Gocator

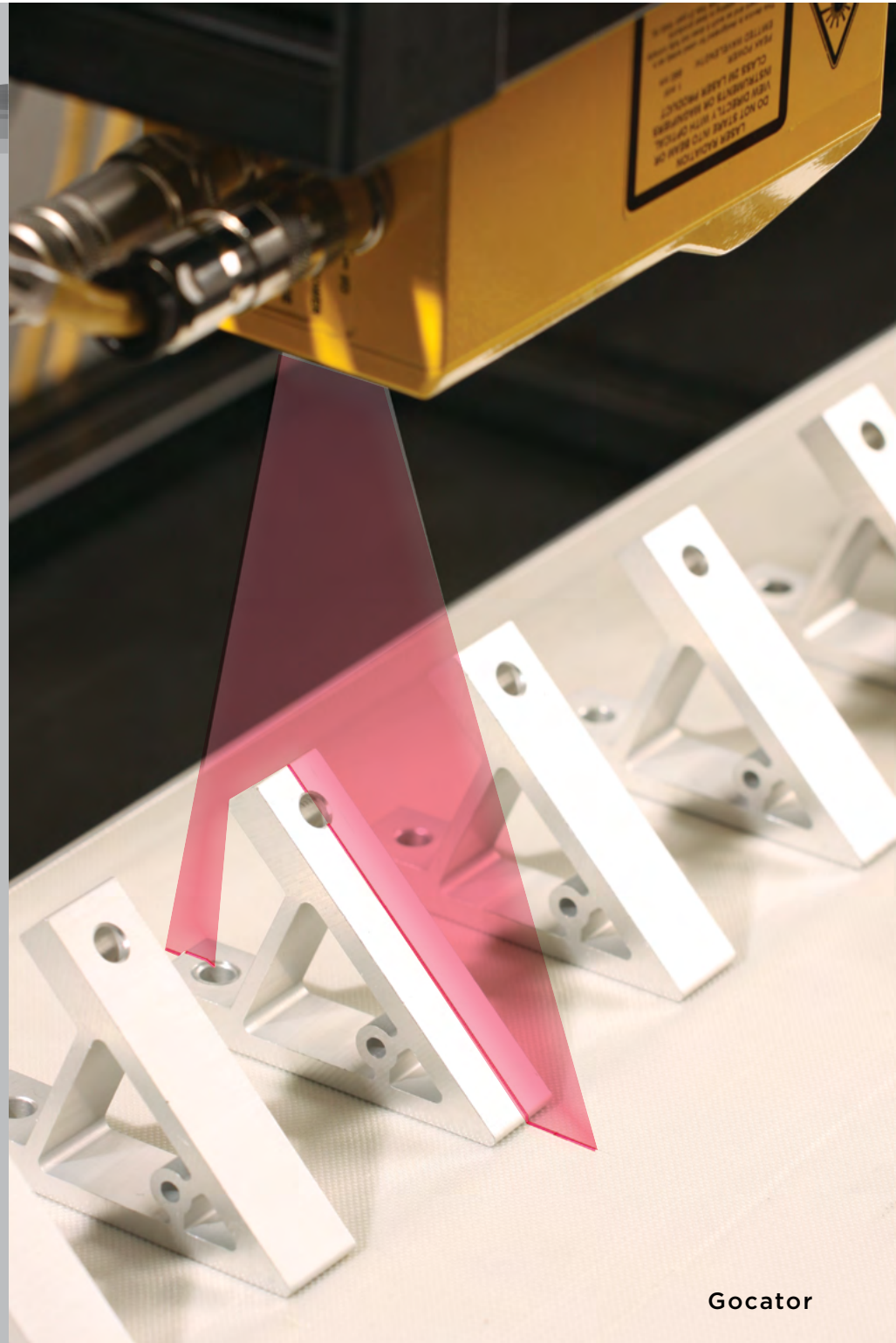
3D measurement and control, made easy

LMI TECHNOLOGIES
www.lmi3D.com

See the World Differently

- We live in a 3D world with products that have three dimensions and textured surfaces
- 3D sensors provide height and contour data, even on low contrast surfaces where 2D cameras may struggle
- 3D measurements bring value to factory automation for processing and quality control
- Measuring in 3D can be fast, uncomplicated, as well as easy to setup and interface
- At LMI, we see the world differently!
- Gocator sensors offer **powerful 3D measurement that is easy for everyone!**

We've made 3D easy



Feature Rich

WEB ENABLED

- Built-in web server, no separate software required
- Use a standard web browser to access the sensor
- View real-time profile data on any computer, any OS

APPLICATION READY

- Built-in measurement tools, no coding necessary
- Easy setup allows real 3D measuring in minutes, not days
- Use as a single sensor, dual sensor system, or scale up to a network of sensors

HIGH PERFORMANCE

- Scan rate up to 5000 Hz
- Resolution to microns
- Ethernet interface

FACTORY CALIBRATED

- Delivers real world coordinates, right out of the box
- Laser and camera are precision factory aligned
- Consistent reliable measurements

RICH I/O

- Interface to your existing control systems, your way
- Choose how you want to trigger and scan
- Select Ethernet, digital, analog, and/or serial data output

COMPACT FOOTPRINT

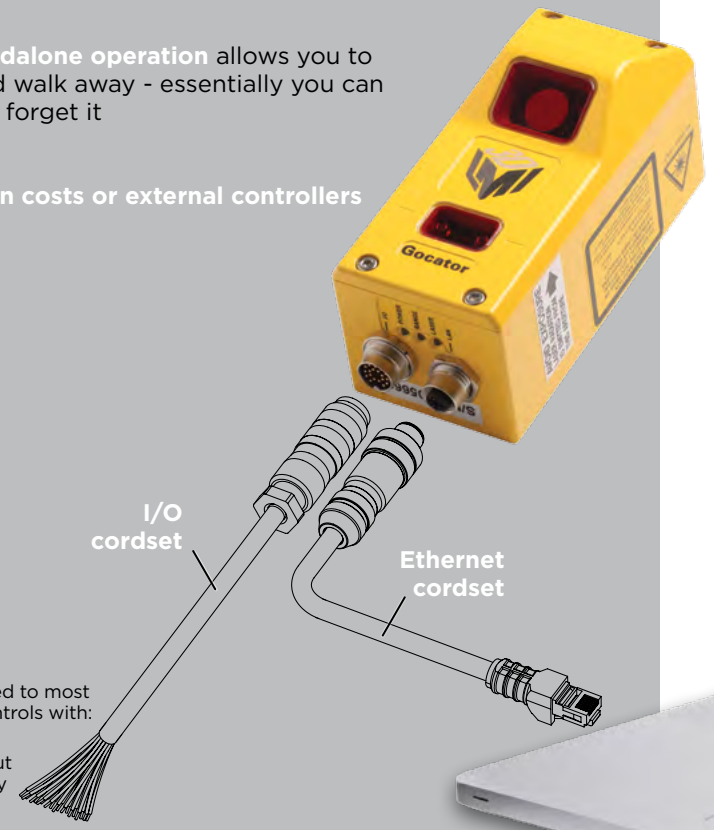
- Easily fits in small spaces
- Can be used on robotic arms
- Fits your application without costly modifications

COMPLETE SOLUTION

- Easy to use, intuitive interface to get measurements fast
- Built-in I/O
- True standalone operation for single or dual sensor systems

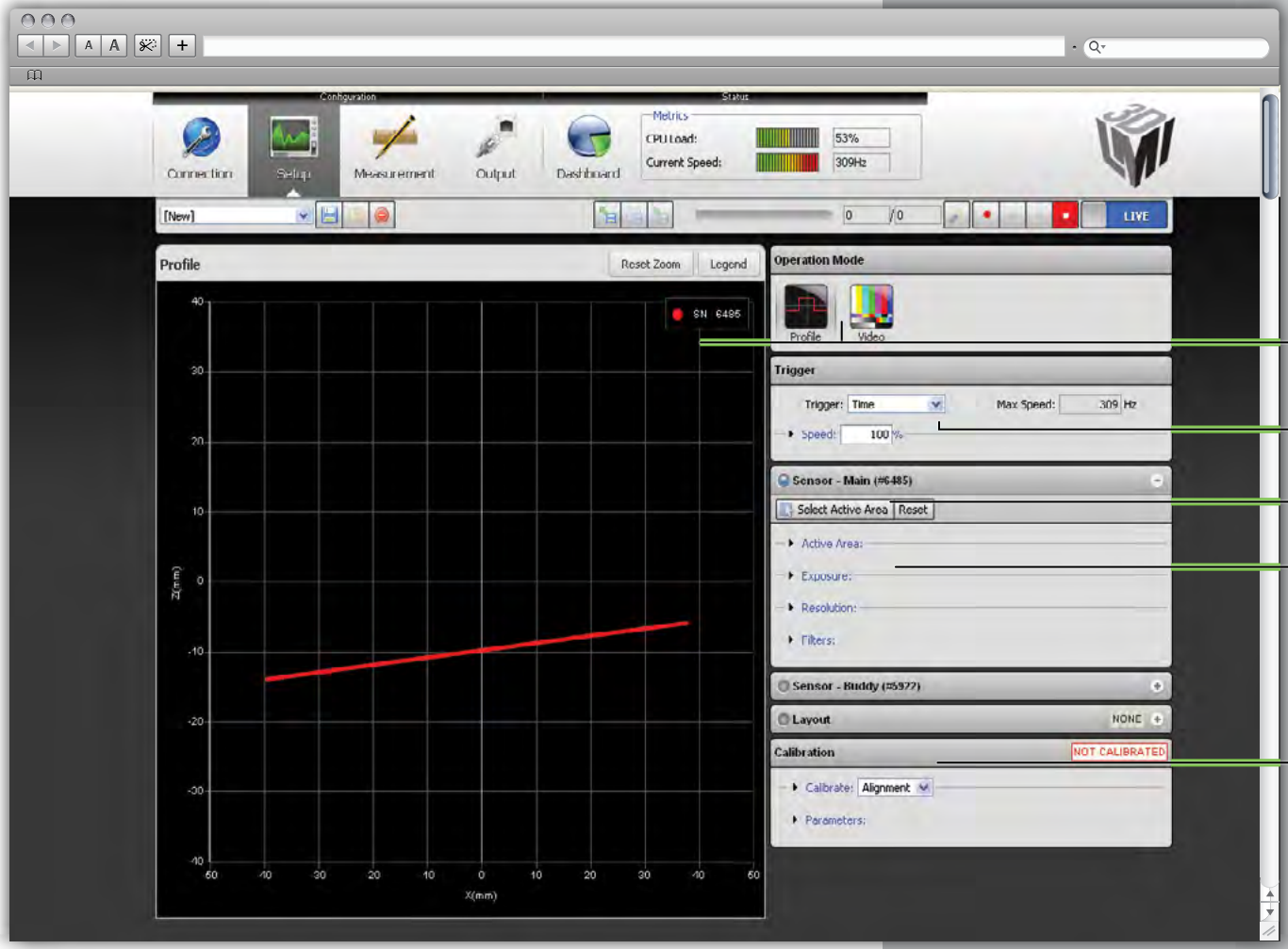
Quick Connection

- The onboard web server allows for **fast setup on any computer**
- Connect via industry standard **Ethernet**
- **Simple cabling** for inputs, outputs, and power
- **True standalone operation** allows you to setup and walk away - essentially you can set it and forget it
- **No hidden costs or external controllers required**



Simple Setup

- Use your favorite **web browser to access and control** the Gocator
- With **a few mouse clicks**, you can setup Gocator to work within your control system
- **Intuitive control panels** make setup faster and easier



View live profile or video

Choose your trigger (time, encoder, external input, or software)

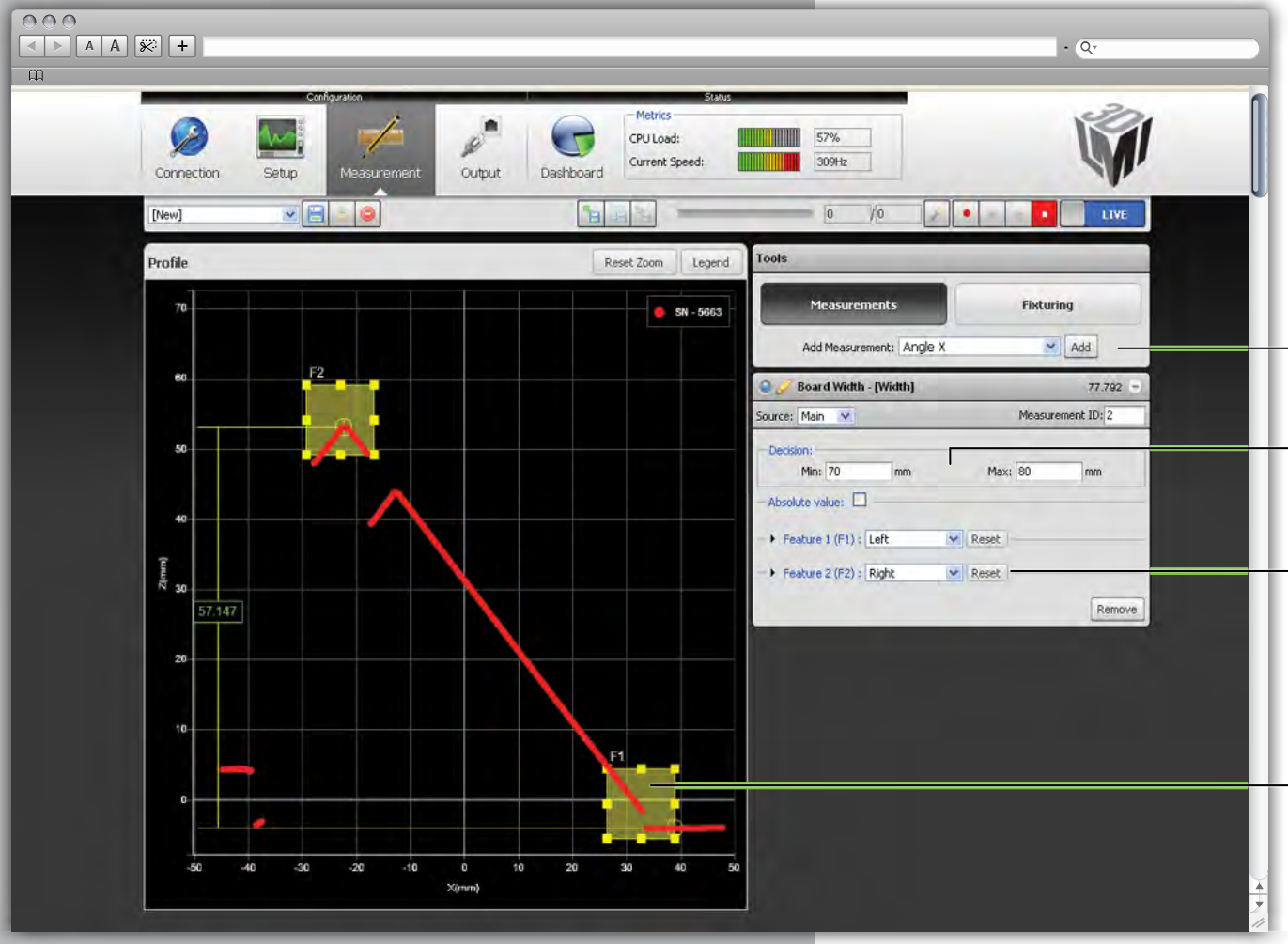
Reduce the active area to measure at faster speeds

Easily set the exposure
One of the most important features for 3D sensors

One button calibration for real world coordinates

Intuitive Measuring

- Powerful **built-in tools** turn **live real-time 3D profiles** into real-time measurements with pass/fail decisions
- Select the type of measurements and **see live results with pass/fail limits**
- **Record and playback sessions** to refine tolerances or export to CSV for later analysis



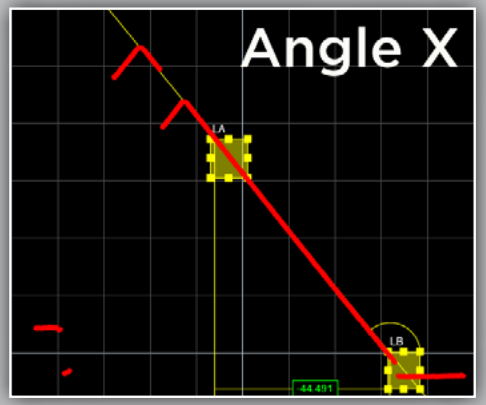
Choose your measurement tools

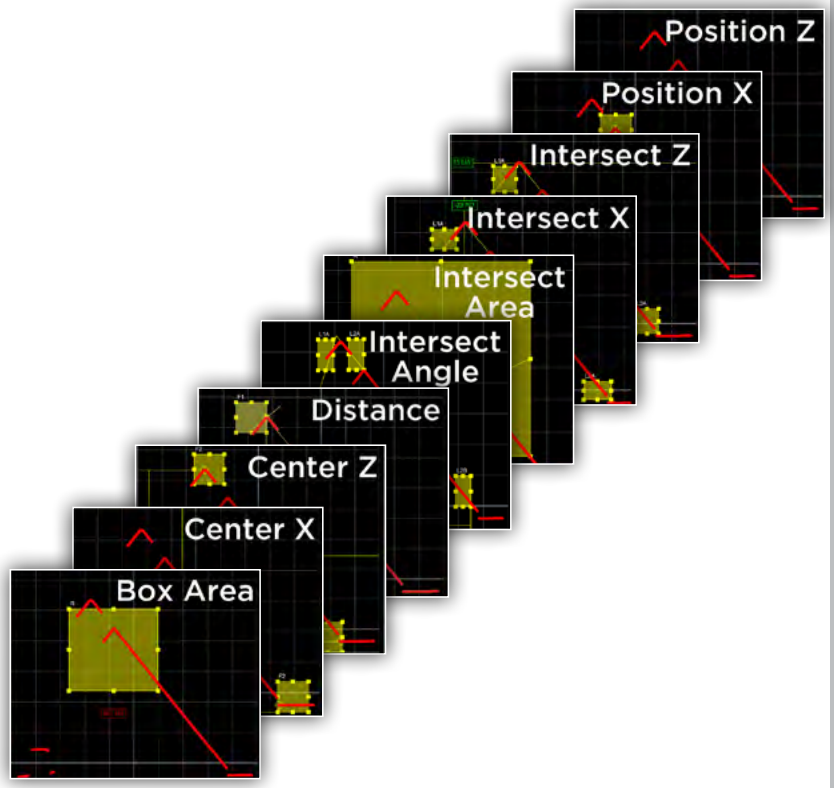
Measure against minimum and maximum thresholds to quickly generate decisions

Choose feature points, to get precise measurements

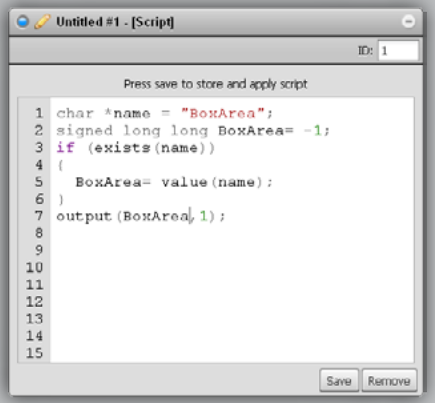
Resize and move feature points to easily select where and what to measure

Precision Tools



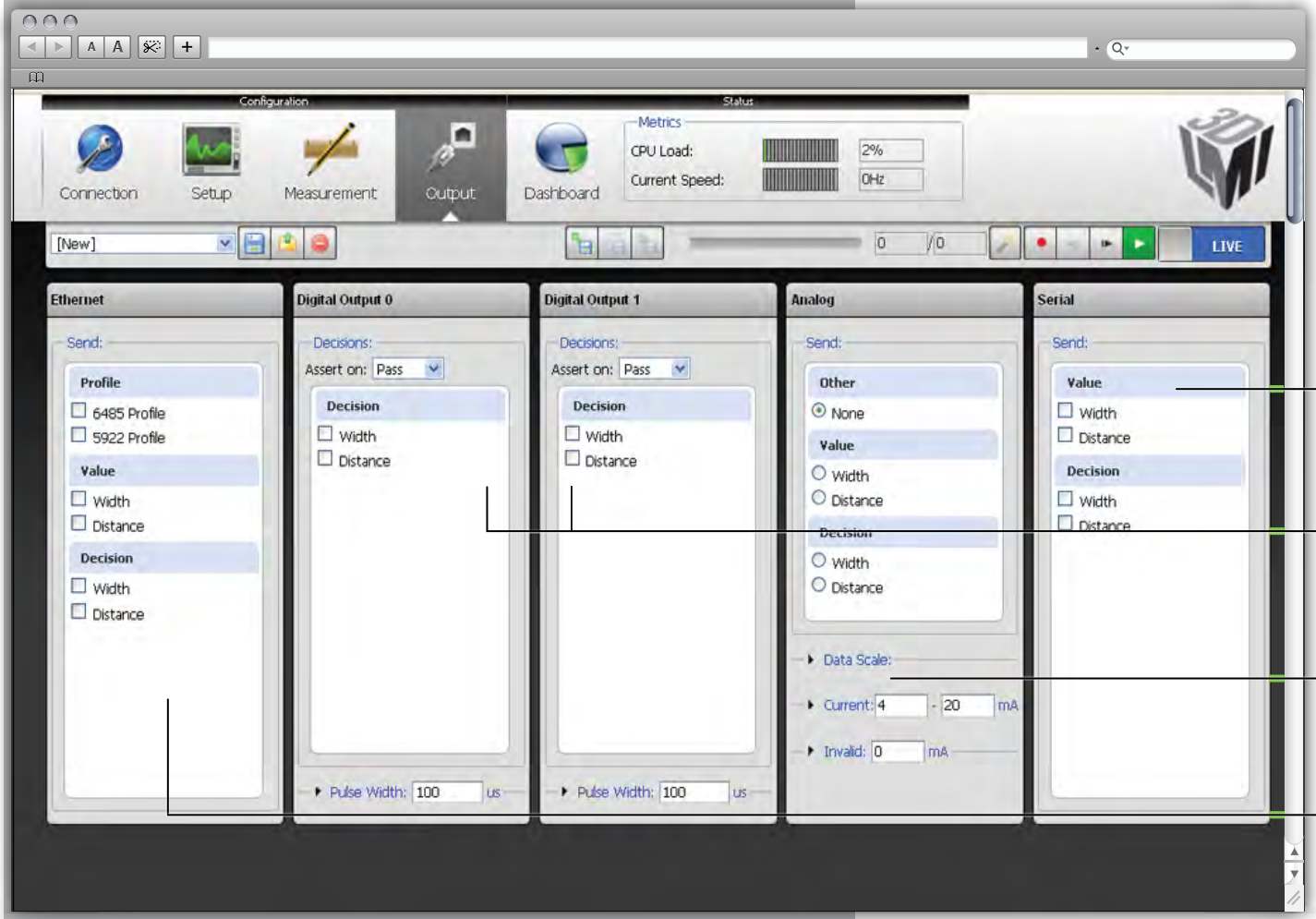


- Gocator's built-in flexible tools provide a **full array of measurement types** to suit most users needs
- **Use one or use multiple tools** simultaneously to get the measurements needed for better decisions
- **NO need for highly specialized knowledge**, intensive training, or writing endless lines of code, **just point, click, and measure**
- **Use the standard tools** or **write your own script** to perform tailored calculations using "C"



Flexible Output

- Simply click on your **choice of output(s) and decision(s)**
- Gocator has the flexibility to **simultaneously output data** and decisions to a wide variety of external controls
- **Easily communicate** with your existing hardware



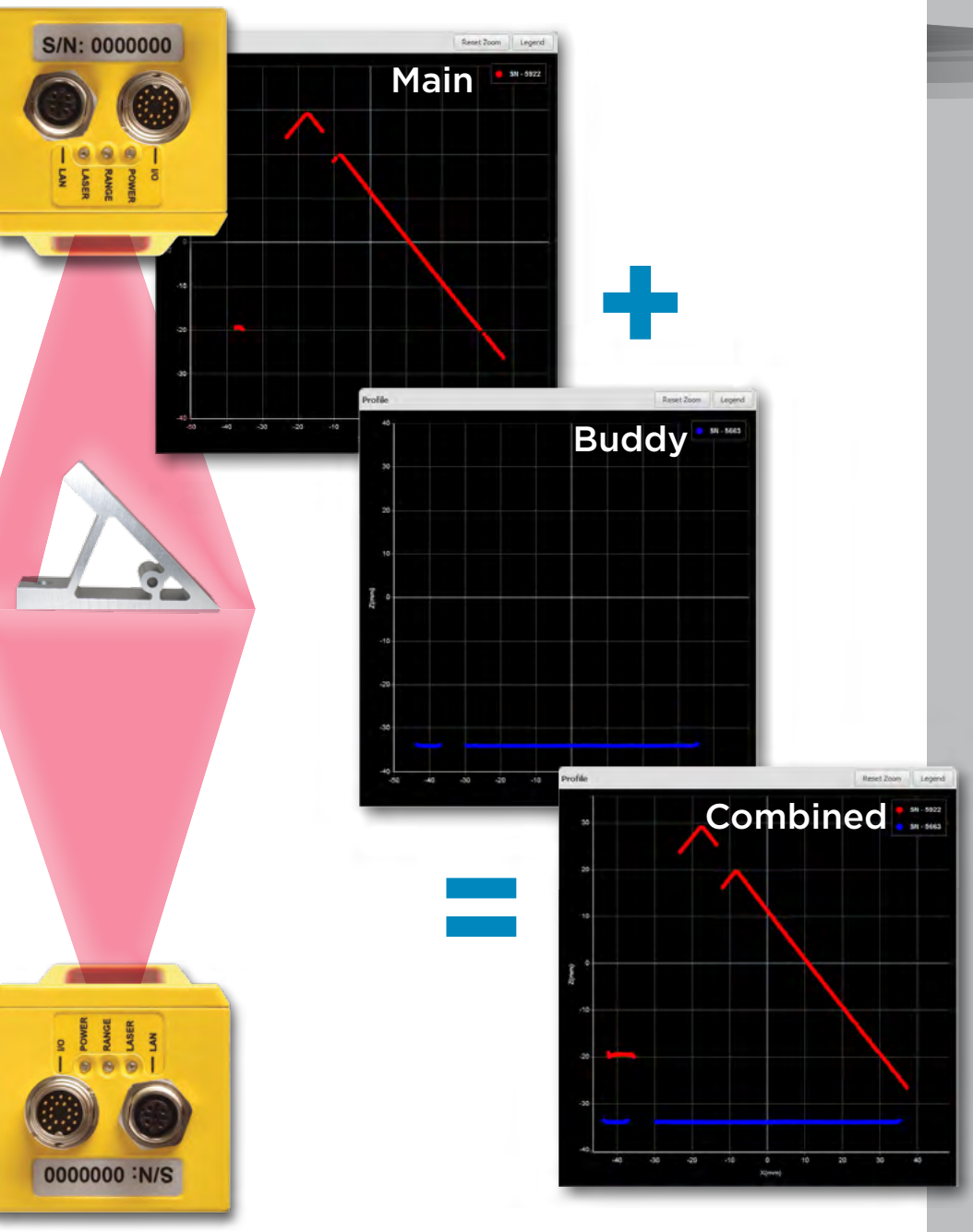
Transmit data and decisions via RS-485 serial output channel

Measurement decisions can be output digitally to external devices

Convert measurement values and decisions to analog output signals

Send profile and measurement information to connected client computer via Ethernet

Main

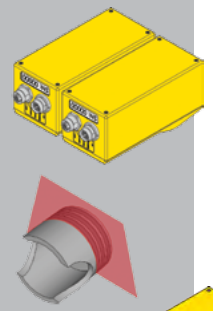


Buddy

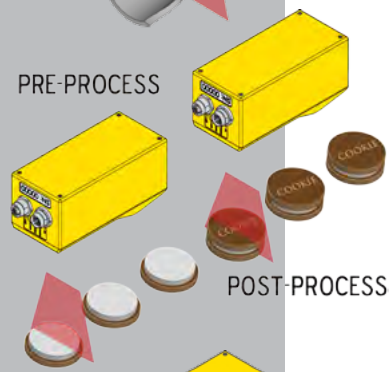
Dual Sensor System

- Gocator automatically recognizes a second sensor - we call it a **Buddy**
- Dual sensor mode seamlessly **combines profile data** from both Main and Buddy sensors as if they were one sensor
- **Uses a single GUI** with the combined profiles to measure, make decisions, and show results
- Flexible Layouts:

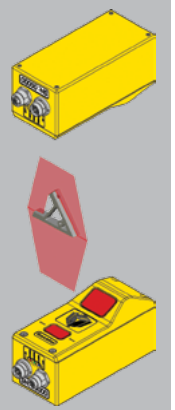
Wide orientation
Mount a Main and Buddy side by side to measure objects that are wider than a single sensor's field of view



Staggered Orientation
Allows you to make measurements before a manufacturing process (with the Main Gocator) and after (with the Buddy) for easy pre and post process comparisons

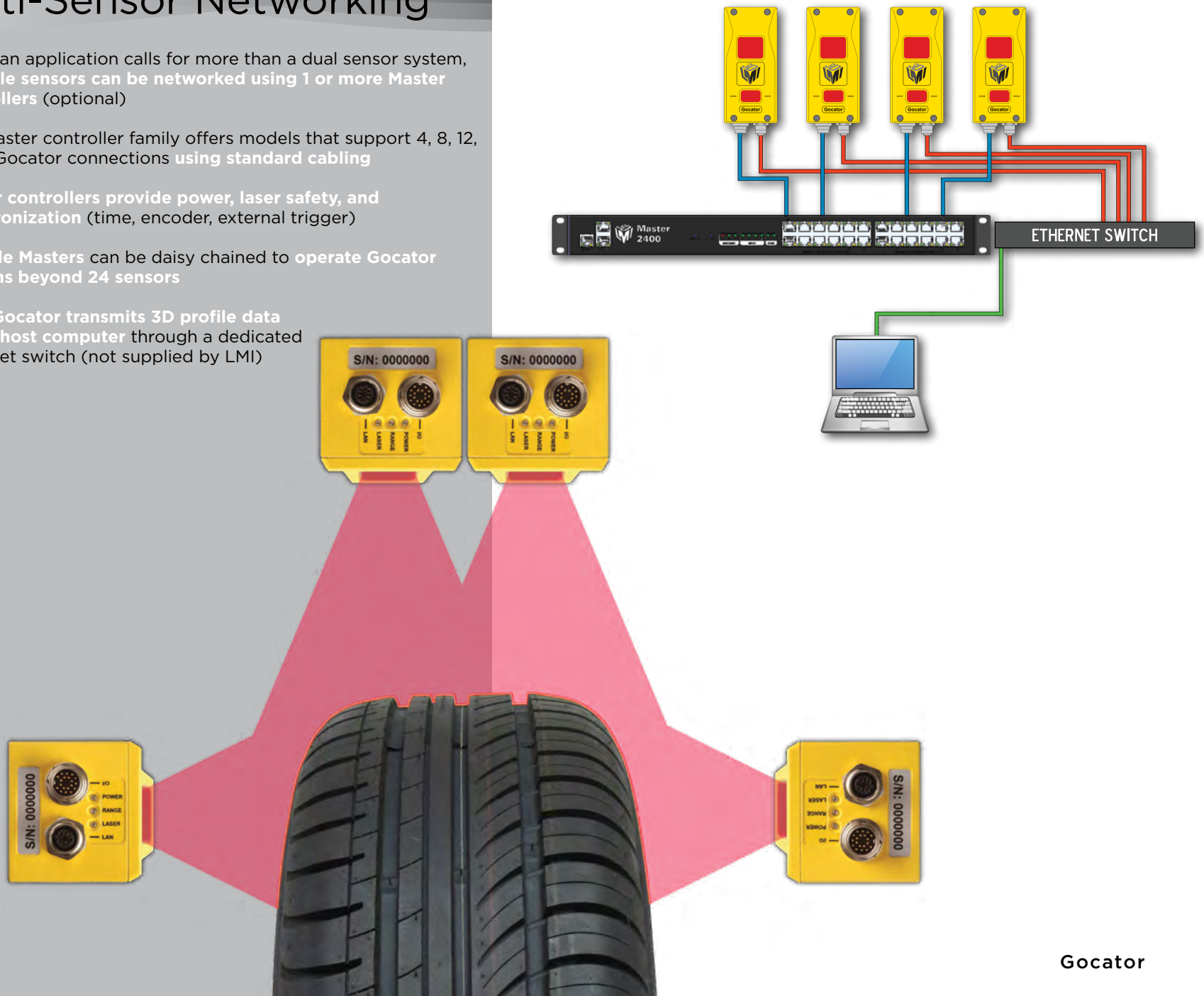


Opposite Orientation
The Main and Buddy performs top and bottom differential measurements for true thickness when the object cannot be referenced to a known surface such as a conveyor

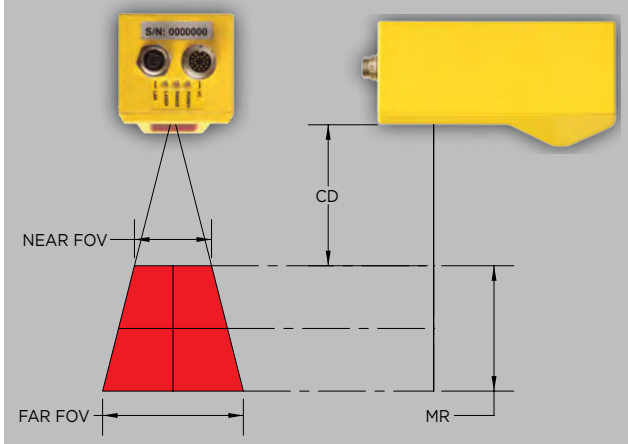


Multi-Sensor Networking

- When an application calls for more than a dual sensor system, **multiple sensors can be networked using 1 or more Master controllers** (optional)
- The Master controller family offers models that support 4, 8, 12, or 24 Gocator connections **using standard cabling**
- **Master controllers provide power, laser safety, and synchronization** (time, encoder, external trigger)
- **Multiple Masters** can be daisy chained to **operate Gocator systems beyond 24 sensors**
- Each **Gocator transmits 3D profile data to the host computer** through a dedicated Ethernet switch (not supplied by LMI)



Specifications



All units in mm

Model	2020	2030	2040	2050	2070	2080
Scan Rate	Approximately 300 Hz - 5000 Hz					
Resolution (Z)	0.003 - 0.011	0.008 - 0.018	0.017 - 0.049	0.025 - 0.092	0.07 - 0.23	0.094 - 0.55
Resolution (X)	0.03 - 0.04	0.088 - 0.15	0.19 - 0.34	0.30 - 0.60	0.55 - 1.1	0.75 - 2.2
Clearance Distance (CD)	40	90	190	300	400	350
Measurement Range (MR)	25	80	210	400	500	800
Field of View (FOV)	14 - 26	47 - 85	96 - 194	158 - 365	308 - 687	390 - 1260
Laser Class*	2M	2M	3R	3R	3B	3B
Interface	100 Mbaud Ethernet					
Inputs	Differential Encoder, Laser Safety Enable, Trigger					
Outputs	2x Digital Output, RS-485 Serial (115 Kbaud), 1x Analog Output (4 - 20 mA)					
Input Voltage	+24 to +48 VDC (10 Watts); Ripple +/- 10%					
Weight	Less than 1.5 kg					
Housing	Gasketed aluminum enclosure, IP 67					

*Some models are available in other laser classes - specifications and pricing will vary.

LMI TECHNOLOGIES

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This product is designed for use solely as a component and as such it does not fully comply with the standards relating to laser products specified in U.S. FDA CFR Title 21 part 1040 and IEC 60825-1.