TeraRanger Duo

by TERABEE

The Distance Measurement Sensor for Optimal Anti-Collision

The TeraRanger Duo is a fully-calibrated distance-measurement sensor that combines infrared Time-of-Flight (ToF) with ultrasound technology to detect any surface.

The sensor is simple to connect and use with one of its interfaces: UART, SPI or I/O, plus USB by using our adapter. It just streams out digital values in mm for both sensors - simple! There is a driver already available for ROS (Robot Operating System).

In addition, the TeraRanger Duo's on-board processor has user space available if you would like to modify the output protocol or implement your own algorithm (please request the SDK in case).

Technical Specifications:

Principle:	Infrared Time-of-flight (TOF), Ultrasound
Range:	14m (in non-direct sunlight conditions, ≥ 6m otherwise) for ToF, Sonar up to 7.65m
Update rate:	1kHz (in speed mode) - up to 600Hz (in precision mode), Sonar 1-20Hz NB: the ratio between speed ToF/sonar can change according to requests (default is ToF in precision mode and sonar at 1Hz)
Range resolution:	0.5cm for ToF, 1cm for Sonar
Accuracy:	± 2cm (in precision mode) for ToF
Field of view:	3.4° for ToF, usual flame shape for Sonar (larger than 3.4°)
Supply voltage:	10-20V DC
Supply current:	50mA@12V = average consumption, 100mA@12V = peak consumption
Possible interfaces:	UART, +5V level, up to 115200,8,N,1, user programmable*
	SPI (shared with JTAG), one CS line, +5V level
	Two user I/O lines, +5V level, e.g. for PWM, interrupts, LEDs etc.
Auxiliary interface:	+5V output available on connector
Expansion:	SDK can be made available upon request
Connector:	15 pin DF13
Weight:	16g

* USB adaptor provides Plug & Play data-connectivity and power supply. More info at:
http://www.teraranger.com/product/teraranger-usb-adapter/

The TeraRanger Duo can be purchased via our online store at:
www.teraranger.com/product/teraranger-duo/