

Laser Range Finders: for Robots

Sentek Solutions Ltd supply a complete range of ultra compact laser range finders for robots and other autonomous machinery.

These unique devices from **HOKUYO** provide an accurate spatial map of surroundings in two or three dimensions.



How far each device can “see”, how small an object can be distinguished, and how quickly it reacts depends on the model.

Which one is right for your application?



Laser Range Finders

Laser Range Finders provide continuous time stamped digital mapping coordinates which the host robot / AGV can interpret and determine subsequent real time actions.

URG-04LX -UG01

Introduced in 2009 with the researcher / hobbyist in mind the URG-04LX-UG01 is a “de-tuned” version of the “classic” URG-04LX allowing low cost access to this leading edge technology.

- 5.6 metres range
- 240° scan window
- 0.36° resolution
- 10 scans per second
- 50mm x 50mm x 70mm
- Weight 160g
- Comm's: USB only
- Power via USB mini-port only

* reduced distance accuracy @ $\pm 3\%$



URG-04LX

The URG-04LX has become the default option for serious robotiers looking to develop autonomous mobile robots.

Key decision criteria are functionality, size, power consumption & RS232 interface.

- 5.6 metres range
- 240° scan window
- 0.36° resolution
- 10 scans per second
- 50mm x 50mm x 70mm
- Weight 160g
- Comm's: USB or RS232
- 5V DC



UBG-04LX-F01

The UBG-04LX-F01 is essentially a turbo charged URG-04LX . It is almost four times as fast but still fits into a similar compact and lightweight footprint.

Key decision criteria: Scan speed & compact size

- 5.6 metres range
- 240° scan window
- 0.36° resolution
- 35 scans per second
- 60mm x 75mm x 60mm,
- Weight 260g
- 12V DC



UTM-30LX

At the top of the range is the UTM-30LX which “punches well above its weight”. Considering the UTM-30LX has a size profile comparable to a standard credit card its ability to map objects up to 30m away is remarkable. Additionally; response time and scan window are unparalleled.

- 30 metres range
- Ideal for outdoor or indoor use
- 270° scan window
- 0.25° resolution
- 40 scans per second
- 60mm x 60mm x 87mm
- Weight 370g
- 12V DC



NB An ultra high speed development version, the UTM-X002S is also available

UXM-30LX

Designed for outdoor use this LRF is capable of “detecting” low reflectivity objects in adverse lighting . Multi echo processing allows “low level” noise such as movement of wind blown leaves to be filtered out. Ethernet connectivity increases flexibility.

- Detects objects with normal reflectivity at 50 m & above
- Objects with 10% reflectivity “seen” at 30m
- Ideal for outdoor or indoor use
- 190° scan window
- 0.25° resolution
- 20 scans per second
- Ethernet or USB connectivity
- 24V DC



Overview

					
Power Source VDC	5	5	12	12	24
Range m	5.6	5.6	5.6	30	50
Scan Window	240°	240°	240°	270°	190°
Resolution	0.36°	0.36°	0.36°	0.25°	0.25°
Scan Speed Hz	10	10	35	40	20
Interface	USB	USB RS232	USB RS232	USB	Ethernet USB
Volume ml	175	175	270	314	2,200
Weight g	160	160	260	370	800

1010 Cambourne Business Park, Cambridge, CB23 6DP UK.

Tel +44 (1223) 923 930 : Fax +44 (1223) 923 940

info@sentekeurope.com : www.sentekeurope.com