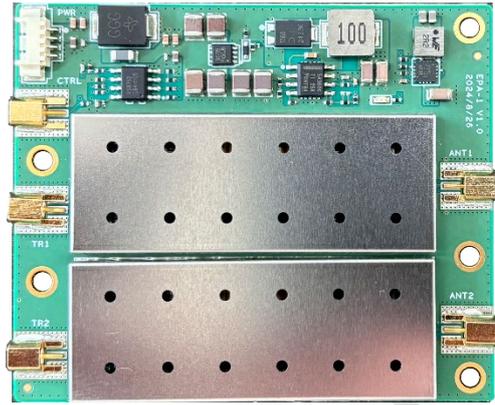


EPA-1 is a dual-channel 2×1 W TDD bidirectional RF power amplifier launched by Zencheer. Measuring only 69 × 58 mm, it operates over 500–1500 MHz and delivers high-linearity output, making it compatible with radio modules supporting standards such as WiFi, LTE, and DVB-T.

## Key Features

- Supports 2×2 MIMO with integrated TX/RX amplifiers (TDD mode)
- Onboard DC-DC buck converter, supporting a wide input voltage range
- Operating band can be customized on request
- Compact and lightweight, suitable for handheld and backpack radio
- Up to 1 W output power per channel



## Specifications

|                          |   |
|--------------------------|---|
| <b>Frequency Range</b>   | Typical: 1420–1530 MHz<br>Customizable within 500–1500 MHz on request |
| <b>Bandwidth</b>         | Typical: 110 MHz  |
| <b>TX Channel</b>        |   |
| Gain                     | Typical: 9 dB<br>Can be customized up to 15 dB (maximum)              |
| Output Power             | 30 dBm ± 1 dB   |
| EVM                      | ≤ -25 dB @ 30 dBm<br>≤ -28 dB @ 27 dBm                                |
| <b>RX Channel</b>        |   |
| Gain                     | Typical: 12 dB  |
| <b>RF Connectors</b>     | MMCX  |
| <b>Control Interface</b> |   |
| Connector                | MMCX  |
| Switch Logic             | Logic high (1.8–3.3 V) enables TX<br>Logic low (0 V) enables RX       |
| Switching Time           | < 1 μs  |
| <b>Supply Voltage</b>    | 14–48 V   |
| <b>Dimensions</b>        | 69 × 58 × 5.7 mm  |
| <b>Weight</b>            | 30 g  |
| <b>Temperature Range</b> | Storage: -40 to +125 °C<br>Operating: -20 to +65 °C                   |
| <b>Power Consumption</b> | 15 W @ 70% TX duty cycle  |

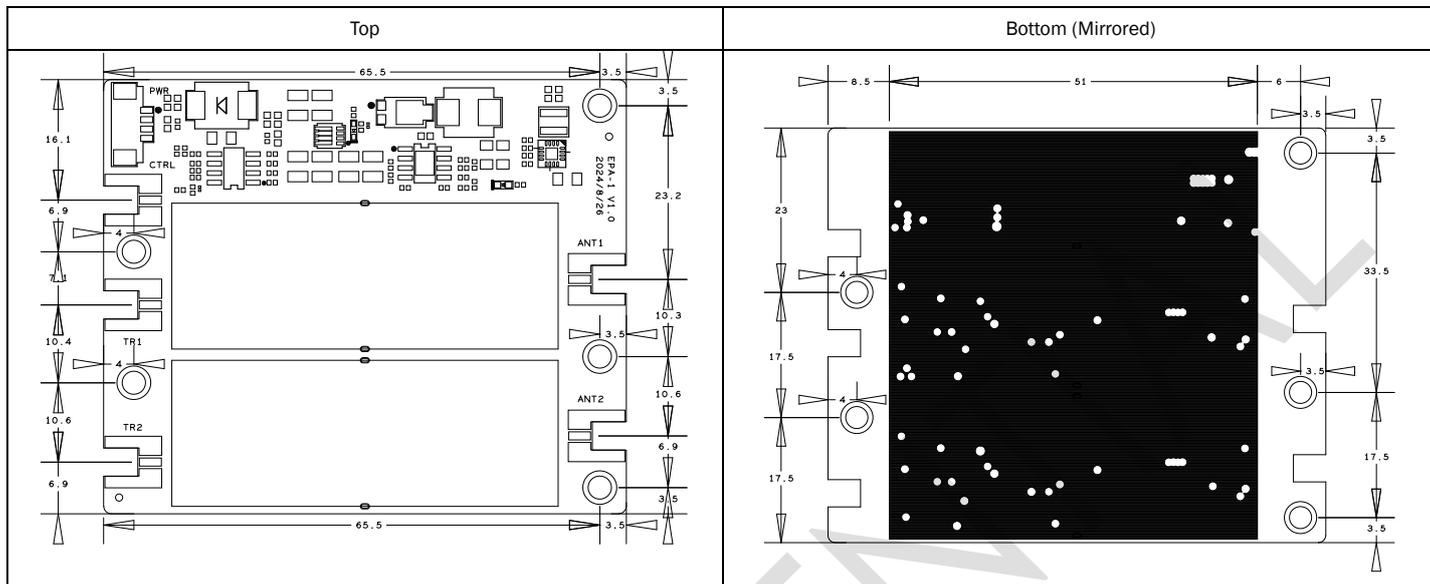
## Interface Definitions

| Interface | Description  |
|-----------|--|
| TR1/TR2   | RF signal I/O, connect to the RF module  |
| ANT1/ANT2 | PA output and LNA input, connect to the antenna  |
| CTRL      | TX/RX control signal   |
| PWR       | 4-pin power connector for PA power input: Pins 1 and 2 are positive (+), Pins 3 and 4 are negative (-) |

Ordering Information

| Model     | Frequency Range | TX Gain | TX Power | RX Gain |
|-----------|-----------------|---------|----------|---------|
| EPA1470-1 | 1420-1530 MHz   | 9 dB    | 30 dBm   | 12 dB   |

Physical Size



Note: All mounting holes have a diameter of 3.1 mm and can be secured with M3 screws. The black shaded area indicates the heat-generating region and should be in contact with the device enclosure.

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