

# RDA-100 USER MANUAL

## Contact Information

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## THIS MANUAL COVERS THE FOLLOWING VARIATIONS:

1. **RDA-100 (version B: Base)** - Base product without radios used as a charging and power system for peripherals (i.e. IR camera).
2. **RDA-100 (version WM: Wi-Fi, Mesh)** - Base product with two radios, this version of the product can be used to provide access to the WAN via Ethernet port connectivity and client connectivity via Wi-Fi.
  - Wi-Fi
  - Mesh
3. **RDA-100 (version CW: Cellular, Wi-Fi)** - Base product with two radios, this version of the product can be used when Wi-Fi is needed and the primary WAN connectivity will be cellular or wired connection to the Internet through the Ethernet port and backup to the cellular network.
  - Cellular
  - Wi-Fi
4. **RDA-100 (version CMW: Cellular, Mesh, Wi-Fi)** - Base product with three radios, this version of the product includes the ability to act as a base station, access point, cellular network gateway as well as a mesh repeater. This product will typically be used in networks where cellular access to the WAN is needed and then can be used by the other RDA's to tie the whole system to an outside network and internet.
  - Cellular
  - Mesh
  - Wi-Fi

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## SYMBOL LEGEND

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GENERAL WARNING



DC Current



AC Current

# SAFETY INFORMATION



## SAVE THESE INSTRUCTIONS READ AND FOLLOW ALL INSTRUCTIONS

This Manual gives step –by-step instructions for the setup and operation of the RDA-100.

There is a potential risk of fire, electric shock or injury to person or persons if this product is not used as instructed.



**WARNING:** When using the RDA-100, use basic precautions including the following:

- Read the entire user manual before turning on or connecting to power.
- Do not power up unit in wet area, electric shock may occur.
- Always use a three pronged power cord with a ground terminal on it.
- Do not attempt to open the RDA-100. The RDA-100 may only be serviced by a Motion Computing trained service technician.



## Product Modification Warning

Motion Computing Products are designed and manufactured to meet the requirements of the United States and International Safety Standards. Modifications to the product could affect safety and render the RDA-100 non-compliant to safety standards.

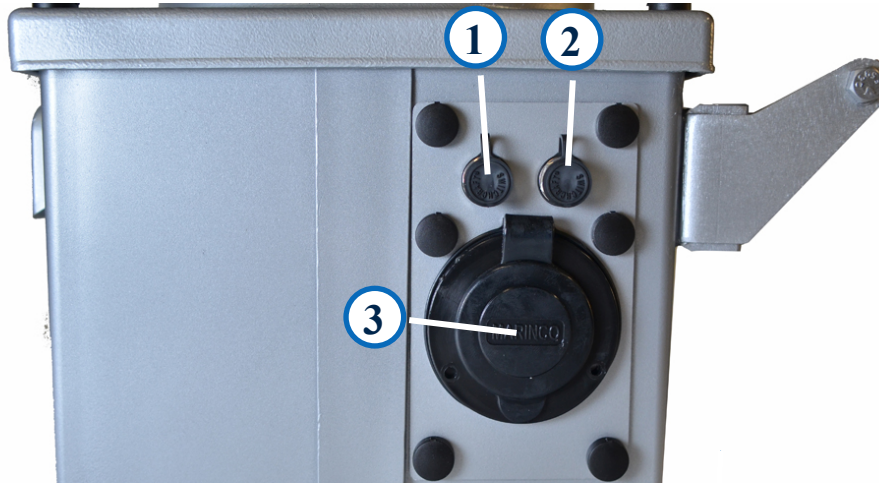
# INTRODUCTION

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The RDA-100 is a stand-alone, battery powered, self contained mobile access point. This unit can be plugged in as a wall unit, run off of the internal battery, powered by a solar array or a combination of all three. The RDA-100 can be accessed wirelessly as a stand-alone unit or used in a mesh with other wireless devices. This unit can also be used as a modular device that can be coupled with other Motion Computing Accessories. These Accessories are sold separately at <http://www.motioncomputing.com> or at approved Motion Computing resellers.



## Overview of AC/DC Inputs and System Controls



① +12VDC Auxiliary Power Output  
Available to power peripherals

② Solar Power Input

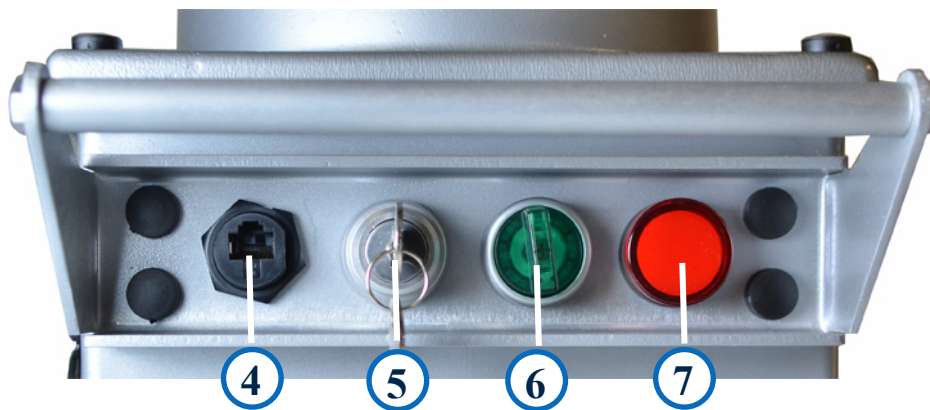
③ 110V AC Power Input

④ RJ45 Connection POE  
POE Connects to Radio Input

⑤ System Key Switch  
Full power over ride and lock-out

⑥ On/Off Switch

⑦ 12VDC Power Indicator  
Indicates AC input or battery mode



# OPERATION

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**To initiate the RDA-100, first refer to safety precautions on page 4.**

- 1. Plug unit in to a standard three prong 110v power cord (**MUST HAVE GROUND TERMINAL**).
- 2. Insert key into the system key switch (**Item# 5**) and turn the key clockwise.
- 3. Turn the green on/off switch (**Item# 6**) clockwise to arm system (switch will illuminate green if plugged into 110v power outlet).
- 4. The Red 12v power light (**Item# 7**) will then illuminate indicating that the system is on.
- 5. Wait approximately 1 minute before logging in to allow radios to connect.
- 6. Once radios have initiated you may scan for the wireless device (**motion**) and enter the default password (**1234554321**).

**NOTE:** When running off of the internal battery only, the RDA-100 has an on board protection system that will shut the system down before the batteries run completely flat. When this happens, the unit must be plugged in to a power source until the battery is charged. The system will automatically reboot itself when it reaches the proper voltage.



**Warning:** The internal antenna's must have a separation of at least 30 Centimeters from all persons during normal operation.



# OPERATION

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## SHUTTING DOWN THE RDA-100

- 1. Turn the green switch (**Item# 6**) counter-clockwise and verify that the red 12v indicator light (**Item# 7**) goes off.
- 2. Turn the system key switch (**Item# 5**) counter-clockwise and verify that both the green light and red light are no longer illuminated. If so, remove key.
- 3. Unplug the unit and secure weather caps (**Items 1,2 and 3**).



**Note:** Before moving unit make sure that all peripheral accessories are unplugged from the RDA-100.

# TROUBLE SHOOTING

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## TROUBLE SHOOTING THE RDA-100

### **The RDA-100 will not power up.**

- Make sure that the unit is plugged in to a live power source, and check to see that both the System key Switch and the green on/off switch are turned to the clockwise on position. If the RDA-100 still will not power up; the battery is low and must be charged before the unit can be used.

### **Cannot connect to the RDA-100**

- Make sure that you have selected the SSID labeled motion and entered the proper credentials.




### **The RDA-100 Will not power up even after plugged in to charge.**

- The unit may need to have the internal battery replaced. This may not be done in the field and must be sent in to Motion Computing to be serviced by a trained technician.







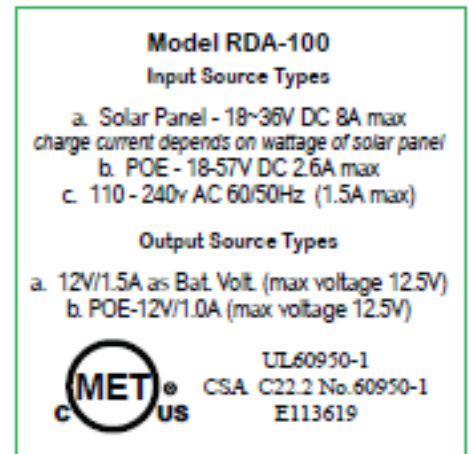
# Input / Output Specifications

## Technical Specification and Ranges of Input Sources

- A. Solar Panel: 18-36 Volt Direct Current , 8 Amp Maximum
- B. POE (Power Over Ethernet): 18-57 Volt Direct Current , 2.6 Amp Maximum
- C. AC Power: 110-240 Volt Alternating Current , 60/50Hertz, 1.5 Amp Maximum

## Technical Specification and Ranges of Output Sources

- A. Solar Panel: 12 Volt , 1.5 Amp as Battery Voltage, 12.5 Volt  Maximum
- B. POE (Power Over Ethernet): 12 Volt , 1.0 Amp, 12.5 Volt  Maximum



❖ All Input/Output Sources designed to UL60950-1 Listed Standards

# RDA-100 Specifications

## Specifications of Dimensions and Weight

- Length = 11.875"
- Width = 10.50"
- Height = 11.750"
- Weight = 15 lbs

## Operating Parameters

- Temperature: -30°C to +70°C
- Humidity (non-condensing): 20% to 90%
- MTBF: 60 Years at 55°C

# Serviceability



NOTE: There are no user serviceable parts in the unit.

Opening the unit voids the product warranty.

The unit is not to be opened except by a Motion Computing trained service technician.