# TERABEE

TeraRanger Evo 15m

With a 15-meter range in a lightweight (12 grams) and low-cost design, TeraRanger Evo 15m provides high-performance for distance sensing in the mid-range. It is ideal for integration into indoor or outdoor drone, robotics and level monitoring applications.

Key features

- Infrared Time-of-Flight technology
- Up to 15 meters detection range
- Small and lightweight design (from 9 grams)
- USB, I2C and UART clip-on and interchangeable interfaces
- Compatible with Arduino, Raspberry Pi, Pixhawk and ROS
- Operates in low light and complete darkness
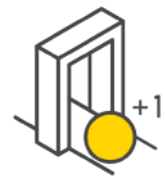- Product design optimized for OEM and easy integration

Applications
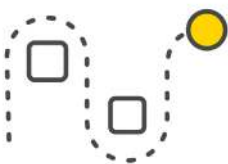
| Robot navigation, anti-collision | Drone anti-collision, altimeter and precision landing | Level monitoring (silos, containers, etc.) | Presence and Proximity detection |

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Terabee, 90 Rue Henri Fabre, 01630,
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Technical specifications

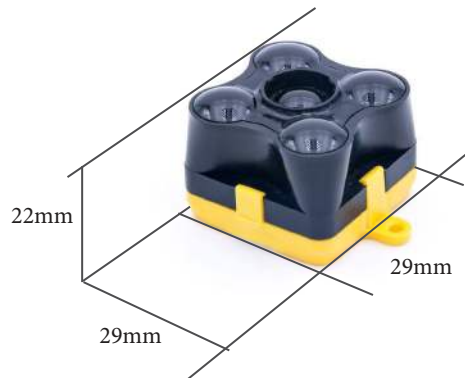| Product code	TR-EVO-15M
Performance	
Detection principle	Infrared Time-of-Flight
Range *	0.5m up to 15m
Update rate	Up to 240 readings per second
Output resolution	0.5cm below 14m, 2cm from 14m
Accuracy	±4cm in the first 14m, 1.5% above 14m
Field of View	Approx. 2°
Electronics	
Supply voltage	5V DC +/-5%
Supply current (min-max)	90mA - 330mA
Communication	
Interfaces	USB 2.0 Micro-B
	UART, +3.3V level, 115200,8,N,1
	IC2, +3.3V level, 400kHz
Connectors	Single 9 pin Hirose DF13
	Micro USB
Mechanical data	
Dimensions	Approx. 29x29x22mm (sensor + backboard)
Weight	9 g (sensor) + 3 g (backboard)
Eye safety	Yes (CE certified)

Specifications are derived from tests in controlled conditions. Bright sunlight, target surface reflectivity and other variables will affect sensor performance. The combination of very bright sunshine and low reflectivity targets (such as grass) can reduce maximum range to 10m or less. For additional information, please find the following test results report.

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Modular Evo Design

The sensor comprises two parts; an opto-electronic sensing device (black module, 9g) and a choice of interface backboard (yellow module, 3g). Simply clip your prefered interface board to the sensor. USB and I2C/UART backboards are available, but custom backboards can also be made to support specific applications. This two-part design alleviates the need to use adapters and converters.

Drivers for ROS (Robot Operating System) and popular drone flight controllers are also in development, or available, adding to the plug and play convenience of our Evo series sensors.

Dimensions

22mm
29mm
29mm

Have any questions? Contact us today!

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