elsight



Blue UAS DoD Listed	Listed in **UAS Marketplace**	**NDAA** Section 848	**ITAR FREE** No Export Restrictions	**TRL-9** Validated	**MIL-STD** 810G	**ISO 9001** 2015	**FCC** Certified

Built for the Contested Sky.

The mission enablement engine for UAVs operating BVLOS – in defense, public safety, and commercial operations.

There's a Halo for Every Mission

Aerial platforms operate where the environment is most contested and the margin for error is zero. Lost links, spoofed positioning, and degraded video don't just affect the mission – they put operators and assets at risk.

Elsight's Halo is the mission enablement engine that keeps airborne platforms connected, located, and fully operational – no matter what the environment throws at them. With over 500,000 operational hours across military and commercial UAV deployments, Halo is the most field-proven platform in its class.

Value-rich Benefits

- **Low SWaP –** under 100g, 86mm x 69mm x 14mm, 6.5W. Designed for the tightest payload budgets.
- **Field-proven –** 500K+ operational hours across military and commercial UAV platforms worldwide.
- **Direct MAVLink support –** seamless integration with standard UAV autopilot systems.
- **Enables BVLOS certification –** FAA accepted built-in network and broadcast Remote ID.
- **Multi-network bonding – not failover. All links active simultaneously. No switchover delay.**
- **Cybersecurity –** VPN-over-VPN tunneling, AES-256-CBC encryption, data security packet splitting.

What the Engine Enables

Connectivity

No single point of failure. Every available network -public/private cellular (LTE/5G), satellite (GEO/LEO), RF (MANET, P2P), and SDR – simultaneously bonded in real time. When one path drops, the others hold. Your UAV stays connected through any environment, any interference, any altitude.

Sensing & Video

Real-time video at multiple resolution levels, encoded with advanced onboard compression for high-quality, bandwidth-efficient transmission.

Positioning

Location certainty, even when GPS is denied. Cellular-infrastructure-based positioning provides reliable, accurate location data independent of GNSS – critical for operations in contested or spoofed environments.

Autonomy & AI

Built for the missions ahead. As the nature of warfare and commercial operations evolves, so does the Halo platform – expanding into autonomy and AI-enabled mission capabilities, built on the same proven foundation.

Specifications

Feature	Specification
Remote ID	FAA accepted (Network & Broadcast)
Ethernet	2 Ports of 1 GB
USB	1 x USB 2.0, 1 x MICRO USB for debug (internal)
WIFI & Bluetooth	Dual Band WiFi (2.4/5 GHz), 802.11 a/b/g/n/ac, BT 2.1+EDR, BT3.0, BT 4.2 (BLE)
Cellular	Embedded 3G/4G LTE/5G bands depending on the region
Positioning	GPS | GLONASS | Galileo | BeiDou + Non-GNSS cellular positioning
Data Security	VPN-over-VPN, AES-256-CBC, Packet splitting
Weight / Dimensions	Under 100g / 86mm x 69mm x 14mm

Key Features

- Integration of cellular communications (3G/LTE/5G) with any direct RF and SATcom links
- Fully configurable – link prioritization, redundancy, buffer size, dynamic path selection
- Advanced network monitoring and real-time link quality analytics
- 3D reception coverage mapping for mission planning and route optimization
- Non-GNSS positioning solution based on existing cellular infrastructure
- Management & Insights platform – cloud-based fleet monitoring, OTA updates, coverage mapping, link management, RF recording, audit trail (also available on-prem)
- Secure Over-the-Air (OTA) updates



Built For Every Mission

Defense & military
ISR and combat support.

Public safety & HLS
Rescue, disaster response, and border monitoring.

Infrastructure inspection
Utilities, pipelines, and critical assets.

Commercial operations
Delivery, agriculture, surveying, and mapping.

The Challenge

Single-link dependency at altitude – A lost connection puts the aircraft and mission at risk.

GPS spoofing & denied positioning – Blocked or spoofed GNSS compromises navigation and BVLOS operations.

Contested RF & EW environments – Jamming and interference disrupt critical communications.

Video & telemetry interruptions – Delayed ISR data reduces situational awareness and slows decisions.

BVLOS certification barriers – Approvals require proven connectivity reliability and Remote ID compliance.

How Halo Holds

Bonding, not failover – Halo bonds available networks simultaneously, maintaining connectivity as individual links degrade.

Positioning without GPS – Cellular-based positioning provides location data independently of GNSS.

Spectrum-aware resilience – Halo adapts to interference, automatically shifting traffic across available links.

Continuous real-time streaming – QoS prioritization keeps mission-critical video, telemetry, and C2 data flowing.

Built to support certification – FAA-accepted network and broadcast Remote ID, backed by 500K+ operational hours.

WHATEVER THE SKY THROWS AT IT – HALO HOLDS.

Talk to us about integrating Halo into your UAV.
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