

**No:** 001  
**Date:** April 15, 2019

**Product:** LVS-95XX  
**Type:** Software Update

# LVS-95XX Software 4.4.1.4002 – Release Notes

**Summary:**

LVS-95XX Software, Omron Microscan’s proprietary 1D and 2D symbol verification software for use with all LVS-95XX products, provides an intuitive way to verify virtually any symbology to a wide variety of standards. LVS-95XX Software supports Windows® 7 Professional and Windows® 10 Pro.



Version 4.4.1.4002 was built on 05 May, 2019.

Feature	Description	Benefits
<p><b>Issue resolution</b></p>	<p>Specific issues related to non-US locals and GS1 codes</p>	<ul style="list-style-type: none"> <li>• Works more reliably when using non-US locale settings.</li> <li>• More accurately reports GS1 code grades</li> </ul>

Specifications and prices in this product news are as of the issue date and are subject to change without notice. Only main changes in specifications are described in this document. Please be sure to read the relevant catalogs, datasheets, product specifications, instructions, and manuals for precautions and necessary information when using products.

**Note:** It is recommended to first uninstall previous versions of LVS-95XX Software before installing version 4.4.1.4002. If installing on a new PC then the database file (.mdb) must be copied from the existing PC to the new PC LVS-95xx program folder – see the user manuals for further information.

Please see the following pages for more detail about updates and improvements. A complete software version history is available from the archive tab of LVS-95XX software.

# New Features, Updates, and Improvements

This new version of LVS-95XX Software includes several improvements and additions to functionality.

## Planned Updates:

- None

## Improvements and Fixes:

- Non-US regional settings
- GS1 QR code grading

## Known Issues

The following known caveats will be fixed in a future release of the 95XX software:

- When grading QR codes using a DPM application standard, MeanLight and MeanDark measurements are reported as Rmin and Rmax.
- Decoded Chinese characters do not render correctly in reports.
- Some graded parameters do not transfer correctly to custom reports.
- MIL STD 130 structural errors reported incorrectly for PDT and REM.
- Calibration events are recorded separately from the audit trail.

# LVS-95XX Software Version History

A summary of important software changes from January 2016 through April 2019 is shown below. A complete software version history is available from the archive tab of LVS-95XX Software.

Version	Release Date	Changes
4.4.1.3013	Not released	<ul style="list-style-type: none"> <li>• GS1 2019 General Specification updates, including new Application Identifiers.</li> <li>• Micro QR code decoding</li> <li>• QR code data reporting in 2D Analysis Screen</li> <li>• Grid Nonuniformity round-off</li> <li>• Axial Nonuniformity round-off</li> <li>• GS1 Stacked Databar error reporting</li> <li>• MySQL memory handling when selecting all reports</li> <li>• OCR tip presentation for non-English languages</li> <li>• “Type mismatch error” during calibration caused by regional settings</li> <li>• Data storage when analyzing composite codes</li> <li>• Shortcut keys to change form tabs</li> <li>• Reference Data Export using SQL</li> <li>• Grading Data Matrix with DPM TR-29158 versus ISO/IEC 15415 (95XX no longer grades a GS1 Data Matrix code unless it has the proper header)</li> <li>• Text wrapping when printing multi-sector report</li> <li>• Verification reports include Pass/Fail indication based on minimum passing score</li> <li>• External trigger (CTRL+SHIFT)</li> <li>• Aperture setting for non-GS1 Data Matrix codes</li> <li>• Quiet zone reporting in 2D analysis screen</li> <li>• Transition Ratio measurement color coding (clarifies FPD grading, helping to understand grading of Data Matrix codes created using dots)</li> <li>• 1 decimal place display of data in calibration screen</li> <li>• Both 1D and 2D parameters included in export reference report when appropriate</li> <li>• “Machine not authorized” error message</li> <li>• Missing FNC1 reporting</li> <li>• Rounding when grading Symbol Contrast for Data Matrix</li> <li>• Stitching function automatically turns on camera as appropriate</li> <li>• 2D analysis of reflectance values on Analysis Screen exclude 20Z white space analysis</li> <li>• Full and compact Aztec codes grading and reading</li> <li>• Data Matrix data structure analysis</li> <li>• MicroPDF codes read if only one of either the stop or start pattern is valid</li> </ul>

		<ul style="list-style-type: none"> <li>• Xdim and Label Height warning flag configurable for all application standards</li> <li>• Ability to delete an old report on the Archive screen restricted to users who have “Allow change archive file” permission</li> <li>• Software installation guide and Readme.txt added to root of LVS-95XX software download</li> <li>• Auto-logoff inhibited if user is grading symbols but not using mouse</li> <li>• Warnings about minimum X dimensions when near the specification limits</li> <li>• Accuracy of aperture size reporting for Data Matrix codes</li> <li>• Inverted PDF417 and MicroPDF417 reading</li> <li>• Data Matrix and DPM symbol reading</li> <li>• 9510 1.75” field of view</li> <li>• Erroneous non-printable characters included in barcode data</li> <li>• Updated contact reference when using Japanese language</li> <li>• Czech language</li> <li>• Hungarian language</li> <li>• “Suomi-Svenska” removed from the translation table</li> <li>• Default directory cleanup after installation</li> </ul>
4.4.0.4106	Jun 27, 2018	<ul style="list-style-type: none"> <li>• Update to Japanese translation file</li> </ul>
4.4.0.4105	Jun 20, 2018	<ul style="list-style-type: none"> <li>• All LVS-95XX products support this version of the software.</li> <li>• Updated functionality to comply with GS1 2018 General Specification.</li> <li>• Improved DPM grading performance compared to v. 4.3.0 with greater ability to grade a DPM symbol</li> <li>• Support of new LVS-958x HD high resolution models</li> </ul>
4.4.0.100x	June 4, 2018	<ul style="list-style-type: none"> <li>• Update for modified LVS-9570 driver PCB</li> <li>• Record minimum passing grade when pass/fail option used</li> <li>• Fix incorrect Invalid AI warning shown after &lt;GS&gt;.</li> <li>• Change report label from GS1 Pass/Fail to be GS1 Data Structure Pass/Fail</li> <li>• Fix incorrect Extraneous FNC1 warning</li> <li>• Fix issue with Ctrl + Shift trigger timeout</li> <li>• Restore ability for LVS-9570 to use automatic sector</li> <li>• Allow either &lt;GS&gt; or &lt;232&gt; as separators in GS1 Data Matrix codes</li> <li>• Update max Xdim for Table 6 GS1 Data Matrix (per Gen Spec 18)</li> <li>• Add 2018 GS1 Gen Spec AIs; 714, 8013. New AI for NHRN Portugal and New GS1 identification key: Global Model Number (GMN)</li> <li>• Resolve Run Time error when connecting to an existing MS SQL database</li> </ul>
4.3.1.xxxx	Jan. 7, 2018	<ul style="list-style-type: none"> <li>• Add new standards for non-DPM versions of Mil-130</li> <li>• Allow 9510 factory calibration via phone support</li> </ul>
4.3.0.3006	08-Nov-2017	<ul style="list-style-type: none"> <li>• Updated to comply with ISO 15416:2016</li> <li>• Updated for changes to GS1 General Specification v17, dated 1 July 2017</li> </ul>

		<ul style="list-style-type: none"> <li>• Allow user to disable decimal grading without using password of the day.</li> <li>• Default setting that provides decimal grading as default for grading parameters.</li> <li>• Improvements to DPM grading</li> <li>• Streamlined software installation process, with fewer driver installation steps.</li> <li>• Removed support for Lumenera cameras used in LVS-9570 serial # 14139 and lower (Dec. 2013 and earlier), LVS-9500, LVS-9505, and LVS-9510 serial # 12906 and lower (June 2012 and earlier).</li> <li>• Added Traditional Chinese language (Taiwan) and character set.</li> </ul>
4.3.0.3003	20-Oct-2017	<ul style="list-style-type: none"> <li>• Extend maximum length of AIs 91 through 99 to be 90 characters.</li> <li>• Include decimal for Rmin, Rmax, and GT.</li> </ul>
4.3.0.1xxx	18-Oct-2017	<ul style="list-style-type: none"> <li>• Implement ISO/IEC 15416:2016(E) interpolation rule</li> </ul>
4.2.1.3xxx	16-Sep-2017	<ul style="list-style-type: none"> <li>• Automatically detect and draw blue sector box around symbol in DPM mod.</li> </ul>
4.2.0.3xxx	08-Sep-2017	<ul style="list-style-type: none"> <li>• Implement ability to read QR Codes when set for DPM.</li> </ul>
4.2.0.3xxx	23-Aug-2017	<ul style="list-style-type: none"> <li>• Fix HIBC error when code switch occurs inside \$\$+7 format.</li> <li>• Update Japanese Translation File.</li> </ul>
4.2.0.3xxx	06-Jul-2017	<ul style="list-style-type: none"> <li>• Fix error in PZN check digit calculation for 2D symbols.</li> <li>• Implement new clock track tracking algorithm for DPM.</li> <li>• Show additional lighting information.</li> <li>• Drop support of Lumenera cameras.</li> <li>• Implement more sophisticated event handler.</li> <li>• Improve build info displayed when double-clicking version.</li> <li>• Include changes from GS1 General Specifications V17.</li> <li>• Show HIBC structure if DPM and first character is a '+'. • Support Taiwan language and character set.</li> <li>• Upgrade to Visual Studio 2015 runtime.</li> <li>• Use dfu-programmer instead of Atmel Flip.</li> <li>• Use Inno Setup instead of InstallShield.</li> </ul>
4.1.0j	23-Jan-2017	<ul style="list-style-type: none"> <li>• Fix overly bright images when upgrading which only affects certain LVS-9580s.</li> </ul>
4.1.0i	13-Jan-2017	<ul style="list-style-type: none"> <li>• Fix bug related to blank passwords and ActiveDirectory.</li> <li>• Remove logic to detect contrast label during calibration, as it is unreliable.</li> <li>• Update Polish translation file.</li> </ul>
4.1.0h	10-Jan-2017	<ul style="list-style-type: none"> <li>• Fix exposure decimal places.</li> </ul>
4.1.0g	27-Dec-2016	<ul style="list-style-type: none"> <li>• Accept GS1-128 calibration card.</li> <li>• Avoid overflow error while minimized.</li> <li>• Avoid overly bright images when upgrading from older versions.</li> <li>• Fix problem with calibration with bright images.</li> <li>• Fix symbology errors on tables 7.2, 7.3, and 7.4.</li> <li>• Improve system responsiveness during focus calibration.</li> </ul>
4.1.0f	07-Nov-2016	<ul style="list-style-type: none"> <li>• Fix calibration not being reloaded when shortcut key used to change application standard.</li> <li>• Update 0410 Italian translation.</li> </ul>
4.1.0e	04-Nov-2016	<ul style="list-style-type: none"> <li>• Don't report 'D' for dome lighting on non-LVS-9580 systems.</li> <li>• Eliminate image jumping once image is stable.</li> <li>• Fix problem with reference reports and SQL Server.</li> <li>• Fix update problem with MySQL.</li> <li>• Reload calibration when changing application standards.</li> </ul>

		<ul style="list-style-type: none"> <li>• Update manuals.</li> </ul>
4.1.0d	20-Oct-2016	<ul style="list-style-type: none"> <li>• Don't allow Data Matrix when set for MIL-STD-130N Linear (1D).</li> <li>• Fix stitching with LVS-9510/ LVS-9580/ LVS-9585.</li> <li>• Update CompactLvsDB to include Microscan in search.</li> </ul>
4.1.0c	18-Oct-2016	<ul style="list-style-type: none"> <li>• Fix comma vs. period for GS1SpecificationTables.</li> <li>• Fix MicroPDF vs. Interleaved 2 of 5 misread.</li> <li>• Record structure information in database so it can be recalled and reprinted.</li> <li>• Try to read QR Code when set for DPM.</li> </ul>
4.1.0b	11-Oct-2016	<ul style="list-style-type: none"> <li>• Grade tilted DPM but issue warning if applicable.</li> <li>• Implement non-integral exposure.</li> </ul>
4.1.0a	05-Oct-2016	<ul style="list-style-type: none"> <li>• Avoid error when review report earlier than the latest report.</li> <li>• Don't accept Defects symbol in calibration mode.</li> <li>• Fix calibration not working in Manual grading mode.</li> <li>• Plot Micro QRCode format cells properly.</li> <li>• Show LVS-9585 as a choice on optional features.</li> <li>• Show green crosshair on LVS-9580 while moving.</li> <li>• Show yellow border while trigger is held.</li> </ul>
4.1.0	27-Sep-2016	<ul style="list-style-type: none"> <li>• Fix problems when interrupting processing.</li> <li>• Fix problems when switching cameras.</li> <li>• Instead of beeping, delay operations where possible.</li> </ul>
4.0.0n	23-Sep-2016	<ul style="list-style-type: none"> <li>• Implement GS1 Table 7.</li> </ul>
4.0.0m	19-Sep-2016	<ul style="list-style-type: none"> <li>• Finish DPM2 implementation.</li> <li>• Fix HIBC link character.</li> <li>• Implement new background/multithread model for slower operations.</li> <li>• Remember AutoPrint setting and don't reset when changing tabs.</li> </ul>
4.0.0L	02-Sep-2016	<ul style="list-style-type: none"> <li>• Placeholder for unreleased version.</li> </ul>
4.0.0k	26-Aug-2016	<ul style="list-style-type: none"> <li>• Changes to Speedup creation of users from Active Directory.</li> <li>• Fix HIBC issue - Unrecognized data identifier.</li> </ul>
4.0.0j	07-Jun-2016	<ul style="list-style-type: none"> <li>• Fixed issue with SQL dB, file access error 75 for Windows users without admin rights.</li> </ul>
4.0.0h	25-Apr-2016	<ul style="list-style-type: none"> <li>• Add 2D symbologies to GS1 table 4.</li> <li>• Add 2D symbologies to GS1 table 7.</li> <li>• Added AI (394) Percentage discount of a coupon.</li> <li>• Added AI (8012) Software version.</li> <li>• Added AI (8111) Loyalty points of a coupon.</li> <li>• Change GS1-128 Table 11 aperture to 5.</li> <li>• Clean up and sort translation files.</li> <li>• Fix Active Directory bug when there are no users in the LVS All Users group.</li> <li>• Fix problem misidentifying older LVS-9580 units.</li> <li>• Fixed incorrect error about missing leader bars in Data Matrix codes.</li> <li>• Fixed missing AI (30) in AI report.</li> <li>• Remove obsolete manuals.</li> <li>• Try more persistently to read UPC/EAN codes with a wrong check digit.</li> <li>• Use data identifiers for MIL-STD-130N.</li> </ul>
4.0.0g	10-Mar-2016	<ul style="list-style-type: none"> <li>• Fix ConfirmEngineType to catch Microsoft SQL 2014.</li> </ul>

		<ul style="list-style-type: none"> <li>• Fix MySQL MaxValue is reserved keyword; add delimiters when engine type is MySQL.</li> <li>• Fix SQL Stmt. error in ActiveDirectoryIntegration. Use UPPER for MySQL and MSSQL.</li> <li>• Fix error in ExportReferenceCommand by using MSSQL Database.</li> <li>• Improve Microscan logo.</li> </ul>
4.0.0g	10-Mar-2016	<ul style="list-style-type: none"> <li>• Include rebranded manuals.</li> <li>• Restore internal designations of Atmel-based LVS-9570 units.</li> <li>• Revert translation files pending redesign.</li> </ul>
4.0.0f	04-Feb-2016	<ul style="list-style-type: none"> <li>• Bump revision letter.</li> </ul>
4.0.0e	02-Feb-2016	<ul style="list-style-type: none"> <li>• Include proper AIs in report for composite symbols.</li> <li>• Include separate structure reports for 1D and 2D if applicable.</li> <li>• Preserve ActiveDirectory settings when copying database.</li> </ul>
4.0.0d	27-Jan-2016	<ul style="list-style-type: none"> <li>• Change default exposure for LVS-9580 from 40 to 70 ms.</li> <li>• Support new red/white lighting for LVS-9580 camera.</li> </ul>
4.0.0c	24-Jan-2016	<ul style="list-style-type: none"> <li>• Add ActiveDirectory Log file and form setting to enable.</li> <li>• Add progress bar when creating operators from Active Directory.</li> <li>• Correct bug in Active Directory CreateUsersFromAD.</li> <li>• Fix HTML characters in "Manufactured By" field.</li> <li>• Rename old registry values.</li> </ul>
4.0.0b	18-Jan-2016	<ul style="list-style-type: none"> <li>• Add ActiveDirectory Log file and form setting to enable.</li> <li>• Add progress bar with creating operators from Active Directory.</li> <li>• Correct bug in Active Directory CreateUsersFromAD.</li> <li>• Correct bug in new Data Matrix locator algorithm.</li> </ul>
4.0.0a	13-Jan-2016	<ul style="list-style-type: none"> <li>• Improve Data Matrix locator algorithm.</li> </ul>
4.0.0	06-Jan-2016	<ul style="list-style-type: none"> <li>• Rebrand as Microscan.</li> <li>• Set modulation to 0 for scan lines which fail edge determination.</li> </ul>