

**SRG3APWC**

**User Guide**





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

Copyright © 2010, The Kroger Co. All rights reserved.

No part of this publication may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without prior written permission from The Kroger Co.

All copyright, confidential information, patents, design rights and all other intellectual property rights of whatsoever nature contained herein are and shall remain the sole and exclusive property of The Kroger Co. The information furnished herein is believed to be accurate and reliable. However, no responsibility is assumed by The Kroger Co. for its use, or for any infringements of patents or other rights of third parties resulting from its use.

The Kroger Co. name and The Kroger Co. logo are trademarks or registered trademarks of The Kroger Co. All other trademarks are the property of their respective owners.



## Table of Content

**1 INTRODUCTION.....5**

**SRG3APWC SPECIFICATIONS .....6**

1.1 PROCESSING ..... 6

1.2 NETWORK CONNECTIONS ..... 6

1.3 POWER..... 6

1.4 CUSTOMER APPLICATIONS ..... 6

1.5 FIRMWARE UPDATES ..... 6

1.6 OPERATING CONDITIONS ..... 6

1.7 DIMENSIONS..... 6

1.8 APPROVALS ..... 7

1.9 INCLUDED ACCESSORIES ..... 7

1.10 SAFETY PRECAUTIONS..... 7

1.11 ELECTROSTATIC DISCHARGE ..... 7

**2 POWER REQUIREMENTS .....8**

**3 INTERFACE DETAILS .....9**

3.1 RS232 INTERFACE: ..... 9

3.2 CAMERA INTERFACE: ..... 9

3.3 ZIGBEE INTERFACE: ..... 9

3.4 BLE INTERFACE: ..... 9

3.5 WI-FI INTERFACE: ..... 9

**4 FCC COMPLIANCE STATEMENTS .....10**

**5 OPERATIONAL INSTRUCTION.....10**

## Tables

**Table 1: RJ45 Connector Pin Assignment 8**



## Revision History

Date	Change Description	Revision
10-APR-18	Initial Revision	0.1



## 1 Introduction

SRG3APWC is a 4PPOE-powered device. It is a surveillance camera. Along with that, it is a ZigBee, BLE5.0, Wi-Fi 2.4GHz and 5GHz Access Point.

### Benefits

- Dual 360 degree Camera
- Supports time synchronization with a Network Time Protocol (NTP) server.
- Access point for ZigBee Infrastructure.
- Access point for BLE5.0 Infrastructure.
- Access point for Wi-Fi 2.4GHz and 5GHz (a/b/g) Infrastructure.
- Firmware update via LAN.



## SRG3APWC Specifications

### 1.1 Processing

- 1.5Ghz Dual Core SoC (ARM Cortex-A15)
- 2GB DDR3/DDR3L RAM per EMIF.
- 1GB NAND FLASH
- On-Board ZigBee Modules (3 Nos)
- On-Board BLE5.0 Module (1 Nos)
- On-Board Wi-Fi (a/b/g) Modules (2Nos)
- RS232 Interface
- Dual 360 Degree Camera Interface
- Linux Kernel 4.4.32

### 1.2 Network Connections

- 10/100/1000 Mbps Ethernet

### 1.3 Power

- Input Voltage: +56VDC (4PPOE)
- Input Current: 0.8A

### 1.4 Customer Applications

- Surveillance camera
- Wi-Fi (a/b/g) access point

### 1.5 Firmware Updates

- Firmware updates over the LAN network

### 1.6 Operating Conditions

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

### 1.7 Dimensions

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



## 1.8 Approvals

- EMI
  - FCC
- Safety
  - UL

## 1.9 Included Accessories

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

## 1.10 Safety Precautions

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

**“ITE is to be connected only to 4PPoE networks without routing to the outside plant.”**

## 1.11 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.

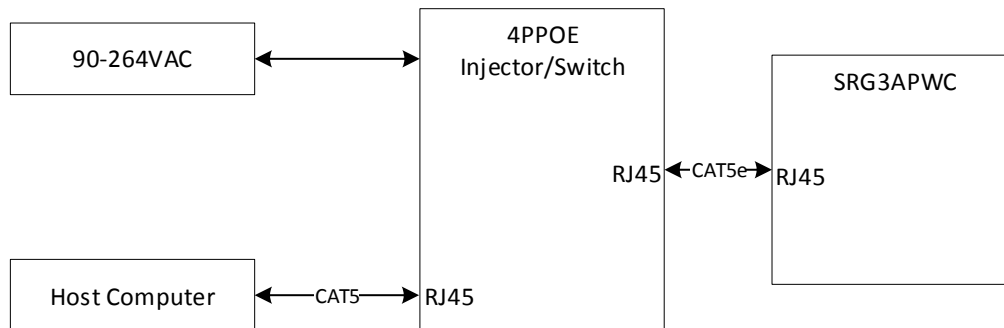
## 2 Power Requirements

The SRG3APWC can be powered through 4PPOE Adapter or 4PPOE Switch through RJ-45 Ethernet connector. Being 802.3bt compliant device, SRG3APWC would draw 35W (< 51W as per 4PPOE standard) power from 4PPOE source.

The 4PPOE Adapter/Switch is not part standard packaging. The standard 802.3bt Type 3 Compliant, FCC/CE/UL certified off-the-shelf devices should be used to avoid interference issues to SRG3APWC.

If multiple SRG3APWC will be powered from single multiport Ethernet switch, proper power rating should be selected to meet individual power requirements of SRG3APWC.

- Specifications for suitable 4PPOE Injector or Switch are as follows:
  - Input Voltages: 90–264 VAC, 50-60Hz
  - Output Voltage (Typ): +56VDC
  - Output Current: 0.6A per Pair
  - Power: 25.5W per Pair



Standard	Source Voltage	RJ45 Pin Number							
		1	2	3	4	5	6	7	8
IEEE 802.3bt using all the Data pairs	+56VDC	TXRX A+ DC+ Pair1	TXRXA- DC+ Pair1	TXRXB+ DC- Pair1	TXRXC+ DC+ Pair2	TXRXC- DC+ Pair2	TXRXB- DC- Pair1	TXRXD+ DC- Pair2	TXRXD- DC- Pair2

**Table 1:** RJ45 Connector Pin Assignment





### 3 Interface Details

SRG3APWC Device provides RJ45 interface for Network connectivity. It also provides Camera Interface to provide a viewing angle of 360 degree at all the times. The streaming of the camera is achieved through Ethernet connectivity. Apart from RJ45 and Camera, SRG3APWC provides ZigBee wireless connectivity through on-board ZigBee modules (3 Nos). It also provides BLE5.0 compatible connectivity using on-board module. Further, it also provides Wi-Fi connectivity through on-board Wi-Fi modules. Wi-Fi Modules are capable of creating six simultaneous access points for the external connectivity. Wi-Fi modules support a, b, and g mode.

Note that The Ethernet Cable is not part of standard packaging. Any Cat5e or above cable should be used to avoid interference issues to SRG3APWC.

Interfaces available on-board SRG3APWC:

#### 3.1 RS232 Interface:

On Board RS232 interface is not accessible from outside enclosure.

#### 3.2 Camera Interface:

SRG3APWC has camera modules integrated and are not accessible from outside.

#### 3.3 ZigBee Interface:

SRG3APWC has three ZigBee modules for wireless connectivity.

#### 3.4 BLE Interface:

SRG3APWC has one BLE 5.0 compliant module for wireless connectivity through BLE network.

#### 3.5 Wi-Fi Interface:

SRG3APWC has two Wi-Fi a, b, g compliant modules for wireless connectivity through Wi-Fi network.



## 4 FCC Compliance Statements

### FCC ID: PBR-SZG3APWC

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.

## 5 Operational Instruction

For SRG3APWC operational instruction, please contact Vendor/Manufacturer for latest updated instruction guide.