Architectural and Engineering Specifications

GV- Fisheye IP Camera

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The GV-Fisheye Camera Architectural and Engineering Specifications shall include the following models: GV-FE2301, GV-FE4301, GV-FE520, GV-FE521, and GV-FER521.

A. General Requirements

1. The GV-Fisheye Camera shall be capable of producing a circular fisheye image that captures an extremely wide viewing angle. Using the Web interface or a GV-System, the circular fisheye image shall be converted into a rectilinear projection that supports digital zoom and PTZ function.
2. The GV-Fisheye Camera shall be a fisheye network camera utilizing a progressive scan CMOS imager with a 1/2.5-inch image sensor.
3. The GV-Fisheye Camera shall utilize H.264 and MJPEG video compression methods with the following resolutions.

   a. GV-FE2301 shall be able to provide images at 1440 x 1376 resolution.
   b. GV-FE4301 shall be able to provide images at 2048 x 1944 and 1440 x 1376 resolutions.
   c. GV-FE520, GV-FE521 and GV-FER521 shall be able to provide images in 2560 x 1920 and 2048 x 1944 resolutions.
4. The GV-Fisheye Camera shall support the following frame rate capacity.
   a. Maximum frame rate capacity of GV-FE2301 shall be up to 15 frames per second at the resolution of 1440 x 1376.
   b. Maximum frame rate capacity of GV-FE4301 shall be up to 15 frames per second at the resolution of 2048 x 1944 and 1440 x 1376.
   c. Maximum frame rate capacity of GV-FE520, GV-FE521 and GV-FER521 shall be 10 frames per second at the resolution of 2560 x 1920 and 15 frames per second at the resolution of 2048 x 1944.
5. GV-FE2301, GV-FE4301, GV-FE520 and GV-FE521 shall be designed for indoor environment, while GV-FER521 shall be designed for outdoor environment.
6. GV-FE2301, GV-FE520, GV-FE521 and GV-FER521 shall support up to seven (7) streams simultaneously over the network. GV-FE4301 shall support up to five (5) streams simultaneously over the network. When the GV-Fisheye Camera is connected to IE browser, GV-System or any other application, it takes up one (1) stream. The maximum number of streams shall be based on the maximum resolution of the GV-Fisheye Camera and H.264 codec type.
7. The GV-Fisheye 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.

B. Alarm and Notification Requirements
1. The GV-Fisheye 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 GV-Fisheye Camera shall support tampering alarm such that an E-mail notification, an alarm or an output device shall be triggered when the camera is being tampered with.

4. The GV-Fisheye Camera shall be capable of triggering an output device or sending E-mail alert when recording errors occur and when the memory card becomes full.
5. The GV-Fisheye Camera shall have E-mail and FTP ability for alert notification.

C. Recording and Playback Requirements

1. The GV-Fisheye Camera shall be capable of beginning recording according to a schedule, upon input trigger, and upon motion detection.
2. The GV-Fisheye Camera shall be capable of storing recorded data on the inserted micro SD / SDHC / SDXC memory card, an FTP server, GV-Systems, GV-Backup Center and GV-Recording Server.
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 on a GV-System or over network.

D. Video Requirements

1. The GV-Fisheye 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, outdoor, florescent, tungsten lamp, and manual. The manual white balance range shall be approximately 2800 degrees to 8500 degrees Kelvin.
3. The GV-Fisheye Camera shall have an automatic shutter with a speed range of 1/5 – 1/8000 seconds. Users shall be able to set a Slowest Shutter Speed for the GV-Fisheye Camera.
4. The following image settings shall be adjustable from the Web interface: brightness, contrast, saturation, sharpness, gamma, white balance, flicker-less, image orientation, backlight compensation, D/N sensitivity, wide angle lens distortion adjustment and defog.

E. Audio Requirements

1. The GV-Fisheye Camera shall support audio codec G.711.
2. The GV-Fisheye Camera shall be equipped with a built-in speaker.
3. The GV-Fisheye Camera shall be equipped with a built-in microphone.
4. The GV-Fisheye Camera shall support bi-directional audio transmission.

F. Networking Requirements

1. Network interface shall be via an Ethernet (10/100 Base-T), RJ-45 connector.
2. A built-in Web server shall be incorporated that allows users to view the camera view using Microsoft Internet Explorer (version 7.0 or higher required) without the need for special viewer software.
3. The GV-Fisheye Camera shall support the following network protocols: HTTP, HTTPS, TCP, UDP, SMTP, FTP, DHCP, NTP, UPnP, DynDNS, RTSP, PSIA, SNMP, QoS (DSCP) and ONVIF.
4. Users shall be able to configure port settings.
5. The GV-Fisheye 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 GV-Fisheye Camera shall have fixed focus.
2. The GV-Fisheye Camera shall have the following aperture.
   a. The aperture of GV-FE2301 and GV-FE4301 shall be F/2.8.
   b. The aperture of GV-FE520, GV-FE521 and GV-FER521 shall be F/2.0.
3. The GV-Fisheye Camera shall require a minimum illumination of 1.0 lux in color mode and 0.5 lux in black and white mode.
4. The GV-FE2301 and GV-FE4301 shall have a fixed iris lens with a focal length of 1.05 mm. The GV-FE520, GV-FE521 and GV-FER521 shall have a fixed iris lens with a focal length of 1.6 mm.

H. Mechanical Requirements

1. The GV-Fisheye Camera shall be equipped with wires for 1 digital input and 1 digital output.
2. The GV-Fisheye Camera shall have the following dimensions.
   a. The camera body of GV-FE2301 and GV-FE4301 shall have a dimension of Ø 160 (diameter) x 47.66 (height) mm / 6.30 x 1.88 in using Hard-Ceiling Mount and a dimension of 164 (diameter) x 47.66 (height) mm / 6.46 x 1.88 in using In-Ceiling Mount.
   b. The camera body of GV-FE520 and GV-FE521 shall have a dimension of Ø 160 (diameter) x 44.9 (height) mm / 6.30 x 1.77 in using Hard-Ceiling Mount and a dimension of 164 (diameter) x 44.9 (height) mm / 6.46 x 1.77 in using In-Ceiling Mount.
   c. The camera body of GV-FER521 shall have a dimension of Ø 160 (diameter) x 46.4 (height) mm / 6.30 x 1.83 in using Hard-Ceiling Mount and a dimension of 164 (diameter) x 46.4 (height) mm / 6.46 x 1.83 in using In-Ceiling Mount.
3. The GV-FE2301, GV-FE4301, GV-FE520 and GV-FE521 shall have a weight of 650 g / 1.43 lb. The GV-FER521 shall have a weight of 480 g / 1.06 lb.
4. The GV-Fisheye Camera shall have a M12-type lens mount with 0.5 mm pitch.
5. The GV-Fisheye Camera shall have a built-in temperature detector to detect the chipset temperature inside the camera.
6. The GV-Fisheye Camera shall have four mounting methods, on the wall, on the ground, on the ceiling surface and partially embedded in the ceiling.

I. Power Requirements

1. The GV-FE2301, GV-FE4301, GV-FE520 and GV-FE521 shall be capable of receiving power from 12V DC, 24V AC, and IEEE802.3af Power over Ethernet (PoE). GV-FER521 shall be capable of receiving power from IEEE802.3af Power over Ethernet (PoE).
2. The maximum power consumption of GV-Fisheye Camera shall be 5 W.

J. Environmental Requirements

1. The operating temperature of GV-FE2301, GV-FE4301, GV-FE520 and GV-FE521 shall be within the range of 0°C - 50°C / 32°F - 122°F. The operating temperature of GV-FER521 shall be within the range of -20°C - 50°C / -4°F - 122°F.
2. The humidity shall be within the range of 10% to 90% with no condensation.
3. GV-FER521 shall comply with IP66 protection classification.
4. The metal casing of GV-FER521 shall have a vandal resistance of IK10.

K. System Requirements

1. Supported operating systems shall include 64-bit Windows 7 and Windows Server 2008 and 32-bit Windows XP, Vista, 7 and Server 2008.
2. Microsoft Internet Explorer version 7.0 or higher is required to access Web interface.

L. Packing list shall include:

1. Camera body
2. Three support brackets
3. Camera cover (Hard ceiling mount)
4. Camera cover (In-ceiling mount)
5. Three screws (Hard ceiling mount)
6. Three screws (In-ceiling mount)
7. Three plastic screw anchors
8. Torx Wrench
9. GV-Fisheye Camera Software DVD containing User Manual and setup program
10. Installation sticker
11. DC 12V Power Adaptor (GV-FE2301, GV-FE4301, GV-FE520 and GV-FE521 only)
12. 2-Pin or 3-Pin Terminal Block (GV-FE2301, GV-FE4301, GV-FE520 and GV-FE521 only)
13. Cable connector (GV-FER521 only)
14. Two silica gel bag and two adhesive tapes (GV-FER521 only)
15. GV-NVR Software DVD
16. GV-NVR Quick Start Guide

M. Certifications and Approvals

1. CE, FCC, CTick, RoHS compliant
2. EN50155 compliant (GV-FER521 only)

All specifications are subject to change without notice.