Barcode Verification System
LVS/V Series

OMRON

Print quality verification to ISO guarantees readability of barcodes

Today, unreadable barcodes can result in damaging the credibility of products and companies

Traceability is being applied throughout supply chains for product quality control, counterfeit prevention, recall avoidance, and highly efficient logistics. While 1D and 2D codes play a key role in traceability, manufacturers and distributors face the challenge of barcode quality management.

Is your industry facing the challenges of barcode quality control?

Prescription medication and medical device industries

Barcode verifiers must be installed within the time specified by law or regulation, with as little effort as possible.

Solution > P.6

Automotive and automotive parts industries

Finished vehicle manufacturer

There is variation in barcode print quality depending on the supplier and material.

Automotive parts manufacturer

Customers complain about unreadable barcodes, but the cause cannot be identified.

Solution > P.8

Omron's barcode verification systems provide objective barcode quality verification, preventing unreadable barcodes from escaping

Food and digital parts industries

Retailers make a complaint that barcodes used for authenticity assessment cannot be read.

Solution > P.10

Logistics and e-commerce

Unreadable barcodes on product management labels require time-consuming confirmation and manual entry of information.

Solution > P.11

Verification to international quality standards

Both hardware and software verify barcodes against ISO standards, enabling reliable quality evaluation.

Grading of print quality

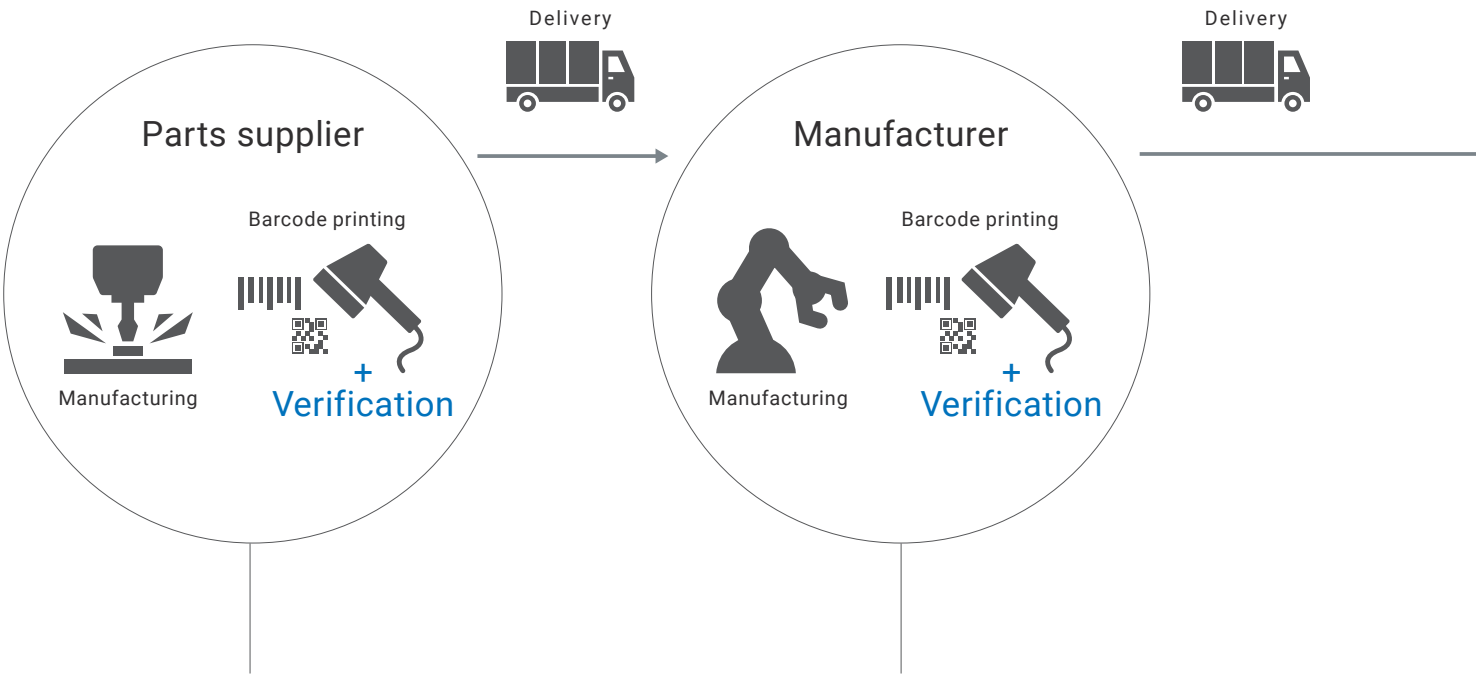
You can easily identify defect causes and share target grades with your suppliers.

Grade:

0.0 to 4.0

ISO verification just after printing ensures barcode quality, increasing the credibility of products and companies

Codes are increasingly used at the distribution and consumption levels as well as the manufacturing process. One of the drastic measures to eliminate reading failures across a supply chain is to verify barcode quality to ISO standards immediately after barcode printing and then use the barcodes, which meet the necessary level of quality, from the upstream of the supply chain.



Prevent defective barcodes from leaving factory

Barcode quality verification just after printing barcodes on manufactured products prevents the escape of poorly printed barcodes.

Avoid complaints and recalls

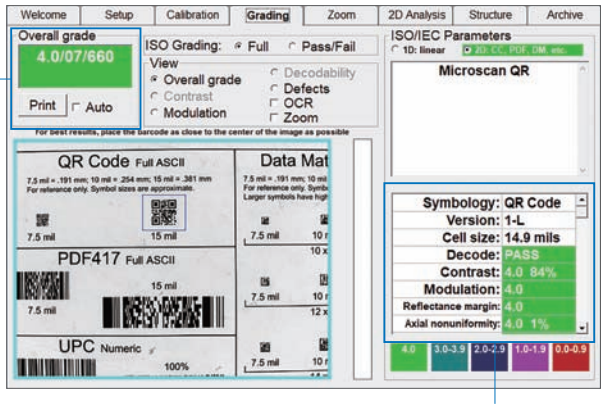
Print quality verification before shipment speeds up dealing with returns and complaints or identifying ranges affected by recalls.

Barcode verification system is a barcode grading tool

Barcode verification systems grade codes by evaluating whether printed barcodes comply with applicable standards. To ensure the accuracy of barcode verification, the standards provide print quality test specifications and verifier conformance specifications. Barcode verification systems must comply with the standards to make absolute judgments if barcodes conform to the relevant standards.

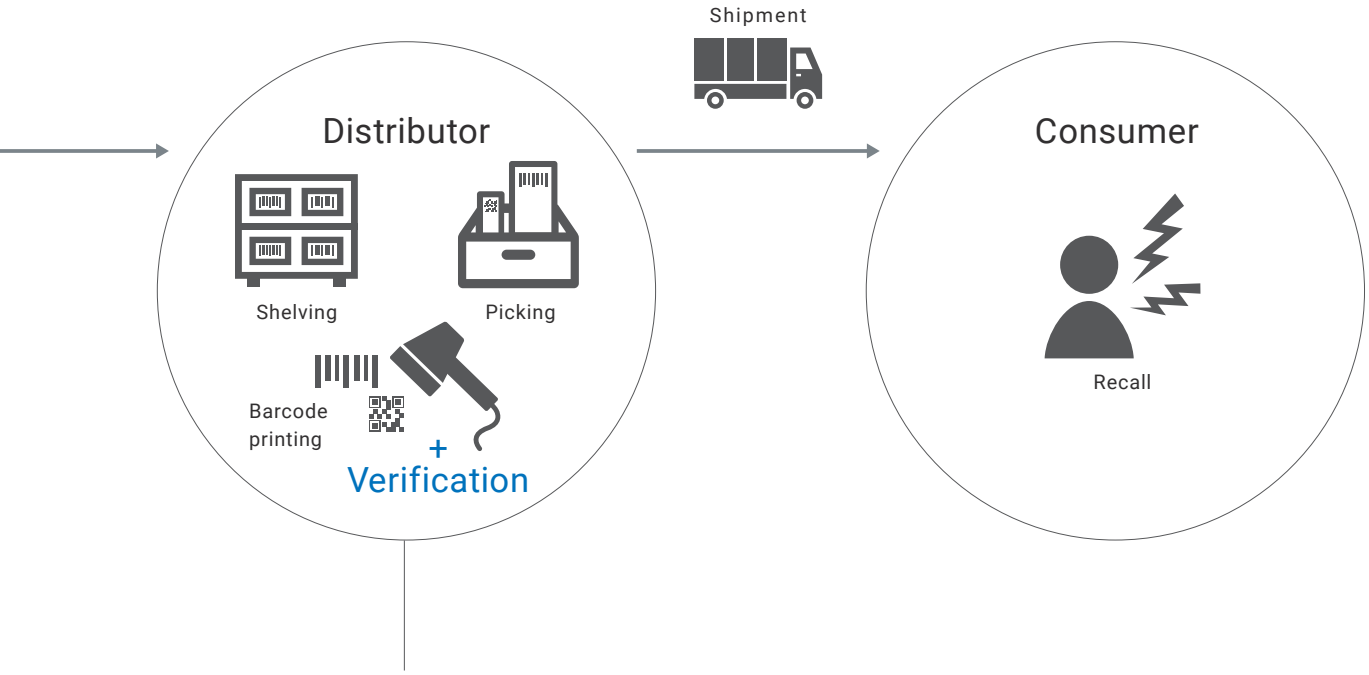
Typical verification standards for barcode print quality

ISO/IEC 29158: For 2D DPM
ISO/IEC 15415: For 2D codes
ISO/IEC 15416: For linear codes



An overall grade from 0.0 to 4.0 is determined from the results of individual verification items. A grade closer to 4.0 indicates a better quality.

Quality is graded through verification items specified in international standards.



Optimize logistics operations

Improved barcode quality reduces reading failure during picking, increasing productivity.

Omron's barcode verification systems to suit your application

Off-line (Cat. No. Q263)

- Desktop

LVS-9510
Series
(for paper/labels)

- Portable

LVS-9580
Series
(for paper/labels)

LVS-9585
Series
(for DPM)

In-line

- Integrated into printer

V275
Series
(for paper/labels)

Prescription medication and medical device industries

Meets strict regulations, with nearly 20 years proven track record in Europe and U.S.

Laws and regulations are increasing to prevent counterfeit medicines from entering supply chains and control quality of medical devices

One example is the U.S. Food and Drug Administration's (FDA[*1]) UDI regulations[*2]. In order to share information throughout a supply chain, UDI regulations require to apply linear or 2D codes in which product identification information is encoded and to verify barcodes to ISO standards before shipment. Prescription medication and medical device manufacturers and OEMs who ship products to newly regulated countries need to meet UDI regulations (1.5 or higher ISO grade) within a period of grace.

Assuring compliance and reliability in the medical supplies industry

Used in European and U.S. medical supplies industry[*3] for nearly **20 years**

Compliant with ISO/IEC and other international standards

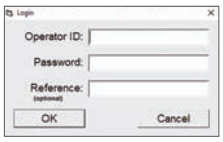
Our barcode verification systems, planned and developed in the U.S. that leads in terms of laws and regulations, meet UDI and other requirements of U.S. and European laws and regulations. We are continuously working to make products conform to upgraded standards by participating in standards organizations. In addition, our long-term product supply offers you peace of mind.

ISO conformance standards
ISO/IEC 15415, 15416, 15426-1, 15426-2, ISO/IEC 29158

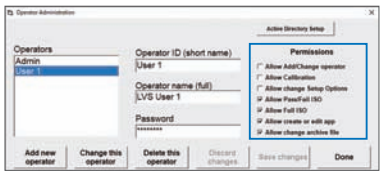
21 CFR Part 11 compliant-ready for medical supplies industry

21 CFR Part 11, established by the FDA, is a regulation to prevent falsification of electronic records and electronic signatures. The FDA requires electronically processed records related to development and production, and the whole manufacturing process must conform to Part 11. Our barcode verification systems have the required abilities to meet the requirements.

User Administration (Active Directory compatible)

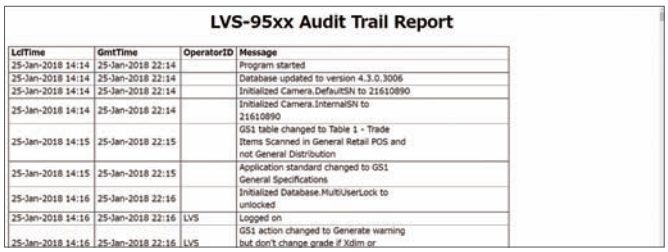


Login requires a user ID and password.



Operational permissions can be set for each user.

Audit Trail



LVS-95xx Audit Trail Report

LclTime	GmtTime	OperatorID	Message
25-Jan-2018 14:14	25-Jan-2018 22:14		Program started
25-Jan-2018 14:14	25-Jan-2018 22:14		Database updated to version 4.3.0.3006
25-Jan-2018 14:14	25-Jan-2018 22:14		Initialized Camera.DefaultSN to 21610890
25-Jan-2018 14:14	25-Jan-2018 22:14		Initialized Camera.InternalSN to 21610890
25-Jan-2018 14:15	25-Jan-2018 22:15		GS1 table changed to Table 1 - Trade Items Scanned in General Retail POS and not General Distribution
25-Jan-2018 14:15	25-Jan-2018 22:15		Application standard changed to GS1 General Specifications
25-Jan-2018 14:16	25-Jan-2018 22:16		Initialized Database.MultiUserLock to unlocked
25-Jan-2018 14:16	25-Jan-2018 22:16	LVS	Logged on
25-Jan-2018 14:16	25-Jan-2018 22:16	LVS	GS1 action changed to Generate warning but don't change grade if Xdim or

The date and time of user entries and actions are recorded for auditing purposes. The audit trail reports can be stored in a database.

*1. The U.S. Food and Drug Administration (FDA) is the government organization that is responsible for regulating foods and pharmaceuticals in the U.S.
*2. Unique Device Identification (UDI) is an identifier to appropriately identify medical devices through distribution and use. UDI is intended to provide internationally accepted medical device identification and coding. In September 2013 the FDA published its final ruling for UDI, and the regulations are spreading in the U.S., European countries, and Asian countries.
*3. Prescription medication and medical device industries.

Verification of various barcodes used in prescription medication and medical device industries

Supporting linear and 2D codes compliant with standards for medical supplies

In addition to verification of a wide range of linear and 2D codes, the barcode verification system can read and verify multiple barcodes simultaneously.

Typical available symbologies

For prescription medications

(01)04912345678904

GS1 DataBar Limited

(01)04912345678904

GS1 DataBar Stacked

(01)04912345678904(17)991231(10)omron123456789

GS1-128

For medical devices and vitro diagnostic medications

(01)04912345678904(17)991231(10)omron123456789

GS1-128

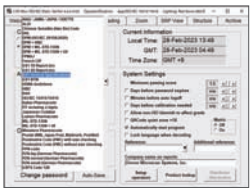
GS1 Data Matrix

Reads and verifies multiple barcodes simultaneously

Easy 3-step verification

The pre-installed menu facilitates adjustment of verification conditions for individual barcodes and calibration. You can verify barcodes in just three steps. The easy-to-use user interface allows on-site operators to operate the system easily and quickly.

1. Select verification standard

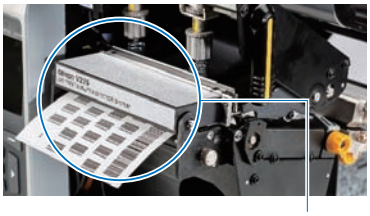


2. Perform calibration

3. Perform grading

In-line inspection of every barcode printed on labels V275 Series

The V275 Series is a label printer with an integrated barcode verifier, automatically inspecting 100% of printed labels for print quality without a separate barcode verifier. It also has blemish detection, optical character recognition (OCR), and optical character verification (OCV) capabilities as well as barcode print quality verification.



Verifies barcodes just after printing

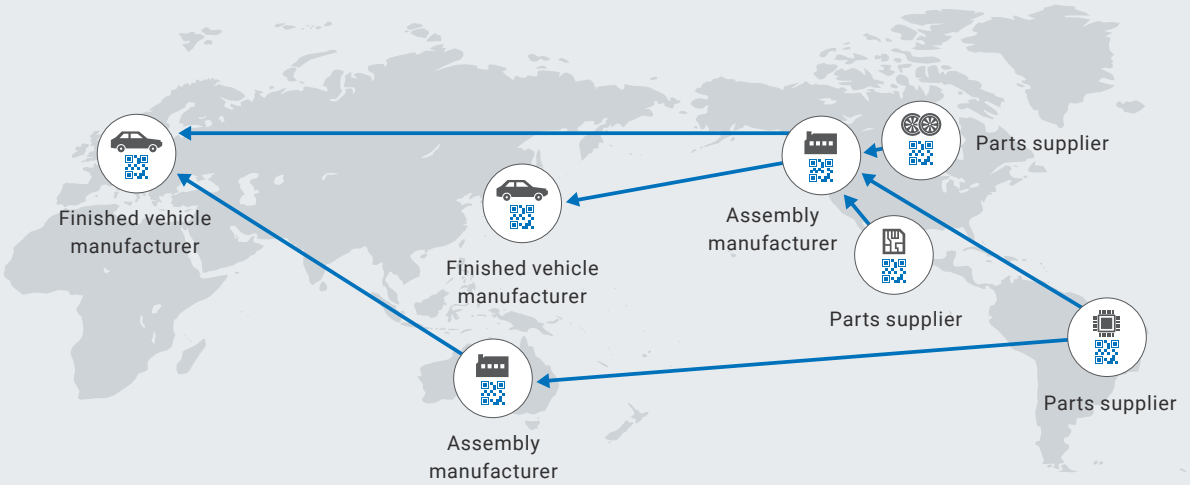
barcode verifier

Automotive and automotive parts industries

Maintains barcode quality to meet customer requirements

As EV parts are distributed globally, readability of barcodes is becoming more crucial

The shift to EVs increases items managed by finished vehicle manufacturers. In the entire supply chains, the global manufacturing and distribution of EV parts is growing more than ever before.
This raises the importance of reliably reading barcodes at every process in parts suppliers, assembly manufacturers, and finished vehicle manufacturers. To ensure reliable barcode reading in the entire supply chains, finished vehicle manufacturers require print verification, and parts suppliers and assembly manufacturers independently verify barcodes to demonstrate their reliability to finished vehicle manufacturers around the world.



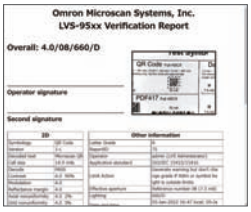
Ensure barcode quality in entire supply chains

With our barcode verification systems compliant with ISO and other international standards, parts suppliers and assembly manufacturers can objectively check barcode quality, preventing low-quality barcodes from reaching the market before shipment. Then assembly manufacturers and finished vehicle manufacturers also check barcode quality with the barcode verification systems when receiving parts. This prevents reading failure and ensures print quality in the entire supply chain.

Print quality verification using our international standard-compliant barcode verification systems benefits all companies involved.

Deliverer

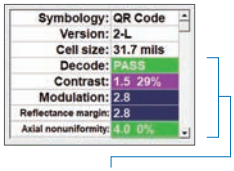
- Ships products that meet the required barcode print quality standards.
- Gains customer confidence by outputting reports of barcode print quality verification results



Example: HTML format report

Recipient

- Checks barcode quality when receiving parts
- Quantitatively requests suppliers to improve quality



Displays results for individual verification items

Verify various barcodes, ranging from barcodes on labels to DPM

Increase in traceable parts requires verification of a range of barcodes. The LVS Series reliably verify a broad variety of barcodes including codes printed on labels and DPM barcodes.

Reduce reading failure by verifying DPM

The LVS-9585 Barcode Verification System for DPM can verify 2D codes directly marked on metal and PCBs. Featuring a 5 Mpix camera, the LVS-9585 Series reads and analyzes barcodes down to 0.15 mm (0.05 mm for the LVS-9585-DPM-HD). Ensuring consistent print quality between factories mitigates reading errors. Also, parts can be traced quickly in case of a recall.

Difference between grading by standard barcode readers and verification by barcode verification systems

Some barcode readers provide grading of the print quality of barcodes they scan. However, barcode readers that do not comply with the standards for verification can only perform relative evaluation, the results of which depend on the distance from the object and lighting conditions. Barcode verification systems can carry out highly reproducible verification in ISO-compliant conditions (installation distance and lighting). Absolute evaluation according to ISO standards allows the verification results to be used as evidence of the quality verification.

	Illumination	Calibration	Verification algorithm
Barcode verification system	Compliant with ISO standards	Compliant with ISO standards	Compliant with ISO standards
Barcode reader (grading)	Manufacturer-specified	None	Compliant with ISO standards

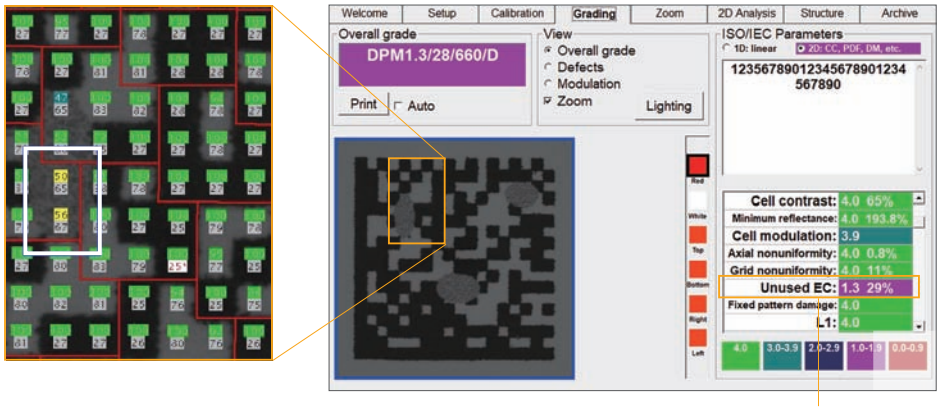
Improve quality by identifying causes of print defects

Our barcode verification systems can analyze barcodes, helping improve barcode print quality based on analysis results. You can quickly increase yield by enhancing barcode quality.

Example of a print defect: A barcode is partially damaged.
(Possible cause: Blemishes such as oil stains and dust on the barcode)

Error details can be checked

In this example, the yellow cells (inside the white frame) indicate defective light cells recognized as dark cells, or vice versa.



Verification standard: ISO/IEC 29158

Error item

Food and digital parts industries

Ensures reliable barcode reading, supporting authenticity assessment

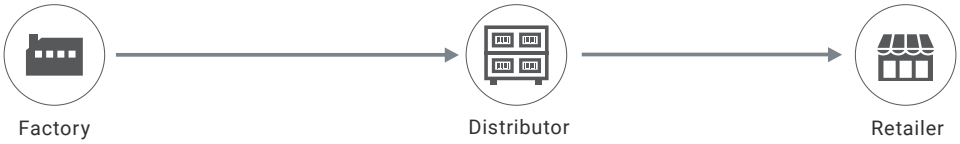
Reliable barcode reading in supply chains is key to solving the issue of counterfeits entering the market

In recent years there has been concern that imitations of expensive products are coming onto the market. Food and beverage that affect people's health directly are especially critical. To address such concern, authenticity assessment systems, which print barcodes containing a serial number on genuine products, are increasingly built. Ensuring barcode print quality before shipment is vital to reliable operation of these systems.

Verify print quality of barcodes for authenticity assessment before shipment

Unreadable barcodes for authenticity assessment may result in costly complaint handling and disposal, plus damage the labeled product's perceived quality. Our barcode verification systems verify barcodes before dispatch from factories, preventing low quality barcodes from entering the market and avoiding barcode reading failure.

Example Authenticity assessment of fine wine



Barcode quality is verified just after printing, and then the codes are attached to bottles.

- Barcode quality verification during barcode printing

Barcode verification system integrated into printer

Verification screen

- Attach barcodes to bottles
- Ship bottles

Reliable reading of barcodes for authenticity assessment

Logistics and e-commerce

Makes logistics operations more efficient by verifying barcodes

Poorly printed barcodes hinder improving operational efficiency of logistics

Many people are working to move, store, manage, and ship goods in warehouses. However, against a backdrop of labor shortages and worsening working environments, warehouses are under urgent pressure to streamline operations and improve environments. To tackle this challenge, they are using barcodes to increase operational efficiency, but facing another problem of reading failure to overcome.

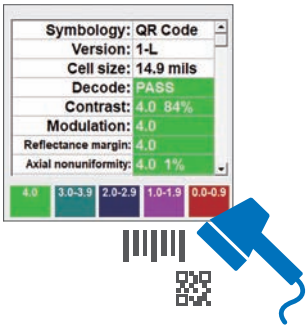
Improve operational efficiency by preventing reading failure

If barcodes on labels cannot be read during product picking in a warehouse, workers need to check product information and manually enter data. This compromises the operational efficiency. Print quality verification with our barcode verification systems before factory shipment boosts work efficiency by eliminating unreadable barcodes.

Example Picking in huge warehouse

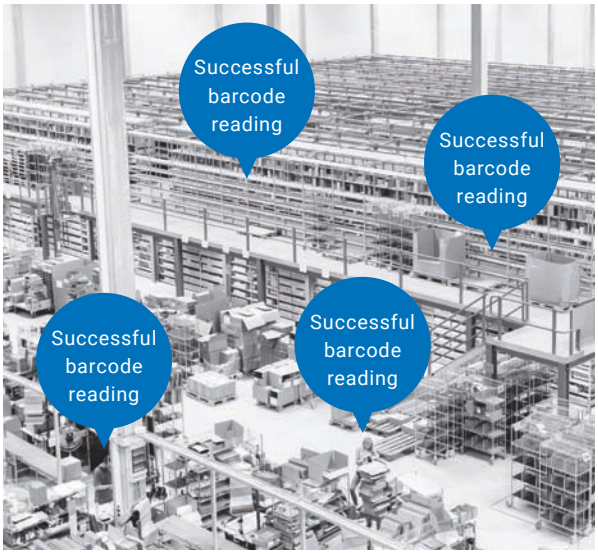
Barcode quality is verified just after printing, and then the barcodes are attached to products.

- Print barcodes
- Verify barcode quality
- Attach barcodes to products
- Ship products



The barcode verification system integrated into a printer is also available.

Reliable barcode reading improves product picking efficiency.



Code Verification System

LVS-9510 series

Desktop Barcode Verification System

Comes with handheld top cover (not shown) to keep label in position on viewing window.

The LVS-9510 is a high-performance system for off-line verification of barcodes to ISO / IEC, ANSI, GS1, and UDI standards.

The LVS-9510 is unique in the world of ISO verification due to its ease of use and ability to verify linear (1D) and two-dimensional (2D) codes without any change of equipment. The system automatically determines the symbology and aperture needed to evaluate the code and identifies and highlights trouble spots.

The LVS-9510 offers a "stitching" feature that allows grading of barcodes that are larger than the field of view.

LVS-9510: At a Glance

- Validates to ISO / IEC, ANSI, GS1, and UDI print quality standards.
- Software upgrade options include Multi-Sector for verification of multiple barcodes on a label.
- 21 CFR Part 11 compliant-ready.
- Certified by GS1 US.
- Supports 19 languages.
- Quality data reporting for auditing purposes.
- Manage operator permissions using LVS-95XX software or using Microsoft Active Directory.
- Includes NIST-Traceable Calibrated Conformance Standard Test Card for calibrating the system.
- Save verification reports to PDF.

LVS-9510: Available Symbologies

Please see the Ratings and Specifications for a complete list of supported symbologies.

ISO / ANSI for 1D
LVS-95XX series barcode verifiers inspect all nine ISO / ANSI parameters for linear (1D) barcodes, have the ability to identify blemishes, and can perform simple human-readable validation.

ISO / ANSI for 2D
The LVS-95XX series verifies 2D codes and reports all parameters as specified in the applicable symbology specification.

Analytical Tools
Equipped with numerous analytical tools to identify and evaluate barcode errors. Problems are color-coded to make problem solving easy.

Software
LVS-95XX software includes GS1 System Symbol Specification Tables. GS1 tables set standards for barcode data structure and how to maintain the quality of codes during barcode creation. OMRON Microscan offers an online training course on GS1 tables and how these apply to different organizations.

Software Upgrade: EAIV
The Enhanced Application Identifier Verification (EAIV) option verifies that all GS1 Application Identifiers, such as Expiration Date, Global Trade Item Number (GTIN), and Batch Number, embedded in the data structure of a GS1 barcode match the data pr grammed in the EAIV feature by the user.

User Permission Options
Manage permissions through LVS-95XX software: Passwords are stored in a local database. All passwords are encrypted, include an expiration date, and count failed password attempts.

Manage permissions through Microsoft Active Directory: User privileges are based on Microsoft authentication and LVS-95XX permissions are assigned based on group membership.

Ordering Information

Code Verification Systems

Type	Field of view	Model
LVS-9510 Verifier	76 mm	**9510-5-3.0**
	102 mm	**9510-5-4.0**
	114 mm	**9510-5-4.5**
	159 mm	**9510-5-6.250**

Note: Be sure to use the power supply and power supply cord included with the product.
In addition, do not use the power supplies or power supply cords with any other electric or electronic equipment.

Accessories

Type	Model
EAN / UPC Calibrated Conformance Test Card (Included with 9510-5-3.0 / 4.0 / 4.5 / 6 / 250)	**98-CAL040**
GS1-128 Calibrated Conformance Test Card (Included with 9510-5-6.250)	**98-CAL041**
LVS-9510 and LVS-958□ Software Upgrade Option: Multi-Sector Verification	**98-SOF0039**
LVS-95□□ Software Upgrade Option: Automatic Login Feature	**98-SOF0056**
Software Upgrade Option: EAIV (Enhanced Application Identifier Verification)	**98-SOF0088**
LVS-95□□ IQ-OQ Validation Procedure Guidelines, v. 4.3 and later (includes text cards)	**98-LVS0077**
Validation Test Cards (35 test cards)	**98-LVS-VTC**

Ratings and Specifications

Supported standards	Application standards	AIAG / DAMA / JAPIA / Odette
		ALDI
		ISO / IEC 29158 (DPM Cat 0)
		DHL
		FPMAJ
		French CIP
		GS1 General Specifications
		HDMA Guidelines
		Health Industry Barcode (HIBC)
		IFAH
		ISO / IEC 15415 / 15416
		Italian Pharmacode
		Japan Codabar
		Laetus Miniature Pharmacode
		Laetus Pharmacode
		Laetus Standard
		MIL-STD-130N Change 1
		Pharmacy Product Number (PPN)
		Automatic GS1 or ISO
		Chinese Sensible (Han Xin) Code
		GS1 General Specifications
		GS1 (NTIN)
		HDMA Guidelines
		Miniature Pharmacode
		Postal (EIB, USPS IMB / Code 128, POSTNET, Japan Post)
		PPN Code
		PZN-big, normal, small (German Pharmacode)
		PZN 7 and PZN 8
	GS1 US certification	Data Matrix for Healthcare
		Data Matrix (ECC 200)
		EAN / UPC
		EAN / UPC and extended codes
		EAN / UPC with CC
		GS1 DataBar Omnidirectional
		ITF-14
		GS1 DataBar-14 with CC (formerly RSS-14 with CC)
		UCC / EAN with Supplementals
		UCC / EAN-128
		UCC / EAN-128 with CC
	ISO conformance standards	ISO / IEC 15415, 15416, 15418
		ISO / IEC 15426-1, 15426-2
		ISO / IEC 29158 (DPM Cat 0) / AIM DPM-1-2006
		ISO / IEC 21471: 2020
		All supported ISO / IEC symbology specifications
Supported symbologies	Linear (1D) symbologies	Codabar
		Code 128, Code 39, Code 93
		GS1 DataBar Expanded and Limited
		DataBar
		DataBar Expanded and Limited
		DataBar Omnidirectional
		DataBar Stacked and Truncated
		EAN / JAN-13
		EAN / JAN-8
		Enterprise Intelligent Barcode (EIB) 4-State (4SB)
		GS1-128
		Hanxin Code
		HIBC
		Interleaved 2 of 5 (ITF)
		ITF-14
		Japan Post
		MSI Plessey
		Pharmacode–Italian and Laetus
		PZN 7, PZN 8
		UPC-A, UPC-E
		USPS-128
		USPS Intelligent Mail Barcode (4-State Customer Barcode)
	Two-dimensional (2D) symbologies	Aztec
		DataBar with CC-A, CC-B, or CC-C
		EAN / JAN-13 with CC-A, CC-B, or CC-C
		EAN / JAN-8 with CC-A, CC-B, or CC-C
		ECC-200 (Data Matrix) • EIB CMDM • French CIP • GS1 Data Matrix • NTIN and PPN
		GS1-128 with CC-A, CC-B, or CC-C
		MaxiCode
		Micro QR Code
		MicroPDF417
		PDF417
		QR Code
		UPC-A with CC-A, CC-B, or CC-C
		UPC-E with CC-A, CC-B, or CC-C
		DMRE (ISO / IEC 21471: 2020)

* Contact OMRON for a complete list of supported ECC-200 (Data Matrix) codes. CC=Composite Components

Minimum PC requirements (PC supplied by customer)		• Windows® 7 Professional, Windows® 8.1 Pro, or Windows® 10 Pro • Intel® Core™ 2 Duo Processor or higher • 2 GB RAM • 800 x 600 screen resolution • One USB 2.0 port available per unit
Camera		Monochrome 5 million pixels
Illumination		White LED, red filter (660 nm)
Environmental specifications	Ambient temperature range	Operating: 10 to 30°C, Storage: 0 to 40°C
	Ambient humidity range	Operating: 20% to 80% (with no icing or condensation), Storage: 20% to 95% (with no icing or condensation)
Communications		USB 2.0 A plug to B plug cable, 1.8 m
Power voltage		12 VDC at 2.5 A max.
Weight	Unpackaged standalone	Approx. 2.72 kg
	Shipping weight	Approx. 5.89 kg (Includes all items packaged in shipping box, such as power supply and cables)
Dimensions		279.4 x 228.6 x 279.4 mm (H x D x W) (Includes rubber feet on system base)
Top cover	Dimensions	139.7 x 190.5 mm
	Weight	Approx. 155.92 g
Safety standards		FCC, CE, UL, KC
Calibrated Conformance Test Card (Included with system)		• Included with 9510-5-3.0: EAN / UPC Calibrated Conformance Standard Test Card • Included with 9510-5-4.0: EAN / UPC Calibrated Conformance Standard Test Card • Included with 9510-5-4.5: EAN / UPC Calibrated Conformance Standard Test Card • Included with 9510-5-6.250: GS1-128 Calibrated Conformance Standard Test Card
Calibrated Conformance Test Card (Option)		• EAN / UPC Calibrated Conformance Standard Test Card (Model: 98-CAL040) • GS1-128 Calibrated Conformance Standard Test Card (Model: 98-CAL041)

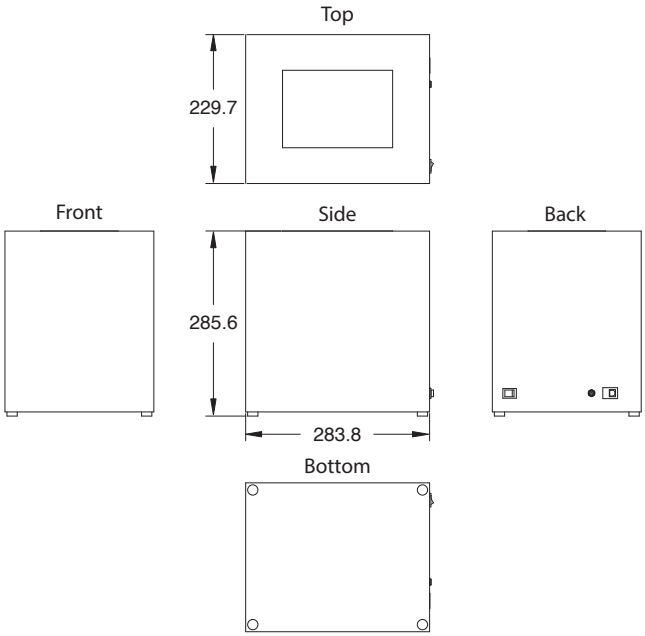
Options

Field of View Options

Model	Minimum X dimension (nominal)		Field of view (approximate)
	1D	2D	
9510-5-3.0	0.10 mm	0.15 mm	76 mm
9510-5-4.0	0.15 mm	0.23 mm	102 mm
9510-5-4.5	0.18 mm	0.25 mm	114 mm
9510-5-6.250	0.24 mm	0.33 mm	159 mm

Dimensions

(Unit: mm)



Related Manuals

Man.No.	Model	Manual
84-9310001-02	LVS-95□□	Barcode Quality Station Operations Manual
84-9310009-02	LVS-95□□	Software Installation Guide

Code Verification System

LVS-9580 series

Portable Barcode Verification System

Durable, portable handheld verifier

Weighs only 0.64kg

The LVS-9580 is a high-performance handheld solution for off-line barcode verification to ISO / IEC, ANSI, GS1, and UDI standards. Featuring a high-resolution 5.0 megapixel camera, the LVS-9580 reads and analyzes linear (1D) and two-dimensional (2D) codes up to 76.19 mm wide and up to 57.15 mm tall. 1D and 2D direct part marks (DPM) of up to 44 mm x 44 mm can be verified to MIL-STD-130, ISO, and GS1 standards.

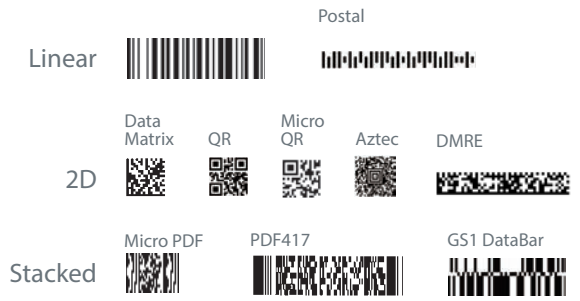
The LVS-9580 verifies multiple symbologies, including any combination of linear, 2D (Data Matrix, QR Code, and Aztec Code), and stacked linear (PDF417, MicroPDF, and Composite codes).

Powered by a 2.0 m USB 2.0 cable, the LVS-9580 verifies barcodes on a wide range of surfaces including plastics, PCBs, metal, cardboard, and shipping containers.

LVS-9580: At a Glance

- Stitching feature to grade barcodes larger than the field of view.
- Ideal for multiple line production and warehouse environments.
- Validates printed barcodes to ISO / IEC, ANSI, GS1, and UDI print quality standards.
- Validates direct part marks (DPM) to ISO, MIL-STD-130, and GS1 standards.
- Software upgrade options include Multi-Sector for verification of multiple barcodes on a label.
- 21 CFR Part 11 compliant-ready.
- Supports 19 languages.
- Quality data reporting for auditing purposes.
- Includes NIST-Traceable Calibrated Conformance Standard Test Card for calibrating the system.
- Save verification reports to PDF.

LVS-9580: Available Symbologies



Please see the Ratings and Specifications for a complete list of supported symbologies.

ISO/ANSI for 1D
LVS-95XX series barcode verifiers inspect all nine ISO and ANSI parameters for linear (1D) barcodes, have the ability to identify blemishes, and can perform simple human-readable validation.

ISO/ANSI for 2D
The LVS-95XX series verifies 2D codes and reports all parameters as specified in the applicable symbology specification.

Analytical Tools
Equipped with numerous analytical tools to identify and evaluate barcode errors. Problems are color-coded to make problem solving easy.

Software
LVS-95XX software includes GS1 System Symbol Specification Tables. GS1 tables set standards for barcode data structure and how to maintain the quality of codes during barcode creation. OMRON Microscan offers an online training course on GS1 tables and how these apply to different organizations.

Software Upgrade: EAIV
The Enhanced Application Identifier Verification (EAIV) option verifies that all GS1 Application Identifiers, such as Expiration Date, Global Trade Item Number (GTIN), and Batch Number, embedded in the data structure of a GS1 barcode match the data programmed in the EAIV feature by the user.

User Permission Options
Manage permissions through LVS-95XX software: Passwords are stored in a local database. All passwords are encrypted, include an expiration date, and count failed password attempts.

Manage permissions through Microsoft Active Directory: User privileges are based on Microsoft authentication and LVS-95XX permissions are assigned based on group membership.

Portability
Connects to the latest Windows OS tablets.

Ordering Information

Code Verification Systems

Type	Model
LVS-9580 Handheld 1D & 2D Barcode Verification	**9580-C-3**
LVS-9580 Handheld 1D, 2D & DPM Barcode Verification	**9580-DPM**
LVS-9580 Handheld 1D, 2D & DPM Barcode Verification, High Resolution	**9580-DPM-HD**

Accessories

Type	Model
EAN / UPC Calibrated Conformance Test Card	**98-CAL040**
GS1-128 Calibrated Conformance Test Card	**98-CAL041**
Data Matrix Calibrated Conformance Standard Test Card (for 9580-DPM-HD)	**98-CAL042**
LVS-9510 and LVS-958□ Software Upgrade Option: Multi-Sector Verification	**98-SOF0039**
LVS-95□□ Software Upgrade Option: Automatic Login Feature	**98-SOF0056**
Software Upgrade Option: EAIV (Enhanced Application Identifier Verification)	**98-SOF0088**
LVS-9580 Upgrade (1D / 2D to DPM)	**98-SOF0095**
LVS-95□□ IQ-OQ Validation Procedure Guidelines, v. 4.3 and later (includes text cards)	**98-LVS0077**
Validation Test Cards (35 test cards)	**98-LVS-VTC**

Ratings and Specifications

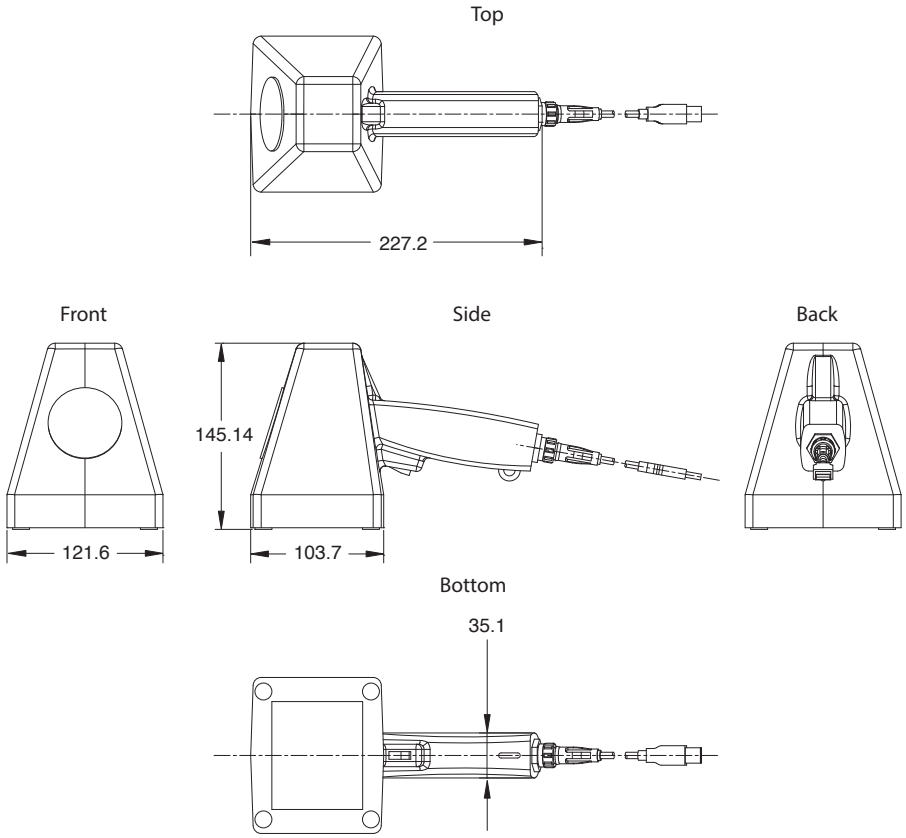
Supported standards	Application standards	AIAG / DAMA / JAPIA / Odette
		ALDI
		ISO / IEC 29158
		DHL
		FPMAJ
		French CIP
		GS1 General Specifications
		HDMA Guidelines
		Health Industry Barcode (HIBC)
		IFAH
		ISO / IEC 15415 / 15416
		Italian Pharmacode
		Japan Codabar
		Laetus Miniature Pharmacode
		Laetus Pharmacode
		Laetus Standard
		MIL-STD-130N Change 1
		Pharmacy Product Number (PPN)
		Automatic GS1 or ISO
		GS1 (NTIN)
		Miniature Pharmacode
		Postal (EIB, USPS IMB / Code 128, POSTNET, Japan Post)
		PZN-big normal small (German Pharmacode)
	GS1 (NTIN)	Data Matrix for Healthcare
		Data Matrix (ECC 200)
		EAN / UPC
		EAN / UPC and Extended Codes
		EAN / UPC with CC
		GS1 DataBar Omnidirectional
		ITF-14
		GS1 DataBar-14 with CC (formerly RSS-14 with CC)
		UCC / EAN with Supplementals
		UCC / EAN-128
		UCC / EAN-128 with CC
	ISO conformance standards	ISO / IEC 15415, 15416, 15418
		ISO / IEC 15426-1, 15426-2
		ISO / IEC 29158 (DPM Cat 0) / AIM DPM-1-2006
		ISO / IEC 21471: 2020
		All supported ISO/IEC symbology specifications

Supported symbologies	Linear (1D) symbologies	Codabar
		Code 128 Code 39 Code 93
		GS1 DataBar Expanded and Limited
		DataBar
		DataBar Expanded and Limited
		DataBar Omnidirectional
		DataBar Stacked and Truncated
		EAN / JAN-13
		EAN / JAN-8
		Enterprise Intelligent Barcode (EIB) 4-State (4SB)
		French CIP
		GS1-128
		Hanxin Code
		HIBC
		Interleaved 2 of 5 (ITF)
		ITF-14
		Japan Post
		MaxiCode
		MSI Plessey
		Pharmacode–Italian and Laetus
		PZN 7 and PZN 8
		UPC-A and UPC-E
		USPS-128
		USPS Intelligent Mail Barcode (4-State Barcode)
	Two-dimensional (2D) symbologies	Aztec Code
		DataBar with CC-A, CC-B, or CC-C
		EAN / JAN-13 with CC-A, CC-B, or CC-C
		EAN / JAN-8 with CC-A, CC-B, or CC-C
		ECC-200 (Data Matrix)
		Enterprise Intelligent Barcode (EIB) Complex Mail Data Marks (CMDM)
		GS1-128 with CC-A, CC-B, or CC-C
		Micro QR Code
		MicroPDF417
		PDF417
		QR Code
		UPC-A with CC-A, CC-B, or CC-C
		UPC-E with CC-A, CC-B, or CC-C
		DMRE (ISO / IEC 21471: 2020)
Minimum PC requirements (PC supplied by customer)		• Windows®7 Pro SP1 or Windows®10 Pro • Intel® Core™ i3 or higher • 4 GB RAM • 800 x 600 screen resolution • One USB 2.0 port available per unit
Field of view	Standard (9580-C-3)	76.19 mm horizontal 57.15 mm vertical
	DPM (9580-DPM)	44 x 44 mm
	HD (9580-DPM-HD)	33 x 25 mm
Minimum cell size	Standard (9580-C-3) DPM (9580-DPM)	1D = 4.0 mils (0.10 mm) 2D = 5.9 mils (0.15 mm)
	HD (9580-DPM-HD)	2D = 2.0 mils (0.05 mm)
Camera		5 million pixels
		Object distance: Contact
Illumination		Red dome (660 nm)
Environmental specifications	Ambient temperature range	Operating: 4 to 46°C, Storage: -20 to 60°C
	Ambient humidity range	Operating: 20% to 80% (with no icing or condensation), Storage: 20% to 95% (with no icing or condensation)
Communications		USB 2.0 A plug to Mini-B plug cable, 2 m
Power supply		USB powered 5 VDC at 400 mA
Weight	Unpackaged standalone	Approx. 0.64 kg
	Shipping weight	Approx. 1.81 kg (includes all cables and other items packaged in shipping box)
Dimensions		215.9 x 139.7 x 120.6 mm (H x D x W)
Calibrated Conformance Test Card (Included with system)		• Included with 9580-C-3: EAN / UPC Calibrated Conformance Standard Test Card • Included with 9580-DPM: EAN / UPC Calibrated Conformance Standard Test Card • Included with 9580-DPM-HD: Data Matrix Calibrated Conformance Standard Test Card
Safety standards		FCC, CE, UL, KC, RCM

* Contact OMRON for a complete list of supported ECC-200 (Data Matrix) codes.
CC=Composite Components

Dimensions

(Unit: mm)



Related Manuals

Man.No.	Model	Manual
84-9310001-02	LVS-95□□	Barcode Quality Station Operations Manual
84-9310009-02	LVS-95□□	Software Installation Guide

Code Verification System

LVS-9585 series

Portable Barcode Verification System

The LVS-9585 is a high-performance handheld solution for off-line barcode verification to ISO / IEC, ANSI, and GS1 standards. Featuring a high-resolution 5.0 megapixel camera, the LVS-9585 reads and analyzes linear (1D) and two-dimensional (2D) codes up to 76.19 mm wide and up to 57.15 mm tall. 1D and 2D direct part marks (DPM) of up to 44 mm x 44 mm can be verified to MIL-STD-130, ISO, and GS1 standards.

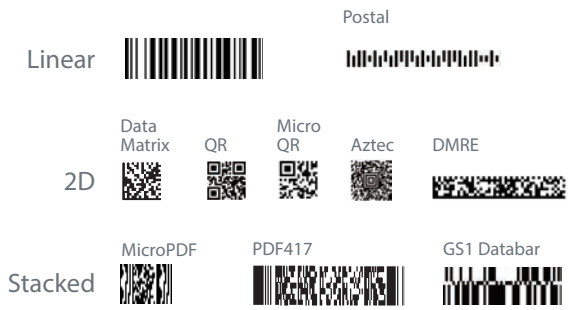
The LVS-9585 verifies multiple symbologies, including any combination of linear, 2D (Data Matrix, QR Code, and Aztec Code), and stacked linear (PDF417, MicroPDF, and Composite codes).

Powered by a 2.0 m USB 2.0 cable, the LVS-9585 verifies barcodes on a wide range of surfaces including plastics, PCBs, metal, cardboard, and shipping containers.

LVS–9585: At a Glance

- Verify a broad variety of direct part marks as well as 1D and 2D printed barcodes with a single model.
- Software automatically selects best lighting performance from integrated red or white dome and 30° angle lighting.
- Validates printed barcodes to ISO / IEC, ANSI, GS1, and UDI print quality standards.
- Validates direct part marks (DPM) to ISO, MIL-STD-130, and GS1 standards.
- Software options include Multi-Sector for verification of multiple barcodes and GS1 AI content check.
- 21 CFR Part 11 compliant-ready.
- Supports 19 languages.
- Export verification reports to Excel or SQL database.
- Save verification reports to PDF.
- Includes NIST-Traceable Calibrated Conformance Standard Test Card for calibrating the system.

LVS–9585: Available Symbologies



Please see Ratings and Specifications for a complete list of supported symbologies.

ISO/ANSI for 1D
LVS-95XX series barcode verifiers inspect all nine ISO and ANSI parameters for linear (1D) barcodes, have the ability to identify blemishes, and can perform simple human-readable validation.

ISO/ANSI for 2D
The LVS-95XX series verifies 2D codes and reports all parameters as specified in the applicable symbology specification.

Analytical Tools
Equipped with numerous analytical tools to identify and evaluate barcode errors. Problems are color-coded to make problem solving easy.

Software
LVS-95XX software includes GS1 System Symbol Specification Tables. GS1 tables set standards for barcode data structure and how to maintain the quality of codes during barcode creation.
OMRON Microscan offers an onlinetraining course on GS1 tables and how these apply to different organizations.

Software Upgrade: EAIV
The Enhanced Application Identifier Verification (EAIV) option verifies that all GS1 Application Identifiers, such as Expiration Date, Global Trade Item Number (GTIN), and Batch Number, embedded in the datastructure of a GS1 barcode match the data programmed in the EAIV feature by the user.

User Permission Options
Manage permissions through LVS-95XX software: Passwords are stored in a local database. All passwords are encrypted, include an expiration date, and count failed password attempts.

Manage permission through Microsoft Active Directory: User privileges are based on Microsoft authentication and LVS-95XX permissions are assigned based on group membership.

Portability
Connects to the latest Windows OS tablets.

Ordering Information

Code Verification Systems

Type	Model
LVS-9585 Handheld 1D, 2D & DPM Barcode Verification, High Resolution	**9585-DPM-HD**
LVS-9585 Handheld 1D, 2D & DPM Barcode Verification, Red and White Light	**9585-DPM**

Accessories

Type	Model
EAN / UPC Calibrated Conformance Test Card	**98-CAL040**
GS1-128 Calibrated Conformance Test Card	**98-CAL041**
Data Matrix Calibrated Conformance Standard Test Card (for 9585-DPM-HD)	**98-CAL042**
LVS-9510 and LVS-958□ Software Upgrade Option: Multi-Sector Verification	**98-SOF0039**
LVS-95□□ Software Upgrade Option: Automatic Login Feature	**98-SOF0056**
Software Upgrade Option: EAIV (Enhanced Application Identifier Verification)	**98-SOF0088**
LVS-9580 Upgrade (1D / 2D to DPM)	**98-SOF0095**
LVS-95□□ IQ-OQ Validation Procedure Guidelines, v. 4.3 and later (includes text cards)	**98-LVS0077**
Validation Test Cards (35 test cards)	**98-LVS-VTC**

Ratings and Specifications

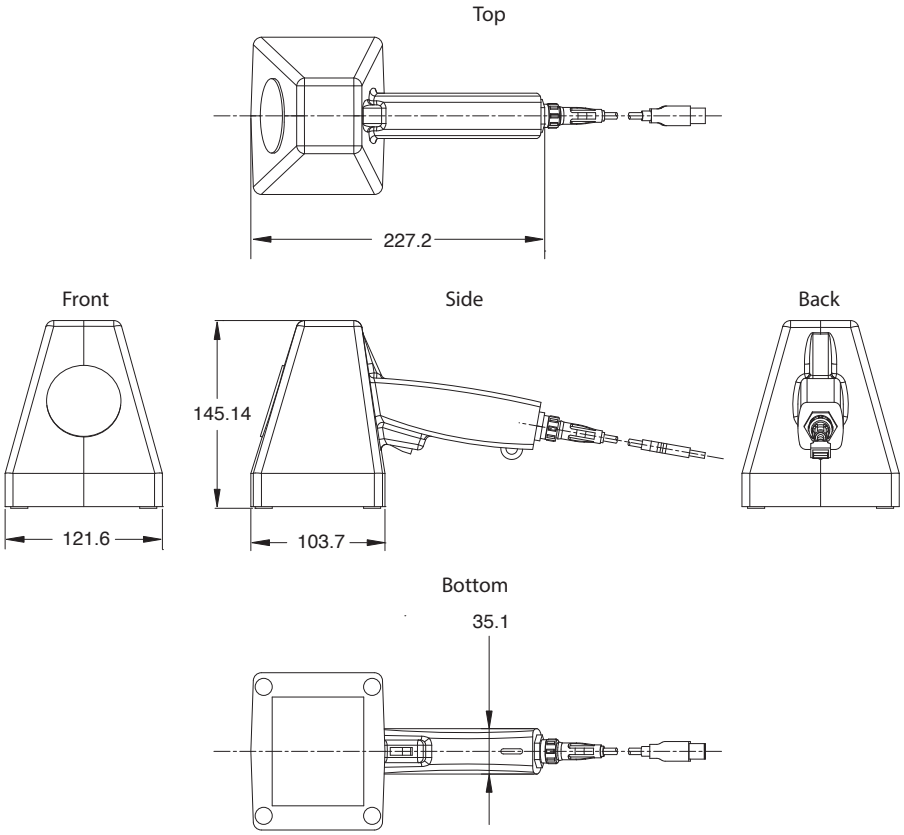
Supported standards	Application standards	AIAG / DAMA / JAPIA / Odette
		ALDI
		ISO / IEC 29158
		DHL
		FPMAJ
		French CIP
		GS1 General Specifications
		HDMA Guidelines
		Health Industry Barcode (HIBC)
		IFAH
		ISO / IEC 15415 / 15416
		Italian Pharmacode
		Japan Codabar
		Laetus Miniature Pharmacode
		Laetus Pharmacode
		Laetus Standard
		MIL-STD-130N Change 1
		Pharmacy Product Number (PPN)
		Automatic GS1 or ISO
		GS1 (NTIN)
		Miniature Pharmacode
		Postal (EIB, USPS IMB / Code 128, POSTNET, Japan Post)
		PZN-big, normal, small (German Pharmacode)
	GS1 US certification	Data Matrix for Healthcare
		Data Matrix (ECC 200)
		EAN / UPC
		EAN / UPC and Extended Codes
		EAN / UPC with CC
		GS1 DataBar Omnidirectional
		ITF-14
		GS1 DataBar-14 with CC (formerly RSS-14 with CC)
		UCC / EAN with Supplementals
		UCC / EAN-128
		UCC / EAN-128 with CC
	ISO conformance standards	ISO / IEC 15415, 15416, 15418
		ISO / IEC 15426-1, 15426-2
		ISO / IEC 29158(DPM Cat 0, 1, 2) / AIM DPM-1-2006
		ISO / IEC 21471: 2020
		All supported ISO / IEC symbology specifications
Supported symbologies	Linear (1D) symbologies	Codabar
		Code 128, Code 39, Code 93
		GS1 DataBar Expanded and Limited
		DataBar
		DataBar Expanded and Limited
		DataBar Omnidirectional
		DataBar Stacked and Truncated
		EAN / JAN-13
		EAN / JAN-8
		Enterprise Intelligent Barcode (EIB) 4-State (4SB)
		French CIP
		GS1-128
		Hanxin Code
		HIBC
		Interleaved 2 of 5 (ITF)
		ITF-14
		Japan Post
		MaxiCode
		MSI Plessey
		Pharmacode–Italian and Laetus
		PZN 7 and PZN 8
		UPC-A and UPC-E
		USPS-128
		USPS Intelligent Mail Barcode (4-State Barcode)
	Two-dimensional (2D) symbologies	Aztec Code
		DataBar with CC-A, CC-B, or CC-C
		EAN / JAN-13 with CC-A, CC-B, or CC-C
		EAN / JAN-8 with CC-A, CC-B, or CC-C
		ECC-200 (Data Matrix)
		Enterprise Intelligent Barcode (EIB) Complex Mail Data Marks (CMDM)
		GS1-128 with CC-A, CC-B, or CC-C
		Micro QR Code
		MicroPDF417
		PDF417
		QR Code
		UPC-A with CC-A, CC-B, or CC-C
		UPC-E with CC-A, CC-B, or CC-C
		DMRE (ISO / IEC 21471: 2020)

* Contact OMRON for a complete list of supported ECC-200 (Data Matrix) codes.
CC=Composite Components

Minimum PC requirements (PC supplied by customer)		• Windows®7 Pro SP1 or Windows®10 Pro • Intel® Core™ i3 or higher • 4 GB RAM • 800 x 600 screen resolution; • One USB 2.0 port available per unit
Field of view	DPM (9585-DPM)	44 x 44 mm
	HD (9585-DPM-HD)	33 x 25 mm
Minimum cell size	DPM (9585-DPM)	1D = 4.0 mils (0.10 mm) 2D = 5.9 mils (0.15 mm)
	HD (9585-DPM-HD)	2D = 2.0 mils (0.05 mm)
Camera		5 million pixels
		Object distance: Contact
Illumination		Red dome (660 nm), white dome, 30° angle
Environmental specifications	Ambient temperature range	Operating: 4 to 46°C, Storage: -20 to 60°C
	Ambient humidity range	Operating: 20% to 80% (with no icing or condensation), Storage: 20% to 95% (with no icing or condensation)
Communications		USB 2.0 A plug to Mini-B plug cable, 2 m
Power supply		USB powered 5 VDC at 400 mA
Weight	Unpackaged standalone	Approx. 0.68 kg
	Shipping weight	Approx. 1.51 kg (Includes all cables and other items packaged in shipping box)
Dimensions		215.9 x 139.7 x 120.6 mm (H x D x W)
Calibrated Conformance Test Card (Included with system)		• Included with 9585-DPM: EAN / UPC Calibrated Conformance Standard Test Card • Included with 9585-DPM-HD: Data Matrix Calibrated Conformance Standard Test Card
Safety standards		FCC, CE, UL, KC, RCM

Dimensions

(Unit: mm)



Related Manuals

Man.No.	Model	Manual
84-9310001-02	LVS-95□□	Barcode Quality Station Operations Manual
84-9310009-02	LVS-95□□	Software Installation Guide

MEMO

Terms and Conditions Agreement

Read and understand this catalog.

Please read and understand this catalog before purchasing the products. Please consult your OMRON representative if you have any questions or comments.

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