

### 3. STARTING GOCATOR

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

Gocator sensors are configured by connecting with a web browser.

The user interface supports the latest versions of Firefox and Chrome, and Internet Explorer 8.0+. (Use Firefox or Chrome for optimal performance.) Version 10.0 or higher of the Adobe Flash browser plug-in must be installed (version 11.3 for 3D viewer).

#### 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, and then click **Properties**.
- On the Networking tab, click **Internet Protocol Version 4 (TCP/IPv4)**, and 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", and 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.



The Gocator interface loads.

#### B. RUNNING GOCATOR

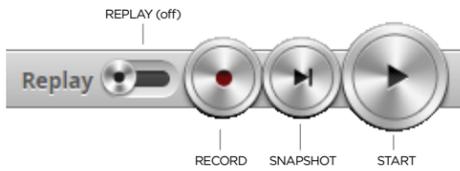
##### Step 1

Select the **Manage** page.



##### Step 2

Ensure that Replay mode is off (slider set to left) and that the Laser Safety switch is enabled or the Laser Safety input is high. Press the **Start** button in the toolbar to start the sensor (a laser line should now be visible).



##### Step 3

Move target into the laser plane and measure!

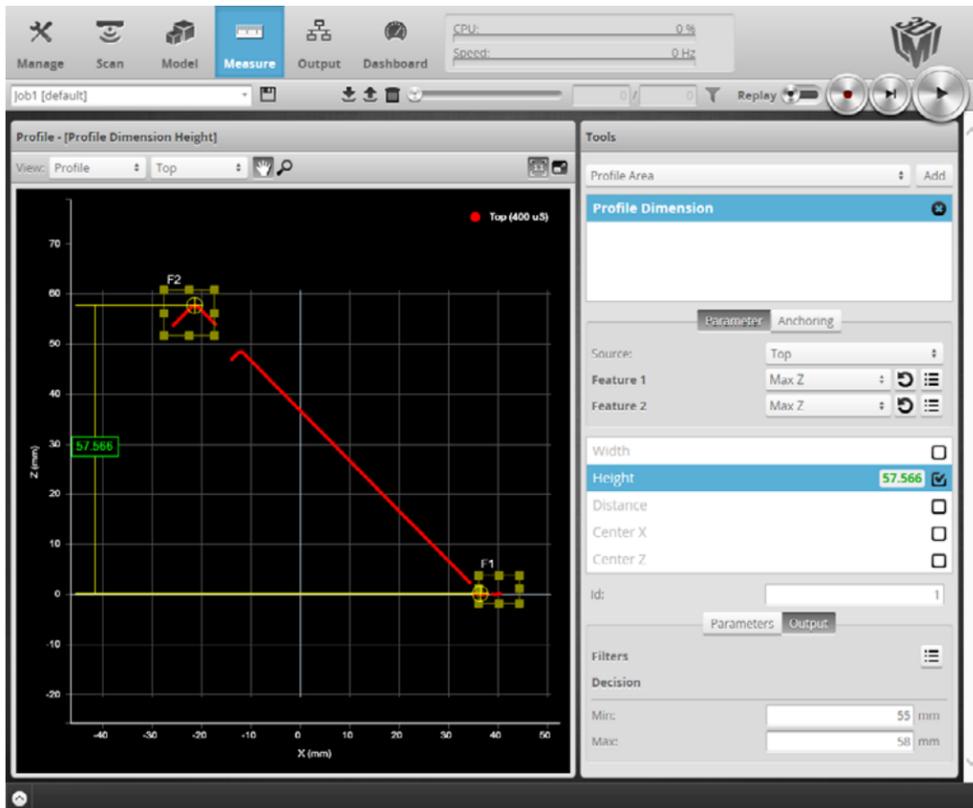
##### NOTE

Gocator sensors can also interface directly with HexSight. Refer to the HexSight Quick Start Guide for more information.

Please note the following firmware compatibility minimums:

Sensor Revision	Minimum Firmware Version
C	4.5 SR1 or later
A or B	3.x / 4.x. (Gocator 2100 is only supported by Gocator 4.x.)

#### An example of the user interface in use



### TROUBLESHOOTING

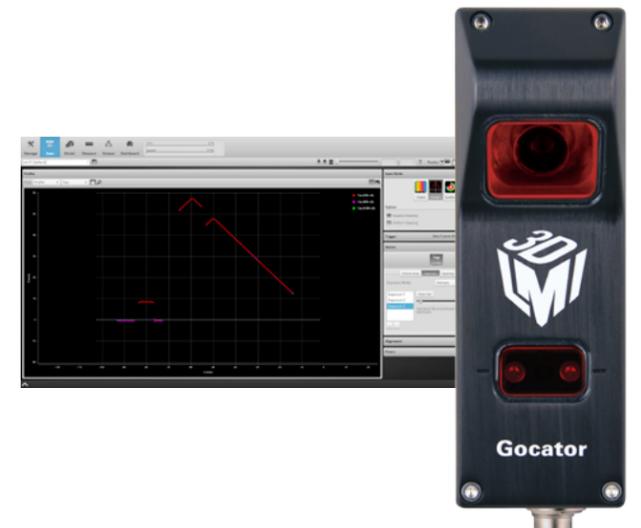
PROBLEM	SUGGESTED RESOLUTION
<b>Mechanical / Environmental</b>	
The sensor is warm.	• It is normal for a sensor to be warm when powered on.
<b>Connection</b>	
When connecting with a web browser, the sensor is not found (page does not load).	<ul style="list-style-type: none"> <li>Verify the sensor power is on. This will be indicated by an illuminated POWER LED.</li> <li>Verify the Power &amp; Ethernet cordset is connected to the Power/LAN connector and the Ethernet RJ45 plug is connected to the Ethernet switch.</li> <li>Verify that the client computer's network settings are properly configured. See <i>Getting Started &gt; Network Setup</i> in the Gocator user manual or your computer's documentation on configuring a network adapter.</li> <li>Download 14405-x.x.x.x_SOFTWARE_GO_Tools.zip from the downloads area of LMI's website at <a href="http://www.lmi3d.com">www.lmi3d.com</a>.</li> <li>Unzip and run the Sensor Discovery Tool [Discovery&gt;kDiscovery.exe] to verify that the sensor has the correct network settings.</li> </ul>
When attempting to log in, the password is not accepted.	<ul style="list-style-type: none"> <li>Download 14405-x.x.x.x_SOFTWARE_GO_Tools.zip from from the downloads area of LMI's website at <a href="http://www.lmi3d.com">www.lmi3d.com</a>.</li> <li>Unzip and run the Sensor Discovery Tool [Discovery&gt;kDiscovery.exe] to find the sensor on the network and click Factory Restore.</li> <li><b>WARNING: Performing a factory restore resets your configuration settings to their original values. These settings can be recovered from backup files if you have previously saved them.</b></li> </ul>
<b>Laser Profiling</b>	
When the Play button is pressed, the sensor does not emit laser light.	<ul style="list-style-type: none"> <li>Ensure that the decal covering the laser emitter window, normally affixed to new sensors, has been removed.</li> <li>Verify that the LASER LED on the Gocator is illuminated. If not, the laser safety input signal is off. To determine the correct solution for your application, see <i>Specifications &gt; Gocator Power/LAN Connector &gt; Laser Safety Input</i> in the user manual.</li> <li>The exposure setting may be too low. For more information, see <i>Gocator Web Interface &gt; Scan Setup and Alignment &gt; Sensor &gt; Exposure</i> in the user manual.</li> </ul>
The sensor emits laser light, but the Range Indicator does not illuminate and/or points are not displayed in the data viewer.	<ul style="list-style-type: none"> <li>Verify that the measurement target is within the sensor's field of view and measurement range. The RANGE LED on the Gocator will illuminate when the target is in range.</li> <li>Check that the exposure time is set to a reasonable level. For more information, see <i>Gocator Web Interface &gt; Scan Setup and Alignment &gt; Sensor &gt; Exposure</i> in the user manual.</li> </ul>
The sensor CPU level is near 100%.	<ul style="list-style-type: none"> <li>Review the active measurements and remove any that are unnecessary.</li> <li>Consider reducing the trigger speed.</li> <li>Consider reducing the laser profiling resolution.</li> </ul>

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## Gocator 2300C 2100C Quick Start Guide



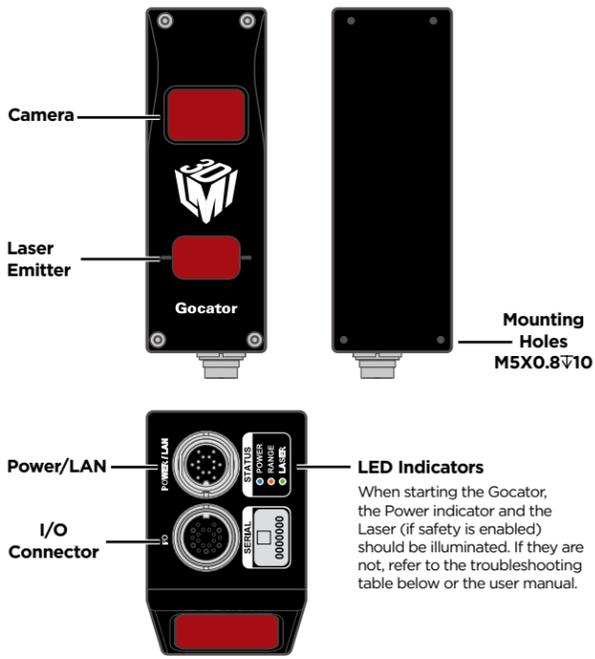
LMI TECHNOLOGIES  
[www.lmi3d.com](http://www.lmi3d.com)

For the user manual, CAD drawings, firmware release notes, SDK, and more, go to [www.lmi3d.com/support/downloads](http://www.lmi3d.com/support/downloads).

15238-01.00\_Manual\_Quickstart\_Gocator\_2100C\_2300C\_Series

## GOCATOR OVERVIEW

There are several sensor models in the Gocator 2100/2300 series, each designed with a unique Clearance Distance (CD), Measurement Range (MR) and Field of View (FOV). Refer to the user manual for more information about your model.



## 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**.

## GROUNDING CORDSET (RECOMMENDED)

To minimize interference with other equipment, the Power & Ethernet or the Power & Ethernet to Master cordset (depending on cordset used in system) can be grounded by terminating the cordset shield before the split. The most effective grounding method is to use a 360-degree clamp. For instructions, see the user manual.

## ELECTRICAL SAFETY

Minimize voltage potential between system ground (ground reference for I/O signals) and sensor ground

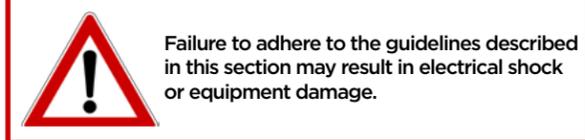
Use shielded cables with shield grounded at both ends. Sensor housing should be connected to earth ground.

## Use a suitable power supply

The +24-48V power supply used with Gocator 2100/2300 sensors should be an isolated supply with inrush current protection.

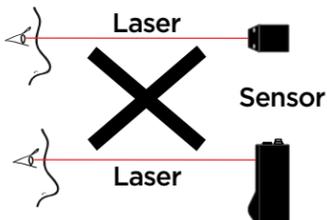
## Use care when handling powered devices

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.

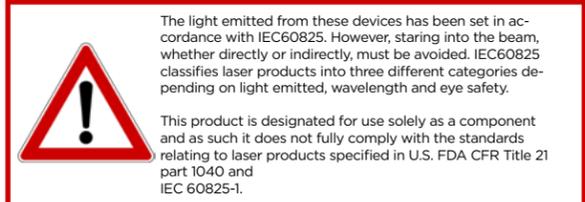


## LASER SAFETY

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**



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: 650 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: 650 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



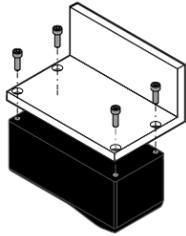
LASER RADIATION  
AVOID EXPOSURE TO THE BEAM  
CLASS 3B LASER PRODUCT  
PEAK POWER: 100 mW  
EMITTED WAVELENGTH: 650 nm  
This product is designated for use solely as a component and as such it does not fully comply with the standards relating to laser products specified in U.S. FDA CFR Title 21 part 1040 and IEC 60825-1.



INVISIBLE LASER RADIATION  
AVOID EXPOSURE TO THE BEAM  
CLASS 3B LASER PRODUCT  
PEAK POWER: 400 mW  
EMITTED WAVELENGTH: 808 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.

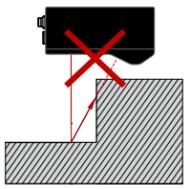
## 1. MOUNTING

**NOTE: Mounting the Gocator is recommended before applying power. Ensure that a proper earth ground is established and that a heat sink is properly installed before applying power.**

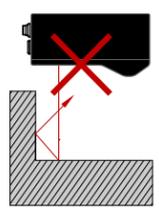
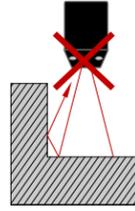


Mount the sensor using four M5 x 0.8 screws of suitable length. The recommended thread engagement into the housing is 8 - 10 mm.

Do not occlude camera's view of the laser

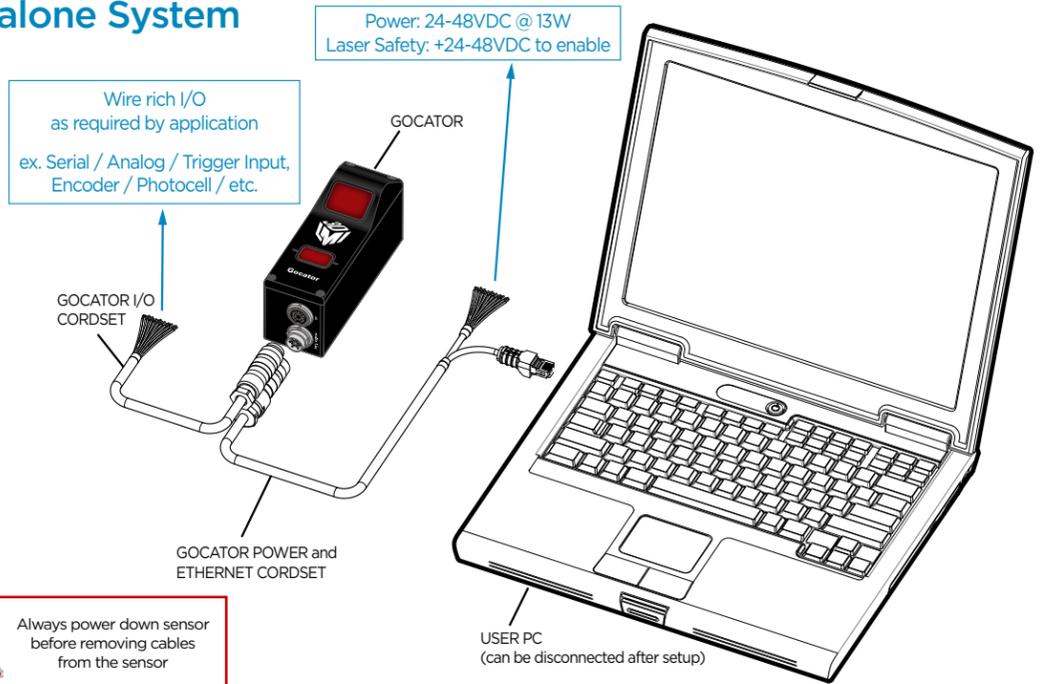


Do not install near surfaces that might create unanticipated laser reflections

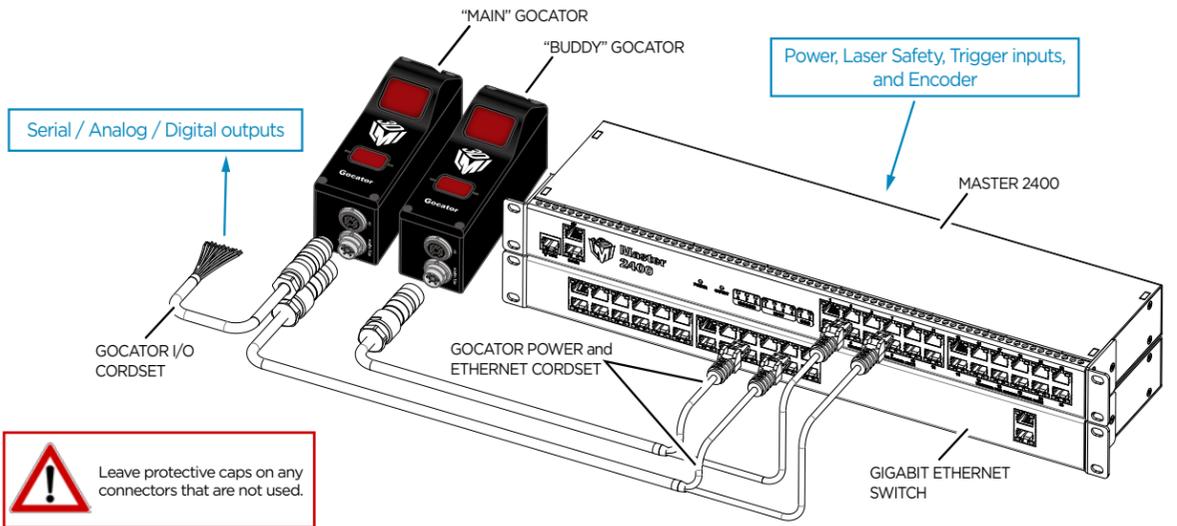


## 2. CONNECTING GOCATOR TO A HOST COMPUTER

### Standalone System

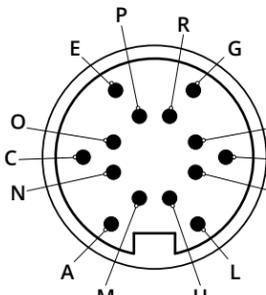


### Dual / Multi-Sensor System



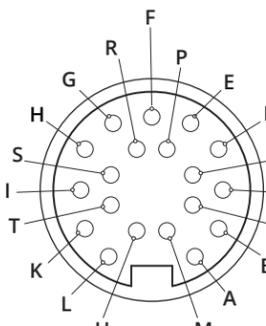
## Connector Pin Details

Gocator Power/LAN (to standalone and to Master)	Pin	Function	Conductor Color
	L	GND_24-48V	White/Orange & Black
	L	GND_24-48V	Orange/Black
	A	DC_24-48V	White/Green & Black
	A	DC_24-48V	Green/Black
	G	Safety-	White/Blue & Black
	J	Safety+	Blue/Black
	E	Sync+	White/Brown & Black
	C	Sync-	Brown/Black
	M	Ethernet MX1+	White/Orange
	N	Ethernet MX1-	Orange
	O	Ethernet MX2+	White/Green
	P	Ethernet MX2-	Green
	S	Ethernet MX3-	White/Blue
	R	Ethernet MX3+	Blue
	T	Ethernet MX4+	White/Brown
	U	Ethernet MX4-	Brown



View: Looking into the connector on the sensor.

Gocator I/O	Pin	Function	Conductor Color
	D	Trigger_in+	Grey
	H	Trigger_in-	Pink
	N	Out_1+ (Digital Output 0)	Red
	O	Out_1- (Digital Output 0)	Blue
	S	Out_2+ (Digital Output 1)	Tan
	T	Out_2- (Digital Output 1)	Orange
	M	Encoder_A+	White/Brown & Black
	U	Encoder_A-	Brown / Black
	I	Encoder_B+	Black
	K	Encoder_B-	Violet
	A	Encoder_Z+	White/Green & Black
	L	Encoder_Z-	Green / Black
	B	Serial_out+	White
	C	Serial_out-	Brown
	E	Reserved	Blue / Black
	G	Reserved	White / Blue & Black
	P	Analog_out+	Green
	F	Analog_out-	Yellow & Maroon/White
	R	Reserved	Maroon



View: Looking into the connector on the sensor.