

DATAMAN 475VS SERIES OFFLINE BARCODE VERIFIER

The next generation of offline verification

Barcode verification is the process of grading the quality of barcodes according to globally accepted ISO standards. Cognex barcode verification technology ensures the readability and compliance of 1D and 2D barcodes.

The DataMan® 475VS verifier series offers more robust grading algorithms, diagnostic tools, and reporting options than any other offline verifier on the market. The adjustable height stand and built-in software focusing feature provides users with an easy, fast, and accurate way to present labels and parts.

The ISO-compliant, multi-quadrant lighting options ensure codes are properly illuminated for the best results possible. The calibration card, which is included in the verifier kits, and powerful Cognex algorithms ensure that the DataMan 475VS not only conforms to industry standards but also provides accurate and repeatable results.



Two models with different lighting options:

- **Label version** for flat printed codes
- **Direct Part Mark (DPM) version** with 30-, 45-, and 90-degree lighting angles to properly illuminate a wide variety of substrates, including paper

ISO Quality Standards:

- ISO/IEC 15415
- ISO/IEC 15416
- ISO/IEC 29158
- ISO/IEC 15426-1
- ISO/IEC 15426-2



DataMan 475VS-Label



DataMan 475VS-DPM

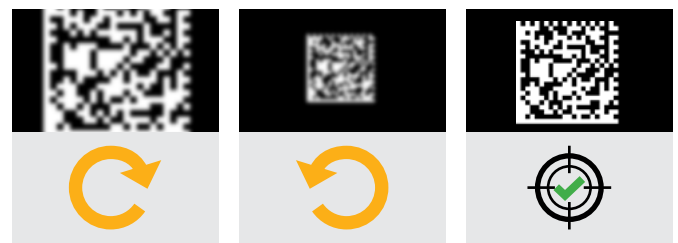
Stand accessory adjusts to small and large parts

The adjustable stand is compatible with both label and DPM models. Parts of varying size and shape can be quickly and easily positioned for verification. An optional extension arm allows larger parts to fit under the verifier.



Easily focus for accurate verification results

The Focus Feedback software tool guides users on precisely how to adjust the height of the stand to properly focus the verifier. Visual confirmation is given when the code is in focus, so users never have to second guess the accuracy of their verifier.



Verification software provides clear and easy to read results

The DataMan 475VS barcode verification software provides intuitive visual diagnostic information to identify one-off or trending code quality issues. It assigns an overall grade to a code based on measurements of ISO-defined quality parameters. These parameters measure several factors that affect a barcode reader's ability to identify and decode a code, maximizing read rates down-process.

Whether using for real-time diagnostics, archiving results for traceability and compliance, or aggregating for statistical process analysis, the DataMan 475VS provides the flexibility and wealth of data to meet your code quality assurance needs.

The screenshot displays the DataMan 475VS software interface. At the top, the overall grade is shown as 'D (1.8) 1.0/20/668/45'. Below this, a list of 'Grade Parameters' is shown with corresponding grades: Unread Error Correction (ERC) 30% B, Symbol Contrast (SC) 65% B, Modulation (MOD) A, Reflection Straggle (RS) C, Axial Nonuniformity (ANU) 0.7% A, Sidal Nonuniformity (SNU) 1.3% B, Fixed Pattern Damage (FPD) 4.0 B, Left V. Size (LVS) A, Bottom V. Size (BVS) A, Left Outer Zone (LOZ) A, Bottom Outer Zone (BOZ) A, Top Outer Zone (TOZ) A, Right Outer Zone (ROZ) A, Top Transition Ratio (TRR) 0% A, Right Transition Ratio (RTR) 0% A, Top Clock Teeth (CTC) A, Right Clock Teeth (RCT) A, Average Grade (AG) 4.0 A, and Defects.

Annotations point to various features: 'Overall grade' points to the top right; 'Individual quality parameter grades' points to the list of parameters; 'Pre-loaded application standards' points to the 'Generic Acceptance Criteria' section; 'Real time trend analysis' points to the 'Grade' trend graph at the bottom; and 'Adjustable grade trend threshold alerts' points to the 'Go Live' button.

Diagnose code quality issues quickly and easily with color-coded, data-rich visual diagnostic tools.

The first screenshot shows a data-rich visual diagnostic tool with a grid of color-coded data points (red, yellow, green) representing different quality parameters across a barcode. The second screenshot shows a barcode with a data matrix and a list of quality parameters and their corresponding grades.

Automatically save data-rich PDF or HTML reports for every verification or only for problem codes.

The screenshots show examples of data-rich PDF and HTML reports generated by the software, displaying various quality parameters and their corresponding grades.

Archive the full data from each ISO verification result to an FTP server or the cloud.




The screenshot shows a list of verification results with columns for ISO standard, Pass/Fail status, and various quality parameters. A 3D visualization of a barcode is overlaid on the data, showing the physical structure of the code.

Selecting the right DataMan 475VS model

	475VS-LABEL	475VS-DPM
Codes printed onto paper, plastic, or matte surfaces	✓	✓
Codes larger than 33 mm wide	✓	
Codes as small as 3.5 mil		✓
Dot peen codes		✓
Codes printed on curved or textured surfaces		✓
Codes printed on shiny reflective surfaces		✓

Choosing between verification methods

An ideal application for offline verification is batch sampling of barcodes to monitor quality, which helps to prevent costly reprints and waste. Companies also use sample testing as proof of code quality when an item leaves or arrives at manufacturing facilities. All companies producing or with barcodes can benefit by having at least one ISO-compliant verifier. Inline verification options are also available and can be used independently or in combination with offline options. The 475VS offline models can be increased to the inline 475V verification speed at any time with a simple software feature key upgrade.

	STANDARDS-BASED GRADING	OFFLINE VERIFICATION	INLINE VERIFICATION
			
What is it?	Verification software that grades the same parameters with the same algorithms and calibration as a verifier, without the fixed lighting. Monitors code quality but is not ISO-compliant.	Portable barcode verifier that spot checks individual parts for batch sampling. Provides ISO-compliant reports proving the level code quality when leaving or arriving facilities.	Barcode verifier that is installed on a production line to verify 100% of codes. Provides ISO-compliant grading to meet industry standards.
Speed	Application dependent	1D and 2D: 4 seconds/code*	1D: 20 codes/second* 2D: 10 codes/second*
When to use	<ul style="list-style-type: none"> ISO-compliant verification is not required or possible Code or part size does not fit verifier specifications Helps ensure downstream code readability and gives early warning of decreased mark quality 	<ul style="list-style-type: none"> ISO-compliant verification is required Codes or parts are inconsistently placed on the manufacturing line, or parts are variable in shape or size Batch sampling is OK Portability is needed 	<ul style="list-style-type: none"> ISO-compliant verification is required or mandated by law Codes or parts are consistently placed on the manufacturing line and do not have much variation Proof of code quality level is necessary To calibrate or monitor marking machines

*Code symbology, size, placement, part substrate, and marking type all affect the verification speed.

To learn more about these code quality monitoring options, visit www.cognex.com/barcode-verifiers

SPECIFICATIONS

	DataMan 475VS-Label	DataMan 475VS-DPM
Lighting Types	660 nm, 45°, 4-quadrant	660 nm, 45°, 4-quadrant 660 nm, 30°, 1-quadrant, 2 quadrant, 4-quadrant 660 nm, 90°
Symbologies	1D: UPC/EAN, Code 128, ITF-14, I25, Code 39, Code 93, Codabar 2D: Data Matrix (ECC 200), QR Code, Micro QR Code, PDF417	1D: UPC/EAN, Code 128, Code 39 2D: Data Matrix (ECC 200), QR Code, Micro QR Code
Field of View	80 x 60 mm	35 x 29 mm
Working Distance	60 mm	41 mm
Depth of Field (WD Tolerance)	+/- 3 mm	5 mil symbols: +/- 1.5 mm 15 mil symbols: +/- 2.5 mm
Minimum X-Dimension	6 mil (0.15 mm)	3.75 mil (0.095 mm)
Image Sensor	Sony IMX264LLR 5 MP (2448 x 2048 pixels) 2/3 inch CMOS, global shutter 8.8 mm x 6.6 mm (H x V); 3.45 µm square pixels	
Lens Type	12 mm fixed focal length, f/4 fixed aperture, 2/3 inch sensor format, C-mount lens (users cannot alter lens)	35 mm fixed focal length, f/4 fixed aperture, 2/3 inch sensor format, C-mount lens (users cannot alter lens)
Communications	Ethernet	
Power Consumption	24 VDC±10%, 1.5 A max (36 W peak)	
Weight	Verifier	945 g
	Stand	6191.5g
Dimensions	Verifier	185 x 185 x 175 mm
	Stand	485.73 x 424 x 280 mm (638.13 x 424x 280 mm with extension arm)
Environmental Protection	IP65	IP65 with cables and appropriate lens cover attached
Approvals	CE, TUV, FCC, KC	
Industry Standards Compliance	ISO/IEC 15415, ISO/IEC 15416, ISO/IEC TR 29158, ISO/IEC 15426-1, ISO/IEC 15426-2	
Application Standards	GS1, MIL-STD 130 UID, UDI, HIBCC, ISO 15434, Russian Crypto-Code, Custom Application Standards	
Maximum Codes per Second	1D and 2D: 4 seconds/code*	2D: 4 seconds/code*
Maximum Linear Line Speed	3.6 ft/second (1.1 m/second)	4.6 ft/second (1.4 m/second)
Coplanarity Tolerance	+/- 3° of coplanar	+/- 2° of coplanar

* Code symbology, size, placement, part substrate, and marking type all affect the verification speed.

COGNEX

Companies around the world rely on Cognex vision and barcode reading solutions to optimize quality, drive down costs and control traceability.

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