

GV-GFER6900 Cloud AI 6MP H.265 Super Low Lux WDR Pro IR Fisheye Rugged IP Camera



Introduction

GV-GFER6900 is a 6 MP fisheye camera that allows you to monitor all angles of a location and can be installed on the ceiling or the wall. The camera supports H.265 video codec to achieve a better compression ratio while maintaining high-quality images at reduced network bandwidths. The camera adheres to IP67 and IK10 standards and can be powered through PoE. Furthermore, the camera has the capability to conduct on-edge fisheye dewarping, eliminating the need to utilize resources from the backend devices.

Empowered by deep learning algorithms, AI technology distinguishes humans and vehicles from other moving objects. When integrated with GeoVision Video Management Software (VMS), it supports AI perimeter protection, real-time alerts, events playback, and more. By connecting the camera to the cloud-based data center and video surveillance solution, GV-Cloud VMS, thousands of on-site videos, alarm devices, and AI events can be monitored and managed from a single platform.

Key Features

- Direct-to-Cloud
- AI deep learning: AI Perimeter Protection & Classification (Human, Vehicle)
- 1/2.5" progressive scan CMOS sensor
- Min. illumination at 0.01 lux
- Triple streams from H.265, H.264, or MJPEG
- Up to 30 fps at 3200 x 1800
- Wide Dynamic Range Pro (WDR Pro)
- Day / Night functionality (with removable IR-cut filter)
- Intelligent IR
- IR distance up to 20 m (65 ft)
- Two-way audio capable
- Built-in microphone
- Built-in microSD card slot (SD / SDHC / SDXC) for local storage
- DC 12V / PoE (IEEE 802.3af)
- Ingress protection (IP67)
- Vandal resistance (IK10)
- 360° and 180° panorama view
- GV-Center V2 connection
- AI analytics (Line Crossing, Region Entrance, Region Exiting, Region Intrusion, Target Counting, Heat Map, Crowd Density)
- Defog
- 3D noise reduction
- Motion detection
- Virtual PTZ function
- Auto Pan function
- Text overlay
- Privacy mask
- 19 languages supported
- ONVIF (Profile G, S) conformant

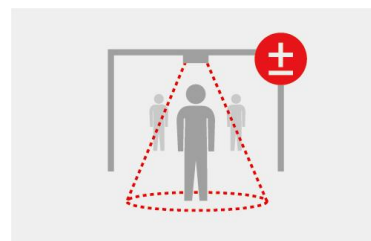
Deep Learning Function

AI Perimeter Protection

(Intrusion, Crossing Line,
Entering Area, Leaving Area)



People Flow Counting



Specifications

Camera					
Image Sensor		1/2.5" progressive scan CMOS			
Picture Elements		3200 (H) x 1800 (V)			
Minimum Illumination	Color	0.01 Lux (F2.0, AGC ON)			
	B/W	0 Lux			
	IR On	0.1 Lux			
Shutter Speed		Auto / Manual (1/3 ~ 1/100000 sec)			
White Balance		Auto / Manual			
Gain Control		Auto / Manual			
S/N Ratio		50 dB			
WDR Pro		Yes			
Dynamic Range		120 dB			
Lens					
Megapixel		6 MP			
Day/Night		Yes (with removable IR-cut filter)			
Lens Type		Fixed			
Focal Length		1.65 mm			
Maximum Aperture		F/2.0			
Mount		M12			
Image Format		1/2.5"			
FOV	Horizontal	180°			
	Vertical	180°			
	Diagonal	180°			
Operation	Focus	Fixed			
	Zoom	Fixed			
	Iris	Fixed			
IR LED	Quantity	4 IR LEDs			
	Max. IR Distance	20 m (65 ft)			
DORI		Detect	Observe	Recognize	Identify
Lens	1.65 mm	33 m (108.2 ft)	13.1 m (42.9 ft)	6.6 m (21.6 ft)	3.3 m (10.8 ft)
Operation					
Video Compression		H.265, H.265+, H.264, H.264+, MJPEG			
Video Streaming		Triple streams from H.265, H.264, or MJPEG			
Frame Rate		Max. 30 fps (60 Hz) / 25 fps (50 Hz) at 3200 x 1800, 2160 x 2160, 1920 x 1080, 1440 x 1440, 1280 x 720, 1080 x 1080, 960 x 960, 720 x 720, 640 x 640, 640 x 360, 480 x 480, 360 x 360 Max. 20 fps (50 & 60 Hz) at 2560 x 1440 * The frame rate and the performance may vary depending on the number of connections and data bitrates (different scenes).			
Maximum Throughput		80 Mbps			
Maximum Streams		10			

* When the total bitrate is within the maximum throughput			* By default, 2 connections are occupied whether connected to GV-Cloud VMS or not.		
Video Analytics			Motion Detection		
Smart Alarm			Motion Detection, SD Card Error, SD Card Full, IP Address Conflict, Cable Disconnection		
Image Settings			Brightness, Contrast, Hue, Saturation, Sharpness, 3D Noise Reduction, Defog, BLC, Antiflicker, Smart IR, Image Orientation (Flip, Mirror, 0°, 180°)		
Dual Redundant Images			Yes (for failsafe firmware upgrade)		
Stream Mode & Supported Live Preview	1: Fisheye		Fisheye View		
	2: Panoramic View		Panoramic View (Ceiling / Desktop: 180° x 2, Wall: 360°)		
	3: Fisheye + Panoramic View + 3 PTZ		Fisheye View, Panoramic View (Ceiling / Desktop: 180° x 2, Wall: 360°), Fisheye View + PTZ x 3, Panoramic View (Ceiling / Desktop: 180° x 2, Wall: 360°) + PTZ x 3		
	4: Fisheye + 4 PTZ		Fisheye View, PTZ x 4		
	5: Fisheye + 4 PTZ Fusion		Fisheye View, 4 PTZ Fusion		
Installation Method & Supported Live Preview	Ceiling Mount		Fisheye View, 180° Panoramic View x 2, Fisheye View + PTZ x 3, 180° Panoramic View x 2 + PTZ x 3, PTZ x 4, 4 PTZ Fusion		
	Wall Mount		Fisheye View, 360° Panoramic View, Fisheye View + PTZ x 3, 360° Panoramic View + PTZ x 3, PTZ x 4, 4 PTZ Fusion		
	Desktop Mount		Fisheye View, 180° Panoramic View x 2, Fisheye View + PTZ x 3, 180° Panoramic View x 2 + PTZ x 3, PTZ x 4, 4 PTZ Fusion		
Audio Compression			G.711		
Audio Support			Two-way audio (external speaker required)		
Digital I/O	Input		1 input, dry contact, NO / NC		
	Output		1 relay output (DC 30V, 1A / AC 125V, 0.3A)		
Video Resolution					
Hardware (On-Edge) Dewarping	Main Stream (only in Edge IE mode)	Fisheye View	2160 x 2160 (default), 1440 x 1440, 1080 x 1080		
		Panoramic View (Ceiling / Desktop: 180° x 2, Wall: 360°)	3200 × 1800 (default), 2560 x 1440, 1920 × 1080		
		PTZ	1280 × 720 (default)		
		4 PTZ Fusion	2560 × 1440 (default)		
	Sub Stream	Fisheye View	960 × 960 (default), 720 x 720, 480 × 480		
		Panoramic View (Ceiling / Desktop: 180° x 2, Wall: 360°)	1280 x 720 (default), 640 x 360		
		PTZ	N/A		
		4 PTZ Fusion	640 x 360 (default)		
	Third Stream	Fisheye View	640 x 640 (default), 360 x 360		
		Panoramic View (Ceiling / Desktop: 180° x 2, Wall: 360°)	1280 x 720 (default), 640 x 360		
		PTZ	N/A		
		4 PTZ Fusion	640 x 360 (default)		
Network					
Interface			10/100 Ethernet		
Protocol			802.1x, DDNS, DHCP, DNS, FTP, HTTP, HTTPS, IPv4, IPv6, NTP, ONVIF (Profile G, S), PPPoE, QoS, RTCP, RTMP, RTP, RTSP, SMTP, SNMP, TCP/IP, UDP, UPnP		

Deep Learning Function			
AI Analytics		Only the following configurations of Stream Modes and Installation Methods enable smart detection events. <u>Configuration 1:</u> Modes: 1, 3, 4, 5 Mounting: Ceiling Functions: ➢ <u>Human detection only:</u> Target Counting by Line, Line Crossing, Region Entrance, Region Exiting, Region Intrusion, Crowd Density, Heat Map <u>Configuration 2:</u> Modes: 2, 3 Mounting: Wall or Desktop Functions: ➢ <u>Human and vehicle detection:</u> Target Counting by Line, Line Crossing, Region Entrance, Region Exiting, Region Intrusion ➢ <u>Human detection only:</u> Crowd Density * A maximum of 1 smart detection event is allowed at a time to ensure comprehensive detection results and optimized performance by the camera. * Once connected to GV-Cloud VMS / GV-Center V2, up to 1 smart detection event is supported.	
Mechanical			
Connectors	Power	DC jack, PoE	
	Ethernet	RJ-45	
	RS-485	Half-duplex	
	Audio	Built-in microphone	Yes
		External microphone required	Yes (audio jack, 3.5 mm or 0.14 in)
		Built-in speaker	No
		External speaker required	Yes (audio jack, 3.5 mm or 0.14 in)
		* Choose either the built-in or external microphone. * The Audio In port only supports microphones with a power supply.	
	Video Output	CVBS output (BNC connector x 1)	
	Digital I/O	4-pin terminal block pitch 3.5 mm (0.14 in)	
Local Storage	microSD card slot (SD / SDHC / SDXC), up to 256 GB		
General			
Operating Temperature		-30°C ~ 60°C (-22°F ~ 140°F)	
Humidity		0% ~ 95% (no condensation)	
Power Source		DC 12V / PoE (IEEE 802.3af)	
Max. Power Consumption		10 W	
Dimension		Ø 130.6 x 46.3 mm (Ø 5.14 x 1.82 in)	
Weight		516.2 g (1.14 lb)	
Ingress Protection		IP67	
Vandal Resistance		IK10	
Certification		CE, FCC, RoHS compliant	
Web Interface			
Installation Management		Web-based configuration	
Maintenance		Firmware upgrade through Web Browser or GV-IP Device Utility	
Access from Web Browser		Live View, Playback, Image Quality, Video Recording (only in Edge IE mode), Image Snapshot, Two-Way Audio (only in Edge IE mode), Digital Zoom, Bandwidth Control, Virtual PTZ, Auto Pan, Text Overlay, Image Masking, Intelligent Mark	
Language		Chinese Traditional, Czech, Dutch, English, French, German, Hebrew, Hungarian, Italian, Japanese, Korean, Norwegian, Polish, Portuguese, Romanian, Russian, Spanish, Spanish (Latin America), Turkish	

Applications	
Software Supported	GV-VMS (V17.4.8 / V18.3.5 or later, patch files required / V20.0.0 or later), GV-Control Center (V4.2.1 or later, patch files required), GV-Edge Recording Manager for Windows (V2.3.0 or later), GV-Recording Server (V2.1.1 or later, patch files required), GV-Center V2 (V18.4.1 or later, patch files required), GV-Cloud VMS (V1.2.1 or later), GV-IP Device Utility (V9.0.2 or later)
Smart Device Access	GV-Eye for iOS (V3.1.0 or later), GV Eye for Android (V3.1.1 or later)
Live Viewing	Web Browser (Edge, IE mode in Edge, Chrome, Firefox, Safari), Mobile App

Note:

1. To avoid reflected glare by IR LED, keep a minimum distance of 1 m (3.28 ft) between the camera body and nearby walls.
2. Using a pendant or corner mount with a fisheye camera may cause IR reflection due to the camera's 360° IR illumination.
3. To use GV-Cloud VMS, avoid connecting to other GV-Software at the same time.
4. To use GV-Cloud VMS, a microSD card must be installed. Industrial-grade microSD cards are recommended to avoid event recording failures.
5. Upon the initial connection of GV-Cloud Camera to GV-Cloud VMS, the Standard Plan will be provided for free for 180 days.
6. GV-Center V2 Standard / Pro can only receive motion events from GV-Cloud IP Cameras. To receive AI and PVD events, GV-Center V2 AI is required.
7. All specifications are subject to change without notice.

Packing List

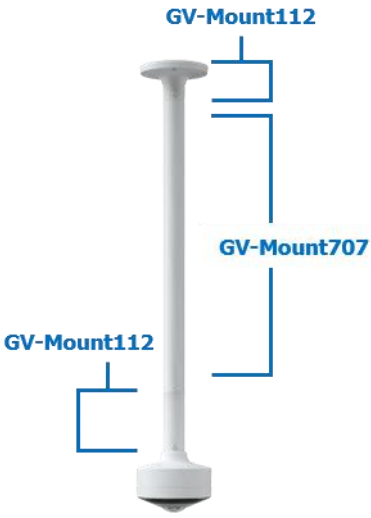
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| 1. GV-GFER6900 | 4. Drill Template Paster |
| 2. Waterproof Rubber Set | 5. Download Guide |
| 3. Screw Kit | |

Accessories

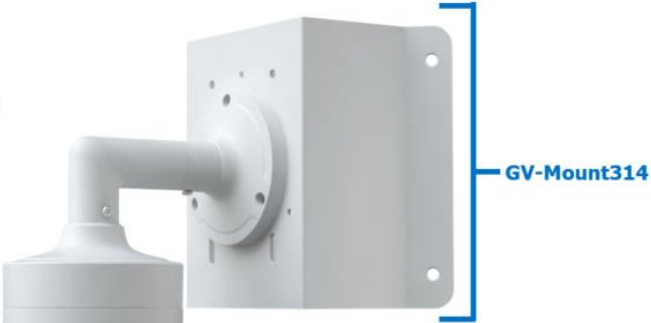
Model No.	Name		Details
GV-Mount112	Pendant Mount		Dimensions: Ø 131.1 x 220.7 mm (Ø 5.16 x 8.69 in) Weight: 0.55 kg (1.21 lb)
GV-Mount211-11	Wall Mount Bracket		Dimensions: 194.7 x 165.6 x 131.1 mm (7.67 x 6.52 x 5.16 in) Weight: 0.57 kg (1.26 lb)
GV-Mount314 (must be used with GV-Mount211-11)	Corner Mount Bracket		Dimensions: 215 x 121.4 x 215 mm (8.46 x 4.78 x 8.46 in) Weight: 2.05 kg (4.52 lb)
GV-Mount470 (must be used with GV-Mount211-11)	Pole Mount Bracket		Dimensions: 163.3 x 54.5 x 215 mm (6.43 x 2.15 x 8.46 in) Weight: 1.10 kg (2.43 lb)

GV-Mount512	Junction Box		Dimensions: 131.0 x 156.9 x 33.0 mm (5.16 x 6.18 x 1.30 in) Weight: 0.24 kg (0.53 lb)
GV-Mount707 (must be used with GV-Mount112)	Extension Tube		Dimensions: Ø 37 x 515 mm (Ø 1.46 x 20.28 in) Weight: 0.8 kg (1.76 lb)
GV-Mount927 (for standard US single and double gang boxes only)	Power Box Mount Bracket		Dimensions: Ø 145 x 11.2 mm (Ø 5.71 x 0.44 in) Weight: 0.2 kg (0.44 lb)
GV-PA191	PoE Adapter		GV-PA191 is a Power over Ethernet (PoE) adapter designed to provide power to the IP device through a single Ethernet cable.
GV-PA301	Gigabit PoE Adapter		GV-PA301 is a Gigabit Power over Ethernet (PoE) adapter.
GV-POE Switch	GV-POE Switch is designed to provide power along with network connection for IP devices. The GV-POE Switch is available in various models with different numbers and types of ports.		
Power Adapter	Contact our sales representatives for the countries and areas supported.		

Mounting Type

Pendant Mount	Pendant Mount with Extension Tube
GV-Mount112	GV-Mount112 + GV-Mount707
	

Wall Bracket Mount	Junction Box Mount
GV-Mount211-11	GV-Mount512
	

Wall Bracket Mount	Corner Bracket Mount
GV-Mount211-11	GV-Mount314
	

Wall Bracket Mount	Pole Bracket Mount
GV-Mount211-11	GV-Mount470
	

Dimensions

