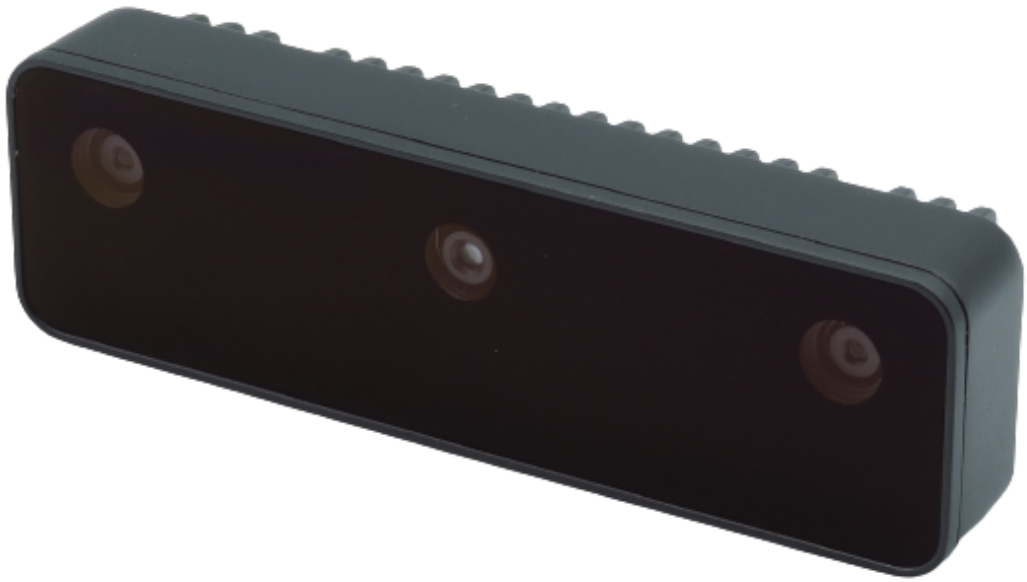
OAK-D S2

docs.luxonis.com/projects/hardware/en/latest/pages/DM9098s2.html



Overview

The **OAK-D S2** is the Series 2 version of the OAK-D. The main difference is that OAK-D S2 has a smaller enclosure and is therefore lighter. OAK-D S2 also doesn't have a barrel jack for supplying power, it only has a USB-C connector for both power and communication.

Hardware specifications

This OAK camera uses USB-C cable for communication and power. It supports both USB2 and USB3 (5Gbps / 10Gbps).

Sensor specifications

Auto-Focus (AF)

Fixed-Focus (FF)

For the normal FOV version you can select either **FF or AF** color camera, more information here.

Camera Specs	Color camera	Stereo pair

Camera Specs	Color camera	Stereo pair
Sensor	IMX378	OV9282
Shutter	rolling	global
FOV (D/H/V)	78°/66°/54	89.5°/80°/55°
Resolution	12MP (4032x3040)	1MP (1280x800)
Focus	AF: 8cm - ∞	FF: 19.6cm - ∞
Max Framerate	60 FPS	120 FPS
Pixel size	1.55µm x 1.55µm	3µm x 3µm
Lens size	1/2.3 inch	1/4 inch

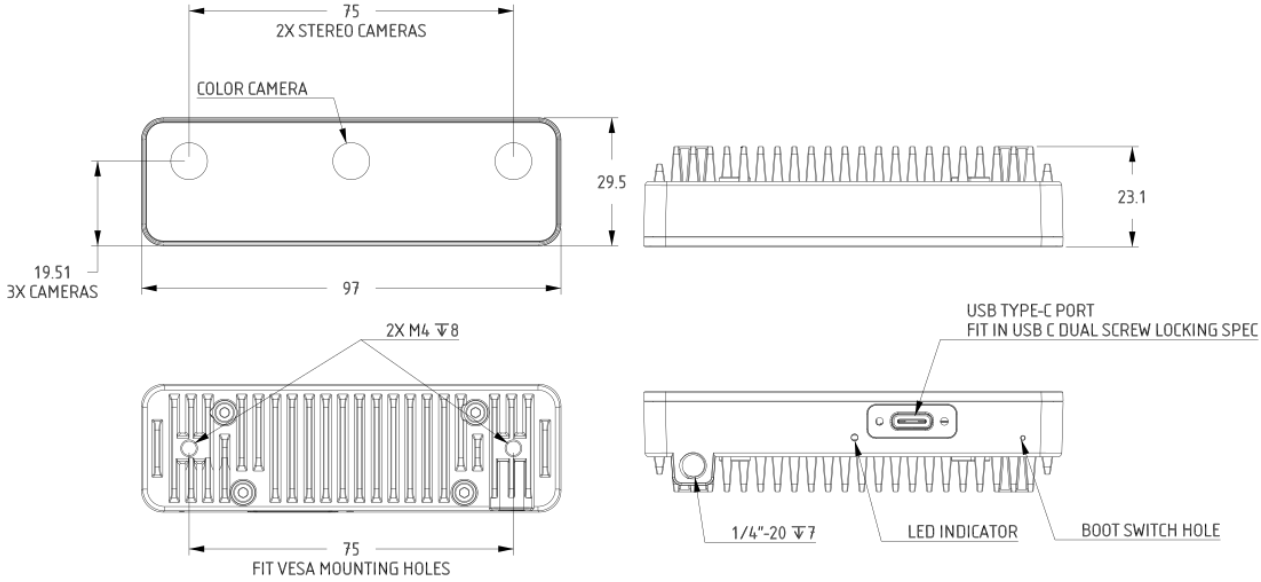
Myriad X inside

This OAK camera has on-board **Myriad X** VPU (product pdf). Main features:

- **4 TOPS** of processing power (1.4 TOPS for AI)
- **Run any AI model**, even custom architectured/built ones - models need to be converted.
- **Encoding**: H.264, H.265, MJPEG - 4K/30FPS, 1080P/60FPS
- **Computer vision**: warp/dewarp, resize, crop via ImageManip node, edge detection, feature tracking. You can also run custom CV functions
- **Stereo depth** perception with filtering, post-processing, RGB-depth alignment, and high configurability
- **Object tracking**: 2D and 3D tracking with ObjectTracker node

Dimensions and Weight

Weight: 91g



Depth perception

This OAK camera has a baseline of 7.5cm - the distance between left and right stereo camera. Minimal and maximal depth perception depends on camera FOV, resolution, and baseline - more information here.

- Min perceivable distance: ~20cm (400P, extended), ~35cm (400P **OR** 800P, extended), ~70cm (800P)
- Max perceivable distance: ~35 meters

Extended means that StereoDepth node has **Extended disparity** mode enabled, more information here. Maximum perceivable distance calculation here.