



LMI TECHNOLOGIES

Gocator® 2400 Series

3D SMART LINE PROFILE SENSORS

FOR WOOD SCANNING APPLICATIONS



- 2-Megapixel imager - up to 1940 points/profile
- 200 HZ full frame up to 5 KHZ (Note: 2400 series provides up to 2X faster scan rate for equivalent window size as 2300 series)
- X Resolution: 0.551" - 0.043" (14.0 mm - 1.1 mm)
- FOV: 1.1" - 78.7" (27 mm - 2000 mm)
- Measurement range: 1.0" - 60.0" (25 mm - 1525 mm)

Gocator 2400 3D smart sensors are designed for the demanding requirements of lumber optimization. With the latest 2-megapixel imaging technology and an embedded processor, these sensors achieve fast scan speeds, high X resolutions and excellent measurement repeatability. The ultra-wide field of view Gocator 2490 model is especially suited for log and board scanning applications that require greater scan coverage.

MULTI-SENSOR NETWORKING CAPABILITY

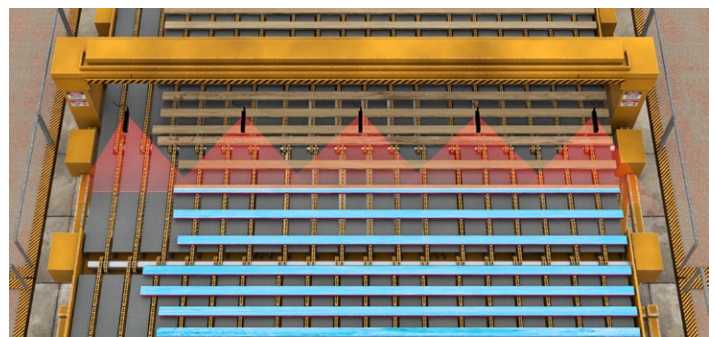
Gocator systems can effortlessly scale to multiple sensors using LMI Master hubs. For example, Gocator 2490 line profilers can be arranged in a lineal configuration that boards pass under on a transverse conveyor to capture the entire board length and width and generate a complete 3D point cloud. Gocator 2400 Series can also be arranged in a ring configuration for 360° log and board scanning, or deployed in a mixed-model sensor network to optimize for both field of view and resolution.

INSPECT WITH SPEED AND PRECISION

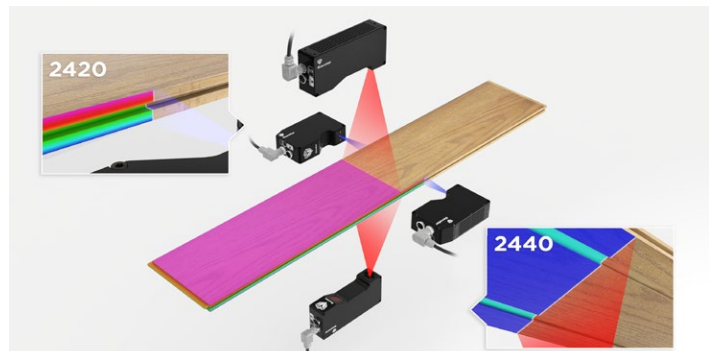
Faster scan and acquisition speeds empower you to speed up your wood scanning processes and leverage higher resolutions. For example, the Gocator 2490 is able to scan an area of 39.370 x 39.370 inches (1000 x 1000 mm) at 800 Hz, and achieve 0.098 inch (2.5 mm) XYZ resolutions at infeed speeds of 393.7 feet per minute (120 meter per minute).

LEVERAGE A GREATER MEASUREMENT RANGE

The Gocator 2400 Series a selection of models with wider field of view and larger measurement range. For example, the Gocator 2490 achieves an impressive ultra-wide maximum 78.7 inch (2000 mm) field of view and 60.0 inch (1525 mm) measurement range.



5x Gocator 2490 Multi-Sensor Network for Transverse Board Scanning

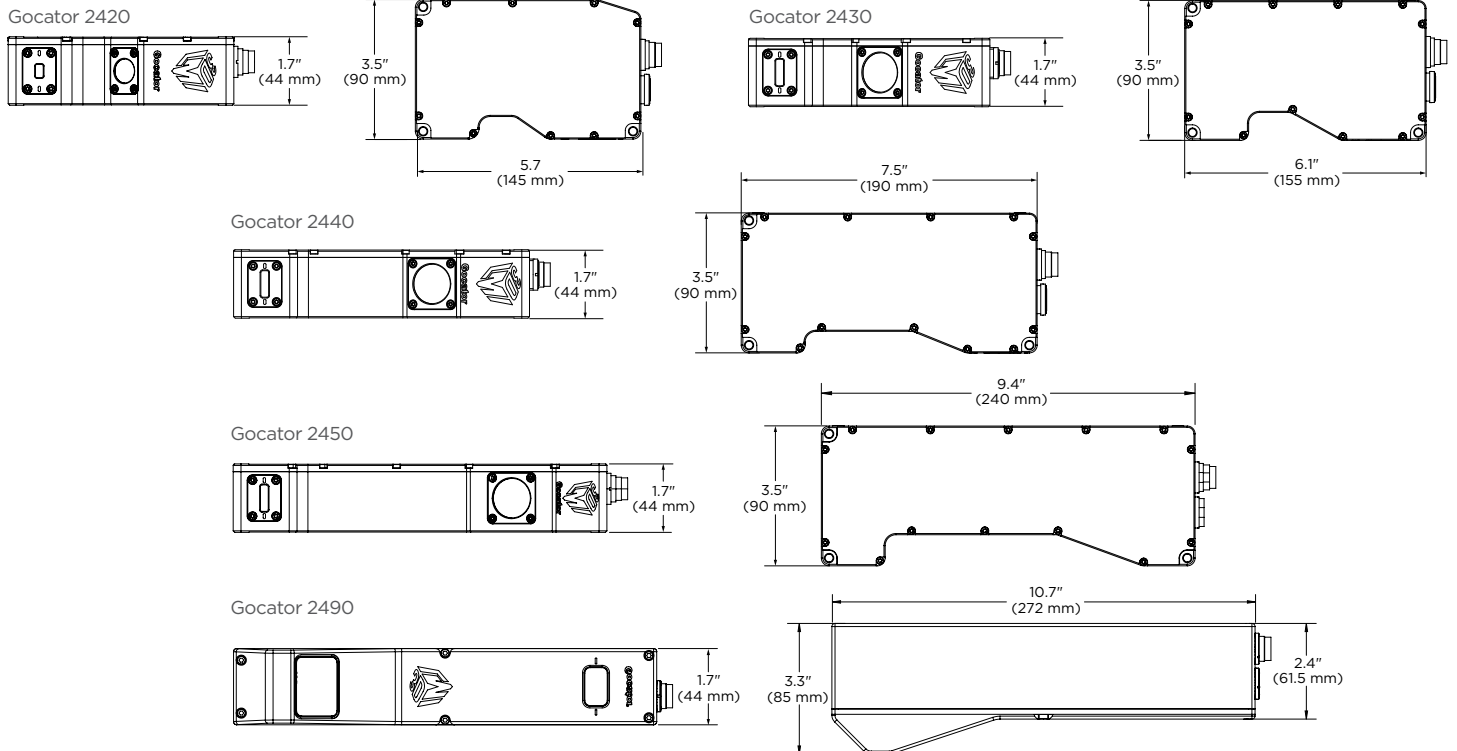


Top and bottom floor board scanning in a Gocator 2400 mixed-model multi-sensor network

GOCATOR 2400 SERIES MODELS	2420	2430	2440	2450	2490
Data Points / Profile	1940	1500	1500	1800	1920
Resolution X (Profile Data Interval)	14.0 - 16.5 μ m	37.0 - 57.0 μ m	90.0 - 130.0 μ m	100 - 255 μ m	250.0 - 1100.0 μ m
Linearity Z (+/- % of MR)	0.006%	0.01%	0.01%	0.01%	0.04%
Repeatability Z	0.4 μ m	0.8 μ m	1.2 μ m	2.0 μ m	12.0 μ m
Clearance Distance (CD)	2.4" (60.0 mm)	3.0" (75.0 mm)	7.2" (183.0 mm)	10.6" (270.0 mm)	13.8" (350.0 mm)
Measurement Range (MR)	1.0" (25.0 mm)	3.1" (80.0 mm)	8.3" (210.0 mm)	21.7" (550.0 mm)	60.0" (1525.0 mm)
Field of View (FOV)	1.1" - 1.3" (27.0 mm - 32.0 mm)	1.9" - 3.3" (47.0 mm - 85.0 mm)	3.8" - 7.6" (96.0 mm - 194.0 mm)	5.7" - 16.7" (145.0 mm - 425.0 mm)	15.4" - 78.7" (390.0 mm - 2000.0 mm)
Laser Class	2M, 3R (blue, 405 nm)	2, 3R, 3B (red, 660 nm; blue, 405nm)	2, 3R, 3B (red, 660 nm; blue, 405nm)	2, 3R, 3B (blue, 405nm)	2, 3R (red, 660 nm)
Dimensions	1.732"x3.543"x5.709" (44x90x145 mm)	1.732"x3.543"x6.102" (44x90x155 mm)	1.732"x3.543"x7.480" (44x90x190 mm)	1.732"x3.543"x9.449" (44x90x240 mm)	1.929"x3.346"x10.709" (49x85x272 mm)
Weight	1.940 lbs (0.88 kg)	2.205 lbs (1.0 kg)	2.646 lbs (1.2 kg)	2.646 lbs (1.2 kg)	3.307 lbs (1.5 kg)

ALL 2400 SERIES MODELS

Scan Rate	200 Hz, up to 5 kHz. (Note: 2400 series provides up to 2x scan rate for equivalent window size as 2300 series)
Interface	Gigabit Ethernet
Inputs	Differential Encoder, Laser Safety Enable, Trigger
Outputs	2x Digital output, RS-485 Serial (115 kBaud)
Input Voltage (Power)	+24 to +48 VDC (9 Watts); Ripple +/- 10%
Housing	Gasketed aluminum enclosure, IP67
Operating Temperature	32 to 122°F (0 to 50°C) (50 to 122°F (10 to 50°C) for Class 2 Blue)
Storage Temperature	-22 to 158°F (-30 to 70°C)
Vibration Resistance	10 to 55 Hz, 0.059" (1.5 mm) double amplitude in X, Y, and Z directions, 2 hours per direction
Shock Resistance	15 g, half sine wave, 11 ms, positive and negative for X, Y, and Z directions
Scanning Software	Browser-based GUI and open source SDK for configuration and real-time 3D visualization. Open source SDK, native drivers, and industrial protocols for integration with user applications, third-party image processing applications, robots, and PLCs.



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