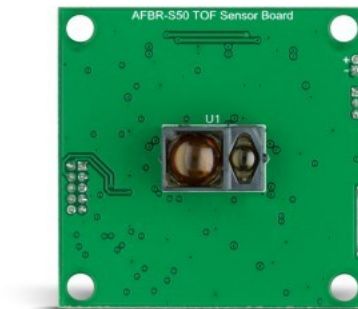
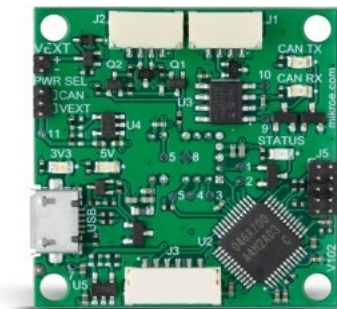


# BDC-AFBR-S50 TOF Sensor Board



PID: MIKROE-5629

**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.

Mikroe produces entire development toolchains for all major microcontroller architectures.

Committed to excellency, we are dedicated to helping engineers bring the project development up to speed and achieve outstanding results.



ISO 27001: 2013 certification of informational security management system.  
 ISO 14001: 2015 certification of environmental management system.  
 OHSAS 18001: 2008 certification of occupational health and safety management system.



ISO 9001: 2015 certification of quality management system (QMS).

## Specifications

|                  |  |
|------------------|--|
| Type             | Optical  |
| 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   |
| Programming      | Bootloader, External   |
| Supply Voltage   | USB,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](#)

Mikroe produces entire development toolchains for all major microcontroller architectures.

Committed to excellency, we are dedicated to helping engineers bring the project development up to speed and achieve outstanding results.



ISO 27001: 2013 certification of informational security management system.  
 ISO 14001: 2015 certification of environmental management system.  
 OHSAS 18001: 2008 certification of occupational health and safety management system.



ISO 9001: 2015 certification of quality management system (QMS).

[AFBR-S50MV85I datasheet](#)

[AFBR-S50MV68B datasheet](#)

[AFBR-S50LX85D datasheet](#)

[AFBR-S50MV85G-DS107 datasheet](#)

Mikroe produces entire development toolchains for all major microcontroller architectures.

Committed to excellency, we are dedicated to helping engineers bring the project development up to speed and achieve outstanding results.



ISO 27001: 2013 certification of informational security management system.  
ISO 14001: 2015 certification of environmental management system.  
OHSAS 18001: 2008 certification of occupational health and safety management system.



ISO 9001: 2015 certification of quality management system (QMS).