

## Architectural and Engineering Specifications

### GV-Bullet Camera

Revision Date: 02/13/2017

*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-BL3700 (H.265 model) / GV-BL5700 (H.265 model)*

*The Bullet Cameras are outdoor cameras designed with IK10 vandal resistance and IP67 ingress protection. They support H.265 video codec to achieve better compression ratio while maintaining high quality picture at reduced network bandwidths. The super low lux / low lux model can provide a color live view in near darkness. With the equipped automatic IR-cut filter and IR LEDs, the cameras provide a complete day and night surveillance solution. The WDR Pro / WDR model can also process scenes with contrasting intensity of lights.*

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-Bullet Camera



### A. General Requirements

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

GV-Bullet Camera	Image Sensor
GV-BL3700	1/2.8" progressive scan super low lux CMOS
GV-BL5700	1/1.8" 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-Bullet Camera	Max. Resolution & Frame Rate
GV-BL3700	2048 x 1536 at 30 fps (60/50 Hz)
GV-BL5700	2592 x 1944 at 30 fps (60/50 Hz)

3. The sub stream shall utilize H.265, H.264 and MJPEG video compression methods with the default resolution and frame rate as below:

GV-Bullet Camera	Resolution & Frame Rate
GV-BL3700	640 x 480 at 30 fps (60/50 Hz)
GV-BL5700	

4. The maximum number of streams supported for the camera over the network, using the H.265 / H.264 codec is eight (8) streams. When the camera is connected to video surveillance or management software GV-VMS, 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 or an output device shall be triggered when the camera is being tampered.
4. The camera shall support visual automation function such that the connected output devices can be triggered by clicking its image on the live view.
5. The camera shall be capable of triggering an output device or sending E-mail alert when recording errors occur and when the memory card is full.
6. 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.
7. The camera shall be capable of integration with video surveillance/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 according to a schedule, upon input trigger, and upon motion detection.
2. The camera shall be capable of storing recorded data on an inserted micro SD/SDHC/SDXC/UHS-I memory card (Class 10).

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 surveillance or management software 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 camera shall support Smart Streaming function, with which the bitrates will be automatically reduced in static scenes, significantly maximizing bandwidth and lowering file size. It only works with compatible version of GV-DVR / NVR and GV-VMS.
3. 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.
4. The camera shall have an automatic and manual shutter with the speed range of 1/5 – 1/8000 seconds.
5. The camera shall support the following image adjustment on the Web interface: Brightness, Contrast, Saturation, Sharpness, Gamma, White Balance, Flicker-less, Image Orientation, Shutter Speed, Backlight Compensation, D/N Sensitivity, WDR, Defog, Low Lux Enhancement, Denoise, Metering.
6. The camera shall have the minimum illumination as described below.

<b>Models</b>	<b>Minimum Illumination</b>
GV-BL3700	0.001 lux in color mode 0.001 lux in B/W mode 0 lux with IR on
GV-BL5700	0.04 lux in color mode 0.03 lux in B/W mode 0 lux with IR on

7. The camera shall support three (3) aspect ratios: 4:3, 16:9 and 5:4.

<b>GV-BL3700</b>	<b>Main Stream</b>	<b>4:3</b>	2048 x 1536 (Default), 1600 x 1200, 1280 x 960, 640 x 480
		<b>16:9</b>	1920 x 1080, 1280 x 720, 640 x 360
		<b>5:4</b>	1280 x 1024, 640 x 512

	<b>Sub Stream</b>	<b>4:3</b>	1024 x 768, 640 x 480 (Default), 320 x 240
		<b>16:9</b>	1280 x 720, 640 x 360, 448 x 256
		<b>5:4</b>	1280 x 1024, 640 x 512, 320 x 256

<b>GV-BL5700</b>	<b>Main Stream</b>	<b>4:3</b>	2592 x 1944 (Default), 2048 x 1536, 1600 x 1200, 1280 x 960, 640 x 480
		<b>16:9</b>	2592 x 1520, 2304 x 1296, 1920 x 1080, 1280 x 720, 640 x 360
		<b>5:4</b>	1280 x 1024, 640 x 512
	<b>Sub Stream</b>	<b>4:3</b>	1024 x 768, 640 x 480 (Default), 320 x 240
		<b>16:9</b>	1280 x 720, 640 x 360, 448 x 256
		<b>5:4</b>	1280 x 1024, 640 x 512, 320 x 256

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

<b>Models</b>	<b>S/N Ratio</b>
GV-BL3700	54 dB
GV-BL5700	50 dB

#### E. Audio Requirements

1. The camera shall support audio codec G.711.
2. The camera shall support two-way audio transmission.
3. The camera shall be equipped with terminal blocks to support one external microphone and one speaker.

#### F. Networking Requirements

1. The camera shall be equipped with a 10/100 Ethernet, RJ-45 connector as a 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 for special viewer software.
3. The camera shall support the following network protocols: DHCP, DynDNS, FTP, HTTP, HTTPS, NTP, ONVIF (Profile S), PSIA, QoS (DSCP), RTSP, SNMP, SMTP, TCP, UDP, UPnP, 3GPP/ISMA.
4. Port settings shall be configurable.
5. The camera shall be able to filter or allow specific IP addresses to

restrict access to the camera.

6. QoS (DSCP) shall be supported to allow differentiated bandwidth control.

#### G. 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-BL3700	Varifocal lens with P-iris	2.8 ~ 12 mm
GV-BL5700		4 ~ 8 mm

2. The camera shall be equipped with a removable IR-cut filter to switch from color to monochrome mode automatically by sensing the illumination level.
3. The maximum aperture of the camera shall be as described below.

Models	Maximum Aperture
GV-BL3700	F/1.7
GV-BL5700	F/1.65

4. The camera shall be of  $\varnothing$  14 mm lens mount.
5. The image format of the camera shall be as described below.

Models	Image Format
GV-BL3700	1/2.7 inch
GV-BL5700	1/1.8 inch

6. The camera shall support automatic gain control.
7. The WDR Pro model, GV-BL3700, shall be equipped with a WDR sensor to process scenes with contrasting intensity of lights.
8. The dynamic range for each model shall be as described below.

Models	Dynamic Range
GV-BL3700	Up to 120 dB
GV-BL5700	Up to 72 dB

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

Models	Horizontal FOV
GV-BL3700	98° ~ 35°
GV-BL5700	88° ~ 51°

10. The camera shall be equipped with 12 IR LEDs with the maximum IR distance of 30 m (98.4 ft).

#### H. Mechanical Requirements

1. The camera shall be equipped with interface for 1 sensor input (dry contact) and 1 alarm output (200 mA, 5V DC).
2. The camera body shall have the dimensions of 215.3 x 91 x 94.4 mm / 8.47 x 3.58 x 3.71 in.
3. The camera shall have a weight of 850 g (1.87 lb).
4. The camera shall have a built-in temperature detector to detect the chipset temperature inside the camera.
5. The camera shall support wall and ceiling installation with the standard package.
6. The camera shall support a rotating range of 0° ~ 360°, a panning range of 0° ~ 360°, and a tilting range of 90° ~ 180°.

#### I. Power Requirements

1. Power shall be connected using power adapter or the Power over Ethernet (PoE).
2. The camera shall be capable of receiving power from 12V DC or IEEE802.3af Power over Ethernet (PoE).
3. The maximum power consumption shall be 12.6 W.

#### J. Environmental Requirements

1. The camera shall be able to tolerate between -20°C ~ 50°C (-4°F ~ 122 °F) at startup and -30°C ~ 50°C (-22°F ~ 122 °F) during operation.
2. The humidity shall be within the range of 10% to 90% with no condensation.
3. The camera shall comply with IP67 protection classification.
4. The camera shall comply with IK10 vandal resistance.

#### K. System Requirements

1. The camera shall be accessible through Web browsers including Microsoft Internet Explorer (version 8.0 or later), Google Chrome, Mozilla Firefox and Safari.

#### L. 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.

#### M. Applications

1. The camera shall support GV-Backup Center and GV-VMS for network storage.
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.

#### N. Packing List shall include:

1. H.265 Bullet Camera
2. Sun-shield Cover
3. Screw for Sun-shield Cover x 2
4. Washer x 2
5. Screw for Supporting Rack x 3
6. Screw Anchor x 3
7. Silica Gel Bag x 2
8. Screw for Mounting Kit x 3
9. Nut for Mounting Kit x 3
10. Hex Wrench
11. RJ-45 Connector x 2
12. GV-IPCAM Software DVD
13. GV-Software DVD
14. Warranty Card

#### O. Certifications and Approvals

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