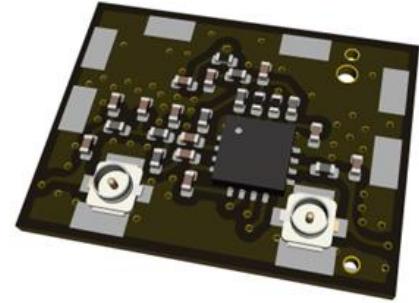




# Product Overview

## eRICA-868 868MHz 27dBm Power Amplifier



The easyRadio eRICA-868 is a cost effective and high-performance power amplifier module. Incorporating a power amp (PA) and low-noise amplifier (LNA) that boosts range performance for all easyRadio eRIC-LoRa and eRA-LoRa series RF modules.

eRICA increases effective radiated power to 27dBm from a 5dBm input for the transmitting device.

When used at the receiving end an additional gain of up to 10dB is achievable due to the onboard low noise amplifier.

Can be used with any RF module within the frequency band 850-950MHz.

### Key Features.

- Small footprint. Compatible pins to eRIC Series
- Up to 27dBm (0.5 W) output power.
- High Transmit Power Efficiency
- Low receive current consumption
  - 3mA for High Gain Mode
  - 26uA for Low Gain Mode
- Operates from 2 V to 3.7 V
- RoHS compliant
- Line of Sight (LoS) range 15km+

### Applications.

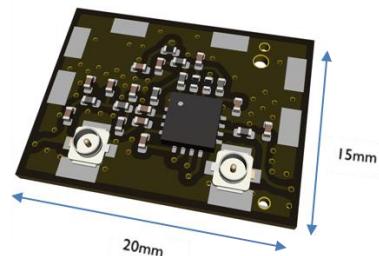
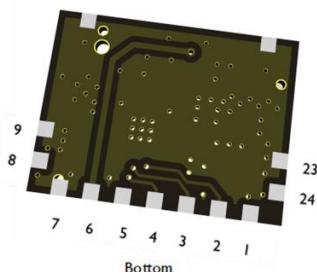
Rail, Security Systems, Asset tracking, Industrial Control, Sensors, Remote Monitoring, Agricultural, Data Logging, Smart Home, Internet of Things, Industrial Sensing, Energy Monitoring, HVAC Control and Monitoring, Facilities Management

## Performance Data.

| Parameters                       | Min | Typical          | Max | Notes                                     |
|----------------------------------|-----|------------------|-----|---|
| <b>DC</b> Supply Voltage (Volts) | 2.0 | 3                | 3.8 |   |
| TX supply current mA             |     | 302              | 370 | 5dBm Input (Typical)<br>10dBm input (max) |
| RX supply current mA             |     | 3.7              |     |   |
| <b>RF</b> Antenna Impedance      |     | 50 Ohms          |     | U.FL                                      |
| Frequency Range                  | 850 | -                | 950 | MHz                                       |
| Transmit Gain                    |     | 27 dBm           |     | 5dBm @ 868Mhz                             |
| Receive Gain                     |     | 10 dB            |     | @ 868MHz with High Gain Mode (HGM) 1      |
| Operating Temperature            |     | -40° C to +85° C |     |   |
| Pad Pitch                        |     | 2.54 mm          |     | Standard 0.1 Inch                         |
| Dimensions                       |     | 15 x 20 x 2.2 mm |     |   |
| Weight                           |     | 1.5 grams        |     |   |

## Pinouts and Pad Identification.

| Pin | Description                |                                   |
|-----|----------------------------|-----------------------------------|
| 1   | NC                         | Not connected                     |
| 2   | High Gain Mode (HGM)       |                                   |
| 3   | RX Enable                  |                                   |
| 4   | TX Enable                  |                                   |
| 5   | NC                         | Not connected                     |
| 6   | VCC                        |                                   |
| 7   | GND                        |                                   |
| 8   | Antenna pin from RF module | If not using eRICA U.FL connector |
| 9   | GND                        |                                   |
| 23  | GND                        |                                   |
| 24  | Product Antenna            | If not using eRICA U.FL connector |



## Product Code

| Name      | Description                | Order Code |
|-----------|----------------------------|------------|
| Power Amp | 850-950MHz power amplifier | eRICA-868  |

Disclaimer: It is imperative that the user of this power amp is aware of the maximum power limits for the country this device is going to be used in. Please consult with your local regulatory authority to make sure you comply with the regulations for the intended frequency used.

