

# FLIR ADK™



## Thermal Vision Automotive Development Kit

Built around the revolutionary FLIR Boson® thermal camera core, the FLIR ADK™ is a cost-effective way to develop the next generation of automotive thermal vision and advanced driver assistance systems (ADAS). Thermal imaging is the best sensor technology for pedestrian detection, identifying people in cluttered environments and giving analytics the critical information needed for automated decisions. FLIR thermal imagers are proven and have helped drivers see well beyond their high beams for more than a decade – day, night, through smoke and haze, and past the glare of oncoming headlights. The ADK's rugged, IP67-rated 12- $\mu$ m thermal sensor is a fraction of the size of current systems, installation is plug-and-play, and driving with the system is simple. The ADK's thermal data ports directly into analytics over the standard USB connection, or through an optional NVIDIA DRIVE™ PX 2 connection. Multiple hardware configurations are available to meet various integration needs.

## SEE CLEARLY, EVEN IN CHALLENGING LIGHTING CONDITIONS

*Thermal sensors create images from heat, not light, so they can detect pedestrians and oncoming vehicles regardless of lighting conditions*

- See clearly day, night, through smoke and haze, and past the glare of oncoming headlights
- Detect pedestrians even in cluttered environments
- Add to ADAS driving systems to complement existing sensors

## NEXT-GENERATION THERMAL VISION IS PLUG-AND-PLAY EASY

*Start collecting thermal data in minutes*

- Quickly mount the IP67-rated kit and drive in all weather conditions
- Standard USB interface
- Detection range of >100 m
- Select a 24° or 34° field of view for flexibility in range and awareness

## SIMPLE INTERFACE PORTS DATA DIRECTLY INTO ANALYTICS

*Easy set-up, operation, and integration*

- Provides thermal picture of scene
- 16-bit TIFF files work seamlessly for analytics development
- Select from three hardware configurations
- Optional NVIDIA drive DRIVE™ PX 2 available



Thermal video screen capture with potential analytics.

## Specifications

Thermal Imager	
Sensor Technology	Boson™ - Uncooled VOx microbolometer
Array Format	320 x 256
Pixel Pitch	12 µm
Field of View	24° x 31° or 34° x 43.5°
Spectral Band	8-14 microns (LWIR)
Thermal Sensitivity	<50 mK
Frame Rates	Full Frame (60/30 Hz), 9 Hz
Non-Uniformity Correction (NUC)	Factory calibrated
Sealed Design	IP67 rated (hermetically sealed)
Outputs	USB, 16-bit TFF IR images
Power	
Power Requirements	3.3 VDC
Power Consumption	From 580 mW (configuration dependent)
Video & Control	USB
Environmental	
Operating Temperature	-40°C to +85°C
Shock	1,500 G @ 0.4 msec
Physical	
ADK Dimensions (camera & housing)	38 x 38 x 42.5 mm (w x h x d)
Camera & Lens only	21 x 21 x 26.7 mm (w x h x d)
Camera Weight	56.25 g (camera only) 116.12 g (camera and mounting bracket)

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FLIR ADK includes Boson in an enclosure, mounting bracket, and a 2 m USB cable.