LMI TECHNOLOGIES

Gocator® 200 SERIES

3D SMART SCANNERS FOR WOOD

With Gocator 200 series **multi-point scanners** you can create a scanning system based on a **modular design** that allows you to mix **3D profiles, tracheid detection, and color vision**. Run systems at up to 300 feet per minute in applications such as transverse board scanning for sawmills and planer mills.

- » FAST 3D PROFILING SPEEDS (UP TO 3 KHZ / 300 FPM)
- » TRACHEID DETECTION AT 1.5 KHZ FOR GRAIN ANGLE AND KNOT DETECTION
- » BOLT-ON COLOR VISION MODULE FOR SURFACE DEFECT DETECTION AT 0.5 X 0.25 MM
- » SUPPORTED BY SDK FOR USER-DRIVEN CONFIGURATION
- » DRIVER- AND OS-INDEPENDENT

Gocator 250 + 205 + LB200

MODULAR DESIGN

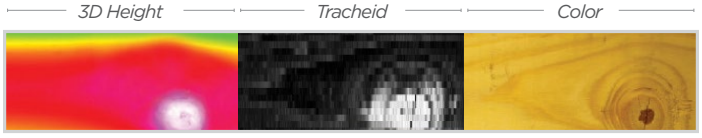
Start out with profile data for volume recovery and then easily upgrade to add color for grade-based recovery. Or start with profile and tracheid scanning for a system that offers excellent grain angle and knot detection, and then add color for further defect recognition.

MORE COMPACT AND COMPLETE SOLUTION

Multi-point scanner heads detect the rising and falling edge of the board, whereas line profilers may not. Multi-point scanners use less space on the scanner frame (~4-6″) whereas line profilers require more of the conveyor deck (typically 2-3′).

TRACHEID DETECTION

Using a patented multi-dot design, the Gocator 250 scanner measures the tracheid effect. When a laser spot is projected onto healthy tracheid wood cells, laser light is scattered into the cells in the direction of cell growth. If the wood fibre is dead (as in a knot), then the laser light does not scatter. This effect can be measured to identify good wood from defective wood and even determine grain angle.



COLOR VISION FOR ENHANCED DEFECT DETECTION

Color vision supports the detection and measurement of surface defects. For wood material, surface defects include knots, splits, and rot, and their size and location is key to grade-based recovery optimization. Stable illumination is provided by white LED light bars, which are strobed to maximize efficiency and lifetime.

ULTIMATE FLEXIBILITY

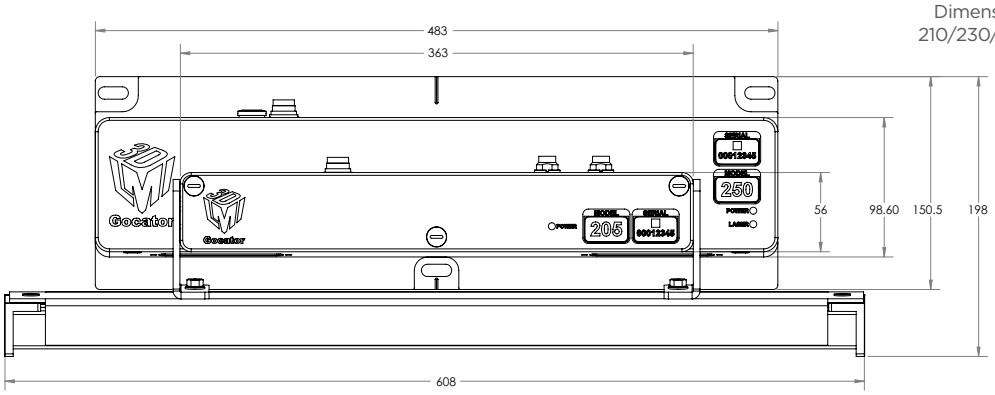
The Gocator 200 series offers onboard processing and multi-sensor networking capability to build high definition 3D data models for material optimization. From early grading of cants in the sawmill to high-speed transverse board scanning applications in the planer mill, there is a suitable model and modular combination to meet your exact needs.

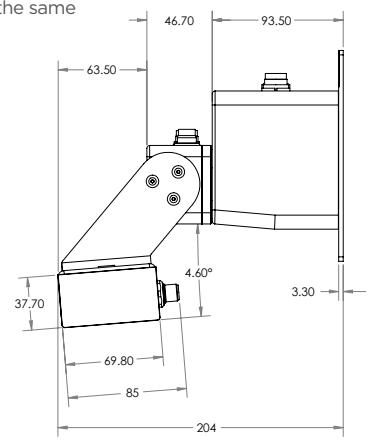
GOCATOR 200 SERIES MODELS	205	210	230	250
Clearance Distance (CD)	20" / 508.0 mm	17" / 431.8 mm	20" / 508.0 mm	20" / 508.0 mm
Measurement Range (MR)	11" / 279.4 mm	14" / 355.6 mm	8" / 203.2 mm	8" / 203.2 mm
Field of View	24" / 609.6 mm	24" / 609.6 mm	24" / 609.6 mm	24" / 609.6 mm
Number of Points	N/A	30	76	76
Scan/Profile Speed	3 kHz	2 kHz	3 kHz	3 kHz
Tracheid Speed	N/A	N/A	N/A	1.5 kHz
X Resolution (At Mid-range)	N/A	1.1" / 27.94 mm	0.333" / 8.5 mm	0.333" / 8.5 mm
Z Resolution	N/A	0.008" / 0.203 mm	0.005" / 0.127 mm	0.005" / 0.127 mm
XY Resolution (Color Vision)	0.02" x 0.01" / 0.5 mm x 0.25 mm	N/A	N/A	N/A

ILLUMINATION	
LB200 Strobed White LED Light Bar	12° fan angle, standard light bar
LB210 Strobed White LED Light Bar	30° fan angle, for reduced clearance distance or larger illumination area

ALL 200 SERIES MODELS	
Interface	Gigabit Ethernet
Inputs	Differential Encoder, Trigger, Laser Safety Enable
Outputs	2x Digital Output, RS485 Serial (115 kbaud), 1x Analog Output (4 - 20 mA)
Input Voltage (Power)	+48 VDC (Gocator 210 / 230 / 250: 25 Watts; Gocator 205: up to 78 Watts); Ripple +/- 10%
Housing	Gasketed Aluminium Enclosure, IP67
Operating Temp	0 to 50 °C
Storage Temp	-30 to 70 °C
Vibration Resistance	10 to 55 Hz, 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, real-time 3D visualization, and reference multi-sensor board state machine design. Industrial protocols for integration with PLCs.

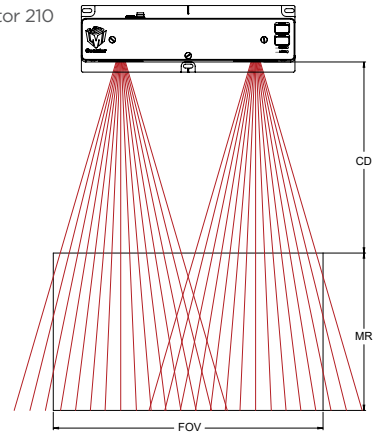
Dimensions of Gocator 210/230/250 are the same



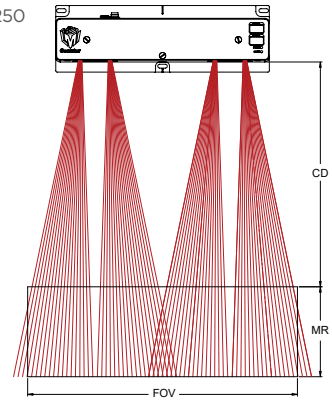


Light bar mounting hardware optional

Gocator 210



Gocator 230/250



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