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MISSION CONSOLE

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FlySight Announces Integration of OPENSIGHT with H-Tech Airborne Solutions' MFAR Mission Computer

FlySight and H-Tech Airborne Solutions are excited to announce a new integration between the advanced OPENSIGHT Mission Console software system and the H-Router MFAR (Multi-Functional Avionics Router) mission computer. This collaboration marks a new step forward in the evolution of airborne mission systems and a new implementation opportunity, enhancing operational efficiency and situational awareness for military and civilian aviation applications.

The OPENSIGHT software suite provides real-time augmented reality engine, artificial intelligence-enhanced data processing, and integration with airborne sensor suites. Now, with its compatibility with the MFAR mission computer, OPENSIGHT will deliver unprecedented capabilities in video switching, airborne network routing, and firewall solutions, offering a highly sophisticated and reliable airborne mission solution.

How the integration works

The integration of OPENSIGHT with MFAR is designed to maximize the efficiency and performance of airborne operations:

- **Steady Data Fusion:** OPENSIGHT processes real-time sensor data and overlays it with augmented reality insights, offering mission operators unparalleled situational awareness.
- **Optimized Video Switching:** Integrated with MFAR's video switching capabilities, OPENSIGHT ensures optimal management of multiple video sources, delivering clear and reliable visual intelligence.
- **Secure and Robust Networking:** Leveraging MFAR's advanced networking features, including airborne router and firewall solutions, OPENSIGHT ensures secure and reliable data transmission across mission-critical environments.
- **Real-Time Decision Support:** OPENSIGHT seamlessly processes and overlays real-time sensor data with augmented reality insights, ensuring that mission-critical information is always available for rapid decision-making.

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Key Benefits and Integration

- **Enhanced Situational Awareness:** Enhanced Situational Awareness: By leveraging OPENSIGHT's real-time data visualization and MFAR's high-performance processing, mission operators gain a comprehensive and accurate operational picture, improving both awareness and responsiveness.
- **Flexibility for System Integrators:** The open architecture of OPENSIGHT and MFAR allows for seamless integration with various avionics systems, ensuring adaptability to multiple platforms.
- **Increased Operational Efficiency:** By streamlining video and data management, this integration reduces operator workload, allowing for more effective mission execution.
- **Robust Security and Reliability:** MFAR's advanced firewall and network management features ensure secure communication and data integrity in high-stakes operational environments.
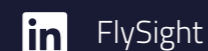
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The H-Router MFAR

The H-Router MFAR by H-Tech Airborne Solutions is a high-performance router and computing platform featuring two integrated systems: a network and routing computer for seamless aircraft integration and a powerful open platform for third-party software.

While the routing system ensures compatibility and interoperability through its various interfaces, the powerful open platform is designed for hosting advanced mission systems like OPENSIGHT. This combination provides a versatile solution and offers the basis for OPENSIGHT to support missions through their innovative application.

Features

- Seamless integration into avionics systems with versatile compatibility
- 67 interfaces across 13 types, including Ethernet, SDI, RS-232, RS-422, ARINC 429, USB, GPS, Wi-Fi, and LTE
- Advanced networking with full routing, secure firewall functionalities, and encryption
- Power over Ethernet capability saves weight and space
- Future-ready AI expansion module for enhanced processing capabilities
- High-performance mission computing with a dedicated GPU, 32GB DDR3 RAM, 2TB SSD storage, dual video outputs, and USB ports
- Physically separate open computing platform for hosting third-party software
- Robust architecture optimized for demanding mission software on Linux and Windows distributions

We are excited about the collaboration between Flysight and H-Tech Airborne Solutions, combining our high-performance computing platform, with their advanced mission software to enhance airborne operations. MFAR's powerful processing capabilities provide the ideal foundation for OPENSIGHT's innovative applications, enabling superior situational awareness and mission efficiency. This partnership reflects our commitment to delivering future-ready solutions that enhance Safety, Visibility, Reliability and Connectivity in the most demanding environments.

Christopher Hofheinz, Head of Hardware Engineering
H-Tech Group

OPENSIGHT Mission Console

OPENSIGHT Mission Console is specifically designed to support payload operators in airborne scenarios, with the aim to conduct the mission more smoothly and efficiently. An Augmented Reality engine, capable of handling multiple high-resolution video flows, improves the geospatial situational awareness of the operator by the superposition of multiple synthetic information layers.

No need to switch to the moving map anymore: all the information is displayed directly over the video for a better mission effectiveness.

Features

- Video processing algorithms for image enhancement (equalization, expansion, saturation, dehazing, fog suppression, super resolution)
- Augmented Reality engine for real-time vector overlay superimposition (works with custom user data)
- 3D Moving map with multiple layers support and real-time video-over-map projection
- Geodatabase functionality for direct and inverse geocoding
- Full touchscreen HMI for quick and effective interaction with the operator

Taking integration to the next level, the OPENSIGHT Mission Console is exceptionally agile and quick to integrate into any mission system. This is made possible through the Open Code provided to OPENSIGHT Software Development Kit users. The Open Code, a unique template crafted by FlySight developers, optimizes the implementation of OPENSIGHT-Mission Console. It not only enhances usability but also unlocks the full potential of OPENSIGHT for the entire user community. Users can effortlessly build upon the established solution, customizing, updating, and enhancing capabilities with ease and speed

A common mission

The partnership between FlySight and H-Tech Airborne Solutions is driven by a shared commitment to innovation, reliability, and excellence in avionics technology. The integration of OPENSIGHT with MFAR embodies a new era in airborne mission computing, empowering system integrators and end-users to achieve superior mission performance and strategic advantage in an increasingly complex operational landscape.