Architectural and Engineering Specifications

GeoVision License Plate Recognition Cameras

Revision Date: 09/22/2020

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. Specific models mentioned are only for clarity – these may be deleted after insertion into the complete specification.

Products covered in this document include:
GV-LPC2210

GV-LPC2210 shall work with the following software and hardware for license plate recognition or surveillance use

- ***GV-DVR / NVR / VMS:*** *DVR / NVR / VMS software*
- ***GV-DVR / NVR / VMS LPR:*** *DVR / NVR / VMS software with LPR processor*

All specifications are subject to change. For more information on GeoVision products, please visit www.geovision.com.tw.

GV-IP LPR Camera

A. General Requirements

1. The camera shall be a super low lux color network camera capable of capturing reflective license plates on vehicle traveling under 120 km/hr (75 mph) or less.
2. The camera shall be equipped with a TV output to provide both IP and analog video.
3. The camera shall be capable of filtering out the background of license plates and capturing only the license plate numbers.
4. Under low-light conditions, the camera shall be capable of producing clear license plate capture with IR LED or IR illuminator turned on.
5. The camera shall support capturing license plates for two (2) lanes in a single shot.
6. The camera shall be able to transmit the images of license plates to DVR / NVR / VMS LPR (DVR/ NVR / VMS software with LPR processor) for identification and the software shall be able to trigger an output to grant access to a gate.
7. The camera shall be capable of connecting with DVR / NVR / VMS software to transmit the vehicle images for live monitoring.
8. The camera shall utilize a progressive scan CMOS imager with a 1/2.8-inch image sensor.
9. The camera shall utilize H.264 and MJPEG video compression methods with a resolution of 1920 x 1080.

10. Up to eight (8) streams shall be supported simultaneously over the network. When one camera is connected to IE browser or any other application, it takes up one (1) stream. When one camera is connected to DVR / NVR / VMS, it takes up two (2) streams.
11. The camera shall provide administrator and guest level settings on the Web interface. The administrator account shall have full access to all functions, and the guest account shall have access to camera live video and network status information only.
12. Maximum frame rate capacity of the camera shall be up to 30 frames per second at a 1920 x 1080 resolution (60/50 Hz).

B. Alarm and Notification Requirements

1. The camera shall be capable of motion detection.
2. A privacy mask function shall be provided to allow users to specify areas of the image to be blocked off on the camera view for privacy purpose.
3. The camera shall support tampering alarm such that an E-mail notification shall be triggered when the camera is being tampered with.
4. The camera shall have E-mail and FTP ability for alert notification. When a motion is detected, a capture 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 events.

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 able to connect to DVR / NVR / VMS software for live monitoring of vehicles and recording.
3. The camera shall be able to connect to DVR / NVR / VMS LPR (DVR / NVR/ VMS software with LPR processor) for license plate recognition and recording.
4. Users shall be able to play back recorded data on the DVR / NVR / VMS software over network.

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 have both automatic shutter and manual shutter with a speed range of 1/120 – 1/2000 seconds.
3. The following image settings shall be adjustable from the Web interface of the camera: brightness, contrast, sharpness, gamma, auto exposure, white balance, flicker less, image orientation, shutter speed, maximum video gain, D/N sensitivity, denoise, defog, metering.
4. The camera shall be equipped with motorized varifocal lens, and support remote focus and zoom change through the Web interface. The user shall be able to:
   - Focus in and focus out
   - Automatically focus using a quick focus (Normal Scan), partial focus of a selected region (Regional Scan) or a detailed, full-view focus (Full Scan)
5. The camera shall support the super low lux function with which the camera can display color live views in near darkness.
6. The camera shall support three (3) aspect ratios: 4:3, 16:9 and 5:4.
7. The S/N ratio for the camera shall be 52 dB.
8. 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 640 x 480.

E. Audio Requirements

1. The camera shall support audio codec G.711.
2. The camera shall be equipped with stereo phone jacks (3.5 mm / 0.14”) for an external microphone and a speaker.
3. The camera shall support two-way audio transmission.

F. Networking Requirements

1. Network interface shall be via an Ethernet (10/100 Base-T), RJ-45 connector.
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, SMTP, SNMP, TCP, UDP, UPnP, 3GPP/ISMA
4. Users shall be able to configure port settings.
5. The camera shall be capable of setting IP filtering to restrict access to the camera.
6. QoS (DSCP) shall be supported to allow differentiated bandwidth control.

G. Lens Requirements

1. The camera shall have a maximum aperture of F/1.2.
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 camera shall have motorized varifocal lens with a P-iris and a focal length of 9-22 mm.
4. The camera shall be equipped with 4 IR LEDs that support an IR distance of 10 - 20 m / 32.8 - 65.6 ft.
5. The camera shall have 38°-18° horizontal field of view.

H. Mechanical Requirements

1. The camera body shall have the dimensions of 406 x 145 x 109 mm / 16 x 5.7 x 4.3 in (without the support rack).
2. The camera shall weigh 3.32 kg / 7.32 lb (including the support rack).
3. The camera shall have ø 14 mm lens mount.
4. The camera shall have a BNC TV-out port.
5. The camera shall have a built-in temperature detector to detect the chipset temperature inside the camera.
6. The camera shall support a panning range of 0°-270° and a tilting range of 0°-70°.

I. Power Requirements

1. Power shall be connected using the supplied DC power adaptor or the optional Power over Ethernet (PoE).
2. The camera shall be capable of receiving 48V DC, 2.5A and High PoE ++ (120 W).
3. The camera shall have a maximum power consumption of 50 W.

J. Environmental Requirements

1. The operating temperature shall be within -40°C ~ 50°C / -40°F ~ 122°F.
2. The humidity shall be within the range of 10% to 90% with no condensation.
3. The camera shall comply with IP67 ingress protection classification.
4. The camera's metal casing shall have a vandal resistance of IK10 for metal casing.
5. The camera shall have a heater that shall turn on when the environment temperature is below or equal to -40°C ~ 8°C (-40°F ~ 46.4°F).
6. The camera shall have a built-in fan which is always turned on.

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, Safari and Microsoft Edge.
2. The camera shall support the following languages on the Web interface: 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. Certifications and Approvals

1. CE, FCC, CTick, RoHS Compliant

M. Packing List

1. The GV-LPC2210 camera
2. Screw Anchor x 4
3. Screw x 4
4. Washer x 4
5. Torx Wrench
6. Power Adapter (DC 48V, 2.5A, 120 W)
7. AC Power Cord
8. Adhesive tape for Silica Gel Bag

9. GV-IP LPR Camera Software CD
10. GV-NVR Software DVD
11. GV-ASManager Software DVD
12. GV-LPR Camera Installation Guide
13. Warranty Card