Architectural and Engineering Specifications

GV-Thermal 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.

Product covered in this document includes:
GV-TM0100

The Thermal IP Camera is an outdoor IP camera capable of producing black-and-white images based on the detected temperature of the people, vehicles and environment. Unlike traditional cameras that rely on visible light, GV-TM0100 is unaffected by the lighting conditions and allows you to detect movements even in complete darkness and backlit scenes. Ideal for border surveillance and sparsely populated areas, the camera can detect human-sized targets at a distance of 1450 m (4757 ft) and vehicles at 1850 m (6070 ft). The Camera can be easily configured through its Web interface and you can record and play back recordings using the GV-VMS and GV-Recording Server software included in the standard package.

All specifications are subject to change without prior notice. *For more information on GeoVision products, please visit www.geovision.com.tw.*

GV-Thermal IP Camera

A. General Requirements

1. The camera shall be a single-stream, network camera equipped with the following image sensor:

Models	Image Sensor
GV-TM0100	Uncooled FPA micro bolometer

2. The thermal sensitivity for the camera should be ≤100 mK at f/1,300K.
3. The spectral range for the camera should be 8 ~ 14 um.
4. The single 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-TM0100	352 x 288 at 25 fps (60/50 Hz)

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

Models	Max. Number of Connections
GV-TM0100	4

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 such that an E-mail notification or an output device shall be triggered when the camera is being tampered.
4. The camera shall send E-mail for alert notification. When motion is detected, a captured still image will be sent by E-mail.
5. The camera shall be capable of integration with GV-VMS. The video or text alerts shall be sent upon video lost, tampering alarm and motion detection.

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 local computer, GV-VMS, and GV-Recording Server.
3. Users shall be able to play back recorded data over network or on a video surveillance or management software GV-VMS or GV-Recording Server.

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 the following image adjustment on the Web interface: image brightness, and contrast.
3. The camera shall support one (1) aspect ratio: 5:4.

GV-TM0100	**Main Stream**	**5:4**	352 x 288

4. The camera shall detect human targets from as far as 1450 m (4757 ft) and 1850 m (6070 ft) for vehicles.
5. The camera shall recognize human targets from as far as 480 m (1575 ft) and 920 m (3018 ft) for vehicles.

E. 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, HTTP, HTTPS, NTP, 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.

F. Lens Requirements

1. The camera shall have a focal length of 40 mm.
2. The camera shall support automatic and manual gain control.
3. The horizontal field of view for the camera shall be as described below.

Models	Horizontal FOV
GV-TM0100	13.7°

G. Mechanical Requirements

1. The camera shall have a dimension of 485.5 x 249.48 x 156.99 mm (19.11" x 9.82" x 6.18").
2. The camera shall have a weight of 2.75 kg (6.06 lb).

H. Power Requirements

1. Power shall be connected using an optional power adapter or the Power over Ethernet (PoE).
2. The camera shall be capable of receiving power from 12V DC and IEEE 802.3af Power over Ethernet (PoE).
3. The maximum power consumption for the camera shall be 10 W.

I. Environmental Requirements

1. The camera shall be able to tolerate between -20°C ~ 40°C (-4°F ~ 104 °F) at startup and during operation.
2. The humidity shall be within the range of 20% to 90% with no condensation.
3. The camera shall comply with IP66 protection classification.

J. System Requirements

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

K. Language Requirements

The camera shall support 28 languages on the Web interface, including Bulgarian, Czech, Danish, Dutch, English, French, German, Greek, Hebrew, Hungarian, Indonesian, Italian, Japanese, Lithuanian, Norwegian, Persian, Polish, Portuguese, Romanian, Russian, Serbian, Simplified Chinese, Slovakian, Slovenian, Spanish, Thai, Traditional Chinese and Turkish.

L. Applications

1. The camera shall support the following software for network storage: Video surveillance or management software: GV-VMS and GV-Recording Server
2. The camera shall support smart device access using GV-Eye mobile app. for live view display and remote playback.

M. Packing List shall include:

1. Thermal IP Camera
2. Supporting Rack
3. Hex Key
4. Rubber pad for supporting rack
5. Philips Cap Screw x2
6. Silica Gel Bag
7. GV-IPCAM Software CD/DVD
8. GV-Software DVD
9. Warranty Card

N. Certifications and Approvals

CE, FCC, RCM, RoHS Compliant