REA VERIFIER

QUALITY CONTROL DEVICES
FOR MATRIX- AND BARCODES

REA MLV-2D
Verifier for Matrix-
and Barcodes

Optimize print quality
by the aid of the detailed measuring results

The REA MLV-2D is a matrix- and barcode verifier which has been developed in conformance to international standards. The measurement uses defined angles distances and illuminations to achieve repeatable results and quality information.

The system uses a precise optical camera module with a CMOS Sensor type. The measuring area is shielded to avoid any ambient light influences. Reports are visualized by using the REA TransWin32 Software. Communication is provided by the standardized, reliable and fast TCP/IP network communication. Additional results are shown on the device display to provide a PC independent operation.

The REA Verifier result allows a quick analysis why reading rates in applications are too low.

Options

Four different camera modules with different field of views and a selection of fitting bottom plates are available. This allows adapting the verifier to different code sizes.

REA ScanLink - Data structure analysis

ISO standardization defines a clear user data structure which is encodes in different bar- and matrix codes. REA ScanLink knows this data structures and provides a detailed analysis. Informations about the origin of the code and data fields (Item number, date information-ans, Lots, etc) are reported. If a code does not incorporate such a data structure then this is higlighted and reported as an error.

REA Code analysis

In several application of bar- and matrix codes the encoded data follows a proprietary structure (unknown to anybody except the creator).
REA Code analysis provides an option to define the structure within a table. Possible to define are field lenghts, numerical or alphanumerical and other attributes. The user transfers the table to the REA Verifier.

The process of verifcation checks then in addition if the proprietary data sequence is properly encoded or not. If not an error message appears. This function is not for ISO standardized data structures.

REA Article Database 32

This is a database which assigns to each verified barcode additional article informations. This is i. e. the article description, a price secondary article informations and date informations. Date informations like „best before use" or „Use until" can verified individually for each article and lead separate to a pass/fail result if dates in the code are incorrect. In principle Article Database 32 can be configured by the user to provide a fail result if the article does not exist and/or if the date range is incorrect. This additional data base supported code content control replaces a separate control step for this requirement.

Code Compare

This function compares the actually decoded bar code content with a previously stored master code. Equal code contents are accepted. All other combination will cause a failed result. The user can select if the result shall be graded or if the result is shown only informative.

90° coaxial Illumination

This Illumination provides a uniform vertical illumination for specific DPM applications for mirror like glossy surfaces. Even dark glossy sufaces will work. In addition this illumination allows to verify dot peen codes and codes lying deeper in a slot.

Features

- contactfree measurement by a CMOS Camera
- easy exchangeable camera modules to adapt to different code sizes
- variable illumination (Angle is either 10° or 45°). Light source is either red or white light. All variations are software selectable included in each device
- capable to measure DPM (direct parts marking) codes
- field of view is protected against ambient light influences
- camera live image on the device display to allow an easy verifier positioning
- verification according to ISO/IEC 15415 for printed matrix codes
- verification according to ISO/IEC TR 29158 / AIM DPM-1-2006 for direct parts marking matrix codes
- verification according to ISO/IEC 15416 or ANSI X3.182 for barcodes
- verification according to the GS1 General Specifications

- verification of GS1-128 data structures
- verification of optional parameters for optimizing the print process
- multi language user interface and reports
- easy to position

Code Types

- **Matrix Codes (2D):**
  DataMatrix, DPM-Matrix Codes, QR-Code, MicroQR-Code, Aztec Code, PDF 417, more under development

- **Barcodes (1D):**
  EAN-13, UPC-A, UPC-E with/without ADD-ON, EAN-8, 2/5 Interleaved with/without check digit, ITF-14, DHL Express, code 39 with/without check digit, PZN-code, Code 32, Code 128, GS1-128 with/without data structure check, GS1 Databar (limited, stacked, expanded, expanded stacked, truncated, omnidirectional), GS1 Databar composite

- **Optional Codes (1D):**
  2/5 3 Bars, 2/5 5 Bars, 2/5 IATA, 2/5 Baggage, 2/5 DHL Express, Code39 Full ASCII, Code93, MSI, Plessey, Code 128 UPU, Code 39 UPU, Code 39 HIBC, Code 128 HIBC, Codabar Monarch (18), LAETUS Pharmacode, LAETUS Mini Pharma code

Technical Data

- measuring accuracy in conformance to ISO/IEC 15426-2 and ISO/IEC 15426-1, System Requirement: PC with Windows 7 or later
- TransWin32 included
- ARM9, 32 bit Microprocessor
- 32 MB RAM, 32 MB Flash ROM
- embedded Linux operating system
- internal real time clock
- red light 660 nm and white 4.000 °K LED illumination
- software selectable illumination angles 45°, 10° or both
- graphic color display, 320 x 240 pixels with backlight
- signal LED for power, pass and fail indication
- easy to understand verification report
- power supply by Power over Ethernet (uses Ethernet cable). Power supply is included in delivery
- ethernet port RJ45 for TCP/IP communication and PoE Power supply
- size: 203 x 203 x 300 mm
- weight: 1,200 g
- System Requirement: PC with Windows 7 oder later

Focal length	Field Of View (FOV)	Typical X-dimension	Minimum X-dimension	Pixel size
16 mm	92 x 52 mm	0.6 mm	0.36 mm	72 µm
25 mm	56 x 45 mm	0.35 mm	0.22 mm	44 µm
35 mm	39 x 31 mm	0.25 mm	0.15 mm	31 µm
50 mm	18 x 14 mm	0.15 mm	0.08 mm	14 µm

Verifying DataMatrix codes on mailing bags

Verification for matrix codes and barcodes

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