



**Bar Code Scanning Systems**  
**Automatic Identification Technology**



**SICK**

# SICK, a Leader in Automatic Identification Technology



The market for automatic identification systems is benefiting from the global trend for automation in all industrial sectors.

Among a variety of different identification technologies the bar code technology offers tailor-made solutions for most applications and is established as a standard throughout the industry.

As one of the leading manufacturers of sensor

equipment, SICK is also offers bar code readers for quick, reliable and economic manufacturing and handling processes in industry, wholesale and transportation. The product portfolio consists of the following bar code scanners:

- Fixed position bar code scanners
- Fixed position matrix code scanners
- Omni directional bar code scanning systems

- Over-the-belt cameras
  - Mobile hand held scanners
- All bar code scanners are supported by sophisticated and easy-to-use software tools. For the operators this means an easy installation and initialization of the total system.

As bar code experts, we not only talk about innovation, we accomplish it. Use our expertise to provide an efficient solution for your application.

## SICK Software



### CLV Setup/Assistant\*

#### Features

- Windows™-based Setup Software
- Supports all CLV and ICR products
- Simple, application-specific scanner configuration
- Extensive, context-based help system
- Direct file transfer to/from all scanners
- Simple parameter cloning for the identical configuration of several bar code scanners
- Integrated terminal emulation for online communication
- Option for printing the scanner configuration as Profile bar codes
- Configuration of a CAN Scanner Network solution is possible
- Stand-alone operation

### RDT 400

- Remote Diagnostic Tool for monitoring scanners (systems)
- Local or central visualization
- Use of existing "state-of-the-art" network infrastructure, such as Ethernet
- Remote monitoring and download of the logfiles via modem, intranet or internet
- Performance monitoring through automatic control of the system read rates and the single scanners in a system
- Detailed visualization:
  - Complete system performance
  - Long-term read rates (up to one year)
  - Detailed read rates
  - Hourly read rates
  - Reading positions
  - Multiread histograms

\*Current software version downloadable at [www.sickusa.com](http://www.sickusa.com)

# Bar code scanners – fixed position



## CLP 100

## CLV 410

## CLV 420

### Optical Features

- CCD scanner
- Fixed Focus
- Best reading performance at short reading distances up to 2.2 in (50 mm)

- Laser scanner
- Fixed Focus

- Laser scanner
- Fixed Focus

### Versions for various reading distances:

- CLV 410 – standard reading distance up to 15.7 in (400 mm)
- CLV 412 – reading distance up to 3.7 in (95 mm), HD bar codes
- CLV 414 – short reading distance starting at 1.6 in (40 mm)

### Versions for various reading distances:

- CLV 420 – standard reading distance up to 14 in (365 mm)
- CLV 421 – extended reading distance up to 28.5 in (725 mm)
- CLV 422 – short reading distance up to 8.0 in (200 mm), HD bar codes

- Line and raster scanner

- Line and raster scanner

### Mechanical Features

- Miniature bar code reader
- Metal housing, IP 40
- Front or lateral reading window

- Compact, zinc die cast housing for the use in industrial environment, IP 54
- Front or lateral reading window

- Compact, zinc die cast housing for the use in industrial environment, IP 65
- Front or lateral reading window

### Special Features

- Standard decoder
- Scanning frequency up to 500 Hz
- Realtime decoding
- Power supply 5 V DC
- 1 programmable digital input/output

- Standard decoder
- High scanning frequency up to 800 Hz
- Wide range of power supply 4.5...30 V DC
- Programmable beeper
- 1 programmable digital input
- 3 programmable digital outputs

- Standard decoder
- Very high scanning frequency up to 1200 Hz
- Wide range of power supply 10...30 V DC
- Programmable beeper
- 2 programmable digital inputs/outputs
- Auxiliary interface for diagnosis of the reading performance

### Operation Features

- Windows based CLP Setup Software, Host Command Configuration

- Easy to use due to Auto-Setup function, Profile Programming, Reflector Polling, CLV Setup Software, Host Command Configuration

- Easy to use due to Auto-Setup function, Profile Programming, Reflector Polling and Host Command Configuration
- Cloning plug for automatic recovery of scanner parameters

Technical Data	CLP 100	CLV 410	CLV 420
Reading Range	1...2.2 in (25...50 mm)	1.4...15.7 in (35...400 mm)	2...28.5 in (50...725 mm)
Scanning Frequency	500 Hz	200...800 Hz	400...1200 Hz
Data Interfaces	RS 232	RS 232, RS 422, RS 485	RS 232, RS 422, RS 485, CANopen, SICK CAN Scanner Network
Dimensions (L x W x H)	2.2 x 0.8 x 1.9 in (55 x 46 x 20 mm)	2.3 x 2.5 x 1.4 in (59 x 62.5 x 35.2 mm)	2.3 x 2.5 x 1.4 in (59 x 62.5 x 35.2 mm)



# Bar code scanners – fixed position



## CLV 430

## CLV 440

## CLV 450

### Optical Features

- Laser scanner
- Fixed Focus

- Laser scanner
- Dynamic Focus Control

- Laser scanner
- Dynamic Focus Control

### Versions for various reading distances:

- CLV 430 – standard reading distance up to 31.5 in (800 mm)
- CLV 431 – medium reading distance up to 16.7 in (424 mm)
- CLV 432 – short reading distance up to 10.0 in (254 mm)
- Line and raster scanner
- Line scanner with oscillating mirror

### Versions for various reading distances:

- CLV 440 – standard reading distance up to 31.5 in (800 mm)
- CLV 442 – short reading distance up to 13.4 in (340 mm), HD bar codes
- Line scanner
- Line scanner with oscillating mirror

### Versions for various reading distances:

- CLV 450 – standard reading distance up to 62.9 in (1600 mm)
- CLV 451 – extreme depth of field for each focus position
- Line scanner
- Line scanner with oscillating mirror

### Mechanical Features

- Compact, zinc die cast housing for the use in industrial environment, IP 65
- Front or lateral reading window

- Compact, zinc die cast housing for the use in industrial environment, IP 65
- Front or lateral reading window

- Compact, zinc die cast housing for the use in industrial environment, IP 65
- Front reading window

### Special Features

- SMART Decoder – high read rates even in the case of damaged, tilted or dirty bar codes
- High scanning frequency up to 800 Hz
- Wide range of power supply 10...30 V DC
- Programmable beeper
- 2 programmable digital inputs/outputs
- Auxiliary interface for diagnosis of the reading performance

- SMART Decoder – high read rates even in the case of damaged, tilted or dirty bar codes
- High scanning frequency up to 800 Hz
- Wide range of power supply 10...30 V DC
- Programmable beeper
- 2 programmable digital inputs/outputs
- Auxiliary interface for diagnosis of the reading performance

- SMART Decoder – high read rates even in the case of damaged, tilted or dirty bar codes
- High scanning frequency up to 1000 Hz
- Wide range of power supply 10...30 V DC
- Programmable beeper
- 2 programmable digital inputs/outputs
- Auxiliary interface for diagnosis of the reading performance

### Operation Features

- Easy to use due to Auto-Setup function, Profile Programming, Reflector Polling and Host Command Configuration
- Cloning plug for the automatic recovery of scanner parameters

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- Cloning plug for the automatic recovery of scanner parameters

Technical Data	CLV 430	CLV 440	CLV 450
Reading Range	2...31.5 in (50...800 mm)	1.2...31.5 in (30...800 mm)	6.2...62.9 in (160...1600 mm)
Scanning Frequency	300...800 Hz	300...800 Hz	400...1000 Hz
Data Interfaces	RS 232, RS 422, RS 485, CANopen, SICK CAN Scanner Network	RS 232, RS 422, RS 485, CANopen, SICK CAN Scanner Network	RS 232, RS 422, RS 485, CANopen, SICK CAN Scanner Network
Dimensions (L x W x H)	3.5 x 2.4 x 1.4 in (90 x 60 x 35.7 mm)	3.5 x 2.4 x 1.4 in (90 x 60 x 35.7 mm)	3.5 x 2.4 x 1.4 in (90 x 60 x 35.7 mm)



# Bar code scanners – fixed position



**CLV 480**



**CLV 490**



**CLX 490**

**Optical Features**

- Laser scanner
- Dynamic Focus Control

- Laser scanner
- Automatic Focus Control

- Omni directional laser scanner
- Automatic Focus Control

**Versions for various reading distances:**

- CLV 480 – standard reading distance up to 80.7 in (2000 mm)
- Line scanner
- Line scanner with oscillating mirror

**Versions for various reading distances:**

- CLV 490 – standard reading distance up to 82.7 in (2100 mm)
- CLV 490 – reading distance up to 63.0 in (1600 mm), HD bar codes
- Line scanner
- Line scanner with oscillating mirror

- CLX 490 – standard reading distance up to 68.9 in (1750 mm)
- 90° crossed scanning lines

**Mechanical Features**

- Smallest and most compact bar code scanner of its class, IP 65
- Option: integrated heating for the use in cold environment

- Smallest and most compact bar code scanner of its class, IP 65
- Option: integrated heating for the use in cold environment

- Smallest and most compact omni directional bar code scanner of its class, IP 65
- Option: integrated heating for the use in cold environment

**Special Features**

- Larger aperture angle enables code reading close up
- SMART Decoder – high read rates even in the case of damaged, tilted or dirty bar codes
- Highest reading reliability for tilted bar codes in an angle of -45...45°
- Optimal reading of thermal print codes via 650 nm laser diodes
- Very high scanning frequency up to 1200 Hz
- Wide range of power supply 18...30 V DC

- SMART Decoder – high read rates even in the case of damaged, tilted or dirty bar codes
- Highest reading reliability for tilted bar codes in an angle of -45...45°
- Extreme depth of field range due to realtime Automatic Focus Control
- Very high scanning frequency up to 1200 Hz
- Wide range of power supply 18...30 V DC
- Remote diagnostic opportunity upon the base of the RDT 400 software

- SMART Decoder – high read rates even in the case of damaged, tilted or dirty bar codes
- Bar code identification in any tilt orientation
- Integrated tracking electronic guarantees the correct assignment of bar codes to the appropriate object – even under the condition of small object gaps
- Option: Use as an omni directional bar code scanner from side position in combination with the OPS system
- Remote diagnostic opportunity upon the base of the RDT 400 software

**Operation Features**

- Easy to use due to CLV Setup Software, Host Command Configuration
- Cloning plug for the automatic recovery of scanner parameters

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- Easy to use due to CLV Setup Software, Host Command Configuration
- Cloning plug for the automatic recovery of scanner parameters

Technical Data	CLV 480	CLV 490	CLX 490
Reading Range	10.2...80.7 in (260...2050 mm)	19.7...82.7 (500...2100 mm)	23.0...68.9 in (600...1750 mm)
Reading Field Height	up to 47.2 in (up to 1200 mm)	up to 47.2 in (up to 1200 mm)	up to 15.7 in (up to 400 mm)
Scanning Frequency	600...1200 Hz	600...1200 Hz	600...1200 Hz
Data Interfaces	RS 232, RS 422, RS 485, SICK CAN Network	RS 232, RS 422, RS 485, SICK CAN Network	RS 232, RS 422, RS 485, SICK CAN Network
Dimensions (L x W x H)	4.6 x 4.6 x 3.7 in (117 x 117 x 94 mm)	4.6 x 4.6 x 3.7 in (117 x 117 x 94 mm)	6.0 x 3.6 x 8.0 in (153 x 93.5 x 208 mm)



# Bar code scanners – fixed position



## OPS 400

## OMNI-2110

## OPS with OTS

### Optical Features

- Omni directional laser scanner
- Automatic Focus Control

- Omni directional laser scanner
- Dynamic Focus Control
- Versions for various depth of field ranges and conveyor widths

- Omni directional laser scanner
- Modular concept consisting of several CLV 490 (optional CLX 490)
- Application specific orientation of the bar code scanners
- Automatic Focus Control
- Versions for the coverage of various conveyor widths

### Versions for various reading distances:

- OPS 400 – standard reading distance up to 78.7 in (2000 mm)
- OPS 400 – reading distance up to 59.0 in (1500 mm, HD codes)
- 90° crossed scanning lines

- 90° crossed scanning lines

- 90° crossed scanning lines

### Mechanical Features

- Compact, innovative design, IP 54, all optical components IP 65

- Compact, metal housing, IP 51

- Modular, application specific alignment of the CLV 490 bar code scanners
- Tunnel scanning systems for multi sided bar code identification of parcels or pallets

### Special Features

- SMART Decoder – high read rates even in the case of damaged, tilted or dirty bar codes
- Bar code identification in any tilt orientation
- Integrated tracking electronic guarantees the correct assignment of bar codes to the appropriate object – even with small object gaps
- Coverage of wide conveyors up to 800 mm width
- Remote diagnostic opportunity upon the base of the RDT 400 software

- CIX Decoder – high read rates even in the case of damaged, tilted or dirty bar codes
- Bar code identification in any tilt orientation
- Integrated tracking electronic guarantees the correct assignment of bar codes to the appropriate object – even with small object gaps
- Coverage of wide conveyors up to 39.4 in (1000 mm) width
- Remote diagnostic opportunity

- SMART Decoder – high read rates even in the case of damaged, tilted or dirty bar codes
- Bar code identification in any tilt orientation
- Tracking electronic in the separate OTS controller guarantees the correct assignment of bar codes to the appropriate object – even with small object gaps
- Remote diagnostic opportunity upon the base of the RDT 400 software

### Operation Features

- Easy to use due to CLV Setup Software, Host Command Configuration

- Easy to use due to Windows™-based Setup Software, Host Command Configuration

- Easy to use due to CLV Setup Software, Host Command Configuration
- Cloning plug for the automatic recovery of scanner parameters

Technical Data	OPS 400	OMNI-2110	OPS with OTS
Reading Range	19.7...78.7 in (500...2000 mm)	25.0...60.0 in (635...1524 mm)	19.7...83.5 in (500...2100 mm)
Reading Field Height	31.5 in (800 mm)	40.0 in (1000 mm)	free selectable
Scanning Frequency	600...1200 Hz	600...1200 Hz	600...1200 Hz
Data Interfaces	RS 232, RS 422, RS 485, SICK CAN Network	Ethernet TCP/IP, RS 232, RS 422, RS 485, Starnode, Optional: DeviceNet, SDS	RS 232, RS 422, RS 485, Optional: Ethernet TCP/IP, DeviceNet, Profibus
Dimensions (L x W x H)	208 x 106 x 62 in (530 x 270 x 158 mm)	242 x 167 x 69 in (615 x 425 x 176 mm)	4.6 x 4.6 x 3.7 in (117 x 117 x 94 mm)



# Bar code / Matrix code scanners – fixed position



## ALIS 400

## ICR 850

## MHV-2020

### Optical Features

- Multi-side, omni directional laser scanner system
- Airport Luggage Identification System for the automatic identification of IATA bar code labels
- Suited for T-Codes and linear bar codes
- Modular concept consisting of several CLV 490 bar code scanners
- Application specific orientation of the bar code scanners
- Automatic Focus Control

- Linear CCD Image Code Reader
- Fixed Focus
- Integrated laser illumination
- Bar code and Data Matrix ECC 200 identification
- Reading distance 4.0 in (101 mm)

- Linear CCD Image Code Reader
- Over-the-belt camera
- Dynamic Focus Control
- Integrated illumination

### Mechanical Features

- Modular, application specific alignment of the CLV 490 bar code scanners
- Tunnel scanning systems for multi-sided bar code identification of luggage

- Very compact, die cast zinc housing for the use in industrial environment, IP 65
- Front or lateral reading window

- Compact, metal housing, IP 65

### Special Features

- SMART Decoder – high read rates even in the case of damaged, tilted or dirty bar codes
- Bar code identification in any tilt orientation
- Tracking electronics in the separate OTS controller guarantees the correct assignment of bar codes to the appropriate object – even with small object gaps
- Remote diagnostic opportunity upon the base of the RDT 400 software
- Maintenance-free operation and high reliability
- Proven performance at airports upon a world-wide base

- Field of view of 83 mm leads to variable positioning of 2D codes or bar codes
- Omni directional identification of 2D codes
- Super fast scanning frequency of up to 15 kHz
- Wide range of power supply 10...30 V DC
- Programmable beeper
- Auxiliary interface for diagnosis of the reading performance
- PIN compatible to CLV 420... 450
- Integrated Ethernet interface

- Bar code and 2D code identification in any orientation
- Identification of all popular 2D codes
- Coverage of wide conveyor of up to 39.4 in (1000 mm) width
- Integrated tracking electronic guarantees the correct assignment of bar codes to the appropriate object – even under the condition of small object gaps
- Remote diagnostic opportunity upon the base of the RDT 400 software

### Operation Features

- Easy to use due to CLV Setup Software, Host Command Configuration
- Cloning plug for the automatic recovery of scanner parameters in case of unit exchange

- Easy to use due to CLV Setup Software, Host Command Configuration

- Easy to use due to Windows™-based Setup Software, Host Command Configuration

Technical Data	ALIS 400	ICR 850	MHV-2020
Reading Range	19.7...83.5 in (500...2100 mm)	4.0 in (101 mm)	27.5...61 in (700...1550 mm)
Reading Field Height	free selectable	3.1 in (80 mm)	38.9 in (990 mm)
Scanning Frequency	600...1200 Hz	15 kHz	10 kHz
Data Interfaces	RS 232, RS 422, RS 485, Optional: Ethernet TCP/IP, DeviceNet, Profibus	RS 232, RS 422, RS 485, CANopen, SICK CAN Network, Ethernet TCP/IP 10 Mbit/s	RS 232, RS 422, RS 485, Ethernet TCP/IP 100 Mbit/s
Dimensions (L x W x H)	4.6 x 4.6 x 3.7 in (117 x 117 x 94 mm)	4.5 x 3.2 x 1.5 in (115 x 80 x 39 mm)	31 x 39.4 x 13.1 in (787 x 1000 x 332 mm)



## For more information on Bar Codes Reading Systems...

Copy, fill in and fax back.

Company	
Name	
Position/ Department	
Address	
City/State/ Zip code	
Phone/Fax	
Industry/Field of application	

Yes, I would like to know more about:

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\_\_\_\_\_

Please have a sales executive call me to discuss my application needs.

More product information available for download at [www.sickusa.com](http://www.sickusa.com)



# SICK