

How to use the optical flow ranging module



Overview

Step1 : Connect the MTF-01 to PC by using the USB to TTL module. Step3: Open the MicoAssistant software, select the correct COM in the upper right corner, baudrate should be 115200, and then. 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 without GNSS — in buildings, underground, or in any other GNSS-denied environment. The video below shows PX4 holding position using the Ark. The micolink is a lightweight protocol customized by MicoAir Tech, prepared for developers who are ready to write their own code to read sensor data. MicoAssistant software can be used to configure protocol or other parameters of MTF-01. Flying an FPV drone in Position Hold and Altitude Hold modes can be significantly improved with the addition of Optical Flow and Sonar (rangefinder) sensors. These sensors help maintain a stable hover by providing precise data about the drone's position and altitude. In this tutorial, I'll guide you. This is a lightweight 2 in 1 optical flow sensor including a short range lidar which uses the serial MAVLink protocol to communicate with the autopilot.



Article Content

Setup Optic Flow& Lidar (MTF-01) For Ardupilot& PX4 To Make

MTF-01 is an optic flow & lidar sensor developed by MicoAir Tech. It uses UART to output data and is compatible with mainstream open-source flight controllers such as Ardupilot, PX4 and iNav.

MTF-01 Optical Flow Ranging Sensor 0.01-8 Meters With ...

Accurate Ranging Sensor: MTF-01 combining optical flow technology with precise distance measurement from 0.01 to 8m, delivering consistent altitude control for UAV positioning

PX4FLOW Optical Flow Camera Board — Copter documentation

This article describes how to setup the PX4FLOW (Optical Flow) Sensor which can be used for Non-GPS navigation. The PX4FLOW is not yet supported in Plane or Rover.

How to Set Up Optical Flow & Rangefinder Sensors in iNav

Learn how to set up a rangefinder optical flow sensor in iNav for enhanced FPV drone stability in Position and Altitude Hold modes.

MicoAir Optical Flow Ranging Sensor Integrated With

The MicoAir Optical Flow Ranging Sensor integrates cutting-edge technology for drone positioning and laser ranging. Featuring the MTF-01 module, it delivers

A Capella: A Unique Compilation | PDF | Wellness

This document contains a long list of words beginning with "ab-" or "ac-". It does not appear to be a coherent text, but rather a collection of unrelated terms.

Ardupilot optical flow code analysis

The PX4Flow (optical flow) sensor is a dedicated high-resolution downward pointing camera module and a three-axis gyroscope that uses ground texture and visible

MicoAir MTF-01 Optical Flow Sensor — Plane

MicoAir MTF-01 Optical Flow Sensor The is a lightweight 2 in 1 optical flow sensor including a short range lidar which uses the serial MAVLink protocol to

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

Ultrasonic transducer

Medical ultrasonic transducers (probes) come in a variety of different shapes and sizes for use in making cross-sectional images of various parts of the body. The

CVPR 2026 Papers with Code & Data – Paper Digest

The IEEE Conference on Computer Vision and Pattern Recognition (CVPR) is one of the top computer vision conferences in the world. The 2026 event will be held in Denver, starting June

MTF-01_USER_MANUAL/README.md at main

It can be used directly after simple configuration without complicated development process. MTF-01 features an integrated PMW3901 optical flow sensor and a high

AERO SELFIE dToF Infrared Optical Flow Sensor for Drones

Explore the AERO SELFIE TF-0850, a compact and ultra-lightweight Infrared Optical Flow Ranging Module designed for drones, robots, and low-power embedded systems.

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IDEX Health & Science is the global authority in fluidics and optics, bringing to life advanced optofluidic technologies with our products, people, and engineering

Optical Flow Sensor Testing and Setup — Copter

Optical Flow Sensor Testing and Setup Be sure you have setup the sensor specific parameters according to its wiki page. If the sensor is mounted to a stabilized

MicoAir MTF-01 Optical Flow Sensor — Plane documentation

Be sure to follow the setup and calibration instructions and parameters for Optical Flow setup and how to switch between outdoor (GPS) and indoor (Optical Flow) positioning.

unsupervised_topic_modeling/topics/en/13/100/100/topics

Contribute to annontopicmodel/unsupervised_topic_modeling development by creating an account on GitHub.

Optical Flow Sensors

Optical Flow Sensors Exploring the capabilities of optical flow sensors by transforming an old optical mouse into a handheld motion tracking device. If

Optical Flow | PX4 Guide (v1.16)

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 without GNSS — in buildings,

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