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. For details on browser compatibility, see the user manual.

A. Launching the Interface

Step 1

Change network setting on the *host computer*.

In Windows 10

a. From the Start menu, launch the Settings app and click **Network & Internet**, and then click **Change adapter options** under Advanced network settings..
b. Right-click desired network connection, and then click **Properties**.
c. On the Networking tab, click **Internet Protocol Version 4 (TCP/IPv4)**, and then click **Properties**.
d. Select "Use the following IP address" option.
e. Enter IP Address "192.168.1.5" and Subnet Mask "255.255.255.0", then click **OK**.

In Mac OS 11

a. Click Apple menu > **System Preferences**, and then click **Network**.
b. In the list to the left, select **Ethernet**.
c. Click **Advanced**, click **Hardware**, click the **Configure** pop-up menu, and set it to "Manually".
d. 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

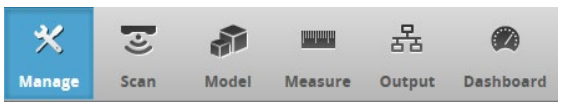
Open a web browser and enter the sensor address.

The Gocator interface loads.

B. Running Gocator

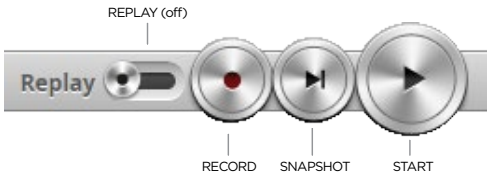
Step 1

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.

Americas — LMI Technologies (Head Office)
Vancouver, Canada
+1 604 636 1011

EMEAR — LMI Technologies GmbH
Berlin, Germany
+49 (0)3328 9360 0

Asia Pacific — LMI (Shanghai) Trading Co., Ltd.
Shanghai, China
+86 21 5441 0711

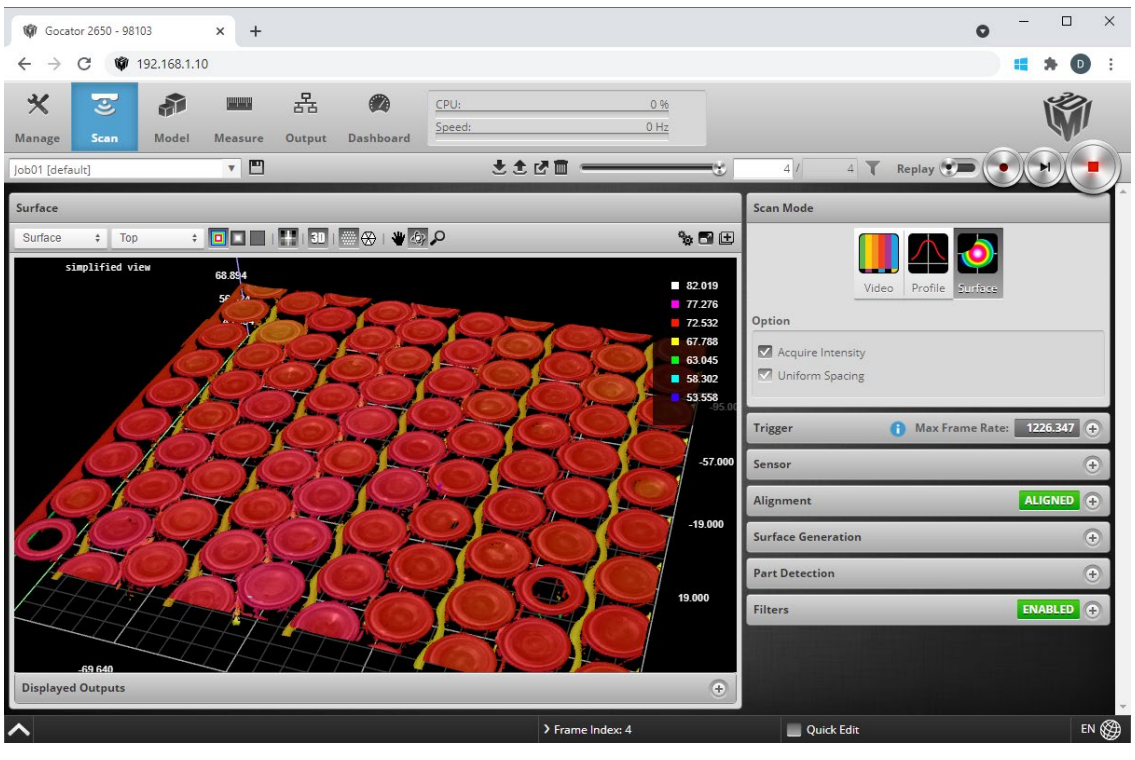
LMI Technologies has sales offices and distributors worldwide. All contact information is listed at lmi3D.com/contact/.

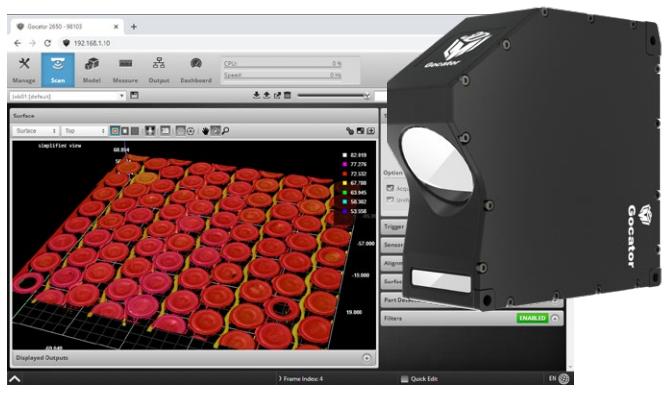
LMI TECHNOLOGIES
www.lmi3D.com

Gocator® 6300

Quick Start Guide

An example of the user interface in use





LMI TECHNOLOGIES
www.lmi3D.com

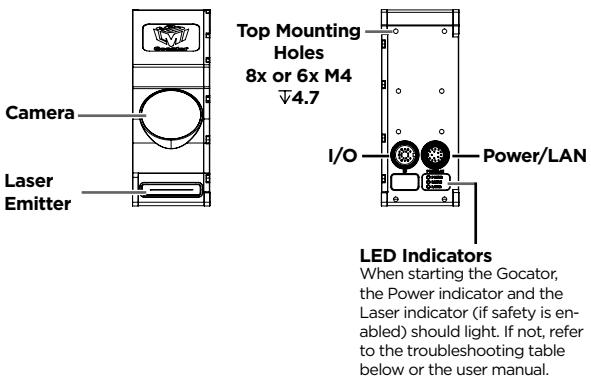
For the user manual, CAD drawings, firmware release notes, SDK, and more, go to **lmi3D.com**/product-downloads.

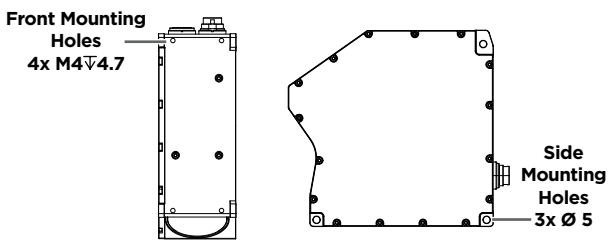
Troubleshooting

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).	• Verify the sensor power is on. This will be indicated by an illuminated POWER LED. • Verify the Power & Ethernet cordset is connected to the Power/LAN connector and the Ethernet RJ45 plug is connected to the Ethernet switch. • Verify that the client computer's network settings are properly configured. See *Getting Started > Network and Sensor Setup* in the Gocator user manual or your computer's documentation on configuring a network adapter. • Download 14405-x.x.xx.x_SOFTWARE_GO_Utilities.zip from the downloads area of LMI's website at www.lmi3D.com. Unzip and run the Sensor Discovery Tool [Tools\Discovery\kDiscovery.exe] to verify that the sensor has the correct network settings.
When attempting to log in, the password is not accepted.	• Download 14405-x.x.xx.x_SOFTWARE_GO_Utilities.zip from from the downloads area of LMI's website at www.lmi3D.com. Unzip and run the Sensor Discovery Tool [Tools\Discovery\kDiscovery.exe] to find the sensor on the network and click Factory Restore. 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.
Laser Profiling	
When the Play button is pressed, the sensor does not emit laser light.	• Ensure that the decal covering the laser emitter window, normally affixed to new sensors, has been removed. • Verify that the LASER indicator LED on the Gocator is illuminated. If not, the laser safety input signal is off. To determine the correct solution for your application, see *Specifications > Sensor Connectors > Gocator Power/LAN Connector > Laser Safety Input* in the user manual. • The exposure setting may be too low. For more information, see *Gocator Web Interface > Scan Setup > Sensor > Exposure* in the user manual.
The sensor emits laser light, but the Range indicator does not illuminate and/or points are not displayed in the data viewer.	• Verify that the measurement target is within the sensor's field of view and measurement range. The RANGE indicator LED on the Gocator will illuminate when the target is in range. • Check that the exposure time is set to a reasonable level. For more information, see *Gocator Web Interface > Scan Setup > Sensor > Exposure* in the user manual.
The sensor CPU level is near 100%.	• Review the active measurements and remove any that are unnecessary. • Consider reducing the trigger speed. • Consider reducing the laser profiling resolution.

Gocator Overview

Each sensor model in the Gocator 6300 series is designed with a unique Clearance Distance (CD), Measurement Range (MR) and Field of View (FOV). Models have different numbers of mounting holes. 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 are designed to provide adequate grounding through the M4 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 6300 sensors should be an isolated supply with inrush current protection.

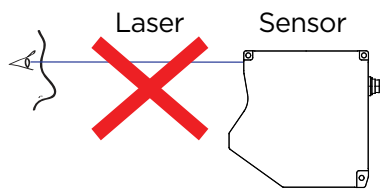
Use care when handling powered devices

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.

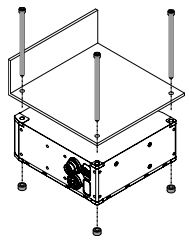
This product is designated for use solely as a component and as such it does not fully comply with the standards relating to laser products specified in U.S. FDA CFR Title 21 part 1040 and IEC 60825-1.

CLASS 3R LASER PRODUCT
LASER RADIATION
AVOID DIRECT EYE EXPOSURE

CLASS 3B LASER PRODUCT
LASER RADIATION
AVOID EXPOSURE TO THE BEAM

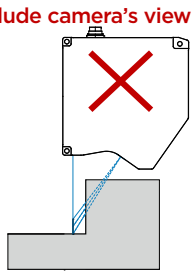
1. Mounting

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.



Side mount (shown): Use three 5 mm bolts of appropriate length. This is the most secure mounting option.
Top or front mount: Use four, six, or eight M4 screws of suitable length, (model- and location-dependant). Recommended thread engagement into the housing is 4.7 mm.

Do not occlude camera's view of the laser

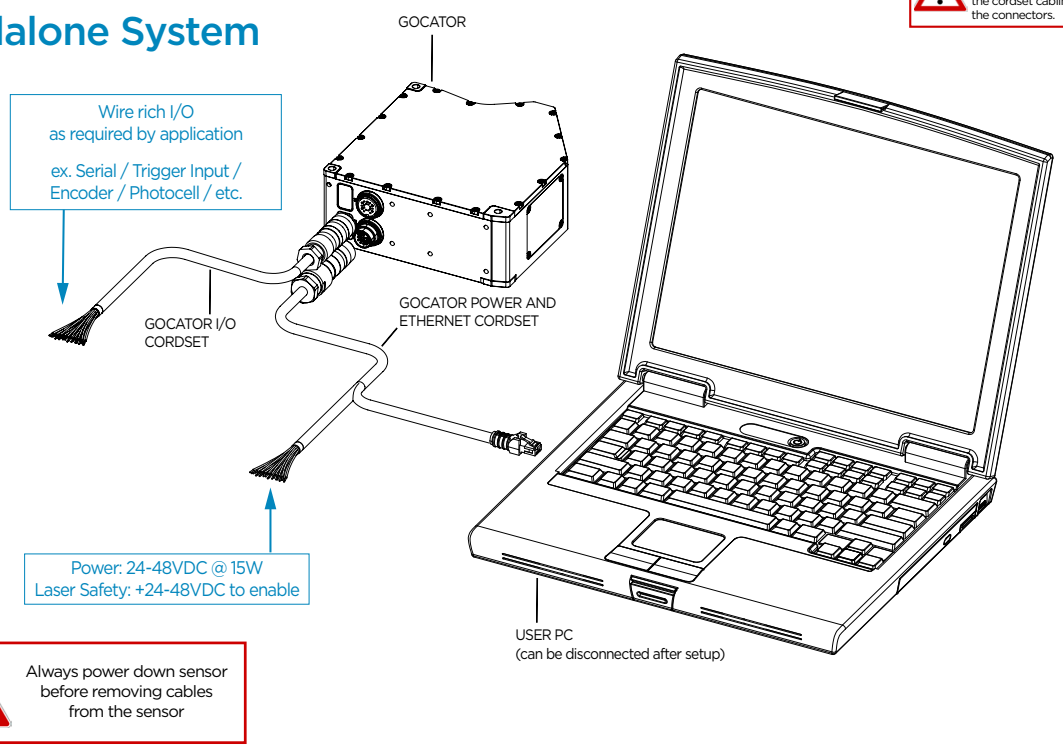


Do not install near surfaces that might create unexpected laser reflections

2. Connecting Gocator to a Host Computer

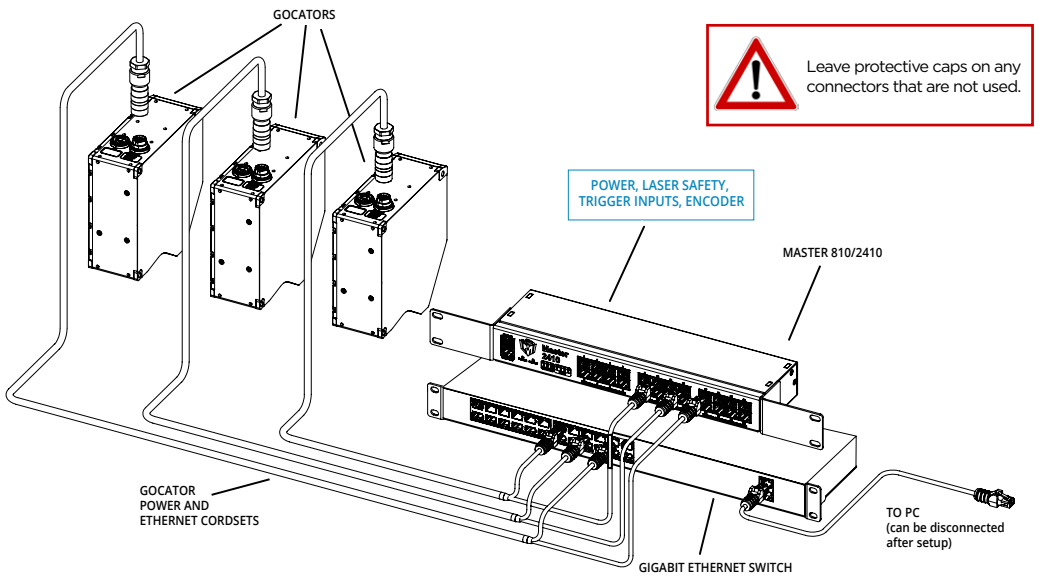
When connecting cordsets to sensors, do not exceed a torque of 2 Nm (18 in-lbs). Ensure that you properly secure the cordset cabling to avoid stress on the connectors.

Standalone System



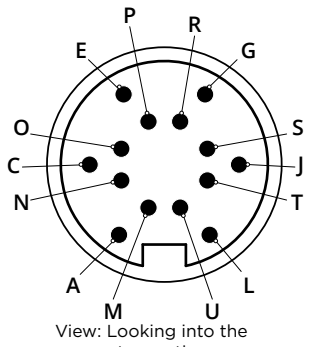
Always power down sensor before removing cables from the sensor

Dual / Multi-Sensor System



Connector Pin Details

Power/LAN

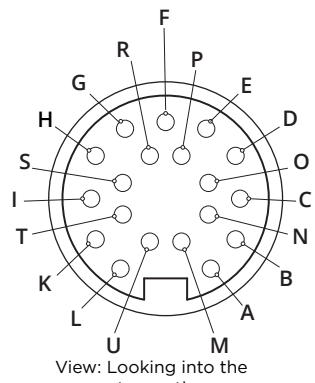


View: Looking into the connector **on** the sensor.

Pin	Function	Conductor Color (Standard)	Conductor Color (High Flex)
L	GND_24-48V	White/Orange & Black	Orange/Red
L	GND_24-48V	Orange/Black	Orange/Black
A	DC_24-48V	White/Green & Black	Green/Red
A	DC_24-48V	Green/Black	Green/Black
G	Safety-	White/Blue & Black	Blue/Black
J	Safety+	Blue/Black	Blue/Red
E	Sync+*	White/Brown & Black	Brown/Red
C	Sync-*	Brown/Black	Brown/Black
M	Ethernet MX1+	White/Orange	White/Orange
N	Ethernet MX1-	Orange	Orange
O	Ethernet MX2+	White/Green	White/Green
P	Ethernet MX2-	Green	Green
S	Ethernet MX3-	White/Blue	White/Blue
R	Ethernet MX3+	Blue	Blue
T	Ethernet MX4+	White/Brown	White/Brown
U	Ethernet MX4-	Brown	Brown

* The Sync leads are not connected in the open wire versions of the Power/LAN cordsets.

I/O



View: Looking into the connector **on** the sensor.

Pin	Function	Conductor Color (Standard)	Conductor Color (High Flex)
D	Trigger_in+	Grey	Blue/Red
H	Trigger_in-	Pink	Blue/Black
N	Out_1+ (Digital Output 0)	Red	Brown/Red
O	Out_1- (Digital Output 0)	Blue	Brown/Black
S	Out_2+ (Digital Output 1)	Tan	Green/Red
T	Out_2- (Digital Output 1)	Orange	Green/Black
M	Encoder_A+	White/Brown & Black	Pink/Red
U	Encoder_A-	Brown/Black	Pink/Black
I	Encoder_B+	Black	Yellow/Red
K	Encoder_B-	Violet	Yellow/Black
A	Encoder_Z+	White/Green & Black	White/Red
L	Encoder_Z-	Green/Black	White/Black
B	Serial_out+	White	Purple/Red
C	Serial_out-	Brown	Purple/Black
E	Reserved	Blue/Black	Red
G	Reserved	White/Blue & Black	Black
P	Reserved	Green	Gray/Red
F	Reserved	Yellow & Maroon/White	Gray/Black & Orange/Black
R	Reserved	Maroon (not connected)	Orange/Red (not connected)