

Date: updated August 31, 2020

Product: LVS-95XX
Type: Software Update

LVS-95XX Software 4.4.2.3008 – 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 4.4.2.3008 was built on 08 August, 2020.

Feature	Description	Benefits
Feature enhancement	<ul style="list-style-type: none"> Updates to conform to latest GS1 Specifications 	<ul style="list-style-type: none"> Supports new application identifiers adopted in v20 of the GS1 General Specification
Issue resolution	<ul style="list-style-type: none"> Stabilization of 2D symbol algorithms Improvements to specific grading and reporting functionality 	<ul style="list-style-type: none"> Reduced variation in 2D grading results Expanded performance across a range of symbologies and application standards

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 4.4.2.3008. 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:

- Support for latest GS1 General Specification V20.

Improvements and Fixes:

- Refinement of 2D grading algorithm
- Improvements to DPM QR code grading
- Improvements to MIL STD 130 structural error reporting
- Improvements and additions to audit trail content

Known Issues

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

- The new DMRE standard (ISO/IEC 21741) is not yet supported.
- DPM QR codes made with dot peen technology are not grading reliably.

LVS-95XX Software Version History

A summary of important software changes from January 2016 through August 2020 is shown below. This version history is limited to software builds that were distributed to customers and partners. A complete software version history is available from the archive tab of LVS-95XX Software. That version history includes all software build numbers. In most cases, the versions listed in this document will include updates from multiple different builds.

Version	Release Date	Changes
4.4.2.3008	September 4, 2020	<ul style="list-style-type: none"> GS1 related changes <ul style="list-style-type: none"> Table 2 and Table 5 updated to allow Data Matrix symbols Data Matrix aperture error in GS1 Table 6 resolved Incorrect Extraneous FNC1 error when grading GS1 QR codes eliminated Added reporting for AI(10) Batch or Lot number for GS1-128 codes Updated aperture size per Gen Spec v20 for QR codes when using Table 1 Correct error message displayed when encountering an NTIN with an incorrect check digit Support new AIs in Gen Spec V20: 235, 417, 7040 and 7240 Corrected element errors in AI 253, 394 and 421 Corrected isolated MinHeight errors in GS1 tables Quiet zone checking when using GS1 Databar codes has been corrected Residual warnings when switching from GS1 Table 1.8200 to ISO/IEC 15415/15416 applications standards has been eliminated An extra FUNC1 or <GS> placed after a data string is ALLOWED per GS1 v20. The software was updated to generate a warning but not to fail in this situation. Updated Table 12 to use minimum passing score of 3.5 per Gen Spec v20 Residual grading banners when using GS1 tables are eliminated Minimum x-dimension banner when using GS1 Table 4 has been eliminated DPM related issues <ul style="list-style-type: none"> Defects and Modulation View displays are corrected Re-drawing region of interest prevented in DPM mode Added Minimum Reflectance to grading report Eliminated inappropriate application of MIL-STD-130 criteria when grading non-MIL-STD-130 symbols Allow multiple format (06, 07) when using MIL-STD-130 + UII Grade changes after releasing the trigger eliminated StrictISO15415IntegerGrading option created to eliminate decimal grading for 2D and DPM symbols Corrected MIL-STD_130N grading errors for PDT and REM Added DPM application standard for HIBC

		<ul style="list-style-type: none"> ○ Issue identifying QR codes as Data Matrix when using DPM TR29158 resolved • MIL-STD-130N <ul style="list-style-type: none"> ○ Allow multiple format (06, 07) when using DPM + MIL-STD-130 + UII ○ Use only 5 mil aperture when MIL-STD-130N + UII application standard is selected ○ Remove “Construct 1” / “Construct 2” labelling for DI25S ○ Fixed duplicate data issue for unknown TEI • Grading Consistency <ul style="list-style-type: none"> ○ Variations observed when grading the same symbol multiple times have been reduced ○ Tolerances are tightened for <ul style="list-style-type: none"> ▪ Contrast Uniformity ▪ Fixed Pattern Damage • Audit Trail <ul style="list-style-type: none"> ○ Action of removing a report from Recent Reports now logged to Audit Trail • UI Issues <ul style="list-style-type: none"> ○ Missing verification parameter descriptions provided ○ Display distortion in Zoom screen when grading a DPM symbol has been corrected ○ Transition Ratio display when in non-US regional settings has been fixed ○ Grade reporting when in non-US regional settings corrected ○ HIBC date display in 1D structure report properly formatted ○ When in Japanese language, the (非対応) notation after OCR on Grading tab was removed ○ Mixed Japanese and English language text when running in Japanese has been improved – only specific dialog boxes were addressed and this condition may still exist in other locations ○ Bar height reporting in inches corrected • Symbolologies <ul style="list-style-type: none"> ○ Mailmark Type D decoding issues fixed ○ Codabar identification fixed ○ Quiet zone errors now correctly reported for Databar Limited using FPMAJ application standard regardless of read direction ○ CC portion of Databar Limited with CC now recognized ○ 2x Quiet Zone check for PDF-417 corrected ○ Allow missing start or stop characters in PDF-417, but don't allow both to be missing • Propeller firmware <ul style="list-style-type: none"> ○ Issue upgrading Propeller firmware when using Japanese regional settings is corrected • Calibration <ul style="list-style-type: none"> ○ Issues encountered when re-calibrating an existing system using a new GS1-128 Conformance Calibration Standard Test Card have been resolved
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4.4.1.4002	May 03, 2019	<ul style="list-style-type: none"> • Fixed issue with non-US decimal & thousands separators • Improved analysis of GS1 QR codes
4.4.1.3013	Not released	<ul style="list-style-type: none"> • GS1 2019 General Specification updates, including new Application Identifiers. • Micro QR code decoding errors corrected • QR Code 2D Analysis reporting improved when using DPM TR-29158 as application standard • Grid Nonuniformity round-off fixed • Axial Nonuniformity round-off fixed • MySQL memory handling improved when selecting all reports • OCR tip presentation for non-English languages enhanced • “Type mismatch error” during calibration caused by regional settings fixed • Data archives when analyzing composite codes fixed – both 1D and 2D data is saved • Shortcut keys to change form tabs run-time error fixed • Reference Data Export using SQL • Grading Data Matrix with DPM TR-29158 fixed issue with embedded <GS> character • Text wrapping when printing multi-sector report • Verification reports include Pass/Fail indication based on minimum passing score • External trigger (CTRL+SHIFT) • Aperture setting for non-GS1 Data Matrix codes • Quiet zone reporting in 2D analysis screen • Transition Ratio measurement color coding (clarifies FPD grading, helping to understand grading of Data Matrix codes created using dots) • 1 decimal place display of data in calibration screen • Both 1D and 2D parameters included in export reference report when appropriate • “Machine not authorized” error message • GS1 Stacked Databar analysis no longer reports missing <FNC1> when <FNC1> is implied • Rounding when grading Symbol Contrast for Data Matrix improved • Stitching function automatically turns on camera as appropriate • 2D analysis of reflectance values on Analysis Screen exclude 20Z white space analysis • Full and compact Aztec codes grading and reading • Data Matrix structure analysis error that caused dropped characters from reported data fixed

		<ul style="list-style-type: none"> • MicroPDF codes read if only one of either the stop or start pattern is valid • Xdim and Symbol Height warning flag (on Setup tab) configurable for all application standards • Ability to delete an old report on the Archive screen restricted to users who have "Allow change archive file" permission • Software installation guide and Readme.txt added to root of LVS-95XX software download • Auto-logoff inhibited if user is grading symbols but not using mouse • Warnings about minimum X dimensions when near the specification limits • Accuracy of aperture size reporting for Data Matrix codes • Inverted PDF417 and MicroPDF417 reading • Data Matrix and DPM symbol reading • 9510 1.75" field of view • Erroneous non-printable characters included in barcode data • Updated contact reference when using Japanese language • Czech language • Hungarian language • "Suomi-Svenska" removed from the translation table • Default directory cleanup after installation
4.4.0.5101	Jun 27, 2018	<ul style="list-style-type: none"> • Update data identifier database to avoid incorrect structure errors
4.4.0.4106	Jun 27, 2018	<ul style="list-style-type: none"> • Update to Japanese translation file
4.4.0.4105	May 30, 2018	<ul style="list-style-type: none"> • Increase camera watchdog timeout to avoid unnecessary camera reset • Fix type mismatch error during calibration when goals don't match regional settings • Fix communications issue with 9580s
4.4.0.4102	May 18, 2018	<ul style="list-style-type: none"> • Improved ability to communicate with and upgrade older 9570 units
4.4.0.4101	May 17, 2018	<ul style="list-style-type: none"> • Fixed regional setting conflict with SQL • Updated PCB software to support 7.5MHz crystals • Added missing FAQ files • Improved French translations • Fixed translation issue when displaying "GS1"
4.4.0.3009	Apr 30, 2018	<ul style="list-style-type: none"> • Add dynamic baud rate adjustment for 9570 units • Show correct mils on calibrate screen for 1.3" FOV • Add word break option to avoid truncated display of decoded text • Fix problem displaying (9580HD) when applicable • Fix signing conflict with new Atmel 1.2.6 driver • Record minimum passing grade when pass/fail option used • Fix dome light correction for 1.3" FOV • Fix incorrect Invalid AI warning • Show (9580HD) on setup screen if applicable • Solve issue with synthetic aperture aligning with 6 mil aperture on 1.3" FOV • Fix issue with AI calibration card • Add new AI 22

		<ul style="list-style-type: none"> • Change report label from GS1 Pass/Fail to be GS1 Data Structure Pass/Fail • Change Symbol ANSI X3.182 Letter Grade scaling • Fix 9585-HD calibration issue • Fix incorrect Extraneous FNC1 warning • Allow 9585 HD white balance calibration without factory override • Check HIBC dates for validity • Correct 9585 HD dome light correlation • Enable pulldown for FPMAJ so height warnings can be made optional • Fix bug in trapezoidal correction logic which would occasionally cause a crash • Improve logic for for non-breakable spaces in HTML reports • Recompute Data Matrix error correction codewords when correcting pseudo-random padding errors • Show (9585HD) if camera model is 9585HD • Update manuals • Attempt to mitigate issues with serial number zero • Fix issue with Ctrl + Shift trigger timeout • Remove problematic translation file 040B.dat • Update Atmel drivers to 1.2.6 • Update for modified LVS-9570 driver PCB • Record minimum passing grade when pass/fail option used • Fix incorrect Invalid AI warning shown after <GS>. • Change report label from GS1 Pass/Fail to be GS1 Data Structure Pass/Fail • Fix incorrect Extraneous FNC1 warning • Fix issue with Ctrl + Shift trigger timeout • Restore ability for LVS-9570 to use automatic sector • Allow either <GS> or <232> as separators in GS1 Data Matrix codes • Update max Xdim for Table 6 GS1 Data Matrix (per Gen Spec 18) • Add 2018 GS1 Gen Spec AIs; 714, 8013. New AI for NHRN Portugal and New GS1 identification key: Global Model Number (GMN) • Resolve Run Time error when connecting to an existing MS SQL database • Add new standards for non-DPM versions of Mil-130 • Allow 9510 factory calibration via phone support
4.3.0.3006	08-Nov-2017	<ul style="list-style-type: none"> • Updated to comply with ISO 15416:2016 • Updated for changes to GS1 General Specification v17, dated 1 July 2017 • Allow user to disable decimal grading without using password of the day. • Default setting that provides decimal grading as default for grading parameters. • Improvements to DPM grading • Streamlined software installation process, with fewer driver installation steps. • 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). • Added Traditional Chinese language (Taiwan) and character set.

4.3.0.3003	20-Oct-2017	<ul style="list-style-type: none"> Extend maximum length of AIs 91 through 99 to be 90 characters. Include decimal for Rmin, Rmax, and GT.
4.3.0.1001	18-Oct-2017	<ul style="list-style-type: none"> Implement ISO/IEC 15416:2016(E) interpolation rule
4.2.0.3021	16-Sep-2017	<ul style="list-style-type: none"> Automatically detect and draw blue sector box around symbol in DPM mod.
4.2.0.3019	08-Sep-2017	<ul style="list-style-type: none"> Implement ability to read QR Codes when set for DPM.
4.2.0.3016	23-Aug-2017	<ul style="list-style-type: none"> Fix HIBC error when code switch occurs inside \$\$+7 format. Update Japanese Translation File.
4.2.0.3003	06-Jul-2017	<ul style="list-style-type: none"> Fix error in PZN check digit calculation for 2D symbols. Implement new clock track tracking algorithm for DPM. Show additional lighting information. Drop support of Lumenera cameras. Implement more sophisticated event handler. Improve build info displayed when double-clicking version. Include changes from GS1 General Specifications V17. Show HIBC structure if DPM and first character is a '+'. <ul style="list-style-type: none"> Support Taiwan language and character set. Upgrade to Visual Studio 2015 runtime. Use dfu-programmer instead of Atmel Flip. Use Inno Setup instead of InstallShield.
4.2.0.3002	03-Jul-2017	<ul style="list-style-type: none"> Always show first decoded scan line as line 1 in dimensional analysis Copy recovery MDB to correct folder Don't include stale structure information in report of newer code Don't misidentify 9585 as 9580 on setup screen and reports Fix canceling calibration
4.1.0j	23-Jan-2017	<ul style="list-style-type: none"> Fix overly bright images when upgrading which only affects certain LVS-9580s.
4.1.0i	13-Jan-2017	<ul style="list-style-type: none"> Fix bug related to blank passwords and ActiveDirectory. Remove logic to detect contrast label during calibration, as it is unreliable. Update Polish translation file.
4.1.0h	10-Jan-2017	<ul style="list-style-type: none"> Fix exposure decimal places.
4.1.0g	27-Dec-2016	<ul style="list-style-type: none"> Accept GS1-128 calibration card. Avoid overflow error while minimized. Avoid overly bright images when upgrading from older versions. Fix problem with calibration with bright images. Fix symbology errors on tables 7.2, 7.3, and 7.4. Improve system responsiveness during focus calibration.
4.1.0f	07-Nov-2016	<ul style="list-style-type: none"> Fix calibration not being reloaded when shortcut key used to change application standard. Update 0410 Italian translation.
4.1.0e	04-Nov-2016	<ul style="list-style-type: none"> Don't report 'D' for dome lighting on non-LVS-9580 systems. Eliminate image jumping once image is stable. Fix problem with reference reports and SQL Server. Fix update problem with MySQL. Reload calibration when changing application standards. Update manuals.
4.1.0d	20-Oct-2016	<ul style="list-style-type: none"> Don't allow Data Matrix when set for MIL-STD-130N Linear (1D). Fix stitching with LVS-9510/ LVS-9580/ LVS-9585. Update CompactLvsDB to include Microscan in search.

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

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