MIKROELEKTRONIKA D.O.O, Batajnički drum 23, 11000 Belgrade, Serbia
VAT: SR105917343 Registration No. 20490918
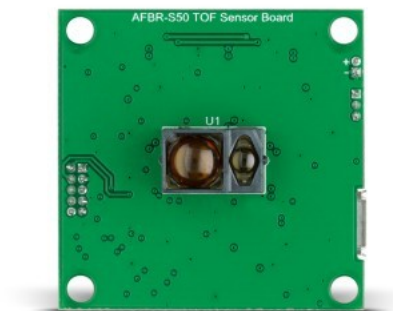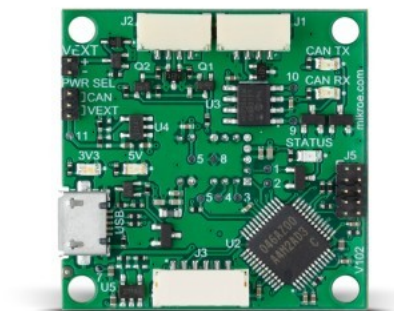Phone: + 381 11 78 57 600 Fax: + 381 11 63 09 644 E-mail: office@mikroe.com
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BDC-AFBR-S50 TOF Sensor Board

PID: MIKROE-4910

AFBR-S50 ToF Sensor Board represents an integrated solution based on the Broadcom AFBR-S50 medium-range 3D multipixel Time-of-Flight (ToF) sensor for distance and motion measurement. The AFBR-S50 has been optimized to measure various distances working equally well on white, black, colored, and metallic reflective surfaces. It provides an ideal solution for robotics and industrial applications requiring precise 3D information and an extended range like drones or AMR/AGV. The AFBR-S50 ToF Sensor Board includes a 32-bit MCU and a VCSEL-based ToF sensor (Laser Class 1 eye safety), mounted on a compact-sized PCB, measuring only 35mm×35mm in size, alongside a 4-pin standard CAN connections compatible with Pixhawk®, a popular general-purpose flight controller. The size of the entire PCB allows users to realize an easy-to-implement subsystem and be used as a complete ToF module in an out-of-the-box manner, cutting the time to market.

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Specifications

Type	Proto,Sensor
Applications	Can be used as an easy-to-implement subsystem and a complete ToF module in an out-of-the-box manner ideal for robotics and industrial applications requiring precise 3D information and an extended range like drones or AMR/AGV, human machine interface, automation and control, and more
On-board modules	AFBR-S50 - Time-of-Flight sensor module for distance and motion measurement from Broadcom
Key Features	High speed and accuracy at medium distance ranges with low power consumption, best-in-class ambient light suppression, multipixel for 3D motion detection, Laser Class 1 eye safe ready, compatible with Pixhawk® general-purpose flight controller, various communication interfaces, full debugging and programming capabilities, and more
Interface	CAN,SWD,UART,USB
Supply Voltage	External

Resources

Reference Board Page

Applications Overview

CAN Application Page

Getting Started

GitHub Repo

Latest Release

Downloads

MCP2542WFD datasheet

RA4M2 MCU datasheet

BDC-AFBR-S50 TOF Sensor 2D and 3D files

AFBR-S50LV85D datasheet

How to flash the reference design via bootloader

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AFBR-S50MV85I datasheet

AFBR-S50MV68B datasheet