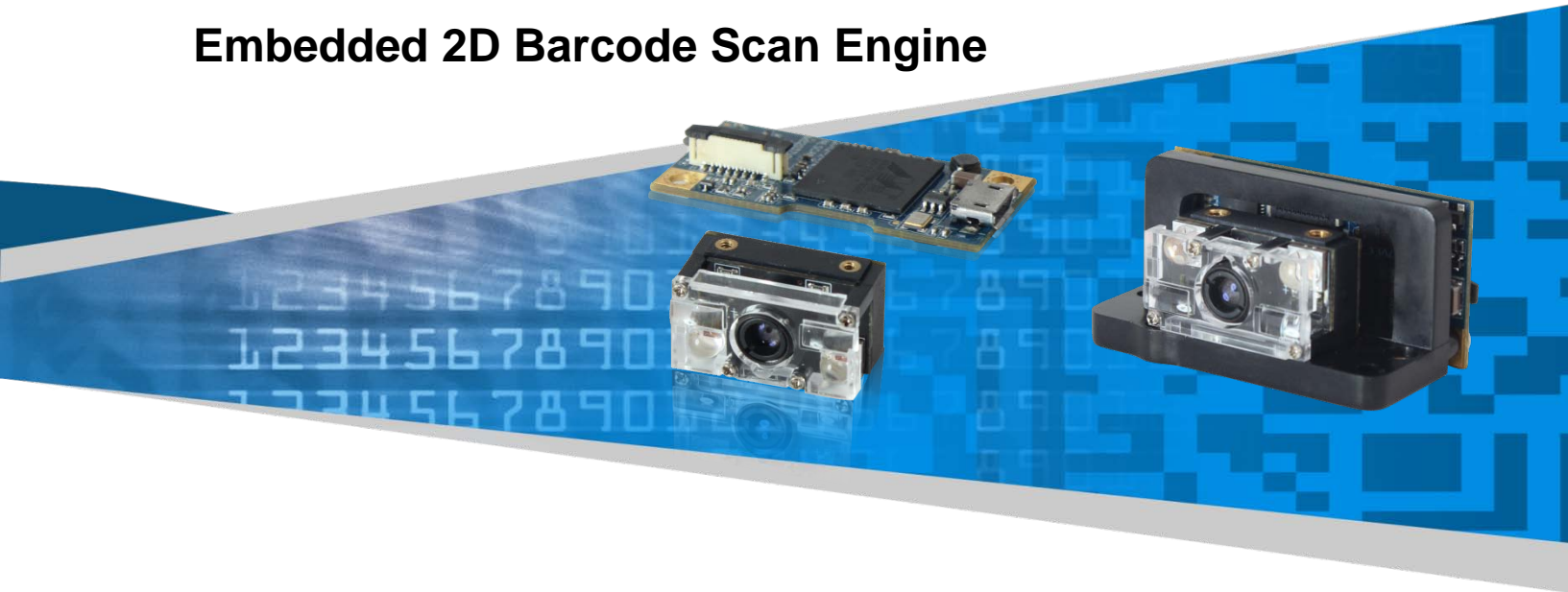# NLS-EM2037 Series

Embedded 2D Barcode Scan Engine

NLS-EM2037 series embedded 2D barcode scan engines, powered by advanced imaging technology and Newland patented **UIMG**® technology, a computerized image recognition system, can read barcodes printed on paper/plastic or displayed on mobile phones with excellent motion tolerance.

The EM2037s support both mainstream 1D and standard 2D barcode symbologies (e.g., PDF417, QR Code, Data Matrix, Composite Code) as well as Chinese Sensible Code and GS1-DataBar™ (RSS) (Limited/Stacked/Expanded versions).

The EM2037s provide combined type (scan engine and decoder board brought together as one) and discrete type (scan engine and decoder board separated) to cater for different mounting needs.

The EM2037s also feature compact & lightweight design and various communication interfaces.

The EM2037s' high-performance CPU in conjunction with provided APIs and SDK makes it easy to develop application programs.

Features

- **Superior decoding performance**
  Delivers speedy and accurate scanning performance and supports mainstream 1D/2D barcode symbologies.

- **Flexible structural design**
  Offers both combined type and discrete type to meet different mounting needs.

- **Ease of application development**
  Provided SDK and APIs allow software developers to conveniently create their own applications.

- **Various interfaces**
  Provides RS-232, USB and TTL (optional) interfaces and supports USB HID-KBW, COM Port Emulation, Data Pipe, etc.

Specifications

Performance		
Image Sensor		752×480 CMOS
Illumination		Red LED 620±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
Symbol Contrast		≥ 30%
Field of View		HD: 42°(H), 27.5°(V); SR: 37.5°(H), 24.5°(V); ER: 32°(H), 20.4°(V).
Scan Angle		Roll: 360°; Pitch: ±50°; Skew: ±50°

Mechanical/Physical		
Interface		TTL-232, USB (HID-KBW, DataPipe, Com Port Emulation, HID-POS, IBM SurePOS, etc.)
Operating Voltage		TTL-232: 3.3 ~ 5.5VDC; USB: 5.0VDC±10%
Current@5VDC	**Operating Current**	330mA
	Idle Current	60mA
	Low Power	1.2mA
Weight		Combined type: 11.8g; Discrete type: 8.3g

Environmental	
Operating Temperature	-20°C to +50°C
Storage Temperature	-40°C to +80°C
Humidity	5% to 95% (non-condensing)
Ambient Light	0 ~ 100,000 LUX (natural light)

Certifications
FCC Part15 Class B, CE EMC Class B

Accessories	
Development Tools	NLS-EVK2037, RS-232 cable, USB cable, AC adaptor

*Standard EM2037 does not support Micro PDF417 or OCR, whereas customized EM2037 supports both.

Depth of Field					
High Density (HD)		**Standard Range (SR)**		**Extended Range (ER)**	
3.3mil Code 39	50mm ~ 90mm	5mil Code 39	70mm ~160mm	20mil Code 39	55mm ~ 635mm
5mil Code 39	40mm ~ 105mm	13mil UPC-A	55mm ~335mm	13mil UPC-A	65mm ~405mm
5mil PDF417	40mm ~ 90mm	6.7mil PDF417	50mm ~165mm	20mil QR	47mm ~385mm
6.7mil Data Matrix	40mm ~ 68mm	10mil Data Matrix	43mm ~170mm	10mil Data Matrix	95mm ~200mm
Min. 1D Barcode Density	3.3mil	Min. 1D Barcode Density	5mil	Min. 1D Barcode Density	5mil
Min. 2D Barcode Density	5mil	Min. 2D Barcode Density	6.7mil	Min. 2D Barcode Density	6.7mil

Contact Us

Specifications are subject to change without notice.   V1.1.2

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