

## Description

The M8 Ultra Wide Angle Lens gives your OpenMV AE3 the ability to see a wider field of view. The standard lens has about a 70-degree FOV which is good, but not great for security applications. This lens has about a 90-degree FOV, so your OpenMV AE3 can see much more without significant image distortion. The lens comes with damping grease to help hold it in place; gluing is recommended for vibration environments. Available with or without a 650 nm IR cut filter.



## Target Areas

Security, surveillance, wide-area monitoring, room coverage, robotics, navigation, indoor monitoring, people counting.

## Key Features

- **90-degree FOV** — Approximately 90-degree diagonal FOV (79.6°H x 55.2°V with PAG7936). 0.74x optical zoom.
- **Low distortion** — Only -2% TV distortion — wide angle with minimal barrel distortion.
- **2 MP resolution** — Supports up to 2 MP sensor resolution.
- **M8 x P0.35 mount** — Standard M8 threaded mount for OpenMV AE3 and PAG7936 dual-camera modules.
- **IR cut filter option** — Available with 650 nm IR cut filter or without for night vision use.
- **3D model available** — STEP file available on GrabCAD for mechanical integration.

## Applications

The M8 Ultra Wide Angle Lens is great for security applications where you want to see a wider field of view. By using this lens, your OpenMV AE3 can easily detect things in an entire room without having to be mounted far away.

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# 1 Specifications

## 1.1 Optical Specifications

Component	Details
Model	M8-2030-S
Mount	M8 x P0.35 threaded
F-Number	F2.0
Effective Focal Length	2.3 mm
Back Focal Length	2.29 mm
Total Track Length	10.47 mm
Image Circle	Ø5.3 mm
Image Format	1/4"
Resolution	2 MP
Size	Ø11.0 x 8.0 mm
Construction	4E + IR (4 elements plus IR filter)
Focus / Iris / Zoom	Manual focus, fixed iris, fixed zoom
IR Coating Filter	650 nm (variant with IR cut filter)
Min. Object Distance	0.2 m

## 1.2 Field of View (1/4" format)

Component	Details
Diagonal	90°
Horizontal	72°
Vertical	60°
TV Distortion	-2%
Relative Illumination	>67%
Chief Ray Angle	<18°

*All specifications ±5% tolerance.*

### 1.3 Actual FOV with PAG7936 Sensor

Component	Details
Diagonal	89.2°
Horizontal	79.6°
Vertical	55.2°
Optical Zoom	0.74x

### 1.4 Compatibility

Component	Details
Supported Cameras	OpenMV AE3, dual-camera modules using PAG7936 sensors.
Installation	Includes damping grease. Gluing recommended for vibration environments. M8 lock ring solution in development.

## 2 General Info

Dimension	Value
Length	11 mm
Width	11 mm
Height	8 mm
Weight	0.5 g
Operating Temperature	-20°C to +65°C
Storage Temperature	-20°C to +65°C
Country of Origin	China
HS Code	8473.30.2000
UPC	608275911238, 608275911221
SKU	IR-M8-Ultra-Wide-Angle-Lens, M8-Ultra-Wide-Angle-Lens
ECCN	EAR99

## 3 Company Information

Field	Details
Website	<a href="https://openmv.io">https://openmv.io</a>
Documentation	<a href="https://docs.openmv.io">https://docs.openmv.io</a>
Support	<a href="https://forums.openmv.io">https://forums.openmv.io</a>

## 4 Reference Documentation

Reference	Link / Document
Product Page	<a href="https://openmv.io/products/m8-ultra-wide-angle-lens">https://openmv.io/products/m8-ultra-wide-angle-lens</a>
3D Model (STEP)	<a href="https://grabcad.com/library/m8-ultra-wide-angle-lens-1">https://grabcad.com/library/m8-ultra-wide-angle-lens-1</a>

## 5 Revision History

Date	Revision	Changes
2026-04-04	Rev 1	Initial public release.