

OAK Sentry

Counter-UAS Site Defence — plan · simulate · grade

Base & critical-infrastructure C-UAS
Multi-post laydown · threat-axis gap analysis
Unclassified · representational

A base-defence planner's tool: lay sensor and effector **posts** around criticality-weighted **assets**, see the detection and **effective-kill** coverage over the site, run a mixed-threat **raid**, read the per-threat-axis **gap** table, and get an **A-F defence grade** — with a one-click laydown optimizer. Built on OAK's EW SUITE C-UAS physics.

A-F

defence-posture grade with weighted scorecard

PASS / GAP

per-threat-axis × UAS-group verdicts

Terrain LOS

coverage shadows (curvature + refraction)

Monte-Carlo

mixed-threat raid with channel saturation

1-click

laydown optimizer (soft + kinetic)

100% offline

pure-software · no GPU · air-gap-friendly



Capability at a glance

- Lay sensor & effector **posts** around criticality-weighted **assets**; see detection and **effective-kill** coverage over the site map for any UAS group and weather.
- **Terrain line-of-sight masking** (earth curvature + 4/3 refraction): flat-earth range rings overstate coverage — a ridge casts a radar shadow low, slow movers exploit while high-altitude threats fly over it.
- **Threat-axis gap analysis**: for each approach × UAS group, first-detection range, effective engagement depth, kill probability, warning time — and a PASS / THIN / GAP verdict.
- A geometric **raid simulation** flies a mixed threat in along the axes and fights it with the posts' effector channels — kill / leak / asset-damage, with saturation of limited channels.
- The key planning truth, made visible: **soft-kill defeats COTS drones but not autonomous / INS threats** (Shahed-class) — the demo site is a GAP on every Group-3 axis until a kinetic post is added.
- A one-click **laydown optimizer** that correctly answers the autonomous threat with kinetic depth, lifting the grade and cutting raid leakage.
- Built on OAK's EW SUITE C-UAS physics; sovereign Canadian IP, ITAR-free. Defensive planning only — no weapons-employment or exploit content.