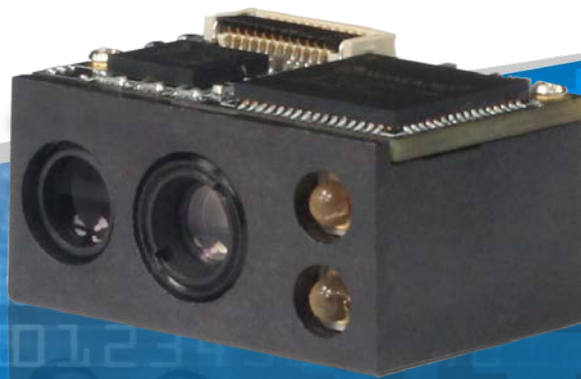


# NLS-EM3096

## OEM Scan Engine



The NLS-EM3096 OEM scan engine, armed with the Newland patented **UIMG**<sup>®</sup>, 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**<sup>®</sup> 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<sup>™</sup>(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		
<b>Image Sensor</b>	752×480 CMOS	
<b>Processor</b>	Newland IOTC 2D decoder chip 48MHz	
<b>Illumination</b>	Red LED 625±10 nm	
<b>Symbologies</b>	<b>2D</b>	PDF 417, Data Matrix (ECC200,ECC000,050,080,100,140) , QR Code
	<b>1D</b>	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.
<b>Reading Precision</b>	≥ 5mil	
<b>Depth of Field*</b>	<b>EAN13 (13mil)</b>	55mm - 185mm
	<b>Code 39 (5mil)</b>	55mm - 100mm
	<b>PDF 417 (6.67mil)</b>	40mm - 130mm
	<b>Data Matrix (10mil)</b>	40mm - 135mm
	<b>QR Code (15mil)</b>	40mm - 160mm
<b>Symbol Contrast</b>	≥ 30% reflectance difference	
<b>Scan Angle**</b>	Roll: 360°, Pitch: ±55°, Skew: ±55°	
<b>Field of View</b>	Horizontal 36°; Vertical 23°	
Mechanical/Electrical		
<b>Interface</b>	TTL-232, USB (optional)	
<b>Rated Power Consumption</b>	0.76 W	
<b>Operating Voltage</b>	3.3±10% VDC	
<b>Current @ 3.3 VDC</b>	<b>Operating Current</b>	230 mA
	<b>Standby Current</b>	4mA (USB communication not supported); 7mA (USB communication supported)
	<b>Sleep Current</b>	<5 uA
<b>Dimensions</b>	21.17(W)×14.6(D)×11.52(H)mm	
<b>Weight</b>	5.0g	
Environmental		
<b>Operating Temperature</b>	-20°C ~ +60°C	
<b>Storage Temperature</b>	-40°C ~ +80°C	
<b>Humidity</b>	5% ~ 95% (non-condensing)	
<b>Ambient Light</b>	0 ~ 100000 lux (natural light)	
Certifications		
FCC Part15 Class B, CE EMC Class B		
Accessories		
<b>NLS-EVK3000</b>	Software development board, equipped with a trigger button, beeper and RS-232 & USB interfaces.	
<b>Cable</b>	<b>RS-232 Cable</b>	Used to connect the NLS-EVK3000 to a host device; equipped with a power connector.
	<b>USB Cable</b>	Used to connect the NLS-EVK3000 to a host device.
<b>Power Adaptor</b>	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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