L3HARRIS™
FAST. FORWARD.

ES-3601S AND ES-3701S

Radar electronic support measure systems for surface naval applications

High-capability electronic support measure (ESM) systems are essential for survival in the electromagnetic threat environment of the modern battlefield. L3Harris' ES-3601S and ES-3701S, a family of passive radar-detection ESM systems for surface vessels, enable warfighters to analyze and respond to threats in real time. Designed specifically for maritime environments, these complete tactical ESM systems are in service on surface vessels across the world's naval fleets.

ES-3601S

ES-3601S is a cost-effective, high-capability radar ESM system that enables warfighters to intercept, analyze, locate, evaluate and report radar signals. ES-3601S uses an innovative monopulse direction-finding (DF) system for accurate bearing measurements and has been integrated into a variety of combat system environments. It is operational on surface platforms from Europe to Asia.

ES-3701S

ES-3701S is a high-performance radar ESM that provides situational awareness, targeting, self-protection and surveillance. ES-3701S delivers complete radio frequency (RF) coverage with DF from communication through radar bands. The system has been interfaced to many combat management systems (CMS) and uses a Windows graphical interface, which can also be run on a multi-function console.

U.S. Navy photo by Mass Communication Specialist 2nd Class Holly L. Herline

BENEFITS

- Provides real-time situational awareness essential for mission fulfillment and vessel survival
- Creates a comprehensive operational picture for informed tactical decision making
- Supports multiple antenna configurations to fit platforms' mission requirements
- Offers a proven turn-key solution for surface platforms with continued service for over 20 years
- Scalable to match differing platform requirements

ES-3601S

KEY SYSTEM CAPABILITIES

- 100% probability of intercept
- Instantaneous DF over 360°
- Accurate 2x4 element monopulse DF
- Long-range detection, DF and tracking
- Measures all radars simultaneously

PERFORMANCE

- 2-18 GHz instantaneous RF coverage with angle of arrival (AOA) on every pulse
- High sensitivity
- Receives right-hand circular polarization (RHCP) and left-hand circular polarizations (LHCP)
- Accurate pulse measurements
- Processes narrow pulses

SIGNAL PROCESSING PERFORMANCE

- Processes 1 million pulses per second (MPPS) signal environment
- 20,000 emitter mode library capacity
- Tracks 500 emitters simultaneously

HUMAN-MACHINE INTERFACE (HMI)

- Windows user interface
- Easily integrated to modern CMS
- HMI hosted on CMS or accessed via remote desktop
- Pulse descriptor word (PDW) recording and playback
- Built-in training

OPTIONS

- Frequency-modulated continuous wave (FMCW) detection and identification at very high sensitivity
- Electronic intelligence (ELINT) subsystem uses digital receivers for precision measurements
- High-speed digital recorder

ES-3701S

KEY SYSTEM CAPABILITIES

- High probability of intercept for instantaneous emitter detection
- High sensitivity for long-range detection
- Accurate AOA on every pulse
- Wideband, narrowband and low band subsystems for comprehensive signal exploitation using advanced sapience emitter processing algorithms
- Handles FMCW radars with ultra-high sensitivity and DF

PERFORMANCE

- Custom frequency coverage
- Precision DF over elevation and dynamic range
- Accurate pulse measurements
- Processes narrow pulses
- Extensive on-board and off-board interference rejection

SIGNAL PROCESSING PERFORMANCE

- < 1 second reaction time
- Processes 1 MPPS signal environment
- 20,000 emitter mode library capacity

HMI

- Windows user interface
- Easily integrated to combat systems
- Can be operated from multi-function consoles
- Built-in training

OPTIONS

- High-speed digital recorder with ELINT recording capability
- Custom cabinets to meet ship's environmental requirements

ESM antenna arrays with complete RF coverage and interference rejection

ESM antenna arrays with broad RF coverage and interference rejection

Installed split ESM antenna array

Typical ES-3601S tactical radar ESM console

ESM antenna array in a baseline configuration

Split antenna assembly does not require the top of a mast

ES-3601S and ES-3701S

Nonexport-controlled Information

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.

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