

NLS-EM3080 Series

Embedded 2D Barcode Scan Engine



NLS-EM3080 series embedded 2D barcode scan engines, armed with the Newland patented **UIMG[®]**, a computerized image recognition system, bring about a new era of 2D barcode scan engines.

The NLS-EM3080'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 NLS-EM3080 supports all mainstream 1D symbologies as well as PDF417, QR Code, Data Matrix and GS1-DataBar™(RSS) (RSS-Limited, RSS-14, RSS-14 Stacked and RSS-Expand). It provides an ideal solution for both emerging mobile phone-based barcode applications, like digital coupons, electronic tickets and boarding passes, and traditional applications.

This compact engine weighs only 3 grams and fits easily into even the most space-constrained equipments such as data collectors, meter readers, ticket validators and PDAs. Moreover, the instant power on/off feature along with ultra-low power consumption brings greater efficiency and convenience in barcode scanning.

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 most 1D and 2D barcodes with a power consumption only one fourth 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-EM3080 Specifications

Performance

Image Sensor		640×480 CMOS
Illumination		Red LED 625±10 nm
Symbologies	2D	PDF417, QR Code (QR1, QR2, Micro QR), Data Matrix (ECC200, ECC000, 050, 080, 100, 140)
	1D	Code128, UCC/EAN-128, AIM 128, EAN-8, EAN-13, ISBN/ISSN, UPC-E, UPC-A, Interleaved 2 of 5, ITF-6, ITF-14, Matrix 2 of 5, Industrial 25, Standard 25, Code39, Codabar, Code 93, Code 11, Plessey, MSI-Plessey, GS1-DataBarTM(RSS) (RSS-14, RSS-Limited, RSS-Expand).
Reading Precision		≥5mil
	Code 39	65mm - 95mm(5mil); 55mm - 295mm(20mil)
	PDF417	50mm -155mm(6.67mil)
Depth of Field	Data Matrix	45mm -160mm(10mil)
	QR Code	45mm -235mm(20mil)
	UPC-A	55mm - 245mm(13mil)
Symbol Contrast		≥30% reflectance difference
Scan Angle**		Roll: 360°; Pitch: ±50°; Skew: ±50°
Field of View		Horizontal 36°; Vertical 23°

Mechanical/Electrical

Interface		TTL-232 / USB1.1
Operating Voltage		3.0~3.6VDC
Current @ 3.3 VDC	Operating Current	155mA
	Idle Current	94mA
	Sleep Current	40mA
Dimensions		15.1(W)×13.1(D)×9.0(H)mm
Weight		3g

Environmental

Operating Temperature	-20 °C to +60°C
Storage Temperature	-40°C to +85°C
Humidity	5% to 95% (non-condensing)
Ambient Light	0 ~ 100000 lux (natural light)

Certifications

Accessories

NLS-EVK3000		Software development board for the NLS-EM3080, equipped with a trigger button, beeper and RS-232 & USB interfaces.
Cables	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:

Code39; 3 Bytes; Resolution=10mil; W:N=3:1; PCS=0.8; Barcode Height=11mm; Scan Distance=120mm; T=23°C; Illumination=200 lux

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Specifications are subject to change without notice.

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