

## Architectural and Engineering Specifications

### GV-Vandal Proof IP Dome

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*The document is written using industry standard formatting and language, and is designed for use by architects, consultants, and specifying engineers who are preparing bid specifications for security cameras, surveillance systems and access control systems.*

*The electronic version of these specifications may be copied into the appropriate sections of a complete bid specification by using the “cut and paste” method. They are written to highlight the features and specifications of GeoVision products. Section headings mention specific models only for clarity – these may be deleted after insertion into the complete specification.*

*Products covered in this document include:  
GV-VD8700*

*The Vandal Proof IP Dome is an outdoor camera featuring face recognition technology that allows users to identify important personnel using its database, which can define and categorize up to 10,000 face profiles. Its face recognition mechanism is effective with a distance of up to 4 m (13.12 ft) while able to identify up to 10 persons simultaneously, with a recognition time of less than 2 seconds. When integrated with GV-VMS, the camera’s face recognition can be used to trigger alerts based on the parameters set.*

*The camera adheres to IK10 vandal resistance and IP66 ingress protection. It supports H.265 video codec to achieve better compression ratio while maintaining high-quality image at reduced network bandwidths. With a removable IR-cut filter, WDR and backlight compensation, the camera is capable of capturing images and performing face recognition in environments with drastic light contrast day and night.*

All specifications are subject to change without prior notice. For more information on GeoVision products, please visit [www.geovision.com.tw](http://www.geovision.com.tw).

## GV-Vandal Proof IP Dome



### A. General Requirements

1. The camera shall be a triple-stream, day/night, network camera equipped with the following image sensor:

GV-Vandal Proof IP Dome	Image Sensor
GV-VD8700	1/2.5" progressive scan low lux CMOS

2. The main stream shall utilize H.265 and H.264 video compression methods with the maximum resolution and frame rate as below:

GV-Vandal Proof IP Dome	Max. Resolution & Frame Rate
GV-VD8700	3840 x 2160 at 30 fps (50 / 60 Hz)

3. The sub and third streams shall utilize H.264 video compression method with maximum resolutions and frame rates of up to 1280 x 720 and 640 x 480, respectively, at 30 fps.
4. The maximum number of streams supported for the camera over the network, using the H.265 / H.264 codec shall be 8.  
*Note when the camera is connected to the video management software GV-DVR / NVR and GV-VMS, it shall take up two (2) streams and when it is connected to IE browser or GeoVision CMS applications, it shall take up one (1) stream.*

5. The camera shall provide administrator and guest account settings on the Web interface. The administrator account shall have full access to all the functions while the guest account shall only have access to the camera live view and network status information.

#### B. Face Recognition Requirements

1. The camera shall have an effective recognition distance of up to 4 m (13.12 ft).
2. The camera shall have a recognition time of less than 2 seconds.
3. The camera shall be capable of recognizing up to 10 faces simultaneously.
4. The camera shall allow a deviation range of 15-degree angle from the frontal view of the face of the recognition target, both longitudinal and lateral, for recognition to work.
5. The camera shall support selectable confidence level for users to adjust the accuracy of its recognition results.
6. The camera shall be capable of storing up to 10,000 face profiles in its Face database.
7. The camera shall store up to 20 pictures per face profile as its basis of face recognition.
8. The camera shall store up to 7 days of face recognition results and up to 3 GB of face recognition snapshots.
9. The camera shall have customizable group settings that can be used to trigger e-mail and/or output alerts when integrated with video management software GV-VMS.

#### C. Alarm and Notification Requirements

1. The camera shall be capable of motion detection, where an e-mail and/or an output alert shall be triggered.
2. A privacy mask function shall be provided for users to specify up to 4 areas to be blocked off on the camera view for privacy purpose. The function shall also be supported through ONVIF/RTSP connection.
3. The camera shall support tampering alarm such that an e-mail notification and/or an output device shall be sent and triggered when the camera is tampered with.
4. The camera shall support 1 dry contact input that can be used to trigger e-mail and/or output alerts.

5. The camera shall be capable of sending captured snapshots through the e-mail alerts upon input trigger and motion detection events.
6. For its face recognition mechanism, the camera shall be capable of storing, and categorizing, up to 10,000 face profiles and, during recording, record up to 7 days of face recognition results with up to 3 GB of recognition snapshots.

#### D. Recording and Playback Requirements

1. The camera shall be capable of storing face recognition snapshots on an inserted micro SD / SDHC / SDXC / UHS-I memory card (Class 10) and GV-VMS.
2. The camera shall be capable of video recording to the local PC, GV-DVR / NVR, GV-VMS, GV-Control Center, GV-Edge Recording Manager and GV-Recording Server.
3. The camera shall be capable of saving recordings into its local storage when it is disconnected from video management software GV-DVR / NVR and GV-VMS and upload them to a specified FTP server upon connecting to the network.
4. Users shall be able to play back recorded data on video management software GV-DVR / NVR and GV-VMS.

#### E. Video Requirements

1. The camera shall support both constant bit rate (CBR) and variable bit rate (VBR). For variable bit rate (VBR), the maximal bit rate shall be selectable to restrict the system from exceeding a specified bit rate.
2. The following white balance settings shall be selectable on the Web interface: auto, indoor, outdoor, fluorescent and manual. The manual white balance range shall be approximately between 2800 degrees to 8500 degrees Kelvin.
3. The camera shall have an automatic and manual shutter with a speed range of 1/30 – 1/8000 seconds.
4. The camera shall support the following image adjustments on the Web interface: image brightness, contrast, saturation, sharpness, white balance, flicker-less, image orientation, shutter speed, iris, backlight compensation, D/N sensitivity, WDR and defog.

5. The camera shall have the minimum illumination as described below.

<b>GV-Vandal Proof IP Dome</b>	<b>Minimum Illumination</b>
GV-VD8700	0.05 lux in color mode 0.04 lux in B/W mode 0 lux in B/W mode with IR on

6. The camera shall support two (2) aspect ratios: 4:3 and 16:9.

<b>GV-VD8700</b>	<b>Main</b>	<b>4:3</b>	2560 x 1920, 2048 x 1536, 1600 x 1200, 1280 x 960
		<b>16:9</b>	3840 x 2160 (Default), 2560 x 1440, 1920 x 1080, 1280 x 720
	<b>Sub</b>	<b>4:3</b>	1024 x 768, 640 x 480, 320 x 240
		<b>16:9</b>	1280 x 720, 640 x 360 (Default)
	<b>Third</b>	<b>4:3</b>	640 x 480, 320 x 240
		<b>16:9</b>	640 x 360 (Default)

7. The S/N ratio of the camera shall be 50 dB.

#### F. Audio Requirements

1. The camera shall support audio codec G.711.
2. The camera shall support one-way audio transmission.
3. The camera shall be equipped with stereo phone jacks (3.5 mm / 0.14") to support one built-in or external microphone, with power supply.

#### G. Networking Requirements

1. The camera shall be equipped with a 10/100 Ethernet, RJ-45 connector as its network interface.
2. The camera shall be built with a Web server with which the live view is accessible using Web browsers, without the need of additional viewer software.
3. The camera shall support the following network protocols: DHCP, DynDNS, FTP, HTTP, HTTPS, NTP, ONVIF (Profile S), RTSP, SMTP, TCP and UDP.
4. The port settings of the camera shall be configurable.
5. The camera shall be able to filter up to 4 IP addresses to restrict or allow access to the camera.

#### H. Lens Requirements

1. The camera shall be equipped with a varifocal lens with P-iris and a focal length of 3.3 to 12 mm.
2. The camera shall be equipped with a removable IR-cut filter to switch from color to monochrome mode automatically based on the illumination level detected.
3. The camera shall be equipped with 20 high-power IR LEDs with a maximum IR distance of 40 m (131.23 ft).
4. The camera shall be of  $\varnothing$  14 mm lens mount.
5. The camera shall have a maximum aperture of F/1.4.
6. The camera shall support automatic gain control.
7. The horizontal field of view of the camera shall be  $106^{\circ}$  to  $42^{\circ}$ .
8. The camera shall have an image format of 1/2.5".
9. The dynamic range of the camera shall be up to 72 dB.

#### I. Mechanical Requirements

1. The camera shall adopt a 3-axis design and be able to pan ( $0^{\circ}$  ~  $350^{\circ}$ ), tilt ( $0^{\circ}$  ~  $75^{\circ}$ ) and rotate ( $0^{\circ}$  ~  $340^{\circ}$ ).
2. The camera shall be equipped with an interface for 1 sensor input (dry contact) and 1 digital output (200 mA, 5V DC).
3. The camera shall have dimensions, diameter and height, of  $\varnothing$  160 x 108.4 mm (6.2" x 4.27").
4. The camera shall have a weight of 1.2 kg (2.64 lb).
5. The camera shall have a built-in temperature detector to detect the temperature of its chipset within.
6. The camera shall support ceiling installation with the standard package.

#### J. Power Requirements

1. Power shall be connected using the camera's Power over Ethernet (PoE) or the optional power adapter.
2. The camera shall be capable of receiving power from 12V DC and IEEE802.3af Power over Ethernet (PoE).
3. The maximum power consumption of the camera shall be 11.04 W.

#### K. Environmental Requirements

1. The camera shall be able to tolerate temperatures between -20°C ~ 50°C (-4°F ~ 122°F) at startup and -30°C ~ 50°C (-22°F ~ 122°F) during operation.
2. The camera shall be able to tolerate a relative humidity within the range of 10% to 90% with no condensation.
3. The camera shall comply with IP66 protection classification.
4. The camera shall comply with IK10 vandal resistance.

#### L. System Requirements

1. The camera shall be accessible through Web browsers of Microsoft Internet Explorer with versions of 11 or later.

#### M. Language Requirements

1. The camera shall support 3 languages on the Web interface, including English, Japanese and Traditional Chinese.

#### N. Applications

1. The camera shall support the following software for network storage:
  - Video management software: GV-DVR / NVR, GV-VMS
  - Recording software: GV-Recording Server, GV-Edge Recording Manager
2. The camera shall remote access from central management station GV-Control Center.
3. The camera shall support live view access from smart device using GV-Eye mobile app.

#### O. Packing List shall include:

1. H.265 Vandal Proof IP Dome
2. Screw x 4
3. Screw Anchor x 4
4. Audio Wire x 2
5. I/O Cable
6. Installation Sticker
7. Conduit Converter
8. PG21 Conduit Connector
9. RJ-45 Connector

10. Waterproof Rubber Sets  
(for RJ-45 Cat.5 and DC 12V / for RJ-45 Cat.6)
11. Torx Wrench
12. Big Concave Hexagon Wrench
13. Small Concave Hexagon Wrench
14. Silica Gel Bag
15. Sticker (for Silica Gel Bag)
16. Ruler
17. Download Guide
18. Warranty Card

P. Certifications and Approvals

1. CE, FCC, RCM, LVD, RoHS Compliant