

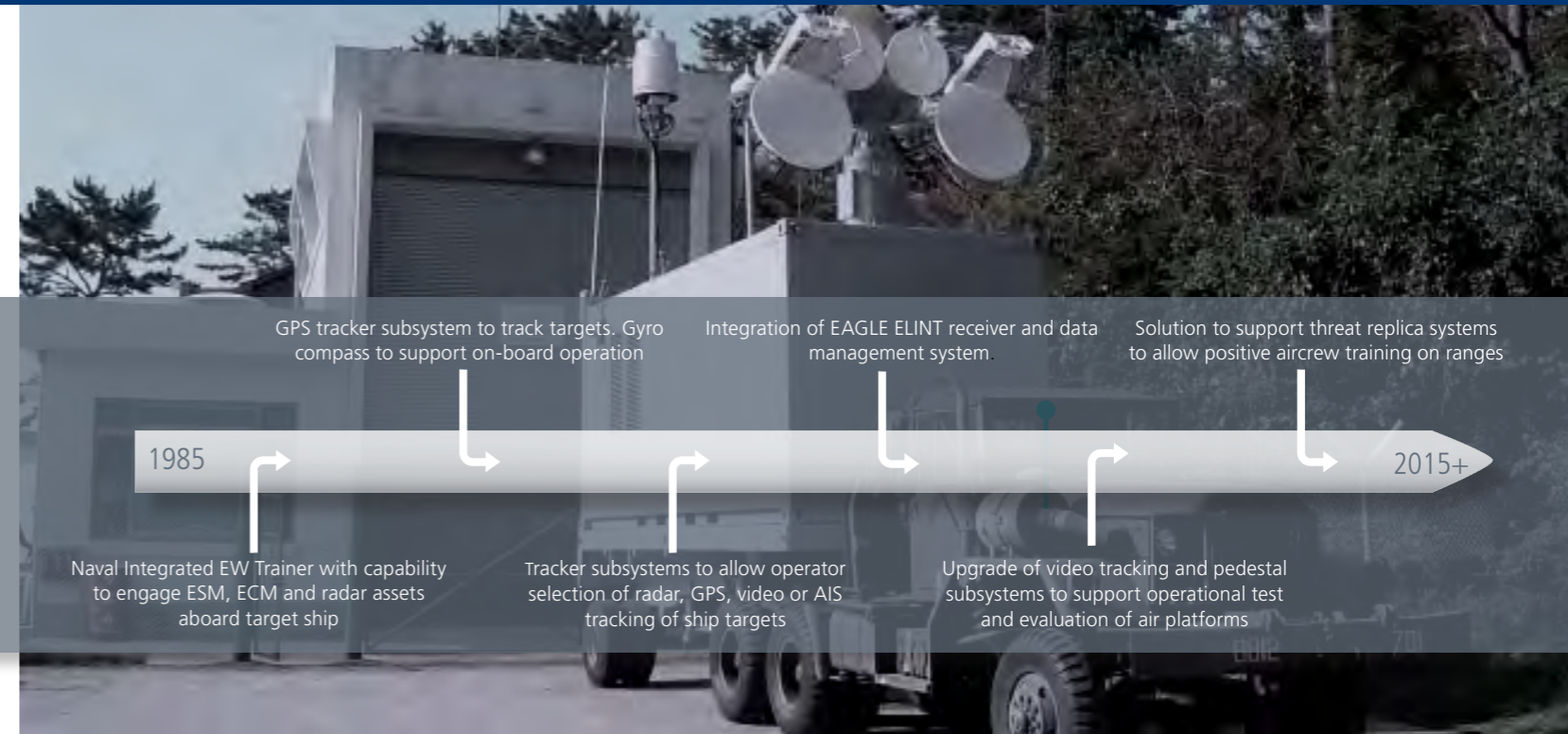


**UltraHAWK**  
ACTIVE SYSTEMS



# Delivering operationally-focused SIGINT and EW systems

Ultra Electronics, TCS is a world-class provider of ground, sea and airborne Signals Intelligence (SIGINT) and Electronic Warfare (EW) systems. Ultra's technical capabilities are underpinned by real and current expert domain-knowledge of the implementation of SIGINT and EW in tactical and strategic operational scenarios.



## Ultra Electronics, TCS Capabilities

ACTIVE Systems	Integrated SIGINT Systems	
<b>UltraHAWK ACTIVE SOLUTIONS</b> Range simulators EW training systems Test and evaluation systems	<b>UltraEAGLE ELINT SOLUTIONS</b> ELINT systems R-ESM systems Hardware and software pulse analyzers	<b>UltraFALCON COMINT SOLUTIONS</b> COMINT systems C-ESM systems Specialist signal intercept

## The UltraHAWK Range Simulator

The UltraHAWK Range Simulator is a product developed to support operational test and evaluation of self protection systems on board ships, aircraft and ground based platforms. The UltraHAWK is capable of radiating multiple simultaneous complex radar signals at a moving or stationary target at ranges of 10-30km.

A typical UltraHAWK configuration includes an environmentally controlled shelter that contains electronic equipment, such as a radar signal simulator, radar target simulator, amplifiers and operator workstations. Associated with the shelter is a platform or trailer that contains the antenna pedestal with transmit and receive antenna arrays and video cameras used for target tracking.

## Analysis Receiver

UltraHAWK range simulators can be equipped with analysis receivers capable of collecting all emissions transmitted at the target and all emissions from the target. Collected signals can be analyzed in real-time or stored for off-line in-depth analysis. The receivers used are based on the UltraEAGLE line of ELINT receivers.

## Fixed or Mobile

UltraHAWK systems can be installed in fixed permanent sites, mounted on trailers or in trucks to support mobile operations. They can also be operated in semi-permanent sites on shore or on board ship when equipped with gyro stabilizers.

## Broad Capability

- ▶ RWR/ES system/jammer engagement & integration on land, sea or air platforms
- ▶ Fully mobile or static configurations (autonomous and/or ad-hoc)
- ▶ Simultaneous engagement of radars and ESM systems utilizing on-board radar signal simulators & radar threat simulators
- ▶ Multiple and simultaneous targets (Radiation of concurrent deception and jamming techniques)
- ▶ Full analysis receiver capability (jamming effectiveness analysis/jamming signal analysis/signal environment in test scenario/interface to 3rd party analysis/DTG/geo stamped outputs)

## Advanced Target Tracking

- ▶ Radar
- ▶ Automatic video tracking
- ▶ AIS tracking
- ▶ Manual tracking
- ▶ Multiple tracking modes available for operator selection

## Advanced Signal Generation

- ▶ State of the art radar signal simulator covering from 0.5 GHz up to 40 GHz
  - ▶ Up to 32 simultaneous complex emitters, each supporting multiple modes and multiple beams, each of which can have pulse-to-pulse parameter agility on all key parameters (PRI, PW, Frequency, MOP, amplitude)
- ▶ Effective radiated power levels up to +100 dBm
- ▶ DRFM based radar target simulator covering from 0.5 up to 40 GHz
  - ▶ Multiple simultaneous channels to support multiple target and ECM generation
  - ▶ Base models include target RCS and Doppler and range



## About Ultra Electronics, TCS

Ultra Electronics TCS, a division of Ultra Electronics, is a global leader in tactical communication systems, including high-capacity radio communication and Electronics Warfare (EW) systems. Ultra Electronics, TCS is proud to work with leading system integrators to provide the best communication systems and services to be integrated with any military architecture and fielded as part of any deployment scenario in the world.

## Ultra Electronics, TCS ISR Solutions

Focusing on EW and SIGINT, the ISR solutions group is based in Ottawa. Ultra's pedigree is underlined by constant collaboration with government customers, government laboratories, scientific establishments and prime integrators. The UltraEAGLE, UltraHAWK and UltraFALCON product lines have detailed technical specifications and system architecture information that is available to government and prime integrators upon request.



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