

Octa: behavioural target classification, tracking and analysis

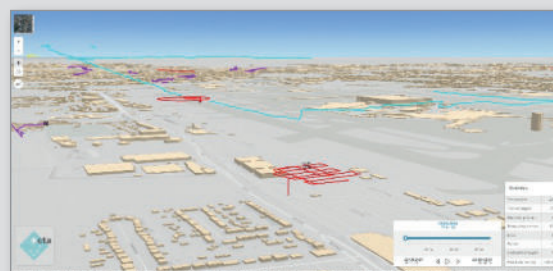
Capability summary

Octa uses track dynamics – the flight behaviour of targets – to identify and classify airborne objects, and to predict their intent and future path.

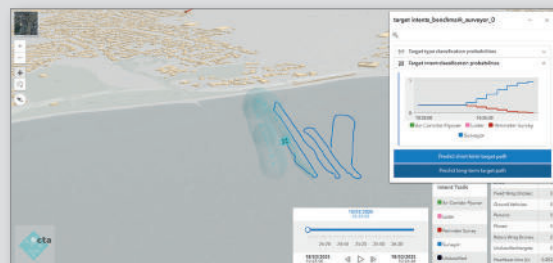


What Octa does

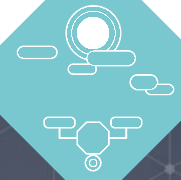
- ◆ **Target classification:** predict target class based on dynamic flight characteristics.
- ◆ **Intent and mission prediction:** predict what a target is trying to achieve, allowing estimates of threat.
- ◆ **Future path projection:** predict the future trajectory of a target at short (~10 s) or medium (~1-2 m) time horizons .
- ◆ **Multi-sensor target tracking:** a high-performance tracking algorithm allows for 100s of targets to be processed simultaneously.
 - ▶ Other tracking options include combined correlation, fusion and tracking, enabling sensors of all capabilities to contribute to the situational awareness picture.
- ◆ **Counter-deception and anomaly detection:** understand the “pattern of life” of a monitored airspace and identify deviations from it, including deceptive behaviour.



▲ Behavioural target classification



▲ Intelligent future path projection



How Octa integrates

Octa is designed for integration with C2/A2ISR systems, and to make existing sensor and analytics platforms more capable and resilient.

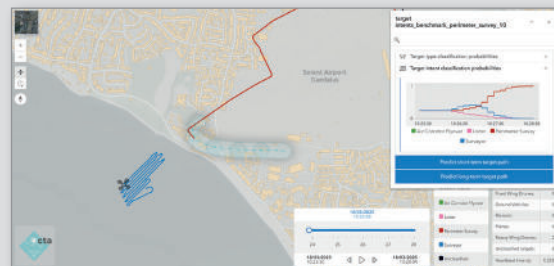
- ◆ **Standards-compliant:** Octa is SAPIENT/NATO STANREC 4869 compliant, enabling rapid integration with a broad range of systems; it can also be easily adapted to vendor-specific protocols where appropriate.
- ◆ **Sensor-agnostic:** Octa only requires target position estimates to function, making it compatible with almost all sensor types; uncertainty and other contextual information can improve the analysis.
- ◆ **Improve existing capability:** Octa can increase the effective classification range of CUAS radar, and help to better direct other sensors, effectors and interceptors.
- ◆ **Enhance resilience:** Octa makes systems more resilient to conditions and deceptive adversary activity by providing an independent, complementary analysis modality.
- ◆ **Software-only, low-SWaP:** Octa does not require specialised hardware to run; lightweight, focused ML models and efficient algorithms allow it to run at the edge or as part of centralised C2 systems.



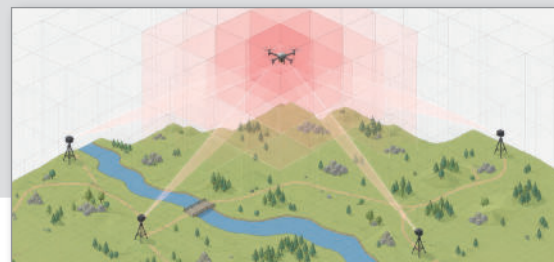
▲ Predict the mission or intent of tracked targets to better understand the threat



▲ Identify and understand deviations from expected activity



▲ Train location-specific ML for bespoke protection



▲ High-performance tracking supports target behavioural analysis



For more information please contact us on:

Email info@riskaware.co.uk

Phone +44 (0) 117 929 1058

Whitefriars, Lewins Mead, Bristol BS1 2NT



Part of Evallic

Riskaware | riskaware.co.uk