

Gocator Firmware 6.1 SR3 – Release Notes

Firmware Version 6.1.42.10

Document Revision B

Compatibility

- **Web Interface**
 - The web interface requires Chrome, Firefox or Microsoft Edge version 79 or later.
 - IE 11 and old Edge versions are only supported in a limited fashion (see known issues for details).
- **Hardware**
 - New measurement tools and PROFINET are not available on G2300 A and B revisions
 - Gocator 1300 and 3100 series sensors are not supported.
- **SDK**
 - The 6.x releases are compatible with 4.x and 5.x SDK.

New Features

<i>Surface Feature Mask</i>	Surface Feature Mask lets you dynamically mask regions based on feature point inputs from other tools.
<i>Cognex VisionPro integration</i>	Integrate Gocator sensors with Cognex VisionPro through the new GoAIK driver provided in the Utilities package.
<i>Part Detection digital output</i>	A new digital output mode has been added to allow triggering external devices when a part is detected by a Gocator sensor.

Improvements

<i>Minimized flash storage wear</i>	Improvements have been made to reduce the wear of the flash storage on Gocator sensor devices.
<i>Modbus output limit increased</i>	The maximum number of measurements that can be output over Modbus has been increased from 333 to 666 measurements.
<i>Surface Pattern Matching Matched Edges</i>	A new Show Details mode in Surface Pattern Matching allows seeing matched edges. This can assist in troubleshooting and tuning matching performance.
<i>Surface Bounding Box Advanced</i>	A new “Show Corners” option allows output of the bounding box corners as geometric point features.
<i>Surface Section Feature Point input</i>	The Surface Section tool now can take in two point features to more easily extract cross sections at angles defined by other features.

<i>Surface Cylinder Advanced Detection</i>	A new search mode “Advanced Detection” is added to Surface Cylinder. This mode provides more robust detection of the cylinder surface with the tradeoff of longer execution times.
<i>Surface Mesh</i>	The Surface Mesh tool now has a new Smoothing option to control the smoothing level of the output mesh.
<i>Surface Blob & Surface Segmentation</i>	In the Surface Blob and Surface Segmentation tools, the average, min and max Z value can now optionally be output by enabling the “Enable Z Measurements” feature.
<i>Surface Circular Edge</i>	A new fit method “Iterative Robust Least Square” is added under the advanced parameters to improve fitting results for cases where unavoidable outliers appear in scan data.
<i>Surface Section</i>	The “Profile” output of Surface Section has been renamed to “Uniform Profile”
<i>Measurement ID conflict</i>	When measurement ID values are changed, the error for conflicting measurement ID now indicates
<i>Current temperature over Modbus</i>	The current sensor temperature has been made available for output over the Modbus protocol at register 383-384.
<i>G3500 projector overheat notification</i>	A notification has been added to the Web UI when an overheat condition is detected on the Gocator 3500 series sensors.

Bug Fixes

<i>Source selection for Top & Bottom buddies</i>	On an opposite buddy system, a job with tools using “Top & Bottom” as source could be loaded incorrectly on system startup, resulting in tools using “Top” as the source.
<i>PROFINET GSD file</i>	The size of the modules in the GSD file were incorrect for 32-bit aligned mode. Two GSD files are now included to cover both Legacy and 32-bit aligned mode.
<i>Acceleration with EtherNet/IP active</i>	Re-acceleration of a sensor could fail after a disconnection if an EtherNet/IP connection was active before the disconnection.
<i>Script Stamp_Inputs() on G3210</i>	The Stamp_Inputs() function in the script tool could return a wrong value on the Gocator 3210 sensor model.
<i>Trigger Delay 0mm</i>	When using the External Input trigger mode on a G2 sensor with Trigger Delay set to 0 and Units set to “mm (Encoder)”, no profiles could be generated.
<i>ASCII communications crash</i>	A crash could occur under specific circumstances when using Ethernet ASCII communications
<i>Black visualizer</i>	At certain zoom levels with some specific data sets, the visualizer could go black.
<i>Large parameter values on GDK tools</i>	When in an accelerated state, large values entered into floating-point parameters could be rounded in the UI field.



<i>Loading transformations from backup</i>	When restoring a backup of a buddy system with more than two sensors, the transformation values for some sensors could be restored incorrectly.
<i>Anomalies in individual profiles</i>	On G2500 sensors, anomalies in the profile data could be produced for individual profiles under very rare circumstances.
<i>G2490 Active Area configuration</i>	Gocator 2490 sensors could show incorrectly transformed profile data when modifying the Active Area.
<i>SDK GoSensor_BuddiesAt()</i>	The SDK function GoSensor_BuddiesAt() did not return the correct buddy sensor.
<i>SDK StopRecordingStream() Unhandled exception</i>	An unhandled exception could occur in the StopRecordingStream() function under some circumstances.
<i>Surface Segmentation</i>	The intensity output from Surface Segmentation was resulting in 0 (black) intensity in output surfaces.
<i>Profile Raw Template Matching</i>	For some cases of matching raw profiles from Surface Section, matching could fail.
<i>Surface Filter percentile filter crash</i>	A crash could occur when using Surface Filter with Use Intensity enabled and with Percentile, Fill Gap, or Decimation filter types.
<i>Surface Pattern Matching</i>	Some measurement values from the tool could be slightly different between running on sensor and on PC.
<i>Surface Merge Wide</i>	The tool could cause a crash under some specific conditions while running on PC through Accelerator or Emulator.
<i>Surface Align Ring</i>	The Surface Align Ring tool could cause a crash with specific input scan data.
<i>Surface Section</i>	A memory leak could occur when operating on empty input surfaces.
<i>Surface Stud</i>	The Radius Offset parameter on the Radius measurement was not applied correctly.
<i>Surface Flatness</i>	A memory leak could occur when using more than one region.
<i>Surface Arithmetic</i>	The Surface Arithmetic tool, when taking input from the Surface Transform tool, ignored a Z offset from the Transform tool.
<i>Surface Mask</i>	When using a polygon mask with 3 points, the output surface could be abnormal.
<i>Surface Volume</i>	When using the Median location type for the Thickness measurement, the tool could take very long to calculate and the measurement could be incorrect.
<i>Profile Bridge Value</i>	The StdDev measurement could falsely be set to Overflow under some circumstances. And the Angle was not Invalid in cases where the Skip was larger than the Window parameter.
<i>Mesh Bounding Box</i>	The tool could fail to report the correct bounding box measurements when using Run rather than stepping through frames in the Emulator.



<i>Surface Blob</i>	For cases where the width and height of a detected blob perfectly matched, an Max Aspect ratio of 1 could still result in the blob being excluded from the results.
<i>URCap ball bar calibration</i>	When no distance to the ball bar was provided, the calculated distance was incorrect. Also, the calculation of the Y offset of each surface contained an error resulting in a Y offset of the end results dependent on scan length.

Known Issues

<i>EtherNet/IP communications with accelerated sensors</i>	Communication over EtherNet/IP to independently accelerated sensors on separate IP addresses does not function correctly. This feature was previously included in the A revision of these release notes.
<i>Factory Restore does not delete tool-created files</i>	Factory Restore does not delete files created by tools. This includes Surface Pattern Matching and Surface Track. To ensure tool files are removed from a sensor, add the appropriate tool and perform a “Delete” operation on any files.
<i>Surface Track</i>	The Surface Track tool is not supported on the GoMax device.
<i>Surface Section</i>	With a profile from the Surface Section tool, it is not possible to obtain Global X & Y measurements from the Profile Bounding Box tool.
<i>Script Tool</i>	Memory leaks can occur when using <i>arrays</i> and <i>structs</i> within a script. Workaround: Avoid using arrays and structs or test thoroughly to ensure stability.
<i>Zoom to rectangle</i>	In profile mode, when disabling 1:1 mode, zoom to rectangle does not fully zoom
<i>Translations incomplete</i>	Not all English text is translated in every language.
<i>G3504 with Interreflection Material</i>	The G3504 does not support the Interreflection Material setting at full field of view due to memory limitations. Workaround: Use the new Interreflective firmware, reduce the field of view, or reduce the scan resolution.
<i>Internet Explorer 11</i>	Several issues exist with Internet Explorer 11: <ul style="list-style-type: none"> • Launching and using additional data viewers is very slow. • When using large data may not be possible due to browser memory limitations. Workaround: Refer to the Gocator user manual for IE 11 specific instructions to work around some of the issues.



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.

The 6.x SDK will not discover any sensors with firmware 4.2 or earlier by default. Use `GoSystem_EnableDiscoveryCompatibility()` to enable discovery of sensors with older firmware.

SDK

No API changes were made compared to the 6.2 SR2 release.

Configuration and Protocol changes

No configuration or protocol changes were made compared to the 6.1 SR2 release.

GDK

No changes were made compared to the 6.1 SR2 release.