

# **G2Z-NCZGBAP**

## **User Guide**





**The Kroger Co.**  
**Release 1.0**  
**Version 1.1**

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## Revision History

Date	Change Description	Revision
08-JUN-18	Baselined	1.0



## 1 Introduction

G2Z-NCZGBAP is a POE powered ZigBee/2.4GHz and IEEE-802.15.4 Access Point device.

### Benefits

- Supports time synchronization with a Network Time Protocol (NTP) server.
- Access point for ZigBee/2.4GHz and IEEE-802.15.4 Infrastructure.
- Firmware update via LAN



## 2 G2Z-NCZGBAP Specifications

### 2.1 Processing

- 600Mhz Dual Core SoC
- Upto 256MB DDR2 RAM
- 128MB NAND FLASH
- On-Board ZigBee/2.4GHz and IEEE-802.15.4 Modules (4 Nos)
- RS232 Interface
- Monta Vista Linux Kernel

### 2.2 Network Connections

- 10/100 Mbps Ethernet

### 2.3 Power

Input Voltage: 48VDC (POE)

Input Current: 0.2A

### 2.4 Customer Applications

- Access Point

### 2.5 Firmware Updates

- Firmware updates over the LAN network

### 2.6 Operating Conditions

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

### 2.7 Dimensions

- Height: 30 mm
- Width: 179 mm
- Depth: 179 mm

### 2.8 Approvals

- EMI
  - FCC
- Safety
  - UL



## 2.9 Included Accessories

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

## 2.10 Safety Precautions

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

**“ITE is to be connected only to PoE networks without routing to the outside plant.”**

## 2.11 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.

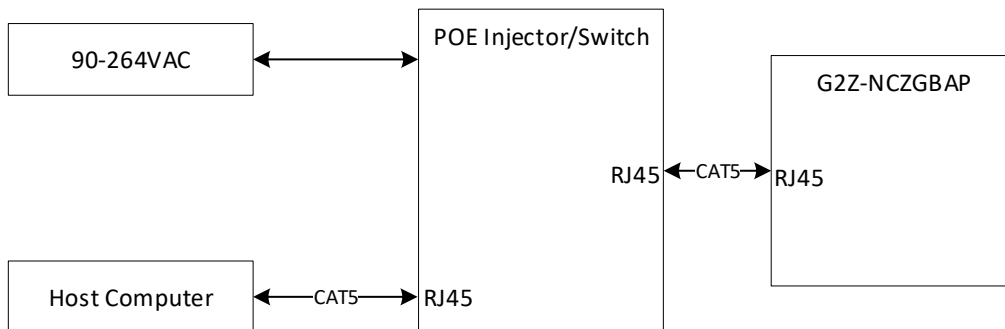
### 3 Power Requirements

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

The PoE Adapter/Switch is not part standard packaging. The power to G2Z-NCZGBAP should be supplied with UL Listed POE+ Adaptor/Switch marked with LPS. The standard 802.3af Compliant, FCC/CE/UL certified off-the-shelf devices should be used to avoid interference issues to G2Z-NCZGBAP.

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

- Specifications for suitable PoE Injector or Switch are as follows:
  - Input Voltages: 90–264 VAC, 60Hz
  - Output Voltage (Typ): +48VDC
  - 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	+48VDC	TX+	TX-	RX+	DC+	DC+	RX-	DC-	DC-

**Table 1:** RJ45 Connector Pin Assignment:





## 4 Interface Details

G2Z-NCZGBAP Device provides RJ45 interface for Network connectivity. The Ethernet interface is the only available interface to the outside world. Apart from RJ45, G2Z-NCZGBAP provides ZigBee/2.4GHz and IEEE-802.15.4 wireless connectivity through on-board ZigBee/2.4GHz and IEEE-802.15.4 modules.

Interfaces available on-board G2Z-NCZGBAP:

### 4.1 RS232 Interface:

On Board RS232 interface is not accessible from outside enclosure.

### 4.2 ZigBee/2.4GHz and IEEE-802.15.4 Interface:

G2Z-NCZGBAP has 4 ZigBee/2.4GHz and IEEE-802.15.4 modules for wireless connectivity.



## 5 FCC Compliance Statements and IC Compliance Statements

**FCC ID: PBR-SZG2ZBNCR1**

**IC: 24718-SZG2ZBNCR1**

FCC compliance statements

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including Interference that may cause undesired operation

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

Part 15B compliance statements for digital devices:

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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

This Class B digital apparatus complies with Canadian ICES-003.

This device complies with Industry Canada license-exempt RSS standard(s).

Operation is subject to the following two conditions

- 1) This device may not cause interference, and
- 2) This device must accept any interference, including interference that may cause undesired operation of the device.



Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This equipment complies with radio frequency exposure limits set forth by Industry Canada for an uncontrolled Environment. This equipment should be installed and operated with minimum distance 20 cm between the device and the user or by standers.

Cet équipement est conforme aux limites d'exposition aux radiofréquences définies par Industrie Canada pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre le dispositif et l'utilisateur ou des tiers.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to ISED ICES-003. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Cet équipement a été testé et jugé conforme aux limites de Classe B pour un appareil numérique, en vertu de l'article 15 de la réglementation de la FCC. Ces limites ont été instaurées pour fournir une protection raisonnable contre toute interférence nuisible dans une installation résidentielle. Cet équipement génère, utilise et peut émettre de l'énergie radiofréquence. S'il n'est pas installé et utilisé conformément aux instructions, il peut provoquer des interférences sur les communications radio. Cependant, il n'est pas garanti que des interférences ne se produiront pas dans certaines installations. Si cet équipement cause des interférences à la réception radio ou télévisée (ce qui peut être vérifié éteignant l'appareil puis en le remettant sous tension), l'utilisateur peut tenter de les résoudre en suivant une ou plusieurs des mesures ci-après :

Réorienter ou déplacer l'antenne réceptrice.

Augmenter l'espace entre l'appareil et le récepteur. Brancher l'appareil à une prise de courant différente de celle sur laquelle le récepteur est branché.

Pour obtenir de l'aide, contacter le vendeur ou un technicien radio/télévision expérimenté.



REMARQUE : Toute modification non autorisée expressément par le fabricant responsable de la conformité peut annuler le droit de l'utilisateur à faire fonctionner le produit

## 6 Operational Instruction

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