

3. STARTING GOCATOR

NOTE: Gocator must be connected to a host computer in order to launch the user interface and setup the sensor.

Gocator sensors are configured by connecting with a web browser. The user interface is supported with FireFox 3.5+, Chrome 4.0+, & Internet Explorer 8.0+. (Use FireFox or Chrome for optimal performance.) The Adobe Flash browser plugin version 10.0+ must be installed.

A. LAUNCHING THE INTERFACE

Step 1

Change network setting on host computer

In Windows 7

- Open the Control Panel>Network and Sharing Center>Change Adapter Settings.
- Right-click desired network connection, then click Properties.
- On the Networking tab, click Internet Protocol Version 4 (TCP/IPv4), then click Properties.
- Select "Use the following IP address" option.
- Enter IP Address "192.168.1.5" and Subnet Mask "255.255.255.0", then click OK.

In Mac OS X 10.6

- Open the Network Pane in System Preferences and select Ethernet.
- Set Configure to "Manually".
- Enter IP Address "192.168.1.5" and Subnet Mask "255.255.255.0", then click Apply.

Gocator is shipped with the following default network configuration

Setting	Default
DCHP	Disabled
IP Address	192.168.1.10
Subnet Mask	255.255.255.0
Gateway	0.0.0.0

Step 2

Open a web browser and enter the sensor address



Step 3

Select language of choice



Step 4

The Administrator password is initially blank. Press the Login button to connect

B. RUNNING GOCATOR

Step 1

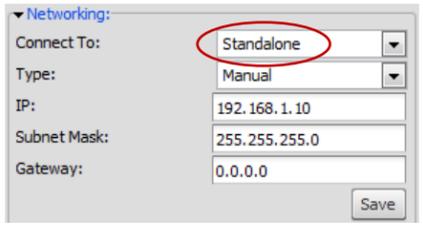
Select the Connection Page



Step 2

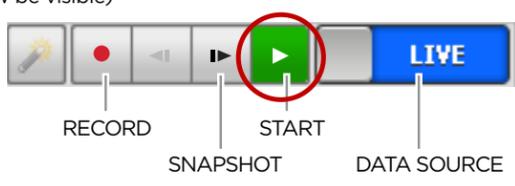
Select what the Gocator will be connected to

- | | |
|--------------------|--------------------|
| Single Sensor: | Select Standalone |
| Using Master 400: | Select Master 400 |
| Using Master 800: | Select Master 800 |
| Using Master 1200: | Select Master 1200 |
| Using Master 2400: | Select Master 2400 |



Step 3

Ensure data source is set to LIVE and the Laser Safety switch is enabled or the Laser Safety input is high. Press the PLAY button in the toolbar to start the sensor (a laser line should now be visible)

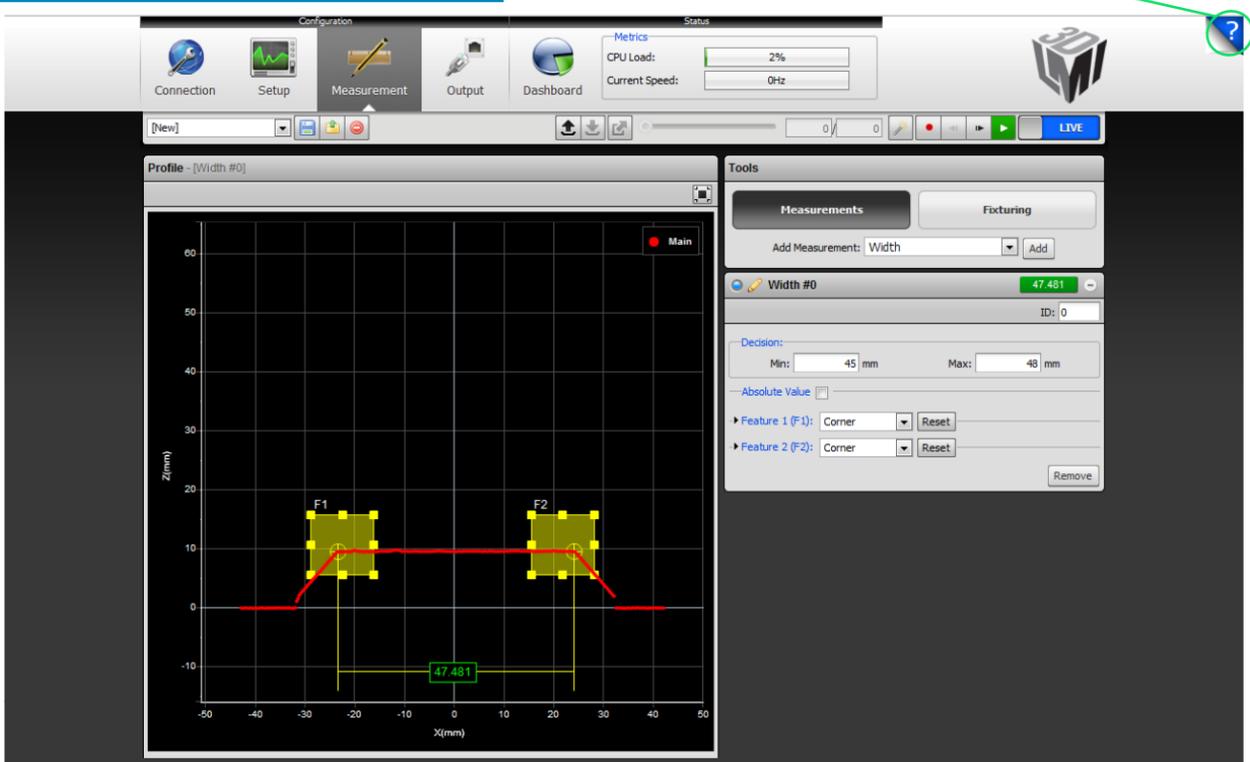


Step 4

Move target into the laser plane and measure!

Once connected to the Gocator, click the Help icon to view the User Manual, update firmware, or download SDK

An example of the user interface in use



©2016 LMI Technologies Inc. All rights reserved.
 This product is designed for use solely as a component and as such it does not comply with the standards relating to laser products specified in U.S. FDA CFR Title 21 Part 1040.
 Information contained within this manual is subject to change without notice.
 Gocator™ is a registered trademark of LMI Technologies Inc. Any other company or product names mentioned herein may be trademarks of their respective owners.
 Trademarks and Restrictions
 No part of this publication may be copied, photocopied, reproduced, translated, or reduced to any electronic medium or machine readable form without prior written consent of LMI Technologies Inc.
 LMI Technologies Inc.

LMI Technologies has sales offices and distributors worldwide. All contact information is listed at lmi3d.com/contact/locations.
 Americas
 LMI Technologies (Head Office)
 Vancouver, Canada
 +1 604 636 1011
 EMEAR
 Berlin, Germany
 +49 (0)3328 9360 0
 Asia Pacific
 LMI (Shanghai) Trading Co., Ltd.
 Shanghai, China
 +86 21 5441 0711



Gocator 2000 Quick Start Guide



For the user manual, CAD drawings, firmware release notes, SDK, and more, go to www.lmi3d.com/downloads

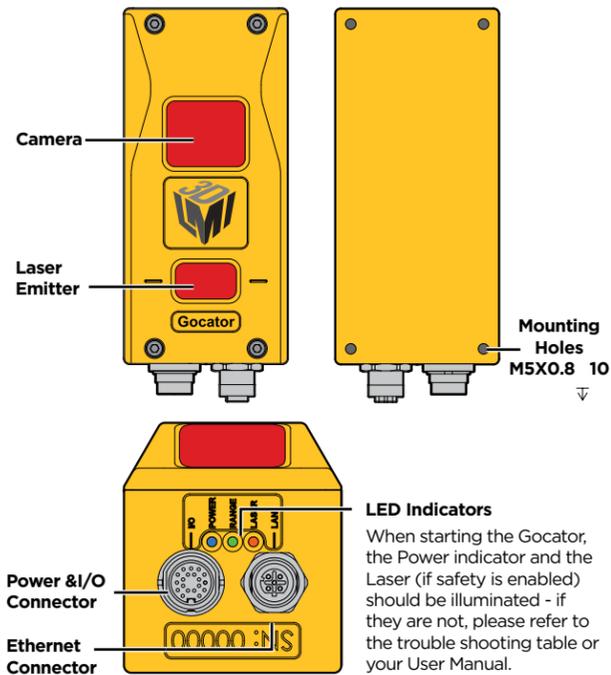


TROUBLESHOOTING

PROBLEM	SUGGESTED RESOLUTION
Mechanical / Environmental	
The sensor is warm.	• It is normal for a sensor to be warm when powered on.
Connection	
When connecting with a web browser, the sensor is not found (page does not load).	<ul style="list-style-type: none"> • Verify the sensor power is on. This will be indicated by an illuminated POWER LED. • Verify the cable from the sensor's LAN connector is plugged into the Ethernet port on the client computer. • Verify that the client computer's network settings are properly configured. Refer to the Connecting to a New Sensor section in the Gocator user manual or to your computer's documentation on configuring a network adapter. • Download 14405-x.x.x.x_software_go2_tools.zip from the downloads area of LMI's website at www.lmi3d.com. <i>Unzip and run the Sensor Discovery Tool [bin>win32>kDiscovery.exe] to verify that the sensor has the correct network settings.</i>
When attempting to log in, the password is not accepted.	<ul style="list-style-type: none"> • Download 14405-x.x.x.x_software_go2_tools.zip from from the downloads area of LMI's website at www.lmi3d.com. <i>Unzip and run the Sensor Discovery Tool [bin>win32>kDiscovery.exe] to discover the sensor on the network and restore default settings.</i> NOTE: Using the Sensor Discovery tool will reset your configuration settings to default - these settings can be recovered from the backup files if previously saved.
Laser Profiling	
When the Play button is pressed, the sensor does not emit laser light.	<ul style="list-style-type: none"> • Ensure that the decal covering the laser emitter window, normally affixed to new sensors, has been removed. • Verify that the LASER LED on the Gocator is illuminated, if not, the laser safety input signal is off. Refer to <i>Laser Safety Input Section in the Gocator user manual to determine the correct solution for your application.</i> • The exposure setting may be too low. Refer to the Exposure section in the Gocator User Manual for more information on configuring exposure time.
The sensor emits laser light, but the Range Indicator does not illuminate and/or points are not displayed in the Profile Viewer.	<ul style="list-style-type: none"> • Verify that the measurement target is within the sensor's field of view and measurement range. <i>The RANGE LED on the Gocator will illuminate when the target is in range.</i> • Check that the exposure time is set to a reasonable level. Refer to the Exposure section in the Gocator User Manual for more information on configuring exposure time.
The sensor CPU level is near 100%.	<ul style="list-style-type: none"> • Review the active measurements and eliminate any that are unnecessary measurements. • Consider reducing the trigger speed. • Consider reducing the laser profiling resolution.

GOCATOR OVERVIEW

There are several sensor models in the Gocator 2000 series, each designed with a unique Clearance Distance (CD), Measurement Range (MR) and Field of View (FOV). Refer to your User Manual for more information about your model.



LED Indicators
When starting the Gocator, the Power indicator and the Laser (if safety is enabled) should be illuminated - if they are not, please refer to the trouble shooting table or your User Manual.

GROUNDING GOCATOR

Gocator housings should be grounded to the earth and the grounding shield of the Gocator I/O cordsets. Gocator sensors have been designed to provide adequate grounding through the use of M5 x 0.8 screws. Always check grounding with a multi-meter to ensure electrical continuity between the mounting frame and the Gocator connectors.

The frame or electrical cabinet that the Gocator is mounted to **must** be connected to **earth ground**.

ELECTRICAL SAFETY

Minimize voltage potential between system ground and sensor ground

Care should be taken to minimize the voltage potential between system ground (ground reference for I/O signals) and sensor ground. Use shielded cables with shield grounded at both ends. Sensor housing should be connected to earth ground.

Use a suitable power supply

The +24-48V power supply used with Gocator 2000 sensors should be an isolated supply with inrush current protection.

Use care when handling powered devices

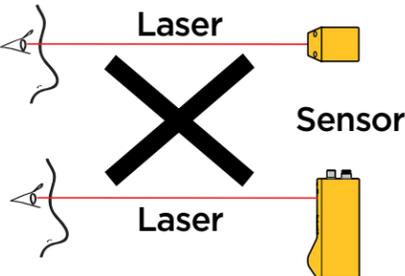
Wires connecting to the sensor should not be handled while the sensor is powered. Doing so may cause electrical shock to the user or damage to the equipment.



Failure to adhere to the guidelines described in this section may result in electrical shock or equipment damage.

LASER SAFETY

The full laser safety details including precautions, responsibilities and requirements are stated in the Gocator User Manual. Use of controls or adjustments or performing procedures other than those specified in the User Manual may result in hazardous radiation exposure.



WARNING: DO NOT LOOK DIRECTLY INTO THE LASER BEAM



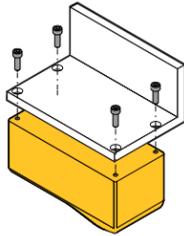
The light emitted from these devices has been set in accordance with IEC60825. However, staring into the beam, whether directly or indirectly, must be avoided. IEC60825 classifies laser products into three different categories depending on light emitted, wavelength and eye safety.

This product is designated 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.

Class 2M: LASER RADIATION DO NOT STARE INTO THE BEAM OR VIEW DIRECTLY WITH OPTICAL INSTRUMENTS CLASS 2M LASER PRODUCT		LASER RADIATION DO NOT STARE INTO THE BEAM OR VIEW DIRECTLY WITH OPTICAL INSTRUMENTS OR MAGNIFIERS CLASS 2M LASER PRODUCT PEAK POWER: 1 mW EMITTED WAVELENGTH: 660 nm This product is designated 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.
Class 3R: LASER RADIATION AVOID DIRECT EYE EXPOSURE CLASS 3R LASER PRODUCT		LASER RADIATION AVOID DIRECT EYE EXPOSURE CLASS 3R LASER PRODUCT PEAK POWER: 5 mW EMITTED WAVELENGTH: 660 nm This product is designated 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.
Class 3B: LASER RADIATION AVOID EXPOSURE TO BEAM CLASS 3B LASER PRODUCT		LASER RADIATION AVOID EXPOSURE TO THE BEAM CLASS 3B LASER PRODUCT PEAK POWER: 100 mW EMITTED WAVELENGTH: 660 nm This product is designated 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.
		INVISIBLE LASER RADIATION AVOID EXPOSURE TO THE BEAM CLASS 3B LASER PRODUCT PEAK POWER: 400 mW EMITTED WAVELENGTH: 900 nm This product is designated 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.

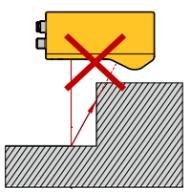
1. MOUNTING

NOTE: Mounting the Gocator is recommended prior to applying power. Ensure that a proper earth ground and heat sink have been properly established prior to applying power.

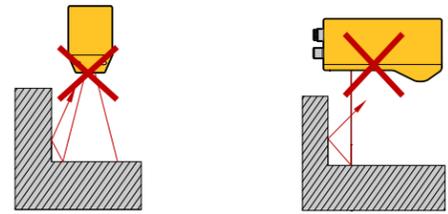


Mount the sensor using four M5 x 0.8 screws of suitable length. The recommended thread engagement into the housing is 8 - 10 mm.

Do not occlude camera's view of the laser

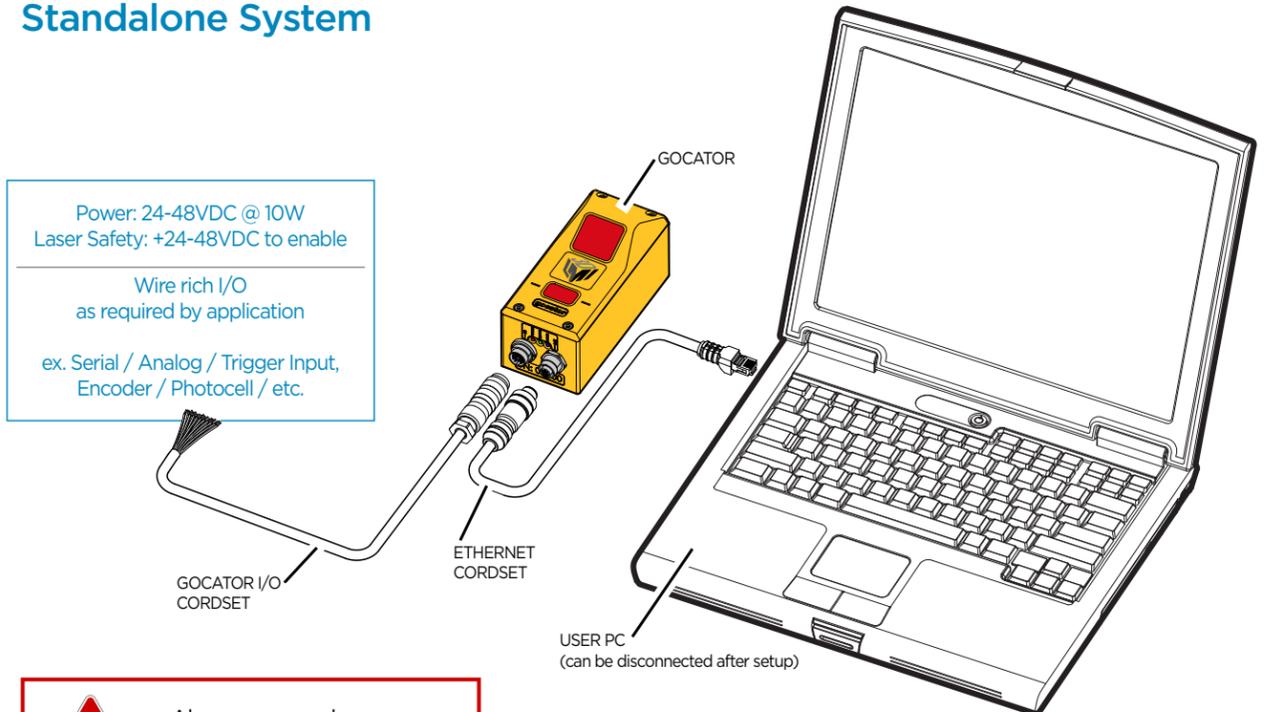


Do not install near surfaces that might create unanticipated laser reflections



2. CONNECTING GOCATOR TO A HOST COMPUTER

Standalone System



Power: 24-48VDC @ 10W
Laser Safety: +24-48VDC to enable

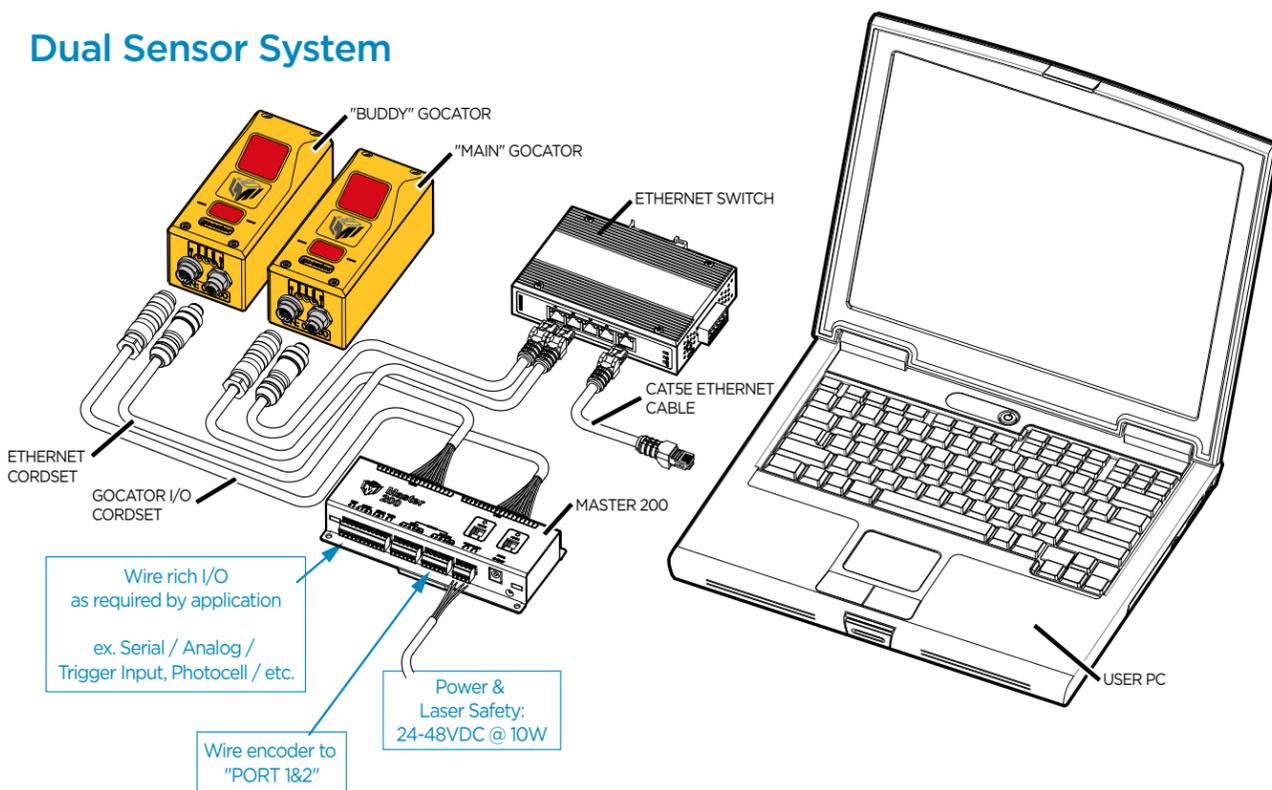
Wire rich I/O as required by application

ex. Serial / Analog / Trigger Input, Encoder / Photocell / etc.



Always power down sensor before removing cables from the sensor

Dual Sensor System



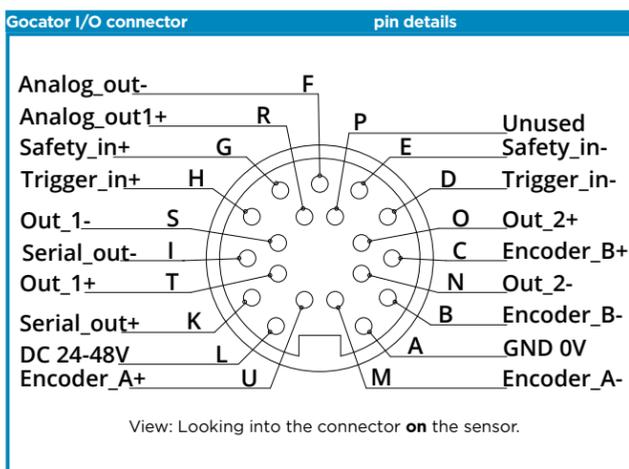
Wire rich I/O as required by application

ex. Serial / Analog / Trigger Input, Photocell / etc.

Power & Laser Safety: 24-48VDC @ 10W

Wire encoder to "PORT 1&2"

Connector Pin Details



Label Text	Conductor Color
DC_24-48V	(White Green & Black) and (Green Black)
Serial_out+	White
Serial_out-	Brown
Trigger_in+	Grey
Safety_in+	Blue/Black
Analog_out-	(Yellow) & (Maroon/White)
Safety_in-	White/Blue & Black
Trigger_in-	Pink
Encoder_B+	Black
Encoder_B-	Violet
GND_OV	(White/Orange & Black) & (Orange/Black)
Encoder_A+	White/Brown & Black
Out_1+	Red
Out_1-	Blue
Analog_out1+	Green
Unused	Maroon
Out_2+	Tan
Out_2-	Orange
Encoder_A-	Brown/Black