

## Architectural and Engineering Specifications

### GV- Arctic Box 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-BX1500-E (P-Iris model)*

*The IR Arctic Box Camera is a series of outdoor cameras designed for environments of extreme temperatures. The cameras adhere to IP67 and IK10 protection standards, and are equipped with removable IR-cut filter for day and night surveillance. The super low lux models are capable of displaying color live view in near darkness. Models using P-Iris allow for precise control of exposure, producing images with better clarity and contrast.*

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- Arctic Box 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-BX1500-E	1/3" progressive scan super 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-BX1500-E	1280 x 1024 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. Live view shall be accessible through network and TV monitor using a video-out wire with BNC connector. The resolution for TV-out shall be up to 720 x 486 for NTSC, and up to 720 x 576 for PAL.

5. The maximum number of streams supported for the camera over the network using the H.264 codec is described as below.

<b>Models</b>	<b>Max. Number of Streams</b>
GV-BX1500-E	8

When the camera is connected to video management software GV-DVR / NVR / 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.

6. 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 via E-mail notification which shall be triggered when the camera is being tampered.
4. The camera shall be capable of sending E-mail alert when recording errors occur and when the memory card is full.
5. 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.
6. 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 according to a schedule and upon motion detection.
2. The camera shall be capable of storing recorded data on an FTP server, GV-DVR / NVR / VMS, GV-Backup Center and GV-Recording Server, and GV-NAS System.

3. Scheduled backup shall be supported when connected to a server installed with the GV-Backup Center program.
4. Pre-recording and post-recording functions shall be available.
5. Users shall be able to play back recorded data over network or on a video surveillance or management software GV-DVR / NVR / 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, defog, super low lux, denoise, and metering.
5. The camera shall support the super low lux function with which the camera can display color live views in near darkness, with minimum illumination of 0.01 lux for color and B/W and 0 lux with IR on.
6. The camera shall support three (3) aspect ratios: 4:3, 16:9 and 5:4.

<b>GV-BX1500-E</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)

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

<b>Models</b>	<b>S/N Ratio</b>
GV-BX1500-E	55 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 stereo phone jacks (3.5 mm / 0.14") for an external microphone and a 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, SNMP, UPnP and 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.

<b>Models</b>	<b>Lens Type</b>	<b>Focal Length</b>
GV-BX1500-E	Varifocal lens with P-Iris	3 ~ 10.5 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 F/1.4.
4. The camera shall be of CS lens.
5. The camera shall have the image format of 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-BX1500-E	Up to 72 dB

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

Models	Horizontal FOV
GV-BX1500-E	81° ~ 29°

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

Models	Minimum Illumination
GV-BX1500-E	0.01 lux in color and B/W mode 0 lux with IR on

10. The camera shall be equipped with 4 IR LEDs with the maximum IR distance 15 m (50 ft.)

#### H. Mechanical Requirements

1. The camera shall have a dimension (without the sun-shield cover) of 100.5 x 100.5 x 317.5 mm (3.96" x 2.96" x 12.5").
2. The camera shall have a weight of 3.2 kg (7.11 lb).
3. The camera shall have a built-in temperature detector to detect the chipset temperature inside the camera.
4. The camera shall support a panning range of 0° ~ 300° and a tilting range of 0° ~ 90°.

#### I. Power Requirements

1. The camera shall be capable of receiving power from IEEE 802.3at Power over Ethernet (PoE).
2. The maximum power consumption for the camera shall be 20 W.

#### J. Environmental Requirements

1. The camera shall be able to tolerate between -30°C ~ 50°C (-22°F ~ 122 °F) at startup and -40°C ~ 50°C (-40°F ~ 122 °F) during operation.
2. The camera shall be equipped with a heater that runs automatically between 8°C (46.4°F) to -40°C (-40°F).
3. The camera shall be equipped with a fan which is constantly on when the camera is supplied with power.

4. The humidity shall be within the range of 10% to 90% with no condensation.
5. The camera shall comply with IP67 protection classification.
6. 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 7.0 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 the following software for network storage:
  - Video surveillance or management software: GV-DVR / NVR / VMS
  - Backup and Recording software: GV-Backup Center, 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.

N. Packing List shall include:

1. IR Arctic Box Camera
2. Screw Anchor x 4
3. Screw x 4
4. Washer x 4
5. Big Torx Wrench
6. Small Torx Wrench
7. Silica Gel Bag x 2
8. Adhesive Tape x 2
9. GV-IPCAM H.264 Software DVD
10. GV-NVR Software DVD
11. Warranty Card

O. Certifications and Approvals

1. CE, FCC, RCM, RoHS Compliant