L3HARRIS™

FAST. FORWARD.

HYDRA SYSTEM

Robust Shipboard
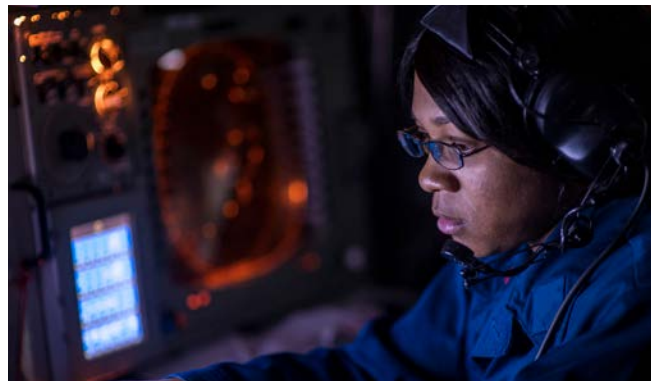Wireless Communications

HYDRA SYSTEM
RELIABLE, SECURE MARITIME C4ISR

Today's naval crews are increasingly deployed into diverse and challenging environments. In addition to traditional interdiction, UN-sanctioned peacekeeping and warfare roles, they must answer growing asymmetric threats of terrorism, smuggling, and piracy. Best-informed decisions require quick, reliable sharing of intelligence, however, today's phone-based systems are damage-prone and nearing obsolescence. Customers seeking a replacement often spend substantial time and resources, only to find themselves behind schedule, over budget, and with a system that doesn't meet their requirements.

The L3Harris HYDRA (Hierarchical Yet Dynamically Reprogrammable Architecture) System is a comprehensive, robust wireless communications solution meeting today's communication challenges. The system takes the guesswork and complexity out of procuring and deploying C4ISR capabilities through a family of cost-effective, pre-configured and fully-integrated solutions including all necessary equipment, cables, and software. These resilient systems feature advanced wireless technologies, ensuring the ship's crew and command stay connected when and where needed.

KEY BENEFITS

> Flexibile Deployment: Customized configurations and integration by in-country partners

> Rapid Response: Engineered for fast turnaround to meet urgent operational needs

> Simplified Procurement: Systems can be purchased as off-the-shelf items, eliminating long system definition and development phases

> Phased Implementation: Standard interfaces and protocols ease future enhancements

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ENGINEERED FOR DEMANDING OPERATIONS

On-deck landings and takeoffs require coordinated precision. The HYDRA System provides ship-wide and off-board VHF radio interoperability, seamlessly interfacing existing landing craft with flight deck announcing systems. Advanced trunking technologies instantaneously prioritize communications, minimizing user waiting time and channel use.

Flight Deck Communications: Optimized equipment supports stringent communications requirements of noisy flight deck environments and includes preemption capabilities for larger ships

Low Power System: Reduces onboard equipment footprint and RF interference

Security: AES and DES encryption protects sensitive communications

Redundant Antenna Design: Permits ship-wide communications when compartment doors are closed

Survivability: Accommodates loss of one or more repeaters with graceful degradation

Low Power Consumption and RF Power Output: Reduces onboard space requirements and system interference

EMCON: Antenna solutions support emergency communications while guarding against adversarial detection

Ship-board Ready: Meets MIL specs and includes audio and power interfaces compatible with shipboard interface requirements

The HYDRA Main Site Repeater Cabinet is easily installed on board ship

MAIN SITE 3 CHANNELS

- UPS Bypass Switch
- Repeaters
- Uninterruptible Power Supply

FIXED COMMAND RADIO

- Interface Box
- L5474
- Headset (Optional)
- H169 Telephone
- Fixed Command Station
- Control Head

USER EQUIPMENT GROUP

- XG-75P Radios
- Flight Deck Holster
- Standard Holster
- Software Accessories Kit
- Lapel Microphone

RUGGEDIZED AND SHIPBOARD READY

The HYDRA System operates in the UHF frequency band (380 to 430 MHz) using mature trunking technology for interior and exterior communications. The main site equipment includes a Repeater Cabinet and an MBB switch hard-mounted to the bulkhead to connect with the ship's power. A single, central location is used for this equipment—a low-power configuration requiring minimal space and air conditioning, reducing installation efforts and associated costs.

REPEATER CABINET

> MIL-STD-901D Grade A shock-qualified

> EMI air filters in doors, cabinet top and wiring

> Easy access from front or rear for maintenance

> Rack-mounted UPS includes internal batteries for 30 minutes additional run time

BASE STATION

> Repeaters can serve as a control channel or working channel

> Repeater redundancy supports continuous, trunked operations

> Multiple levels of fault tolerance and fail-safe features assist in maintaining communications

TRUNKING

> Assigns users to open channels so calls are not lost

> Supports radio communications through PBX telephones by routing audio, mobile data and encrypted digital voice data between devices

SUPPORT EQUIPMENT

6-Unit Multicharger

Cadex Optimizer

OPTIONAL FLIGHT DECK EQUIPMENT

Fixed Command Radio Station

Flight Deck Helmet with XG-75P

CUSTOMIZABLE SOLUTIONS

HYDRA Systems are installed in more than 100 U.S. and international naval vessels. Built-in trunking technologies, developed by L3Harris, are time-tested and in use with Public Safety agencies around the world.

Configurations are flexible—additional equipment and capabilities can be integrated at initial purchase or later as an upgrade. The HYDRA System easily integrates into larger systems and is customizable to meet a variety of naval force requirements.

BASELINE CONFIGURATION

> Low-Power Repeater Cabinet

> Three Repeaters

> Low-Power Amplifiers

> Power Supplies

> RF Combining Equipment (Duplexer, Multicoupler, Six-Channel Combiner, Switch Shelf and Reference Oscillator)

> Uninterruptible Power Supply (UPS)

> Make-Before-Break (MBB) Switch

> Fixed Command Radio Station—for the ship's Bridge

> Handheld Radios with holsters—50 are included, with an optional flight deck holster available

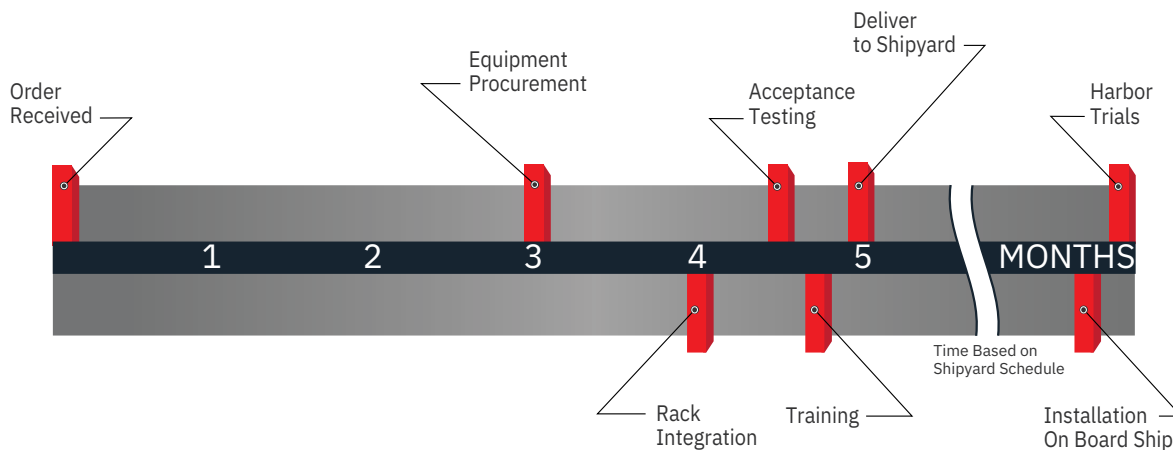> Battery Conditioner and Six-Position Charger

> Programming Devices

OPTIONAL ACCESSORIES

> Flight Deck Helmet

> Additional Flight Deck Communications Equipment

> Additional Fixed Command Radio Station for the Flight Deck

> Antennas, cabling, and connectors to cover Bridge, Ship Compartments and Flight Deck

LOW-RISK, HIGH-PERFORMANCE SOLUTIONS

Millions of men and women in service around the world trust L3Harris for industry-leading solutions to meet their greatest challenges. We have over 50 years of engineering and integration expertise deploying large scale, international communications systems. Our advanced manufacturing facility allows us to quickly customize solutions to meet varying operational requirements. We work with every customer to deliver the appropriate system without the need for long hardware or software development cycles.

Order Received

Equipment Procurement

Acceptance Testing

Deliver to Shipyard

Harbor Trials

1 2 3 4 5 MONTHS

Rack Integration

Training

Time Based on Shipyard Schedule

Installation On Board Ship

PROTECTING YOUR INVESTMENT

World-Class Expertise: Our customer knowledge, program management and technical expertise lower fielding risks

High Performance: The HYDRA System's open architecture design capitalizes on technology refresh of components, maximizing the value of customers' investments over an extended time period

System Durability: Sustainment issues are reduced by using ruggedized military-grade equipment

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DEDICATED TO YOUR SUCCESS

L3Harris is always there for customers with extensive product training and 24/7 customer support by phone, email and web-based services. No matter where in the world you are, we will field, maintain, repair and upgrade your L3Harris equipment. We have a "boots on the ground" approach—many of our product and technical service members are former military, bringing unmatched expertise and abilities to solve unique customer challenges.

CONTINUOUS CUSTOMER SUPPORT

> Premier web site with manuals, answers to FAQs, software upgrades, accessory purchases, warranty and maintenance support

> Ongoing product training at L3Harris, at customer's location or in the field

> Installation and maintenance by in-country partners

> Availability of extended warranties beyond the standard 12 months

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