KONGSBERG GEOSPATIAL

IRIS AM
Airspace Management System

Critical Infrastructure and Emergency Airspace Management

IRIS AM (Airspace Management) is a comprehensive, real-time Airspace Management System, which provides operators with a clear picture of all manned and unmanned air traffic in the operational airspace. The application is intended for use safely integrating unmanned systems into the airspace during emergency operations and disaster response, or as an airspace monitoring system for counter-UAS operations around critical infrastructure.
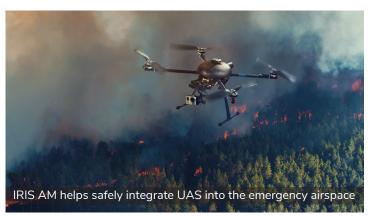
Manage Your Operational Airspace

IRIS AM™ is a combination of software and sensor technology that, like IRIS UxS™ gives operators a comprehensive real-time picture of their operational airspace. However, IRIS AM is optimized for managing emergency airspace operations and counter-UAS applications.

IRIS AM is deployed by first responders and security organizations for integrated emergency operations that require the safe operation of UAS in the same airspace as manned aircraft, and by security organizations that need to manage the airspace and prevent intrusions by hostile UAS around critical infrastructure, including prisons, airports, and sports stadiums.

IRIS AM has also been used for combined emergency response and search-and-rescue operations - tracking ground vehicles, and dismounted searchers in addition to UAS and nearby aircraft.

Conduct Integrated Operations with Confidence

IRIS AM helps safely integrate UAS into the emergency airspace

Utilizing real-time data sources including RADAR, telemetry and ADS-B, IRIS AM calculates the airspace separation between all contacts in the operational space, and between each ownship and the terrain. The system computes the projected flight path of every detected aircraft forward through time, and displays warnings, alerts and cues to the operator if there is a danger of a developing airspace conflict, or an intrusion by unauthorized UAS.

This helps first responders and security organizations effectively operate unmanned systems in an emergency airspace without putting other emergency aircraft operating at low altitude, including water bombers, air ambulances, or police helicopters at risk. With IRIS AM, pilots can confidently and effectively operate UAS in close proximity and chaotic situations without posing a risk to manned aircraft.

Protect Critical Airspaces from Infiltration

IRIS AM is also being applied for monitoring and protecting important airspaces from intrusion by hostile or unauthorized UAS, including the airspace around airports, prisons, and other critical infrastructure.

How IRIS AM Works

The IRIS UxS system comprises a software engine connected to a Data Distribution Service (DDS) bus. The software engine accepts real-time updates from a variety of sensor inputs and performs target fusion between multiple dissimilar sensor types. The resulting airspace picture is layered over the terrain and environment and displayed in real-time, using Kongsberg Geospatial's TerraLens® geospatial engine.

IRIS AM supports integration with a variety of sensor types and data feeds out of the box, including RADAR, ADS-B, and GPS receivers. Additional sensor support can readily be added via the DDS bus.

Keep Hostile UAS Out of your Airspace

IRIS AM is an ideal airspace management tool for protecting the airspace around critical infrastructure. When integrated with the right combination of sensors, IRIS AM has proven effective in detecting small, commercially available drones, including the DJI Mavic, and in triangulating the likely location of the drone operator.

The system has proven effective at ranges of up to three nautical miles, and has been used successfully to locate hostile drone operators in repeated policing and security exercises. IRIS AM has been deployed for airspace management at prisons and airports in the United States, Canada, and Europe.

Share Airspace Data with your Emergency Team

For field operations, it has proven useful to be able to share the airspace picture with other team members in the field. As an optional additional feature, IRIS AM can include a web-based component that sends near real-time updates of the airspace picture to a web-based client, allowing team members secure access to critical information on their mobile device over WiFi (where available) or LTE Internet.

Features

- Displays ownship UAS feeds, including telemetry and video
- Live track data from ADS-B, Harris NEXTGEN™ and LATAS™
- Live ADS-B data integration with uAvionix PingStation™
- Integrated with Cloud Cap Piccolo, ArduPilot, PixHawk, Cube and Micropilot autopilots
- High-performance plotting of up to 10,000 simultaneous tracks
- High-performance 3D map and terrain engine powered by TerraLens®
- Deployable to multiple form factors, from mobile devices to 4K touch
- Pilot-configurable UI, map styling, and data layers

the IRIS AM interface shows data for all UAS in the airspace

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