

GV-Tower VMS System V3



Introduction

GV-Tower VMS System V3 comes with 8 hot-swap drive bays for a total storage of 192 TB and a key-operated safety lock for enhanced HDD data protection. This system features an Intel Core Ultra 5 Processor, the latest VMS system, and 64-bit Windows 11 IoT Enterprise. GV-Tower VMS System V3 supports up to 64 channels for GV-VMS V20, and up to 32 channels for GV-VMS V17 & V18 (GV-IP or third-party IP devices, license required). You can output surveillance video to HDTVs using the system's HDMI port or DisplayPort. This towering VMS system delivers a powerful, cost-effective, and efficient solution.

Features

- Powered by Intel Core Ultra 5 Processor
- 64-bit Windows 11 IoT Enterprise
- Support for GPU Decoding
- 8-bay hot-swap data HDD
- Maximum storage capacity of 192 TB
- One Gigabit LAN port
- Multiple monitor display for up to 3 monitors simultaneously (HDMI, DisplayPort, D-Sub)
- Key-operated safety lock for enhanced HDD data protection
- Support for 3rd party IP devices
- Up to 64 channels for GV-VMS V20 / Up to 32 channels for GV-VMS V17 & V18 (pure IP surveillance)
- All-in-one solution (Live View, Playback, Recording, Backup, CMS)
- Video analysis
- Fisheye camera dewarping function
- Automatic connection to GV-IP devices
- H.265 / H.264 / MJPEG / MPEG4
- On-screen LED panel for HDD status
- Smart device access
- Multiple (23) languages

Note: For supported languages, see [VMS V17/V18 Datasheet](#) and [VMS V20 Datasheet](#).

Specifications

Hardware

System		
CPU		Intel Core Ultra 5 Processor
RAM		16 GB Dual Channel
No. of HDD		8 (3.5" HDD; SAS / SATA3 interface)
Internal Storage		128 GB (SSD)
OS		64-bit Windows 11 IoT Enterprise
Power		450 W, 110-115 V, 60 Hz 450 W, 220-230 V, 50 Hz
Connector	Ethernet	RJ-45, 2.5 GbE Ethernet Port x 1
	Video Output	HDMI x 1, DisplayPort x 1, D-Sub x 1 (applicable simultaneously)
	Mouse/Keyboard	PS/2 x 1
	USB 3.2	Front: 3 ports (Type-A x 2, Type-C x 1) Rear: 2 ports (Type-A x 2)
	USB 2.0	Rear: 4 ports (Type-A x 4)
Environment		
Operating Temp.		0 ~ 45 °C / 32 ~ 113 °F
Humidity		0 ~ 80% RH (non-condensing)
Physical		
Color		Black
Dimensions (W x H x D)		217 x 405 x 451 mm / 8.54 x 15.94 x 17.76 in
Net Weight		15.5 kg / 34.17 lb (± 1 kg / 2.2 lb)
Sensor and Alarm (Optional)		
GV-IO Box 4 Ports		4 inputs, 4 outputs
GV-IO Box 8 Ports		8 inputs, 8 outputs
GV-IO Box 16 Ports		16 inputs, 16 outputs

Software

Video and Audio		
Video Input	V17 / V18	32 channels
	V20	64 channels
Audio Input	V17 / V18	32 channels
	V20	64 channels
Live View and Playback		
Image Control		Contrast / Brightness / Saturation / Hue
Recording Mode		Round the Clock / Motion Detection / Sensor Detection / Pre & Post Recording / Schedule Recording
Pre Recording		1~ 45 min.
Instant Playback		Max. 5 min.
Watermark		Supported
Searching and Playback		
Search Method		Date / Time / Camera / Event Type
Backup Type		DVD+R (DL) / DVD-R (DL) / DVD+R / DVD+RW / DVD-R / DVD-RW / CD-R / CD-RW
Remote Monitoring		
Monitoring Environment		Web browser (Edge, Chrome, Firefox and Safari) Mobile device (Android Smartphone and tablet; iPad, iPhone and iPod Touch)
Live View	V17 / V18	Max. 32-channel multi views (Up to 200 channels connection to GV-Tower System V3)
	V20	Max. 64-channel multi views (Up to 200 channels connection to GV-Tower System V3)
Network Type		LAN, WAN, Internet
System Monitoring		
Power Restoration		Automatic restart after power outage
Monitoring		Two independent Watchdogs (Hardware Watchdog + Software Watchdog)
Language		
Type		Bulgarian / Chinese Simplified / Chinese Traditional / Czech / Danish / English / French / German / Greek / Hebrew / Hungarian / Italian / Japanese / Persian / Polish / Portuguese / Russian / Serbian / Slovakian / Slovenian / Spanish / Turkish / Ukrainian * Ukrainian is only supported on GV-VMS V20

Note:

1. It is required to enable the dual-stream function on GeoVision and third-party IP cameras to have the maximum number of channels supported.
2. For backup function, you need to connect an external USB DVD/CD burner.
3. If you are in an area with unstable voltage, make sure to install an automatic voltage regulator (AVR) or a UPS power supply with AVR function, to maintain a constant voltage
4. All damages to the power supply caused by unstable voltage are not included in the 2-year warranty service.
5. For details on the software licenses, see the datasheets for [GV-VMS V17 & V18](#) and [GV-VMS V20](#).
6. Product design and specifications are subject to change without notice.

Total Frame Rate and Max. No. of Channels Supported – For GV-VMS V20
For GV-IP Camera (Dual Stream)

Video Resolution	Stream 1 (H.265)	Mbps	Stream 2 (H.264)	Mbps	Max. FPS / Camera	Channels Supported	Total FPS / System	
							Recording	Live View ¹
4 MP	2688 x 1520	2.78	640 x 360	0.94	30 fps	64 ch	1920 fps	448 fps
8 MP	3840 x 2160	3.52	1280 x 720	1.48	20 fps	64 ch	1280 fps	448 fps

Note:

1. For GV-VMS V20, if more than 32 channels are connected during initial setup, all sub streams default to 7 fps, which determines the initial total live view frame rate per system:
 - $Total\ Live\ View\ Frame\ Rate\ (fps) = 7\ (fps) \times Channels\ Supported$
2. The supported channel count was tested using a Full HD (1080p) monitor.
3. The total frame rate and channels supported are determined in round-the-clock recording settings with live view only, while remote connections and video analysis features are disabled.

Total Frame Rate and Max. No. of Channels Supported – For GV-VMS V17 & V18
For GV-IP Camera (Dual Stream)

Video Resolution	Stream 1 (H.264)	Mbps	Stream 2 (H.264)	Mbps	Max. FPS / Camera	Channels Supported	Total FPS / System
1.3 MP	1280 x 720	3.99	640 x 360	1.99	30 fps	32 ch	960 fps
2 MP	1920 x 1080	6.12	640 x 360	2.19	30 fps	32 ch	960 fps
3 MP	2048 x 1520	9.17	640 x 360	1.99	30 fps	32 ch	960 fps
4 MP	2560 x 1440	9.21	640 x 360	1.72	25 fps	32 ch	800 fps
5 MP	2592 x 1944	9.19	640 x 480	2.29	30 fps	32 ch	960 fps
8 MP	3840 x 2160	13.47	1280 x 720	3.14	25 fps	32 ch	800 fps
12 MP	4000 x 3000	13.73	1024 x 768	3.07	15 fps	32 ch	480 fps

Video Resolution	Stream 1 (H.265)	Mbps	Stream 2 (H.264)	Mbps	Max. FPS / Camera	Channels Supported	Total FPS / System
1.3 MP	1980 x 720	0.83	640 x 360	0.84	30 fps	32 ch	960 fps
2 MP	1920 x 1080	1.6	640 x 360	0.84	30 fps	32 ch	960 fps
3 MP	2048 x 1536	2.05	640 x 360	0.83	30 fps	32 ch	960 fps
4 MP	2560 x 1440	2.21	640 x 360	0.82	25 fps	32 ch	800 fps
5 MP	2560 x 1920	2.41	640 x 360	0.83	30 fps	32 ch	960 fps
8 MP	3840 x 2160	3.52	640 x 360	1.24	20 fps	32 ch	640 fps

For GV-Fisheye Camera (Dual Stream, 360° De-warping)

Video Resolution	Stream 1 (H.264)	Mbps	Stream 2 (H.264)	Mbps	Max. FPS / Camera	Channels Supported	Total FPS / System
8 MP	2896 x 2768	6.39	640 x 608	0.38	25 fps	26 ch	650 fps
12 MP	4000 x 3000	13.74	640 x 480	0.24	15 fps	26 ch	390 fps

Video Resolution	Stream 1 (H.265)	Mbps	Stream 2 (H.264)	Mbps	Max. FPS / Camera	Channels Supported	Total FPS / System
3 MP	2048 x 1536	3.3	640 x 480	1.02	30 fps	28 ch	840 fps
5 MP	2592 x 1944	7.75	640 x 480	1.09	30 fps	28 ch	840 fps
12 MP	4000 x 3000	9.85	1024 x 768	1.01	20 fps	28 ch	560 fps

Note: The total frame rate and channels supported are determined in round-the-clock recording settings with live view only, while remote connections and video analysis features are disabled.

Options

GV-Data Capture V3 Box	GV-Data Capture unit allows the integration of POS systems and the GeoVision surveillance system through cable or network connection.
GV-IO Box Series	GV-IO Box series provides 4 / 8 / 16 inputs and relay outputs, and supports both DC and AC output voltages, with optional support for Ethernet module and 4E additionally supporting PoE connection.
GV-Joystick V2	GV-Joystick facilitates the PTZ camera control. It can be either plugged into the GeoVision surveillance system for independent use or connected to GV-KeyBoard to empower the operation.

Packing List

- GV-Tower VMS System V3
- Keys for Hard Disk Safety Lock x 2
- Hard Disk Drive Screw x 16
- AC Power Cord
- Download Guide

Overview

