

## LightRanger 7 Click



PID: MIKROE-5842

LightRanger 7 Click is a compact add-on board capable of precise distance measurement and motion tracking. This board features the AFBR-S50, a medium-range 3D multipixel Time-of-Flight (ToF) sensor from Broadcom. Besides a VCSEL-based ToF sensor (Laser Class 1 eye safety), optimized to measure various distances working equally well on white, black, colored, and metallic reflective surfaces, this board also includes a 32-bit MCU, RA4M2 group of Renesas MCU with Arm® Cortex®-M33 core, alongside a 4-pin standard CAN connections compatible with Pixhawk®, a popular general-purpose flight controller. This Click board™ makes the perfect solution for robotics and industrial applications requiring precise 3D information and an extended range like drones or AMR/AGV.

LightRanger 7 Click is supported by a [mikroSDK](#) compliant library, which includes functions that simplify software development. This [Click board™](#) comes as a fully tested product, ready to be used on a system equipped with the [mikroBUS™](#) socket.

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 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
ClickID	Yes
Compatibility	mikroBUS
Click board size	L (57.15 x 25.4 mm)
Input Voltage	3.3V,5V

## Resources

[mikroBUS™](#)

[mikroSDK](#)

[Click board™ Catalog](#)

[Click boards™](#)

## Downloads

[LightRanger 7 click example on Libstock](#)

[AFBR-S50MV85I datasheet](#)

[AFBR-S50MV85G datasheet](#)

[AFBR-S50LV85D datasheet](#)

[AFBR-S50MV68B datasheet](#)

[LightRanger 7 click 2D and 3D files](#)

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[LightRanger 7 Click schematic](#)

[RA4M2 MCU datasheet](#)

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