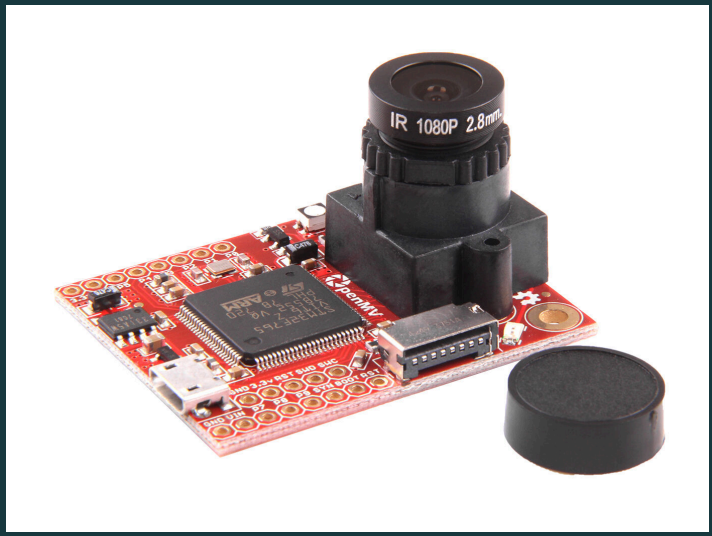
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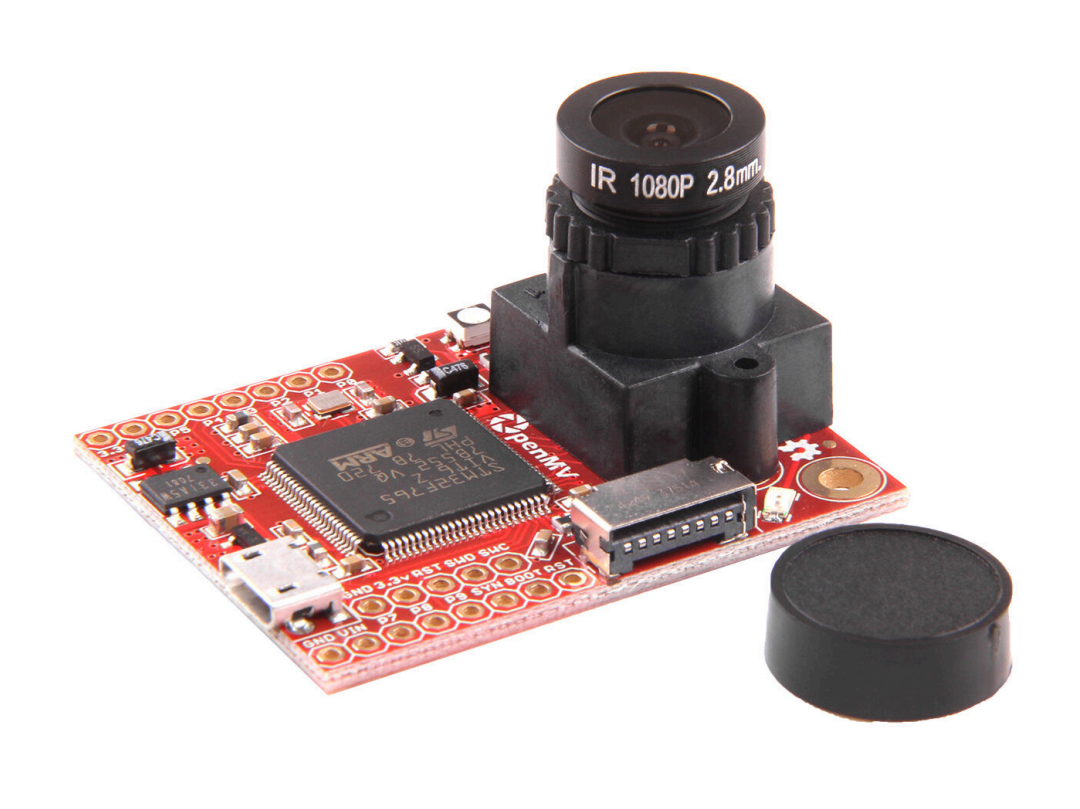
OpenMV Cam M7

The OpenMV Cam is a small, low power, microcontroller board which allows you to easily implement applications using machine vision in the real-world.

SKU	UPDATED	PRICE
102990763	2026-11-11 07:57:14	$65.00(Excl. VAT)

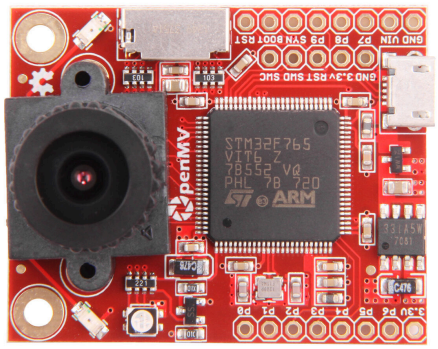


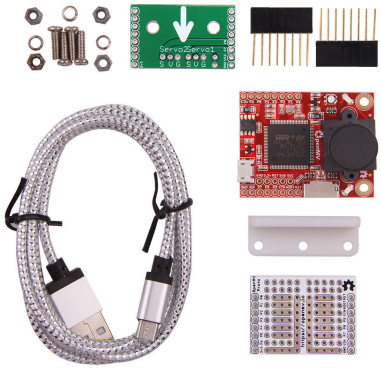
Overview



The OpenMV Cam is a small, low power, microcontroller board which allows you to easily implement applications using machine vision in the real-world.

Product Gallery





Applications

- **The OpenMV Cam can be used for the following things currently (more in the future):**
- **Frame Differencing:** You can use Frame Differencing on your OpenMV Cam to detect motion in a scene by looking at what's changed. Frame Differencing allows you to use your OpenMV Cam for security applications.
- **Color Tracking:** You can use your OpenMV Cam to detect up to 32 colors at a time in an image (realistically you'd never want to find more than 4) and each color can have any number of distinct blobs. Your OpenMV Cam will then tell you the position, size, centroid, and orientation of each blob. Using color tracking your OpenMV Cam can be programmed to do things like tracking the sun, line following, target tracking, and much, much, more. Video demo here.
- **Marker Tracking:** You can use your OpenMV Cam to detect groups of colors instead of independent colors. This allows you to create color makers (2 or more color tags) which can be put on objects allowing your OpenMV Cam to understand what the tagged objects are. Video demo here.
- **Face Detection:** You can detect Faces with your OpenMV Cam (or any generic object). Your OpenMV Cam can process Haar Cascades to do generic object detection and comes with a built-in Frontal Face Cascade and Eye Haar Cascade to detect faces and eyes.
- **Eye Tracking:** You can use Eye Tracking with your OpenMV Cam to detect someone's gaze. You can then, for example, use that to control a robot. Eye Tracking detects where the pupil is looking versus detecting if there's an eye in the image.
- **Optical Flow:** You can use Optical Flow to detect translation of what your OpenMV Cam is looking at. For example, you can use Optical Flow on a quad-copter to determine how stable it is in the air.
- **QR Code Detection/Decoding:** You can use the OpenMV Cam to read QR Codes in it's field of view. With QR Code Detection/Decoding you can make smart robots which can read labels in the environment. You can see our video on this feature here.
- **AprilTag Tracking:** Even better than QR Codes above, the OpenMV Cam M7 can also track AprilTags at 160x120 at up to about 12 FPS. AprilTags are rotation, scale, shear, and lighting invariant state-of-the-art fidicual markers. We have a video on this feature here.
- **Edge/Line Detection:** You can preform edge detection via either the Canny Edge Detector algorithm or simple high-pass filtering followed by thresholding. After you have a binary image you can then use the Hough Detector to find all the lines in the image. With edge/line detection you can use your OpenMV Cam to easily detect the orientation of objects.
- **Template Matching:** You can use template matching with your OpenMV Cam to detect when a translated pre-saved image is in view. For example, template matching can be used to find fiducials on a PCB or read known digits on a display.
- **Image Capture:** You can use the OpenMV Cam to capture up to 320x240 RGB565 (or 640x480 Grayscale) BMP/JPG/PPM/PGM images. You directly control how images are captured in your Python script. Best of all, you can preform machine vision functions and/or draw on frames before saving them.

Resource Links

- https://www.seeedstudio.com/OpenMV-Cam-M7-p-2855.html
- Getting Started Guide
- here

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