



## Gocator 20XX and 23XX Release Notes Version 3.2.1.172 (Tools Version 3.2.1.176)

### New Features:

<i>Tracking Window</i>	<p>The Gocator can track a relatively flat object in real-time to achieve very high scan rates. This feature is based on tracking the object height using a small window that moves dynamically to cover a larger measurement range. Users can balance the gain in speed and the tracking ability by configuring the size of the tracking window. This feature is typically used in road or web scanning applications where the target is a continuous flat surface.</p> <p><i>This feature is only available on the Gocator 23xx family.</i></p>
<i>GenTL Driver Support</i>	<p>The Gocator GenTL driver streams 3D point clouds created by the Gocator's Whole Part Mode into 3<sup>rd</sup> party image processing applications which support the GenTL standard (e.g. Halcon, CVB, etc). Within these software packages, users can control the Gocator and process 3D data and the gray-scale intensity in real-time.</p>
<i>Circle Fit Measurement Tool</i>	<p>Measures the diameter and center of a circular surface. This can be used to measure the shape of objects such as pipe, logs or paper rolls. Limits can be set to establish pass and fail conditions for inspection decisions.</p>
<i>Line Fit Measurement Tool</i>	<p>Measures the deviation from a flat surface. It reports the error and the variations within a flat profile. This can be used to inspect the quality of flat objects such as sheet metal and calendared rubber. Limits can be set to establish pass and fail conditions for inspection decisions.</p>
<i>Z Fixturing</i>	<p>The fixturing support for built-in measurement tools is now extended to the z-axis. The Gocator can now adjust the measurement tools setup to compensate for changes in the target's height (z-axis) which is useful when parts vary significantly in height and for handling conveyor belt movement. User can separately enable the ability to adapt for variations in the target's position (x-axis) and height (z-axis).</p>



## Improvements:

<i>SDK Examples</i>	New source code examples are added to help software developers understand how to receive 3D point clouds and raw profile using the Gocator SDK. These new examples are concise and easy to understand, reducing the learning time needed to develop Gocator applications.
<i>Gocator CSV Converter Tool</i>	A new software tool is included to convert recorded 3D point clouds to formats that can be directly imported into CAD, image processing and 3D model analysis tools, such as RapidForm. The supported formats include ASCII (XYZI), 16-bit bitmap, 16-bit PNG and GenTL driver's output format.
<i>Shorter Configuration Time</i>	Improved response time for accepting configuration changes. The web interface is more responsive and SDK applications can restart the sensor quicker after changing the configuration.
<i>Measurement Setup Visualization</i>	The graphical controls for setting up measurement tools use a new coloring scheme that makes adjusting overlapping areas easier. The change also reduces clutter in the data viewer, making it easier to read the results produced by the measurement tools.
<i>Export Measurement Values To CSV Files</i>	Measurement values is now included when recorded profiles or whole part's 3D point clouds are exported to CSV.
<i>CPU offloading</i>	More CPU resources are freed up by offloading critical tasks to the Gocator 2300 hardware accelerators. Extra computational power is now available for calculating more 3D measurements at higher frame rates. <i>This feature is only available on the Gocator 23xx family.</i>
<i>GenTL Driver Configurations</i>	Users can now configure the output image size and control resampling logics thru the GenTL driver, improving the efficiency in processing height map and intensity images when using 3 <sup>rd</sup> party image processing applications.
<i>GenTL Driver Sensor Controls</i>	Users can now select the sensor's live configuration and retrieves the current encoder value thru the GenTL driver, allowing 3 <sup>rd</sup> party image processing applications to synchronize measurement decisions with external devices such as PLC or eject gates.



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## Fixes:

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*SDK only accepts integer encoder period*

SDK functions now accepts encoder period in floating point.

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*Switching to replay mode causes browser to disconnect*

Browser now remains connected when switching between live and replay mode.

## Known Issues:

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*Incomplete language translations*

The web interface is not fully translated in some supported languages (i.e. Japanese and Korean).

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## Protocol Changes:

This firmware version can read configuration and template files saved with firmware version 2.2.1 or later. User applications must be built against the SDK library included with this firmware release.

Action	Type	Name	Description of change
Add	Configuration	Output/Ethernet/Protocol	EtherNet/IP option is now supported. The supported values are: 0 – Gocator 1 – Modbus 2 – EtherNet/IP
Add	Configuration	Sensor/Profiling/Tracking	A new node is added for configuring tracking active area.
Change	SDK	Go2System_EncoderPeriodMin, Go2System_EncoderPeriodMax, Go2System_EncoderPeriod	SDK functions accept encoder period as floating point values.
Change	Configuration	Profile/Anchoring	Updated anchoring XML element to support Z anchoring.  <pre> &lt;Profile&gt;   &lt;Measurements&gt;     &lt;Anchor&gt;       &lt;ZEnable&gt;       &lt;XEnable&gt;       &lt;ZFeature&gt;         &lt;Type&gt;         &lt;Area&gt;       &lt;XFeature&gt;         &lt;Type&gt;         &lt;Area&gt; </pre> The SDK has been updated to reflect these structural changes
Add	Configuration	Profile\Measurements\CircleRadius Profile\Measurements \CircleX Profile\Measurements \CircleZ Profile\Measurements \LineStdDev Profile\Measurements \LineErrorMin Profile\Measurements \LineErrorMax Profile\Measurements \LinePercentile	New elements are added to support Circle Fit and Line tools.
Add	Configuration	Sensor/Profiling/FrameRateMaxSource Sensor/Profiling/EncoderPeriodMinSource	New items (read-only) to share more information about the source of speed or encoder period constraints.