



MICRO-SIZED, SECURE SOLUTION FOR MAXIMUM MISSION FLEXIBILITY

KEY BENEFITS

Interoperable with fielded Harris Falcon III® RF-7850S radio family assets

Software Defined Radio capable of storing multiple waveforms in one small form factor

SWaP optimized for flexibility over a wide range of use cases and mission scenarios

Secure AES-128 / AES-256 encryption

Superior frequency range—
from 225 MHz up to 2.5 GHz

Selectable power—transmission-capable
from 0.25 W to 3.2 W

HARRIS FALCON III® RF-7850A-ER

EMBEDDABLE MODULAR RADIO [EMR]

The Harris Embeddable Modular Radio is a small form factor, Software Defined Radio that offers the best available SWaP today with various security solutions. It provides a voice and data link with maximum flexibility, capable of a diverse set of waveforms suitable for embedment in a wide variety of host platforms.

Anywhere the mission requires voice, data or video transmission and reception, the EMR provides flexible capabilities to support modern CONOPs at the tactical edge. The proven, leading-edge technology in this single-board, Software Defined Radio is derived from the Harris Falcon III® line of radios for secure and reliable communications. With its advanced

capabilities, the EMR offers a number of mission-critical options for airborne, maritime and ground operations. Whether it is use cases such as MANET range extension or advantaged node video dissemination, the Harris EMR provides a highly integrated, secure communication link that significantly expands current capabilities and mission goals.

SPECIFICATIONS FOR: **HARRIS FALCON III® RF-7850A-ER EMBEDDABLE MODULAR RADIO (EMR)**

GENERAL

RT Nomenclature	Harris Falcon III® RF-7850A-ER
Frequency Range	225 MHz to 2.5 GHz
Futureproof	Software Defined Radio
GPS	Internal GPS; supports external GPS devices
Bandwidth	25 kHz 1.2 MHz 5 MHz
Voice	MELPe

TRANSMITTER

Operating Voltage	0.25, 1.0, or 3.2 W User selectable levels
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SECURITY

Encryption	AES-128 AES-256
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POWER

Power Input	8.5 - 16.9 VDC
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ENVIRONMENTAL

Shock and Vibration	Designed to MIL-STD-810G
Temperature	Operating: -30°C to +55°C Storage: -40°C to +85°C
EMI/RFI	Designed to MIL-STD-461F

PHYSICAL

Dimensions	3.4 H x 2.5 W x 1 D in (8.63 H x 6.35 W x 2.54 D cm)
Volume	4.4 in³ (72.1 cm³)
Weight	88 grams

MODES AND WAVEFORMS

Narrowband Waveforms	<p>TDMA Networking Waveform:</p> <ul style="list-style-type: none"> • Narrowband communication mode • Optimized voice and guaranteed GPS reporting • Frequency hopping (ECCM) operation <p>UHF Line-Of-Sight:</p> <ul style="list-style-type: none"> • Narrowband communication mode • Interoperable with Harris radio systems
Wideband Waveforms	<p>Soldier-TDMA Networking Waveform:</p> <ul style="list-style-type: none"> • Advanced wideband communication for team, squad or platoon-level deployments • Simultaneous voice and data • IP data up to 1.5 Mbps • Multiple talk groups • Guaranteed position reports from every soldier • Ad-hoc mesh networking protocols
Voice and Data Modes	MELPe and CVSD Voice
Telephony	Embedded SIP

INTERFACES

Antenna Port	SMPM
Programming	USB
Power Connector	Deans connector

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.

Learn more at harris.com

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