



HARRIS FALCON III® RF-7850A-UA

UNMANNED AIRCRAFT NETWORKING RADIO

EXTENDED RANGE AND ADVANCED ISR

KEY BENEFITS

Provides high-speed networked data and video via M-TNW

Fulfills evolving mission needs for ISR, close combat support and joint operations with ground troops

Extends battlefield networks Beyond-Line-Of-Sight without requiring satellite access

Based on combat-proven Harris Falcon III® technology

Full interoperability with legacy narrowband

Designed to easily integrate into a wide variety of UAV platforms

Designed for unmanned aircraft deployment, the Harris RF-7850A-UA Unmanned Aircraft Networking Radio delivers advanced Intelligence, Surveillance and Reconnaissance (ISR) capabilities with unprecedented high-speed data and video for improved Situational Awareness and decision making. Acting as a communications relay, it also supports expanded communications coverage for geographically isolated units.

Based on the combat-proven Harris Falcon® family of radios, the RF-7850A-UA provides narrowband interoperability—including traditional Combat Net Radio waveforms—as well as next-generation functionality. Between these advanced networking capabilities and its minimal Size, Weight and Power (SWaP) profile, the RF-7850A-UA is the ideal unmanned aircraft radio for operations at the tactical edge.

Despite its small SWaP profile, the RF-7850A-UA is fully capable of delivering both high-speed IP-networked data and Full Motion Video for improved ISR.

It also takes advantage of tactical VHF/UHF networks to provide range extension of secure air-to-air and air-to-ground communications by functioning as an advantage node.

As part of the Harris Falcon III RF-7850A platform, which includes a multi-channel airborne networking radio, the single-channel RF-7850A-UA leverages combat-proven technology to provide the world's first wideband-capable airborne radio designed for Unmanned Aerial System deployment.

SPECIFICATIONS FOR: **HARRIS FALCON III® RF-7850A-UA UNMANNED AIRCRAFT NETWORKING RADIO**

GENERAL	
RT Nomenclature	RF-7850A-UA
Frequency Range	Narrowband: 30 - 512 MHz Wideband: 225 - 512 MHz
Channel Spacing/Bandwidth	8.33, 12.5, 25, 75 kHz and 1.2 MHz
Net Presets	25
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	Up to 10 watts
Harmonic Suppression	> 50 dBc typical
Frequency Stability	±1 parts per million
Spurious Suppression	> 50 dBc typical
RECEIVER	
Sensitivity	AM -103.5dBm at a 10dBm SINAD FM -116dBm at a 12dBm SINAD
Squelch	Noise, tone, CTCSS, digital
IF Rejection	80 db typical
POWER	
Power Input	10-13 VDC

SECURITY		
Encryption	128 & 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 Waveforms	TDMA Networking Waveform (TNW) 25K and 75K	
Wideband Networking	M-TNW*, ANW2* [®] C (optional)	
Optional Waveforms	Export SINCGARS with Pavilion encryption Satellite Tactical Communications HAVEQUICK I/II	
PHYSICAL		
Dimensions	3.30 H x 5.30 W x 1.75 D in (8.13 H x 13.46 W x 4.44 D cm)	
Weight	1.4 lbs (0.635 kg)	
Color/Finish	CARC Green 383	
ENVIRONMENTAL		
Shock and Vibration	MIL-STD-810G	
Temperature	MIL-STD-810G -22° F to +140° F (-30° C to +60° C) (operational- convection cooled) -40° F to +185° F (-40° C to +85° C) (storage)	
INTERFACES		
Data	USB 2.0, Synchronous, Asynchronous, and Ethernet	
Audio	Analog, fixed level, and Internet Protocol	
Antenna Port	50 Ohm SSMA female	
Programming	Communications Programming Applications	
Remote Control	ASCII and Ethernet (Web API)	
Web UI	WEB UI	
INCLUDED ACCESSORIES		
10515-0484-4100	Quick Reference Guide	
OPTIONAL ACCESSORIES		
12178-7000-02	RF-7850A-UA Bench-top Programming Kit	
12178-7500-02	RF-7850A-UA Integration Kit	
TECHNICAL PUBLICATIONS		
10515-0484-4200	RF-7850A-UA Operator's Manual	
10515-0484-7000	RF-7850A-UA Interface Control Document	

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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