RadioRA 3 Processors

RadioRA 3 processors allow for setup, control, and monitoring of RadioRA devices and Lutron wireless shades from a smartphone or tablet using the Lutron App[1].

Features

- Programmed via the Lutron Designer PC tool[2] and Lutron App[1].
- Scene control via the Lutron App, Pico wireless controls, and compatible RadioRA 3 Vierti standard and hybrid Clear Connect – Type X keypads.
- Timeclock scheduling of daily events.
- Powered by an IEEE 802.3af, IEEE 802.3at or IEEE 802.3bt compliant Power over Ethernet (PoE) switch or injector.
- Connects to the WiFi router via an Ethernet connection.
- Local device operation will continue to function if internet connection is lost.
- System access from anywhere in the world using the Lutron App[1].
- Control from *Apple Watch.*
- Supports integration with other smart home brands including Amazon® Alexa®, Apple HomeKit®, Google® Assistant, Sonos®, Ring®, and more.
- Up to four (4) wireless repeaters can be added to extend the range for Clear Connect – Type A devices (in-line RF dimmer/switch, etc.) for larger systems. The wireless repeater does not extend the range of Clear Connect – Type X devices (standard and hybrid keypads).
- Integration with professional A/V and security systems via Lutron's LEAP API.

System and Device Limits

	Unit Limit per RadioRA 3 Processor	Total Units Allowed in RadioRA 3 System
RadioRA 3 Processor	-	4
Clear Connect Type X Devices	100	200
Clear Connect Type A Devices	95	198
Clear Connect Type A Repeaters	4	



Processor

Model Numbers

Model Number	Description
RRKE-PROC3-KIT1	Includes processor, PoE Injector, 1,8 m down-angle Ethernet cable and 0,9 m Ethernet cable
RRKE-PROC3-CW	Includes processor, recess-mount adapter and junction box mount adapter

Compatible Devices[3]

- Vierti standard and hybrid keypads for RadioRA 3 systems.
- In-line dimmer, in-line switch, in-line fan control for RadioRA 3 systems.
- Plug-in dimmers for RadioRA 3 systems.
- Sivoia QS Triathlon and Sivoia QS wireless roller shades, drapery track, Kirbé, Palladiom wire-free shade systems, and Roman shade systems.
- Pico wireless remotes and keypads.
- Radio Powr Savr occupancy/vacancy sensors.
- RF dimming modules (0–10 V control and relay module).
- Auxiliary/wireless repeaters (up to 4) for RA2 Select systems.

[1] The Lutron App is required for setup and use with the RadioRA 3 processor. The Lutron App is compatible with iOS and Android devices. See the Apple App Store and Google Play for the minimum version requirements.

[2] The PC tool requires a 32 or 64 bit processor running Windows® 10, with a recommended minimum of 8 GB of RAM, 4 GB disk space, and a 2,67 GHz Core i5 processor.

[3] RadioRA 2, GRAFIK T, Wallbox Power Modules (WPM), GRAFIK Eye, seeTemp, HVAC controller, and wireless temperature sensors are not compatible with RadioRA 3.

RadioRA 3 Processors

Specifications

Regulatory Approvals

- CE
- UKCA certified
- ETSI 300-328 compliant
- CB report
- RoHS
- REACH

PoE Power

- L-POEI-G-BL (included in RRKE-PROC3-KIT1, available for purchase separately) - fully compliant with IEEE802.3af (max. 15,4 W)
- Processor must be powered by PoE supply that is IEEE 802.3af, IEEE 802.3at or IEEE 802.3bt compliant.
- Processor is classified as Class 1 typical 1.5 W (max. 4.0 W) IEEE 802.3af device.

Environment

- Ambient operating temperature: 0 °C to 40 °C
- 0% to 90% humidity, non-condensing
- Indoor use only

Communications

- In-Line RF dimmers/switches, Pico wireless controls, Sivoia QS wireless shades, RA3 in-line dimmers, switches and fan controls, etc. (Clear Connect – Type A):
  - Each device must be within 9 m of a repeater or wireless processor.
  - Repeaters can be spanned up to 18 m apart from other repeaters to create the network.
  - Utilizes 868 MHz RF
- RadioRA 3 Vierti standard keypads and hybrid keypads etc. (Clear Connect – Type X):
  - All devices associated with the wireless processor must be within a 23 m radius of the processor.
  - There must be a minimum of two devices within 6 m of the wireless processor.
  - Each Clear Connect – Type X device should have two or more non-battery powered Type X devices within 6 m of another compatible Clear Connect – Type X device. Using more than two devices is ideal for creating an ultra high-performance mesh network.
  - Utilizes 2.4 GHz RF
- Internet connection required for initial setup and to receive periodic firmware updates.
- For more information, please refer to the Wireless Setup Guide which can be found in the RA3 Support Center: www.lutron.com/RA3support

Protection

- Tested to withstand electrostatic discharge without damage or memory loss in accordance with IEC 61000-4-2
- Tested to withstand surge voltages without damage or loss of operation, in accordance with IEEE C62.41-1991

Power Failure Memory

- Should power be interrupted, the RA3 processor will return to its previous state when power is restored.
- Timeclock will be retained via internal battery backup.

Connections

- RadioRA 3 processor requires an Ethernet connection for data and power via Power over Ethernet (PoE).
- RRKE-PROC3-KIT1 includes a 1.8 m down-angle Ethernet cable for connection to the processor mounted in the shelf-mount adapter and 0.9 m Ethernet cable for connection to Wi-Fi router.

Wiring

- Use Cat5e minimum cable. Maximum length is 100 m (328 ft) from router to processor including the PoE Injector. Each wireless processor needs to have a home run Ethernet connection back to the PoE supply.
- PoE wiring must be kept internal to the building. Do not run PoE wiring outdoors or install the processor in metallic enclosures.

Mounting

- Reliability of Clear Connect wireless communication requires that the wireless processor be centrally-located and within a maximum distance of the specific wireless devices in the system. Wireless processors must be mounted 2 m away from wireless interference sources like microwaves, Wireless Access Points (WAPs), etc.

  For myLutron users, please see Application Note #842 (P/N 048842) for additional information on Clear Connect – Type X Best Practices on www.lutron.com

Replacement Parts

Model Number	Description
L-CMNT-WH	Recess-mount adapter
L-JMNT-WH	Junction box mount adapter
L-SMNT-WH*	Shelf-mount adapter
L-POEI-G-BL	PoE injector with U.S. UK, European, Australian, and India plug adapters, 1.8 m down-angle 0.9 m Ethernet cable

* Needs down-angle Ethernet cable similar to the one included in the RRKE-PROC3-KIT1 or L-POEI-G-BL.

RadioRA 3 Processors

RadioRA 3 System Security Statement

Lutron takes cybersecurity very seriously. We actively monitor the threat landscape and take a proactive approach to security and privacy, continuously working to update and enhance our systems and processes.

At Lutron, we call our approach to cybersecurity **"Secure Lifecycle"**, and we would like to present the following steps we take to protect your security and privacy:

- **Security by Design.** When building a new system, Lutron utilizes a dedicated security team to ensure best practices are implemented. Security is built in. It is not an afterthought or an add-on.
- **Third-Party Validation.** Security is complicated. Lutron has a dedicated team of internal experts, but we also leverage external experts to double-check our work and to make security recommendations.
- **Continuous Monitoring and Improvements.** Security is a constantly moving target. Lutron uses a dedicated security team to continuously monitor for potential threats and, when needed, send out security patches to update installed systems.
- **Ongoing Support.** Lutron has the resources you need to answer questions about security when they arise.

We incorporate a variety of security features into our product designs. These features include recommendations from the National Institute of Standards and Technology (NIST) among others, and they are aimed at meeting our secure lifecycle protections. While we do not publish a comprehensive list of our security features, the following list is a small example of some of the techniques employed in our system designs for the RadioRA 3 processor, associated devices and associated services (such as mobile applications and cloud resources):

1. Secure and authenticated remote access with unique keys for every RadioRA 3 system.
2. A secure hardware element ("chip") on the RadioRA 3 processor to guard the keys used for secure communication and authentication.
3. Enforcing industry-standard encrypted communication and techniques for our integration protocols to the highest extent possible. Any integrated third-party components or systems should be evaluated independently.
4. Secure commissioning – all communication between the system programming software tool/app and the processors is encrypted and authenticated. Programming a system requires permission to access that system.
5. Security updates are pushed out automatically to the lighting system for urgent security patches. Lutron is committed to one year of security support from system start-up date.
6. Use of industry-standard techniques for cloud-based integrations, such as OAuth2.0
7. Signed processor firmware to ensure a firmware update is authentically from Lutron.

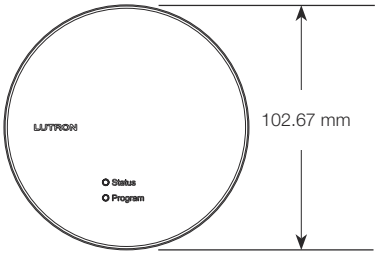
If you have additional questions or would like to make a vulnerability disclosure to Lutron, please contact Lutron's 24/7 Technical Support Line at +44.(0)20.7702.0657 (UK & Europe) or email us at eatechnicalsupport@lutron.com

RadioRA 3 Processors

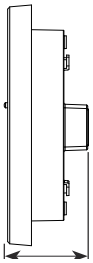
Dimensions

Wireless Processor

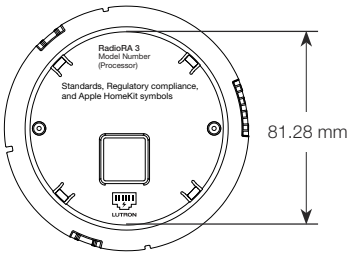
Front View



Side View

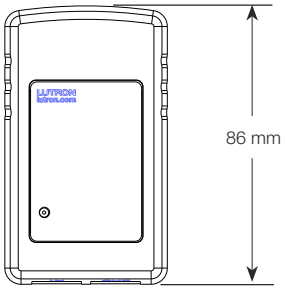


Back View

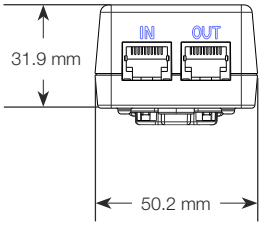


PoE Injector

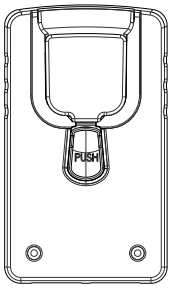
Front View



Bottom View



Back View

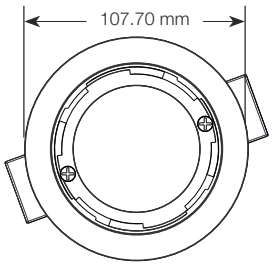


RadioRA 3 Processors

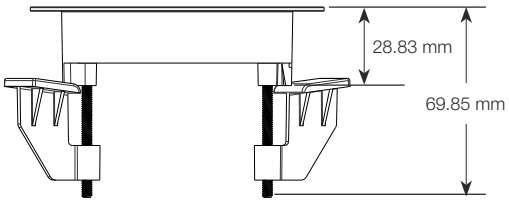
Dimensions *(continued)*

Recess-mount Adapter

Front View

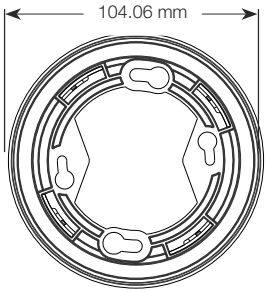


Side View



Junction Box Mount Adapter

Front View

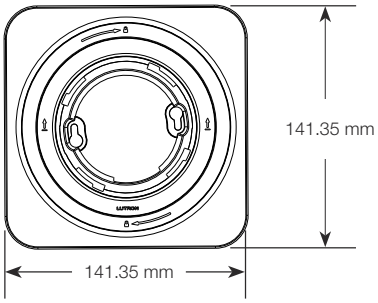


Side View

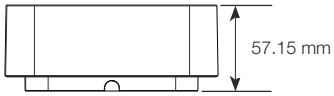


Shelf-mount Adapter

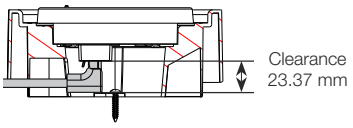
Front View



Side View



Detail View

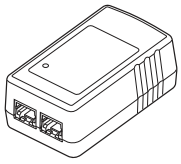


RadioRA 3 Processors

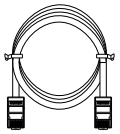
Mounting

Included in RRKE-PROC3-KIT1

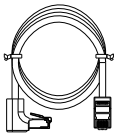
PoE injector and region-specific plugs
P/N: L-POEI-G-BL

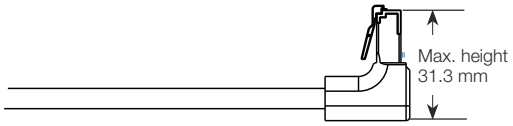


0.9 m Ethernet cable



1.8 m Down-angle Ethernet cable

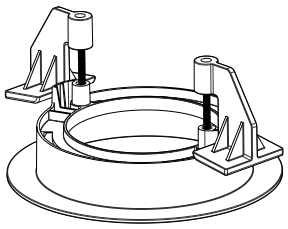




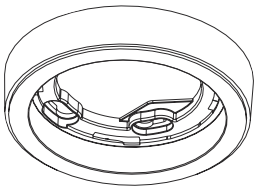
Note: The low-profile of the shelf-mount adapter requires a down-angle Ethernet cable with a maximum height of 31.3 mm. See down-angle Ethernet cable included in RRKE-PROC3-KIT1 or L-POEI-G-BL.

Included in RRKE-PROC3-CW

Recess-mount adapter
P/N: L-CMNT-WH



Junction box mount adapter
P/N: L-JMNT-WH



Lutron, Clear Connect, GRAFIK T, GRAFIK Eye, Kirbé, Palladiom, Pico, Radio Powr Savr, RadioRA, RadioRA2, RadioRA 3, Sunnata, Sivoia, Vierti, seeTemp and Triathlon are trademarks or registered trademarks of Lutron Electronics Co., Inc. in the US and/or other countries.
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