

GoPXL 1.3 – Release Notes

Firmware Version 1.3.7.26

Document Revision B

Compatibility

- Devices supported:
 - Gocator Line Profilers: 2100 C/D version, 2300 C/D version, 2400, 2500, 2600, 6300
 - Gocator Snapshot Sensors: 3200, 3500 (including B version)
 - Gocator Line Confocal Profilers: 4000, 5500
 - GoMax NX, ORIN, ORIN+
 - X64-based PC (Intel/AMD) with Windows 10 and Windows 11
- The following series and models are not supported:
 - Gocator Point Sensors: 1300
 - Gocator Line Profiler: 2342, 2880
 - Gocator Multi-point Profiler: 200
 - GoMax (pre-NX version)
- Minimum browser requirements:

	Google Chrome	Microsoft Edge	Mozilla Firefox
GoPXL Web UI	91+	91+	79+
GoHMI	80+	80+	74+

New features

<i>New model support</i>	The following new models are supported (compared to GoPXL 1.2): <ul style="list-style-type: none">• G6310, 6320
<i>Chinese and Japanese language</i>	The user interface is now available in Chinese and Japanese. A restart is required to apply the language change.
<i>Sensor replacement</i>	It is now possible to swap one configured sensor with another without losing configuration data.
<i>Third party integration</i>	A Cognex AIK integration driver is now included in the Utilities package. It supports image, profile and surface mode.
<i>Multi-exposure frame rate optimization</i>	Optimized frame sequencing now enables higher maximum frame rates in multiple exposure mode. Applicable to G2, G4, G5, G6 series sensors.

Improvements

<i>UI Navigation</i>	<p>To simplify navigation and improve usability, we have reorganized the main navigation bar as follows:</p> <p>Renamed Pages:</p> <ul style="list-style-type: none">● System → Connect● Scan → Acquire● Tools → Inspect● Control → Communicate● Report → Monitor <p>Structural Changes:</p> <ul style="list-style-type: none">● Connect now combines the old Design and Discover pages.● The Motion and Alignment settings are now on the Acquire page.
<i>Navigation Bar Menus</i>	<p>Child pages in the main navigation bar are now hidden by default and appear as a drop-down menu when hovering over their parent section to provide a less cluttered interface.</p>
<i>Tool Outputs Panel Redesign</i>	<p>The Tool Outputs panel has been redesigned with a properties section that's now permanently anchored at the bottom, plus new in-row buttons to pin, record, and filter outputs.</p>
<i>Adding Sensor to Group</i>	<p>Added ability to add a sensor directly to an existing sensor group from the Connect > Visible Devices table, with automatic filtering of sensors already assigned.</p>
<i>Sensor Swapping</i>	<p>Added support for sensor reassignment which allows swapping the active remote sensor via dropdowns on the Design page, with filtering for compatible and discovered sensors only.</p>
<i>New Job UI Improvements</i>	<p>Improvements were made to the user interface of new job file creation.</p>
<i>Job Naming Standardization</i>	<p>New jobs are now 'untitled', duplicates append '- copy', and conflicting uploads get a number (e.g., 'JobA 2').</p>
<i>Acquire Page UI Cleanup</i>	<p>On the Acquire page, the “Summary Block” table was removed to reduce clutter, and the panel title now shows the specific scan engine's name (e.g., "New sensor 1") for clearer context.</p>
<i>Active Filter Indicator</i>	<p>The “Filters” section on the Acquire page now displays a visual indicator to show when any filter inside it is active.</p>
<i>Default filtering</i>	<p>For G2 sensors, Gap filling filtering is enabled by default to match the Gocator Classic firmware.</p>
<i>Connecting sensors</i>	<p>Sensors can now be added to GoPXL on PC or buddied to each other with a “+” button on the Connect page.</p>
<i>Multiplexing visibility</i>	<p>For G2 multi-sensor systems, the current state multiplexing is more clearly displayed.</p>

<i>Time triggering</i>	Improved accuracy of frame period with Time mode triggering. With the same job configuration, this can result in slightly higher trigger rates due to the rounding difference.
<i>GoMax ORIN+ performance</i>	The performance of the GoMax ORIN+ was improved resulting in faster execution times for CPU intensive tasks.
<i>Job load performance from PLC</i>	Optimized job load from external devices (PLC or PC) to not include running tools on any previous frame data.
<i>Icon updates</i>	The Windows application icons have been updated to better differentiate GoPxL Manager, Discovery and HMI Designer
<i>GoPxL Manager notification</i>	A new notification is shown when starting GoPxL Manager to give immediate feedback that it is running in the system tray.
<i>GoPxL Manager launch</i>	GoPxL Manager: It is now possible to disable automatically opening a browser window when an instance is launched.
<i>GoPxL Manager troubleshooting file</i>	A troubleshooting package containing logs can be downloaded from the GoPxL Manager menu
<i>GoHMI Dynamic Job Loading</i>	The GoHMI manual and advanced sample app now include a new tutorial and demo for dynamically loading jobs from a dropdown list.
<i>GoHMI User Visibility Tutorial</i>	The GoHMI manual and advanced sample app now include a new tutorial showing how to control which parts of the HMI app are visible based on the user who is logged in.
<i>GoHMI Dynamic UI Actions</i>	In GoHMI Designer, you can now pass variables and items directly into UI Action parameter and resource fields. For example, you can now use an item as a variable in a REST API call, such as setting the resource path to <code>/resource/path/\${Item Name}</code> .
<i>GoHMI App in Backup and Support files</i>	System backups (.gpbak) and support files (.gpsup) now include the latest user-modified and published GoHMI application. This ensures that HMI customizations are correctly saved and restored along with the rest of the system configuration.
<i>GoHMI Designer</i>	In GoHMI Designer, you can now pass variables and items directly into UI Action parameter and resource fields. For example, you can now use an item as a variable in a REST API call, such as setting the resource path to <code>/resource/path/\${Item Alias}</code> .
<i>Backup Memory Optimization</i>	Reduced memory use during Backup archiving by 5-6x to support larger replay files and improve system stability during download.
Tool Enhancements	
<i>Tool output parameters</i>	Tool output properties are now shown consistently at the bottom of the tool output list.
<i>Anomaly Detector performance</i>	The training time has been improved and the accuracy is also better due to automatically setting the anomaly threshold.

<i>Script tool</i>	The number of error logging notifications is reduced when multiple errors are found.
<i>Surface Blob</i>	Added a new “Include Inner” option in the “All Contours” hierarchy mode, useful for extracting the contour of a blob.
<i>Surface Filter</i>	Improved usability when using intensity data.

Bug Fixes

GoPXL 1.3 includes many bug fixes for issues in GoPXL 1.2. Below are the most significant issues that were resolved.

<i>GoHMI Admin Login</i>	Fixed an issue where the GoHMI app would incorrectly prompt for an administrative login.
<i>G4 start after power cycle</i>	In a specific case, a G4 sensor could not be put into running state after power cycling.
<i>UI memory leak</i>	Memory usage from the browser with an open GoPXL UI could increase over time until PC resources are exhausted.
<i>SDK ConfigureSensor sample</i>	The SDK sample ConfigureSensor failed with an error if digital output was not already enabled
<i>Digital output for G5 part detection</i>	The digital output signal for G5 sensors was inverted
<i>G4 invalid points</i>	Enabling Uniform Spacing on G4 sensors may introduce artificial points near profile boundaries
<i>Multiple GoPXL Instances</i>	When using multiple GoPXL instances in GoPXL Manager, one GoPXL instance could intermittently show a timeout.

Tool bug fixes

<i>Profile Closed Area and Profile Circle Radii</i>	A connection lost crash issue could occur when these tools had an invalid input or region.
<i>Surface Arithmetic</i>	When using “subtract” or the “or” operator, the Surface Arithmetic tool produced incorrect results.
<i>Surface Arithmetic</i>	Surface Arithmetic could generate output outside the user specified region.
<i>Surface Filter</i>	When Relative Threshold was used as the second filter in Surface Filter, some points below the lower threshold could remain.

<i>Surface Filter</i>	Surface Filter excluded expected data when intensity was selected with multiple regions and “Preserve data outside region”.
<i>Surface Merge Wide</i>	When Output Width was set to a large value, some data in the Y axis was missing in the output.
<i>Surface Merge Wide</i>	Surface Merge Wide offsets were not applied after reloading a job.
<i>Script tool</i>	Memory usage could grow after repeated Start/Stop cycles of the Script tool on Windows.
<i>Script tool</i>	When the first element of an array was invalid, the Script tool could show an error: 'NoneType' object is not subscriptable
<i>GenTL driver</i>	Halcon could not auto-detect a sensor through the GenTL interface.
<i>Surface Plane</i>	In some cases regions were not visible and defaulted to 0, 0, 0.
<i>Feature Line Create</i>	Output of “Point from line and circle” did not produce an interception point between Line and Circle.

Known Issues

General

<i>Gocator 3210 upgrade</i>	<p>The free storage on a Gocator 3210 sensor may limit its ability to be upgraded to a different firmware version.</p> <p>Workaround: If upgrade fails, perform a factory restore and ensure that any tool-created files are removed (for example from Surface Pattern Matching or Surface Track) by adding the tool and then deleting any files from the tool's Operation drop-down. If you have previously run the Gocator Classic firmware on the sensor, make sure files created with these tools are also removed (you will need to downgrade first)</p>
<i>False error about digital output</i>	When loading a .gprec file to GoPxL on PC, false warning messages could be shown in the log indicating that digital output could not be enabled even if it was not enabled in the recording file.
<i>Unmerged multiple exposures</i>	With Uniform spacing disabled, multiple exposures, enabling "Unmerged multiple exposure", and switching from Profile to Surface mode, data processing errors occur.
<i>FireFox and large surface data</i>	<p>With the FireFox web browser, issues can occur in the user interface when working with large/high resolution surface data.</p> <p>Workaround: We recommend using Chrome when using large data sizes.</p>
<i>GoMax upgrade with Anomaly Detector</i>	It is not possible to directly upgrade a GoMax device from Gocator Classic 6.3 SR2 and earlier with the GoMax Anomaly Detector upgrade package (.dat file). This is due to an upgrade package size restriction.

	Workaround: First upgrade to GoPxL 1.1 before upgrading with the GoMax Anomaly Detector build.
<i>Large job files</i>	With a large job file and the UI open, performing Start and Stop operations could be delayed.
<i>Job loading/switching</i>	Loading or switching jobs may be slower than expected with small job files with less than 10 tools.
<i>Industrial Protocols: PROFINET</i>	Once the service is enabled, it will remain running in the background until a power cycle is performed. Workaround: Toggle off the service, save the job, restart the sensor, and load the job again.
Tools	
<i>Tool performance</i>	The execution time of some tools may be slower than expected. Workaround: Ensuring that the Web UI is closed can improve performance of some tools.
<i>Default region size</i>	When using surface tools on the output of Profile Part Detection, the default tool regions may be inappropriately sized and placed relative to the surface dimensions.
<i>Surface filter</i>	Advanced filters (laplacian, morph gradient, sobel magnitude) result in incorrect surfaces.
Utilities	
<i>Track editor with multiple GoPxL instances</i>	When using multiple GoPxL instances on PC, it is not obvious which instance is which in the Track editor application's Source drop-down.
GoHMI	
<i>Updating HMI App on PC</i>	The browser cache must be cleared in order for a newly updated or created HMI app to show. In Chrome, open Developer Tools (Shift+Ctrl+J or F12), Right-Click on the browser Reload Button, and select "Empty Cache and Hard Reload". This is not required for GoHMI on sensor or GoMax NX.
<i>Trendline Initial Setup</i>	GoHMI Trendline may not function on initial setup or app import until the HMI Service is toggled in Control > HMI.

REST API

<i>New REST API Endpoints</i>	Control Service Discovery <ul style="list-style-type: none"> ● /controlTypes - New collection resource for discovering available control protocols <ul style="list-style-type: none"> ○ Returns descriptions of all control service types (Modbus, PROFINET, EtherNet/IP, etc.)
<i>System Enhancements</i>	Internationalization Support <ul style="list-style-type: none"> ● /system/locale - New resource for system locale configuration Enhanced System Metrics (/system/metrics) <ul style="list-style-type: none"> ● Live Data Buffer Monitoring: <ul style="list-style-type: none"> ○ liveBuffer/frameCount, frameIndex, frameTime, memoryUsed & memoryCapacity ● Application Logging Metrics: <ul style="list-style-type: none"> ○ appDebugLogs - Debug log count ○ appTraceLogs - Trace log count ○ messagesFiltered - Filtered message count
<i>New GDP Message / Register Block Types</i>	Added String to the basic data types.

SDK

GoSystem Initialization	Fixed an issue with GoSystem initialization caused by missing assembly binding redirects.
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Functionality compared to Gocator 6.x firmware

This section lists features that are available in Gocator firmware versions 6.x but not available in GoPxL.

<i>Runtime variables</i>	Runtime variables from PLC are not yet supported. This functionality is planned for GoPxL 1.4.
<i>Maximum frame rate simulation</i>	When loading a support file in GoPxL, the maximum frame rate is not calculated as it is in Gocator Emulator. This feature is planned for GoPxL 1.4.
<i>More user interface translations</i>	GoPxL is only available with English, Chinese and Japanese user interface currently. More translations are planned for future releases.
<i>Mixed-model buddying</i>	Mixing different G2 line profile models in a merged system (buddying) is not supported. The models must match.

<i>Analog, and Serial output</i>	Analog, and Serial output are not supported.
<i>GoMax Independent acceleration</i>	GoMax can only accelerate a single sensor or a single set of grouped G2 or G4/G5 sensors (formerly known as “buddy” system). Accelerating multiple sensors independently is not supported.
<i>Recording filtering</i>	<p>There is currently no ability to conditionally record data with recording filter settings.</p> <p>Conditional export to file is supported with the Data Export tool. And the new data storage feature planned for GoPxL 1.4 will include conditional storage.</p>
<i>Technician login</i>	Gocator 6.x Technician login with restricted UI is replaced by GoHMI functionality allowing creating a reduced access interface.
<i>G2 Tracking, Translucent spot detection</i>	The tracking functionality and translucent spot detection are not available.
<i>Surface Section and Polygon region</i>	Surface Section does not allow editing the section line by dragging end points and no polygon region is supported. These will be added in a future release.
<i>G2342, G2880, G200</i>	These models are not currently supported in GoPxL
<i>Surface Barcode</i>	<p>The Surface Barcode tool is currently not supported in GoPxL.</p> <p>An Image Barcode tool is planned for GoPxL 1.4.</p>