AR-50 SERIES
RF BOOSTER AMPLIFIERS

The AR-50 series booster amplifiers enhance communication distance and reliability. Offering 50 Watts of output power over the 30 to 512 MHz range, these amps work with a wide range of tactical military communication radios and systems.

The fully automatic T/R switching booster amps support legacy and proprietary waveforms and an integrated DC / DC converter supports a wide range of input voltages while maintaining constant output power.

Our battle tested amplifiers include over temperature protection, RF sensing, T/R Switching, automatic level control (ALC), harmonic filters, and protection against antenna mismatch. Models within the AR-50 series also have built-in internal LNA with co-site filtering that can be switched on or off by the front panel switch to improve SATCOM receive performance.

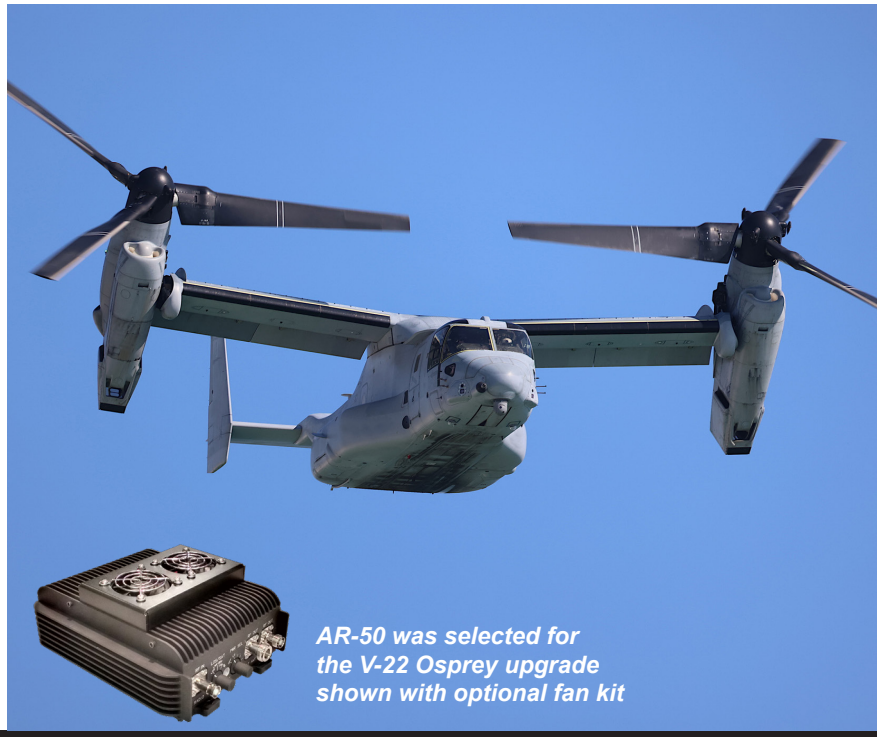
Optional fan kit (FK-AR-50), shock mount kit (SM-AR-50) and interface coaxial cables are available.

FEATURES & BENEFITS:

- 50 Watts
- 30 - 512 MHz
- Fully automatic T/R switching
- Harmonic filtering
- Lightweight package
- Low-profile design
- Optional internal LNA
- Rugged and reliable operation

- Waveforms supported: AM, FM, ANW2, IW, DAMA, SRW, HPW, SINCGARS, HAVEQUICK I and II, and more

- Supports Multiple Radio Platforms: AN/PRC-117G, AN/PRC-152, AN/PRC-148 (MBITR/JEM), AN/PRC-163, AN/PRC-167, AN/PRC-154 Rifleman™ Radio, AN/PSC-5D, AN/ARC-210, and more



AR-50 was selected for the V-22 Osprey upgrade shown with optional fan kit

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AR-50 SERIES
RF BOOSTER AMPLIFIERS

PDS / Abaco SYSTEMS
AMETEK

Features	AR-50	AR-50C2	AR-50FE	AR-50M	AR-50RC	AR-50S	AR-50SE	AR-50SAT75
								
Power Output	50 Watts CW nominal; 50W PEP with 70% AM modulation, ,10% distortion typical	50 Watts CW, 50 Watts PEP with 80% AM modulation, <10% distortion typical	50 Watts CW nominal; 50W PEP with 70% AM modulation, <10% distortion typical	50 Watts CW, 50 Watts PEP with 80% AM modulation, <10% distortion typical	LOS: 25 Watts nominal, 25W PEP with 70% AM modulation, <10% distortion typical SATCOM (290 MHz to 320 MHz): 50 Watts	50 Watts CW nominal, 50W PEP with 80% AM modulation, <10% distortion typical	50 Watts CW nominal, 50W PEP with 80% AM modulation, <10% distortion typical	LOS: 50 Watts SATCOM: 75 Watts
Frequency Range	30 MHz-512 MHz	30 MHz-512 MHz	30 MHz-512 MHz	30 MHz-512 MHz	30 MHz-512 MHz	30 MHz-88 MHz	30 MHz-88 MHz	LOS: 30 MHz-512 MHz SATCOM: 220 MHz-324 MHz
Input Power	<5W CW typical for 50W Output	<5W CW typical for 50W Output	<5 Watts CW typical for 50 Watts Output; Input Protection for up to 20W CW	<5W CW typical for 50W Output	<5 Watts CW typical for 25W LOS and 30W SATCOM Output	<5 Watts CW typical for 50 watts Output	<5 Watts CW typical for 50 watts Output	LOS: 4-6 Watts SATCOM: 7-8 watts
SATCOM Rx LNA	Built-in	Built-in	N/A	Built-in	Built-in	N/A	N/A	Built-in
SATCOM Rx LNA Gain /Noise Figure	12 dB / 2.5 dB typical	12 dB / 2.5 dB typical	N/A	12 dB/<2.5 dB typical	12 dB/<2 dB typical	N/A	N/A	12 dB/2 dB typical
SATCOM Rx Co-site Filter	Band pass frequency 239 - 273 MHz, Out of band rejection >45 dB typical	Band pass frequency 239 - 273 MHz, Out of band rejection >35 dB typical	N/A	Band pass frequency 239 - 273 MHz, Out of band rejection >35 dB typical	Band pass frequency 239 MHz-273 MHz, Out of band rejection 35 dB typical	N/A	N/A	Band pass frequency 329-270 MHz, Out of band rejection 55 dB typical
Modulation	All legacy and modern complex tactical communications waveforms like ANW2, IW and SRW	All legacy and modern complex tactical communications waveforms like ANW2, IW and SRW	AM, FM, or PM and tactical communications waveforms	All legacy and modern complex tactical communications waveforms like ANW2, IW and SRW	AM, FM, or PM and tactical communications waveforms	AM, FM, or PM and tactical communications waveforms	AM, FM, or PM and tactical communications waveforms	AM, FM, or PM and tactical communications waveforms
Power Requirements	12-36 VDC from battery or 12 and 24 VDC vehicle systems, filtered and transient protected	12-35.5 VDC from two XX90 batteries or 12 and 24 VDC vehicle systems, filtered and transient protected	12-33 VDC MIL-STD-461E & 1275	12-35.5 VDC from two XX90 batteries or 12 and 24 VDC vehicle systems, filtered and transient protected	12-35.5 VDC filtered and transient protected for 12 to 24 volt vehicle systems or dual XX90 batteries	12–36 VDC filtered and transient protected for 12 or 24 Volt vehicle systems or dual XX90 batteries	12-33 VDC MIL-STD-461E and 1275	18-35.5 VDC filtered and transient protected for 24 volt vehicle systems or dual XX90 batteries
Current @ 24 VDC nominal	7.5A nominal	7.5A nominal	<7.5A @ 24 V typical	7.5A nominal	<7.5A @ 24 V typical	<7.5A @ 24 V typical	<7.5A @ 24 V typical	<8.5A @ 24 V typical (75 W SATCOM)
Operating Temperature	-30 to 60° C ambient	-30 to 60° C ambient	-40 to 55° C ambient	-30 to 60° C ambient	-30 to 60° C ambient	-30 to 60° C ambient	-40 to 55° C ambient	-30 to 60° C ambient
Water	IP67	IP67	IP67	IP67	IP67	IP67	IP67	IP67
Vibration / Shock / Humidity	MIL-STD-810G (Including SB-X 10001B	MIL-STD-810F	Designed to meet applicable sections of Mil Std 810F/ designed for ground/ base vehicle use	Designed to meet applicable sections of MIL-STD-810 / designed for ground / base vehicle use	Per MIL-STD-810F	Per MIL-STD-810F	Per MIL-STD-810F	Designed to meet applicable sections of MIL-STD-810F/ designed for ground / base vehicle use
Size (HxWxD) Inches	2.50 x 6.00 x 7.50	2.50 x 6.00 x 7.50	2.50 x 6.50 x 9.93	2.50 x 6.00 x 7.50	2.50 x 6.00 x 7.50	2.50 x 6.00 x 7.50	2.50 x 6.50 x 9.93	3.25 x 5.25 x 7.50
Weight	4.4 lb.	4.4 lb.	8.0 lb.	4.4 lb.	4.4 lb.	4.4 lb.	8.0 lb.	4.9 lb.
JITC Certified	PSC-5D, PRC-117G, PRC-148 JEM	PSC-5D, PRC-117G, PRC-148 JEM	Based off AR-50 design	Based off AR-50 design	Based off AR-50 design	Based off AR-50 design	Based off AR-50 design	Based off AR-50 design
GSA Schedule	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

GSA Schedule

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Specifications subject to change without notice