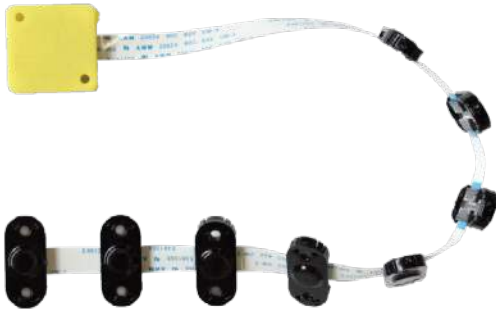


# TERABEE

## TeraRanger Multiflex

**Build flexible sensor arrays for indoor robotics and IoT applications**

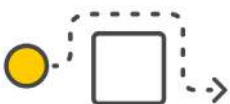
TeraRanger Multiflex is the modular solution for short range (<2 m) distance sensing applications. Connect up to eight plug and play sensors on one flexible bus to create custom configurations and to place sensors where needed. An array of calibrated distances in millimeters is streamed from the Multiflex Hub. It's the ideal – and higher performance – alternative to ultrasound for shorter-range distance sensing, delivered as a convenient and easy to use kit.



## Key features

- Time-of-Flight technology
- Multi-sensor crosstalk avoidance
- Detection range: from 0.05 up to 2m
- I2C / UART / USB interface
- Kit includes 8 distance sensors, central Hub & cables
- Pre-calibrated distance data in millimeters
- Weight: 20 grams
- ROS ready

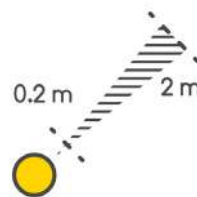
## Applications



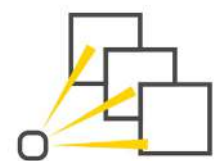
Robot navigation & collision avoidance



Stock level monitoring



Close-range distance measurements



Multi-sensor distance measurements

## 2 versions available

Multiflex

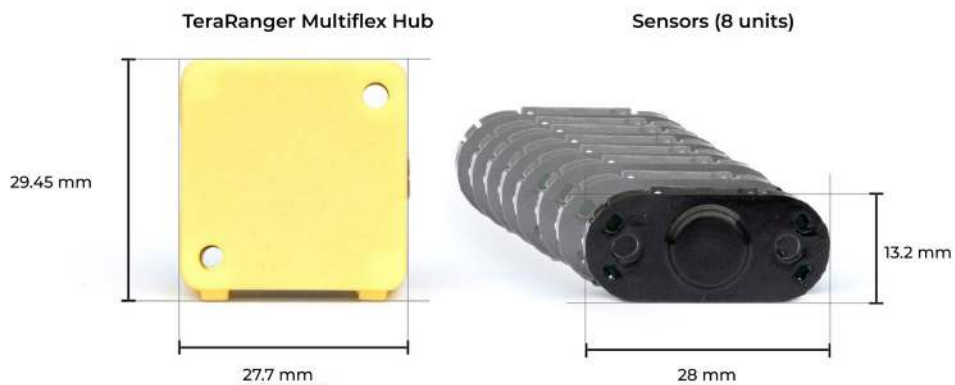


Multiflex PCB



TeraRanger Multiflex has dust and splash protection covers and offers the fastest refresh rates (up to 50 Hz), while TeraRanger Multiflex PCB has the longer detection range, up to 2.0 m.

## Dimensions



## Technical specifications

Product code	TR-MFX	TR-MFX-PCB
<b>Performance</b>	<b>Multiflex</b>	<b>Multiflex PCB</b>
Technology	Infrared laser Time-of-Flight (ToF)	
Range	Up to 1.10 m	Up to 2.00 m
Update rate	Up to 50 Hz*	Up to 30 Hz*
Range resolution	1 mm	
Accuracy	± 6 cm	± 3 cm
Field of View	Approx. 20°	
<b>Electronics</b>	<b>Multiflex</b>	<b>Multiflex PCB</b>
Supply voltage	5V DC	
Supply current	50 mA (typical conditions with 8 sensors connected)	
<b>Communication</b>	<b>Multiflex</b>	<b>Multiflex PCB</b>
Weight	Each sensor unit: Approx. 2 g Multiflex Hub: 5 g Total kit: Approx. 20 g	
Sensors and Hub protection covers	Yes	No
Eye safety	Class 1 laser device compliant with standard IEC 60825-1:2014-3rd ed.	
<b>Mechanical data</b>	<b>Multiflex</b>	<b>Multiflex PCB</b>
Interfaces	USB 2.0 Micro-B UART, +3.3 V level, 115200 baud I2C, +3.3 V level, 400k Hz	
Connectors	7 pin DF13 Micro USB (50 cm cable provided)	
<b>Conformity</b>	<b>Multiflex</b>	<b>Multiflex PCB</b>
Reference standard	CE, FCC, RoHS	

\* Output from the Hub with a single sensor connected. When more sensors are connected, divide this number by the total number of sensors. All tests conducted against a white diffuse reflector at nominal voltage (5 V) and typical temperature (23 degrees C) with the complete Field of View covered.

## What's inside the box

### Multiflex

- 8 sensors with covers
- Multiflex Hub and case
- 8 Flat Flex cables (10 cm)
- Micro USB cable (50 cm)
- DF13 7 pin cable, Open-End (22 cm)




### Multiflex PCB

- 8 sensors without covers
- Multiflex Hub
- 8 Flat Flex cables (10 cm)
- Micro USB cable (50 cm)
- DF13 7 pin cable, Open-End (22 cm)



**Any questions? Contact us today!**

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