

ATR

DETECTOR & TRACKER

Automatic Target Recognition for carts, tablets and airborne platforms

A single detection and tracking engine that runs identically on the ground control cart, the operator's rugged tablet and the aircraft itself. Operators keep the same target picture whether processing happens at the station or onboard, so hand-off between ground and air never resets the track.

DETECTION

- ▶ Multi-class ATR for personnel, light and heavy vehicles, vessels and static structures
- ▶ EO/IR and multispectral input with per-sensor model profiles
- ▶ Small-object detection tuned for high-altitude and long-standoff imagery
- ▶ Confidence gating and operator-adjustable classification thresholds

TRACKING

- ▶ Persistent multi-object tracking with re-acquisition after occlusion
- ▶ Operator click-to-track and auto-lock on highest-priority classification
- ▶ Track continuity across zoom, gimbal slew and platform manoeuvre
- ▶ Geo-registered track output for fusion into the common operating picture

DEPLOYMENT SURFACES

- ▶ Ground control carts — rack or box compute driving multi-feed operator displays
- ▶ Rugged tablets — dismounted operation with the same track pipeline at reduced power
- ▶ Onboard drone integration — direct feed from payload to mission computer, no downlink required

INTEGRATION

- ▶ ROS2, MAVLink and custom protocol bridges
- ▶ Track and detection streams over standard video and telemetry channels
- ▶ Deterministic behavior with full audit trail of detections and operator actions
- ▶ Runs disconnected — no cloud dependency in contested comms

AT A GLANCE

COMPUTE NVIDIA Jetson (Orin family), Qualcomm	SENSORS EO, IR, multispectral	FORM FACTORS Cart, tablet, airborne payload
INTERFACES ROS2, MAVLink, custom	CONNECTIVITY Fully offline capable	

NVIDIA Jetson

Qualcomm

iMX8

Hailo

Integrate ATR into your platform

Tell us your compute, sensors and platform, and we will scope the integration.

neuronicode.com/products/atr-detector-tracker