



NLS-EM3088-W

OEM SCAN ENGINE

FEATURES

- Ultra Wide-viewing FOV**
Featuring excellent near-field reading and the widest viewing angle H:99°/V:72.4°/D:109° in the AIDC industry, the scan engine offers stunning performance on decoding in close-range for extended-length 1D barcodes or 2D barcodes with rich data.
- Excellent Decoding Performance**
With 1280×800 pixel CMOS sensor, the EM3088-W is able to decode extended-length 1D barcodes, 2D barcodes with rich data, passport OCR-B and even poor quality barcodes (e.g., low contrast, laminated, damaged, torn, warped or wrinkled).
- Smooth Gradient Illumination**
Designed with big-FOV and smooth gradient warm-white LED illumination, EM3088-W maximizes the overall decoding performance in close-range reading.
- Support NRE on Firmware or Decoding Algorithm**
Newland experienced software RD team can fulfill your special requirements on firmware or decoding algorithm in time based on project NRE.



CMOS



1D Barcode



TTL232



2D Barcode



USB

NLS-EM3088-W

Performance

| | | |
|-------------------------------------|-------------|---|
| Image Sensor | | 1280*800 CMOS |
| Illumination | | White LED |
| Symbologies | 2D | PDF 417, Micro PDF417, QR, Micro QR, Data Matrix, Chinese Sensible Code, GridMatrix, Code One, Aztec |
| | 1D | Code 128, EAN-13, EAN-8, Code 39, UPC-A, UPC-E, Codabar, Interleaved 2/5, ITF-14, ITF-6, ISBN, ISSN, Code 93, Code 11, GS1 Databar, GS1 Composite, Matrix 2/5, COOP 25, Industrial 2/5, Standard 2/5, MSI Plessey, Plessey, Code 49, Code 16K, GS1 128, AIM 128, ISBT 128 |
| | Postal | USPS Postnet, USPS Intelligent Mail, Royal Mail, USPS Planet, KIX Post, Australian Postal, Japan Post |
| | OCR | Passport OCR, Chinese ID Card OCR, China Travel Permit OCR |
| Resolution | | ≥3mil(Code 39) |
| Typical Depth of Field ¹ | EAN-13 | 30mm-85mm (13mil) |
| | PDF417 | 30mm-55mm (6.7mil) |
| | Code 39 | 35mm-65mm (5mil 50mm) |
| | Data Matrix | 23mm-65mm (10mil) |
| | QR Code | 20mm-80mm (15mil) |
| Min. Symbol Contrast | | 25% |
| Scan Angle ² | | Roll: 360°, Pitch: ±50°, Skew: ±50° |
| Field of View | | Horizontal 99°, Vertical 72.4°, Diagonal 109° |

Physical

| | | |
|-------------------|------------------------------|--------------------------------|
| Interface | | TTL-232, USB |
| Operating Voltage | | 3.3VDC±5% |
| Current@3.3VDC | Operating (RMS) ³ | 423mA (max.) |
| | Idle (RMS) | 44mA |
| Dimensions | | 21.7(W)×14.5(D)×12(H)mm (max.) |
| Weight | | 3g |

Environmental

| | |
|-----------------------|--------------------------------|
| Operating Temperature | -20°C to 60°C (-4°F to 140°F) |
| Storage Temperature | -40°C to 70°C (-40°F to 158°F) |
| Humidity | 5% to 95% (non-condensing) |
| Ambient Light | 0lux |

Certificates

| | |
|---------------------------|---|
| Certificates & Protection | FCC Part 15 Class B, CE EMC Class B, RoHS, IEC62471 |
|---------------------------|---|

¹Depth of Field: T=23°C; Illumination=300lux using incandescent lamp; sample barcodes made by Newland.

²Scan Angle: Scan Distance=(min. DOF + max. DOF)/2; 2D: QR Code; PCS=I; sample barcodes made by Newland.

³Operating Current: Scan Distance=(min. DOF + max. DOF)/2; test in the normal mode.

Specifications are subject to change without notice.

NLS-EM3088-W

The following table lists the pin functions of the 12-pin FPC connector.

| PIN# | Signal | I/O | Function |
|------|-----------|-----|-----------------------------|
| 1 | NC | - | Reserved |
| 2 | VCC | - | 3.3V power input |
| 3 | GND | - | Ground |
| 4 | TTL232_RX | I | TTL level 232 receive data |
| 5 | TTL232_TX | O | TTL level 232 transmit data |
| 6 | USB_D- | I/O | USB_D- signal |
| 7 | USB_D+ | I/O | USB_D+ signal |
| 8 | EXT_IO | - | Reserved |
| 9 | EXT_BUZ | O | Beeper output |
| 10 | EXT_DSF | O | Good Read LED output |
| 11 | EXT_RST# | I | Reset signal input |
| 12 | EXT_TRIG# | I | Trigger signal input |

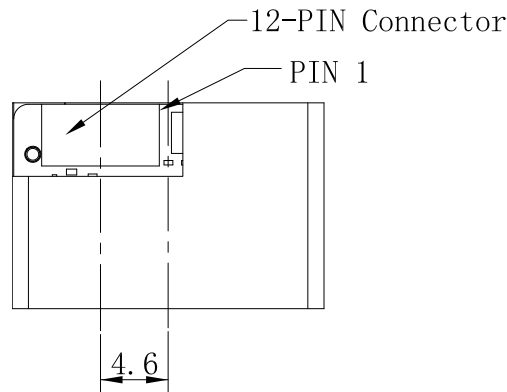
Specifications are subject to change without notice.

Version: V1.0

NLS-EM3088-W

Interface

Pinouts

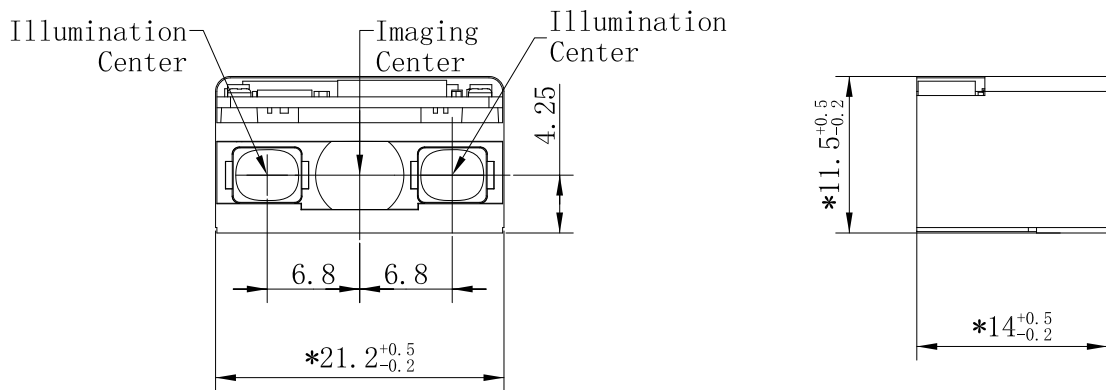
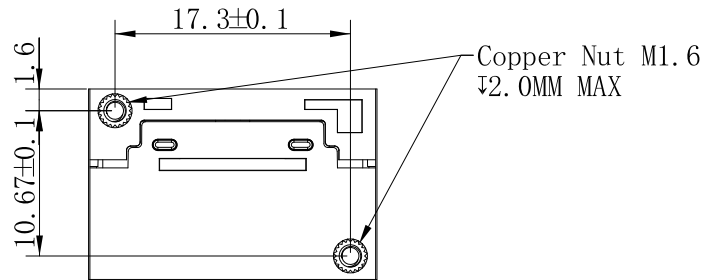


Mechanical

Mounting

Dimensions

(unit: mm)



Dimensions: 21.7(W)×14.5(D)×12(H)mm (max.)

Specifications are subject to change without notice.

Version: V1.0

Newland AIDC

Add: No.1 Rujiang West Rd.,
Mawei, Fuzhou, Fujian 350001, China
Tel: +86-591-83979500
Fax: +86-591-83979216
Email: info@nlscan.com
Web: www.newlandaidc.com

Asia Pacific

Add: 6 Raffles Quay #14-06
Singapore 048582
Email: info@nlscan.com

Europe & Middle East

Add: Rolweg 25, 4104 AV Culemborg,
The Netherlands
Tel: +31 (0) 345 87 00 33
Email: sales@newland-id.com
Tech Support: tech-support@newland-id.com

North America & Latin America

Add: 46559 Fremont Blvd.,
Fremont, CA 94538, USA
Tel: +1 510 490 3888
Fax: +1 510 490 3887
Email: info@nlscan.com