

ELSIGHT POSITIONING

When GPS fails, most systems guess. We don't.

Precise Positioning for Uncrewed Systems in GNSS-Denied Environments

Elsight Positioning delivers precise geolocation across air, land, and maritime domains when GPS is unavailable, degraded, or spoofed. Compact, lightweight, and cost-effective, it is fully integrated into Halo, with no additional hardware required for existing customers.

GPS When You Can. Resilience When You Need It.

Elsight uses GPS when reliable and cellular-derived positioning when GPS is compromised. Its patented engine fuses available inputs to improve accuracy and resilience, while a continuous GPS reliability assessment determines whether to rely on GPS or the alternative inputs.

Know Where You Are. Keep the Mission Moving.

Using cellular network measurements, Elsight determines geographic location rather than relying solely on movement estimates. It operates on infrastructure separate from GNSS and can use available cellular networks regardless of ownership or origin.



Multiple Inputs. One Precise Position.

GPS
Primary source when reliable

Cellular Timing Advance
Network timing measurements

Base Station Signals
Surrounding cellular references

Motion & Velocity
Platform movement data

Elsight Positioning
Multi-source fusion engine

Precise Geolocation

Automatically adapts as positioning inputs change.

When GPS Misleads, Stay on Course.

Halo continuously evaluates whether the GPS input is reliable, unavailable, or spoofed, and factors this assessment into the position calculation, relying on GPS or the alternative positioning inputs accordingly. This status can also be made available to the customer.

No Internet. No Visual Reference. More Freedom to Operate.

Operate in darkness, at sea, and in conflict zones without internet, an active communications link, or visual references. Elsight uses available cellular measurements to determine position without relying on cameras or visual landmarks.

See Where Elsight Makes the Difference.

WHAT MATTERS	OTHER GPS-DENIED APPROACHES	ELSIGHT POSITIONING
Knowing where you are	Inertial and odometry approaches estimate movement; map-based approaches use external geographic references.	**Determines geographic location using cellular network measurements.**
Operating without visual references	Camera-based approaches need usable imagery; inertial approaches do not.	**No visual reference required, including in darkness.**
Operating without an active connection	Many onboard solutions work offline; requirements vary by technology.	**No internet or active communications link required.**
Spoofing protection	Protection capabilities and methods vary by product.	**Built-in GPS reliability assessment, factored into the position calculation.**
Adding hardware to a Halo-equipped platform	May require additional sensors, cameras, or processing hardware.	**No additional hardware, enabled through software.**
Combining positioning and communications	Integration depends on the products selected.	**Positioning and resilient multi-link communications within Halo.**

Comparison describes technology approaches. Individual products may combine several methods. Performance depends on configuration, available measurements, and operating conditions.

More Resilience. Less Hardware Burden.

Compact, lightweight, and cost-effective, Elsight adds GNSS-denied positioning within Halo.

EXISTING HALO CUSTOMERS

Enable precise positioning and built-in spoofing protection through software, with no additional hardware.

SOFTWARE ONLY

NEW CUSTOMERS

Integrate Halo to bring resilient communications and positioning into one platform.

ONE PLATFORM

elsight

ELSIGHT POSITIONING

Built Around Your Mission.

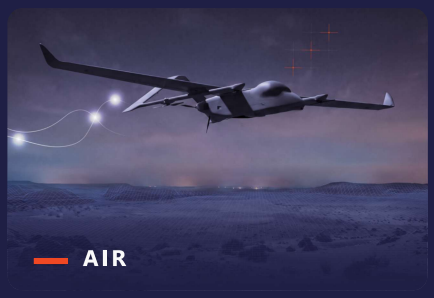
For OEMs: Add positioning and spoofing protection without additional hardware on Halo-equipped platforms.

For defense teams: Reduce GPS dependence with a cellular-based positioning alternative.

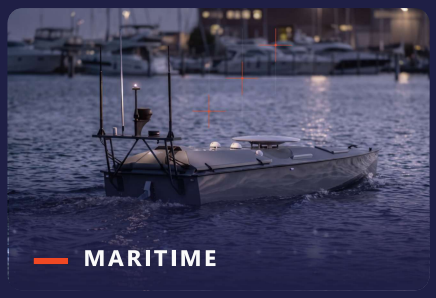
For operators: Maintain location awareness when GPS becomes unreliable, with GPS reliability status available from Halo.

Across Air, Land, and Maritime Operations.

Support UAV, USV, and UGV missions in GPS-compromised environments, including defense, security, and public safety operations. Positioning works without internet, an active communications link, or visual references, using available cellular measurements.







Built on a proven foundation

- 500,000+ operational hours
- 100+ active customers
- Battle-tested in high-intensity combat environments
- Included on the DCMA Blue List
- Available through the UAS Marketplace

Give Your Next Mission a Positioning Advantage.

info@elsight.com
www.elsight.com