GV-GFER12800   AI 12MP H.265 Super Low Lux IR Fisheye Rugged IP Camera

- AI deep learning: AI Perimeter Protection & Classification (Human, Vehicle)
- 1/1.7" progressive scan CMOS sensor
- Min. illumination at 0.01 lux
- Triple streams from H.265, H.264, or MJPEG
- Up to 30 fps at 3000 x 3000
- Day / Night functionality (with removable IR-cut filter)
- Intelligent IR up to 20m (66 ft)
- Two-way audio capable
- Built-in microphone
- Built-in microSD card slot for local storage
- DC 12V / PoE (IEEE 802.3af)
- Ingress protection (IP67)
- Vandal resistance (IK10)
- 360° and 180° panorama view
- 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
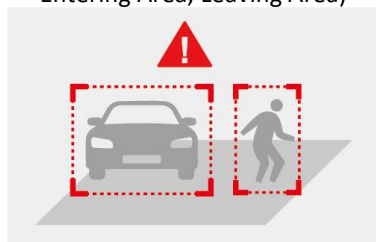 ONVIF (Profile G, S) conformant

Introduction

GV-GFER12800 is a 12 MP outdoor 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 recourses from the backend devices.
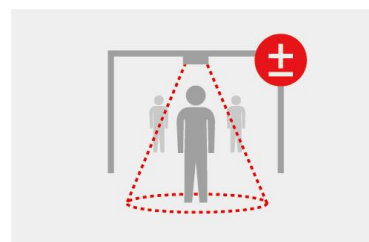
Empowered by deep learning algorithms, AI technology distinguishes humans and vehicles from other moving objects. When integrated with GeoVision Video Management Software (VMS), it supports AI perimeter protection, real-time alerts, events playback, and more.

Deep Learning Function

AI Perimeter Protection
(Intrusion, Crossing Line,
Entering Area, Leaving Area)

People Flow Counting

Specifications

Camera		
Image Sensor		1/1.7" progressive scan CMOS
Picture Elements		4000 (H) x 3000 (V)
Minimum Illumination	Color	0.01 Lux (F2.0, AGC ON)
	B/W	0 Lux
	IR On	0 Lux
Shutter Speed		Auto / Manual (1/3 ~ 1/100000 sec)
White Balance		Auto / Manual
Gain Control		Auto / Manual
S/N Ratio		50 dB
WDR		Yes
Dynamic Range		Up to 90 dB

Lens		
Megapixel		12 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		1/1.7"
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 (66 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 3000 x 3000, 2160 × 2160, 1440 × 1440, 1080 x 1080, 960 × 960, 720 x 720, 640 x 640, 480 × 480, 360 x 360
	Max. 20 fps (50 & 60 Hz) / 10 fps (50 & 60 Hz) at 4000 x 3000, 3840 x 2160, 3200 x 1800, 2560 × 1440, 1920 x 1080, 1280 x 720, 960 x 540, 640 x 480, 640 x 360
	Max. 15 fps (50 & 60 Hz) at 3000 x 3000, 2160 × 2160, 1440 × 1440, 1280 x 720, 1080 x 1080, 960 × 960, 960 x 540, 720 x 720, 640 x 640, 480 × 480, 360 x 360
	* 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 * When the total bitrate is within the maximum throughput			6
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°)
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	3000 x 3000 (default), 2160 x 2160, 1080 x 1080
		Panoramic View (Ceiling / Desktop: 180° x 2, Wall: 360°)	4000 x 3000 (default), 3840 x 2160, 3200 × 1800, 2560 x 1440
		PTZ	1280 × 720 (default), 960 x 540
		4 PTZ Fusion	2560 × 1440 (default)
	Sub Stream	Fisheye View	1440 x 1440 (default), 720 x 720, 480 × 480
		Panoramic View (Ceiling / Desktop: 180° x 2, Wall: 360°)	1920 x 1080 (default), 960 x 540, 640 x 480
		PTZ	N/A
		4 PTZ Fusion	640 x 360 (default)
	Third Stream	Fisheye View	960 x 960 (default), 640 x 640, 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.
		Configuration 1:
		Modes: 1, 3, 4, 5
		Mounting: Ceiling
		Functions:
		➤ Human detection only: Target Counting by Line, Line Crossing, Region Entrance, Region Exiting, Region Intrusion, Crowd Density, Heat Map
		Configuration 2:
		Modes: 2, 3
		Mounting: Wall or Desktop
		Functions:
		➤ Human and vehicle detection: Target Counting by Line, Line Crossing, Region Entrance, Region Exiting, Region Intrusion
		➤ Human detection only: 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.
Mechanical		
Connectors	Power	DC jack
	Ethernet	RJ-45 connector
	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		10.5 W
Dimensions		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), GV-Control Center (V4.2.1.0), GV-Edge Recording Manager for Windows (V2.2.8.0 or later), GV-Recording Server (V2.1.1.0), GV-IP Device Utility (V9.0.3 or later)
Smart Device Access		GV-Eye for iOS and Android (V3.2.0 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. All specifications are subject to change without notice.

Packing List

1. GV-GFER12800
2. Waterproof Rubber Set
3. Screw Kit
4. Drill Template Paster
5. Download Guide

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-Mount470 (must be used with 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-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	Wall Bracket Mount	Junction Box Mount
GV-Mount112	**GV-Mount211-11**	**GV-Mount512**

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

Dimensions