

GV-SDI-204 Card

The GV-SDI-204 Card provides up to 4 video channels of HD-SDI cameras, recording up to 120 /100 fps (NTSC / PAL) in total at 1080p with H.264 hardware compression. You can install up to four GV-SDI-204 Cards for a total of 16 channels. The new technology of resolution is employed to enhance the live image without DSP Overlay. Even in multi views, the image on the largest division view can remain at high-quality resolution without DSP Overlay.

Minimum System Requirements

OS	32-bit	Windows XP / Vista / 7 / 8 / Server 2008	
	64-bit	Windows 7 / 8 / Server 2008 R2 / Server 2012	
CPU	GV-SDI-204	Core 2 Duo E4400, 2.00 GHz	
	GV-SDI-204 x 2	Core 2 Quad Q9400, 2.66 GHz	
	GV-SDI-204 x 3	Core i3-2130, 3.40 GHz	
	GV-SDI-204 x 4	Core i3-2130, 3.40 GHz	
RAM	GV-SDI-204	2 x 1 GB Dual Channels	
	GV-SDI-204 x 4		
HDD	GV-SDI-204	500 GB	
	GV-SDI-204 x 4	2 TB	
Graphic Card	AGP or PCI-Express, 800 x 600 (1280 x 1024 recommended), 32-bit color		
DirectX	9.0c		

Packing List

1. GV-SDI-204 Card x 1
2. SATA Power Converter Cable x 1
3. Hardware Watchdog Jumper Wire x 1
4. USB Dongle x 1
5. Software DVD x 1

Connecting the GV-SDI-204 Cards

Up to four GV-SDI-204 Cards can be connected. GV-SDI-204 Cards can also be installed with other types of GV-Video Capture Cards including GV-900A, GV-800B, GV-650B, GV-600B, and GV-1480A / 1240A / 1120A Combo Cards, GV-1480B / 1240B / 1120B Combo Cards, GV-4008 and GV-5016. With the combination of different video capture cards, the total number of channels cannot exceed 32 channels.

- Connect the HD-SDI cameras to the GV-SDI-204 Card using BNC cables.
- Using the supplied SATA Power Converter Cable, connect the GV-SDI-204 Card to power supply.
- Connect the supplied Hardware Watchdog Jump Wire (Figure 2).
- After you turn on the computer, the Power LED (D1) and Status LED (D10 and D18) should be lit in green to indicate the card is ready for use.

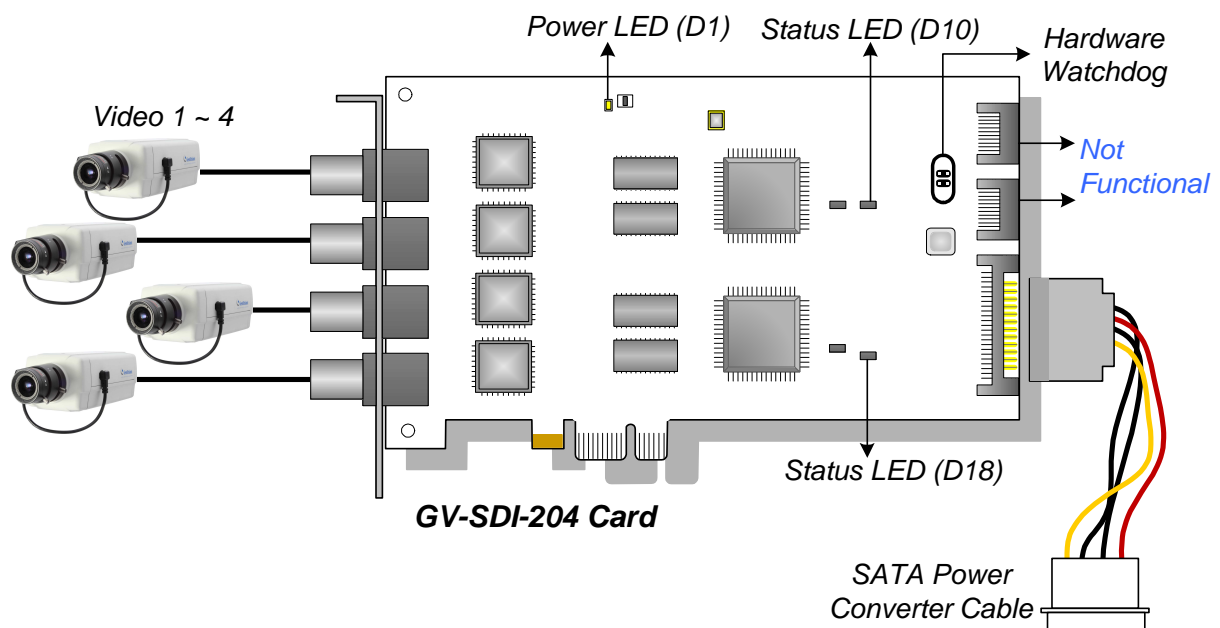


Figure 1

Note:

1. The GV-SDI-204 Card only works when the supplied USB Dongle is inserted to PC.
2. The connected HD-SDI cameras must have a resolution under 1080p_30, 720p_60 or 1080i_60. The Video Lost message will be displayed when the connected channels have higher resolution.

Connecting Hardware Watchdog

Insert the Hardware Watchdog Jumper Wire to the 2-pin connectors on the Card. The (+) pin on the Card must connect to the Reset (+) pin on the motherboard, and the (-) pin on the Card to the Ground (-) pin on the motherboard. Ensure the connection is correct; otherwise the hardware watchdog will not work.

When installing multiple capture cards, the Hardware Watchdog can be connected to any of the GV-SDI-204 cards, no matter if the cards are all GV-SDI-204 cards or a combination of GV-SDI-204 cards and other capture cards. If you are installing GV-SDI-204 cards in addition to existing video capture cards and the Hardware Watchdog has already been connected, you do not need to change the connection to a GV-SDI-204 card.

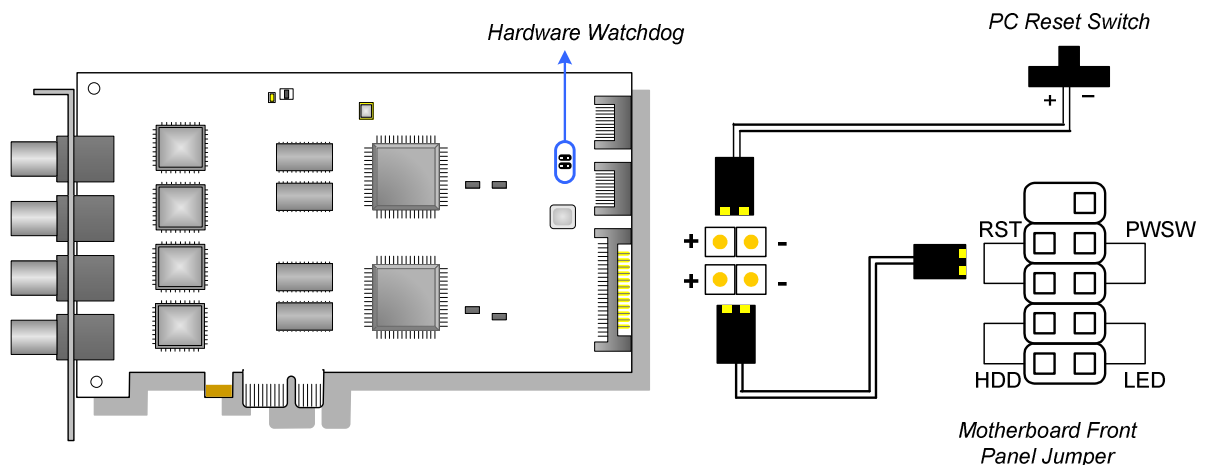


Figure 2

Note: To locate the motherboard's Reset (+) pin and (-) pin, please refer to the motherboard's user manual.

Installing Drivers

After installing the GV-SDI-204 Card in the computer, insert the software DVD to install GV-Series drivers. The DVD will run automatically and an installation window will pop up. Select **Install or Remove GeoVision GV-Series Driver**, and select the following two options to install card and USB dongle drivers.

- **Install or Remove GeoVision GV-Series Card Drivers:** installs card drivers.
- **Install GeoVision USB Device Drivers:** installs USB dongle drivers.

To verify the drivers are installed correctly, go to Windows Device Manager and see if their entries are listed. The image below is an example of installing one GV-SDI-204 card.



Figure 3

Expand the **DVR-Devices** field, you can see:

GV-SDI-204 Card	Entry
Single-card mode	GV-SDI-204 GV-Series USB Protector
Four-card mode	GV-SDI-204 GV-SDI-204 GV-SDI-204 GV-SDI-204 GV-Series USB Protector

Adjusting the Video Settings in the Main System

One distinct feature of GV-SDI-204 Cards is their ability of hardware compression, providing you with higher system performance and DVD recording quality.

To take full advantage of GV-SDI-204 Cards, you can adjust the video settings, including the recording quality and frame rate, before running the GV-System.

Setting up the video settings of the recorded files:

Considering computer performance or recording quality, you may adjust the settings to meet your needs.

1. On the Main System, click the **Configure** button, select **System Configure**, select **Camera Install**, and click **Hardware Compression Setup**. This dialog box appears.

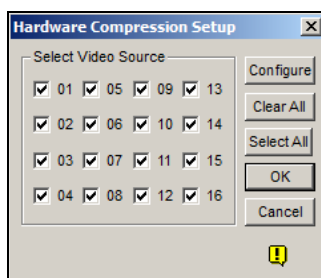


Figure 4

2. Select the cameras you want to set up, and click the **Configure** button. This dialog box appears.



Figure 5

3. In the Select Hardware-compressed Camera section, select one camera to be configured.
4. Select the recording quality.
5. The **Enable hardware-compressed data FIFO** option is disabled by default. When the option is enabled, the hardware-compressed data from the video IP device, such as IP camera, video server and compact DVR, will be transmitted directly to remote servers instead of being compressed again on the DVR. The remote servers include CMS-related servers and WebCam Server. This feature can decrease the system load of DVR but increase that of remote servers.
6. To use standard H.264 codec in recording, enable **Standard codec** in the Recording codec format section.
7. To apply the same setting to all cameras, click the **Finger** button in each section.
8. To access the frame rate settings, on the Main System, click the **Configure** button, select **System Configure**, and select **Camera Configure**. This dialog box appears.

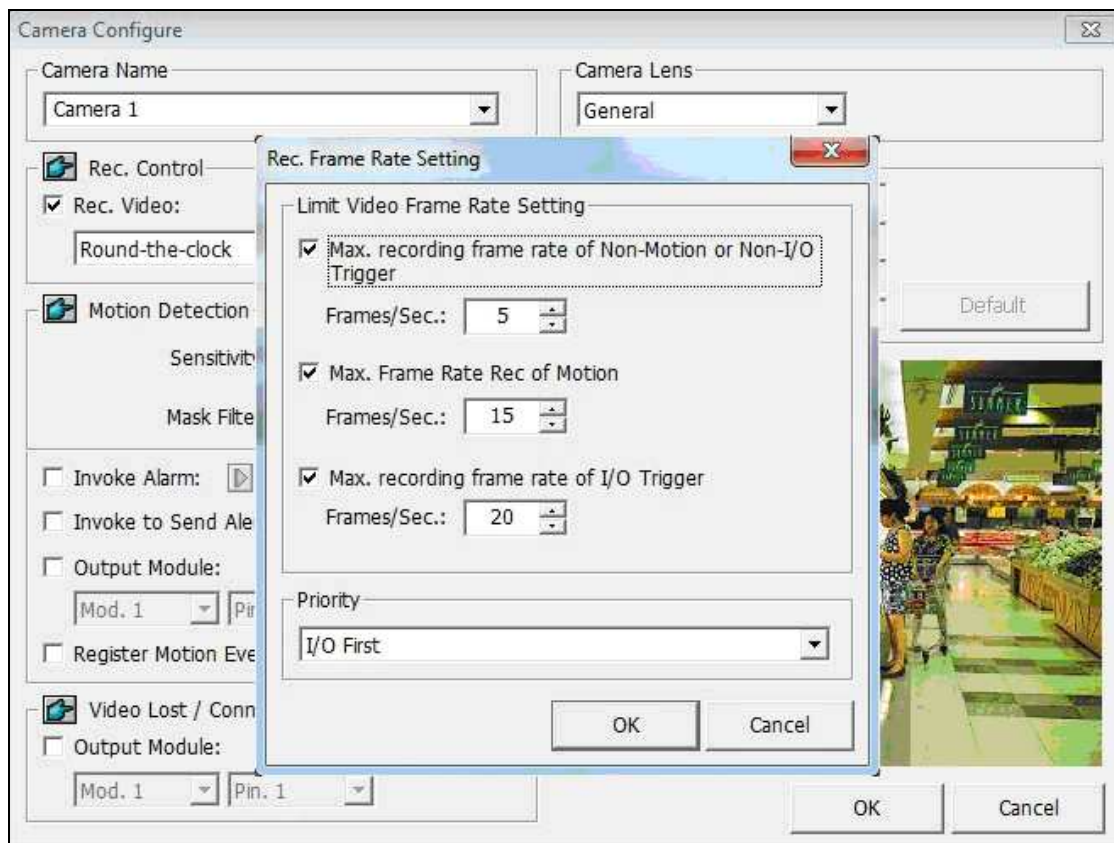


Figure 6

9. In the Rec Control section, click the **Arrow** button. The Hardware Rec. Frame Rate Setting dialog box appears.
10. Set the maximum frame rate for motion and non-motion periods to save disk space when possible.

Specifications

			GV-SDI-204
Interface			PCI-E (x1)
Input Type			BNC
Video Input			4 Cams
Audio Input			N/A
Recording Rate and Display Rate	1080p	NTSC	120 fps
		PAL	100 fps
	720p	NTSC	240 fps
		PAL	200 fps
	1080i	NTSC	120 fps
		PAL	100 fps
Video Resolution	H/W	1080p	1920 x 1080
		720p	1280 x 720
		1080i	1920 x 1080
	S/W	1080p	960 x 540, 480 x 270
		720p	640 x 360
		1080i	960 x 540, 480 x 270
Video Compression Format		H/W	H.264
		S/W	Geo MPEG4, Geo H.264
Bit Rate Range			10M ~ 20M
GV-NET/IO Card Support			Yes (Note 3)
GV-Multi Quad Card Support			No
GV-Loop Through Card Support			No
Dimensions (W x H)			158 x 111 mm / 6.22 x 4.37 in
Note:			
<ol style="list-style-type: none"> GV-SDI-204 does not support the TV-Out function. GV-SDI-204 is currently not compatible with VIA series and ATI series chipset motherboards. To work together with GV-SDI-204, GV-NET/IO Card V3.1 must be set in the I/O Box Mode and connected to the PC through USB or DB9. 			