

G2Z-CAP Camera User Guide





The Kroger Co.
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Revision History

Date	Change Description	Revision
19-SEP-12	Initial Revision	1.0
29-SEP-12	Updated as per Internal Review	1.1
07-Nov-12	Updated for Compliance statements	1.2



1 Introduction

G2Z-CAP is a PoE powered IP Camera device. It also acts as a wired and wireless access point.

Benefits are as follows:

Benefits

- Built-in Web server that does not require any additional hardware or software to operate
- Supports time synchronization with a Network Time Protocol (NTP) server
- Ability to view and save snapshots
- Ability to Pan/Tilt at 350° and 90°
- Access point for ZigBee Infrastructure
- Embedded Video Analytics
 - Customer counting
 - Dwell Time
 - Occupancy
 - Analytics ties in with task management system software.



2 System Requirements

The system requirements for the G2Z-CAP Network Camera include the following for browser-based viewing.

2.1 System Requirements

- Microsoft Windows PC
- Microsoft Internet Explorer version 5.x or higher
- Apple Quick Time Player

3 G2Z-CAP Specifications

3.1 Processing

- 600MHz Dual Core SoC
- Upto 256MB DDR2 RAM
- 128MB NAND FLASH
- 3.1M Pixel CMOS Image Sensor
- On-Board ZigBee Modules (4 Nos)
- microSD Card Socket
- USB Host 2.0 Connectivity (Optional)
- Audio In/Out Connectivity (Not Used)
- Pan/Tilt Motor Interface
- RS232 Interface
- Monta Vista Linux Kernel
- Extended depth of field Lens

3.2 Network Connections

- 10/100 Mbps Ethernet

3.3 Power

Input Voltage : 48VDC (POE)
Input Current : 0.2A

3.4 Security

- Multi-user level password protection to restrict camera access

3.5 Video Capture and Encoding

- Display in color OR black and white.
- Illumination: 10-10 000 lux.
- Image sensor: 3.1 MPixel 1/4" progressive scan CMOS image sensor
- Image frame rate
 - Up to 15 frames per second for QXGA resolutions
 - Up to 30 frames per second for XGA capture resolution.
- Image compression: Motion JPEG, individual JPEG and H.264
- Resolution range:
 - 1280 x 1024 , 1280 x 960, 1280 x 720
 - 640 x 480, 640 x 360
 - 320 x 240
- Network bandwidth usage limitation control based on Variable Bit rate H.264 codec

3.6 Customer Applications

- Compliance with ONVIF

3.7 Firmware Updates

- Firmware updates over the LAN network

3.8 Operating Conditions

- Temperature: 5 to 40° C (41 to 104 °F)
- Humidity: 20 to 80% RHG
- Indoor use only

3.9 Dimensions

- Height: 180 mm
- Width: 172 mm
- Depth: 172 mm

3.10 Approvals

- EMI
 - FCC
- Safety
 - UL

3.11 Included Accessories

Adjustable ceiling mount supporting tile mount, through ceiling mount and tear drop installations.

3.12 Safety Precautions

Below is safety precaution that should be observed when installing device.

3.13 Electrostatic Discharge

The device will be installed over ceiling, there will not threat of ESD during normal operation. The ESD threat will be further reduced due to plastic casing.

The installation of the device will be done through trained person. The person should take care of ESD precautions while installing device.

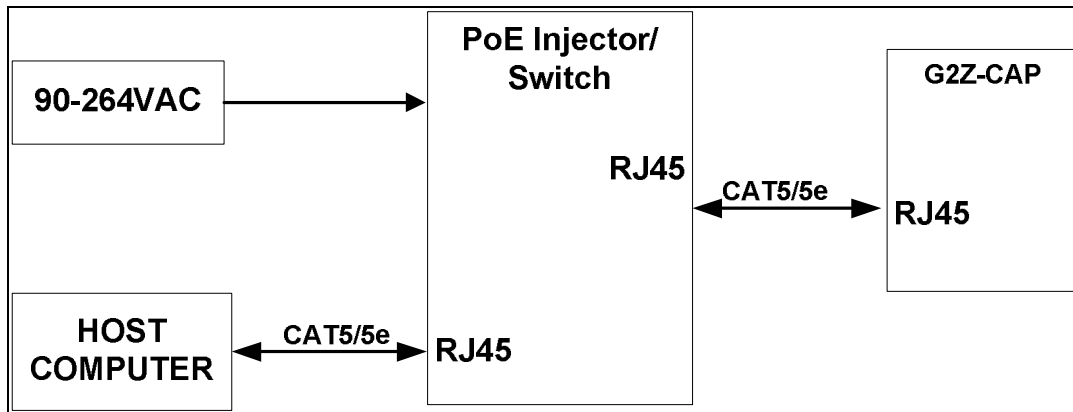
4 Power Requirements

The G2Z-CAP Camera can be powered through PoE Adapter or PoE Switch through RJ-45 Ethernet connector. Being 802.3af compliant device, G2Z-CAP would draw 10W (< 13W as per PoE standard) power from PoE source.

The PoE Adapter/Switch is not part standard packaging. The standard 802.3af Compliant, FCC/CE/UL certified off-the-shelf devices should be used to avoid interference issues to G2Z-CAP.

If multiple G2Z-CAP Cameras will be powered from single multiport Ethernet switch, proper power rating should be selected to meet individual power requirements of G2Z-CAP.

- Specifications for suitable PoE Injector or Switch are as follows:
 - Input Voltages: 90–264 VAC, 60Hz
 - Output Voltage: 48 VDC
 - Output Current: 0.32A per Port
 - Power: 15.36W per Port



Standard	Source Voltage	RJ45 Pin Number							
		1	2	3	4	5	6	7	8
IEEE 802.3af using Spare Data pairs	48-56VDC	TX+	TX-	RX+	DC+	DC+	RX-	DC-	DC-

Table 1: RJ45 Connector Pin Assignment:



5 Interface Details

G2Z-CAP Device provides RJ45 interface for Network connectivity. The Ethernet interface is the only available interface to the outside world. Apart from RJ45, G2Z-CAP provides ZigBee wireless connectivity through on-board ZigBee modules.

Interfaces available on-board G2Z-CAP:

5.1 RS232 Interface:

On Board RS232 interface is not accessible from outside enclosure.

5.2 MicroSD Card Interface:

MicroSD card interface on G2Z-CAP Board is used to store data in case of network failure. This interface is not available to the User. MicroSD is not accessible from outside enclosure.

5.3 USB Interface:

USB connectivity option is available on G2Z-CAP. USB is not accessible from outside enclosure.

5.4 Audio In/Out Interface:

Audio In/Out interface is not used in G2Z-CAP Device. Audio Interface is not accessible from outside enclosure.

5.5 ZigBee Interface:

G2Z-CAP Camera has 4 ZigBee modules for Wireless Connectivity.



6 Replaceable Battery

G2Z-CAP has a coin battery which is not user replaceable. But the battery can be replaceable by service person.

CAUTION: The battery must be replaced only by the authorized service person.

7 FCC Compliance Statements

This device complies with Part 15 of the FCC rules. Operation is subject to following two conditions:

1. This device may not cause harmful interference and
2. This device must accept any interference received including interference that may cause undesired Operation of this device.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

To comply with the FCC RF exposure compliance requirements, this device and its antenna must not be co-located or operating to conjunction with any other antenna or transmitter, except if installed in compliance with FCC Multi Transmitter procedures.

This equipment should be installed and operated with minimum distance of 20cm between the radiator and your body.

Snap-On Ferrite Core 28A2025-0A2 (Make: Liard Signal Integrity Products) need to be mounted on Ethernet Cable near RJ45 connector of G2Z-CAP. This ferrite core was used during testing to achieve compliance.

8 Operational Instruction

For G2Z-CAP operational instruction, please contact Vendor/Manufacturer for latest updated instruction guide.