temperature.
- Allows manual adjustment of GPU core and memory clock.

### 7.2 Launching ASUS SmartDoctor

The ASUS SmartDoctor utility is a memory resident program that is launched everytime you start Windows® and remains in the computer memory to check the graphics card status.

If you minimize the SmartDoctor window, click the SmartDoctor icon  on the Windows® taskbar and select **Popup SmartDoctor** to access the menu.

If you exit the utility, go to **Start > Programs > ASUS > ASUS SmartDoctor > ASUS SmartDoctor** to relaunch the program.

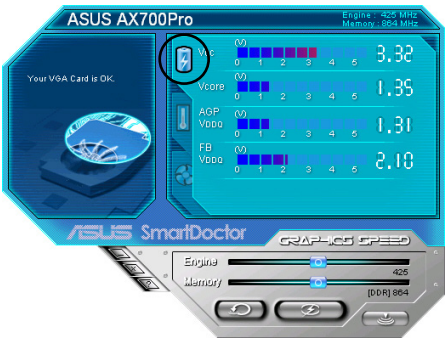


If your graphics card does not support voltage, temperature, and fan speed monitoring, you will only see the clock settings panel display. Refer to **7.6 Engine and memory clock settings** for details.



### 7.3 Voltage status

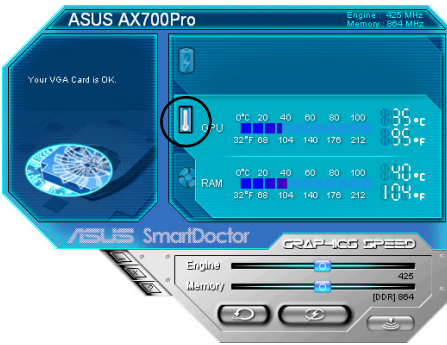
Click the Voltage status tab to display the voltage status of your graphics card.



The item is grayed or disabled if your graphics card does not support voltage monitoring.

### 7.4 Temperature status

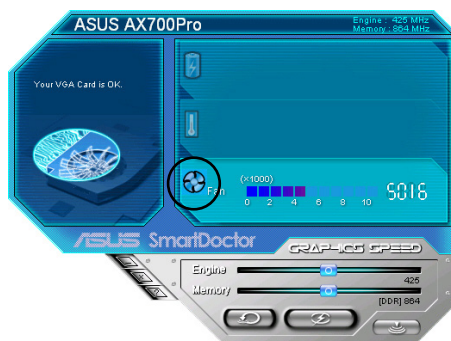
Click the Temperature status tab to display the GPU and RAM temperature status of your graphics card.



If your graphics card does not support temperature monitoring, the item is dimmed.

## 7.5 Fan speed status

Click the Fan speed tab to display the current fan speed of your graphics card.



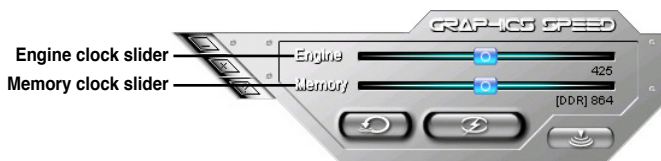
If your graphics card does not support fan speed monitoring, the item is dimmed.


## 7.6 Engine and memory clock settings

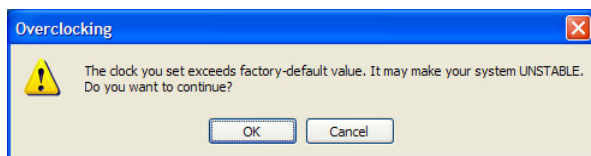
You can manually adjust the Graphics Processing Unit (GPU) and memory clock to enhance your graphics card performance.

To adjust the engine and memory clock:

1. Move the Engine clock slider to adjust the engine clock.
2. Move the Memory clock slider to adjust the memory clock.




3. Click  to set.
4. SmartDoctor prompts a warning message. Click **OK**.



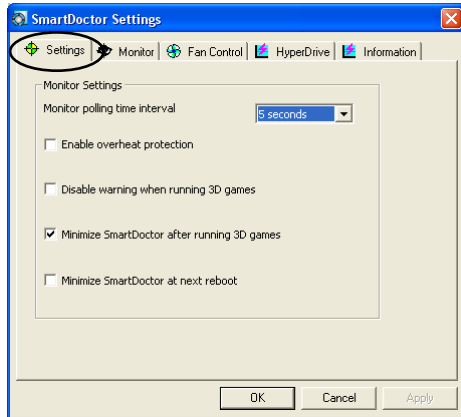
5. The engine clock you set appears on a dialog box. Click **OK**.

## 7.7 Advanced setup features

To launch the SmartDoctor Settings dialog box, click  on the SmartDoctor menu.

### 7.7.1 Settings

To change the settings, click the **Settings** tab from the SmartDoctor Settings dialog box.



### Monitor Settings

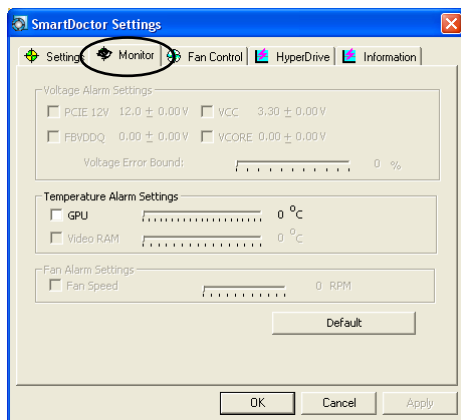
To change monitor settings:

1. Click the combo list box to set Monitor polling time interval.
2. Click the check box to enable or disable any of the monitor setting features.
3. Click **Apply** or **OK** to save settings.

## 7.7.2 Monitor

To change voltage, temperature and fan monitor settings:

1. Click the **Monitor** tab from the SmartDoctor Settings dialog box.



### Voltage Alarm Settings

- Click the check box to enable or disable the alarm for AGPVDDQ (for AGP cards) or PCIE 12V (for PCIe cards), VCC, FBVDDQ or VCORE voltages.
- Move the slider to adjust the Voltage Error Bound percentage.

### Temperature Alarm Settings

- Click the check box to enable or disable the alarm for the GPU and Video RAM temperature.
- When enabled, you can move the slider to adjust the GPU or Video RAM alarm temperature.

### Fan Alarm Settings

- Click the check box to enable or disable the Fan speed alarm.
- When enabled, you can move the slider to adjust the fan speed.



---

Click the **Default** button to load optimum values for stable performance.

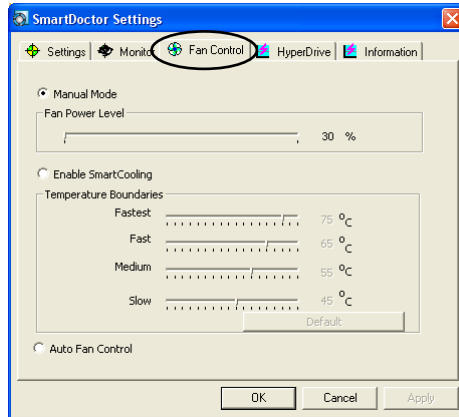
---

2. Click **Apply** to apply settings or click **OK** to save settings and exit. Click **Cancel** to discard changes and exit.

### 7.7.3 Fan Control

To change the fan control settings:

1. Click the **Fan Control** tab from the SmartDoctor Settings dialog box.



2. Click the option buttons to select fan control feature. The fan control has three features: Manual mode, SmartCooling and Auto Fan Control.

**Manual mode:** You can manually change the fan speed by adjusting the slider of each temperature mode.

**Enable Smartcooling:** SmartDoctor will automatically adjust the fan speed according to the GPU temperature. For example, if the GPU temperature rises over 60 degrees Celsius, SmartDoctor will raise the fan speed to the fastest level to cool the GPU. Move the slider to adjust the temperature for fan speeds or click **Default** to load optimum settings.

**Auto Fan Control:** SmartDoctor automatically adjusts the fan speeds for optimum performance.



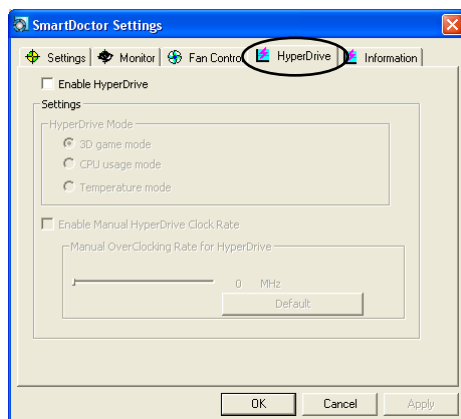
The Fan Control tab is not displayed if your graphics card does not support the Fan Speed Control feature.

3. Click **Apply** to apply settings or click **OK** to save settings and exit. Click **Cancel** to discard changes and exit.

## 7.7.4 HyperDrive

To change the ASUS HyperDrive settings:

1. Click the **HyperDrive** tab from the SmartDoctor Settings dialog box.



### ASUS HyperDrive

To activate HyperDrive:

1. Click the **Enable HyperDrive** check box to enable or disable the HyperDrive feature.
2. Click the option buttons to select the HyperDrive Mode.



Make sure to install the ASUS Enhanced driver when using the HyperDrive 3D mode.

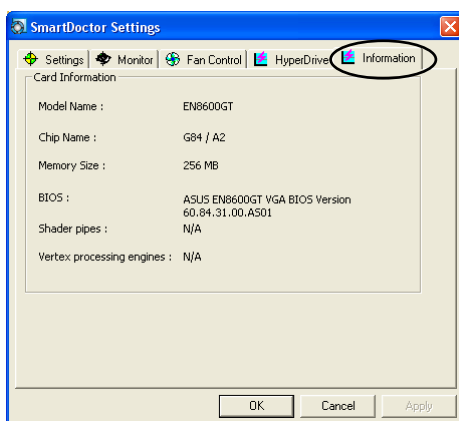
#### HyperDrive Modes

- **3D Game mode:** In 3D Game mode, ASUS SmartDoctor automatically sets the GPU clock to its highest possible value when playing 3D games for better 3D performance. It reverts to its normal GPU core clock after playing 3D games.
- **CPU usage mode:** When set to this mode, ASUS SmartDoctor dynamically adjusts the GPU core clock depending on the Central Processing Unit (CPU) work load. ASUS SmartDoctor increases the GPU core clock when the CPU is busy and decreases it when your CPU is idle.
- **GPU Temperature mode:** In Temperature mode, ASUS SmartDoctor smartly adjusts the GPU clock according to its temperature. If the GPU temperature increases, ASUS SmartDoctor automatically decreases the GPU core clock, and vice versa.

3. When the HyperDrive is enabled, you can enable the Manual HyperDrive Clock Rate and move the slider to adjust the frequency.
4. Click **Default** to load optimum settings.
5. Click **Apply** to apply settings or click **OK** to save settings and exit. Click **Cancel** discard changes and exit.

### 7.7.5 Information

Click the **Information** tab to display the card information.



## 8. ASUS VideoSecurity Online

### 8.1 System requirements

#### Software:

- Microsoft WINDOWS 2000/XP/Vista with DirectX 9.0a or above.
- WDM Capture Driver for your capture devices.
- Internet Connection with Microsoft IE 6 SP1 or above.
- Microsoft Media Player 9.0 or above.

#### Hardware:

- Video capture devices, like Webcams, CCD, V8 or Hi-8, which support UYVY video format.
- A sound card or onboard chip is necessary if you want to play the warning wave file.

See also the ReadMe text file for more details.

### 8.2 What's New





- VideoSecurity Online works with all kinds of video capture devices, which support UYVY video format. It can also handle many different video connectors or interfaces such as USB, IEEE1394.
- When VideoSecurity Online detects something abnormal, it starts tracing the object and recording its movement.
- A more user friendly History Logging interface gives you a clear idea of what's going on.
- Remote monitoring. With web browser and ASUS WebRTP ActiveX control, you will be able to receive the streaming video data that has been transmitted from your local system through the Internet.
- New VideoSecurity Online supports dual devices with the functionality of preview, motion detection, tracing, snapshot, video recording and remote surveillance. It displays the History, Screen, and Main panel windows in one screen, making operating more convenient.
- VideoSecurity supports SkypeOut through Skype and brings you convenience.

### 8.3 Launching ASUS VideoSecurity

To launch ASUS VideoSecurity:

From the Windows taskbar, click the Start button then select **All Programs > ASUS > ASUS Video Security > ASUS Video Security** to display the following menu.



**Setup:** opens the Setup dialog. You can't change settings while VideoSecurity Online is executing watchdog or tracing function.

**Video source:** changes the Video connector type.

**Set detect region:** use mouse to drag a rectangular region you want to detect.


ASUS VideoSecurity Online supports two video sizes, 320x280 and 680x880. Click to change the size.

**History:** When VideoSecurity Online detects any abnormal event, it records the date, time and other information.

VideoSecurity Online working modes include Standby, Watchdog and Tracing.

- **StandBy:** in this mode, VideoSecurity Online does nothing but broadcast the video. You can only change settings in this mode.
- **WatchDog:** press Start to start detecting. You can press the Stop button to switch to the Standby mode.
- **Tracing:** When the tracing option is enabled, VideoSecurity Online starts trying catch the motion object(s), which cause any unusual situation. Users can manually stop tracing. VideoSecurity Online also stops tracing when the object is too small.
- **Streaming:** When Enable HTTP server option is enabled, ASUS VideoSecurity Online starts streaming if any remote client is connected to your local system. The streaming will be stopped while there's no client connection to your local system. To manually stop streaming, press the **Stop** button.

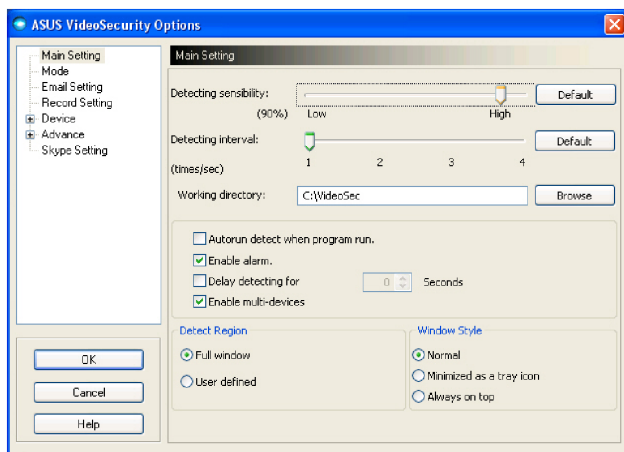
## 8.4 Setup

To display the ASUS VideoSecurity setup window, click  from the ASUS VideoSecurity menu.

### 8.4.1 Main

The main settings section allows you to adjust the detecting sensibility, detecting interval and working directory. This section also contains the check boxes to enable various features including the alarm, autorun, use of multi-devices, and setting of detecting delay. You can also set the detect region and windows style in this section.

To modify the Main setup options, click **Main Setting** from the Video Security setup dialog box. The following submenu appears:



### Adjusting the detecting sensibility parameter

To adjust the detecting sensibility:

Move the slider to adjust the Detecting sensibility parameter. This item sets the receptibility of VideoSecurity to environment changes.

- OR -

Press Default to set pre-assigned values based on normal light and temperature conditions.





- Temperature and lighting may affect monitoring.
- The quality of the video capture device is also very important in setting the sensibility.
- Test different values to fine-tune this parameter for optimum performance.

## Setting the detecting interval parameter

To set the detecting interval parameter:

Move the Detecting interval slider. The interval (times/sec) or scan rate has four configuration options: 1 times/sec, 2 times/sec, 3 times/sec and 4 times/sec.

- OR -

Click Default to set the recommended scan rate.

The default value of Detecting interval is 2 frames/sec. The higher the scan rate is, the more accuracy the detection could be, the more CPU usage you need. If you want VideoSecurity Online and other applications (like Office, network) to run simultaneously, choose a lower scan rate to release CPU usage to other applications.



Set to a higher scan rate for a more accurate detection.

## Setting the working directory

To set the working directory:

Key in the working directory on the textbox or click Browse to locate and set the working directory.

The default working directory is C:\VideoSec, if Windows roots in disk C. Everytime you launch ASUS VideoSecurity, a new folder is created. The folder filename indicates the current time and date the application was launched. For example, "2005.06.16\_04.20.10" means that ASUS VideoSecurity was launched on June 06, 2005 at 4:20:10 AM.



Do not change the working directory name while ASUS VideoSecurity is running. Doing so will cause a runtime error!

## Setting other features

To enable or disable the autorun feature, alarm, use of multi-devices and/or set the detecting delay:

- Click the Autorun detect when program run check box to enable or disable the autorun feature of ASUS VideoSecurity. When this item is enabled, VideoSecurity Online will auto-run when system boots. This option is helpful when you use remote control over your computer.

☐ Autorun detect when program run.

- Click the Enable alarm check box to enable or disable the alarm feature. When this item is enabled, VideoSecurity Online can alert user when VideoSecurity Online detects any unusual condition. Before use this option, make sure your PC has properly installed a sound card.

☒ Enable alarm.

- Click the Delay detecting for XXX seconds check box to enable or disable the delay feature when a motion is detected. Key in or click the arrows to set the delay (in seconds).

☐ Delay detecting for  Seconds

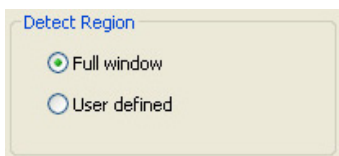
- Click the Enable multi-devices check box to enable or disable the alarm feature. This option allows you to switch to single device mode or double devices mode for VideoSecurity Online.

☐ Enable multi-devices

## Setting the detection region

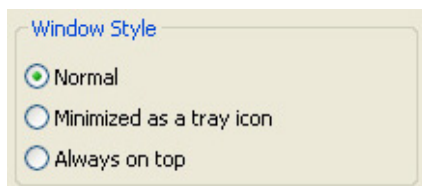
To set the detect region, click the Detect Region option buttons.

If you select Full Window, VideoSecurity Online will monitor the whole visible area. If you select User Defined Region, VideoSecurity Online will only detect changes within the specific region you set. The default value is Full window.



## Setting the Windows display style

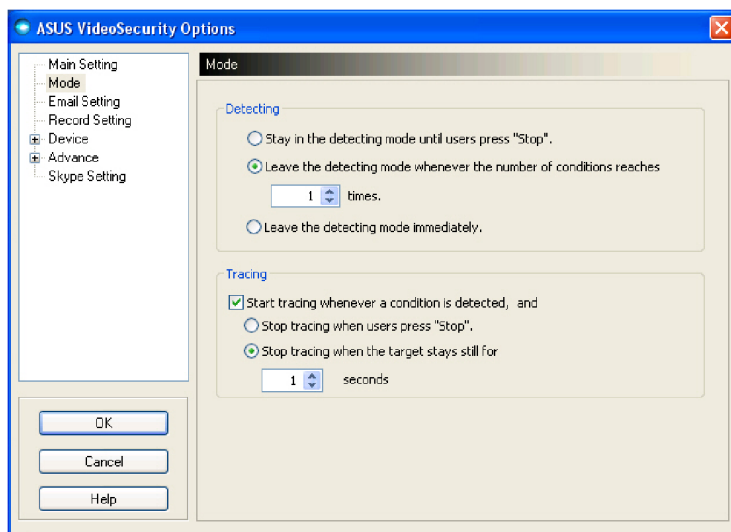
To set the Windows display style, click the Window Style option buttons.



Make sure to click OK after making changes.

### 8.4.2 Mode

The Mode section allows you to configure the Detecting and Tracing method. To modify the mode settings, click the Mode item from the ASUS VideoSecurity setup dialog box. The following submenu appears:

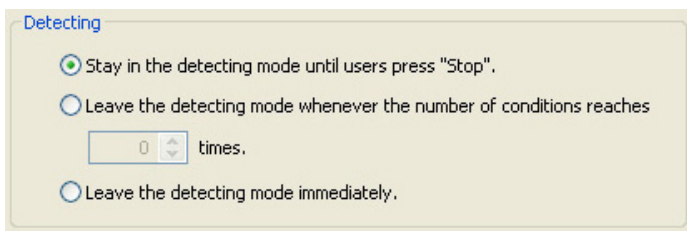


## Setting the detecting mode

To set the detecting mode:

Click the option button of your desired mode. The following describes the available configuration options:

- Stay in the detecting mode until users press "Stop" - when a condition is detected, VideoSecurity will continue detecting the region until you press the Stop button on the main menu.
- Leave the detecting mode whenever the number of conditions reaches **n** times - this option allows you to set the maximum number of conditions **n** before VideoSecurity stops detecting a region. To set **n**, key in your desired number in the text box or click the arrows to adjust the desired maximum number.
- Leave the detecting mode immediately - This is the default option. If any unusual condition is detected, VideoSecurity Online stops watchdog function immediately.

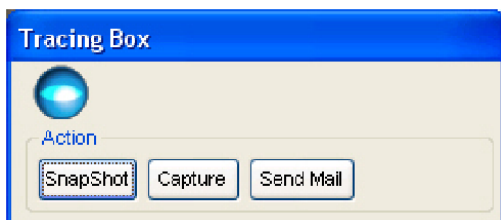


## Setting the tracing method

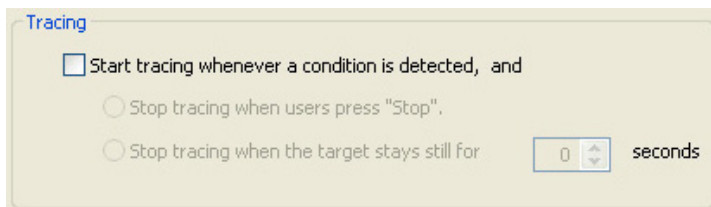
To set the tracing method:

Click the **Start tracing whenever a condition is detected** check box to have VideoSecurity Online not only detects conditions, but also can trace the motion object. The tracing modes are:

- **Stop tracing when user's press "Stop"** - When there is an event, VideoSecurity online starts to trace the motion object(s) and prompt a Tracing Box to provide you with more options.



- **Stop tracing when the target stays still for x seconds** - automatically stops tracing when the detect region remains still for **x** seconds. To set **x**, key in the number in the text box or click the arrows keys to adjust value.



- Make sure to click OK after making changes.
- When Tracing Box prompts, users can snapshot or capture by themselves, all the recorded files are saved at the current working directory you specified.

### 8.4.3 Email setting

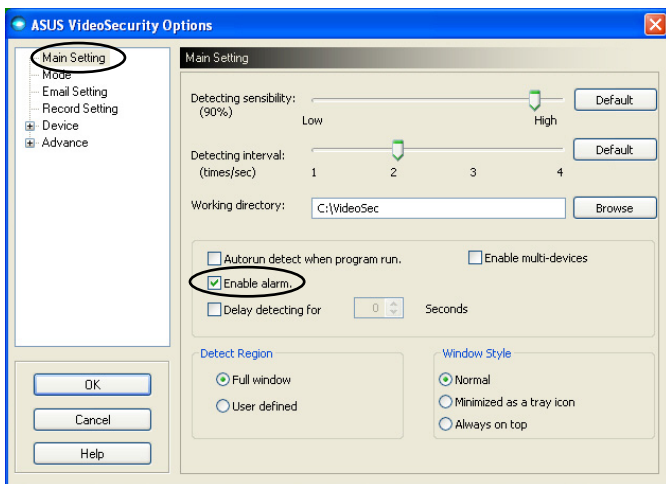
The Email setting section contains the email parameters necessary to send an email when the email alarm feature is enabled. To modify the email settings, click the Email Setting item from the setup dialog box, the submenu appears.



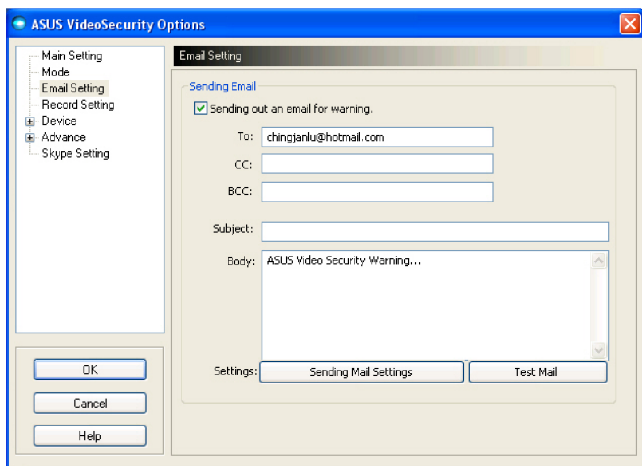
## Using the email warning feature

To use the email warning feature:

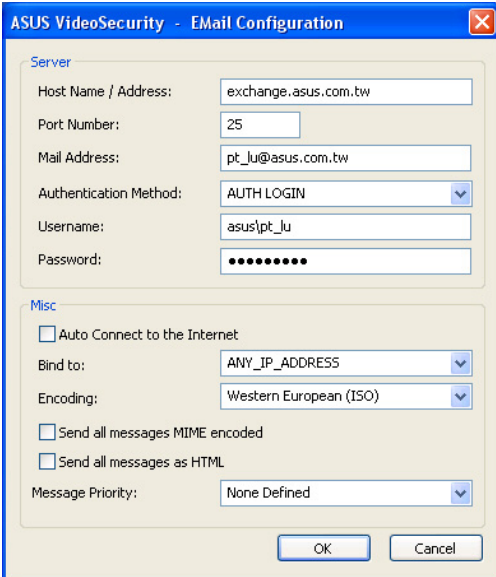
1. From the Main Setting section, click to check Enable alarm.



2. Click the Email Setting item from the setup dialog box then click to enable Send out an email as warning.



3. Key in the email address(es) of the recipient(s), the subject, and body content. The following describes these email parameters:
  - To
  - CC
  - BCC
  - Subject
  - Body
4. Click **Sending Mail Settings** to configure the email parameters. The following window appears:



ASUS VideoSecurity - Email Configuration

**Server**

Host Name / Address: exchange.asus.com.tw

Port Number: 25

Mail Address: pt\_lu@asus.com.tw

Authentication Method: AUTH LOGIN

Username: asus\pt\_lu

Password: .....

**Misc**

☐ Auto Connect to the Internet

Bind to: ANY\_IP\_ADDRESS

Encoding: Western European (ISO)

☐ Send all messages MIME encoded

☐ Send all messages as HTML

Message Priority: None Defined

OK Cancel



If necessary, consult your system administrator for authorization and other server parameter settings.

### Server

Contains the parameters and protocols necessary to send your email. Key in the host name/address, port number, mail address, authentication method, username, and password. The following describes the server parameters:

Host Name/Address - refers to the simple mail transfer protocol (SMTP) server address that is used to transfer mail over the Internet. Example: exchange.companyname.com or 149.112.144.153.

Port Number - the number identifying the type of connection requested by a remote computer on the Internet. The default value is 25.

Mail Address - refers to the sender's email address.

Authentication method - refers to preferred server authentication method when checking the user name and password.

Username - refers to your user account name.

Password - secret set of characters and/or numbers required to access a computer system. In this case, to allow you to send and receive emails.

### Misc

The Misc group contains miscellaneous parameters and server settings. Refer to the following parameter descriptions:

Auto Connect to the Internet - when enabled, the utility will check if an Internet connection already exists. If the connection between the IP you bind and the destination mail server can't be established, the utility will automatically dial-up. Click the check box to enable or disable this feature.

Bind to - selects your local IP to bind for Internet connection. Click the list box to select IP.

Encoding - sets the encoding method for the character set of email sent. Click the list box to select encoding method.

Send All messages MIME encoded - allows support for multipurpose Internet mail extensions (MIME) character sets. Click the check box to enable or disable this feature.

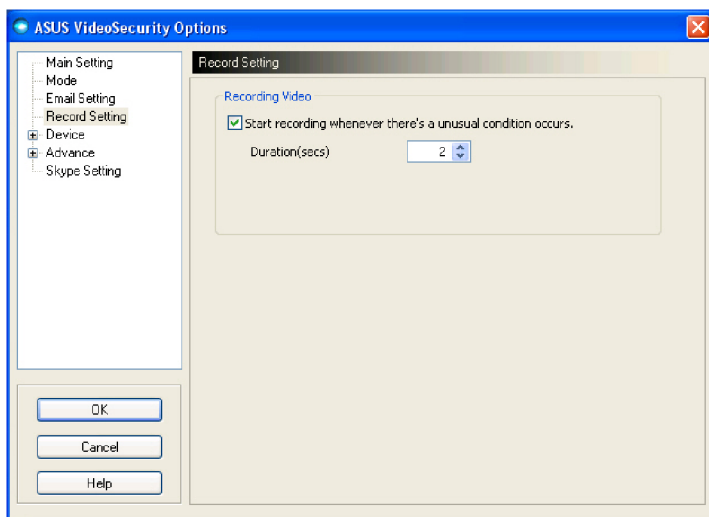
Send All messages as HTML - allows you to send your messages in hypertext markup language (HTML) format. Click the check box to enable or disable this feature.

Message Priority - sets the email message priority level. Click the check box to enable or disable this feature.

5. Click OK to save the configuration or Cancel to abort.
6. Click Test Mail to test your email configuration.
7. When finished, click OK to save settings and exit.

### 8.4.4 Record setting

The Record setting section contains parameters that allows you to configure the recording duration whenever condition is detected. To set the recording parameters, click the Record setting item from the setup dialog box. The following submenu appears:

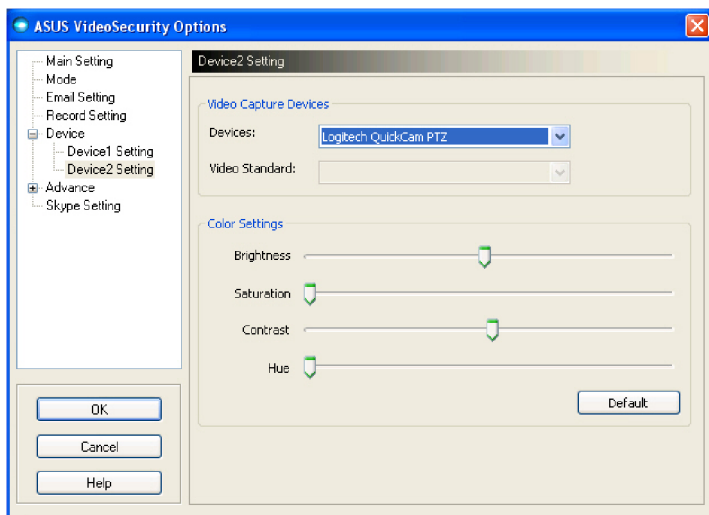
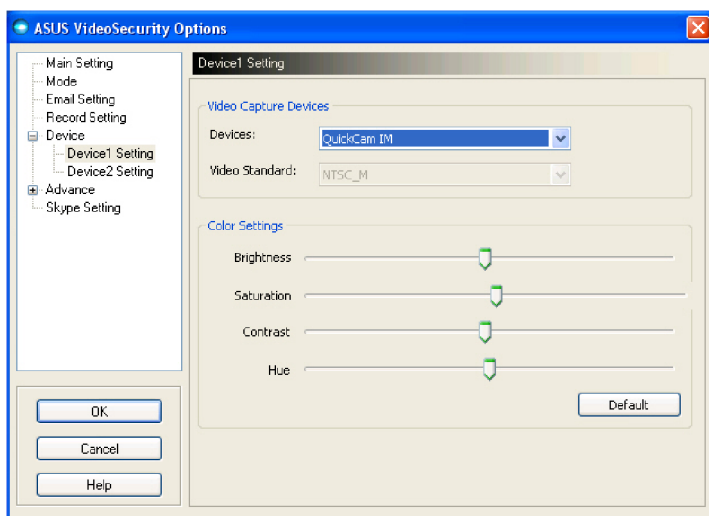


To set the recording parameters:

1. Click to enable Start recording whenever there's an unusual condition occurs.
2. When enabled, key in or use the arrows to set the recording duration in seconds. The default value is 2 seconds.
3. Click **OK** to save settings and exit.

## 8.4.5 Device

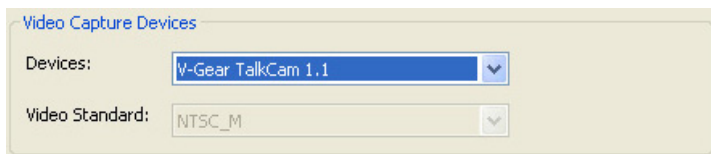
The Device section allows you to set the video capture devices and color settings. To select a video capture device or adjust color settings, click the Device Setting item from the ASUS VideoSecurity setup dialog box. The following sub-menu appears:



## Configuring capture device

To configure device:

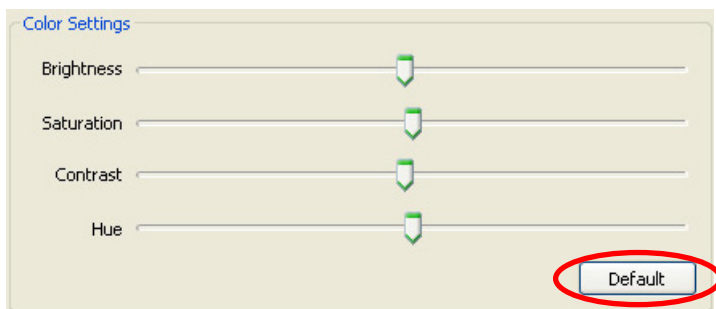
1. Click the Devices list box to select video capture device.
2. Click the Video Standard list box to set the video standard in your area. The default video standard is chosen based on your system location.



3. Move the slider to adjust the brightness, saturation, contrast or color hue. Click on the Default button to restore the default settings.

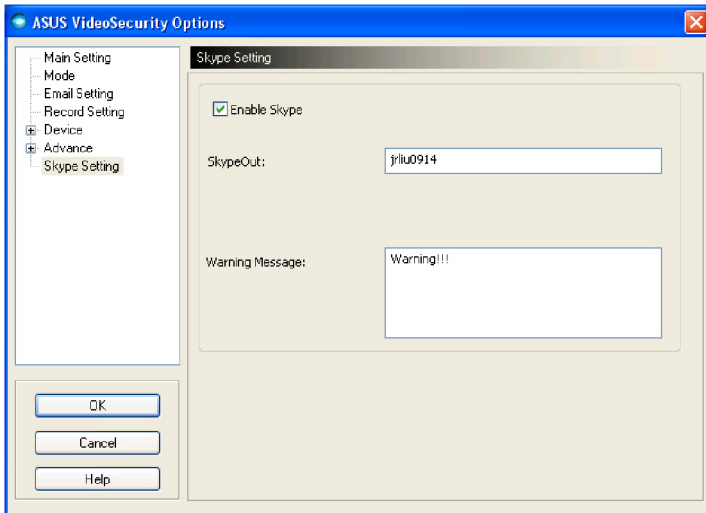
- OR -

Click Default to load recommended values.



4. Click OK to save settings and exit.

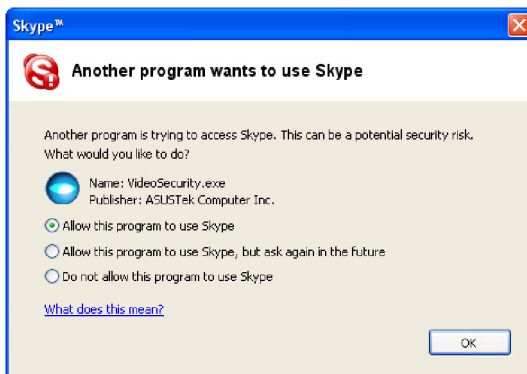
## 8.4.6 Skype Setting



**Enable Skype:** When enabled, ASUS VideoSecurity works with Skype. If any event is detected, Skype will notify you.

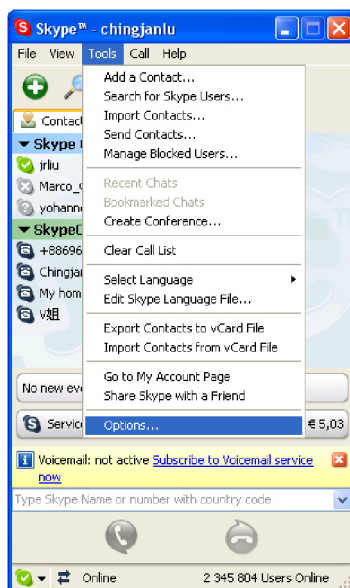
Before using this function, you need to install Skype in the system and properly configure the settings.

When Skype is enabled in the first time, a dialog box pops up as the following. Select “Allow this program to use Skype”, and then click **OK**. If you select “Do not allow this program to use Skype”, VideoSecurity will be blocked from hosting Skype.

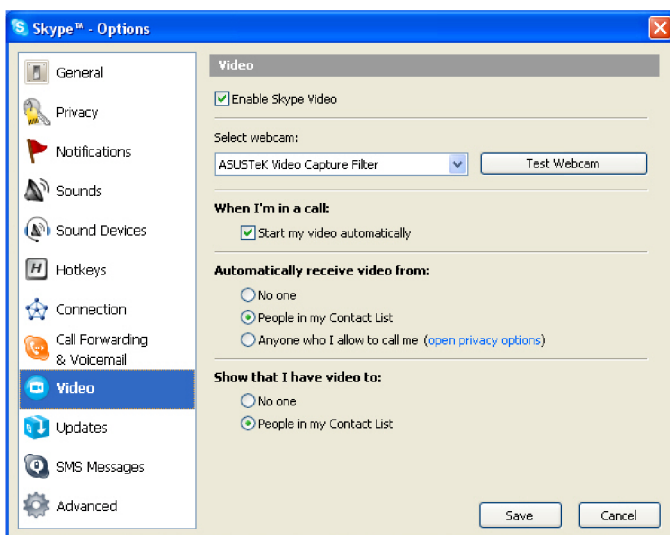


To configure the video settings of Skype:

1. Launch Skype.
2. Click the **Tools** tab and select **Options....**
3. Click **Video** in the left part.



4. Select **Select webcam:** and choose **ASUSTek Video Capture Filter**.
5. Click **Enable Skype Video** and **Start my video automatically**.
6. Click **Save**.





The operation of remote surveillance from Skype appears as the following screens (figure 1, 2 and 3).

If you have two webcams enabled in the server, you can use chat command “change source” (figure 3) to switch the webcam you want to see.

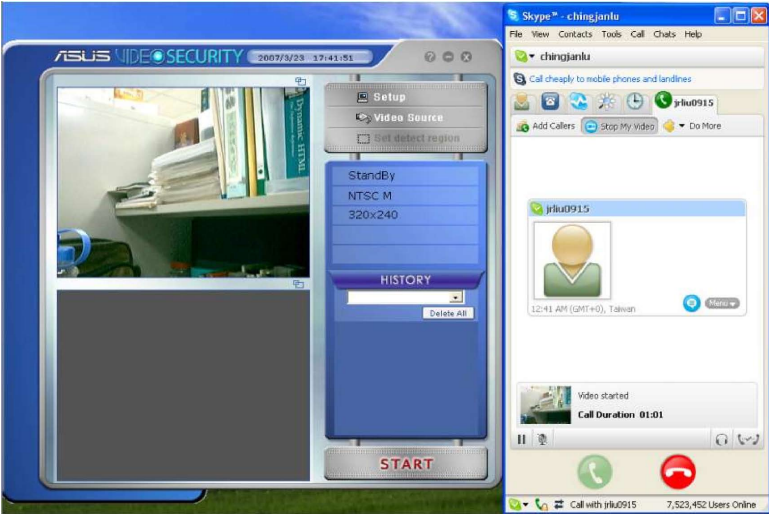


Figure 1: home PC

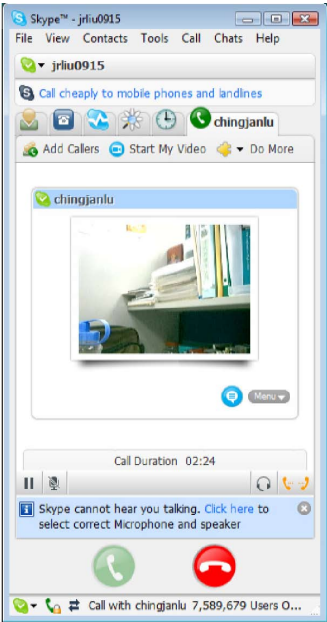


Figure 2: remote side PC

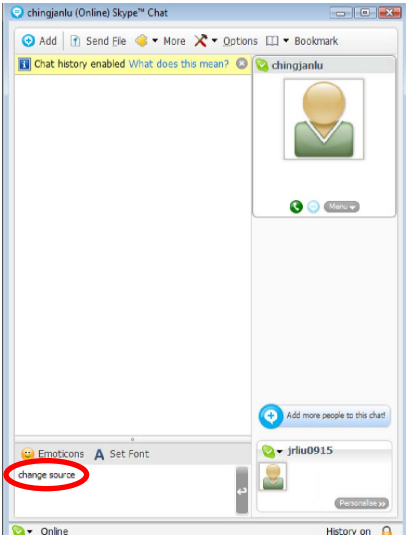


Figure 3: remote side PC

## 8.5 Video Source

The Video Source lists available video devices installed to your system. When available, you can exchange the different video source types.

### Video source setting

To set the video source:

1. Click **Video Source** from the VideoSecurity main menu.
2. From the pop-up menu, select from the available video sources. The selected video source output is displayed on the upper screen.

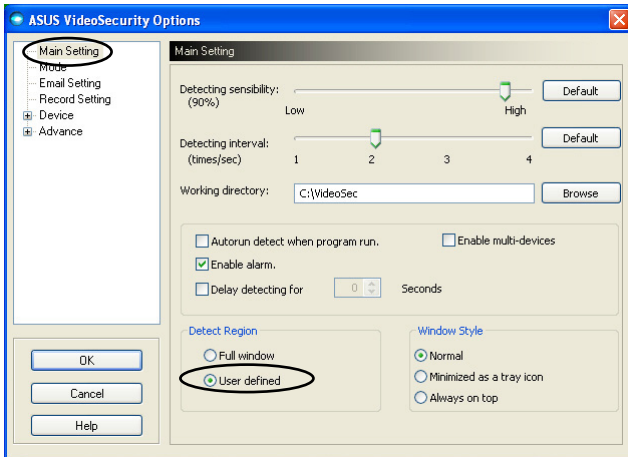


## 8.6 Set detect region

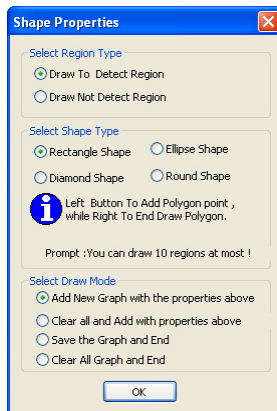
The Detect Region is a user-defined area or areas that VideoSecurity will monitor for condition changes.

To set detect region:

1. From the **Main Setting** section, select **User Defined** under the **Detect Region** group.



2. Click **Set detect region** from the VideoSecurity main menu to display the **Shape Properties** dialog box.



3. Click the desired option buttons to configure the settings in the Region Type, Shape Type, and Draw Mode fields.
4. Click **OK** to apply settings.

5. Drag the mouse to an area to set the detect region.

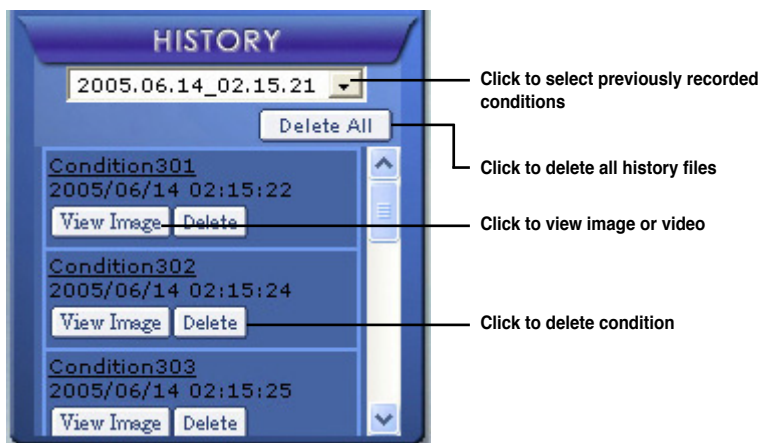


You can set up to ten (10) detect regions.

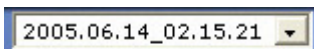
8. Click  to begin surveillance.

## 8.7 History

History contains the list of recorded conditions in the detect region. The following labels the history section from the main menu.




1. To select other recorded conditions, click the list box labeled with the date and time of recording.



2. To delete a recorded condition, select the folder from the list box and click



3. To preview image or video, click  from a listed condition.

4. To delete a recorded condition, click .

## 8.8 Limitations

Before using VideoSecurity Online, there are some limitations you have to understand so that you can appropriately use this application.

- While using Webcams or CCDs, the high temperature and luminance sensibility often cause distorted CCDs of the images, which might result in erroneous detection.
- If the features (e.g. color, luminance) of the object are much similar with that of the background, the object might not be detected.
- The Webcams or CCD cannot successfully capture the object if the object moves too fast.
- VideoSecurity Online can only process UYVY, YUY2 and I420 video format.
- Due to the limitation of Video Mixing Renderer in Win2000, VideoSecurity3500 doesn't support User Defined Motion Detection and Tracing features in Win2000.
- VideoSecurity does not support 256 color. We suggest that you run the program under 16-bit color environment or above.

### Known Issues

- If you want to connect two USB devices to the system, we recommend that you connect them to USB ports of different USB port modules. Do not use two USB ports in the same USB port module, for example, using port 1 and 2 at the same time.