



LONG-RANGE WIDEBAND NETWORKING

KEY BENEFITS

High-speed wideband and narrowband networking

Secured with Harris Citadel® and AES encryption

Manpack performance in a handheld

High-rate ECCM and Free Channel Search

Harris Falcon II and Falcon III interoperability

Software Defined Radio architecture

HARRIS FALCON III® RF-7850M-HH

MULTIBAND NETWORKING HANDHELD

The Harris RF-7850M-HH combines the small-profile portability of a handheld with the power and long-range performance of a manpack. Equipped with enhanced Falcon III wideband and narrowband capabilities, the multiband networking handheld is also interoperable with the Harris Falcon II® radio family.

The RF-7850M-HH is ideal for traditional Combat Net Radio missions, ground-to-air and Company and Below voice and data communications. When used with the optional 50 W Power Amplifier, the RF-7850M-HH plays a key role at the mid-tier level of any tactical network.

The RF-7850M-HH leverages the TDMA Networking Waveform family for true simultaneous voice and data services over wideband, narrowband and ECCM channels. This waveform family is also available in the Falcon III VHF, airborne

and soldier radios supporting seamless communications across the battlefield.

The large multilingual display and built-in WebUI applications deliver maximum mission flexibility. Now, capabilities such as text and file transfer can be accessed directly from the radio, further reducing soldier payload. The optional WebUI provides additional applications including Friendly Force Tracking, video streaming, remote control and others for use at all levels of the battlefield.

SPECIFICATIONS FOR: HARRIS FALCON III® RF-7850M-HH MULTIBAND NETWORKING HANDHELD

GENERAL	
RT Nomenclature	RF-7850M-HH
Frequency Range	Narrowband: 30 - 512 MHz Wideband: 225 - 512 MHz AM: 108 - 512MHz
Channel Spacing/Bandwidth	8.33kHz (AM only), 12.5 kHz (AM only), 25 kHz, 75 kHz*, 1.2MHz*
Net Presets	25 total/13 selectable from switch
GPS	Internal GPS Accepts external GPS input
Management Tool	Communications Programming Applications
Software Environment	Software Defined Radio
RF Input/Output Impedance	50 Ohms

TRANSMITTER	
Power Output	Selectable .25, 1, 2, 5 and up to 10 watts
Harmonic Suppression	> -50 dBc typical
Frequency Stability	±1 parts per million
Audio Output	Variable and fixed audio

RECEIVER	
Sensitivity	AM -103.5dBm at a 10dBm SINAD FM -116dBm at a 12dBm SINAD
Squelch	Selectable: off, noise, tone, CTCSS, digital
IF Rejection	> 70 dB

POWER	
Power Input	10-13 VDC
Power Consumption	35 watts

SECURITY	
Encryption	1128 & 256 bit Harris proprietary Citadel® AES 128 & 256 Customer Algorithm Modification

MODES AND WAVEFORMS		
Voice and Data Modes	AM/FM Analog Voice FSK/ASK MELP Voice FSK/ASK CVSD Voice	FSK/TCM Data GMSK/QPSK Data* ECCM
ECCM	Quicklook 1A, 2, 3 and Quicklook-Wide*	
Narrowband Networking	TDMA Networking Waveform (TNW) 25K* and 75K*	
Wideband Networking	M-TNW*, ANW2°C (optional)	
Optional Waveforms	Export SINCARS with Pavilion encryption Satellite Tactical Communications HAVEQUICK I/II	

PHYSICAL	
Dimensions	2.94 W x 9.71 H x 2.43 D in (7.5 W x 24.7 H x 6.1 D cm)
Weight	2.0 lbs (<1.0 kg) with battery
Color/Finish	Green (RF-7850M-HH001) Black (RF-7850M-HH002) Tan (RF-7850M-HH003)

ENVIRONMENTAL	
Temperature	-30° C to +60° C (-22°F to +140°F) with battery -25° C to +60° C (-13°F to +140°F)
Shock and Vibration	MIL-STD-810G
Humidity	MIL-STD 810G
Sand/Dust/Salt Fog/Rain	MIL-STD 810G
Immersion	5 meters

INTERFACES	
Data	USB 2.0, USB RNDIS, Synchronous, and Ethernet
Audio	Analog, fixed level, and Internet Protocol
Antenna Port	50 Ohm TNC
Programming	Communications Programming Applications
Remote Control	ASCII and Ethernet (Web API)
Web UI	WEB UI

STANDARD KIT INCLUDES	
12011-2710-03	Whip Antenna
12011-2730-01	Tape Antenna
12041-2400-XX	High-Capacity Li-Ion Rechargeable Battery
10515-0461-4100	Quick Reference Guide

*Indicates RF-7850M-SW002 software option

See Harris Product Catalog for accessories

About Harris Corporation

Harris Corporation is a leading technology innovator, solving customers' toughest mission-critical challenges by providing solutions that connect, inform and protect. Harris supports government and commercial customers around the world.

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