

# 2m Optical Flow Module



## Overview

This module integrates a high-precision low-power optical tracking sensor PMW3901 and a high-precision laser sensor VL53LXX (2m version uses VL53L0X, 4m version uses VL53L1X), PMW3901 Optical flow sensor is responsible for measuring horizontal movement, VL53LXX laser sensor is. This module integrates a high-precision low-power optical tracking sensor PMW3901 and a high-precision laser sensor VL53LXX (2m version uses VL53L0X, 4m version uses VL53L1X), PMW3901 Optical flow sensor is responsible for measuring horizontal movement, VL53LXX laser sensor is. Make sure Optical Flow lens to ground >2cm for opflow initialization while FC starting up. Maximum range of VL53L0X is 2m, Altitude hold 0~2m @ throttle 0~100% if VL53L0X is enabled. SERIALn\_PROTOCOL = 32, "n" is serial number of UART in ArduPilot hwdef, not the FC UART number. On some flight. PMW3901 is an ultra-light and multifunctional low-power optical flow module. Powered by Teledyne e2v's proprietary image sensor technology, Optimom has been thoughtfully designed to ensure there is minimum development. Matek Optical Flow and Lidar 3901-L0X is an additional sensor for measuring height and movement. It can be used to determine speed when navigating without GNSS — in buildings, underground, or in any other GNSS-denied environment. The video below shows PX4 holding position using the Ark.



## Article Content

Hot

Live demonstration of the Optimom™ 2M Optical Module

In this demonstration, taken at Embedded World 2023, see the Optimom™ 2M imaging module with Multi-Focus live in action. For more information visit i...

Sep 23, 2025 Hot

Teledyne e2v's Optimom 2M optical modules ensure

Teledyne e2v announces the release of its 2-Megapixel Optimom, the first in a range of MIPI CSI-2 optical modules. Powered by Teledyne e2v's

Dec 16, 2025 Hot

Matek Micro Optic Flow and Lidar Sensor - Unmanned

It has a working range of up to 2m, and uses a VL53L0X Lidar rangefinder along with a PMW3901 optic flow module. It connects to your FC via UART and it currently

Jan 15, 2026 Hot

Optical Flow Sensor Module APM 2.5 2.6 2.8

The Optical Flow Sensor comes fully assembled. Specifications: ADNS-3080 optical sensor. High speed motion detection. Up to 6400 fps update rate. 30x30 pixel

Mar 15, 2026 Hot

Matek Systems

Make sure Optical Flow lens to ground >2cm for opflow initialization while FC starting up. Maximum range of VL53L0X is 2m, Altitude hold 0~2m @ throttle 0~100% if VL53L0X is enabled.

Mar 31, 2026 Hot

PX4FLOW Optical Flow Camera Board — Copter

Overview The PX4FLOW (Optical Flow) Sensor is a specialized high resolution downward pointing camera module and a 3-axis gyro that uses the ground

Apr 03, 2026 Hot

PX4FLOW 2.21 INTELLIGENT OPTICAL FLOW

PX4FLOW 2.1 Smart Optic Flow Module with Sonar Description:- The board is with imported Maxbotix sonar, adopting 16mm lens, DF13 terminal- 168 MHz Cortex

Jul 16, 2025 Hot

(EOL) Optical Flow 3901-L0X - MATEKSYS

STM32L051 has substituted for STM32F051 on 3901-L0X because of MCU STM32F051 shortage. Make sure Optical Flow lens to ground >2cm for opflow

Jul 03, 2025 Hot

Interfacing PMW3901 Optical Flow Sensor With ESP32

Learn how the PMW3901 optical flow sensor tracks motion without GPS. Explore its features, specifications, and how to interface it with ESP32 for

Dec 14, 2025 Hot

Taidacent PMW3901 Optical Flow Sensor+ VL53L0X

The 4m version of the optical flow module is an upgraded version of

Oct 04, 2025 Hot

HereFlow Optical Flow Sensor / Lidar Module

HereFlow Optical Flow Sensor / Lidar Module The HereFlow is a lightweight (1.2g) finger-sized board that houses an optical flow sensor as well as a Lidar component.

May 12, 2026 Hot

H-Flow (Optical Flow and Distance Sensor Module)

The Holybro H-Flow is a compact optical flow and distance sensor module that combines a PixArt PAA3905E1 optical flow sensor, a Broadcom AFBR

Sep 03, 2025 Hot

Taidacent PMW3901 Optical Flow Sensor+ VL53L0X

Taidacent PMW3901 Optical Flow Sensor+ VL53L0X Distance Sensor Fixed Point Laser Ranging Optical Tracking Sensor Minifly Four Axis 2M/4M (4M) :

Aug 22, 2025 Hot

Teledyne e2v releases Optimom 2M, turnkey MIPI optical modules for ...

All Optimom 2M models are powered by Teledyne e2v's proprietary 2-Megapixel, low-noise, global shutter image sensor which provides sharp images of fast-moving objects.

Mar 29, 2026 Hot

Optical Flow Image Sensor Position Measuring Module

Buy Optical Flow Image Sensor Position Measuring Module ADNS 3080 CJMCU-110 APM2.52/2.6 CMOS CCD Flight Controller from UGE Electronics Egypt. Check

May 21, 2026 Hot

PMW3901 XY Optical Flow Current Sensor Module

PMW3901MB sensor is a far-field X-Y motion tracking sensor that can track at any distance from 80mm to infinity. See the notes below for common applications of

Sep 05, 2025 Hot

Here Flow

Here Flow is a finger size optical flow sensor. Compared with other optical flow sensors, it is even smaller. It can be installed easily at any position

Nov 12, 2025 Hot

Ranging Four Axis 2M/4M Optional PMW3901 Optical

Ranging Four Axis 2M/4M Optional PMW3901 Optical Flow Module Fixed-point Laser Color: 2 meter Edition Customer Reviews Specifications Description Store

Jun 01, 2026 Hot

The Most Comprehensive Guide Of Optical Modules

Explore the ultimate guide to optical modules. Learn types, functions, performance metrics & how to choose the right module for your fiber network.

Apr 11, 2026 Hot

CX20 OPTICAL FLOW FOR APM 2.6

Adding a Optical Flow Sensor v10 Module for APM 2.5 2.6 2.8 Flight Control Update Version.ADNS3080 Mouse Sensorenabled of \_loiter mode and OF log instructionsl...

Mar 26, 2026 Hot

Optical Flow | PX4 Guide (main)

The Holybro H-Flow is a compact DroneCAN optical flow and distance sensor module. It combines a PixArt PAA3905 optical flow sensor, a Broadcom AFBR

Jun 08, 2026 Hot

ADNS-3080 APM2.52 APM2.6 Optical flow sensor V1.0

Overview:&nbsp; This sensor is based on the ADNS3080 mouse sensor. Optical flow sensor CJMCU-110 for APM2.52 APM2.6 Flight Controller video

Feb 25, 2026 Hot

PMW3901 Optical Flow Module Fixed-point Ranging Four Axis 2M/4M ...

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Jan 26, 2026 Hot

Optical Flow | PX4 Guide (main)

Optical Flow uses a downward facing camera and a downward facing distance sensor for velocity estimation. It can be used to determine speed when navigating

Apr 12, 2026 Hot

PMW3901-Based Flow Sensors | PX4 Guide (main)

PMW3901-Based Flow Sensors PMW3901 is an optical flow ASIC that computes the flow internally and provides a difference in pixels between each frame. It uses a

Oct 14, 2025 Hot

Matek 3901-L0X Optical Flow a Lidar (2m) | Rotorama

Matek Optical Flow and Lidar 3901-L0X is an additional sensor for measuring

Aug 21, 2025

## Contact Us

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