

# **FIREFLY**<sup>TM</sup>

# Next-generation, lightweight, compact anti-submarine warfare sonar system

L3Harris' Firefly<sup>™</sup> offers a revolutionary improvement in helicopter and unmanned surface vehicle (USV) dipping sonar operations for anti-submarine warfare (ASW).

This new, modern, compact, lightweight system provides state-of-the-art ASW multi-mission capability never seen before on small maritime helicopters. This system is the culmination of decades of proven, reliable ASW sonars from the supplier of the AN/AQS-13, AN/AQS-18 and HELRAS ASW sonars.

## SWAP-C SPECIFIC FOR MID-SIZED HELICOPTERS

A compact military off-the-shelf (MOTS) processor and highresolution display, combined with an available electric reeling machine, optimizes the dipper for mid-sized helos.

### IDEAL FOR SMALL HELICOPTERS

Firefly delivers optimal robust acoustic array geometry with interleaved transmit and receive elements with no moving parts. Onboard energy storage minimizes impact on aircraft and allows for detection ranges up to 40 kiloyards.

### **PROVEN AND QUALIFIED**

Firefly is based on more than 50 years of reliable worldwide military-qualified dipping sonar systems.

# DIGITAL INTERFACE

Line-replaceable unit functional combination and extensive use of modern digital (ethernet) input/output make for easier integration, lighter overall system weight and more reliable operation.

# ELECTRIC REELING MACHINE OPTION

Firefly does not rely on the aircraft hydraulic supply. All hoisting is done with an optional compact, high-efficiency, reliable, all-electric motor.

## MODERN GEO-SITUATIONAL USER INTERFACE

Geosituational-centric sonar operations result in improved situational awareness for the sonar operator, superior detection and vastly reduced false alarms.



AW159 HELICOPTER WITH FIREFLY (LIGHTWEIGHT DIPPING SONAR)



### **Key Features**

- Minimal size, weight, power and cooling (SWaP-C)
- > Remote control capable (USV-OPS)
- > Optimum mid-frequency operation
- > Proven, qualified and reliable
- > Low-cost
- Electric or hydraulic reeling machine options
- > Digital interface
- > Geosituational user interface



## SWAP-C

SWaP-C drives every aspect of design of the next-generation dipping sonar for small to mid-size helicopters and USVs. Firefly delivers improved ASW performance to the AN/AQS-18A and is available now as an upgrade to existing Q-18-equipped aircraft. The transducer assembly is based on the proven AN/AQS-18 ultra-slim, hydrodynamic body with improved stability and optimal dip-cycle time. The combined MOTS Intel® processor and display allows for the latest technology and additionally provides for seamless technology upgrades.



PLAN POSITION INDICATOR (PPI) DISPLAY



ACOUSTIC PERFORMANCE PREDICTION DISPLAY

SPECIFICATIONS	
System Weight	Less than 485 lb
Max Operating Depth	500 m
Deployment	Manual and automatic
Active Transmission	CW, FM and Combo Pulses
Active Operating Frequency	9.2, 10.0 and 10.7 kHz mutually exclusive
Active Processing	Monostatic and multistatic
Source Level	Up to 216 dB, re 1µ Pa, re 1 yd
Passive Processing	Broadband detection
Underwater Telephone	STANAG 1074
Built-In Test	Power up, continuous and initiated
Record/Playback	For post-mission analysis
Display	Touchscreen intuitive, geo-situational based displaye
Performance Prediction	Range-of-the-day and raytrace using measured and database Sound Velocity Profiles (SVPs)
Classification Aids	Doppler zoom, FM Amplitude scan and user-defined signature database

#### L3Harrissellsht\_Firefly

### © 2022 L3Harris Technologies, Inc. | 09/2022

NON-EXPORT CONTROLLED - These item(s)/data have been reviewed in accordance with the International Traffic in Arms Regulations (ITAR), 22 CFR part 120.33, and the Export Administration Regulations (EAR), 15 CFR 734(3)(b)(3), and may be released without export restrictions.

L3Harris Technologies is an agile global aerospace and defense technology innovator, delivering end-to-end solutions that meet customers' mission-critical needs. The company provides advanced defense and commercial technologies across air, land, sea, space and cyber domains.



1025 W. NASA Boulevard Melbourne, FL 32919 t 818 367 0111 | f 818 364 2491 OSinfo@L3Harris.com