# LZR®-FLATSCAN U

Laser distance
measurement device

## TECHNOLOGY

Laser

## DESCRIPTION

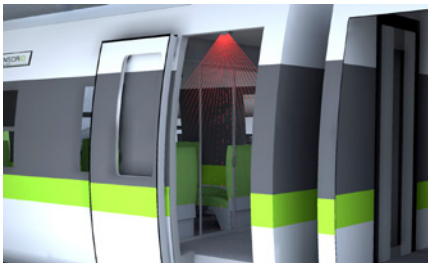
The **LZR®-FLATSCAN U** is a LASER-based device measuring distances on 1 plane. The **LZR®-FLATSCAN U** can be installed to scan in any direction and is designed to provide the highest degree of flexibility. This very compact and competitive LASER scanner communicates the raw measurement data for post-processing or control tasks.

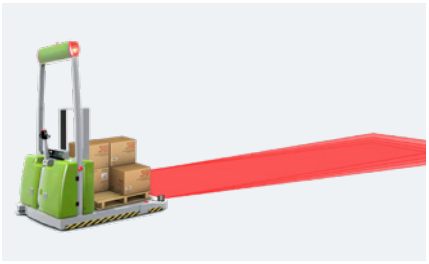
### Performance

- Non-contact optical measurement.
- Different background or substrate has almost no effect on measurements.
- Distance measurement range : up to 8 m.
- Field of view: up to 108°.
- Data output : standard RS485 bus communication (full-duplex / bidirectional).
- Low power consumption (< 2 W), thus adapted to autonomous systems.
- No external illumination of target object necessary compared to camera systems.

## INSTALLATIONS


Shelving

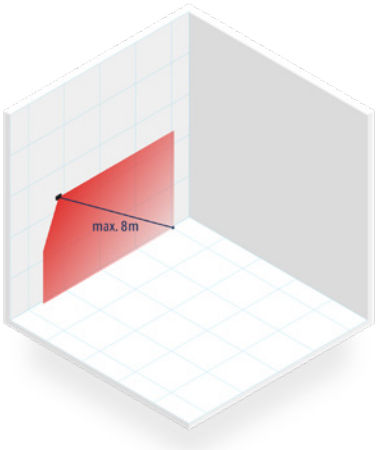

Profile analysis of people


Navigation

## APPLICATIONS

- Profile analysis
- Traffic control
- Navigation of Automated Guided Vehicles
- Navigation monitoring
- Object measurement / detection
- Position measurement
- Counting
- And more

## TECHNICAL SPECIFICATIONS




| | |
|---|---|
| **Technology** | Laser scanner, time of flight measurement |
| **Measurement range** | Max. 8 m / 4 m @ 2% remission factor / 8 m @ 8% remission factor |
| **Number of planes** | 1 |
| **Number of points/plane** | Max. 400 |
| **Angular resolution / coverage** | Min. 0.18° / Max. 108° |
| **Scanning rate** | 93 scans/sec. @ angular resolution ≥ 0.74°<br>23.25 scans/sec. @ angular resolution < 0.74° |
| **Emission characteristics**<br>IR LASER | <br>Wavelength 905 nm; max. output pulse power 25 W (CLASS 1) |
| **Supply voltage** | 12-24 V DC ±15% |
| **Power consumption** | < 2 W |
| **Response time** | measurements are refreshed every: 10,75 ms @ angular resolution ≥ 0,74°<br>measurements are refreshed every: 43 ms @ angular resolution < 0,74° |
| **Measurement error** | @4m: ± 30 mm<br>@8m: ± 70 mm |
| **Repeatabiliy** | @4m: ± 5 mm<br>@8m: ± 10 mm |
| **Peak current at power-on** | 0,8 A (max. 20 ms @ 24 V) |
| **Cable length** | 2,5 m |
| **Connector** | DF11-6DS-2C |
| **Serial communication** | see LZR®-FLATSCAN U950 Protocol (available for download on our website) |
| Type | Asynchronous |
| Interface | RS 485 |
| Communication mode | Full-duplex |
| Transmission speed | max. 921600 bit/sec (configurable) |
| Topology | Point to point |
| Symbol coding | 1 start bit, 1stop bit, no parity bit |
| File type | 8 bits |
| Byte order | Little endian, LSB first |
| **LED-signal** | 1 tri-coloured LED: sensor/communication status |
| **Dimensions** | 142 mm (L) x 85 mm (H) x 23 mm (D) (mounting base + 7 mm) |
| **Material - Colour** | PC/ASA - Black |
| **Protection degree** | IP54 [EN 60529] |
| **Temperature range** | -30°C to +60°C if powered ; -10°C to +60°C unpowered |
| **Humidity** | 0-95 % non-condensing |
| **Vibrations** | < 2 G |
| **Conformity** | This product conforms to all applicable European Union legislation. Please refer to the Declaration of Conformity for further information. |





**BEA** s.a. / LIEGE Science Park / Allée des Noisetiers 5 / 4031 Angleur • BELGIUM
**T** +32 (0)4 361 65 65 / **F** +32 (0)4 361 28 58 / **E** info-eu@beasensors.com