

# RV-N55-3 RAZN Data Sheet

RV-N55-3 RAZN  
RV-N58 PAIRs

## Remote Controller for LIGHTS, VALVES, PUMPS ...

A Remote Autonomous Zone Node (RAZN) is an Automated Peripheral for controlling



things in remote areas with a compact, cost-effective, package.

Works over many miles. Flexible inputs and outputs and secure communications.



Together: These are a complete Autonomous Solution. Depends on needs for solid state relays.

## Product Overview

### Automated Irrigation Management

RAZN was created to optimize water use for agriculture, farms, campuses, and large areas. The RAZN system has a long-range wireless network of remote controllers and is useful in isolated areas of water-limited geographical areas.

### Long Range Wireless Operation

Many RF options, super long-range communication. 1/2W to 5W UHF, VHF; 50mW-1W ISM LoRa. Verify operation and quality of connection in the field from 1 to 50 miles.

### High Performance Interfaces

The master controller has a number of interface options.

- A. **Ethernet.** Connect to a LAN, the Internet, Cloud, or PC/Server. The device can be a TCP client or server.
- B. **Serial Port.** RS485.
- C. **WebGIU.** HTML website server built in to use a Web Browser to access statistics, settings, and control IOs.

### Turn Things On and Off

Use Buttons, Switches, or WEBGUI to turn things on and off. And the remote Servant outputs DC or AC power from pins on Terminal port A. Turn lights, pumps, valves, alarms, relays, or whatever you want to remotely control.

Each **SV** Switched Voltage output is controlled in real-time by the **BI** Button inputs.

### Reliable Wireless Connection

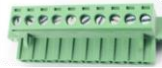
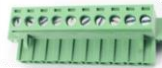
This communicates wirelessly over many miles, and the RAZN confirms messages and shows the status of remote Servant on the LEDs of the master.

### 8 **SV** Switch Voltage Outputs,

Terminals to output voltages to control lights, valves, pumps, ... in isolated areas. LEDs show output status on or off.

### 8 **BI** Button Inputs,

Most have 8 button inputs to connect buttons to to control the local **SV** terminals or remote RAZNs with **SV** terminals in isolate areas.



### Autonomous Operation Also

Along with all remote control features, you can setup the RAZN to also run Autonomously, so this peripheral will reliably do what you want it to do, and if your computer, network, cell service, or whatever fails, the RAZN will work autonomously and save your isolated things.

### A Myriad of Ways to Use This:

Point-to-Point: Two RAZNs can work together by themselves and control what you want in isolated areas.

You can use 2-200 of these RAZNs to do what you need to control in isolated areas.

### Social Distancing

RAZN's Autonomous Wireless Man-Machine interface helps promote remote social distancing (due to Covid-19) while connecting it to the Internet of Things

### Secure Data

Data encryption is in wireless communication that uses encrypt transmissions with AES128.

### STATUS LEDs

The RAZN has power LED and Communication LED to show what is working. The master's LEDs show the status of the remote RAZN, and the remote RAZN with SV outputs has LEDs to show its own output status.

### Other Notes

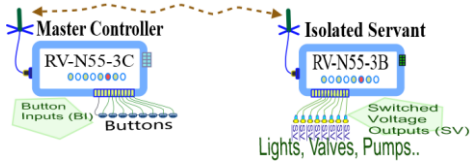
The IO pins have great ESD and over-voltage protection. DC power in is reverse and over-voltage protected. Very robust. Internal temperature and voltage monitoring for diagnostics.

The next page shows the architecture of several ways to use the RAZN.

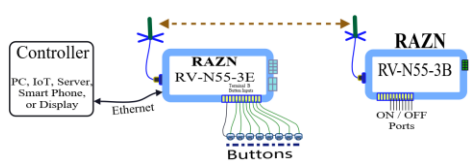
### RV-N55-3B RAZN With Masters

RV-N55-3B has 8 switched power outputs. RV-N55-3C Master controls the Servant in isolated area with long-range wireless link.

#### RV-N58-2CB Pair



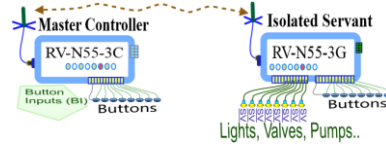
RV-N55-3B controlled by PC, IoT, Smart Phone.... RV-N55-3E Ethernet interface connects to servers or IoT, to remote control the RAZN and buttons will work also.



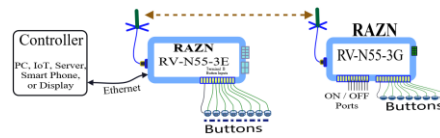
### RV-N55-3G RAZN Versions

RV-N55-3G has 8 switched power outputs and 8 button inputs. Remotely control things and locally push buttons as needed. Master Controller connects to a RAZN in a remote Isolated area.

#### RV-N58-2CG Pair



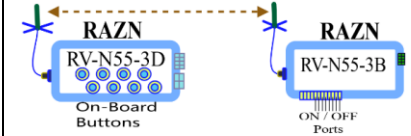
RV-N55-3G controlled by PC, IoT, Smart Phone.... RV-N55-3E Ethernet interface connects to servers or IoT, to remote control the RAZN and local and remote buttons will work also.



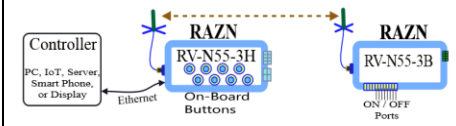
### Master Controller Versions

RV-N55-3D has 8 buttons on top the enclosure. To remotely control things, locally push buttons as needed to turn remote SV terminals on or off.

#### RV-N58-2DB Pair



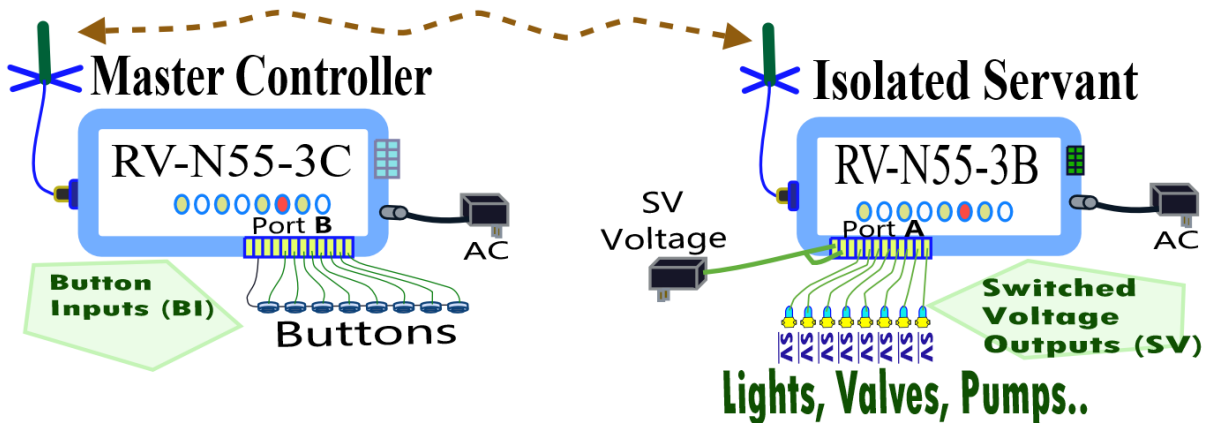
RV-N55-3H has 8 buttons built onto the enclosure. To remotely master control things, locally push buttons as needed. Your Controller and RAZN can connect to the RV-N55-3H via Ethernet to communicate to a RAZN in an isolated area.



Plug In Buttons to control what you want.

### Preset Features on All Versions of the RV-N55-3

A Master RAZN Controller has inputs for buttons or switches, and each one controls the SV outputs on the Isolated Servant RAZN using the long-range RF connection. Pressing a master Button Input (BI) turns on Switched Voltage (SV) terminal outputs in the Servant. The RAZN is powered by a 12V AC power supply, and the SV output terminals are whatever the SV voltage input is on Port B. Put AC or DC input voltage in



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