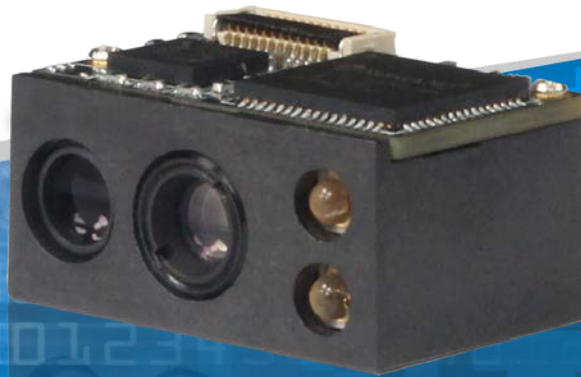


NLS-EM3096

OEM Scan Engine



The NLS-EM3096 OEM scan engine, armed with the Newland patented **UIMG[®]**, a computerized image recognition system, brings about a new era of 2D barcode scan engines.

The EM3096's 2D barcode decoder chip ingeniously blends **UIMG[®]** technology and advanced chip design & manufacturing, which significantly simplifies application design and delivers superior performance and solid reliability with low power consumption.

The EM3096 supports all mainstream 1D as well as PDF417, QR Code (M1/M2/Micro), Data Matrix and GS1-DataBar[™](RSS) (Limited/Stacked/ Expanded versions).

This compact engine weighs only 5 grams and fits easily into even the most space-constrained equipments such as data collectors, meter readers, ticket validators and PDAs.

Features:

- **2D Barcode Decoder Chip:** The engine armed with the state-of-the-art 2D barcode decoder chip invented by Newland demonstrates unprecedented reading performance.
- **Two-In-One Design:** Seamless integration of CMOS image sensor and decoder board makes the engine small, lightweight and easy for integration.
- **High Performance & Ultra-Low Power Consumption:** The engine can read 1D and 2D barcodes with a power consumption only one third that of a traditional engine.
- **All-Round Scanning Capability:** It can read barcodes on virtually any medium - paper, plastic cards, mobile phones and LCD displays.

NLS-EM3096 Specifications

| Performance | | |
|------------------------------------|----------------------------|---|
| Image Sensor | | 752×480 CMOS |
| Processor | | Newland IOTC 2D decoder chip 48MHz |
| Illumination | | Red LED 625±10 nm |
| Symbologies | 2D | PDF 417, Data Matrix (ECC200,ECC000,050,080,100,140) , QR Code |
| | 1D | Code 128, EAN-13, EAN-8, Code 39, UPC-A, UPC-E, Codabar, Interleaved 2 of 5, ITF-6, ITF-14, ISBN, Code 93, UCC/EAN-128, GS1 Databar, Matrix 2 of 5, Code 11, Industrial 2 of 5, Standard 2 of 5, Plessey, MSI-Plessey, etc. |
| Reading Precision | | ≥ 5mil |
| Depth of Field* | EAN13 (13mil) | 55mm - 185mm |
| | Code 39 (5mil) | 55mm - 100mm |
| | PDF 417 (6.67mil) | 40mm - 130mm |
| | Data Matrix (10mil) | 40mm - 135mm |
| | QR Code (15mil) | 40mm - 160mm |
| Symbol Contrast | | ≥ 30% reflectance difference |
| Scan Angle** | | Roll: 360°, Pitch: ±55°, Skew: ±55° |
| Field of View | | Horizontal 36°; Vertical 23° |
| Mechanical/Electrical | | |
| Interface | | TTL-232, USB (optional) |
| Rated Power Consumption | | 0.76 W |
| Operating Voltage | | 3.3±10% VDC |
| Current @ 3.3 VDC | Operating Current | 230 mA |
| | Standby Current | 4mA (USB communication not supported); 7mA (USB communication supported) |
| | Sleep Current | <5 uA |
| Dimensions | | 21.17(W)×14.6(D)×11.52(H)mm |
| Weight | | 5.0g |
| Environmental | | |
| Operating Temperature | | -20°C ~ +60°C |
| Storage Temperature | | -40°C ~ +80°C |
| Humidity | | 5% ~ 95% (non-condensing) |
| Ambient Light | | 0 ~ 100000 lux (natural light) |
| Certifications | | |
| FCC Part15 Class B, CE EMC Class B | | |
| Accessories | | |
| NLS-EVK3000 | | Software development board, equipped with a trigger button, beeper and RS-232 & USB interfaces. |
| Cable | RS-232 Cable | Used to connect the NLS-EVK3000 to a host device; equipped with a power connector. |
| | USB Cable | Used to connect the NLS-EVK3000 to a host device. |
| Power Adaptor | | Used to provide power for the NLS-EVK3000. Output: DC5V, 2A; Input: AC100~240V, 50~60Hz |

* Test conditions: T=23°C, Illumination=300 LUX

** Test conditions:

Code 39, 3 Bytes; Resolution=10mil; W:N=3:1; PCS=0.8; Barcode Height=11mm; Scan Distance=120mm, T=23°C, Illumination=300 LUX

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