

450-550MHz Long-Range Signal Booster

Model:EP-AB092

1. Product Overview

The EP-AB092 Signal Extender is a high-performance RF amplifier designed to enhance wireless communication range and signal stability. Featuring an ultra-low noise design and high output power, it significantly improves link quality, transmission distance, and overall reliability in complex environments.



This device supports a wide input voltage range and offers plug-and-play operation, making it ideal for outdoor and industrial communication applications.

2. Key Features

- Ultra-low noise figure: ≤ 2.5 dB
- High transmission gain: 18 dB ± 1
- Wide operating voltage: 8V–32V DC
- High output power up to 36 dBm (4W)
- Fast TX/RX switching: < 1 μ s
- Plug-and-play, no software required
- Rugged aluminum enclosure for heat dissipation
- Up to 50 \times signal power enhancement
- Flexible frequency customization (300–800 MHz)

3. Technical Specifications

Number	Items	Specifications
1	Frequency Range	450-550MHz (customized: 300-400MHz /400-500MHz//500-600MHz/600-700MHz/700-800MHz)
2	Operating Voltage	8-32V
3	Receiving Gain	15dB ± 1
4	Transmission Gain:	18dB ± 1
5	Max Output Power(P1dB)	36dBm(4W)
6	Input Trigger Power	Min:3dBm Max:23dBm
7	EVM	3%@28dBm 802.11g 54Mbps OFDM 64QAM BW 20MHz
8	Noise Figure	< 2.5 dB
9	Current Supply	580mA@Pout 28dBm 12V
10	TX/RX Switch Time Delay	< 1 us
11	LED Indicator	Transmitter: Green; Receiver: red

12	Operating Temperature	-30°C ~+70°C
13	Storage Temperature	-40°C ~+150°C
14	Operating Humidity	Up to 95% rel. humidity
15	RF Connector	Input: SMA-K; Output: RP-SMA-K
16	Power Socket	2.5*0.7mm DC
17	Shell Size	65*35*13(mm)
18	Shell Material	Aluminum
19	Net Weight	60g

4. Typical Applications

- Wireless data transmission systems
- Industrial remote control
- Security and surveillance communication
- Long-range sub-GHz wireless communication systems

5. Installation Guidelines

1. Connect the antenna before powering on the device
2. Then connect the power supply
3. Finally connect the RF signal source/device

6. Power Supply Recommendation

- Recommended: 12V / 1.5A DC power adapter
- Input range supported: 8V–32V

7. Important Notes

- Ensure proper heat dissipation (heat sink or cooling fan recommended for continuous high-power operation)
- Maximum output power (36 dBm) is achieved when input power is around 18–19 dBm
- Do not operate without antenna connected to avoid RF damage
- Keep within safe input power range to prevent device saturation or damage

8. Customization Options

- Frequency bands: 300–800 MHz (customizable)
- Connector types (optional)
- Gain tuning (based on application)



The accessory