

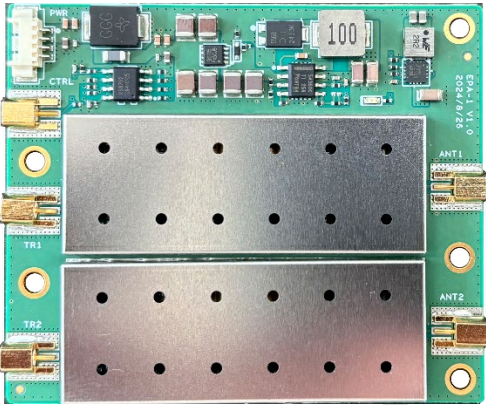
EPA-1 is a dual-channel 2×1 W TDD bidirectional RF power amplifier launched by Zencheer. Measuring only 69 × 58 mm, it operates over 500–1500 MHz and delivers high-linearity output, making it compatible with radio modules supporting standards such as WiFi, LTE, and DVB-T.

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

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



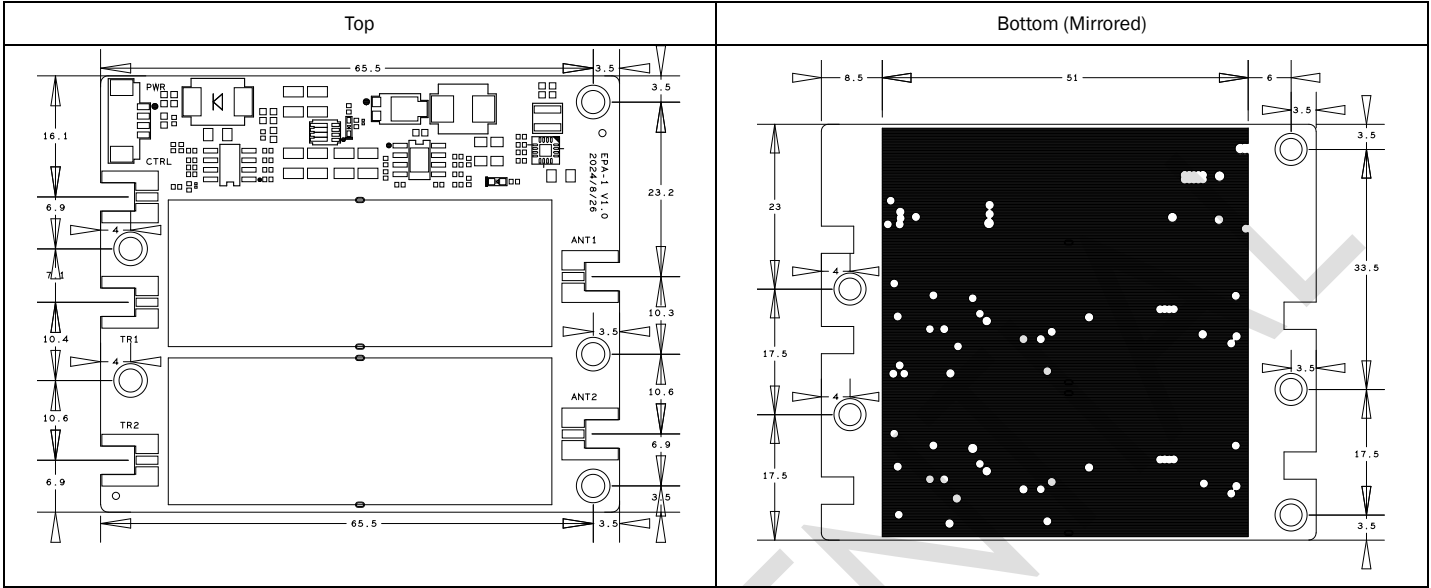
Interface Definitions

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.