



## FALCON III® VEHICULAR/ BASE MULTIBAND RADIO SYSTEM

### RF-7850M-V51x

- > Wideband Networking (ANW2Ce)
- > Narrowband Networking (TNW)
- > Advanced ECCM and Free Channel Search
- > Industry Standard Protocols (USB, SIP, VOIP, SNMP, etc.)
- > Low Profile Design
- > Falcon II and Falcon III Interoperability
- > Software Defined Radio

With the new Falcon III® RF-7850M-V51x, your forces get a solution that gives them the ability to communicate more information, with greater speed and reliability—all critical to achieving information superiority on the battlefield. Meanwhile, commanders get access to advanced real-time situational information that enables them to make faster, more informed decisions. The RF-7850M-V51x combines performance and flexibility unlike any other multiband combat net radio available, in a low-profile vehicular or base station platform that is easy to use and install.

The RF-7850M-V51x provides continuous coverage in the 30 to 512 MHz frequency band with up to 50 watts output power from 30 to 108 MHz and up to 20 watts output power from 108 to 512 MHz. The RF-7850M has a familiar user interface and embedded applications that support expedient field-field base dissemination of text messages, images and situational awareness data. Ready for integration into vehicular communications systems, the RF-7850M-V51x is fully interoperable with the Harris Digital Intercom System—the RF-7800I and includes a VIC-3 interface for legacy intercom support.

#### BENEFITS

- > Advanced Networking Wideband Waveform (ANW2Ce) delivers information superiority on the battlefield in an ad-hoc, self-forming, self-healing network.
- > Harris narrowband TDMA Networking Waveform (TNW) helps area commanders visualize the operating environment and take informed decisive action by allowing up to 64 users on a net to simultaneously communicate voice and time critical situational awareness.
- > The Quicklook ECCM waveform suite and Free Channel Search enable covert communications, render enemy radio-jamming devices ineffective and ensure operation in high-noise environments.
- > Industry standard protocols that reduce integration complexity and costs.
- > An ideal radio for space constrained platforms that require increased power output for long range voice and data.
- > Interoperable with the Harris Falcon II® family of HF, VHF and multiband radios including the RF-5800V-HH, RF-5800H-MP, RF-5800M-HH, as well as the Falcon III® RF-7800M-MP, RF-7850A, RF-7850S and RF-7800V.
- > Future proof architecture enables planned product improvements to be implemented as software only upgrades in most cases.



# SPECIFICATIONS FOR: RF-7850M-V51x

## GENERAL

Frequency Range	30-512 MHz
Net Presets/Channels	25 total
RF Input/Output Impedance	50 Ohms
Transmission Modes	AM/FM Analog Voice FSK/ASK MELP Voice FSK/ASK CVSD Voice ASK Data FSK/TCM Data GMSK/QPSK Data ECCM

## SPECIFICATIONS

Dimensions	7.87 W x 7.48 H x 13.5 D in. 20.0 H x 19.0 W x 34.3 D cm
Weight	< 28.0 lbs (< 13.6 kg)
Color	Green (RF-7850M-V511) Black (RF-7850M-V512) Tan (RF-7850M-V513)

## TRANSMITTER

Power	30-108 MHz: 5W, 20W, 50W (user selectable) 108-512 MHz: 5W, 10W 20W (user selectable)
Frequency Stability	±1 ppm
Harmonic Suppression	> 60 dBc typical
Spurious Suppression	> 50 dBc typical

## RECEIVER

FM Sensitivity	-112 dBm @ 12 dB SINAD
IF Rejection	> 60 dB
Squelch	Off, noise, tone, CTCSS and digital

## ENVIRONMENTAL (MIL-STD-810)

Operating Temperature	-30° C to +60° C (-22°F to +140°F)
Shock/Vibration	Ground/Mobile
Humidity	90%
Sand/Dust	

## STANDARD FEATURES (RF-7850M-SW001)

COMSEC	128 & 256 bit Harris proprietary and AES Customer Algorithm Modification (CAM)
GPS	Internal
Vocoder	MELP, CVSD
Data Interface	USB 2.0, Sync, Async, Ethernet, RNDIS
Bandwidth	8.33 kHz (AM), 12.5 kHz (AM) and 25 kHz
ECCM	Quicklook 1A, Quicklook 2, Quicklook 3, Free Channel Search and Mixed Mode
Data Communications	IP and DTE
Network Management	SNMP v1.0, v2.0C and v3.0
Simultaneous Voice and Data Support	Yes
Dual Net PTT Support	Yes
Direct Connection to LAN and USB Devices	Yes
Custom Language Support	Yes

## ADVANCED FEATURES (RF-7850M-SW002)

Advanced Waveforms	ANW2Ce (1.2 MHz) TNW (25 kHz) FSK/TCM (75 kHz) Quicklook-Wide (75 kHz)
Telephony	Voice over IP (VoIP) and SIP Telephony and RF-6010 Base station

## STANDARD KIT INCLUDES

12112-6027-01, Mounting Plate Assembly

10570-0720-01, Install Kit with DC Power Cable

RF-7850MH-SW001, Communications Programming Application and Operations Manual/Soft Copy

10515-0397-4200, System Install & Maintenance Manual

*For optional accessories, please refer to the Product Catalog*



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