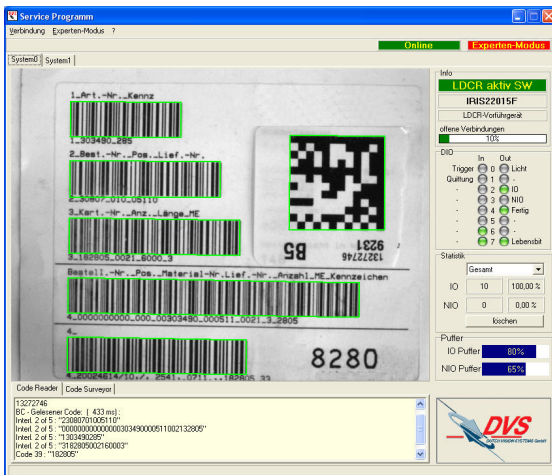


## Reader LDCR

The LDCR is a compact and network ready code reader with excellent features. The Windows® CE® based system contains image taking, frame grabbing and decoding in one piece, compared to a PC-based system reducing investments and space consumption. The elaborate installation of an industrial PC-housing is not needed anymore.

The LDCR is a flexible module based tool (different software applications, lenses and external lighting systems) that matches a widespread variety of tasks and situations.



Service Programme

### Software

The software service program enables to set up and control the code reader from any network system and also allows to observe the decoding results. Performance analysis, system tuning and output of images and code values can be managed by the service program. Important information is stored in a decoding statistic and in the easy comprehensible status overview.

### Delivery package

Turnkey System containing:

- Sensor with lens in protective housing
- Lighting
- Cable set
- Software package
- Installation guide and tutorial



### Features and assets

- Reading distances up to a couple of meters
- Intuitive user interface
- Password protected expert mode
- Really easy set up and adjustment
- Very fast reading ability
- Life image decoding function
- Save correct and incorrect decoded images
- Comfortable software update function
- A variety of external communication interfaces
- Easy install and put into operation

### Scope of use

- Decoding of dot peen, laser and printed codes
  - Inspection of parts specifications on form and dimensions
  - Checking of best-before dates, article numbers and the like
  - Control of prints
  - Inspection of bore holes and screwings on presence and defects
  - Presence check of lids, covers and other components
- And many applications more!

### Decoding and reading examples



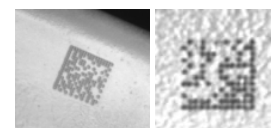
Best-before date on bottles



Laser codes on glas



Lasered code on synthetic surface



Dot peen code on metal surface



Laser code  
(Original size 2,4x2,4mm)



Best-before date on carton

## Software modules for the LDCR-Reader

### Data matrix/Barcode recognition

- Parallel Barcode and Data matrix recognition in one view
- Automatic additional character teaching on stored images for recognition improvement
- Supported codes:  
Data Matrix ECC200 (ISO 16022-Standard), Code39, Code 2 of 5 interleaved, Code 128, EAN 8, EAN 13, EAN 128
- Omni directional
- Automatic recognition of code type
- Automatic correction of perspective distortion, code damage, change of lighting conditions
- Multi reading function for multiple codes in the field of view
- Checking of the code content by comparison with a given code
- Code angle inspection and presentation of the result

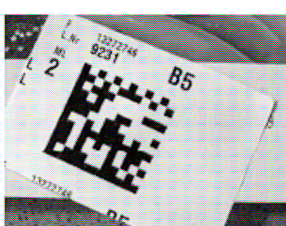
### Code Surveyor 1D/2D

- Quality assessment for objective code valuation conform ISO/IEC 15415 and ISO/IEC 15416
- Digital output signal when an adjustable quality level is not met
- Individual and overall valuation of quality grade
- Valuation results and image of code can be sent to printer

DVS LDCR Code Surveyor - Qualitätsreport DataMatrix

Publikation	Menge/1	Good / Pass	Defective	Erwartung
Aufzeichnung	0.011	4/4	0/0	10
Kontingenzbelegzahl	0.006	4/4	0/0	10
Spindelbelegzahl	10	4/4	0/0	10
Ungerade Einzelkontingenz	1.000	4/4	0/0	10
Paarbelegzahlen	4.000	4/4	0/0	10
Belegzahlen		4/4	0/0	10
Erwartung		4/4	0/0	10
Erwartung		4/4	0/0	10

10 = 100% OK = 100% OK, 0 = 0% OK = 0% OK



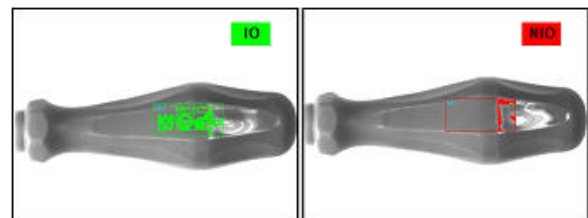
Inspection sheet Datamatrix



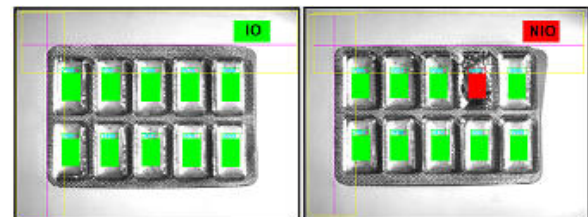
### Check Pro

The software module Check Pro can be flexibly used for many tasks:

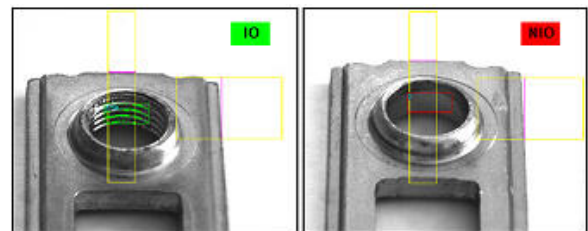
- Presence of printed data
- Checking the colour intensity to meet a certain level
- Presence of drilling holes and threads
- Detection of surface errors
- Completeness of blister packages
- Presence check of lids, covers and other components



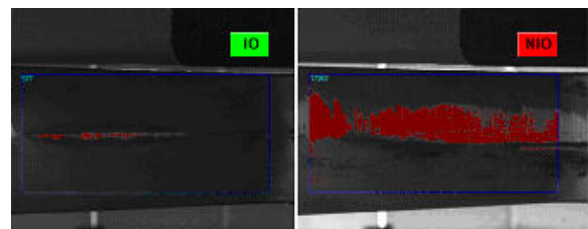
Presence check of prints



Presence check of Blister



Presence check of threads

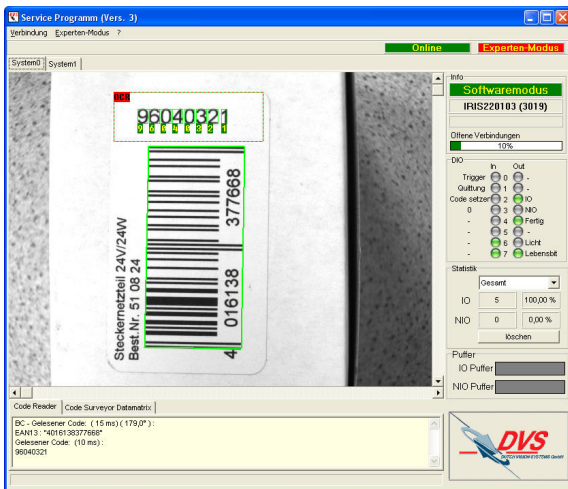


Surface check of unintentional press cuts of cast parts

The module facilitates to define and control up to ten control zones in static or dynamic positions.

## OCR/OCV Lite

- Reliable reading of product data such as expiration date, sell-by date, article number, charge number and production number
- New characters can be taught
- Adjustable sign segmentation and quality level
- OCV-string can be prescribed over the service program or TCP/IP



OCR und Barcode recognition at the same time

## Technical Data

Functions and features	
Reading distance	100 mm to 3.000 mm
Frame rate	up to 30 fps (high speed model: up to 100 fps)
Sensor – Matrox Iris P-Serie	
Type	progressive scan CCD with quadratic pixels 5,6 µm x 5,6 µm effective resolution: 640(h)x480 (v) also available: 1024(h)x768(v) or 1280(h)x1024(v) (4,65 µm x 4,65 µm Pixel size)
Trigger	intern and extern (85 µs), High Speed Mode: 22,8 µs
I/O	
input/output	8 digital inputs, 8 digital outputs (o.c.), 5-24V input power
I/O Board / Protocol	10/100 Mbit Ethernet (TCP/IP, FTP & HTTP)
Serial Interface	RS-232 (ASCII or 3964R), RS-422/485 over external converter (optional)
Mechanical, power and dimensions information	
Lens	zoom lens (standard), CS-mount or fixed focal length lens
Connection	RJ45 for power supply and RS232, RJ45 for Ethernet, DB-25 for dig. IO
Working voltage	24 V DC, 0.4A (10W)
Protective system	IP 65
External lighting	24 V DC, LED spot or circular light
Dimensions	depends on tube length; tube length: 48mm, 72mm, 92mm or 112 mm Additional data in camera house datasheet SG-Tx!

## Interfaces

Results can be exported through several interfaces (RS232, FTP-server, FTP-client, TCP/IP and Windows share).

The LDCR provides digital output signals in line with the result of the recognition or checking task.

## Further interesting features

- All modules can be combined and can work simultaneously
- Trigger debounce time can be set
- The system can be triggered over digital input, serial or TCP/IP, or by software command induced by the service programm
- Continuous decoding during adjustable time span
- DIO signals can optionally be used over level or flank

## Available software licenses

C	1D/2D Single Code Reader
CS1D, CS2D	Code Surveyor 1D, 2D
MR1D, MR2D	Multireader 1D, 2D
CP	Check Pro
OCR/OCV	OCR-OCV-Reader

Further software modules on demand.