L3HARRIS®
FAST. FORWARD.

CDL HAWKLINK AN/SRQ-4 RADIO TERMINAL SET

The standard for high-bandwidth surface-to-air and communications

L3Harris' next-generation AN/SRQ-4 provides Command/Control (C2), sensor data transfer, data link operation and comprehensive built-in test. Radar, video, network and acoustic data interfaces meet shipboard interface requirements. CDL Hawklink provides real-time exploitation of aircraft sensors, extending situational awareness over the horizon.

PRODUCT DESCRIPTION

The L3Harris Hawklink AN/SRQ-4 shipboard terminal is a fully qualified communications system meeting requirements of the U.S. Navy's fleet of DDG-51, CG-47 and FFG-7 class ships. Control systems run on modern open system architecture with the latest touch-screen interfaces for ease of control and display of status. Robust built-in test eliminates complex support equipment and enables reduced logistics footprint. The 42-inch directional antenna maximizes link performance by implementing pseudo-monopulse tracking in azimuth while simultaneously open-loop pointing in elevation to avoid spoofing from multipath off the water. Automatically switches between omni and directional antennas to allow seamless operation from takeoff to max range. The fully qualified radome matches existing ship interfaces and is optimized for Ku-band.

The terminal is interoperable with currently deployed acoustic suites (SQQ-89) and shipboard Navigation Sensor System Interfaces (NAVSSI). Current software baselines in production for the MH-60R, include SPOP interfaces for tactical data and link control. The system is software configurable supporting Common Data Link (CDL) waveforms (fully compliant to Annex C and D). Network interfaces are fully compatible with the latest SAU07000 Digital Messaging Interfaces.

AN/SRQ-4
Touchscreen
Control Monitor

Proven Capability and Reliability

> Supports Anti-Submarine Warfare (ASW) and Anti-Ship Surveillance and Targeting (ASST) missions

> Receives and distributes full-motion video

> IP enabled and extensible to future network-centric applications

> Compatible with SAU07000 Digital Messaging Interface

> Qualified to U.S. Navy shock and environmental requirements

> Expanded CDL frequency range to support MH-60R operations

> Auto-switches between omni antenna and Monopulse tracking directional antenna depending on range between airborne platform and ship

> Range specified to 100 nm to

> AN/ARQ-59 airborne terminal

> Extensive built-in test avoids O-level support equipment

> Interoperable with CDL family of airborne terminals, including

> MH-60R, P-8, P-3 and Fire Scout

> Easy-to-use touchscreen graphical user interface for control and status

> Growth path to dual-link operation

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SPECIFICATIONS

PHYSICAL CHARACTERISTICS

Above Deck Equipment

	LENGTH (IN.)	WIDTH (IN.)	HEIGHT (IN.)	WEIGHT (LB.)
RFA	24.20	13.00	6.20	30.50
Directional Antenna	43.21	43.21	55.63	142.60
Radome	61.60	61.60	57.50	59.00
Omni Antenna	5.33	5.13	9.81	3.00
Total				**235.10**

Below Deck Equipment

> Total power consumption: < 1.3 kVA

	L (IN.)	W (IN.)	H (IN.)	WT (LB.)
R/T Rack				
MUX	24.40	23.50	10.44	
EFC	23.27	23.50	10.44	
PDU	23.97	23.50	10.44	
R/T Total Incl. Rack	31.50	24.00	73.80	995.00
Control Monitor	7.36	12.94	16.00	31.00
Total				**1026.00**

Environmental

> Humidity: 0 to 95%

> Transit and storage: sea level and 40,000 feet

> Temperature:

  - BDE: 50 °F to 95 °F (10 °C to 35 °C)

  - ADE: -18.4 °F to +120.2 °F (-28 °C to +49 °C) plus solar loading

  - Does not require access to ship's cooling system

  - Transit and storage: -40 °F to 158 °F (-40 °C to +70 °C)

> Shock and vibration:

  - BDE meets MIL-STD-167 and MIL-S-901D

  - ADE meets MIL-S-901D

> Rain and freshwater wash: 2.0" per hour for 1 hour

> Salt fog: MIL-STD-2036, tailored per RTCA-DO-160D, Section 14.0

PERFORMANCE CHARACTERISTICS

RF

> Extended Ku-band frequency ranges:

  - Forward link: 15.15 to 15.35 GHz

  - Return link: 14.53 to 14.93 GHz

  - Tuning: 5 MHz steps across band

Data Rate Options

> Forward link: 200 10.71, 21.42 Mbps

> Return link: 10.71 and 21.42 Mbps

Modulation

> BPSK: Standard CDL waveforms

> O-QPSK: Standard CDL waveforms

Bit Error Rate

> Less than 10^{-8} without encryption

Sensor Interface Options
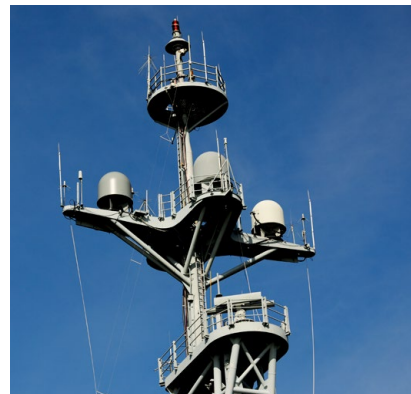
> RS-170/NTSC color video, MPEG-2

> Full-duplex analog audio interface

> Full-duplex 10/100 Base-T Ethernet and fiber optic Ethernet

> Acoustic PPI/ISAR user interface

Other Interfaces

> COMSEC fill interface

> Flight deck hardwire for preflight checks

Encryption Options

> Type 1

> AES

AN/SRQ-4 Directional Antenna Radome on Mast (on left)

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