

HIGH-PERFORMANCE EVENT-BASED VISION STARTER KIT FOR RASPBERRY Pi 5



PROPHESSEE STARTER KIT GENX320 FOR RASPBERRY Pi 5



DESCRIPTION

The GenX320 Starter Kit for Raspberry Pi 5 is a compact and powerful embedded vision development platform designed to unleash the capabilities of event-based sensing on the Raspberry Pi 5. Built around Prophesee's GENX320, the world's smallest and most power-efficient event-based vision sensor, this kit enables the development of real-time, ultra-low latency applications for robotics, drones, industrial automation, and more. It provides a streamlined path to rapidly develop, test, and prototype custom applications, making it an ideal solution for engineers and researchers looking to harness the benefits of neuromorphic vision.

FEATURES

- Interchangeable M12 S-mount lens holder
- Complete lensed event based camera board
- 20 cm flex cable MIPI Raspberry Pi compatible output
- RASPBERRYPI5 : Sold separately at: [raspberrypi.com](https://www.raspberrypi.com)

SOFTWARE

- V4L2 Driver
- Open EB: C++/ Python APIs
<https://github.com/prophesee-ai/openeb>
 - Visualization
 - Sensor settings (biases), ROI, ERC

COMPATIBLE WITH METAVISION® SDK5 PRO
(OPTION AVAILABLE FOR PURCHASE)

Source code access including:

- Real-time object tracking
- Vibration detection
- Optical flow
- Active marker detection and tracking

Learn more: prophesee.ai/SDK5Pro

PROPHESSEE STARTER KIT - RASPBERRY Pi5 - GENX320 - S MOUNT

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Specifications

Sensor Specification	
Sensor	Prophesee GENX320
Resolution	320 x 320 px
Event Rate	~10,000 fps equivalent
Latency	<150 μ s at 1,000 lux, <1,000 μ s at 5 lux
Dynamic Range	>140 dB
Power Consumption	<50 mW (sensor only)
Interface	MIPI CSI-2 (D-PHY)

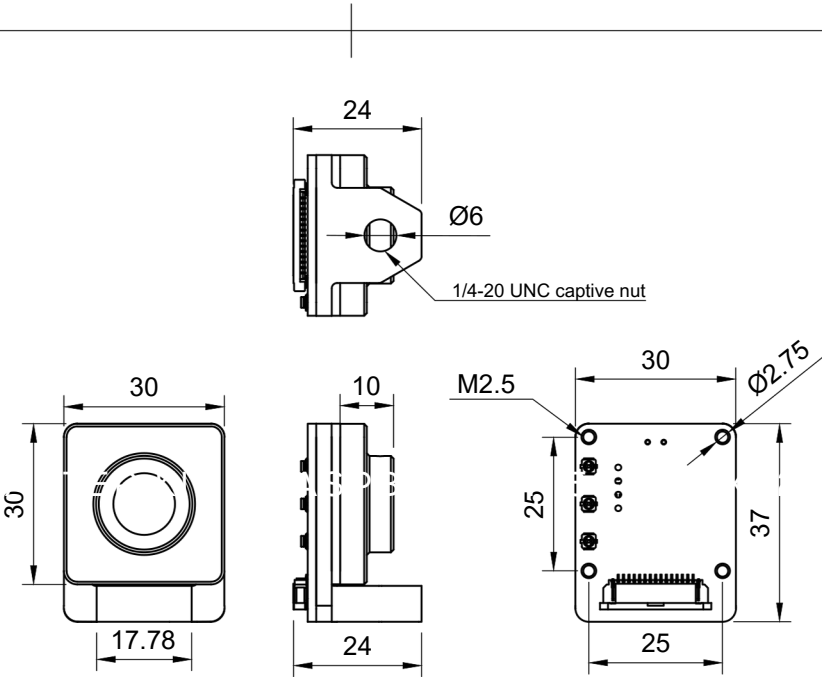
Camera specifications	
Lens Mount	M12
Focal length	1.8 mm
Diagonal field of view	76°
Horizontal field of view	58°
Vertical field of view	58°
Focal ratio (F-stop)	f/2.8 Fixed Iris
IR cur filter	No

* Raspberry Pi 5 board needs to be purchased separately.

Systems specifications

- System power consumption (typical, metavision_viewer, 1ME/s):
- System weight (using SSD kit and Active Cooler, not including PSU):

Physical specifications



Note: all dimensions in mm

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APPLICATIONS

This kit enables untethered, high-speed, low-latency event data collection on embedded platforms, serving as the foundation for developing advanced event-based applications :

Drones:

- Detection and tracking
- Obstacle avoidance
- Real-time SLAM
- GPS-denied navigation

Industrial & IoT:

- Vibration monitoring
- Spatter tracking
- Defect detection

Surveillance:

- Fall Detection
- Intrusion Monitoring in low-light conditions

...and many others.



HOST PLATFORM REQUIREMENT

Recommended SKUs/Accessories for best performance:

- <https://www.raspberrypi.com/products/raspberry-pi-5/?variant=raspberry-pi-5-8gb>
 - PI5 MODEL B/8GB
- <https://www.raspberrypi.com/products/active-cooler/>
 - SC1148
- <https://www.raspberrypi.com/products/27w-power-supply/>
 - SC1153
- <https://www.raspberrypi.com/products/ssd-kit/>
 - SC1675

ORDERING CODES

PSKX320MPCOBRPI5 - STARTER KIT - GENX320MP-COB RPI 5

<https://www.prophesee.ai/event-based-metavision-raspberrypi5-genx320-starter-kit/>