

L3HARRIS RF-7850M-V50X

Wideband Handheld Integrated Power Amplifier

The RF-7850M Wideband Handheld Integrated Power Amplifier enhances narrowband range and link reliability for the L3Harris Falcon III® RF-7850M-HH Multiband Networking Handheld Radio. This on-the-move solution supports the L3Harris Mid-Tier TDMA Networking Waveform (M-TNW) and is SATCOM-capable, extending mission-critical connectivity to Beyond-Line-Of-Sight.

The L3Harris Wideband Handheld Integrated Power Amplifier provides continuous coverage in the 30 to 512 MHz frequency band, with up to 50 watts output power from 30 MHz to 108 MHz and up to 20 watts output power from 108 MHz to 512 MHz. Designed for use in vehicular or base station systems, the RF-7850M PA includes an integrated handheld battery charger for simultaneous radio operation and battery charging. Its “hot jerk-and-run” feature allows radios to be removed from the amplifier without turning them off.

The RF-7850M Wideband Handheld Integrated Power Amplifier is fully interoperable with the L3Harris Falcon III RF-7800I Tactical Networking Intercom System, and has a future-proof architecture supporting software-only upgrades to future capabilities.



VERSATILE, HIGH-PERFORMANCE RANGE EXTENSION

KEY BENEFITS

- > Extended range and link reliability for narrowband waveforms
- > Supports L3Harris M-TNW
- > SATCOM-capable
- > Uninterrupted radio operation with “hot jerk-and-run” feature
- > Future-proof architecture via software upgrades

GENERAL	
RT Nomenclature	RF-7850M-V50X
Frequency Range	Narrowband: 30-512 MHz Wideband: 225-512 MHz
Software Environment	Software-defined amplifier

TRANSMITTER	
Power Output	30-108 MHz: 5 W, 20 W, 50 W (user selectable) 108-512 MHz: 5 W, 10 W, 20 W (user selectable) SATCOM: 5 W, 20 W, 50 W (user selectable)
Harmonic Suppression	>60 dBc typical
Spurious Suppression	>50 dBc typical

RECEIVER	
Sensitivity	VHF FM: -112 dBm @ 12 dB SINAD UHF FM: -118 dBm @ 12 dB SINAD UHF AM: -103.5 dBm @ 10 dB SINAD
IF Rejection	>70 Db

POWER	
Power Input	20-32 VDC
Power Consumption	Max 450 W

MODES AND WAVEFORMS	
Narrowband Waveforms	Capable
Wideband Waveforms	Capable
UHF SATCOM Waveforms	Capable

PHYSICAL	
Dimensions	10.7H x 19.3 W x 14.0 D in (27.2 H x 7.6 W x 35.6 D cm) (VAA only without shock tray)
Weight	26.0 lbs (~11.8 kg) without shock tray 40.0 lbs (~18.1 kg) with shock tray
Color	Green (RF-7850M-V504) Black (RF-7850M-V505) Tan (RF-7850M-V506)

ENVIRONMENTAL	
Temperature	-22°F to +140°F (-30°C to +60°C)
Immersion	MIL-STD 810
Shock and Vibration	MIL-STD 810
Sand/Dust/Salt Fog/Rain	MIL-STD 810
Humidity	MIL-STD 810

INTERFACES	
Data	Data/remote
Audio	Speaker power
Antenna Port	VHF RF Port (BNC) 50 ohms, unbalanced UHF RF Port (BNC) 50 ohms, unbalanced
Remote Control	Remote keypad display, intercom

STANDARD KIT INCLUDES	
12050-3000-XX	Shock Mounting/Interface Assembly
12107-0105-XX	Ancillary Kit
10515-0467-4200	System Install/Maintenance Manual

Please visit L3Harris.com for more information.

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