

GV-5016

The GV-5016 Card provides up to 16 video and 16 audio channels, recording up to 480 / 400 fps (NTSC / PAL) in total with H.264 hardware compression. 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 7 / 8 / 8.1 / 10 / Server 2008	
	64-bit	Windows 7 / 8 / 8.1 / 10 / Server 2008 R2 / Server 2012	
CPU	GV-5016	Core 2 Quad, 2.4 GHz	
	GV-5016 x 2	Core i5 650, 3.20 GHz	
RAM	GV-5016	2 x 1 GB Dual Channels	
	GV-5016 x 2		
HDD	GV-5016	500 GB	
	GV-5016 x 2	1 TB	
Graphic Card	AGP or PCI-Express, 800 x 600 (1280 x 1024 recommended), 32-bit color		
DirectX	9.0c		

Packing List

1. GV-5016 Card x 1
2. 1-16 LFH-Type Audio and Video Cable x 1
3. Hardware Watchdog Jumper Wire x 1
4. USB Dongle x 1
5. Software DVD x 1

Connecting One GV-5016 Card

- Connect the video and audio cables to the GV-5016 Card.
- Connect the supplied Hardware Watchdog Jump Wire (Figure 5).
- After you turn on the computer, the Power LED (D19) and Status LED (D17) should be lit in green to indicate the card is ready for use.

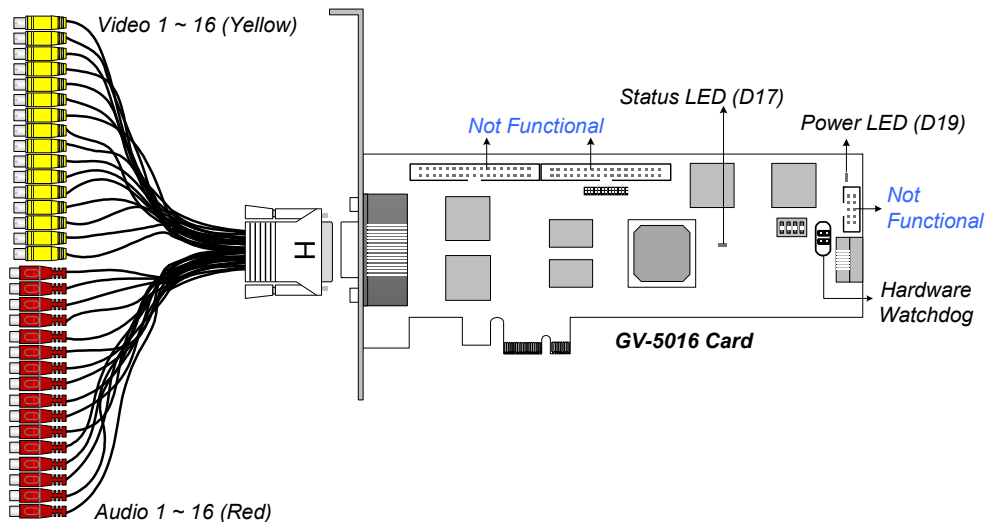


Figure 1

When connecting the cable, make sure the cable is connected correctly:

- The letter “H” on the connector should be on the same side as the chipsets.

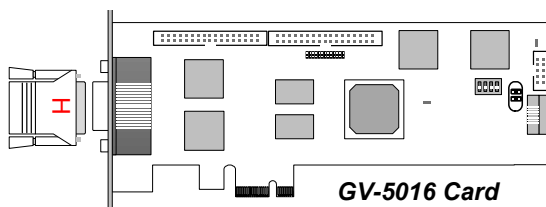


Figure 2

- The LFH connector on the cable is in the shape of a trapezoid and should match the trapezoid connector on the capture card.

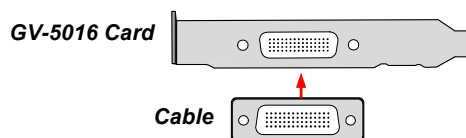


Figure 3

Note:

1. The GV-5016 Card only works when the supplied USB Dongle is inserted to PC.
2. The GV-5016 Card cannot work with microphones which acquire power from the PC. Use microphones which have external power supply.

Connecting Two GV-5016 Cards

You can install two GV-5016 Cards for a total of 32 channels. Master Card is the card with 1-16 channels and Slave Card is that with 17-32 channels. Normally, the card attached to the lower PCI-E slot number will act as Master, and the card attached to the higher PCI-E slot number will act as Slave.

- **Hardware Watchdog Connection:** Connect the supplied Hardware Watchdog Jump Wire to the Master Card only (Figure 5).

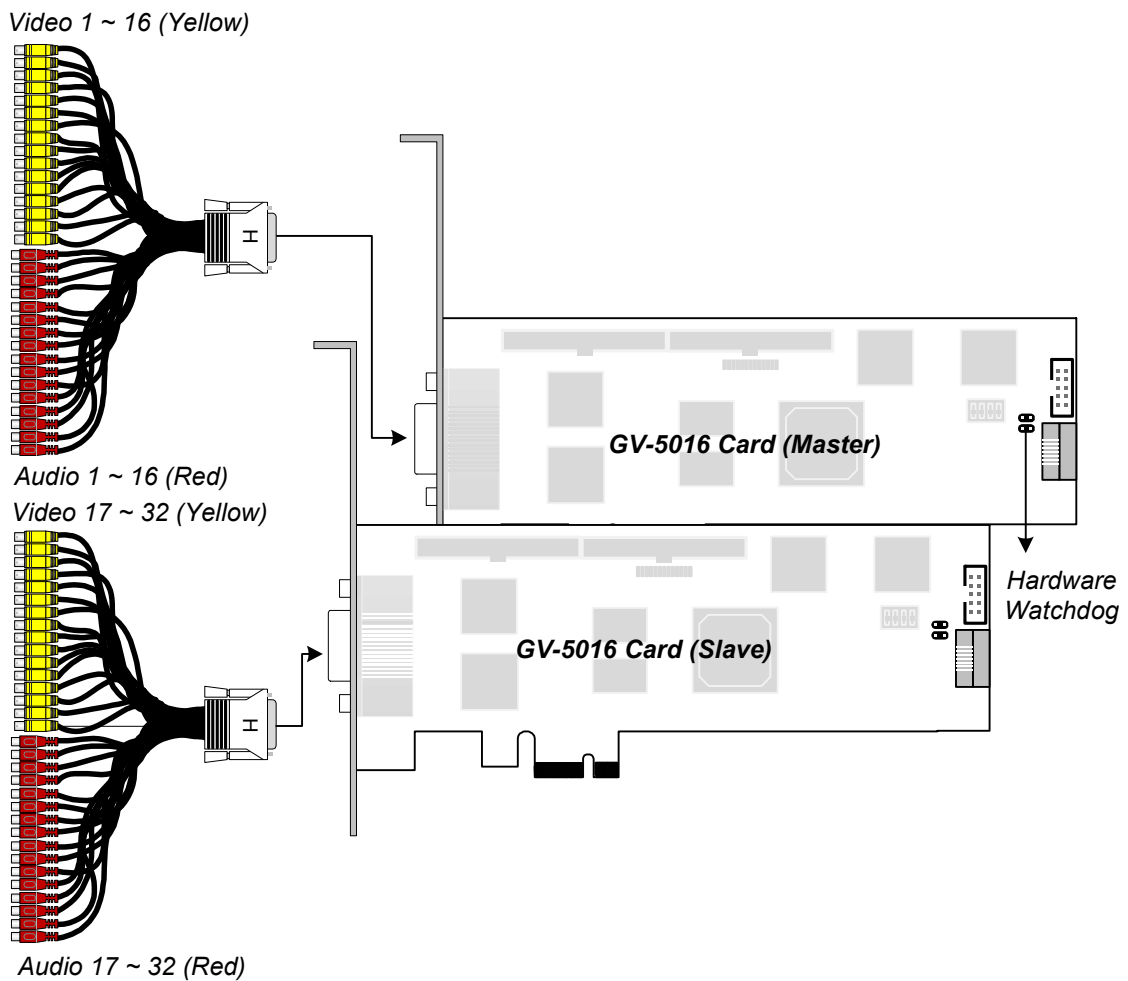


Figure 4

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.

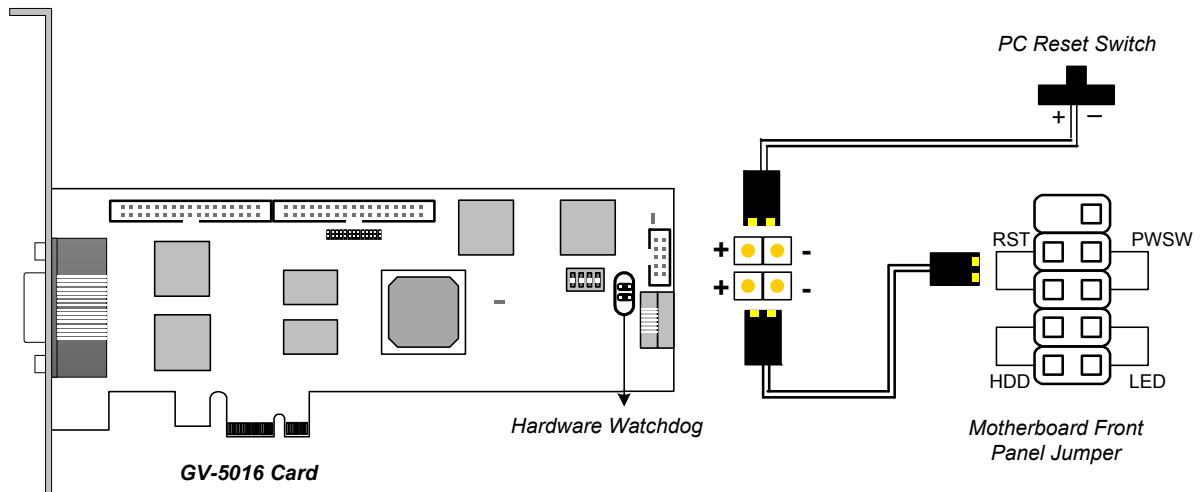


Figure 5

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

Installing Drivers

After installing the GV-5016 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-5016 card.

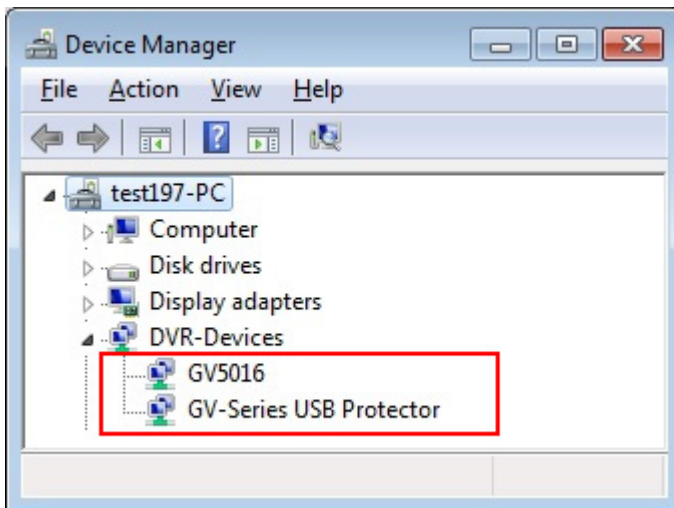


Figure 6

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

GV-5016 Card	Entry
Single-card mode	GV5016 GV-Series USB Protector
Two-card mode	GV5016 GV5016 GV-Series USB Protector

Adjusting the Video Settings in the Main System

One distinct feature of GV-5016 Cards is their ability of hardware compression, providing you with higher system performance and DVD recording quality.

To take full advantage of GV-5016 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.

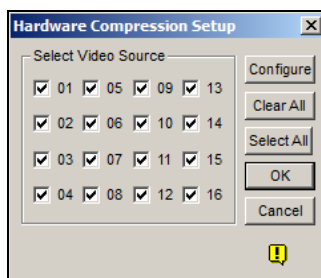


Figure 7

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

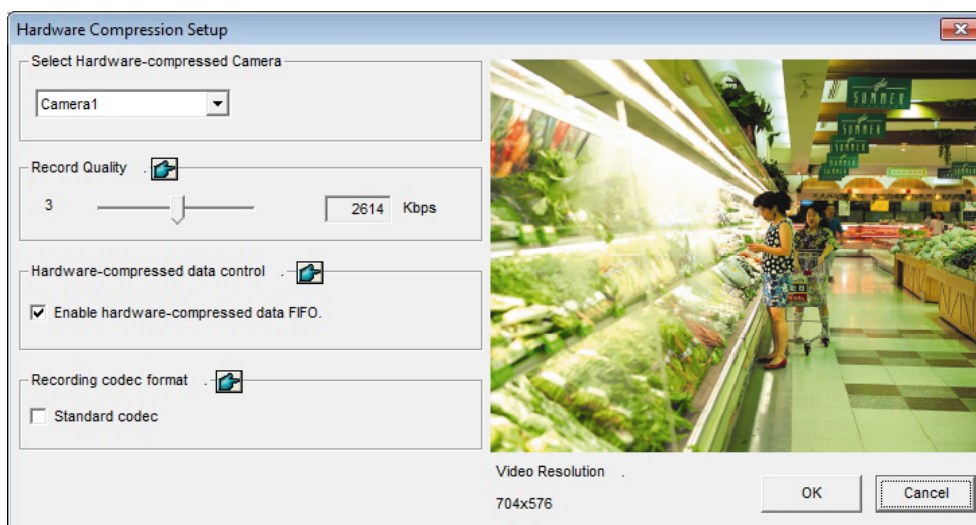


Figure 8

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.

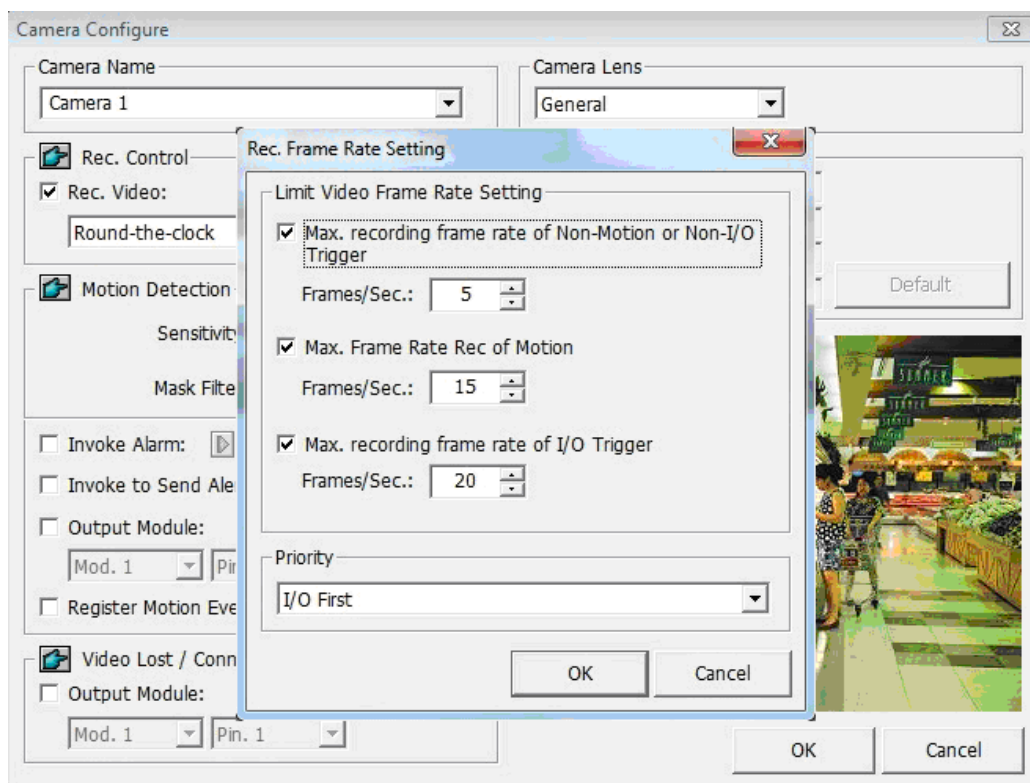


Figure 9

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.
11. To adjust image quality, in the Video Attributes section, move the sliders to the desired values or click **Default** to apply default values.

Note: The default settings are as follows: Recording Quality is 3, video resolution is 704 x 480 (NTSC) / 704 x 576 (PAL), codec is Geo H.264 and frame rate is 30 (NTSC) / 25 (PAL).

Specifications

		GV-5016		GV-5016 x 2
Interface		PCI-E (x1)		PCI-E (x1) x 2
Input Type		LFH		
Video Input		16 Cams		32 Cams
Audio Input		16 Channels		32 Channels
Recording Rate (D1)	NTSC	480 fps		960 fps
	PAL	400 fps		800 fps
Display Rate	NTSC	480 fps		960 fps
	PAL	400 fps		800 fps
Video Resolution	NTSC	H/W	704 x 480	704 x 480
		S/W	352 x 240	352 x 240
	PAL	H/W	704 x 576	704 x 576
		S/W	352 x 288	352 x 288
Video Compression Format	S/W	Geo MPEG4, Geo H264		
	H/W	H.264		
Audio Format		16 kHz / 16 bit, 32kHz / 16 bit		
Bit Rate Range		5M ~ 10M		
GV-NET/IO Card Support		Yes (Note 2)		
GV-Multi Quad Card Support		No		
GV-Loop Through Card Support		No		
Dimensions (W x H)		168 x 70 mm / 6.61 x 2.75 in		

Note:

1. GV-5016 does not support the TV-Out function.
2. To work together with GV-5016, GV-NET/IO Card V3.1 must be set in the I/O Box Mode and connected to the PC through USB or DB9.