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 FireFox 3.5+, Chrome 4.0+, and Internet Explorer 8.0+. (Use Firefox or Chrome for optimal performance.) The Adobe Flash browser plugin version 10.0+ must be installed. Version 4.0 of the interface is shown here.

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

http://192.168.1.10/

Step 3
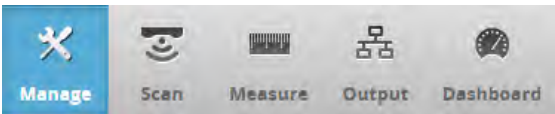Select language of choice

Administrator
Login
Language
English
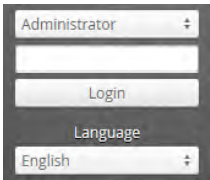
Step 4
The Administrator password is initially blank. Press the Login button to connect

B. RUNNING GOCATOR

Step 1
Select the Manage page.

Manage Scan Measure Output Dashboard

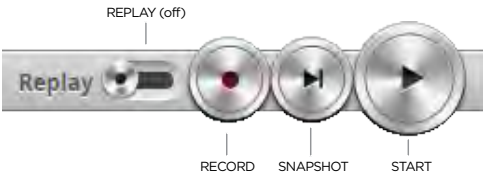### Step 2
Ensure that Replay mode is off (slider set to left) and that the Safety switch is enabled or the Safety input is high. Press the Start button in the toolbar to start the sensor (a light pattern should now be visible).

REPLAY (off)

Replay

RECORD SNAPSHOT START

Step 3
Move target into the projected light pattern and measure!

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

An example of the user interface in use

Once connected to the Gocator, click the Help icon to view the user manual or download the SDK

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 indicator light. • Verify the Power & Ethernet cordset is connected to the Power/LAN connector and the Ethernet end's RJ45 of the cordset is connected to the Ethernet switch. • 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. *Unzip and run the Sensor Discovery Tool [bin>win32>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.x.x_software_go2_tools.zip from from the downloads area of LMI's website at www.lmi3D.com. *Unzip and run the Sensor Discovery Tool [bin>win32>kDiscovery.exe] to discover the sensor on the network and restore default settings.* 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.
3D Data Acquisition	
When the Play button is pressed, the sensor does not emit LED light.	• Verify that the LED indicator light on the Gocator is illuminated, if not, the safety input signal is off. *Refer to the Safety Input section in the Gocator user manual to determine the correct solution for your application.* • The exposure setting may be too low. Refer to the Exposure section in the Gocator User Manual for more information on configuring exposure time. • Use the Snapshot button instead of the Start button to capture 3D point cloud data. If the LED light flashes when you use the Snapshot button, but not when you use the Start button, then the problem could be related to triggering.
The sensor CPU level is near 100%.	• Review the active measurements and eliminate any that are unnecessary measurements. • Consider reducing the trigger speed. • Consider reducing the data resolution.

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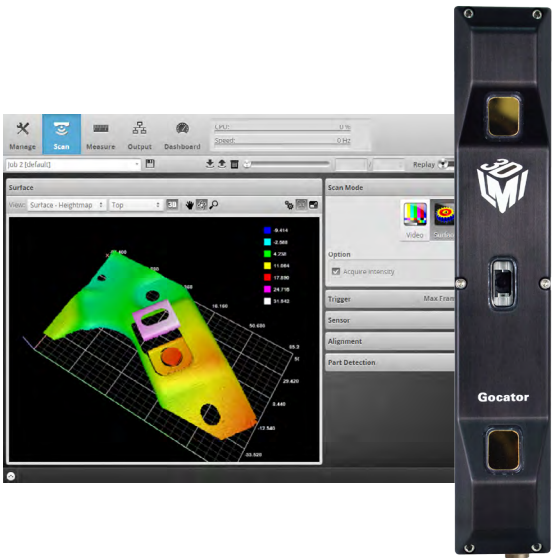
Gocator® 3100
Quick Start Guide

LMI TECHNOLOGIES
www.lmi3D.com

For the user manual, CAD drawings, firmware release notes, SDK, and more, go to **www.lmi3D.com**/support/downloads
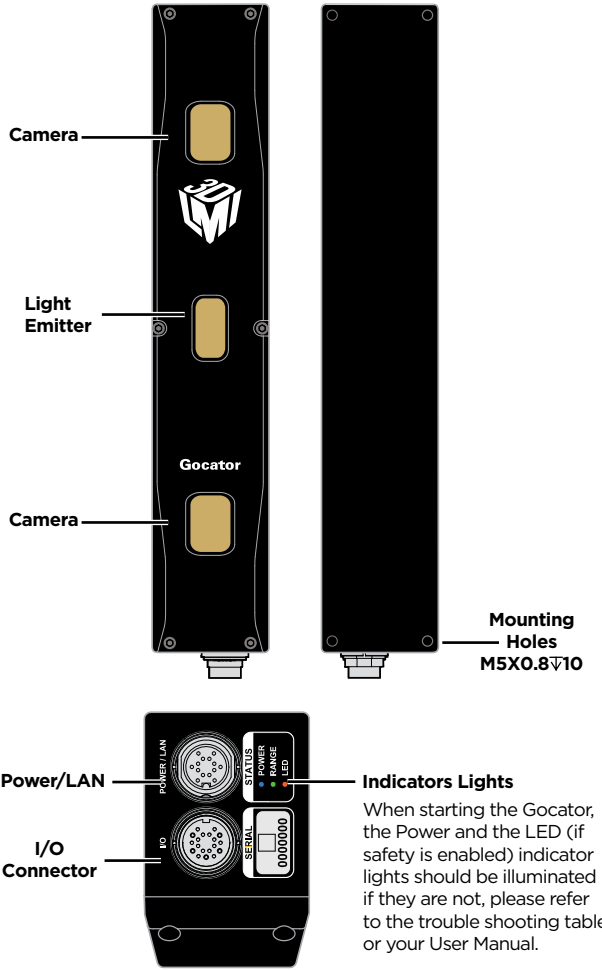
15198-01.05-Manual_Quickstart_Gocator-3100A-Series

GOCATOR OVERVIEW

Each Gocator 3100 model is 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.

Camera

Light Emitter

Camera

Gocator

Mounting Holes M5X0.8↧10

Power/LAN

I/O Connector

Indicators Lights
When starting the Gocator, the Power and the LED (if safety is enabled) indicator lights 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**.

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. See User Manual for instructions.

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 3100 sensors should be an isolated supply with inrush current protection.
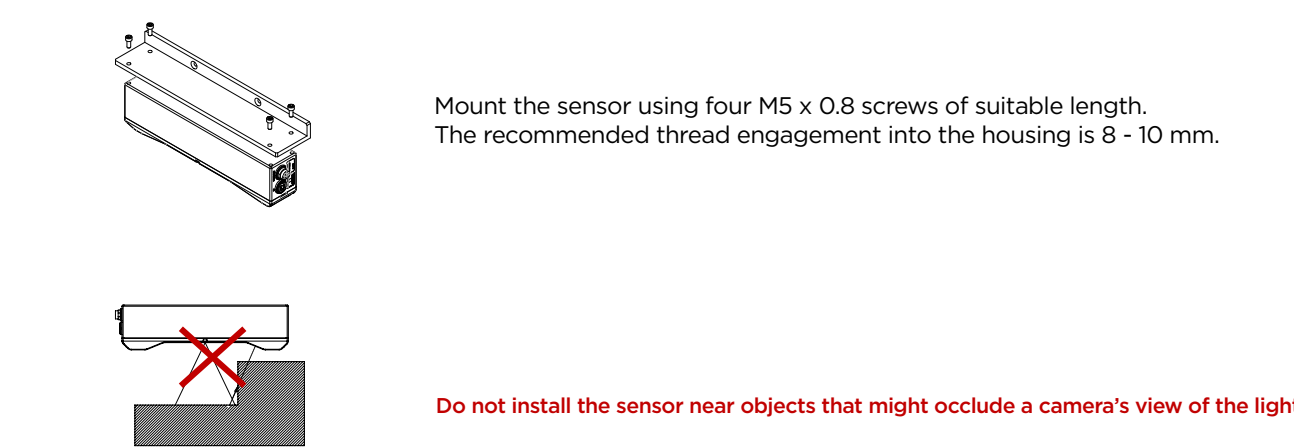
Use care when handling powered devices
Wires connecting to the sensor should not be handled while the sensor is powered. Doing so may cause electrical shock to the user or damage to the equipment.

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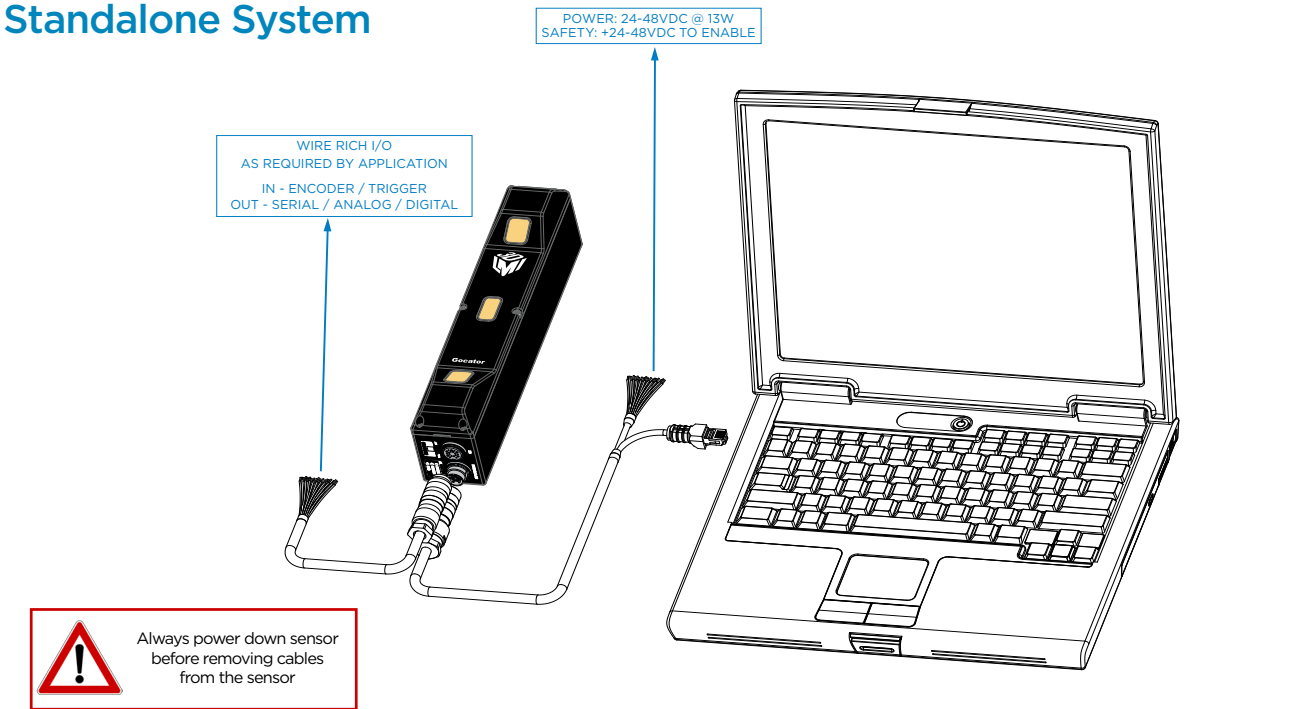
1. MOUNTING

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.
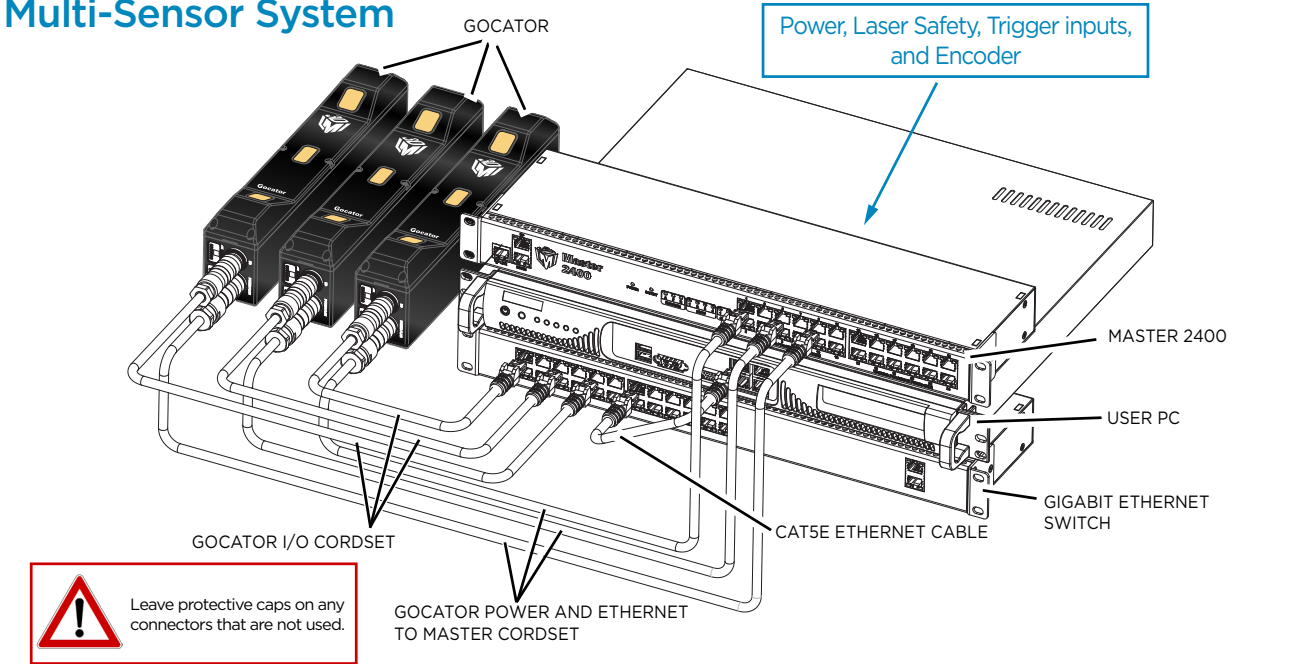

Mount the sensor using four M5 x 0.8 screws of suitable length. The recommended thread engagement into the housing is 8 - 10 mm.

Do not install the sensor near objects that might occlude a camera's view of the light

2. CONNECTING GOCATOR TO A HOST COMPUTER

Standalone System

POWER: 24-48VDC @ 13W
SAFETY: +24-48VDC TO ENABLE

WIRE RICH I/O
AS REQUIRED BY APPLICATION
IN - ENCODER / TRIGGER
OUT - SERIAL / ANALOG / DIGITAL

⚠ Always power down sensor before removing cables from the sensor

Multi-Sensor System

GOCATOR

Power, Laser Safety, Trigger inputs, and Encoder

MASTER 2400

USER PC

GIGABIT ETHERNET SWITCH

CAT5E ETHERNET CABLE

GOCATOR POWER AND ETHERNET TO MASTER CORDSET

GOCATOR I/O CORDSET

⚠ Leave protective caps on any connectors that are not used.

Connector Pin Details

Gocator Power/LAN (to standalone and to Master)

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

Pin	Function	Cable 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

Pin	Function	Cable Conductor Color
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

Gocator I/O

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

Pin	Function	Cable 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

Pin	Function	Cable Conductor Color
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