Object Detection and Tracking Software Libraries

PRISM™ AI

Prism AI is a collection of software libraries that enable classification, object detection, and object tracking operating on low-power embedded processors from Qualcomm and NVIDIA. The Teledyne FLIR perception software and powerful, efficient embedded processors enable developers to bring decision support and computational imaging to the edge.

Compatible with Teledyne FLIR market-leading thermal modules, including Boson®, Tau® 2, Hadron™ 640R, and Neutrino®, Prism AI provides high-performance models trained on the world's largest application-specific thermal image datasets. Perception software models are available for automotive, ground ISR, air-to-ground, and counter-drone applications.

STRAIGHTFORWARD INTEGRATION ONTO SYSTEM PROCESSOR

Software delivers high performance and lowers investment for integrating thermal-camera-perception capability
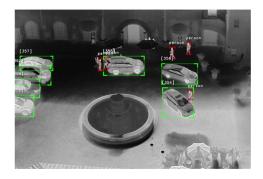
- Object classification, detection, and tracking in thermal and visible video streams at video frame rate.
- High-performance correlation video tracker
- Advanced motion target indicator (MTI) detects small moving targets
- Supports up to 270 TOPS for NVIDIA ORIN AGX and 48 TOPS on Qualcomm RB-5 Gen 2

LEVERAGE PERCEPTION ECOSYSTEM TO SHORTEN TIME TO MARKET

Suite of development tools provides a cost-effective framework for object detection software from systems with thermal and visible video inputs.

- Conservator™ data lifecycle management with model performance evaluation tool
- More than 4M training annotations in both thermal and visible spectrums
- Quality, scalable thermal and visible image annotation services
- All models trained using internal or license-free data

BUILT FOR DEVELOPERS WITH THE TELEDYNE FLIR BRAND PROMISE

Trusted global leader in thermal infrared sensing and solutions

- Expert technical services available to support integration
- Compatible with Teledyne FLIR ADK, Boson, Tau 2, Hadron, and Neutrino
- Sample C++ reference application with libraries and documentation
- Supports Linux and Windows (by request)

For more Information visit:
www.flir.com/prism

www.teledyneflir.com

SOFTWARE FEATURES

Camera Interface	16b monochrome for LWIR/MWIR, 24b RGB/BGR for visible
Fine Grained Classification (AI)	Progressive classification discrimination based pixels on target (ex. Vehicle -> Small Truck -> F150)
Moving Target Indicator (MTI)	Detection of small moving targets from stationary or non-stationary video
Multi Object Tracker	Lightweight, signal-processing based tracker reduces false positives and maintains target lock between frames in the absence of detections. Image-plane and ground-plane configurations available. (thermal and EO)
Object Detector (CNN)	40+ detection classes including: vehicles, humans, animals, boats, signs, Pre-trained DNN models for: ground ISR, air-to-ground applications, counter UAS and automotive. Other models on request. (thermal and EO)
Single Object Tracker	Auto tracking of user selected moving or fixed target
Support Contract	Support with software integration and optimization on client hardware (on demand)
Supported Hardware	Qualcomm: Snapdragon 8 gen 1 (RB5/QRB5165) & Snapdragon 8 gen 2 (QCS8550); NVIDIA: Jetson Xavier & Jetson Orin; Other Qualcomm and NVIDA HW on request.
Synthetic Data Generation	Synthetic object and scene generation for rare or classified classes/backgrounds (on demand)

Specifications are subject to change without notice.
For the most up-to-date specs, go to www.flir.com/prism

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