L3HARRIS™
FAST. FORWARD.

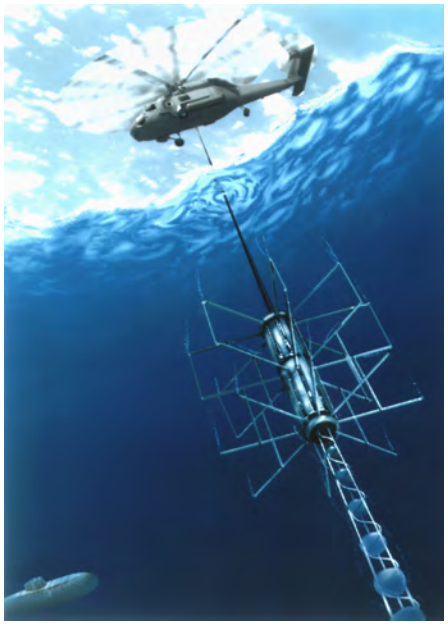
HELICOPTER LONG-RANGE ACTIVE SONAR

Highest-performance dipping sonar in the world

The Helicopter Long-Range Active Sonar (HELRAS) provides operators with a significantly more capable, interoperable and a versatile weapon system that reduces total operating costs by minimizing the time needed to execute an Anti-Submarine Warfare mission.

FEATURES

- Highest-performance dipping sonar in the world — demonstrated against both diesel-electric and nuclear submarines, the HELRAS outperforms in diverse geographic and acoustic environments, and in both active and passive operations.
- Demonstrated performance advantage over medium-frequency (2 kHz and higher) dipping sonar systems — by operating at a nominal frequency of 1.38 kHz, the HELRAS consistently achieves long-range detections and target tracking in both littoral and open ocean environments.
- Lightweight system produces high source levels, narrow vertical transmit beams and high array gain, performing at least 14 dB higher than that of medium frequency dipping sonar systems.
- Patented, compact, powerful acoustic transducers and expandable transmitting and receiving arrays produce a lightweight system that exploits the advantages associated with using truly low acoustic frequencies.
- High-resolution Doppler processing — long-shaped CW pulses (up to 10 seconds) and wide-bandwidth FM pulses (up to 5 seconds) are available to detect near-zero Doppler low strength targets.
- Interoperable with all key sonobuoys and modern low-frequency towed variable depth sonars.
- Yields savings in operating costs — long-range detection and large area search rates reduce total operating hours.



- Highest-performance dipping sonar
- Increased figure of merit
- High-resolution Doppler processing
- Stand-alone or fully integrated
- Low-frequency performance advantage
- Technological innovations
- Bistatic and multistatic interoperability
- Reduced operating expense

HELRAS PERFORMANCE

Operating Modes	Active (CW, FM and combo), passive, communication, playback, multistatic and test
Active Mode	Shaped CW pulses (0.039 sec. to 10 sec. max) @ 1,311, 1,380 and 1,449 Hz center frequency Linear period FM (pulse width 0.156 sec. to 5.0 sec.) FM triplet (pulse width 0.625 sec. to 1.25 sec.) 50 Hz downsweep: at 3 center frequencies 100 Hz downsweep: at 3 center frequencies 300 Hz downsweep: at 1 center frequency (1,380 Hz) Combo FM/CW (0.625 to 2.5 sec.) PPI, bearing range, Doppler range, A-scan FM, all beam Doppler displays
Range Scales	1, 1.5, 2.5, 4, 6, 1 0, 16, 25, 40 and 60 nautical mile
Passive Mode	Bandwidth 800 Hz to 2,000 Hz, broadband, narrowband, ALI and DEMON processing Bearing time record, bearing frequency indicator, NALi and DEMON, LOFAR and waterfall displays
Communication Mode	STANAG-1074 underwater telephone
Playback Mode	Playback of recorded data for analysis and training
Multistatic Mode	Transmit and receive capabilities; displays mode adjusted for elliptical equation
Test Mode	Power up, continuous and initiated built-in test
Capabilities	Ping-to-ping integration, contacts, tracks, classification database, range of the day built-in acoustic model, directional audio, auto deployment
Source Level	219 dB re 1 µPa @ 1 yd.
Depth	500 m
Arrays	Transmit: vertical 15° (steerable ± 15°), horizontal omni, 7-projector, expandable line array (5.2 m height) Receive: vertical ± 19.5° , horizontal 32 half : beams/16 full beams, expandable volumetric array (2.6 m diameter, 1 .2 m height)

CAPABILITIES

- > Ping-to-ping integration
- > Contacts
- > Tracks
- > Classification database
- > Range of the day built-in acoustic model
- > Directional audio
- > Auto deployment

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.

L3HARRIS™
FAST. FORWARD.

1025 W. NASA Boulevard
Melbourne, FL 32919
ProductSales@L3Harris.com