

Architectural and Engineering Specifications

GV-CS1320 Camera Access Controller

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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-CS1320 Camera Access Controller Firmware Version 2.20*

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

GV-CS1320 Camera Access Controller



Camera

A. General Requirements

1. The camera shall be a dual-stream, day/night, network camera equipped with the 1/2.8" progressive scan super low lux CMOS image sensor.
2. The camera shall be capable of producing a circular image that captures an extremely wide viewing angle.
3. The main stream shall utilize H.264 and MJPEG video compression methods with a resolution up to 1920 x 1080 at a maximum frame rate of 15 fps.
4. The sub stream shall utilize H.264 and MJPEG video compression methods with a resolution up to 640 x 360 at a maximum frame rate of 15 fps.
5. The maximum number of streams supported by the camera access controller is 5.

When it is connected to the access control software GV-ASManager and the 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.

7. The camera shall support GV-I/O Box 4 Ports for sensor, alarm application and door bell activation.

B. 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, Image Orientation, Shutter Speed, Backlight Compensation, D/N Sensitivity, Defog, Denoise, Metering, Super Low Lux, and WDR.
5. The camera shall have the minimum illumination of 0.02 Lux in B/W mode.
6. The camera shall support 16:9 aspect ratios.

Main Stream	16:9	1920 x 1080
Sub Stream	16:9	640 x 360

7. The S/N ratio for the camera shall be 52 dB.

C. Audio Requirements

1. The camera shall support audio codec G.711.
2. The camera shall be equipped with a built-in microphone and speaker.

D. Lens Requirements

1. The camera shall have a fixed lens with the focal length of 1.7 mm.
2. The camera shall be equipped with a removable IR-cut filter.
3. The maximum aperture of the camera shall be F/2.5.
4. The camera shall be of M12 lens mount.
5. The camera shall have the image format of 1/2.8 inch.
6. The horizontal field of view shall be 180°.
7. The camera shall have 2 IR LEDs that support a maximum IR distance of 3 m / 9.84 ft.

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: HTTP, HTTPS, TCP, UDP, SMTP, FTP, DHCP, NTP, UPnP, DynDNS, 3GPP/ISMA, RTSP, PSIA, SNMP, QoS (DSCP), ONVIF (Profile S and Profile C).
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.

Access Control

A. General Requirements

1. The camera access controller shall be capable of controlling doors, parking gates and elevators.
2. The camera access controller shall support 1 door with one-way control or two-way control.
3. The camera access controller shall be equipped with a 32-bit RISC microprocessor CPU
4. The camera access controller shall support up to 40,000 cards in network mode.
5. The camera access controller shall be equipped with 2 digital inputs and 1 relay output.
6. The camera access controller shall have an event buffer of up to 50,000 events and log data.
7. The camera access controller shall support TCP/IP connection with the access control software GV-ASManager. With GV-ASManager, you shall be capable of accessing information and alarm messages from the camera access controller.
8. The camera access controller shall be accessible on a network using a fixed or dynamic IP address, or the DDNS function.
9. The camera access controller shall support the wiring of a locking device to be secured inside the door. This wiring method shall be able to prevent outside intruders from shorting the wires together and opening the door.

B. Interface Requirements

1. The camera access controller shall be able to establish RS-485 connection with up to 2 compatible GeoVision readers.
2. The camera access controller shall come with 1 TCP/IP interface to allow network connection with up to 2 compatible GeoVision network readers and the access control software GV-ASManager.
3. Four Door Entry / Exit Control related functions shall be available for users when connecting to GV-I/O Box 4 Ports:

Sensor / Button	Input Pins on GV-I/O Box	Output Pins on GV-I/O Box
Door Sensor	Input 1	(to trigger) Output 2
Door / Gate Button	Input 2	(to trigger) Output 1
Fire Sensor	Input 3	(to trigger) Output 2
Tamper Sensor	Input 4	(to trigger) Output 2
Door Bell	X	(to trigger) Output 3

C. Web Interface Requirements: You shall be able to access the following settings through the Web interface of the camera access controller.

1. You shall be able to export the camera access controller settings, and then import the same settings to other controllers.
2. You shall be able to upgrade controller firmware.
3. The Web interface shall support the following languages: English, French, Portuguese, Russian, Spanish, and Traditional Chinese.
4. You shall be able to manage login ID and password for the Web interface. An administrator account with full access to all functions, and a guest account with limited access rights shall be available.
5. You shall be able to set up **Anti-Passback (APB)** across multiple door controllers. When enabled, a card used on an entry door cannot access the same entry door again unless it has been used on a corresponding exit door.
6. The camera access controller shall support the following authentication modes.
 - **Local Unlock Mode:** Doors remain open.
 - **Local Lock Mode:** Doors remain locked
 - **Fixed Card Mode:** Grant access to door after the card is presented or the passcode is entered.
 - **Fixed Card + PIN Mode:** Grant access to door after the card is presented and a PIN code is entered.
 - **Fixed Card / Common Mode:** Grant access to door either after the card is presented or the door's password is entered.
 - **Authentication Schedule Mode:** Follow the authentication schedule set on the access control software GV-ASManager.
 - **Local Lock Down:** Lock down the door. This mode shall override the Authentication Schedule and the door shall only be opened by presenting the assigned access card.

7. The camera access controller shall support the following access control modes.
 - **Card Only Mode:** Access shall be granted after the card is presented.
 - **Card and Face Mode:** Access shall be granted after the card is presented and the face is detected.
8. You shall be able to configure the following Parameter Setting.
 - **Lock Reset Time:** Doors remain open for the specified time period (between 1 and 255 seconds) and after that, doors shall be automatically locked.
 - **Held Open Time:** Doors shall be held open for the specified time period (between 5 and 9999 seconds) before an alarm is generated.
 - **Fire Action:** Lock or unlock the door when a fire condition occurs.
 - **Alarm Continuous Time:** When triggered, alarm shall go off for the specified time period (between 1 and 10 seconds) before it automatically turns off.
 - The camera access controller shall support the following types of alarms: Door Held Open, Door Forced Open, Global Fire, Door Access Denied, and Urgent Code.
9. The Card Setting page shall be available to set the built-in card reader to read UID (unique identification) or GID (GeoVision ID) on ID cards or key fobs.
10. The camera access controller shall support the following time settings: manually set a time, synchronize with PC's time, synchronize with a network time server, and enable / disable day light time
11. You shall be able to define the input devices connected to the camera access controller. Input sensors shall be set to Normally Open (NO) or Normally Closed (NC).
 - **Door / Car Sensors:** When the door is forcibly opened, Door / Car Sensors shall trigger Forced Open. If Forced Open is selected on GV-ASManager, the camera access controller shall send forth alarm sound.
 - **Door / Gate Button:** When Door / Gate Button gets triggered, the door shall be opened.

- **Fire Sensor:** When the flame detector senses fire, Fire Sensor shall be triggered. If Fire Alarm is selected on GV-ASManager, the camera access controller shall send forth alarm sound.
 - **Tamper Sensor:** When the camera access controller is being physically tampered with, the alarm events shall show on GV-ASManager. If Tamper is selected on GV-ASManager, the camera access controller shall send forth alarm sound.
12. You shall be able to define the output devices connected to the camera access controller. Output devices shall be set to Normally Open (NO) or Normally Closed (NC).
- **Electric Lock:** The lock output shall be triggered when the correct card is presented to open the locking device.
 - **Event Alarm:** The alarm output shall be triggered when the defined alarm events occur.

Inputs	Alarm Events
Door Sensor	Forced Open
Fire Sensor	Fire Alarm
Tamper Sensor	Tamper

- **Door Bell:** The door bell shall be triggered upon activating the touch pad.
13. You shall be able to define the readers connected to the camera access controller through RS-485 network connection.

D. Alert and Notification Requirements

1. The camera access controller shall be able to send e-mail notifications when the door is tampered with.
2. The PC-based program GV-ASNotify shall generate a notification message whenever the bell button (touch pad) of the camera access controller is activated.
3. After adding the access control software GV-ASManager to GV-Access mobile app, the operator shall get an alert notification upon the trigger of the bell button (touch pad) of the camera access controller.
4. The camera access controller shall place a call to the operator through the Internet using VoIP when the bell button (touch pad) is activated.

Reader

A. General Requirements

1. The built-in reader shall be capable of performing face detection together with card verification before access can be granted.
2. The built-in reader shall read frequency of 13.56 MHz, supporting Mifare DESFire, Mifare Plus and Mifare Classic cards.

General

A. Mechanical Requirements

1. The camera access controller shall have dimensions of 137 x 80 x 34.5 mm / 5.4 x 3.15 x 1.36 in.
2. The camera access controller shall have a weight of 315 g / 0.69 lb.
3. The camera access controller shall be able to connect with 2 input devices: sensor inputs and button inputs. All inputs shall be dry contact and can be set to NO/NC.
4. The camera access controller shall be connect with 1 door output of voltage 30V DC, 0.5A.
5. The camera access controller shall have 1 RS-485 interface for max. 2 readers and 1 I/O box.
6. The camera access controller shall have a built-in micro SD card slot.
7. The camera access controller shall have a temperature detector

B. Power Requirements

1. The camera access controller shall be capable of receiving power from 12V DC, 2.5 A / PoE+ (IEEE 802.3at).
2. The maximum power consumption of the camera access controller shall be 25.5 W.

C. Environmental Requirements

1. The operating temperature of the camera access controller shall be within the range of -20 ~ 50° C / -4 ~ 122° F.
2. The operating humidity shall be within the range of 10% ~ 90% RH

with no condensation.

3. The camera access controller shall comply with IP66 protection classification.

D. Packing list shall include:

1. Camera Access Controller
2. Mounting Plate
3. Standard Screw x 2
4. Plastic Screw Anchor x 2
5. Security Screw
6. Torx Wrench
7. Silica Gel Bag
8. Micro SD Card 2 GB
9. Software DVD
10. Warranty Card

E. Certifications and Approvals

1. CE, FCC, RCM, RoHS compliant.

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