

# NLS-EM3000

## Embedded 2D Barcode Scan Engine



The NLS-EM3000 embedded 2D barcode scan engine, powered by advanced imaging technology and Newland patented **UIMG<sup>®</sup>** technology, a computerized image recognition system, can read barcodes on various mediums such as paper and plastic, with excellent motion tolerance.

The NLS-EM3000 supports both mainstream 1D and standard 2D barcode symbologies (e.g., PDF417, QR Code, Data Matrix) as well as Chinese Sensible Code and GS1-DataBar™ (RSS) (Limited/Stacked/Expanded versions).

This compact, lightweight engine fits easily into even the most space-constrained equipments such as cash registers, data collectors, meter readers, ticket validators and PDAs.

The NLS-EM3000's high-performance processor, in conjunction with the supplied APIs and SDK, provides greater ease in application development.

### Features:

- **Two-In-One Design**  
Seamless integration of CMOS image sensor and decoder board makes the engine small, lightweight and easy for integration.
- **Superior Decoding Performance**  
Delivers speedy and accurate scanning performance and supports mainstream 1D/2D barcode symbologies.
- **Ease of Application Development**  
The provided SDK and APIs allow software developers to conveniently create their own applications.

## Specifications

Performance	
Image Sensor	752x480 CMOS
Illumination	Red LED 625±10 nm
Symbologies	2D PDF417, QR Code, Data Matrix, Chinese Sensible Code, Aztec Code, Maxicode, MicroPDF417*, etc.
	1D Code128, EAN-13, EAN-8, Code39, UPC-A, UPC-E, Codabar, Interleaved 2 of 5, ITF-6, ITF-14, ISBN, Code 93, UCC/EAN-128, GS1 Databar, GS1 Composite Code, Matrix 2 of 5, Code11, Industrial 25, Standard 25, Plessey, MSI-Plessey, etc.
	OCR* ID cards, passports
Reading Precision	≥ 5mil
Depth of Field	Code 39 50mm -135mm(10mil); 70mm~170mm(15mil)
	PDF417 55mm -145mm(10mil); 70mm~160mm(15mil)
	Data Matrix 40mm -120mm(10mil); 60mm~145mm(15mil)
	QR Code 40mm -115mm(10mil); 60mm~150mm(15mil)
Symbol Contrast	≥ 25%
Scan Angle **	Roll: 360° ; Pitch: ±50°; Skew: ±50°
Field of View	Horizontal 36°; Vertical 23°
Mechanical/Electrical	
Interface	TTL232
Operating Voltage	3.3 ~3.6VDC
Current @ 3.3VDC	Maximum Current 400 mA
	Operating Current 300 mA
	Idle Current 65 mA
Dimensions	28.0(W)x24.5(D)x13.5(H) mm
Weight	10.1g
Environmental	
Operating Temperature	-20°C to +45°C
Storage Temperature	-40°C to +60°C
Humidity	5% to 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 for the NLS-EM3000, equipped with a trigger button, beeper and RS-232 & USB interfaces.
Cable	RS232 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.

\*Standard EM3000 does not support Micro PDF417 or OCR, whereas customized EM3000 supports both.

\*\*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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