

NLV-3101

2D CMOS Imager

The NLV-3101, a 2D CMOS fixed mount barcode scanner, is ideal for retail or industrial scanning applications. It features red LEDs to illuminate the viewable area and green LEDs to precisely target the barcode. Additional features include exceptional motion tolerance, improved scanning of curved, wide and poorly printed barcodes and image capture capabilities.



Highlights

- Full spectrum illuminated 2D CMOS imager
- World's most compact 2D imager in its class
- Rapidly scans and decodes a wide variety of 1D or 2D barcodes
- Fast global shutter technology with auto exposure – easily scans barcodes of a wide variety of surfaces
- Custom configuration capabilities including multi-read
- Exceptional motion tolerance for moving applications
- Improved scanning of curved, wide and poorly printed barcodes
- Green bar LED aim function providing laser-free aiming with no laser class warning
- Complete unit with integrated decoder
- Durable – survives five foot drop to concrete
- IP65 rating against dust and moisture
- Low power consumption provides design flexibility
- Communication interface: USB and RS232
- Backed by a two year warranty

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Product Specifications



Operating indicators

Visual: 1 LED (red, green, orange)

Non-visual: buzzer

Operating keys

Entry options: 1 scan key

Communication

RS232: DB9 connector with external power supply

USB: Ver. 2.0, HID/VCP, USB-A connector

Power

Voltage requirement: 6V \pm 5% (RS232, USB)

Current consumption: max. 200 mA

2D Imager optics

Light source: Aiming green LED, illumination LEDs

Scan method: CMOS area sensor, 752 x 480 pixels, gray scale

Scan rate: up to 60 fps

Image format: Windows Bitmap, JPEG, TIFF

Gradulation: 256, 16, 2

Image output mode: 3 resolutions (full, 1/2, 1/4),

2 ranges (horizontal, vertical)

Reading pitch angle: \pm 50°

Reading skew angle: \pm 50°

Reading tilt angle: 360°

Curvature: R \geq 16 mm (12-digit UPC), R \geq 20 mm (10-digit Codabar)

Min. resolution at pcs 0.9: 0.127 mm / 5 mil at code 39

Min. pcs value: 0.3

Field of view: Horizontal 40.6°, vertical 26.4°

Depth of field at code 39:

90 - 125 mm (0.127 mm) / 3.54 - 4.92 in (5 mil)

70 - 190 mm (0.254 mm) / 2.76 - 7.48 in (10 mil)

65 - 235 mm (0.508 mm) / 2.56 - 9.25 in (20 mil)

Depth of field at QR Code:

95 - 115 mm (0.212 mm) / 3.74 - 4.53 in (8.4 mil)

60 - 185 mm (0.381 mm) / 2.36 - 7.28 in (15 mil)

Supported symbologies

Barcode (1D): UPC-A, UPC-A Add-on, UPC-E, UPC-E Add-on, EAN-13, EAN-13 Add-on, EAN-8, EAN-8 Add-on, JAN-8, JAN-13, Codabar/NW-7, Code 11, Code 39, Code 93, Code 128, GS1 DataBar, GS1 DataBar Limited, GS1 DataBar Expanded, Composite GS1 DataBar, Composite GS1-128, Composite EAN, Composite UPC, IATA, Industrial 2of5, Interleaved 2of5, Matrix 2of5, MSI/Plessey, S-Code, Telepen, Tri-Optic, UK/Plessey

Postal code: Chinese Post, Korean Postal Authority code

2D code: MicroPDF417, PDF417, Codablock F, QRCode, Micro QR Code, DataMatrix (ECC 200), MaxiCode (Modes 2 to 5), Aztec Code, Chinese Sensible Code, Passport MRZ (OCR-B)

Durability

Temperature in operation: -20 to 50 °C / -4 to 122 °F

Temperature in storage: -20 to 60 °C / -4 to 140 °F

Humidity in operation: 20 - 85% (non-condensing)

Humidity in storage: 20 - 90% (non-condensing)

Ambient light immunity: Fluorescent 10,000 lx max, Sunlight 100,000 lx max, Incandescent 10,000 lx max

Drop test: 0.75 m / 2.5 ft drop onto concrete surface

Vibration test: 10 - 100 Hz with 2G for 1 hour

Protection rate: IP65

Physical

Dimensions (WxHxD): 33 x 24 x 41.1 mm / 1.3 x 0.94 x 1.62 in

Weight: Ca. 30 g / 1.06 oz (excl. cable)

Case: ABS, Black

Regulatory & safety

Product compliance: CE, FCC Class B, VCCI, RoHS, IEC62471, EN55022, EN55024, FDA CDRH Class II