

mC-UAS

Advanced C4i
System for
Counter-UAS Threats

Solution Brief

Enhance Your Airspace Security with mPrest's mC-UAS

Addressing aerial threats is crucial in today's environment: mPrest's mC-UAS system offers a comprehensive solution to counter UAS, protecting critical assets, airspace, and operational integrity.

SCALABLE AND PRECISE DEFENSE

Flexible and Reliable System

mC-UAS is a **scalable and modular** C4i system designed to counter the evolving threat of UAS. Leveraging mPrest's expertise in air defense, mC-UAS offers reliable performance capable of neutralizing small drones, whether single or in swarms, up to medium UAS.

Customizable Solutions

Built on an open architecture, mC-UAS **seamlessly integrates a wide range of components**, creating a solution tailored to meet your specific operational needs and budget and to provide optimal defense capabilities.

User-Friendly Interface

The system features an intuitive interface with map integration and clearly defined threat zones. Operators benefit from a **rule-based tool** that supports real-time decision-making, allowing for the creation and update of rules as needed.

Component Integration

mC-UAS offers flexibility in integrating detection, tracking, and **threat elimination technologies**. The system can incorporate both customer-specified and third-party equipment, ensuring smooth integration across various environments.

Integration Capabilities:

- Detection & Tracking: Passive RF sensors, Electro-Optic sensors, and active 3D Tracking RADARS.
- Mitigation Options: RF Jamming, RF Spoofing (including flight control takeover), GNSS Jamming, GNSS Spoofing, or direct destruction by kinetic effectors.

Debriefing and Training

Operational data can be recorded for debriefing and analysis. Additionally, mC-UAS includes embedded training capabilities, allowing operators to **practice within the system environment**.

Unified Air Picture and Situational Awareness

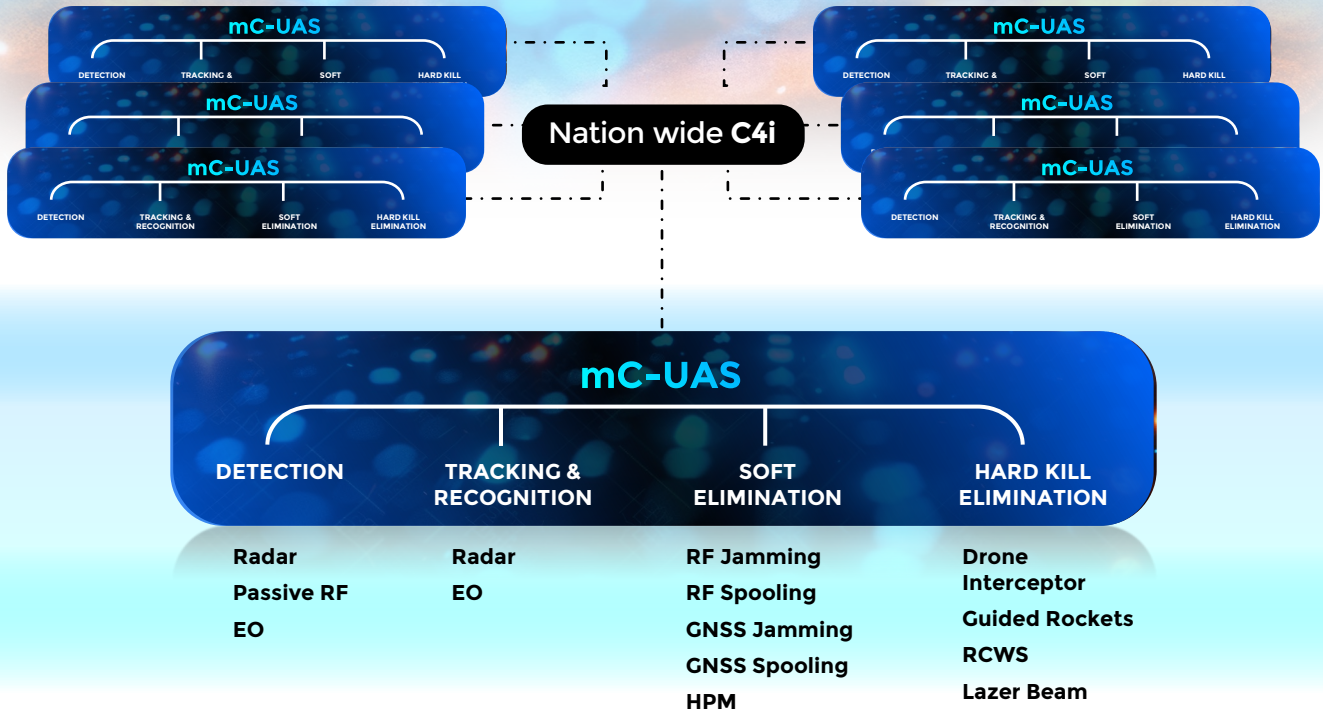
mC-UAS sophisticated data correlation algorithm - with a **multi-sensor data fusion and tracking component (MSDF)** - enables building a comprehensive and clear sky picture to the operator and to reduce the workload.

A Central High Echelon C4i for C-UAS can integrate data from mC-UAS systems or other C4i networks into a single situational awareness picture. This unified view enhances efficiency in threat detection and neutralization.

WHY MPREST DEFENSE?

Known for the Iron Dome C4i, mPrest's defense combat proven solutions excel in collecting and analyzing complex, dynamic scenarios to deliver real-time operational actions against immediate threats. mPrest Defense C4i systems offer comprehensive Military Command and Control capabilities, supporting mission planning and execution with real-time integration of tactical information from sensors across air, sea, and land domains. **These systems, built on an open, modular architecture, enhance operational efficiency and support decision-making processes.**

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ABOUT MSDF

Accurate and reliable surveillance information for all objects within the area of interest is essential for effective airspace security. Leveraging long-year expertise in tracking technologies, the multi-sensor data fusion and tracking component (MSDF) delivers highly accurate and highly reliable surveillance information services by making use of measurements from multiple surveillance sensors and fusing them into one seamless tactical situation picture for air and ground.

mC-UAS Enhances Sky Clarity and Reduces Operator Workload with MSDF

MSDF offers the surveillance engine for diverse fields of application, delivering improved accuracy, richer information and better fault tolerance by fusing data from multiple surveillance sensors into one continuously disseminated, seamless traffic situation picture.

MSDF is scalable with regards to kind & number of sensors & targets, areas of interest and service outputs.







MSDF provides a vendor agnostic surveillance solution that supports a broad range of surveillance sensor technologies, including for example active and passive radars, electro-optical sensors or cooperative sensor technologies.

MSDF improves detectability, accuracy, information richness and fault tolerance for C4i system solutions. MSDF applies advanced tracking techniques including e.g. multiple-hypothesis tracking, non-linear filter algorithms for track state prediction and use case based machine learning approaches.

MSDF is highly adaptable to heterogenous target environments and provides outstanding configuration and tuning possibilities.

MSDF is developed and maintained based on long-year domain knowledge in surveillance data fusion and tracking technologies.

mPREST BENEFITS

-  Open architecture system tailored to meet customer needs
-  Auto / semi-auto operations with intuitive GUI
-  Continuous 24/7 monitoring and recording
-  Ongoing development and integration of new features
-  Scalable software capable of managing complex, multi-site systems (nationwide solutions)
-  Flexible integration with third-party software and hardware