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# Gocator Firmware 4.0 Service Release 1
# Firmware Version 4.0.10.27 Release Notes
Revision A

This is Service Release 1 for release 4.0. For a complete description of 4.0, refer to the original 4.0 release notes.

## New Features:

*No new features in Service Release 1*

## Compatibility:

Gocator Service Release 1 includes breaking SDK changes from the original 4.0 release. Users should re-compile their application against the latest SDK. See Protocol Changes section below.

Gocator 4.x firmware is NOT compatible with Gocator 3.x firmware. Users need to setup their configurations using the Gocator 4.x firmware. SDK users need to update their software to work with the Gocator 4.x SDK.

The Gocator 4.x Setup and SDK migration guides explain how to migrate from Gocator 3.x firmware to Gocator 4.x firmware. The migration guides can be downloaded from http://www.lmi3d.com/resources/gocator/#how-to-guides

Sensors upgraded to the Gocator 4.x firmware can downgrade back to Gocator 3.x firmware.

*Users should back up their sensors before upgrading from Gocator 3.x firmware to Gocator 4.x firmware.*

Gocator 4.x interface requires IE 9, Firefox or Chrome. Adobe Flash version 11 or above is also required.

## Improvements:

| | |
|---|---|
| *Rename of Profile Feature types Left/Right/Top/Bottom* | Profile tool Feature types are renamed to MinX/MaxX/MinZ/MaxZ to be consistent with Surface tools and avoid confusion with sensor layout Top Left/Top Right. |
| *Linux and QNX support in SDK* | The SDK now fully supports Linux and QNX. |

## Fixes:

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|---|---|
| *Profiles lost in surface scans when running with multiple exposures* | When running in surface mode with multiple exposures at higher speeds, profiles within the surface would be randomly lost. This is now corrected. |
| *Part Detection failed in certain scenarios* | There were issues with the part detection when Intensity was enabled, as well as in Opposite Layout. This is now corrected. |

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| *LabVIEW driver not reading time stamp correctly* | The LabVIEW driver was not reading the time stamps of the Gocator data. This is now corrected. |
| *Dashboard measurement statistics showed min and max values swapped* | The Dashboard page in the web interface showed measurement statistics for min and max values swapped. This is now corrected. |
| *Wrong height values in CSV export with certain sensor settings* | With certain Active Area settings and the target in certain positions in the Measurement Region, the CSV export contained the wrong height (Z) values. This is now corrected. |
| *Simulating in a full buffer recorded with multiple exposure shows incorrect frame indexes* | While simulating with a full buffer with multiple exposures, the current frame index gets bigger than the total number of frames available in the buffer. Also, in the CSV file the index of the first saved frame is not 0. This is now corrected. |
| *Trigger Delay and Output Delay now in real µs* | Previously the Trigger Delay and Output Delay were specified in an internal time unit that was 2.4% different from real time. These setting are now in real time. |
| *GenTL driver not using part detection settings* | GenTL driver was not using maximum length setting from the sensor's when running in Surface data mode. This is now fixed. |
| *Modbus and EtherNet/IP register display wrong in web interface.* | Some register fields for the Modbus and EtherNet/IP protocols were shown as the wrong size in the Gocator web interface. This is now corrected. |

## Known Issues:

| | |
|---|---|
| *SDK documentations search function* | SDK documentation search function may not work on some Chrome installation due to privacy settings. |
| *IE8 display incorrectly* | IE8 does not display some web interface controls properly. This will be addressed in future release. Users are recommended to use IE9 or later, or other web-browsers. |
| *Incomplete language translations* | The web interface is not translated in some previously supported languages (i.e. Japanese, Korean, Spanish and Portuguese) |
| *The Groove tool is missing the Open shape type* | The Open shape type is not available in the Groove tool. It will be available in the next release. |
| *Median feature position option is missing* | The median feature position is not available. It will be available in the next release. |

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## Protocol Changes: Protocol Version 101.1

Protocol version is specified as [Major].[Minor]. Firmware releases with the same Protocol Major version are backward compatible and users do NOT need to recompile their applications unless features in the newer version are used.

Note that these are protocol and SDK changes between the original 4.0 release and Service Release 1. Refer to the Gocator 4.x SDK migration guide for details on how to port your 3.x application to Gocator 4.x firmware.

| Action | Type | Name | Description of change |
|---|---|---|---|
| Change | Protocol | Measurement Decision Output | Measurement decision outputs in all Ethernet protocols (Gocator, Modbus, EtherNet/IP and ASCII) have been changed such that measurement decision is a bit mask where:<br>Bit 0: 1 – Pass<br>0 – Fail<br>Bits [1-7]: 0 – Measurement value OK<br>1 – Invalid Value<br>2 – Invalid Anchor |
| Change | Config | Output/Ethernet/EIP/Setting<br>Output/Ethernet/EIP/BufferEnabled<br>Output/Ethernet/Modbus/Setting<br>Output/Ethernet/Modbus/BufferEnabled | New sections to hold specific options for EtherNet/IP and Modbus protocols |
| Add | SDK | GoMeasurementData_Value,<br>GoMeasurementData_Decision,<br>GoMeasurementData_DecisionCode | New functions to support the new format for measurement decisions. |
| Add | SDK | GoSystem_ClearMultiplexBanks | New function added to clear any added multiplex banks |
| Change | SDK | GoSystem_AddMultiplexBank | Now returns a kStatus instead of a GoMultiplexBank and has a third argument to accept a GoMultiplexBank pointer which it updates with the created multiplexing bank |
| Change | SDK | GoMultiplexBank_HasSensor | GoMulitplexBank_IsSensorInBank was renamed to GoMultiplexBank_HasSensor |
| Change | SDK | GoControl_GetTimestamp | Renamed GoControl_GetTimeStamp to GoControl_GetTimestamp (note the lower case change) |
| Change | SDK | GoSystem_Timestamp | Renamed GoSystem_GetTimeStamp to GoSystem_Timestamp |
| Change | SDK | GoSystem_Encoder | Renamed GoSystem_GetEncoder to GoSystem_Encoder |
| Change | SDK | GoSensor_AlignmentReference | Renamed GoSensor_GetAlignmentReference to GoSensor_AlignmentReference |
| Change | SDK | GoSensor_Timestamp | Renamed GoSensor_GetTimeStamp to GoSensor_Timestamp |
| Change | SDK | GoSensor_Encoder | Renamed GoSensor_GetEncoder to GoSensor_Encoder |
| Change | SDK | GoSensor_EnableRecording | Renamed GoSensor_SetRecordingEnabled to GoSensor_EnableRecording |
| Change | SDK | GoSensor_RecordingEnabled | Renamed GoSensor_GetRecordingEnabled to GoSensor_RecordingEnabled |
| Change | SDK | GoSensor_EnableAutoStart | Renamed GoSensor_SetAutoStartEnabled to GoSensor_EnableAutoStart |

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| Change | SDK | GoSensor_AutoStartEnabled | Renamed GoSensor_GetAutoStartEnabled to GoSensor_AutoStartEnabled |
| Change | SDK | GoSensor_ExposureAutoSet | GoSensor_ExposureAutoSet now takes in a device role as an argument |
| Change | SDK | GoTools_AddTool | GoTools_AddTool now returns a kStatus instead of a GoTool and has a third argument to accept a GoTool pointer which it updates with the created tool |
| Change | SDK | GoVideoMsg_PixelType | GoVideoMsg_PixelType now returns a GoPixelType enum value instead of a kType |
| Change | SDK | GoSerial_SetSelcomRate | GoSerial_SetSelcomRate was changed to take in a rate value instead of an option list index |
| Change | SDK | GoAnalog_OptionAt | GoAnalog_OptionAt was updated to remove an unnecessary output source argument. |
| Remove | SDK | GoSetup_ExposureDelay<br>GoSetup_SetExposureDelay | Removed GoSetup_ExposureDelay and GoSetup_SetExposureDelay |
| Remove | SDK | GoDigital_OptionList,<br>GoAnalog_OptionList,<br>GoSerial_OptionList | Removed GoDigital_OptionList, GoAnalog_OptionList, and GoSerial_OptionList (there were already OptionCount and OptionAt functions) |