



ENHANCED
CONNECTIVITY
FOR EVERY
SOLDIER AND
TACTICAL
SCENARIO

Harris Falcon III® RF-7850S SPR™

Advanced Wideband Secure Personal Radio



KEY BENEFITS

- Ultimate integration: radio, edge device, GPS and application software in a single platform
- Unique soldier-specific waveform allows for both wideband and narrow-band operation
- Enhanced capabilities such as multiple talk groups, ad-hoc mesh networking and multi-hop forwarding
- Harris Ground Force Tracker brings battle-management systems capability to the soldier level

The Harris Falcon III RF-7850S Advanced Secure Personal Radio (SPR) provides the ultimate integration of radio, edge device, GPS, and application software. A modular upgrade from the RF-7800S SPR Team Radio, it includes additional input/output interfaces—offering soldiers and commanders increased capabilities in a single platform that's now even smaller and lighter.

Equipped with the unique, soldier-specific Harris Soldier-TDMA Networking Waveform (S-TNW), the RF-7850S SPR delivers team-based voice, fully networked platoon-wide communication and reliable position reports to ensure every soldier stays connected. It allows for both wideband and narrowband operation modes, and is designed to meet the specific needs of soldier-level communications with enhanced and comprehensive capabilities, including multiple talk groups, ad-hoc mesh networking and multi-hop forwarding.

Designed for the modern battlefield, the RF-7850S SPR's simple, robust Web-based user interface can run on any edge device—tablet, laptop or phone. Because it comes with the easy-to-use Harris Ground Force Tracker, it puts battle-management systems capability into the hands of the soldier, whatever device is used—allowing maps to be downloaded and to show the location of everyone on the network.

The RF-7850S SPR is interoperable with legacy Harris SPR and Falcon III radio families, extending your network and investment. Software upgradeable, it's also easy to configure and upgrade in the field—so the network is always future-ready.

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Specifications for:

Harris Falcon III® RF-7850S SPR™ Advanced Wideband Secure Personal Radio

GENERAL

Platform	Advanced Secure Personal Radio (SPR) Software-defined Radio (SDR) Upgradeable via USB port
Frequency Range	225 MHz to 2.0 GHz
Power Out	3.2 watts
Bandwidth	Wideband Modes: 1.2 MHz, 5.0 MHz Narrowband Mode: 25 kHz
Waveforms	Soldier-TDMA Networking Waveform (S-TNW): <ul style="list-style-type: none"> Advanced wideband communication for team, squad or platoon level deployments Multiple talk-groups with Avalanche Voice™ Guaranteed position reports from every soldier Ad-hoc mesh networking protocols TDMA Networking Waveform (TNW): <ul style="list-style-type: none"> Narrowband communication mode Optimized voice and guaranteed GPS position reporting Frequency hopping (ECCM) operation VHF-UHF Line of Sight (VULOS): <ul style="list-style-type: none"> Narrowband communication mode Interoperable with Harris radio systems
Encryption	256-bit Citadel® Encryption Algorithm (Future) 256-bit AES (Advanced Encryption Standard) Algorithm
Voice Operations	Full duplex audio Multiple, concurrent talk-groups with multiple Push-To-Talk (PTT) operation Stereo audio capable Selectable PTT activation
Data Operations	Simultaneous voice, GPS position reporting and IP data up to 1 Mbps
Location Reporting	Built-in GPS with automatic position reporting
Alerts	Audible status, optional foreign language prompts

SPECIFICATIONS

Dimensions	Approx. 21.0 x 8.0 x 5.0 cm with standard battery (~8.3 x 3.1 x 2 inch with standard battery)
Weight	Approx. 775 g (~1.71 lbs.) with standard battery
Volume	Approx. 475 cc
Color	Green & Black Black

INTERFACES

GPS	Removable antenna
Audio	9-pin SPR Fischer connector for stereo audio and multiple PTT control
Data	USB 2.0 IP over USB RS232
Embedded Applications	Web User Interface with built-in Ground Force Tracker, compatible with standard internet browsers

ENVIRONMENTAL (MIL-STD-810)

Shock/Vibration	Ground portable
Immersion	2 meters
Operating Temperature	-30°C to +60°C (-22°F to +140°F)

ACCESSORIES

Included	
Low-band Antenna	12121-2700-01 (225-870 MHz)
Rechargeable Battery	12041-2200-0X
Computer Programming Application	RF-7850SH-CD
Operations Card	TBD
Optional	
Headsets	Various models – consult catalog for details and part numbers
Holster	RF-6953-CA00X – consult catalog for color options
Remote KDU	12113-1000-2X – consult catalog for color options
Battery Chargers	1, 2, 6-bay chargers/conditioners
Cables	12164-0710-A006 USB Type-A 12164-0711-A006 USB Type micro-B 12164-0714-A006 Ethernet RJ-45 12164-0718-A006 Tablet Data Cable 12164-0720-A006 Cross Band Retrans 12164-2211-A004 TVP Video Cable
Antennas	12121-2710-01 High-band (870-2.0 GHz) 12121-2730-01 Tri-band (225-450 MHz, 1250-1390 MHz, 1755-1850 MHz)
Falcon Fighter Storage Bag	12128-6050-0X – consult catalog for color options

LEARN MORE

To learn more about the Harris RF-7850S SPR Advanced Wideband Secure Personal Radio and its advanced features, contact Harris at TacticalCommunications@harris.com.

Harris is dedicated to developing best-in-class *assured communications*® products, systems and services.

