

Elsight Halo

Add LTE/5G to traditional military comms for NLOS persistent connectivity in contested areas



Unmanned Aerial Vehicles/Systems
(UAV, UAS, FPV)



Unmanned Ground Vehicles (UGVs)



Autonomous Robotics

Overview: A new CONOPS

Elsight's low SWaP platform, Halo, provides persistent, Non Line-of-Sight (NLOS) connectivity for mission-critical uncrewed systems. Halo technology creates bonded, multi-link, connectivity to maintain continuous C2, telemetry and video links. With over 500,000 logged hours of operation, Halo is battlefield-proven in EW contested environments. By enhancing situational awareness and interoperability, Halo provides a safer environment for field warriors, special forces and ground troops.

Value-rich benefits

- Low SwaP, modular and portable
- Integrates easily with any satellite provider, narrow-band and wide-band
- Integrates easily with any RF provider (MANET, P2P, PTMP, and other SDRs)
- Supports MAVLink

Features

- Fully configurable with a wide selection of bands available (e.g. link aggregation, prioritization, redundancy, and dynamic path selection)
- Advanced network monitoring and link quality analytics
- 3D reception coverage mapping for mission planning
- Cybersecurity:
 - Uses a VPN over VPN tunnel (double VPN) for data security
 - Encryption up to AES-256-CBC
- Non-GNSS positioning solution based on existing cellular infrastructure

Compliance

- Component within the Blue UAS Cleared List
- U.S. National Defense Authorization Act (NDAA) ready

By using a mix of widespread private and public LTE/5G cellular spectrum, point-to-point radio (SDR), and satellite links, the Halo manages all the available communication paths. Through the use of a logical connectivity layer, Halo ensures seamless and reliable communications between networks.

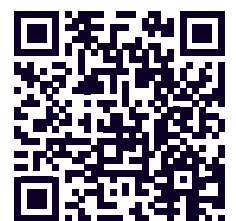
There's a Halo for Every NLOS-C2 Mission



4 x LTE

Less than 100 grams
3.39" x 2.72" x 0.55"
86mm x 69mm x 14mm

**Watch
Combat-Tested
Drone BLOS
Connectivity**



www.elsight.com

Only a Spectrum-Aware Multi-Network Platform can Ensure Mission Completion

Each option on its own has its failings. Creating a bond of multiple networks delivers countless benefits.

Direct RF Link	Satellite Links	A Single Cellular Link
Susceptible to jamming, limited redundancy	Limited redundancy and high dependency on satellite availability	Unstable coverage and lack of redundancy
Requires line of sight between the unmanned vehicle and the operator	Requires open skies, higher SWaP, high latency, and limited bandwidth	Coverage gaps at altitude and in obstructed environments



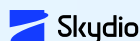
ELSIGHT HALO:

A bonded, spectrum-aware, multilink pipe for Non Line-of-Sight Connection Confidence

Designed for contested environments, providing link diversity, redundancy, high bandwidth, low latency, and robust cybersecurity for operational safety

By aggregating all available IP links to one bonded link, unmanned systems (ground and aerial) ensure operational continuity for mission-critical outcomes.

Trusted by the best



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)

*Option to remove

Cellular

Embedded 3G/4G LTE/5G bands depending on the region

Serial

2 x RS232/422/485

1 x CAN BUS

1 X UART

Positioning Systems Supported

GPS | GLONASS | Galileo | BeiDou

Data Security

A double VPN tunnel used for data security Encryption up to AES-256-CBC

Advanced Communication

VPN: OpenVPN L2/3

Environmental Conditions

Operating: -10°C to 75 °C

Power Input

DC 9V – 30V

Power Consumption

6.5W (Avg.), 10W (Max)

Size

4 x LTE:

3.39" x 2.72" x 0.55" / 86mm x 69mm x 14mm

Weight

Less than 100 grams



FREEDOM TO MANEUVER ANYWHERE
WITHOUT COMMUNICATIONS LOSS

For more information:
info@elsight.com or visit www.elsight.com

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