SKY-WATCH

SOFTWARE

FROM INSIGHT TO IMPACT

CONTENTS

SECTION 1.0

DIGITIZING THE BATTLEFIELD

The conflict landscape is continuously evolving. New threats require multi-domain coordination and real-time data collection as well as the integration of advanced defense technology.

At Sky-Watch, we empower troops and decision makers. We strengthen situational awareness and provide a significant edge in front-line efense and mission effectiveness.

ELECTRONIC WARFARE IS HERE TO STAY

The majority of defense drones are failing in modern combat and against Electronic Warfare. One major contributor to this is the use of open-source software. We have a solution to that. Over the last 7 years we have developed an extensive and proprietary software suite for:

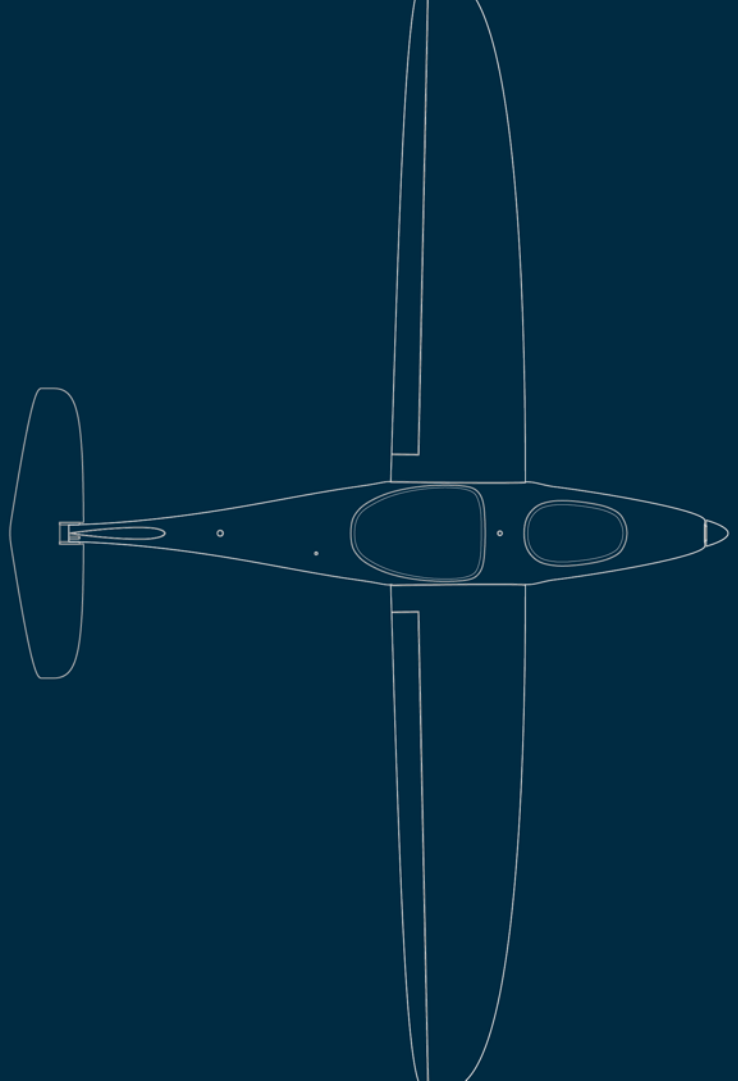
- Flight control
- Ground control
- Third-party integrations for:
  - Battle Management Systems
  - Sensor-to-Shooter systems
  - Strategic/tactical AI-based data analysis and dissemination.

ONLY WHEN YOU STAY INFORMED, WILL YOU KNOW WHAT MATTERS

Our software-suite is engineered for the demanding contexts of military use. It offers unrivaled control in any mission environment, including GNSS-denied areas, and will streamline your flight planning process ensuring efficiency and precision in mission execution.

FROM INSIGHT TO IMPACT

The RQ-35 Heidrun is not just about flying a drone. It’s about delivering clarity that cuts through complexity. Powered by an advanced software stack, the RQ-35 Heidrun delivers instant operational insights, reduces uncertainty, and secures peace of mind, regardless of circumstance or situation.



SECTION 2.0

CUT THROUGH COMPLEXITY

In unpredictable environments, certainty is a tactical advantage.
Our plug-and-play software solution enables data-driven operations with instant access to mission-critical intelligence. Built for interoperability, the system keeps frontline units informed, agile, and ready to act and respond with precision.

MEET THE SKY-WATCH DRONE MANAGER

The Sky-Watch Drone Manager sets a new standard in UAV operations with its user-friendly interface and optimal performance on both tablets and laptops.

It offers unrivaled control in any mission environment, streamlines your flight planning process with customizable segments and ensures efficiency and precision in mission execution.

You will get simple and fast access to sensor data, terrain elevation, a sophisticated alert system, and highly advanced features such as the capability to fly in GNSS-denied environments. The result is operational readiness with straightforward and seamless flight log management and live video feed.

Sky-Watch Drone Manager is your ultimate Ground Control Station, simplifying operations and setting a new standard for simple control of UAVs.

THE SKY-WATCH DRONE MANAGER INCLUDES:

- Post-mission reporting
- Map handling
- GNSS-denied navigation

- Mission planning
- UAV control
- Video control

- System overview and updates services
- Advanced service & production tool
- Multi-language support

2.1 MISSION PLANNING

UNRIVALED CONTROL IN ANY MISSION ENVIRONMENT

INTUITIVE MISSION SETUP

Configure flight plans within seconds with a user-friendly interface designed for efficiency.

INTELLIGENT ELEVATION ADJUSTMENT

Enhance safety and effectiveness of missions with automatic adjustments of flight plans based on ground elevation and wind.

DYNAMIC FLIGHT PLAN MODIFICATIONS

Adapt in-air and in real-time facilitated by change and upload of flight plans.

FULLY AUTONOMOUS MISSIONS

Execute complete missions autonomously based on the uploaded flight plan without need for manual control.

2.2 UAV CONTROL

SIMPLIFY OPERATIONS WITH INTUITIVE CONTROL

UNIFIED CONTROL INTERFACE

Operate both UAV and payload seamlessly with centralized control from an easy-to-use single tablet.

COMPREHENSIVE FLIGHT INFORMATION

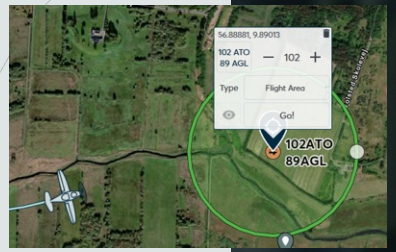
Ensure safe and informed piloting based on all flight-critical information, updates and status in real-time.

PROACTIVE ALERT MANAGER

React instantly to critical flight conditions based on notifications of terrain warnings and system anomalies.

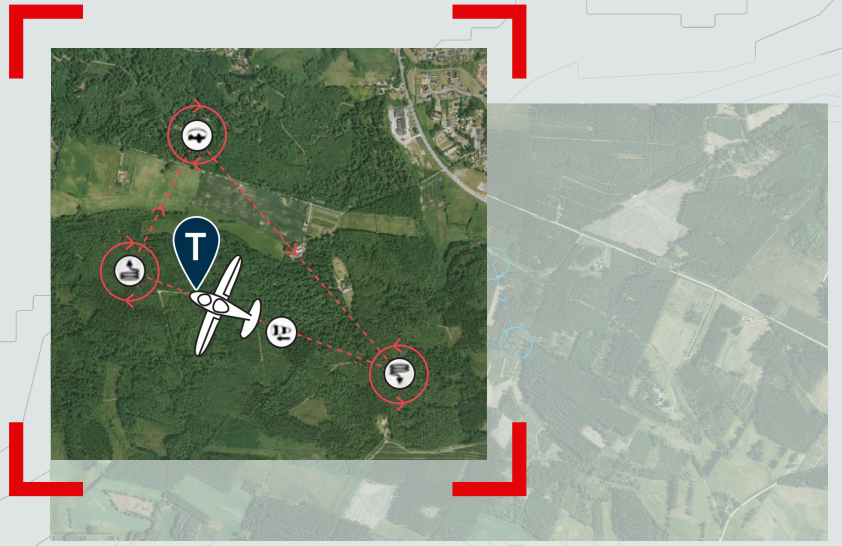
VERSATILE AND USER-FRIENDLY NAVIGATION

Navigate as you please with flexible navigation choices – pre-planned routes, click on the desired location on the map or directly through a video feed. Or via manual control with an on-screen software joystick for precise maneuvering.



2.3 VIDEO CONTROL

FLEXIBLE VIDEO CONTROL FOR COMPLETE OVERVIEW



TOUCH-FRIENDLY CAMERA CONTROL

Control the Payload with a simple tap or drag with the user-friendly design optimized for touch interactions.

OBJECT TRACKING CAPABILITY

Engage real-time tracking of moving objects with automatic payload adjustments keeping focus on the target.

MAP-BASED CAMERA TARGETING

Direct the camera to focus effortlessly by clicking on the map on specific ground locations.

INTEGRATED VIDEO OPERATIONS

Keep control of the video recording with options to capture both video and still images during flight.

DYNAMIC POI CREATION

Generate Points of Interest (POIs) instantly directly from the video feed, automatically displayed on the map.

2.4 POST MISSION REPORTING

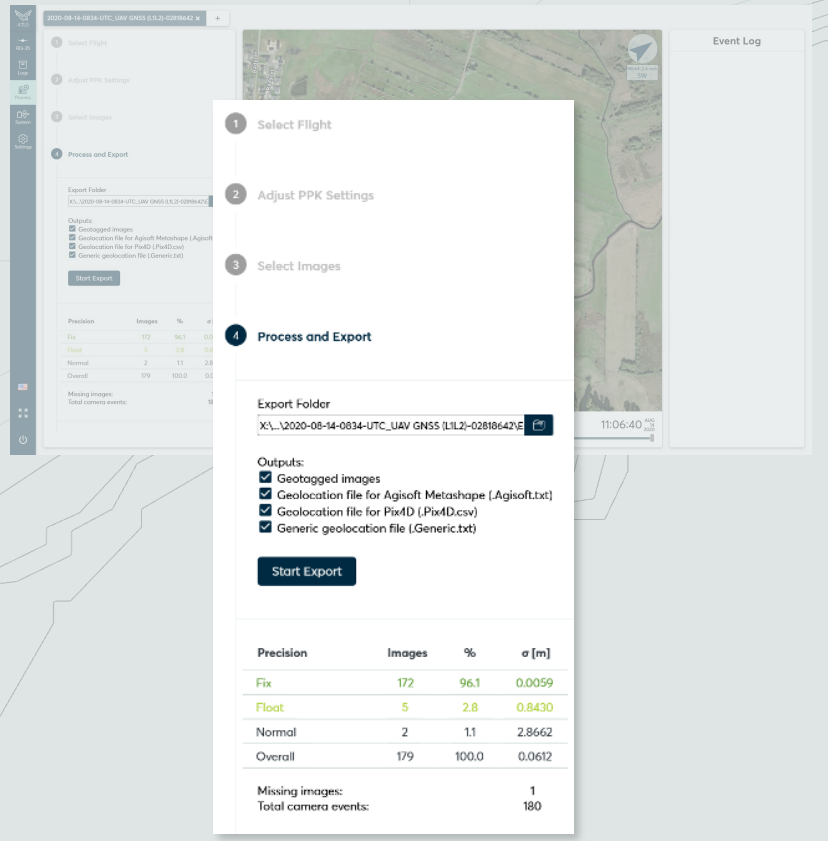
EXPEDITE POST MISSION REPORTING

DETAILED MISSION REPORTING

Generate fast mission analysis and documentation with comprehensive post-flight PDF reports, including videos, images, and Points of Interest (POIs) captured during the mission.

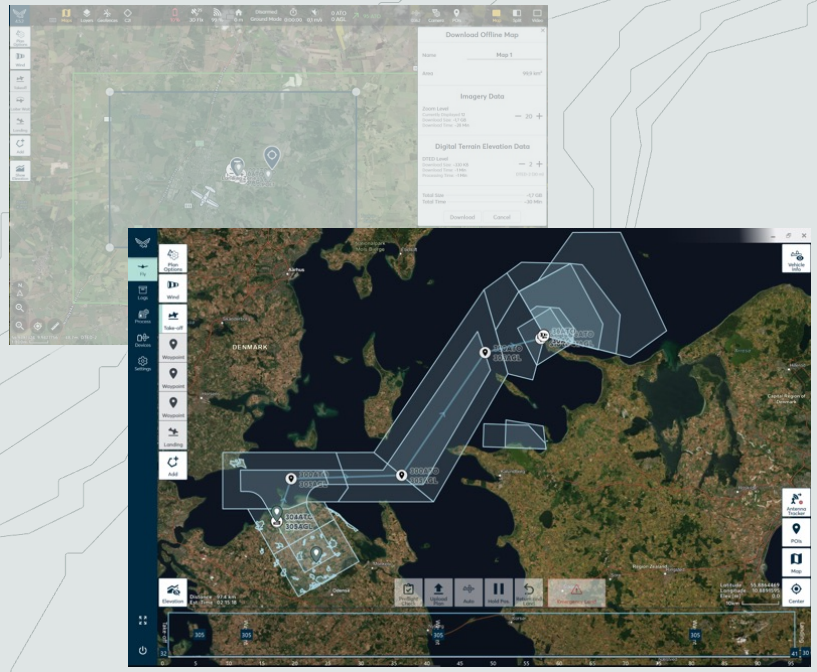
FLIGHT PATH VISUALIZATION TOOL

Review routes and assess images immediately with a processor tool displaying the flight path taken by the UAV.



2.5 MAP HANDLING

MAP HANDLING AT YOUR FINGERTIPS



INTEGRATED ESRI MAPS

Access high-quality geographic data for detailed mapping and navigation.

DIRECT MAP DOWNLOADS

Support mission planning and precise flight execution with instant download of maps and elevation data.

MAP MANAGEMENT AND WARNINGS

Coordinate flights with map data based on a detailed list of all downloaded maps, automatically alerting if planned flight paths or areas fall outside the available offline map coverage.

VECTOR GRAPHICS IMPORT

Customize map presentations with Vector graphics. Import overlays for additional data layering.

2.6 GNSS-DENIED NAVIGATION

FLY ANYWHERE. INCLUDING GNSS-DENIED AREAS

OPTIMIZED FOR GNSS-DENIED ENVIRONMENTS

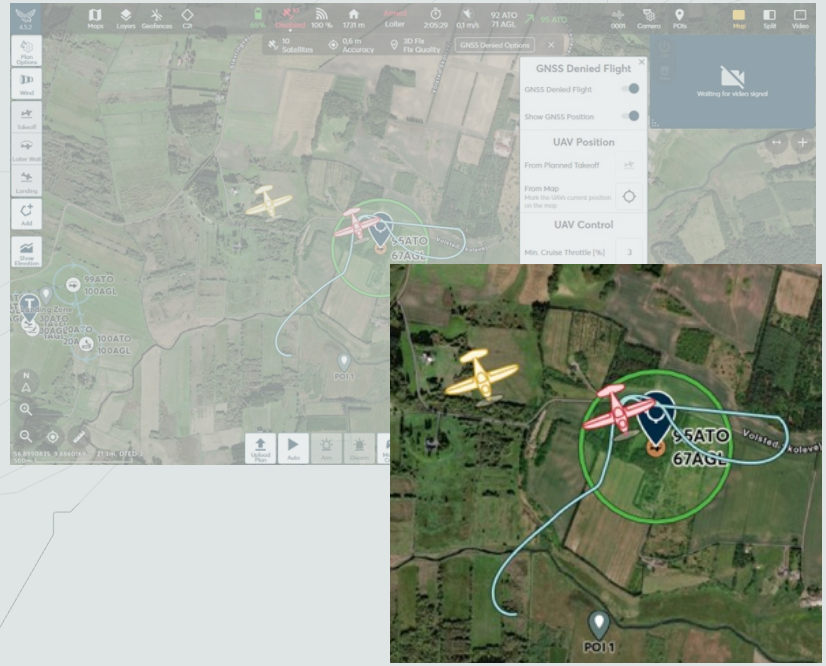
Ensure continued operation with reliable performance even in areas where GNSS signals are compromised or unavailable.

ADVANCED POSITION ESTIMATION

Always keep track of the UAV's position with Flight controller estimating the position when GNSS is disabled.

LANDMARK-BASED POSITION ADJUSTMENT

Adjust flightpath immediately in case of drift. Visible landmarks are identified through the camera feed and transferred in real-time which allow for precise adjustments for drift when needed.



SECTION 3.0

DOMINATE THE BATTLEFIELD

Our proprietary software suite transforms raw data into actionable insights - powering everything from flight control and sensor-to-shooter links to seamless integration with leading battle management systems. Achieve a decisive tactical edge with improved situational awareness and fast decision-making to stay one step ahead.

3.1 INTEGRATION OF THIRD PARTY SOFTWARE

IMPROVED SITUATIONAL AWARENESS

POI CONVERSION AND DISTRIBUTION

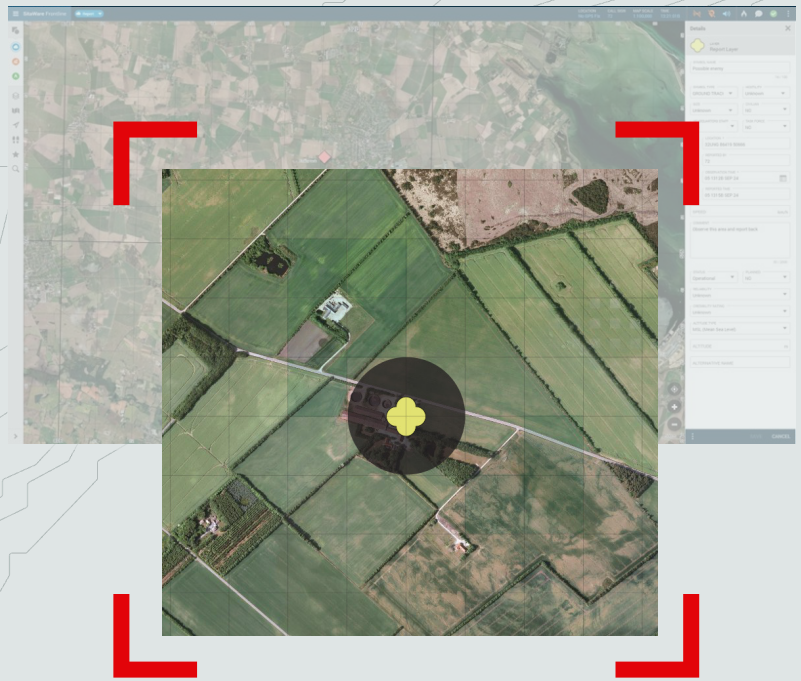
Empower real-time decision-making. Points of Interest (POIs) designated by the user are automatically converted into NATO Joint Military Symbology objects and distributed to Battle Management Systems.

SITAWARE INTEGRATION

Enhance operational awareness. Sky-Watch Drone Manager (SDM) seamlessly integrates with Systematic's SitaWare suite, exchanging NATO symbology objects in real-time. Live video feeds from SDM are transmitted directly to SitaWare and distributed to key stakeholders and commanders.

ATAK COMPATIBILITY

Improve coordination across the network. SDM supports real-time video streaming to ATAK, ensuring widespread accessibility.



3.2 SYSTEM OVERVIEW
AND UPDATE SERVICES

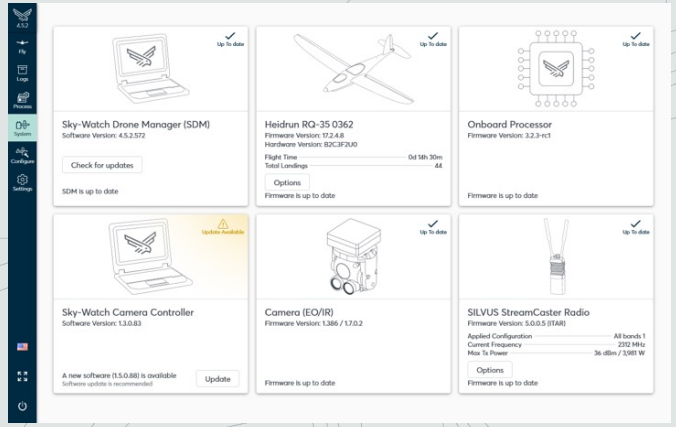
OVERVIEW AND UPDATES IN REAL-TIME

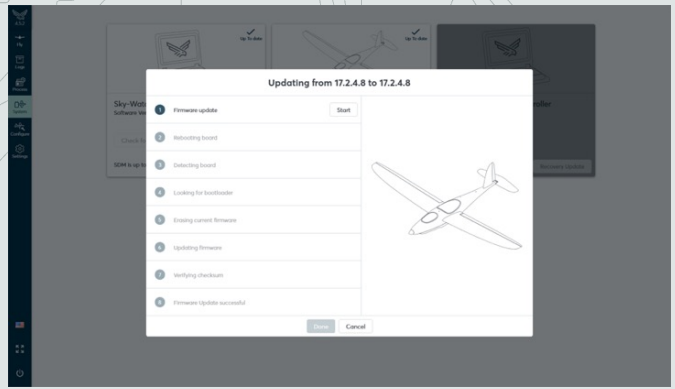
SYSTEM STATUS MONITORING

Display real-time operational status for critical system components such as UAV, payload, radio, and onboard processor within SDM.

PROACTIVE UPDATE ALERTS

Get timely upgrades and consistent system optimization with automatic alerts about available updates and associated system components.





SECTION 4.0

SECURE PEACE OF MIND

Ensure uninterrupted missions with a robust, proprietary software suite built for mission-grade security. Even in GNSS-denied or EW-contested zones, your data stays safe, links stay stable, and decisions stay informed. With ongoing feature updates, security patching, and advanced data sanitation you are always ready for action.

4.1 ADVANCED SERVICE & PRODUCTION TOOL

ENHANCE EFFICIENCY AND PRECISION

ALL-IN-ONE UAV CONFIGURATION TOOL

All you need to set up and maintain the UAVs with firmware flashing for up-to-date software, precise parameter settings for optimal operation, and extensive calibration tools for power, control surfaces, and elevator.

COMPREHENSIVE PRODUCTION GUIDANCE

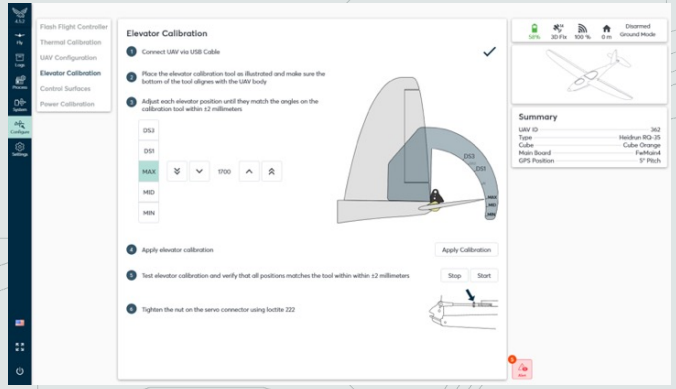
Improve efficiency and precision with detailed guides to streamline internal production processes.

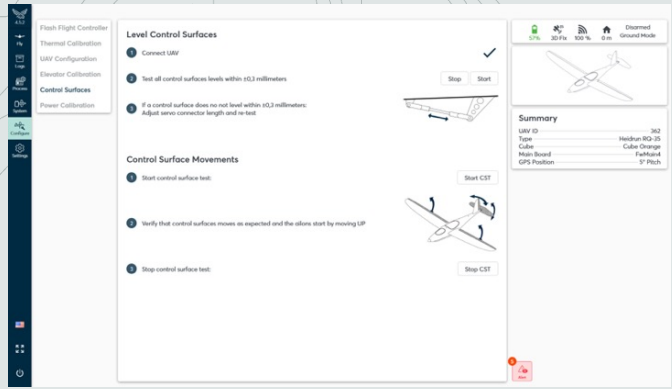
SERVICE AND CALIBRATION ACCESSIBILITY

Prolong UAV lifetime with calibration tools available to external repair centers and end-users, enabling onsite adjustments and maintenance

INTEGRATED UPDATE GUIDES

Maintain the system with ease with detailed, step-by-step instructions for component updates of software and firmware.





4.2 MULTI-LANGUAGE SUPPORT

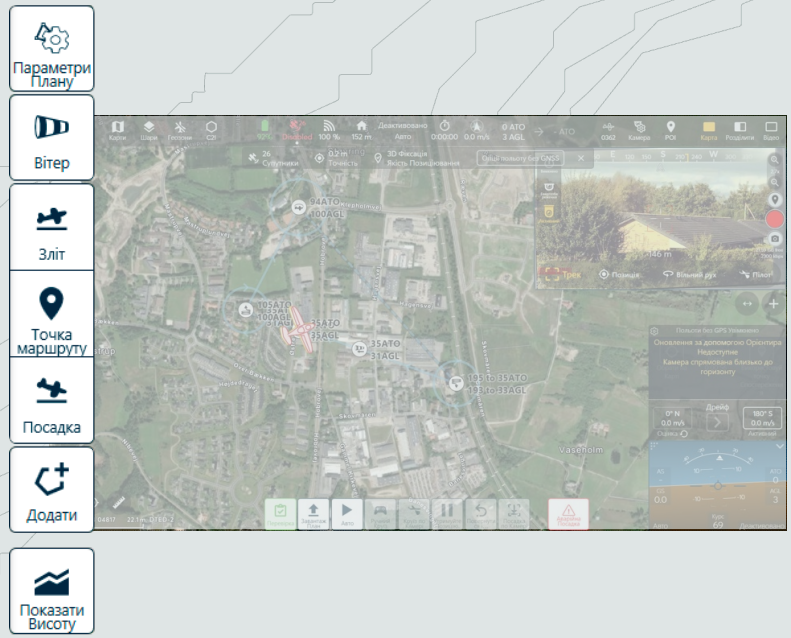
DRONE MANAGER IN MULTIPLE LANGUAGES

HIGH-QUALITY LANGUAGE LOCALIZATION

Multiple language versions ready to use, ensuring accessibility and usability for a global user base.

TRANSLATE UI TO ANY LANGUAGE

Accommodate specific language needs with a UI that can be translated to any language to minimize barriers to mission success.



4.3 SKY-WATCH CAMERA CONTROLLER (SCC)

PURPOSE BUILT FOR PAYLOAD OPERATORS

The Sky-Watch Camera Controller (SCC) is a standalone application crafted specifically for ease of use for all payload operators.

ADVANCED PAYLOAD CONTROL

See what matters. SCC features all the camera payload functionality known from SDM, such as object tracking, image stabilization, and POI gathering and reporting.

INTEGRATION WITH SKY-WATCH DRONE MANAGER

Integrate seamlessly. POIs and media captured in SCC are automatically transferred to and shown on the map in SDM.

DYNAMIC MISSION ADAPTATION

Stay in control. SCC and SDM support dynamic switching of payload control between the two applications on the fly.

4.4 PAYLOAD & RETRACT CONTROL

SMART PAYLOAD MANAGEMENT

INTEGRATED CONTROL SYSTEM

Ensure seamless UAV operation with custom-built software embedded in the payload/retract board, allowing precise control over payload extension and retraction.

AUTOMATIC RETRACTION ON LANDING

Protect sensitive equipment with automatic retraction of the payload during landing, maintaining UAV stability.

EMERGENCY PROCEDURE INTEGRATION

Enhance UAV safety and resilience with built-in emergency protocols enabling rapid payload retraction in critical situations.

4.5 UAV EMBEDDED FLIGHT CONTROL

EFFICIENT FLIGHT CONTROL FOR SAFE OPERATIONS

CORE OPERATIONAL RESPONSIBILITY

Ensure consistent, safe operations with the Flight Control feature, crucial for maintaining UAV stability and flight dynamics, across a variety of mission profiles.

DEEPSTALL LANDING

Enhance safety and precision with the unique deep stall landing technique, which also enhances operational flight time.

INTELLIGENT FAILSAFE MANEUVERS

Secure continuous safe operation with automatic activation of failsafe measures in critical situations, such as signal loss or GNSS jamming.

PROPRIETARY SOFTWARE UPGRADES

Enhance functionality and performance. Supported by extensively optimized software, built on a community-developed foundation.

4.6 UAV EMBEDDED FLIGHT CONTROL

INTELLIGENT CAMERA BASED FLIGHT PATTERNS

ADVANCED AUTOMATED HOLDING PATTERN

Ensure optimal camera orientation with an intelligent holding pattern to stay within a designated area, automatically adjusting the flight path for the most stable video feed. This ensures optimal camera orientation and prevents unwanted wraparounds.

CAMERA CRUISE

Allow intuitive control directly through the camera with a video-driven navigation mode where the UAV automatically flies toward and tracks objects centered in the video feed.

CAMERA LANDING CAPABILITY

Enable precise landings by identifying and tracking a target in the video feed, allowing for GNSS-denied landings using camera-based navigation.

4.7 RADIO CONTROL

OPTIMIZED RADIO COMMUNICATION

ADAPTIVE RADIO POWER CONTROL

Maintain a strong and stable connection with UAV and SDM automatically adjusting radio power to reduce electronic exposure.

EASY FIRMWARE UPDATES

Ensure up- to-date communication system through update of radio firmware directly through SDM.

SEAMLESS RADIO PAIRING

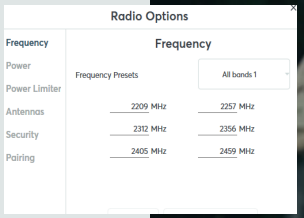
Quick and hassle-free setup by pairing of UAVs and radio units effortlessly via SDM.

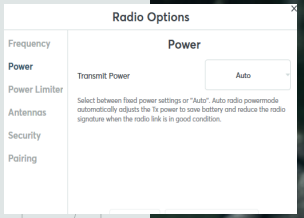
CUSTOMIZABLE FREQUENCY SETTINGS

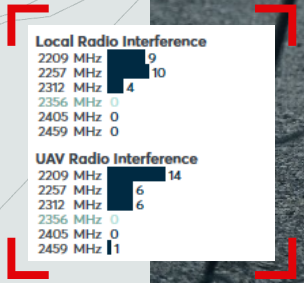
Match mission-specific communication needs with adjustment of radio frequencies and settings within SDM.

REAL-TIME INTERFERENCE MONITORING

Make instant adjustments with live tracking of radio interference, maintaining a reliable connection.



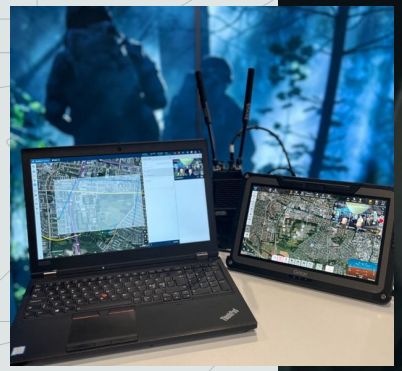


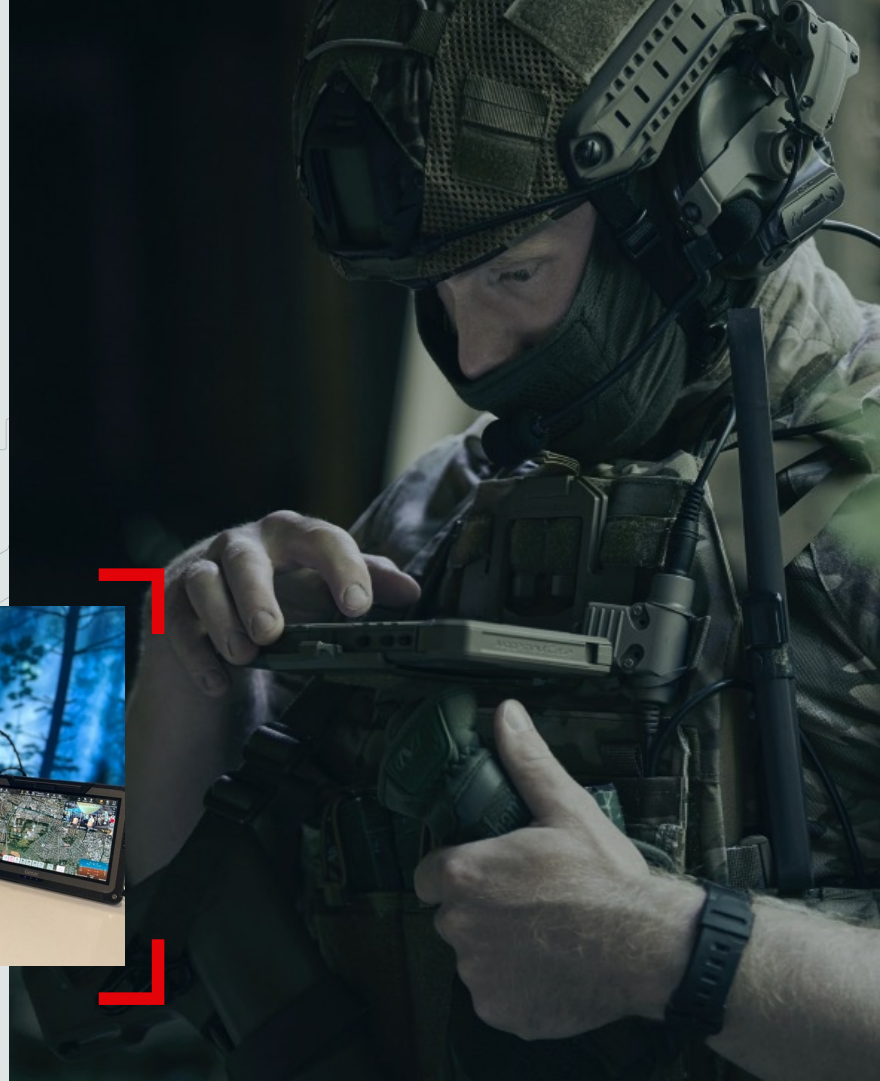


4.8 INTEGRATION OF THIRD PARTY SOFTWARE

CONNECT TO PERFORM

- **Sensor-to-shooter**
- **Connecting the kill chain (The Kill Cloud)**
- **BMS / SA app integration**
- **Data dissemination & analysis (AI facilitation)**





SKY-WATCH

THANK YOU FOR YOUR ATTENTION.
ANY QUESTIONS?