COETZER OPTICAL SYSTEMS (Pty) Ltd

PMW3901 Optical Flow Module

Overview

The PMW3901 is a small, low-power optical flow sensor that measures movement by analysing surface patterns. It is widely used in robotics, drones, and automation to estimate position changes without GPS. It uses a tracking sensor that is similar to what you would find in a computer mouse, but adapted to work between 80 mm and infinity. This makes it an excellent choice for applications requiring precise motion tracking. It comes pre-solder with 6pin JST GH connector made to connect right to TELEM ports on most flight controller. Manufactured by Pimoroni Ltd, this sensor leverages advanced algorithms to provide precise motion data, making it an essential component for robotics, drones, and other autonomous systems.

Article Content

PMW3901-Based Flow Sensors | PX4 Guide (main)

PMW3901 is an optical flow ASIC that computes the flow internally and provides a difference in pixels between each frame. It uses a tracking sensor that is similar to what you would find in a computer

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 accurate position tracking.

PMW3901 Optical Flow Sensor

The Holybro PMW3901 Optical Flow Sensor is a UART version of PMW3901 module with built in BEC. It comes pre-solder with 6pin JST GH connector made to connect right to TELEM ports on most flight

How to Use PMW3901: Examples, Pinouts, and Specs

The PMW3901 is a high-performance optical flow sensor designed for motion detection and tracking applications. Manufactured by Pimoroni Ltd, this sensor

PX4-user_guide/en/sensor/pmw3901.md at main

PMW3901 is an optical flow ASIC that computes the flow internally and provides a difference in pixels between each frame. It uses a tracking sensor that is similar to what you would find in a computer

(EOL) Optical Flow 3901-L0X – MATEKSYS

Communication between 3901-L0X module and Flight controller via UART MSP V2 protocol supported by INAV and ArduPilot. There is no detailed datasheet of

Build an Open-Source ESP32 Drone That Does More

LiteWing solves this using a dedicated positioning module featuring: PMW3901 optical flow sensor for X/Y motion tracking VL53L1X Time-of-Flight sensor for height measurement The optical

2X Mateksys OPTICAL FLOW & LIDAR SENSOR 3901-L0X INAV Flow

Descriere 2X Mateksys OPTICAL FLOW & LIDAR SENSOR 3901-L0X INAV Flow Sensor Module for RC FPV Racing Freestyle F4 F7 Specifications Optical Flow: PMW3901 Lidar: ST VL53L0X (max.

Arduino driver for PMW3901 optical flow sensor

Arduino driver for PMW3901 optical flow sensor. Contribute to bitcraze/Bitcraze_PMW3901 development by creating an account on GitHub.

PAA5100JE near optical flow SPI breakout module

PAA5100JE near optical flow SPI breakout module Wishlist Breakout navigation module ideal for surface detection and floor tracking of a robot vacuum cleaner PAA5100JE sensor that uses a low-resolution

PMW3901 Optical Flow Sensor Module

Now available from PMD Way is the PMW3901 optical flow ASIC that computes the flow internally and provides a difference in pixels between each frame, with free

laksh890/GPS-Denied-Autonomous-Drone-ISRO---IRoC-2025

This project enables a quadcopter to perform autonomous takeoff, hover, drift correction, and smart landing without relying on external positioning systems. The system uses onboard sensors (Optical

ThoneFlow-3901U UART Serial Version PMW3901 Optical Flow Sensor

ThoneFlow-3901U is a UART version PMW3901 optical flow module, make it easier connect to your control board. The data format is also compatible with discontinued product CX-OF, already

PX4-user_guide/en/sensor/pmw3901.md at main

The Holybro PMW3901 Optical Flow Sensor exposes a PMW3901 optical flow module via a UART interface. The board doesn''t include a distance sensor onboard, so you will need to use an external

nemakemake/single_optical_flow_ros

ROS 2 odometry package for a single PMW3901 or PAA5100 optical flow sensor - nemakemake/single_optical_flow_ros

PMW3901-Based Flow Sensors | PX4 User Guide

The Hex HereFlow PMW3901 Optical Flow Sensor is a very small board containing the PMW3901 flow module, the VL53L1X distance sensor and an IMU to better synchronize the flow data with the gyro

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

PIM ST Datasheet, PDF

PIM453 247Kb/3P PMW3901 Optical Flow Sensor Breakout Texas Instruments PIMB063T-R68MS-63 2Mb/29P 22-V Input, 10-A Integrated FET Converter With Ultra-Low Quiescent (ULQ) International

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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.