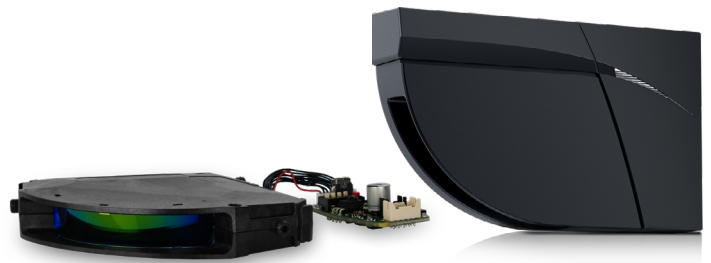




LZR®-FLATSCAN U950/U952

COMPACT, SINGLE CURTAIN, LASER SCANNER
FOR RAW DATA APPLICATIONS



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▲ click or scan

TECHNOLOGY



CERTIFICATIONS



DESCRIPTION

BEA's **LZR-FLATSCAN U950** and **U952** sensors are compact, single curtain, raw data, LASER scanners capable of being integrated into hardware and systems. They are ideal for AGV and AMR applications, as well as portal protection.

These solutions provide high-resolution output with 400 configurable detection spots that can be customized to your application needs.

The **LZR-FLATSCAN U950** offers flexible mounting in a low-profile housing, while the **LZR-FLATSCAN U952** is available for full integration into your equipment.



Background Independent

Background or substrate has limited effect on measurements

LASER-Based Measurements

Measurement range is up to 8 meters (26 feet)



Uni-Directional or Bi-Directional Standard

RS485 bus communication (bi-directional)

Superior Object Recognition

No external illumination of target object necessary as compared to camera systems

TECHNICAL SPECIFICATIONS

TECHNOLOGY / PERFORMANCE

Technology	LASER scanner, time-of-flight measurement
Measurement range	max. 26'3" (8 m) 13' (4m) @ 2% remission factor 26'3" (8m) @ 8% remission factor
Number of planes	1
Number of points/plane*	max. 400 pts
Angular resolution*	min. 0.18°
Angular coverage*	max. 108°
Response time	measurements are refreshed every: 10.75 ms @ angular resolution ≥ 0.74° 43 ms @ angular resolution < 0.74°
Scanning rate	93 scans/sec. @ angular resolution ≥ 0.74° 23.25 scans/sec. @ angular resolution < 0.74°
Emission characteristics	IR LASER: Wavelength 905 nm; max. output pulse power 25 W; Class 1
Measurement error	± 1 3/16" @ 13' (±30mm @ 4m) ± 2 3/4" @ 26'3" (±70mm @ 8m)
Repeatability	± 3/16" @ 13' (±5mm @ 4m) ± 25/64" @ 26'3" (±10mm @ 8m)
Serial communication	see LZR®-FLATSCAN U Protocol (available for download on our website)
Type	asynchronous
Interface	RS 485
Communication mode	full-duplex
Transmission speed	max. 921,600 bit/sec (configurable)
Topology	point to point
Symbol coding	1 start bit, 1 stop bit, no parity bit
Type	8 bits
File type	little endian, LSB first
Byte order	1 tri-colored LED: sensor/communication status

ELECTRICAL

Supply voltage	12 – 24 VDC ±15%
Power consumption	< 2 W
Peak current at power-on	0.8 A (max. 20 ms @ 24 V)

PHYSICAL

Cable length	8'2-1/2" (2.5m)
Connector	DF11-6DS-2C
Dimensions (U950 only)	5 1/2" (L) × 3 1/8" (H) × 1" (D) [142mm (L) × 85mm (H) × 23mm (D)] mounting bracket + 1/4" (7mm)
Material - Color (U950 only)	PC/ASA - Black
Tilt angles (U950 only)	-2 – 6° (with mounting base) 2 – 10° (without mounting base)
Protection degree (U950 only)	IP54 [IEC 60529]
Temperature range	powered: -22 – 140 °F (-30 – 60 °C) unpowered: 14 – 140 °F (-10 – 60 °C)
Humidity	0 – 95% non-condensing
Vibrations	< 2 G

COMPLIANCE

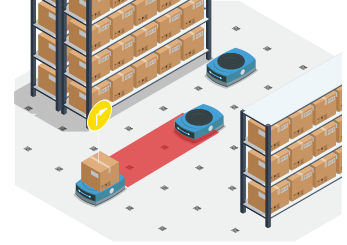
Compliance	2014/30/EU; 2011/65/EU; IEC/EN 60825-1 Laser safety; IEC/EN 61000-6-2; IEC/EN 61000-6-3 EMC
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* These parameters can be configured via the RS 485 communication interface. For more information on the existing options, see LZR®-FLATSCAN U Protocol.

APPLICATIONS



Autonomous-mobile robots

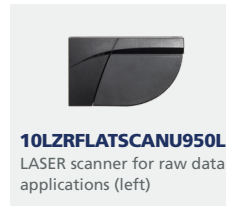


Autonomous-guided vehicles

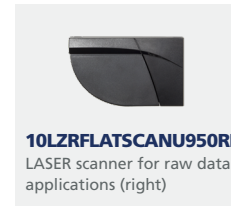


Automatic forklifts

PRODUCT SERIES



10LZRFLATSCANU950LB
LASER scanner for raw data applications (left)



10LZRFLATSCANU950RB
LASER scanner for raw data applications (right)



10LZRFLATSCANU952
LASER scanner without housing for raw data applications

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