

# TeraRanger Tower

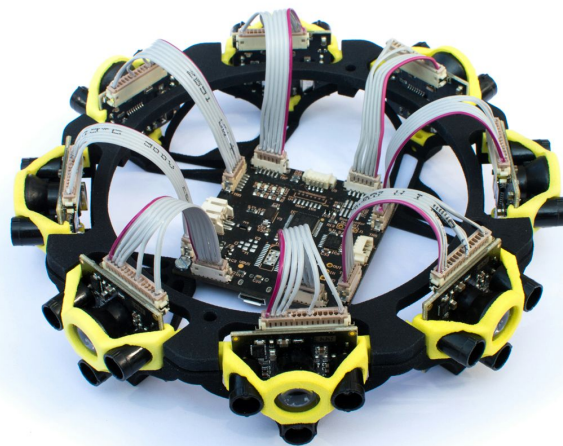
by TERABEE 

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## Silent, non-rotating alternative to laser LiDAR scanners

TeraRanger Tower is a simultaneous multi-axis scanner capable of replacing traditional laser lidar scanners in some applications. It is totally silent and has zero moving parts, resulting in greater efficiency and reliability. It combines 8 TeraRanger One sensors and the TeraRanger Hub to create a lightweight, fully eye-safe scanner for Simultaneous Localisation and Mapping (SLAM) and collision avoidance on fast-moving ground and airborne robots. Calibrated distance data is streamed from a USB or UART port as an array of synchronised distances, in millimetres.



TeraRanger Tower is sold as a self-assembly kit and takes less than 10 minutes to build. A tutorial video and user manual are available on our website, and a scan format ROS (Robot Operating System) node will get you up and running quickly. A free Windows GUI is also available, allowing you to see graphically the distance values being obtained and set certain sensor parameters with a just a few mouse clicks.

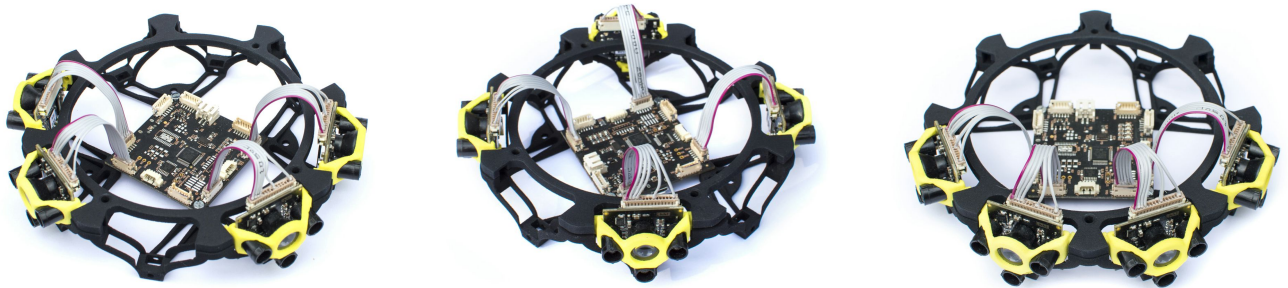
### *Technical Specifications:*

Mounting:	4 mounting holes in the base for M3 screws
Size:	Diameter 150mm x H 45mm
Weight:	130g fully assembled with 8 sensors
Supply voltage:	12V DC recommended (10-20V accepted)
Supply current:	345mA @12V in general environment
Possible interfaces:	UART, +3.3V level, 921600,8,N,1. Connector: 4 pin Molex Picoblade Micro-USB port (2.0)

Expansion:	4 pin Molex Picoblade connector for Can bus +5V level. (Requires firmware development. Please contact us if you are interested in this)
Range:	Up to 14m indoors (reduced range in sunlight)
Update rate:	Fixed 270 Hz in fast mode and up to 270 Hz in precision mode
Range resolution:	0.5cm
Accuracy:	$\pm 4$ cm in precision mode
Field of view:	3° for each sensor, 45° between each sensor axis

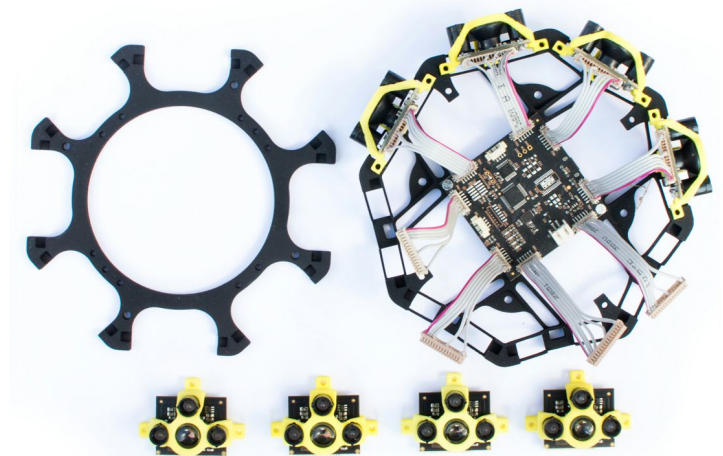
### Sensor options: Choose Tower 8 or Tower 4

Tower 8 gives you more data points to work with, producing denser maps and providing more sensing coverage for collision avoidance. As a lower cost alternative you can start from Tower 4 which offers the flexibility to place 4 sensors where you want, and the option of plugging in more sensors at a later date if required.



### In the box:

- Either eight or four TeraRanger One Sensors
- Tower frame and all mounting hardware
- TeraRanger Hub
- Power cable with open ends (requires soldering or crimping)
- Sensor-to-hub cables
- One Micro USB cable



The TeraRanger Tower can be purchased via our online store at:

<http://www.teraranger.com/product/teraranger-tower/>