

TERRATRACK

TerraTrack is a lightweight real-time object tracking system designed for edge deployment. It combines AI detection with robust tracking algorithms into an easy-to-use pipeline, delivering fast and reliable performance on CPU-only systems and embedded platforms such as Raspberry Pi.



TECHNICAL SPECIFICATIONS

PARAMETER	
Processing Latency	18 ms end-to-end on Raspberry Pi 5* (detector + tracker, 20 objects)
Multi object tracking	Up to 20 simultaneous tracked objects
Target acquisition range	500m
Detection System	Flexible detector integration with proprietary or third-party models
API Languages	Python and C++ API support
Tracking Capability	Camera motion resistant tracking with occlusion recovery
Image format	RGB, Thermal support coming soon
Image resolution	Up to 4056×2160 px @ 30 FPS (RGB) on Raspberry Pi 5

* Latency was measured as the elapsed time between input frame acquisition and the completion of the tracker update, including detector and tracker processing. Measurements were collected on a Raspberry Pi 5 with ~20 simultaneously tracked objects and the latency was averaged over 250 frames.