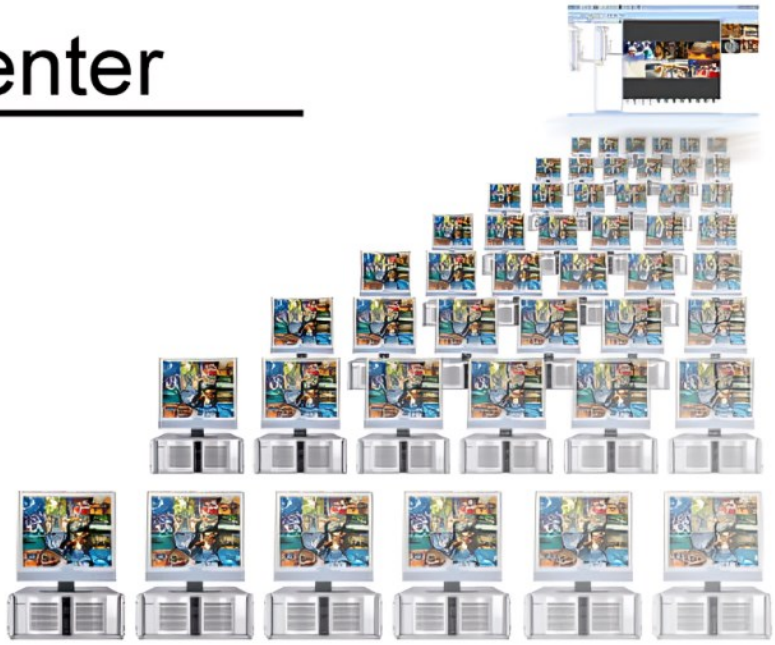
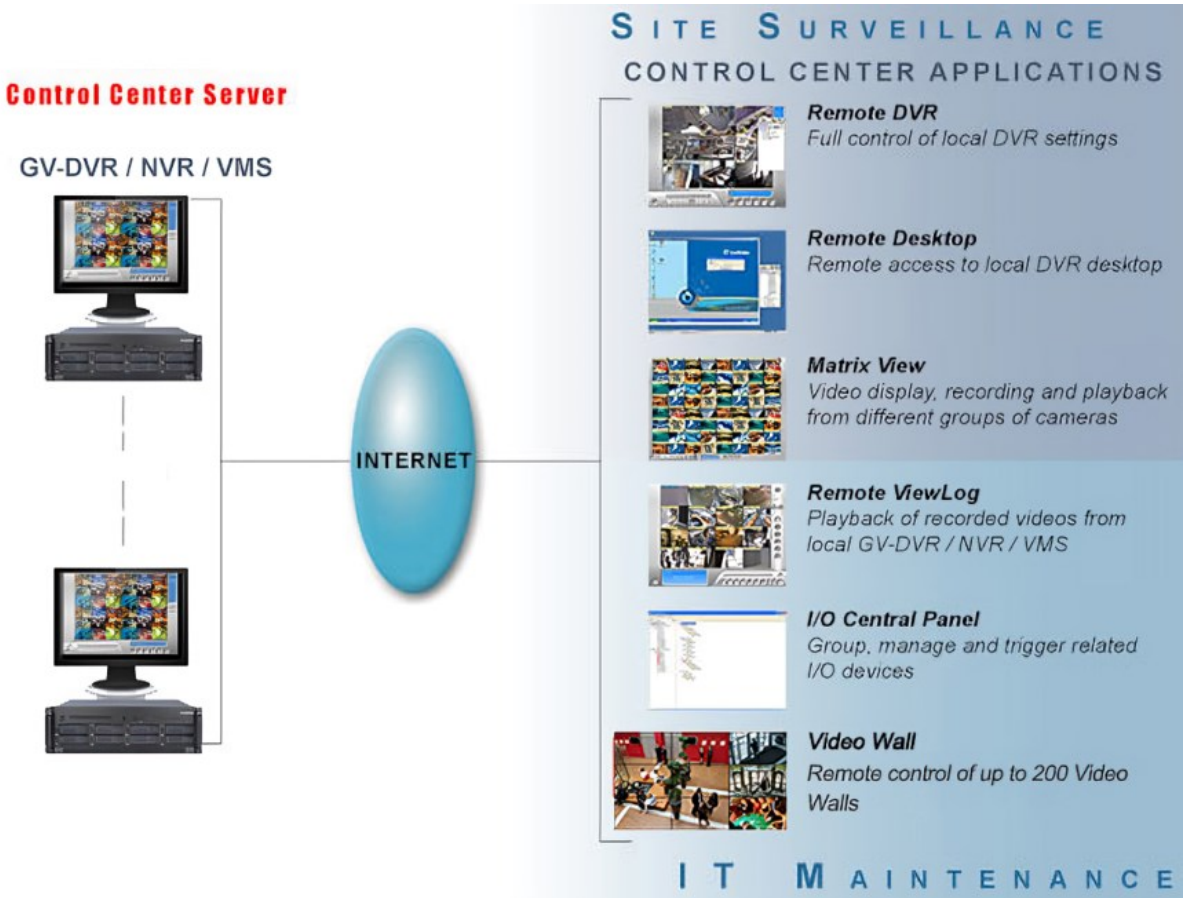
GV-Control Center

Handy Tool For Security Control Center Operations



Introduction

GV-Control Center is an integrated security management software that serves as a useful tool for managing a central monitoring station. GV-Control Center is a comprehensive solution that enables central operators to efficiently control a wide range of IP cameras, I/O devices, and surveillance and video management systems. These devices and systems can then be efficiently handled with GV-Control Center, improving monitoring performance and ensuring their proper operation.



Key Features

- **Remote DVR: Full control of local NVR settings**

The Remote DVR facilitates the operator to remotely configure local GV-NVR settings from a single workstation. This function lessens the need for frequent visits to each NVR.

- **Remote Desktop: Remote access to local NVR / VMS desktop**

GV-Control Center can access the desktop of local GV-NVR / VMS systems and have full control over the surveillance system and Windows operating system of the client.

- **Matrix View: Remotely monitor, record and play back from 1000 hosts**

The Matrix View is a single display that can show videos from up to 96 cameras, such as groups of cameras in office areas, exits or on the street. Depending on surveillance needs, the operator can open up to 8 Matrix Views with 768 cameras on 8 monitors simultaneously. Each Matrix View supports both live monitoring and video playback.

- **I/O Central Panel: Group, manage and remotely configure I/O devices**

GV-Control Center provides an I/O Central Panel for remote management of I/O devices from various GeoVision surveillance systems and IP devices. For ease of control, the operator can group function-related I/O devices, such as groups of IR sensors, alarms and fire exits. In the event of a building fire, for example, GV-Control Center can simultaneously trigger all alarms in the networked GV-NVR / VMS systems and force open all fire exits or water spray systems.

- **Remote Playback**

The Remote ViewLog service enables playback of recordings from different hosts. The operator can utilize this service to save video clips for later retrieval as event evidence.

- **Authentication Center**

Authentication Center is a user account and access rights management system with centralized control over multiple Control Centers. Users can only view hosts, groups, and operations for which they have permission when a Control Center is connected to an Authentication Center.

- **Video Wall (optional)**

GV-Video Wall, also known as a TV wall, is an arrangement of multiple monitors on a server. The operator can create a layout with a variety of displays, including desired camera channels, zoom windows, scan windows, web pages, video playback and live views popped up from E-Map. A megapixel camera channel can even be placed across monitors.

Specifications

Features	Control Center
GV-NVR / NVR Host	Unlimited
IP Camera Host	
GV-Video Server Host	
GV-Compact DVR Host	
GV-Recording Server / GV-Video Gateway Host	
GV-SNVR System Host	
GV-ASManager Host	
I/O Hosts (only for GV-IP Devices)	Unlimited - One host supports up to 9 sets of 16-in and 16-out I/O modules.
Remote DVR	Unlimited
Remote Desktop	Unlimited
Remote ViewLog	8
Video Wall (optional)	1 to 200 licenses
Remote E-Map Host / Map	500 / Unlimited
Live View	Single View: 1 Window Multiple View: 36 Divisions each Window
Matrix View / Group / Channel	8 Matrix Views / Unlimited / 768 Channels in total (For 1920 x 1200, 1920 x 1080 resolution)
VMD Groups / Channels (Only for GV-IP Devices)	1 Group / 1200 CH - GV-NVR / VMS: 1000 Channels - GV-Video Server + GV-Compact DVR + GV-IP Camera: 200 Channels
Panorama Views / Channels	4 Panorama Views / 32 Channels per view
Matrix Resolutions / Channels	1024 x 768 / 64 Channels (Total: 512 Channels on 8 Matrix)
	1280 x 1024 / 64 Channels (Total: 512 Channels on 8 Matrix)
	1680 x 1050 / 80 Channels (Total: 640 Channels on 8 Matrix)
	1600 x 1200 / 64 Channels (Total: 512 Channels on 8 Matrix)
	1920 x 1200 / 96 Channels (Total: 768 Channels on 8 Matrix)
	1920 x 1080 / 96 Channels (Total: 768 Channels on 8 Matrix)
	1280 x 800 / 48 Channels (Total: 384 Channels on 8 Matrix)
	1440 x 900 / 48 Channels (Total: 384 Channels on 8 Matrix)
Language	Arabic, Bulgarian, Czech, Danish, Dutch, English, Finnish, French, German, Greek, Hebrew, Hungarian, Indonesian, Italian, Japanese, Lithuanian, Norwegian, Persian, Polish, Portuguese, Romanian, Russian, Serbian, Simplified Chinese, Slovakian, Slovenian, Spanish, Swedish, Thai, Traditional Chinese, Turkish

Note: Make sure to meet the remote connection criteria of the following hosts before building the connection:

- **GV-VMS / NVR:** Maximum remote connections depend on CPU specifications and usage, and available bandwidth.
- **GV-Recording Server:** Supports a maximum of 600 remote connections. See the *GV-Recording Server datasheet* for details.
- **GV-SNVR0412/0812/1600/1611:** Maximum remote connections vary by model. See the *Remote Monitoring* section in *GV-SNVR Comparison Table* for details.

Total Frame Rate and Number of Channels Supported

Refer to the technical notice to see the total frame rate and number of channels supported by GV-Control Center when connected to GV-VMS / NVR / Recording Server / IP cameras.

Minimum System Requirements

OS	64-bit	Windows 8 / 8.1 / 10 / Server 2012 R2
CPU	Core i7 2600K, 3.4 GHz	
RAM	16 GB Dual Channels	
Hard Disk	500 GB	
Processor Graphics	Please see the **GPU Decoding Specifications** below.	
Direct X	9.0c	
LAN Card	Gigabit Ethernet x 2	
Hardware	Internal or External GV-USB Dongle	

IMPORTANT: PCs with 15th Gen Intel processors are currently not recommended due to compatibility concerns.

Note:

1. It is not recommended to install GV-Center V2 (Pro) and GV-Control Center on the same PC. Running the two software together on the same PC may result in CPU overload or system failure.
2. To display a megapixel IP channel across monitors, make sure the external graphic cards on a server are of the same brand, model and driver version. The capacity of graphic cards must be equivalent to NVIDIA GTS 450 or higher to ensure maximum efficiency.
3. When you find CPU usage is high or live view is unsmooth (dropping frames), you may need to increase CPU threads and memory or decrease the number of connected cameras to improve the system performance.
4. For GV-Control Center to support up to 8 Matrix views with 768 cameras, the minimum CPU and memory requirements are Core i7-3770 and 16 GB dual channels respectively.

Software License

Free License	N/A
Maximum License	Unlimited number of hosts
Increment for Each License	N/A
Optional Combinations	1. Control Center 2. Control Center + Video Wall (1 to 200 license) 3. Control Center + Vital Sign Monitor 4. Control Center + Vital Sign Monitor + Video Wall (1 to 200 license)
Dongle Type	Internal or external

Note:

1. It is recommended to use the internal GV-USB Dongle to have Hardware Watchdog which restarts the PC when Windows crashes or freezes.
2. The Maximum License is a paid service.

GPU Decoding Specifications

A higher total frame rate can be achieved if your CPU comes with onboard GPU or is connected to external GPU for GPU decoding.

Onboard GPU: GPU decoding is only supported when using the following Intel chipsets:

For **H.264** Video Compression

- 2nd Gen Intel Core i3 / i5 / i7 Desktop Processors (Sandy Bridge) - only support 1 MP to 2 MP videos
- 3rd Gen Intel Core i3 / i5 / i7 Desktop Processors (Ivy Bridge)
- 4th Gen Intel Core i3 / i5 / i7 Desktop Processors (Haswell / Haswell Refresh)
- 6th Gen Intel Core i3 / i5 / i7 Desktop Processors (Skylake)
- 7th Gen Intel Core i3 / i5 / i7 Desktop Processors (Kaby Lake)
- 8th Gen Intel Core i3 / i5 / i7 Desktop Processors (Coffee Lake)
- 9th Gen Intel Core i3 / i5 / i7 Desktop Processors (Coffee Lake / Coffee Lake Refresh)
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For **H.265** Video Compression

- 6th Gen Intel Core i3 / i5 / i7 Desktop Processors (Skylake)
- 7th Gen Intel Core i3 / i5 / i7 Desktop Processors (Kaby Lake)
- 8th Gen Intel Core i3 / i5 / i7 Desktop Processors (Coffee Lake)
- 9th Gen Intel Core i3 / i5 / i7 Desktop Processors (Coffee Lake / Coffee Lake Refresh)

External GPU: GPU decoding is only supported when using the NVIDIA graphics card with compute capability 3.0 or above and memory 2 GB or above. To look up the commute capability of the NVIDIA graphics cards, refer to: https://developer.nvidia.com/cuda-gpus

Note:

1. Only one external NVIDI graphic card is supported by GV-Control Center to perform GPU decoding.
2. GeForce GTX1060 is not supported.

Onboard GPU + External GPU: To have both the onboard and external GPU to perform GPU decoding, the GPUs must follow their respective specifications listed above.

Note:

1. If you have both onboard and external GPUs installed, the onboard GPU must be connected to a monitor for H.264 / H.265 GPU decoding.
2. CUDA compute capability 5.0 or higher is required to ensure optimal performance.

Supported GeoVision IP Devices and Software

- **GV-ASManager** (V4.3 or later)
- **GV-NVR** (V8.5 or later)
- **GV-VMS** (V14.1 or later)
  - *Note:* GV-VMS V20 supports GV-Control Center V4.0 and later; GV-Control Center V3.8 is not supported.
- **GV-Recording Server / GV-Video Gateway**
- **GV-SNVR**
  - GV-SNVR0400F / 1600 (FW V1.1 or later); GV-SNVR0411 (FW V2.0 or later); GV-SNVR0812 (FW V1.03 or later); GV-SNVR1611 (FW V3.03 or later); GV-SNVR0412
- **GV-Video Server**
  - GV-VS11 / 12 / 14 / 2400 / 2420 / 2800 / 2820 (FW V1.01 or later)
  - GV-VS2401 / VS21600

Options

Optional Devices	Description
GV-Joystick V2	GV-Joystick can be used in conjunction with GV-Keyboard V3 to control PTZ channels from GV-Control Centers.
GV-IO Box Series	GV-IO Box series (4E / 4 Ports / 8 Ports / 16 Ports) provide 4 / 8 / 16 inputs and relay outputs and support both DC and AC output voltages, with optional support for Ethernet module and 4E additionally supporting PoE, TCP/IP and RS-485 connection.
Internal USB Dongle	Internal GV-USB Dongle provides the hardware watchdog function to restart the PC when Windows crashes.