



MODEL AR-125R 125 WATTS, 30 to 512 MHz Automatic Band-Switching

The Model AR-125R is a multi-band, fully automatic RF booster amplifier for use with VHF/UHF Tactical Radio equipment and supports legacy, proprietary and emerging networking waveforms including SINCGARS, HPW, HAVEQUICK, DAMA, IW, SRW and ANW2. The amplifier includes RF sensing, automatic T/R switching, Automatic Level Control (ALC), automatically switched harmonic filters and protection against antenna mismatch and over-temperature. The AR-125R can be ordered to operate from either an AC or DC source. The unit is self-cooling for heavy or light tactical communications, regardless of the modulation format transmitted, and packaged in a 2RU 19" rack mountable chassis.

Product Highlights

- Radio Vendor independent design, single and multi-band radio compatible with just an RF and power connections
- Operates independently or under remote control (GUI – over Ethernet)
- Built to meet MIL-STD-461
- Optional remote SATCOM Low Noise Amplifier system operated over the RF coaxial cable via a remote bias tee
- Compatible with 5 to 20 Watt tactical radios

GENERAL SPECIFICATIONS

The general specifications listed below apply to the AR-125R family of amplifiers unless otherwise noted. **For ordering, see “Ordering Information – Model Configurations” for detailed information for specific model names.**

ELECTRICAL SPECIFICATIONS

FREQUENCY RANGE	30 to 512 MHz
POWER OUTPUT	125 Watts (typical)
INPUT POWER	10 Watts (typical, up to 20W without damage)
RF KEYING SENSITIVITY	1 Watt (typical)
T/R & FILTER SWITCHOVER	SINCGARS, HPW, HAVEQUICK, DAMA, IW, SRW and ANW2 compatible
BYPASS INSERTION LOSS	1 dB (typical)
MODULATION	AM/FM/PM, SINCGARS, HPW, HAVEQUICK, DAMA, IW, SRW and ANW2, plus others
DUTY CYCLE	100% Tactical operations
INPUT/OUTPUT IMPEDANCE	50 Ohm (nominal)
INPUT VSWR	1.5:1 (typical)
HARMONICS	<-60 dBc (typical)
SPURIOUS OUTPUTS	<-70 dBc (typical)
POWER REQUIREMENT	Two Options (See Ordering Information below): <ul style="list-style-type: none"> • AC power: 100 to 240 VAC, 50-60 HZ • DC power: 18 to 36 VDC (approximately 650 Watts @ 24 VDC)

ENVIRONMENTAL SPECIFICATIONS

OPERATING TEMPERATURE	-30 °C to +60 °C (ambient)
ALTITUDE (operating)	15,000 ft.
VIBRATION / SHOCK / HUMIDITY/ENVIRO	Designed to meet applicable sections of Mil-STD 810F/ designed for ground/base/ vehicle use

MECHANICAL SPECIFICATIONS

SIZE (H x W x D)	3.5 x 19 x 24 inches
WEIGHT	~ 25 pounds
COOLING	Thermostatically controlled cooling fans
RF CONNECTORS (REAR PANEL)	RF Input, N Type Female (Radio) RF Output, N Type Female (Antenna)
REMOTE INTERFACE	ETHERNET (see manual for details)
POWER CONNECTORS	<ul style="list-style-type: none"> • IEC 320 Inlet Style (AC Power Option) • DC Power Option
CONSTRUCTION	Rack mountable 19" 2RU



ORDERING INFORMATION – MODEL CONFIGURATIONS

The following table provides specific details on orderable configurations of the AR-125R. For details not listed below **General Specifications apply.**

MODEL NAME	CONFIGURATION DETAILS
AR-125R	Standard Configuration (C1) <ul style="list-style-type: none">• AC power supply
AR-125RC2	Configuration 2 (C2) <ul style="list-style-type: none">• DC power supply – Call Factory

OPTIONAL EQUIPMENT

Low-Noise SATCOM Pre-Amplifier	MODEL KMW2030P - 240-270 MHz (contact AR Modular RF for details)
Remote Bias Tee	MODEL AR-RBT (contact AR Modular for details)

OUTLINE DRAWING

The following figure illustrates the outline drawing of the amplifier. Dimensions critical for installation are noted. All other drawing features are for reference only, vary by model configuration and are subject to change.

