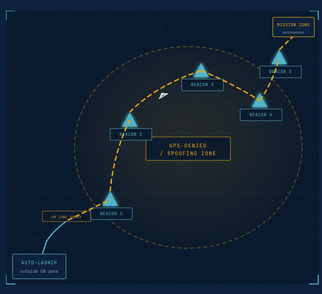
LAB 254 · NAVIGATION IN GPS-DENIED ZONES

Drone navigation where GPS is jammed or spoofed

Tracer Beacon — a GPS-free navigation system: a ground beacon plus a compact module that connects directly to the drone's flight controller. Beacons are deployed across the mission area; the drone flies between them through zones of full GPS denial or spoofing.

The beacons are virtually undetectable to enemy electronic-intelligence systems.



20–40 km
RANGE · COVERAGE OF A SINGLE BEACON

Stealth
LOW-SIGNATURE TO ENEMY SIGINT

FIELD STATUS · IN SERIAL PRODUCTION

Replaces satellite navigation in zones of full GPS denial or spoofing — the drone holds its route without GPS and without an operator in the link.

Compatibility: any FPV drone — quadcopter or fixed-wing
Flight controllers: ArduPilot, BetaFlight, iNav

Low-signature when dormant

While dormant, the beacon emits faint RF noise that appears as background to enemy SIGINT. It becomes briefly detectable only during an active drone mission.

Waypoint navigation

Beacons are placed along the route. The drone moves beacon-to-beacon autonomously — no GPS, no operator commands, no radio link. Replaces satellite navigation rather than supplementing it.

Drone module included

A compact module connects directly to the drone's flight controller (ArduPilot / BetaFlight / iNav) — no firmware patches, no airframe changes. Fits any FPV drone — quadcopter or fixed-wing — across strike, bomber, logistics, relay, and ISR roles.

Tamper resistance

Beacons are deployed before the mission. The list of beacon coordinates is then loaded into the drone via a mobile app.

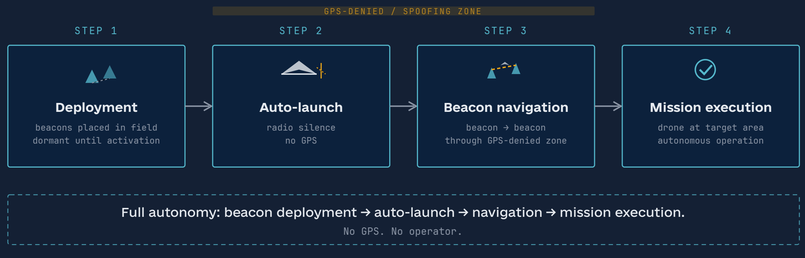
If the enemy finds and physically moves a beacon, the drone simply ignores it. Spoofing or relocating a beacon to throw the drone off course will not work.

01 Beacons are placed in the field in advance

02 The list of beacon coordinates is loaded into the drone via a mobile app

03 If a beacon is moved, the drone ignores it and holds course on the remaining beacons

How the beacon works — from deployment to mission



Full autonomy: beacon deployment → auto-launch → navigation → mission execution.
No GPS. No operator.

Specifications

KIT	ground beacon + drone module
RANGE	20–40 km
ENVIRONMENT	GPS-denied and spoofing zones
NAVIGATION	waypoint-based · autonomous flight between beacons
COMPATIBLE DRONES	FPV quadcopters · fixed-wing drones (strike, bomber, logistics, relay, ISR roles) · T-REX
FLIGHT CONTROLLERS	ArduPilot, BetaFlight, iNav
COORDINATE UPLOAD	mobile app → drone (beacon coordinate list)

Lab 254
Full specs available on request

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