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Release Notes
DNNF023
Software wenglor uniVision 3



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Available as PDF file only
Version 1.29
www.wenglor.com

1 Compatibility

The following uniVision 3 products each have their own version number:

- Software wenglor uniVision 3
- uniVision job
- Firmware B60
- Firmware MVC

The version number of software and firmware products consists of three digits (e.g. Software uniVision 3.0.0):

- Major release: The first digit is changed (no job compatibility).
- Feature release: The second digit is changed (job must be converted via job converter).
- Bugfix release: The third digit is changed (jobs are compatible).

The following generally applies with regard to the compatibility of uniVision job files:

- For uniVision jobs, there are only two digits in the version number, as the job format does not change for bugfixes (third digit changed).
- Jobs with a specific two-digit version number can only be opened on devices with a suitable version of the firmware or set up using a suitable version of the software.
- After a firmware update with new features (second digit changed) on a device (e.g. Smart Camera), the corresponding software version must be installed and existing uniVision jobs must be converted. Details can be found in the operating instructions for the wenglor uniVision 3 software.



NOTICE

1. Different feature versions of the software wenglor uniVision 3 (different second digit) can be installed in parallel on Windows PCs.
2. The software wenglor uniVision 3 can be installed in parallel to uniVision 2 software versions.

The following table shows which versions are compatible with each other:

Software wenglor uniVision 3	uniVision job version	Firmware versions
3.0.x	3.0	Firmware B60 1.0.x
3.1.x	3.1	Firmware B60 1.1.x
3.2.x	3.2	Firmware B60 1.2.x
3.3.x	3.3	Firmware B60 1.3.x Firmware MVC 1.1.x
3.4.x	3.4	Firmware B60 1.4.x Firmware MVC 1.1.x
3.5.x	3.5	Firmware B60 1.5.x Firmware MVC 1.2.x
3.6.x	3.6	Firmware B60 1.6.x Firmware MVC 1.3.x
3.7.x	3.7	Firmware B60 1.7.x Firmware MVC 1.4.x **NOTE:** The hardware version F (and later versions) for the Smart Camera B60 with C mount and the hardware version D (and later versions) for the Smart Camera B60 with auto-focus require minimum the firmware version 1.7.0. Furthermore, all AI variants of the Smart Camera B60 (B60Axxx) also require minimum firmware version 1.7.0 (independent of the hardware version).
3.8.x	3.8	Firmware B60 1.8.x Firmware MVC 1.5.x

2 Change Index Software wenglor uniVision 3

Version	Release Date	Compatibility
3.8.0	13.08.2026	• uniVision job: 3.8 • Firmware B60: 1.8.0 • Firmware MVC: 1.5.0

New features:

- Module Image Calibration: Support of further calibration sizes (375 x 550 mm and 550 x 800 mm).
- Module Image ONNX: Support of rotated object detections and option to "Create output regions" at rotated and unrotated object detections.
- Module Image ONNX and AI: New parameter "Optimize Job Loading Times" for faster job changes with AI and ONNX models (only supported by the Smart Camera B60).
- Module Image AI: New parameters at "Upload to weHub" in case of loaded AI models.
- Module Image Deep OCR:
  - Option to load custom detection and recognition models.
  - Support "Mode" "Detect and Read" at the Smart Camera B60 and new parameter "Detection Inference" at the Smart Camera B60.
  - Smaller minimum value for parameter "Recognition Image Width".
  - New parameter "Model Type" in Enhanced Parameters (not supported at Smart Camera B60).
- Module Profile Sorting: New sorting option "X Ascending".
- Module Profile Region: New result "Message" to display self-tapping regions (at area calculation).
- Module Profile Locator: Support of entity type "spline" at dxf import.
- Module Profile Volume: New option "Contour" and new parameter "Area Closure" at teaching virtual bottoms.
- Module Profile Seam Tracking: New parameters "Forbidden Area Width [%]" and "Min Angle Edge".
- Device FTP: New parameters "Folder Name" and "Prefix Date/Time".
- Device Volatile Ring Buffer: Option to store also basic data types in volatile ring buffer.

Bugfixes and performance improvements:

- Module Image AI: Minor fixes (e.g. behavior if output score is out of range)
- Module Profile Seam Tracking: Several bugfixes and optimizations when finding the seam (especially at no sharp edges).
- Module Profile Locator: Fixes at import of DXF files.
- Device FTP: Saving files with space characters in the filename works now.
- Device Volatile Ring Buffer: Linking color image works now.
- Webbased visualization: Displaying colored output images of Module Image Manipulation works now.

Version	Release Date	Compatibility
3.7.3	29.06.2026	• uniVision job: 3.7 • Firmware B60: 1.7.3 • Firmware MVC: 1.4.3

Bugfix and performance improvements:

- Device TCP: Slow TCP connections especially when connecting no longer block the Processing Instance (to avoid data overflow).
- Module Image Calibration: Linear calibration result is now kept when loading the job.
- Module Image Measure: Intersection result is no longer in error state when calibration is linked as input of the module.
- Module Profile Seam Tracking: Linking input point for type "Input Point" works now correct.

Version	Release Date	Compatibility
3.7.2	19.05.2026	• uniVision job: 3.7 • Firmware B60: 1.7.2 • Firmware MVC: 1.4.2

Bugfix and performance improvements:

- Device Volatile Ring Buffer: Saving runs in a folder different to the default “input” folder works now.
- Starting “Simulation Mode (Pointloud)” creates now a bigger default field of view (to see profiles created from 2D/3D Profile Sensors with big measuring ranges).
- Module Image ONNX and Module Image AI: Running an ONNX or AI model created with a previous uniVision version (e.g. uniVision 3.6) takes now similar process times (no performance regression anymore).

NOTE: Still it is recommended to train the model again using the target software “uniVision 3.7” in AI lab or the latest Jupyter Notebook version for best performance and to decrease the RAM usage allowing more complex job configurations (especially important at Smart Camera B60).

Version	Release Date	Compatibility
3.7.1	06.05.2026	• uniVision job: 3.7 • Firmware B60: 1.7.1 • Firmware MVC: 1.4.1

Bugfix and performance improvements:

- Module Image Deep OCR: Recognition model can now read dots again.
- Module Profile Volume: Improved area calculation in case of multiple objects.
- Module Profile Seam Tracking: Linking “History Reset” to another job result works now.
- Module Image Locator: Editing the parameter “Clutter Threshold [%]” no longer hides the parameter afterwards.
- Module Image Measure: The tools “Find Arc” and “Find Circle” work now correct in case of linked calibration.
- Webbased visualization: Changing e.g. font, color or text size of “Edit Parameter” is now also applied to the value itself (not only to the text label).

Version	Release Date	Compatibility
3.7.0	03.03.2026	• uniVision job: 3.7 • Firmware B60: 1.7.0 • Firmware MVC: 1.4.0

New features:

- Module Profile Region: New feature “Length Calculation”
- Module Profile Filter: New filter type “Concave Hull” for 360° contours.
- Module Profile Seam Tracking: Minor adjustments of defaults
- New Module Profile Volume to calculate the volume of an object.
- Module Image Locator:
  - Option to import DXF file as shape model in case of linked calibration input
  - Option to link “Teach Contour”
  - Support of clutter region
- Module Image Pattern Match: Support of clutter region
- Module Image Blob: New visualization tool for easier setup of minimum and maximum values of features.
- Update of Module Image Code 1D, Code 2D, Pattern Match, Deep OCR and HALCON Script to HALCON 24.11.
- Module Image Deep OCR, ONNX and AI: Return now valid result if the region is partially outside of the image (Message contains warning info).
- Module Image Deep OCR:
  - Increase maximum number of regions to ten at mode “Read Only”
  - Support of “Replacement List”
  - New parameters “Min Character Score [%]” and “Substitution Value”
  - New parameter “Detection Network Type” at Mode “Detect and Read”
- Module Image ONNX: Support of Object Detection models and calibration input
- Module Image AI: Support of calibration input
- Module Spreadsheet: New formulas “VALUE”, “REPLACE”, “REPT”, “ABS”, “LEN”, “ROUND”, “ROUNDUP” and “ROUNDDOWN”
- New Module If Else Condition
- New Device Volatile Ring Buffer to store images or profiles in a volatile ring buffer and new teachplus recording option to record teachplus with data of Device Volatile Ring Buffer.

Bugfix and performance improvements:

- Module Spreadsheet: REGEX formula works now correct with big numbers (maximum 14 digits)
- Module Profile Seam Tracking: Optimiziations at seam detection
- Module Image Blob: Fix for the feature “Distance Between Blobs”
- Module Image AI/ONNX: Links to other modules are no longer lost after job loading if the link model functionality is used in several AI/ONNX modules.

NOTE: In case of updating from an older uniVision version to uniVision 3.7.0 or higher, it is recommended to re-export or re-train ONNX or AI models for best performance (for Module Image ONNX and Module Image AI).

Version	Release Date	Compatibility
3.6.3	26.01.2026	• uniVision job: 3.6 • Firmware B60: 1.6.3 • Firmware MVC: 1.3.3

Bugfix and performance improvements:

- Opening offline uniVision jobs that are located in file paths with special folder names (including e.g. #1234a5678) works now.
- Saving the color image via Device FTP that is linked to the output image of Module Image Manipulation works now.
- Fix for Module Image Coordinate System when changing the “Find Method” e.g. to “Find Line” at monochrome images.

Version	Release Date	Compatibility
3.6.2	08.12.2025	• uniVision job: 3.6 • Firmware B60: 1.6.2 • Firmware MVC: 1.3.2

Bugfix and performance improvements:

- Module Image Deep OCR: Visibility of text overlay in image scene at small images or regions.
- Module Image/Profile Coordinate System: At Construction Method “1 Pt. Origin, Angle” the value of the parameter “Angle” is now kept in case of saving the job (reset to 0 is fixed).
- Module Image Locator and Module Image Pattern Match: Computation of Coordinate System Distorted is now correct in case of linked undistorted image as input image and linked calibration.
- Module Profile Locator: Orientation of imported DXF files works now correct (especially if using VisionApp 360 as input device).
- Minor translation bugs are fixed.
- Webbased visualization: Editing parameters works now correct for parameters of datatype integer and real.

Version	Release Date	Compatibility
3.6.1	15.10.2025	• uniVision job: 3.6 • Firmware B60: 1.6.1 • Firmware MVC: 1.3.1

Bugfix and performance improvements:

- Module Image ONNX: Fixed heatmap for quantized models in case of Multi Label Classification when editing the job in offline mode.
- Module Image Deep OCR: In offline mode now only the settings that are possible for the input device type are available.
- Module Profile Locator: Support additionally the line entity when importing DXF files.
- The software wenglor uniVision 3 on the Machine Vision Controller MVC no longer crashes if loading files within modules (e.g. calibration or model files).

Version	Release Date	Compatibility
3.6.0	21.08.2025	• uniVision job: 3.6 • Firmware B60: 1.6.0 • Firmware MVC: 1.3.0

New features:

- Diskloader Device in Simulation Mode: Editing the “Source Path” opens now the file dialogue to select the file location in an easier way.
- Module Image Calibration: Calculate additionally the undistorted coordinate system aligned to the x axis of the calibration plate (only available if the undistorted image is computed).
- Module Profile Locator: Option to import a DXF file at the shape model.
- Module Image and Profile Coordinate System: New construction method “1 Pt. Origin, Angle”.
- New “Module Image AI” to run (execute) the model within the uniVision job, to directly upload images to AI Lab and to directly download the model via the weHub client software.
- Module Image ONNX: Support of multi label classification models.
- Module Image Deep OCR: Provide additional result “Character Scores” for each word (within “Word List”).
- Module Image Deep OCR: Increase the maximum value of “Recognition Image Width” from 160 to 290 if using the module on the Smart Camera B60 (same maximum value like on the Machine Vision Controller MVC).
- Module Image Coordinate System: Increased maximum values (and partially updated defaults) for the parameters “Edge Width”, “Threshold Outlier Distance”, “Search Ray Length” and “Search Ray Interval”.
- Module Image Measure: Increased maximum values (and partially updated defaults) for the parameters “Edge Width”, “Threshold Outlier Distance”, “Search Ray Length” and “Search Ray Interval”.
- Module Image Comparison: Increased maximum value of the parameter “Edge Broadening”.
- Module Profile Seam Tracking: Updated defaults for the “Search Box” and the parameters “Straight Line Left/Right” and “Gap Left/Right Max”.
- Module Profile Seam Tracking: New option to filter the “Tracking Points” at the sub-module “View”.
- Webbased visualization: Edit parameters (for datatypes bool, dint, real and string) and button “Save job”.

Bugfix and performance improvements:

- Module Image Manipulation: Rotating by 90° or 270° allows now to keep the full image resolution.
- Module Image Deep OCR: Mode “Detect and Read” works now correct in case of a linked region that is tracked by a coordinate system.
- Module Image Measure: Caliper tool works now correct in case of a linked coordinate system as input of the module.
- Several image and profile based modules: Fixed issues in case of linking coordinate systems and input regions in a chain.
- Several fixes at download of jobs for simulation mode.
- Webbased visualization: Linked text next to overlays now displays correctly as a strings.

Version	Release Date	Compatibility
3.5.2	11.08.2025	• uniVision job: 3.5 • Firmware B60: 1.5.2 • Firmware MVC: 1.2.2

Bugfix and performance improvements:

Fixed template “Measure diameter (360 degree)” in order to open it also online on an MVC with VisionApp 360.

Version	Release Date	Compatibility
3.5.1	09.07.2025	• uniVision job: 3.5 • Firmware B60: 1.5.1 • Firmware MVC: 1.2.1

Bugfix and performance improvements:

- Module Image Pattern Match: Avoid crashes of the Processing Instance after MVC reboots if using Module Image Pattern Match in several Processing Instances (fixed parallel initialization issue).
- Module Image Deep OCR: Hide parameter “Model Type” (for B60 always the faster quantized model is used).
- Module Image Deep OCR: Editing the parameter “Recognition Image Width” is now supported for the quantized model at B60.
- Module Profile Sorting: Improvements in sorting algorithms and new module state 1013 (sorting failed).
- Activating the license for Module Image AI is supported again.

Version	Release Date	Compatibility
3.5.0	26.05.2025	• uniVision job: 3.5 • Firmware B60: 1.5.0 • Firmware MVC: 1.2.0

New features:

- Input Devices: Support of buttons (e.g. for Acquisition Start/Stop)
- Module Image Blob:
  - Optionally link input coordinate system and input region
  - New parameter “Remove Blobs Touching Borders”
  - New feature “Max Radial Distance”
  - New feature “Distance Between Blobs”
  - New feature “Minimum Enclosing Circle”
  - New feature “Phi (Z-Rotatioin)”
  - Option to add “Center of Gravity Offset”
  - Calculate “Distance to Origin”
- Module Image Deep OCR:
  - Support of option “Quantized” at “Model Type” to run the Recognition model on the NPU of the Smart Camera B60 (for better performance)
  - Support of further options at Recognition Alphabet (with customization)
- Module Profile Seam Tracking: New option “Input Point” at parameter “Type”
- Module Image and Profile Measure: Support to intersect points, arcs and circles
- Module Image Measure:
  - Support of caliper tool
  - Support of “Calculate Max Deviations” at find line, arc and circle tools
- New Module Profile Sorting to sort united profiles of the software VisionApp 360
- Device Industrial Ethernet: Support of parameter “Min Delay Next Run”
- Device FTP: Store second image and new parameter “Local Storing Offline”
- uniVision GUI: Option to “Store Data” (record camera data)
- uniVision GUI: Clear separation between online/teachplus mode and simulation mode
- uniVision GUI: Option to “Export Job for Simulation Mode”

Bugfix and performance improvements (e.g. fixed spelling and translation bugs)

Version	Release Date	Compatibility
3.4.2	29.04.2025	• uniVision job: 3.4 • Firmware B60: 1.4.2 • Firmware MVC: 1.1.2

Minor bugfix and performance improvements

Version	Release Date	Compatibility
3.4.1	21.03.2025	• uniVision job: 3.4 • Firmware B60: 1.4.1 • Firmware MVC: 1.1.1

Bugfix and performance improvements:

- uniVision GUI on MVC: Using Module Image Pattern Match, Module HALCON Script and Module Image ONNX works now if using offline and online jobs after each other.
- Adding color images to Image Container Viewer works now at offline uniVision jobs.

Version	Release Date	Compatibility
3.4.0	17.02.2025	• uniVision job: 3.4 • Firmware B60: 1.4.0 • Firmware MVC: 1.1.0

New features:

- Open several instances of the uniVision GUI offline in parallel on Windows PCs.
- Updated templates and new templates (template “HALCON script shape model clutter” with updated HALCON script and new template “Run ONNX model”)
- Input Cameras: Further camera properties are shown in normal view (not extended view) of the software wenglor uniVision 3 (e.g. sub module Digital IO Control)
- New Module Image Manipulation for cropping, rotating and resizing the image.
- New Module Image ONNX to load and run an ONNX model.
- Module Image Deep OCR: Link multiple input regions at Mode “Read Only” and adjustable “Recognition Image Width”
- Module HALCON Script: Shows now extended error message from HALCON.
- Device FTP: New option Local Folder “input” for storing data.
- Device Robot Vision: Defaults for Result Max Count and Shape Model (in Result List) are updated to more user-friendly settings.

Bugfix and performance improvements:

- Module Spreadsheet: Prevent crashes if entering wrong format at formula TOFSPLIT.
- Module Spreadsheet: REGEX formula works now for inputs that are result of previous calculation (e.g. sum).
- Module HALCON Script: Procedure init is now called after a new HALCON script is loaded.
- Module Image Calibration: Improved calculation of perspective transformed image

Version	Release Date	Compatibility
3.3.3	16.12.2024	• uniVision job: 3.3 • Firmware B60: 1.3.3 • Firmware MVC: 1.0.3

Bugfix and performance improvements:

- Module Spreadsheet: Wrong formatting of REGEX formula no longer crashes the application.
- Module Image and Profile Locator: Linking teach functionality to e.g. digital input works now.

Version	Release Date	Compatibility
3.3.2	05.11.2024	• uniVision job: 3.3 • Firmware B60: 1.3.2 • Firmware MVC: 1.0.2

Bugfix and performance improvements:

- Directly switching between profile and image based jobs in teachplus mode works now without closing the job.
- Module Spreadsheet: TEXT function works now also for negative values. Make sure that the number of digits before the comma is big enough for all possible numbers that could appear.
- Module Image Calibration: The undistorted image is now calculated without cutting parts of the image.

Version	Release Date	Compatibility
3.3.1	15.10.2024	• uniVision job: 3.3 • Firmware B60: 1.3.1 • Firmware MVC: 1.0.1

Bugfix and performance improvements:

- Updated templates (robot weld seam tracking templates and template “Pick objects with generic robot”)
- Templates are now available if connected to MVC with input device using the uniVision GUI on the MVC.
- Linking undistorted image of Module Image Calibration in any image module (e.g. Module Image Locator) provides now the correct mm results (especially if linking also an input coordinate system).
- Module Image Deep OCR: Input image is now shown correct in the scene in case of activated heatmap in the normal view of the uniVision software.
- Module HALCON Script: Correct display of pointclouds (Module HALCON Script supports either images or pointclouds, but not both within the same Module HALCON Script).
- Webbased visualization: Matching results of Module Profile Locator are now displayed correctly.

Version	Release Date	Compatibility
3.3.0	06.09.2024	• uniVision job: 3.3 • Firmware B60: 1.3.0 • Firmware MVC: 1.0.0

New features:

- Support of up to 16 processing instances on Machine Vision Controller MVC with Machine Vision Cameras (BBVK and BBZK) and 2D/3D Profile Sensors of weCat3D series
- Integration of wenglor uniVision 3 software on Machine Vision Controller MVC (as part of MVC firmware).
- Support of Simulation Mode for Images and Pointclouds (at menu bar “View”) with device diskloader
- Save connection info at “Connect to Device” widget (at menu bar “View”)
- Support of input devices (device digital-camera and device wecat3d)
- Support of profile modules (Module Profile Region, Module Profile Filter, Module Profile Locator, Module Profile Coordinate System, Module Profile Measure, Module Profile Calculus, Module Profile Seam Tracking)
- Module Image Calibration: Option to calculate perspective transformed image
- Module Image Filter: Further Kernel Sizes and new parameter “Filter Iterations”
- Module Image Locator, Module Image Pattern Match, Module Image Code 1D and Module Image Code 2D: Additional optional input Coordinate System (for sorting and calulating results in reference to it).
- Support of Module Image Deep OCR
- Module HALCON Script: Support of input and output pointclouds
- Module Spreadsheet: New formulas “TOFSPLIT” and “REGEX”
- Device FTP: Option to store profiles in format DXF, PLY Binary or PLY Ascii
- Support of Device IO Unit (only for Machine Vision Controller MVC)
- Support of protocol EtherCAT at Device Industrial Ethernet (only for Machine Vision Controller MVC)
- Support of Device Robot Weld Seam Tracking (for optical seam tracking applications).
- New LIMA command to “Get Pointcloud”

Bugfix and performance improvements

Version	Release Date	Compatibility
3.2.2	25.07.2024	• uniVision job: 3.2 • Firmware B60: 1.2.2

Bugfix and performance improvements:

- Sporadic issues when opening uniVision job files offline on Windows PCs are fixed.
- Minor improvements.

Version	Release Date	Compatibility
3.2.1	08.07.2024	• uniVision job: 3.2 • Firmware B60: 1.2.1

Bugfix and performance improvements:

- Sporadic “ghost triggers” (one single evaluation without trigger signal) are prevented directly after booting.
- Very sporadic crashes of processing instance after booting are prevented.

Version	Release Date	Compatibility
3.2.0	15.05.2024	• uniVision job: 3.2 • Firmware B60: 1.2.0

New features:

- Device Smart Camera (Acquisition Control): Maximum value of Acquisition Frame Rate is increased to 60 Hz
- Device Smart Camera (Acquistion Control): Support of Trigger Delay if using Line as Trigger Source
- Device Smart Camera (Light Control): Support of light segments (if using illlumination module at Smart Camera B60 with Autofocus)
- Device Smart Camera (Optic Control): Optimized autofocus algorithm and new result “Focus Position [Focus Steps]”
- Module Image Locator: New result “Distance to Origin” and new sorting rules
- Module Image Locator and Module Image Pattern Match: New “Distorted” Results in case of undistorted image as input image and linked input calibration (Distorted results can be linked at Device Robot Vision for robot vision with UR)
- Module Image Measure: New diameter results in mm for arc and circle tools in case of linked input calibration
- Device Industrial Ethernet supports also Industrial Ethernet protocol EtherNet/IP
- Device TCP: Results of Device TCP are available if running uniVision jobs offline.
- New LIMA commands to teach position sensor, to get position sensor data and to localize.
- Webbased visualization: New button to start or stop the acquisition.

Bugfixes and performance improvements:

- Module Code 1D and 2D: Correct update of parameters depending on code type and quality grading
- Module Image Pattern Match: Teach timeout prevents that device gets unresponsive when teaching unsharp or ambiguous objects
- Module Image Measure: Tools like “Find Segments on Line” work now correct in case of linked input calibration
- Linking coordinate system and calibration as input in the same module provides now more accurate results
- Webbased visualization: Images with overlays work now again

Version	Release Date	Compatibility
3.1.3	23.04.2024	• uniVision job: 3.1 • Firmware B60: 1.1.3

Bugfix and performance improvements:

- Support of white and infrared illumination module at Smart Camera B60 with Autofocus
- Device Smart Camera → Light Control: New third mode Strobe Overdrive for maximum brightness (if using illumination module at Smart Camera B60 with Autofocus)

Version	Release Date	Compatibility
3.1.2	12.04.2024	• uniVision job: 3.1 • Firmware B60: 1.1.2

Bugfix and performance improvements:

- Module Image Pattern Match: Memory leak resulting in high RAM is solved when running job with pattern match for several hours.
- Robot Vision Server for communication with robots of UR works again.

Version	Release Date	Compatibility
3.1.1	02.02.2024	• uniVision job: 3.1 • Firmware B60: 1.1.1

Bugfix and performance improvements:

- After saving jobs offline in uniVision Simulator, selecting records in Image Container Viewer is now possible without error messages (e.g. in Module State of Device Smart Camera).
- Device Smart Camera: Chunk data linked in other modules are now set to Error state if chunk data is deactivated.
- Module Image Pattern Match: Angles are now calculated correct in case of selecting any sorting by mm option.

Version	Release Date	Compatibility
3.1.0	11.12.2023	• uniVision job: 3.1 • Firmware B60: 1.1.0

New features:

- Device Smart Camera:
  - Support of B60 with Autofocus (Optic Control)
  - Support of illumination module (white, IR and RGBW) at B60 with Autofocus (Light Control)
  - Support of test object status LEDs (red and green LEDs) on illumination module (Test Object Status Control)
  - Invert x any y of image (Image Format Control)
  - New output “Processing Active” at Digital IO Control
  - Provide meta data together with image (Frame ID, Missed Trigger Counter, Line 1-6 Status, Position X and Y of position sensor) at Chunk Data Control
- Module Image Calibration:
  - Additional Calibration Size 24x30 mm
  - Option to compute undistorted image (in order to use undistorted image as input image in other modules)
- Module Image Locator, Pattern Match, Blob, Code 1D and Code 2D: Calibration as optional input
- Module HALCON Script: Use HALCON debug server in uniVision Simulator (only in offline uni¬Vision jobs!)
- Support of Device Industrial Ethernet (for Industrial Ethernet protocol PROFINET)
- New LIMA command to get list of available jobs
- Support of several user languages (DE, EN, FR, IT, ES, PT, NL, HU, TR, ZH, RU)
- Job converter

Minor bugfixes and performance improvements.

Version	Release Date	Compatibility
3.0.3	02.02.2024	• uniVision job: 3.0 • Firmware B60: 1.0.2

Bugfixe Release:

- Connecting to Machine Vision Devices in case of multiple different uniVision GUI versions (e.g. uniVision 3.0 and 3.1) installed on the same Windows PC.
- Correct deinstallation of only relevant uniVision 3.0 GUI version

Version	Release Date	Compatibility
3.0.2	15.11.2023	• uniVision job: 3.0 • Firmware B60: 1.0.2

Update of operating instructions

Version	Release Date	Compatibility
3.0.1	19.08.2023	• uniVision job: 3.0 • Firmware B60: 1.0.1
Bugfix and performance improvements: • Module Image Measure: Linking the result “Quality of Fit [%]” e.g. of “Find Line” tool works correct now so that the result can be used as input in other modules. • Module Image Code 1D/2D: The position of codes is now displayed correctly (“nan” results of angle Phi are prevented). • Module Image Code 1D/2D: User-friendly names for e.g. “Enhanced Parameter”. • Module Statistic: Linking of “Reset Statistic” with values of datatype REAL works now correct.		

Version	Release Date	Compatibility
3.0.0	04.08.2023	• uniVision job: 3.0 • Firmware B60: 1.0.0
Initial version for the market introduction		