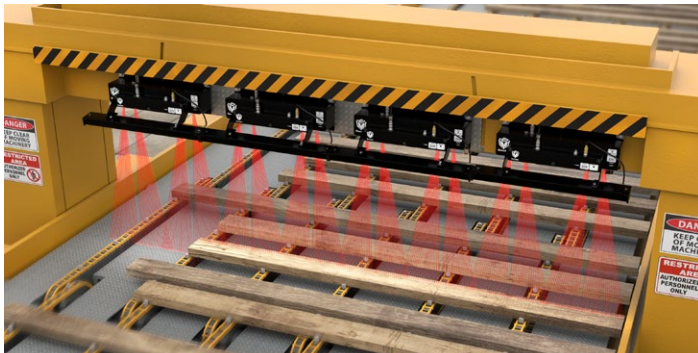
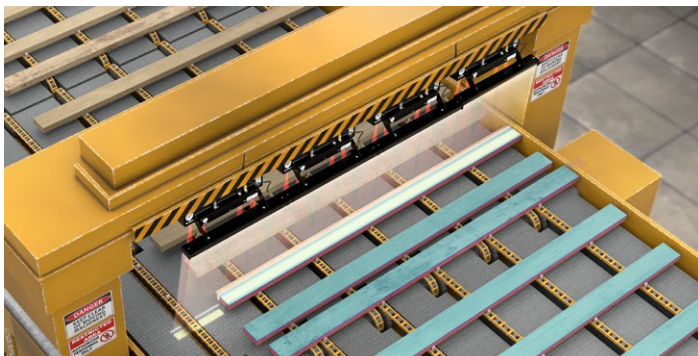


Gocator® 200 Series

3D SMART SCANNERS FOR WOOD



Transverse Board Scanning with G200 Multi-Point Profilers



Final Lumber Grading with G200 Multi-Point Profilers

With Gocator 200 series **multi-point scanners** you can create a system based on a modular design that allows you to mix **3D profiles**, tracheid detection, and **color vision**. These systems achieve frame rates up to 4 kHz for high-speed transverse board scanning applications in the saw and planer mill.

- Fast 3D profiling speeds (up to 4 khz)
- Tracheid detection at up to 2 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

MODULAR DESIGN

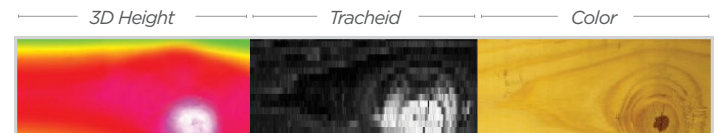
Start out with profile data for volume recovery and then easily upgrade to add color for grade-based recovery. Or start with profile and tracheid scanning for a system that offers excellent grain angle and knot detection, and then add color for further defect recognition.

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.

200 SERIES MODELS	205		210	230		240		250	
Measurement Range (MR) ¹	11" 279.4 mm		14" 355.6 mm	8" 203 mm	10" 254 mm	8" 203 mm	10" 254 mm	8" 203 mm	10" 254 mm
Clearance Distance (CD) ¹	20" 508 mm	19" 482 mm	17" 431.8 mm	20" 508 mm	19" 482 mm	20" 508 mm	19" 482 mm	20" 508 mm	19" 482 mm
Scan/Profile Speed (kHz) ²	4	3	2	4	3	4	3	4	3
Tracheid Speed (kHz) ²	-		-	-		- ³		2	1.5
Field of View (FOV) (mm)	609.6		609.6	610		610		610	
Number of Points	-		30	76		76		76	
X Resolution (At Mid-range)	-		1.1" / 27.94 mm	0.333" / 8.5 mm		0.333" / 8.5 mm		0.333" / 8.5 mm	
Z Resolution	-		0.008" / 0.203 mm	0.005" / 0.127 mm		0.005" / 0.127 mm		0.005" / 0.127 mm	
XY Resolution (Color Vision)	0.01" x 0.01" 0.5 x 0.25 mm		-	-		-		-	

ILLUMINATION	LB200 STROBED WHITE LED LIGHT BAR	LB210 STROBED WHITE LED LIGHT BAR
Light Fan Angle	12°, standard light bar	30°, for reduced clearance distance or larger illumination area

ALL 200 SERIES MODELS		
Interface	Gigabit Ethernet	<div><div><div>1</div><div>Distance to center of MR is consistent between 8" and 10" configuration</div></div><div><div>2</div><div>4 kHz profile and 2 kHz tracheid at 8" MR and lower</div></div><div><div>3</div><div>Tracheid detection available as a software upgrade</div></div></div>
Inputs	Differential Encoder, Laser Safety Enable, Trigger	
Outputs	2x Digital output, RS-485 Serial (115 kBaud)	
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 Temperature	0 to 50°C	
Storage Temperature	-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.	

