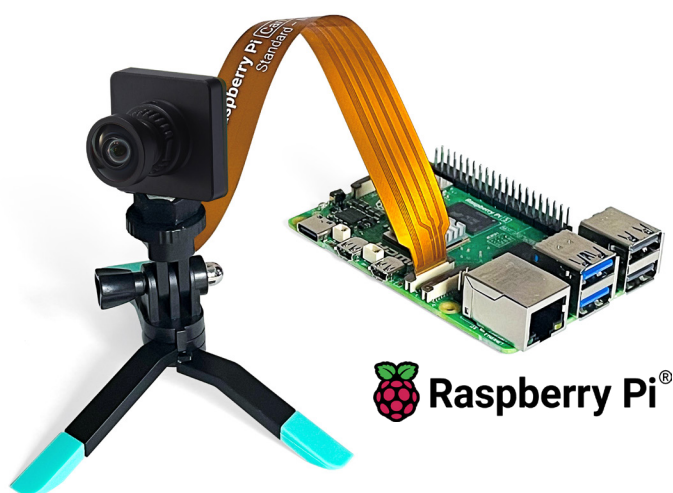**HIGH-PERFORMANCE EVENT-BASED VISION STARTER KIT FOR RASPBERRY Pi 5**

STARTER KIT GENX320 FOR RASPBERRY Pi 5

* Raspberry Pi 5 board needs to be purchased separately.

SENSOR	
Sensor	Prophesee GENX320
Resolution	320 x 320 px
Event Rate	~10,000 fps equivalent
Latency	‹150 µs at 1,000 lux
Dynamic Range	›140 dB
Power Consumption	‹50 mW (sensor only)
Interface	MIPI CSI-2 (D-PHY)

CAMERA	
Lens Mount	M12 (S-Mount)
Focal Length	1.8mm
Diagonal field of view	76°
Horizontal field of view	58°
Vertical field of view	58°
Aperture	f/2.8 Fixed Iris
IR Filter	No

FEATURES

- M12 (S-mount)
- Complete event-based camera board with lens
- 20 cm flex cable MIPI Raspberry Pi compatible output
- Raspberry Pi 5: sold separately at: raspberrypi.com

SOFTWARE
- V4L2 Driver
- Open EB: C++/ Python APIs https://github.com/prophesee-ai/openeb
  - Data recording, replay and visualization
  - Sensor settings (biases), ROI, ERC

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
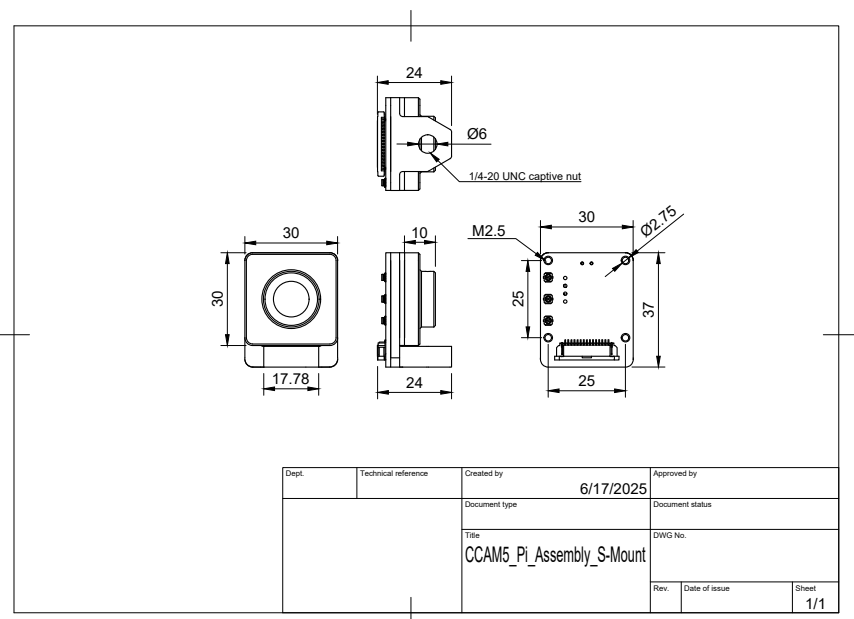- GPS-denied navigation

INDUSTRIAL & IoT:
- Vibration monitoring
- Spatter tracking
- High speed defect detection

SURVEILLANCE:
- Fall Detection
- Intrusion Monitoring

...and many others.

PHYSICAL SPECIFICATIONS

Dept.	Technical reference	Created by		Approved by	
		6/17/2025			
		Document type		Document status	
		Title		DWG No.	
		CCAM5_Pi_Assembly_S-Mount			
			Rev.	Date of issue	Sheet 1/1

DESCRIPTION

The STARTER KIT GENX320 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.

RASPBERRY Pi 5: HOST PLATFORM REQUIREMENT

Recommended accessories for best performance:
RASPBERRY Pi 5 8GB/16GB – SC1432/SC1113: https://www.raspberrypi.com/products/raspberry-pi-5
ACTIVE COOLER – SC1148: https://www.raspberrypi.com/products/active-cooler/
27W POWER SUPPLY – SC1153: https://www.raspberrypi.com/products/27w-power-supply/
SSD KIT – SC1675: https://www.raspberrypi.com/products/ssd-kit/

ORDERING CODES

PSKX320MPRPI5 – STARTER KIT – GENX320MP-COB RPI 5
https://www.prophesee.ai/event-based-starter-kit-genx320-raspberry-pi-5/

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