

holybro-overview.md

> For the complete documentation index, see llms.txt (<https://docs.holybro.com/llms.txt>). Markdown versions of documentation pages are available by appending `.md` to page URLs; this page is available as Markdown (<https://docs.holybro.com/peripherals/h-flow-dronecan/overview.md>).

Overview

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The Holybro H-Flow is a compact optical flow and distance sensor module that combines a PixArt PAA3905E1 optical flow sensor, a Broadcom AFBR-S50LV85D distance sensor, and an InvenSense ICM-42688-P 6-axis IMU. This all-in-one design simplifies installation, while the onboard infrared LED enhances visibility in low-light conditions.

The H-Flow features a Pixhawk-standard 4-pin CAN connector, ensuring seamless integration with Pixhawk-compatible controllers via the CAN port. Utilizing the DroneCAN protocol, it offers reliable and high-speed data transmission between the sensor and the flight controller.

Specification

- * PixArt PAA3905E1 Optical Flow Sensor
 - * Tracks under low light conditions of >5 lux
 - * Effective Viewing angle up to 42°
 - * Wide working ranges from 80mm up to 30m
 - * Up to 7.4 rad/s
 - * 40mW IR LED built onto the board for improved low-light operation
- * Broadcom AFBR-S50LV85D Time-of-Flight Distance Sensor
 - * Integrated 850 nm laser light source
 - * Field-of-View (FoV) of $12.4^\circ \times 6.2^\circ$ with 32 pixels
 - * Typical distance sensing range up to 30m
 - * Operation of up to 200k Lux ambient light
 - * Works well on all surface conditions
 - * Transmitter beam of $2^\circ \times 2^\circ$ to illuminate between 1 and 3 pixels
- * InvenSense ICM-42688-P 6-Axis IMU
- * STM32F412CEU6 MCU
- * Pixhawk Standard CAN Connector (4 Pin JST GH)
- * Compact Form Factor
- * Software-Controlled CAN Termination
- * Weight: 15.2g (3.5g without casing)

Agent Instructions

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