GoPxL 1.6 - Release Notes

Version 1.6.33.98
Document Revision B

Compatibility

- Devices supported:
  - Gocator sensors & cameras
    - Line Profilers: 2100/2300 C/D version, 2400, 2500, 2600, 6300
    - Snapshot: 3200, 3500 (including B version)
    - Line Confocal Profilers: 4000, 5500
    - 2D Smart Cameras: 1050, 1120
  - GoMax NX, ORIN, ORIN+
  - X64-based PC (Intel/AMD) with Windows 10 and Windows 11
  - Alvium G1 2.4MP to 24MP
- 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+

For G2600 models, the X subsampling option has been removed since they provide no benefit. If you require larger X spacing, use Custom spacing with the desired spacing amount.

For accelerated G3 sensors, using a PC with NVIDIA graphics, the minimum driver version has been increased to version 576.57.

New features

New model support	This release adds support for the following models - The new B version of the Gocator 2610 and 2618 - Gocator 2710, 2720, 2730 and 2735 B - Gocator 6190
Surface Inference & Image Inference tools	The new tools Surface Inference and Image Inference allow using externally trained Segmentation or Object Detection YOLO AI models in GoPxL

Image Object Detector	Expands GoPxL's vision capabilities by using deep learning to locate and identify discrete objects within captured image data.
New G2500 spot algorithm	A new algorithm "Precise" has been added for G2500 sensors offering
Protocols Help pane	Added a help panel at the bottom of every Communicate page (Industrial, Gocator, HMI, Digital Output, Storage), so protocol user guides can be read in-app without the need to open the full manual.
Data viewer view state	Added the ability to capture the data viewer's active pane view state to a shareable URL, so the viewer always reopens to the exact same view. Use the link button in the Displayed Outputs panel to capture, and the Clear persisted view button to remove it.
Saved data viewer views	Added named views in the data viewer, so users can save a viewing angle or zoom level and restore it later from a dropdown without manually readjusting the data viewer. Save, rename, delete, and set a default view; saved views persist across page reloads.
GoHMI widgets	Added GoPxL widgets for GoHMI: Metrics, Card Grid, Job Manager, Scan Controls, Tool Performance, Data Viewer, XY Plot and Text Panel.
Laser auto-off	Added a Laser auto-off option to surface generation on G2 and G6 sensors. The laser stays off until a start trigger arrives, which extends laser life. When enabled, the Exposure Begin digital output follows the laser on and off.
Translucent spot selection	G2 sensors now support the Translucent spot selection type, previously only available in Gocator Classic, for improved measurement of translucent materials.
G3 shutdown	Added a Shutdown button for G3 sensors that parks the projector mirrors before power off, on models that support it. Shutdown does not work while the sensor is accelerated.

Improvements

Tool list	The Tool List panel on the Inspect page is now a floating window with a draggable tool picker, where tools can be viewed and filtered, grouped by the new application category so tools from the same application type are grouped together and easier to find.
Tool icons	Replaced the acronym-based tool icons with a set of unique icons, color-coded by application category, so tools are identifiable at a glance without hover.
Active area	Added a banner in the Visualizer during active area editing. The banner provides a clear visual cue for switching between scan modes and includes controls to apply or discard changes directly, eliminating the need to navigate through separate panels.

Job actions	In the Jobs page, multi-select is added to the jobs list with shift or ctrl + click, so bulk actions such as delete can be performed on multiple jobs at once through a context menu.
Recording buffer	The recording buffer can now hold up to 3.9 GB, up from 1.95 GB.
G7150 Surface tool color support	For the G7150 sensor with color surface output, color intensity data now flows through a broader set of tools.
Image OCR	The Image OCR tool is now faster and reads text more reliably for single lines of text. It also now supports rotated regions and provides a confidence score
Image Edge Count	The Image Line Count has been renamed to Image Edge Count. It now also features a 1D edge detection mode and new intuitive UI for parameter adjustments.
Image color conversion	Color Conversion is added to Image tools like Edge, OCR and Barcode to allow tuning of how color images are converted to grayscale in processing
Data viewer image display rate	With Gocator 2D and Alvium cameras, the image display rate in the data viewer is greatly improved for smoother display.
Data Storage	Added support for an uncompressed TIFF export option, making it easier for third-party applications to import and view 3D point cloud data. Saving capabilities have also been expanded to include uniform profiles and non-uniform surfaces.
G6 subsampling	G6 sensors now have one Subsampling setting with 1x1 (Standard) and 2x2 (High Speed), which avoids combinations that limit the frame rate.
G2 and G6 Advanced settings	The Advanced section for G2 and G6 sensors is reorganized with clearer group names and fewer nested groups. Dual-camera merge type is hidden on single-camera models.
Spot detection priority	New G2500 setting. Robustness gives better ambient noise rejection and consistent results over a wider range of targets. Precision can give sharper intensity and reflection immunity, but usually needs PC or GoMax acceleration.
Valid spot count	The Health metrics now show a Valid Spot Count next to Max Spot Count for G2 and G5 sensors, the number of spots with valid data.
Multi-sensor uniform surface arrays	Multi-sensor array output can now be used with uniform spacing enabled, so uniform surfaces from multiple sensors are output as an array instead of being merged.
G6 overheat notifications	G6 sensors now show warning and error messages when a component overheats. Data acquisition is suspended at the error level and resumes when the sensor cools down. G3 overheat messages are also updated.
External Input digital output event	Added an External Input event for digital outputs to confirm that an input trigger was received. The system must be running.
Error messages	Error pop-ups now have specific titles, such as Snapshot failure, and plain descriptions instead of endpoint paths and numeric codes.
File version number display	The log now shows the GoPxL version that an uploaded support or replay file was captured with.
Connection status	If a sensor cannot be connected because it is in a running state, a hover-message communicates this.

Multiple exposure sliders	Each exposure value in multiple exposure mode now has a slider, like single and dynamic exposure.
View options for profile data	Top-down and perspective views are disabled when the displayed data has no Y information, such as profiles.
Job actions	In the Jobs page, multi-select is added to the jobs list with shift or ctrl + click, so bulk actions such as delete can be performed on multiple jobs at once through a context menu.
Job switching	Selecting Cancel on the unsaved changes prompt when switching jobs now keeps the current job selected.
Overlapping subnets	GoMax now rejects network settings where two interfaces use the same or overlapping subnets.
Last visited page	Opening the device address in a browser now goes to the last visited page. The Connect page opens if there is no saved page.
File names	The word "SOFTWARE" was removed from the distributed file names
Tool type on hover	Hovering over a tool icon or name now shows the tool type, also after the tool is renamed.
Active area	Added a banner in the Visualizer during active area editing. The banner provides a clear visual cue for switching between scan modes and includes controls to apply or discard changes directly, without the need to navigate separate panels.
System Settings dialog	Added a System Settings dialog under Manage > Settings for URL parameters. It lists them by category with descriptions and defaults, builds the URL, and can apply, copy or reset it.
Exported file names	Exported support, backup, replay and audit log files now have descriptive default names with date, time, model and serial number.
Histogram window	The histogram window is now draggable and opens in a position that covers less of the Visualizer.
File size limits	Uploading a support file or recording larger than the device's limit now shows a clear error message.
Data Storage profile input	Data Storage now supports uniform profile and raw profile input sources, allowing users to export profile scan data and preview images (PNG, JPG, TIFF) to local or remote storage.
Persistent audit logs	Audit logs can be saved to flash or disk so they survive a power cycle, and exported from the Audit Log panel.
Tool locking with tool groups	Tool locking now works with tool groups. Users can lock an entire group and all its child tools with a single action, and locked groups prevent tools from being added or removed.
Color threshold tuning in image tools	Image tools such as Image Blob, Image Circle, and Image Line now make it easier to tune the Threshold parameter for color images, including a grayscale view of the converted image.
Emulator file cleanup	GoPxL Manager now removes leftover GoPxL Emulator instance files at startup, so they no longer fill the disk.
GoPxL Manager exit	GoPxL Manager now closes GoPxL Discovery and the GoHMI Designer launcher on exit, if they were opened from its Tools menu during that session.

Licensed image tools in the Emulator	Licensed image tools now work in the GoPxL Emulator in replay mode.
Recording labels	The Record button tooltip and frame counter now show that data is recorded to the device buffer.
Load job into live job	Added the REST command /jobs/commands/loadLive, which loads a job directly into the live job without saving it to flash.
Emulator loading message	The GoPxL Emulator splash screen now shows when replay data is loading, with a note that it may take a long time for support files over 1 GB.
2D image display rate	On GoMax and 2D Smart Cameras, images sent to the data viewer are now displayed at a higher frame rate for large 2D images.
Save view in URL	Added a button to save the current data viewer view in the URL, so a GoHMI display reopens with the same view.
Saved views	Added saved views to the data viewer for all view modes. A saved view keeps the camera position and zoom, view mode, displayed outputs and colour mode.
Duplicate tool naming	Duplicated tools and tool groups now get numbered names instead of repeated "- Copy" suffixes.
Large images in the data viewer	The data viewer can now show images wider or taller than 16384 pixels, which were shown as black before. Very large images may still not display on some graphics hardware.
3D TIFF	Data Storage and the Replay editor can now export surface data as uncompressed 16-bit single-channel TIFF files, preserving full height resolution for use in external tools.
Audit log change details	Audit log entries now show the changed setting and its new value instead of a payload size.
Replay Editor	Redesigned as a full-window app with in-memory frame management, faster thumbnail grid navigation, keyboard shortcuts, and improved upload and export of replay frames in .gprec, .sur, .srf, .pcd, and image formats.
GoPxL Manager file association	GoPxL Manager now shows a non-blocking notice when the .gpsup file association is out of date, and the Settings toggle shows the correct state.
Data Storage	Data Storage can now export uniform surface and surface intensity data as an uncompressed TIFF file via the export to 3rd party format option.
Replay Utilities	The ReplayUtils command line tool can now convert CSV files to a .gprec format. Note the CSV format must match the CSV output format when converting to CSV
CodeMeter update	The Wibu CodeMeter runtime used for licensing is updated to 9.10 to address Wibu security advisories WIBU-103081 and WIBU-103401.
Date Viewer	The Visualizer now groups overlapping prediction labels in tools such as Object Detector and Image OCR, showing the label count with the individual label values on hover.
User interface log download	The User interface log download button is now next to the support file download.
Tool menu Delete	Delete is now separate from Duplicate in the tool menu, to prevent accidental deletes.
Protocols Help pane	Added a help panel at the bottom of every Communicate page (Industrial, Gocator, HMI, Digital Output, Storage), so protocol user guides can be read in-app without the need to open the full manual.

EtherNet/IP System Status block	EtherNet/IP scan output now starts with a System Status block by default.
GoHMI label visibility	The copied GoHMI link now includes the showLabels parameter, so measurement labels can be shown or hidden separately from includeGraphics.

Tools

Collapsed Tool Diagram	When the Tool Diagram panel is collapsed, a column of tool icons with their status badges stays visible, so tools can be selected without opening the panel.
G7100 tool color support	Added support in Surface tools to allow operation on color intensity data from G7100 sensors.
Script tool and Python GDK	The Python version has been updated to 3.12
Multi-sensor profile inputs	Profile Bounding Box, Profile Intersect, Profile Line, Profile Position and Profile Dimension now accept an array of any number of profiles and combine them for processing. Previously only two (top and bottom) were supported.
Surface Position and Dimension options	Surface Position adds a Plane input and Step Height output (distance from the extracted point to the plane). Surface Dimension adds Plane and Percentile feature types.
Surface Blob and Surface Flatness performance	Surface Blob and Surface Flatness now use multi-threaded processing for faster execution.
Uniform surface arrays in 6DOF tools	Surface Align Wide, Surface Merge Wide, Surface Align Ring and Surface Mesh now accept an array of uniform surfaces.
Surface Align/Merge Wide sensor count	For Surface Align Wide and Surface Merge Wide, the maximum number of sensors is increased to 16.
Profile Groove multiple grooves	Profile Groove can now measure multiple grooves in one tool instance using the new Groove Count parameter. Measurement outputs become arrays when more than one groove is configured.
Surface Transform Optimized algorithm	New Optimized algorithm option resolves cases where the previous algorithm removed needed data. It also merges an array of surfaces from aligned multi-sensor systems into a single output.
Decisions in Measurement Formula	Measurement Formula can now use measurement decisions (D1, D2, …; Pass = 1, Fail = 0) in formulas, in addition to measurement values. If any measurement used in the formula is invalid, the result is invalid.
Mesh Template Matching templates	Mesh Template Matching now has upload, download and delete buttons for templates. A new template with a name that already exists gets a number added, so the old one is kept.
String output text	String output text can now be displayed in the visualizer.
Surface Track	Added an option to specify track tolerances throughmin and max values rather than nominal and tolerance.
Surface Anomaly Detector	Importing a multi-layer GPREC recording from a G4021 replay buffer imported both layers into the project instead of a single layer.
Image OCR rotated regions	Image OCR now supports rotated regions via a Z Angle parameter, with faster processing. New Text Angle Enabled and Text Angle parameters set the expected text orientation.

Image OCR	The Image OCR tool now outputs a confidence score and bounding box (width, height, angle, and center position) for each detected line of text.
Image Transform	The Image Transform tool now offers an output size option that expands the output canvas to fit the full rotated image, so rotated content is no longer cropped.
Image & Surface Inference	The Image and Surface Inference tools now support tiling-based inference for BYOM segmentation and object detection models, splitting images into tiles with adjustable overlap and merging the tile outputs into a single result.
Image Inference	The Image Inference tool now provides Major Axis and Minor Axis measurement outputs for each detected object or segment when using detection and segmentation models.

SDK

C++ SDK Resource API	Added a Resource API to the C++ SDK. It gives typed, path-based access to sensor settings with automatic caching, batch updates, tool management and command calls, plus optional schema validation and change notifications.
SDK Resource API	New set of 21 C++ samples built on the Resource API (V2 samples), replacing the 5 Resource API samples from 1.5; the original samples are still included
.NET SDK class reference	Added a class reference for the GoPxL .NET SDK, in line with the C++ SDK.
SDK sample scan engine IDs	SDK samples now include the scan engine IDs for G75xx and G71xx.
Discover sample	The C++ and .NET Discover samples now skip remote GoPxL instances and list each remote sensor under the instance it belongs to.
SDK DLL version info	The C++ and .NET SDK DLLs now show version information in Windows file properties.
.NET SDK memory use	Reduced memory allocation in the .NET SDK when receiving large surface and image data.

Bug Fixes

G2 buddy with large X offset	A G2 buddy sensor with a large X offset did not produce correct resampled profile data with 3DOF alignment.
Replay download over 2 GB	A replay download of more than 2 GB could fail in the browser.
Sensor restart with many tools	A sensor could restart without a crash log when many tools were duplicated while it ran.
GoMax memory leak	On GoMax with Pro Tools, memory use grew steadily during long runs until the GoMax ran out of memory and crashed after several days.

G5 external trigger drops	With external triggers in Surface mode, dropped triggers were not shown as missing lines, so the surface length was distorted.
Replay Editor in the GoPxL Emulator	The Replay Editor in the GoPxL Emulator could not open small replay files and reported insufficient memory.
Regions reset on job upgrade	Loading 1.3 jobs/support files into 1.4/1.5 reset all Surface Plane and Surface Mask tool regions, blocking upgrades for jobs with hundreds of regions.
GoPxL Manager crash for standard users	When logged in as a Windows standard user, GoPxL Manager crashed when GoPxL Discovery or GoHMI Designer was opened from its Tools menu.
Data Storage	Resolution and offset values added to saved file names were labeled in um but the values were in mm.
Continuity spot selection	With Continuity spot selection, X coordinates could be wrong, which gave incorrect width measurements.
Accelerated sensor reconnect	After an accelerated sensor was disconnected and reconnected, scanner drops could occur after a few hundred scans.
GoPxL Manager memory use	GoPxL Manager memory use could grow over time.
Crash on replay restore	GoPxL on PC could crash when a .gprec file was restored.
Part Detection crash	A crash could occur when Part Detection was enabled and specific scan data was processed.
Crash with GoHMI enabled	Under some circumstances, a crash could occur when making job modifications while GoHMI was enabled.
G6 intensity	G6 sensors reported intensity values that were too high.
G6 Image mode with a reduced X FOV	With a reduced X FOV on a G6 sensor in Image mode, false spots could show on the right side of the image.
Part Detection digital output after toggling Invert	A digital output set to the Part Detection event could stay in the wrong state after Invert output signal was toggled, until the next part was detected.
Pixel Format Acquisition	Alvium color models did not display the full image correctly and limit their frame rate when using RGB8 or BGR8 pixel format.
GoPxL Manager	An error could be shown indicating that an instance was unable to start even though the instance was running.
Deleting offline camera on PC	Deleting a 2D camera that was offline crashed the GoPxL on PC instance (GoMax unaffected).
Tools	Tools were disconnected from their input sources when switching between replay and live mode.
X or Y offset too large	An error message appeared "X or Y offset is too large. Maximum Y difference..." even when the offset was less than the stated limit.
Localization	The Date and Time block in Manage > Settings did not appear when the UI locale was set to a non-English language such as Japanese or Chinese.
Snapshot resets Alvium trigger	Pressing Snapshot on an Alvium camera silently changed the trigger source from Software to Time while the UI still showed Software, causing unintended continuous scanning.

GDP source filter	The filter in the GDP output source list did not work with Chinese characters.
ASCII output formats	ASCII output formats with a width and precision, such as %9.3f, returned a formatting error.
ASCII loadjob timeout	When trying to load a large job over the ASCII protocol, a timeout error was reported if the job load took more than 3 seconds.

Tools

Pattern Editor uploads	A template or track upload in the Pattern Editor could clear the replay data.
Image Anomaly Detector	A blocking problem could be reported by Image Anomaly Detector after model training completed.
Scripts ignore decision output	String outputs created in scripts ignored the measurement decision, so the output did not reflect pass/fail (Green/Red) state.
Feature Dimension	When a Feature Dimension tool processed arrayed inputs and the output for one element could not be calculated (e.g. Width or Length to a line parallel to the X or Y axis), the tool raised an error and the tools after it did not run.
Image Matrix	The Image Matrix tool limited the maximum number of instances to 10.
Surface Cylinder	The Surface Cylinder tool did not use the Z range of the tool region.
Surface Filter Sobel Magnitude	With larger kernel sizes, the Sobel Magnitude filter saturated most of the surface at its maximum value, making the result unusable. A Scale parameter has been added to control the output range.
Surface Arithmetic display	The Uniform Surface output of the Surface Arithmetic tool could not be scaled correctly in the 3D data viewer.
Surface Edge profile outputs	The profile outputs of the Surface Edge tool used the input surface's bounding box, so the data viewer grid for these outputs was incorrectly sized.
Surface Stitch lock	In the Surface Stitch tool with Reset on Start enabled, the Lock operation cleared the stitched surface from the data viewer instead of locking it.
Data Export 16-bit depth map noise	When exporting a surface as a 16-bit PNG or TIFF with Keep Aspect Ratio enabled, noise appeared along the edges between valid and missing data.
Feature Line Create center line	In Feature Line Create, "Center line from two lines" placed the output line in the wrong position and reported incorrect X/Y/Z values when the two input lines were not exactly coplanar. The line angle was correct.
Surface Blob	When using a plane as reference feature in Surface Blob, and the plane input is Invalid, the tool used the XY plane as the reference rather than outputting Invalid for its measurements.

Utilities

ReplayUtils ASCII PCD	ReplayUtils could not convert point cloud files in ASCII PCD format; only binary PCD was supported.
Common Vision Blox	Common Vision Blox was not able to find the GenTL driver

GoAIK reconnection	When a sensor lost power or was power-cycled, the GoAIK connection to Cognex VisionPro was not restored automatically, and VisionPro had to be restarted.
GenICam GenTL driver with G6	The GenICam GenTL driver did not recognize G6 sensors, so GenICam applications such as Halcon could not acquire data from them.
GDP output with raw surface data	A G6 or G2 sensor could lose its connection when it scanned raw surface data at a high frame rate with GDP output.
SDK CPU use after power loss	An SDK app that received data asynchronously used high CPU after the sensor lost power.

Known Issues

General

G2650 performance	Single-sensor full-X surface performance is reduced from ~3000 to ~2500–2600
Higher CPU with pinned measurements	Pinning measurement results in the UI leads to increased CPU usage and extra processing delay
Accelerated G3 with old NVIDIA drivers	Old NVIDIA drivers can result in accelerated G3 sensors producing a flat surface output with no errors logged. Upgrade to the latest driver version to ensure correct G3 surface generation.
Duplicating Tool Groups	Duplicated tool groups do not preserve internal tool references correctly and could require manual relinking in some workflows.
Alvium cameras and GoMax	If an Alvium camera is configured with an IP address that is not in the GoMax subnet, the camera is not listed or can not be added. Workaround: Update the IP to persistent with matching subnet to GoMax.
SFP+ adapters not supported on Smart Camera	Smart Cameras do not establish a network link through SFP+-to-Ethernet media adapters. Connect through standard 1GbE ports.
CPU spike on monitoring pages	Opening the Performance or Measurements page can pin CPU to 100% when certain script tools are in the job. Refresh the browser to recover.
Upgrade failure with full storage	Upgrading a Smart Camera with near-capacity user storage can fail partway, leaving a partial upgrade with the AI tool missing. Free up user storage before upgrading.
Image Barcode	There may be a chance that Image Barcode tool will crash when reading a very noisy image.
GoMax recording download	When downloading a recording greater than 700MB in size from GoMax to some PCs, a second large file is also downloaded.

EtherNet/IP	With EtherNet/IP, simultaneous implicit and explicit messages can cause faults. If multiple sequential implicit messages are corrupted a temporary disconnect can be caused.
Data Export false success	The Data Export tool reports success (status 1) even when saving fails due to non-ASCII characters in the target path, silently losing exports. Use ASCII-only paths.
3D + 2D AI	Using intensity image produced by surface image converter tool for Image anomaly detector and classifier will result in a No valid frames present issue
GoAIK driver	A timeout error is shown in VisionPro if attempting to run job shortly after GoPxL is available. And if an IP address is changed in GoPxLAIK.xml, the device name may not show correctly in VisionPro.
Gocator 3210 upgrade	The free storage on a Gocator 3210 sensor may limit its ability to be upgraded to a different firmware version. 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)
Interleaved Multiple Exposure	On G2/G4/G5 sensors, enabling Interleaved exposure mode may result in dropped triggers, leading to missed data.
Unmerged multiple exposures	With Uniform spacing disabled, multiple exposures, enabling "Unmerged multiple exposure", and switching from Profile to Surface mode, data processing errors occur.
GoMax upgrade with Anomaly Detector	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.
Job loading/switching	Loading or switching jobs may be slower than expected with small job files with less than 10 tools.
PROFINET disable	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

Image Object Detector bounding box limit	Max number of bounding boxes is limited to 16 per image.

Tool performance	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.
Default region size	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.
Surface Stitch	Stitching multiple large surfaces may cause GoPxL to become unresponsive due to excessive memory.
Script tool	Drawing APIs may require an additional Surface input or an explicitly specified output index (e.g., output = 0) to ensure points and labels render correctly
Data storage	Due to memory constraints, G3520 with data storage enabled on device may become unresponsive. Workaround: Accelerate sensor on PC with GoPxL.
Feature Create tools	When duplicating Feature Create or Surface Feature Mask tools, an error stating "not a compatible type" may appear. To avoid this, first switch to a "constant" output type, then back to the desired output type.

Utilities

Track editor with multiple GoPxL instances	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

Default HMI App	A factory restore is required to update the default HMI app.
Updating HMI App on PC	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.
HMI Designer	GoHMI projects that were opened, upgraded, or saved in the 1.4 or 1.5 Designer may no longer open, import, or upload correctly in older environments. For systems that must remain older versions such as 1.3, keep a separate copy of the project and maintain it in the matching older Designer version. If a project was already updated in 1.4 or 1.5, rework in the older version may be required to restore compatibility.

SDK and REST API Protocols

REST API version 8.1.0
GDP Protocol x.x.x

SDK

Resource API samples	New set of 21 C++ samples built on the Resource API (V2 samples), replacing the 5 Resource API samples from 1.5; the original samples are still included
.NET class reference	Class reference for the .NET SDK, built from XML doc comments with Doxygen and included in the SDK package
.NET memory use	Reduced memory allocation when receiving large surface and image data
DLL version information	C++ and .NET SDK DLLs now show version information in Windows file properties
Scan engine IDs in samples	Sample comments now name the scan engine IDs for G75xx (LMIStereoVision) and G71xx (LMIStereoVisionCompact)
Exception handling	Discovery, sensor listing and GoResource no longer use exceptions for normal checks
.NET ReceiveAsync sample	Fixed a build error in the .NET ReceiveAsync sample after dotnet restore

REST API

/jobs/commands/loadLive	(Added) Command to load a job directly into the live job without saving it to flash
/tools/:tool/commands/setLockState	(Removed) The single-tool lock command has been removed; use /tools/commands/setLockState for one or more tools
/environ/ipConfig	(Updated) Static IPv4 addresses starting with 127 (loopback) or 255 (broadcast) are now rejected
Action traits	(Updated) The binaryUpload and binaryDownload action traits have been replaced by a single binary trait

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.

G2 Tracking	The G2 tracking window feature for dynamic active area position is not available.
GoMax Independent acceleration	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.
More user interface translations	GoPxL is only available with English, Chinese and Japanese user interface currently. More translations are planned for future releases.
Analog, and Serial output	Analog, and Serial output are not supported.
Technician login	Gocator 6.x Technician login with restricted UI is replaced by GoHMI functionality allowing creating a reduced access interface.
Surface Section and Polygon region	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.
G2342, G2880, G200	These models are not currently supported in GoPxL