

# DATASHEET

## AMP58-500 500mW 5.8GHz RF Amplifier AMP58-500



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AMP58-500

The Radiolinx AMP58-500 Amplifier series are Automatic Gain Control (AGC) compensated for constant power output bi-directional amplification. This provides constant maximum output power at the antenna over a wide RF input range. An amplifier significantly improves the link reliability and operating range by low noise amplification in receive mode, and spectrally clean power amplification in transmit mode. This amplifier has unique internal filtering and AGC in both the Tx and Rx paths. This combination provides exceptional performance in high traffic areas.

The bi-directional amplifier may also be used if an application requires long lengths of coaxial cable to reach the antenna. The amplifier is designed to put maximum power right at the antenna and boost the received signal primarily to overcome cable loss and improve overall receiver signal quality. The AMP58-500 amplifier has been specifically FCC approved for use with Radiolinx radios.

### Features and Benefits

- Automatic Gain Control (AGC)
- P1dB Compression Point = +32dBm (1.5W)
- OFDM 802.11a Power Output: +27dBm (500mW)
- Low 2.5dB RX Noise Figure
- Low Transmit Harmonics
- Ruggedly designed for outdoor use
- Internal Lightning Protection
- Machined Aluminum Housing
- 2 Year Warranty w/ Lightning Protection

### Installation Guidelines

- 1 Each AMP58-500 amplifier is equipped with internal  $\frac{1}{4}$  wave technology lightning protection
- 2 The AMP58-500 amplification device is a Radiolinx subassembly and its use has been FCC approved for use in an RF system. The AMP58-500 kit has been pre-designed to meet FCC approval and use under the following guidelines:
  - The bi-directional amplifier has been designed to operate with a cable loss between the radio and amplifier of 6.5 dB to 20 dB. Within this range, the output of the amplifier will always be  $\frac{1}{2}$  W regardless of the input level
  - The amplifier may not be used with less than 6.5 dB cable loss. With more than 20 dB of coaxial cable loss, the amplifier will not turn on
  - Use of the amplifier outside of these guidelines will result in violation of 47 CFR Part 15 FCC Rules, under which the equipment has been authorized

## Specifications

Frequency Coverage	5.47 to 5.825 GHz
Supply Voltage	+12 VDC +/- 5%
Receive	
Gain	10 dB +/- 2dB
Noise Figure	2.5 dB
Supply Current	<250 mA
Tx to Rx Switching	< 500 nSec
Transmit:	
AGC Power	Avg Power: 500 mW (27dBm), Pin +5 to +20 dBm Peak Power 1500 mW (+32 dBm)
Compression Point	P1dBm = 1500 mW (+32dBm)
RF Input Power for Turn-On	>1 dBm
Harmonic Rejection	2fo > 55 dBc, 3fo >70dBc @ Po=+27dBm
Supply Current	< 1 A
Rx to Tx Switching	< 500 nSec
Maximum Ratings	Pin (Radio port) + 30 dBm Pin (Antenna port) + 27 dBm
Size	2.88 in. x 3.00 in. x1.01 in.
Weight	< 12 oz.
Chassis	Machined Aluminum with durable black anodize finish CCA is protected with a conformal coating compound
Indicator LED	Green LED - Rx mode, Red LED - Tx mode.
Lightning Suppression	¼ wavelength short

## Additional Products

ProSoft Technology® offers a full complement of hardware and software solutions for a wide variety of industrial communication platforms.

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## Ordering Information

**To order this product, please use the following:**

AMP58-500      AMP58-500 500mW 5.8GHz RF Amplifier

To place an order, please contact your local ProSoft Technology distributor. For a list of ProSoft distributors near you, go to <http://www.prosoft-technology.com>

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fax to +33 (0) 5.61.78.40.52

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