

Patria

MUSCL Multistatic Coherent Location

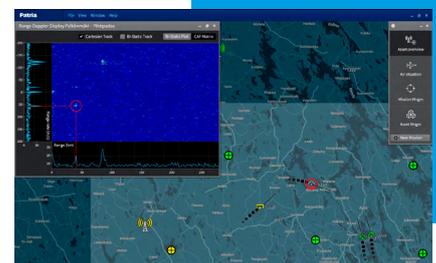
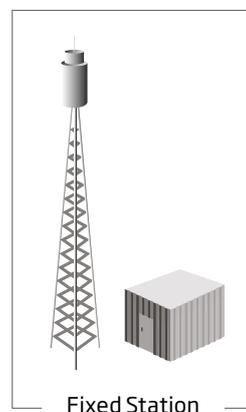


MUSCL – Multistatic Coherent Location

Patria's MUSCL passive radar system is a resilient, covert and easily deployable air surveillance system. The system provides affordable area and point surveillance for various applications such as military air surveillance, border control, critical infrastructure protection and drone detection.

The system exploits FM and DVB-T/T2 broadcasting signals as illuminators of opportunity. The system does not produce a signal footprint making it practically invisible for adversaries' signal intelligence and anti-radiation missiles as well as enabling safe deployments and use in urban areas.

With multistatic receiving geometry and lower operating frequencies than used by conventional air surveillance radars, it can detect stealth and small targets from meaningful ranges. Exploitation of dense network of broadcasting signals enables detection of low altitude targets.



KEY FEATURES

Performance

- » Target detection capability for ranges up to hundreds of kilometers
- » Simultaneous tracking of over 100 targets
- » 360° surveillance coverage
- » Air situation picture update rate 1 Hz
- » Small-size (e.g. UAVs and drones), stealth and low altitude target detection capability
- » Non-cooperative target recognition capability: Fixed wing, propeller, helicopter

System configuration types

- » Deployable or fixed configuration
- » Interchangeable units and modules between system configurations
- » Deployable system operable in harsh outdoor environment
- » Self-sufficient power supply

System highlights

- » FM and DVB-T/T2 signal compatibility
- » ITAR free direct RF sampling receiver architecture
- » Cost-efficiency by utilizing graphics processors (GPU) for real-time signal processing
- » 24/7 unattended remote operation
- » Easy to use graphical user interface
- » Integration to C2 networks (e.g. ASTERIX messages)
- » Man-portable rugged cases give protection against climatic, mechanical, biological and chemical stress during operation and transport

Covert and secure system

- » Covert system with no signal footprint
- » Customized secure gateway implementation between fielded stations and command center

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