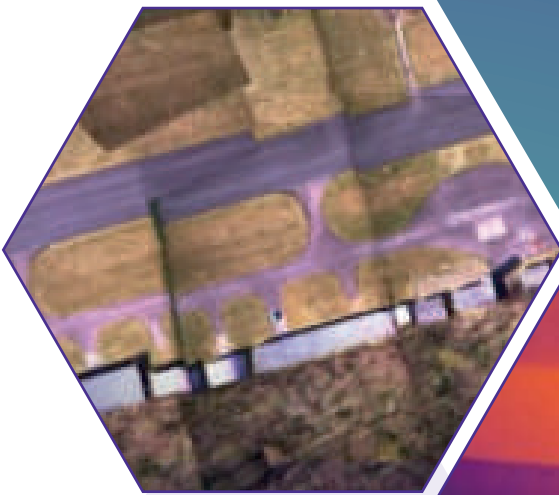


# EZ-CHAINS

UNIVERSAL EMBEDDED PLATFORM FOR SWARMING OF HETEROGENEOUS DRONE AGENTS (UAV, UGV, USV)

*EZ-CHAINS is an embedded intelligence for a fleet of unmanned systems. It leverages each drone's expertise by having them communicate with each other. Following the principle that acting as a group is smarter than operating alone*

REAL-TIME  
AUTONOMOUS MAPPING



INTELLIGENCE  
SURVEILLANCE  
RECONNAISSANCE



TACTICAL  
EFFECTOR DROPPING



## EZ-CHAINS CORE

### MISSION PLANNING

Operation simulation  
HIL/SIL - safe by design

### HYPERVISION

UAV Status  
Monitoring & control  
Payload Control  
3D Dynamic geofencing  
STANAG 4589

### MISSION EXECUTION

U-SPACE integration  
Safety management

### EMBEDDED FAILSAFE

Resilient to com loss  
Repulsive avoidance  
4D Navigation  
Auto-landing

### VISUALISATION

Symbology of enrichment (BFT)  
Recording & replay

### INTEGRATION

With other vehicles  
ADS-B / FLARM  
Tier systems  
C2, C4i, UTM, U-SSP

### PAYLOAD MANAGER

Payload data for failsafe  
STANAG 4609

### COMM.

Centralized or  
Mesh Network

### COMPATIBILITY

API for UxV  
MAVLink and  
80% of autopilots





# WHY EZ-CHAINS ?

As a multi-operable platform, EZ-CHAINS coordinates aerial, terrestrial and waterborne drones of multiple manufacturers. Its modular software architecture provides automation and real-time mission adaptation according to mission and external environment, sensors or systems offering a continuous high level of service, security and safety. Using the versatility of a drone fleet, it provides a huge solution for complex missions based on drone swapping or swarming.

MULTI-OPERABLE



VERSATILITY



AUTOMATION



SAFETY



SECURITY



# FUNCTIONALITIES

## Embedded autonomy

<b>Multi-drones agents heterogenous/homogeneous (36 agents)</b>	✓
Agent : Multirotor UAVs/UGVs	✓
Agent : Fixed Wing UAV	Option
More than 36 agents	Option
Interoperability with autonomous agents (UGV, IOT)	✓
<b>Safe flight</b>	✓
Static / Dynamic geofencing	✓
Dynamic Swarm deconfliction	✓
Geofencing based on IOT on Human/Vehicule	Option
Smart battery monitoring with automatic end-of-flight	✓
<b>Deterministic rule-based autonomous navigation</b>	✓
Automatic waypoints and path planning	✓
Leader-Follower navigation (UAV-UAV or UGV-UAV)	✓
Automatic Take-off /Landing – standard helipad	✓
Moving helipad, specific areas	Option
<b>Automatic scan of zones</b>	✓
Advanced scanning & exploration	Option
Automatic Target Recognition	✓
<b>Georeferenced photos</b>	✓
Local storage of videos/ photos when low bandwidth	✓

## HMI – Command and Control

<b>Tactile HMI</b>	✓
<b>Unique HMI + share of tacview</b>	✓
C2-C4i integration / SPY'C / ATAK/ CICS-D / ATLAS	Option
U-SPACE information	Option
Layers display management	✓
Live mission editing and objective assignments	✓
Geolocation of potentiel threats	✓
Geolocation of agents & connected objects	✓
Display of agent status and video feeds	✓
Display zones to scan & scanned zones	✓
Surface and distance measure	✓
<b>Preparation, Simulation, Rehearsal</b>	✓
4D Automatic planification of mission and tasks	✓
Dynamic re-allocation of autonomous agents	✓
Decision making help algorithm	Option
Object selection and attributes visualisation	✓
Vectorial data visualisation	✓
<b>Automatic Target Recognition</b>	✓
Image sampling detection under bandwidth constraint	Option
Automatic report generation with metadata/threat	✓

## Supported platform

<b>UAV</b>	
DRONEVOLT / AM704	✓
HEXADRONE / TUNDRA 1 - TUNDRA 2	✓
ISS AEROSPACE / SENSUS L - SENSUS M	✓
NOVADEM / NX70	Option
PARROT / ANAFI-AI - ANAFI-USA	✓
PILGRIM / Drone Cargo - Dragon	✓
SQUADRONE / Apach – Crow - Stork	✓
ATECHSYS / DSA	✓
DJI / M30 - M300	On demand
Other manufacturer	On demand
<b>Autopilots</b>	
Ardupilot / Arducopter	✓
HIONOS / PULSAR	✓
MAVLINK compatible autopilot	On demand
Other autopilots	On demand

## EZ-CHAINS INSIDE



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