

## Architectural and Engineering Specifications

### GV-Target Bullet Camera

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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-EBL1100 Series and GV-EBL2100 Series.*

*The Target Bullet Camera (GV-EBL) is a series of light-weighted cameras designed for outdoor environments. The camera adheres to the IP67 standard and has full protection against dust and jets of water. The camera offers an entry-level surveillance solution with all the essential features and excellent image quality.*

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-Target Bullet Camera



### A. General Requirements

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

Models	Image Sensor
GV-EBL1100 Series	1/3" progressive scan low lux CMOS
GV-EBL2100 Series	1/2.8" progressive scan low lux CMOS

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

Models	Max. Resolution & Frame Rate
GV-EBL1100 Series	1280 x 1024 at 30 fps (60/50 Hz)
GV-EBL2100 Series	1920 x 1080 at 30 fps (60/50 Hz)

3. The sub stream shall utilize H.264 and MJPEG video compression methods with a resolution up to 640 x 512 at a maximum frame rate of 30 fps.

4. The maximum numbers of streams supported for the camera over the network, using the H.264 codec are described as below.

<b>Models</b>	<b>Max. Number of Streams</b>
GV-EBL1100 Series	8
GV-EBL2100 Series	6

Note when the camera is connected to GV-System (GV-DVR/NVR) or GV-VMS, video management software, it shall take up two (2) streams and when it is connected to IE browser or any other application, 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, and the guest account shall only have access to camera live view and network status information.

#### B. Alarm and Notification Requirements

1. The camera shall be capable of motion detection.
2. A privacy mask function shall be provided for users to specify 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 shall be sent when the camera is being tampered.
4. The camera shall have E-mail and FTP ability for alert notification. When motion is detected, a captured still image will be sent by E-mail or to the FTP server.
5. The camera shall be capable of integration with video management software or a central monitoring station. The video or text alerts shall be sent upon alarm event.

#### C. Recording and Playback Requirements

1. The camera shall be capable of beginning recording upon motion detection.
2. The camera shall be capable of storing recorded data on GV-Systems (GV-DVR/NVR), GV-Recording Server, GV-VMS, and GV-NAS System.
3. Pre-recording and post-recording functions shall be available.

4. Users shall be able to play back recorded data over network or on a video management software, GV-System (GV-DVR/NVR) or GV-VMS.

**D. Video Requirements**

1. The camera shall support both constant bitrate (CBR) and variable bitrate (VBR). For variable bitrate (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 2800 degrees to 8500 degrees Kelvin.
3. The camera shall have an automatic and manual shutter with the speed range of 1/5 – 1/8000 seconds.
4. The camera shall support the following image adjustment on the Web interface: image brightness, contrast, saturation, sharpness, gamma, white balance, flicker-less, image orientation, shutter speed, backlight compensation, D/N sensitivity, WDR and defog.
5. The camera shall support three (3) aspect ratios: 4:3, 16:9 and 5:4.

<b>GV-EBL1100 Series</b>	<b>Main Stream</b>	<b>4:3</b>	1280 x 960, 640 x 480, 320 x 240
		<b>16:9</b>	1280 x 720, 640 x 360, 448 x 252
		<b>5:4</b>	1280 x 1024 (Default), 640 x 512, 320 x 256
	<b>Sub Stream</b>	<b>4:3</b>	640 x 480, 320 x 240
		<b>16:9</b>	640 x 360, 448 x 252
		<b>5:4</b>	640 x 512, 320 x 256 (Default)
<b>GV-EBL2100 Series</b>	<b>Main Stream</b>	<b>4:3</b>	1280 x 960, 640 x 480, 320 x 240
		<b>16:9</b>	1920 x 1080 (Default), 1280 x 720, 640 x 360, 448 x 252
		<b>5:4</b>	1280 x 1024, 640 x 512, 320 x 256
	<b>Sub Stream</b>	<b>4:3</b>	640 x 480, 320 x 240
		<b>16:9</b>	640 x 360, 448 x 252 (Default)
		<b>5:4</b>	640 x 512, 320 x 256

6. The S/N ratio for the camera shall be as described below.

Models	S/N Ratio
GV-EBL1100 Series	50 dB
GV-EBL2100 Series	48 dB

#### E. Networking Requirements

1. The camera shall be built with a Web server with which the live view is accessible using Web browsers, without the need for special viewer software.
2. The camera shall support the following network protocols: DHCP, DynDNS, FTP, HTTP, HTTPS, NTP, ONVIF (Profile S), QoS (DSCP), RTSP, SNMP, SMTP, TCP, UDP, UPnP and 3GPP/ISMA.
3. Port settings shall be configurable.
4. The camera shall be able to filter or allow specific IP addresses to restrict access to the camera.
5. QoS (DSCP) shall be supported to allow differentiated bandwidth control.

#### F. Lens Requirements

1. The camera shall be equipped with a lens of the lens type and focal length as below.

Models	Lens Type	Focal Length
GV-EBL1100-1F GV-EBL2100-1F	Fixed lens	6 mm
GV-EBL1100-2F GV-EBL2100-2F		3.8 mm

2. The camera shall be equipped with a removable IR-cut filter.
3. The maximum aperture of the camera shall be as below.

Models	Max. Aperture
GV-EBL1100-1F GV-EBL2100-1F	F/1.8
GV-EBL1100-2F GV-EBL2100-2F	F/1.8

4. The camera shall be of M12 (pitch 0.5 mm) lens mount.
5. The camera shall have the image format as below.

Models	Image Format
GV-EBL1100 Series GV-EBL2100 Series	1/2.7 inch

6. The camera shall support automatic gain control.
7. The dynamic range for each model shall be as described below.

Models	Dynamic Range
GV-EBL1100 Series GV-EBL2100 Series	Up to 72 dB

8. The horizontal field of view for each model shall be as described below.

Models	Horizontal FOV
GV-EBL1100-0F	44°
GV-EBL1100-2F	64°
GV-EBL2100-0F	51°
GV-EBL2100-2F	72°

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

Models	Minimum Illumination
GV-EBL1100 Series	0.05 lux in color mode 0.03 lux in B/W mode 0 lux in B/W mode with IR on
GV-EBL2100 Series	0.07 lux in color mode 0.04 lux in B/W mode 0 lux in B/W mode with IR on

10. The camera shall be equipped with 24 IR LEDs with the maximum IR distance of 30 m (98.4 ft).

#### G. Mechanical Requirements

1. The camera shall have a dimension of 115 x 76 x 73 mm (4.5" x 3.0" x 2.9")
2. The camera shall have a weight of 547 g (1.20 lb).
3. The camera shall support ceiling and wall installation with the standard package.
4. The camera shall contain an IR-cut filter to switch the camera from color to monochrome mode automatically by sensing the illumination level.

#### H. Power Requirements

1. Power shall be connected using a power adapter or the Power over Ethernet (PoE).
2. The camera shall be capable of receiving power from 12V DC and IEEE802.3af Power over Ethernet (PoE).
3. The maximum power consumption shall be 7.8 W.

#### I. Environmental Requirements

1. The camera shall be able to tolerate between -20°C ~ 50°C (-4°F ~ 122 °F) for start-up, and -30°C ~ 50°C (-22°F ~ 122 °F) for operation.
2. The humidity shall be within the range of 10% to 90% with no condensation.
3. The ingress protection rating for the camera shall be IP67
4. The vandal resistance rating (IK code) shall be IK10 for metal casing.

#### J. System Requirements

1. The camera shall be accessible through Web browsers including Microsoft Internet Explorer (version 7.0 or later), Google Chrome, Mozilla Firefox and Safari.

#### K. Language Requirements

1. The camera shall support 31 languages on the Web interface, including Arabic, Bulgarian, Czech, Danish, Dutch, English, Finnish, French, German, Greek, Hebrew, Hungarian, Indonesian, Italian, Japanese, Lithuanian, Norwegian, Persian, Polish, Portuguese, Romanian, Russian, Serbian, Simplified Chinese, Slovakian, Slovenian, Spanish, Swedish, Thai, Traditional Chinese and Turkish.

#### L. Applications

1. The camera shall support the following software for network storage:
  - Video management software: GV-System (GV-DVR/NVR), GV-VMS
  - Backup and Recording software: GV-Recording Server
  - NAS system: GV-NAS System
2. The camera shall support smart device access using GV-Eye mobile app. for live view display and remote playback.
3. The camera shall allow remote access from central management stations, such as GV-Control Center, GV-Center V2 and GV-Vital Sign Monitor.

#### M. Packing List shall include:

1. Target Bullet Camera
2. Sun-Shield Cover
3. Silica Gel Tape x 2
4. Supporting Rack
5. Screw x 4
6. Screw Anchor x 3
7. GV-IPCAM H.264 Software DVD
8. GV-IPCAM H.264 Quick Start Guide
9. GV-NVR Software DVD
10. GV-NVR Quick Start Guide

#### N. Certifications and Approvals

1. CE, FCC, RCM, RoHS Compliant