GV-Tower VMS System V3 (Rev. B)



Introduction

GV-Tower VMS System V3 (Rev. B) 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 (Rev. B) 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 2 monitors simultaneously (HDMI, DisplayPort)
- Wireless Communication (Wi-Fi)
- 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
Wireless Communication		Wi-Fi 6 (2.4 / 5 GHz), IEEE 802.11a/b/g/n/ax Bluetooth 5.3
Connector	Ethernet	RJ-45, 2.5 GbE Ethernet Port x 1
	Video Output	HDMI x 1, DisplayPort x 1 (applicable simultaneously)
	USB	Front: USB 3.2 (Type-A, 5 Gbps) x 2, USB 3.2 (Type-C, 5 Gbps) x 1 Rear: USB 3.2 (Type-A, 5 Gbps) x 2, USB 2.0 (Type-A) x 4
	Wi-Fi Antenna	Rear: 2 ports
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
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 (Rev. B))
	V20	Max. 64–channel multi views (Up to 200 channels connection to GV-Tower System V3 (Rev. B))
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. 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
3. All damages to the power supply caused by unstable voltage are not included in the 2-year warranty service.
4. For details on the software licenses, see the datasheets for GV-VMS V17 & V18 and GV-VMS V20.
5. 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) x 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 x360	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 V3 (for GV-VMS V20)	GV-Joystick V3 facilitates PTZ camera control. It is compatible not only with GeoVision software, but also with any third-party software that supports the HID standard.

Packing List

- GV-Tower VMS System V3 (Rev. B)
- Keys for Hard Disk Safety Lock x 2
- Hard Disk Drive Screw x 16
- AC Power Cord
- Wi-Fi Antenna x 2
- Download Guide

Overview

