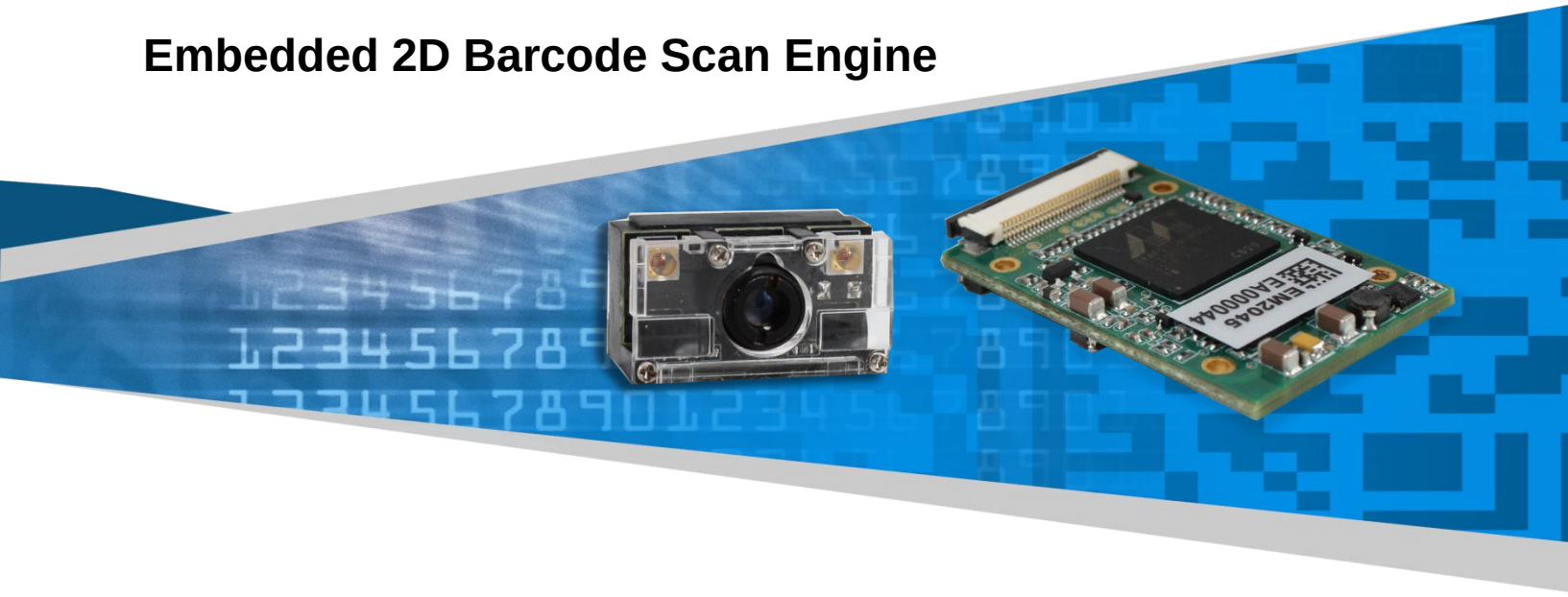
NLS-EM2045 Series

Embedded 2D Barcode Scan Engine



NLS-EM2045 series embedded 2D barcode scan engines, powered by advanced imaging technology and Newland patented UIMG® technology, a computerized image recognition system, can read barcodes on various mediums such as paper and plastic, with excellent motion tolerance.

The EM2045s 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).

Featuring an ingenious design of getting imager and decoder board separated and a variety of communication interfaces, the EM2045s fit easily into even the most space-constrained equipments such as data collectors, meter readers, ticket validators and PDAs.

The EM2045s' high-performance CPU, in conjunction with the supplied APIs and SDK, provides greater ease in application development.

Features:

- **Simple to integrate**
  Getting imager and decoder board separated makes it easier for integration
- **Superior decoding performance**
  Delivers speedy and accurate scanning performance and supports mainstream 1D/2D barcode symbologies
- **Wide range of operating voltage**
  DC 3.0V~5.5V
- **Various interfaces**
  Provides RS-232, USB (HID-KBW, COM Port Emulation, DataPipe) and TTL-232 (optional) interfaces
- **Ease of application development**
  The provided SDK and APIs allow software developers to conveniently create their own applications

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, etc.	
	1D	Code128, EAN-13, EAN-8, Code39, UPC-A, UPC-E, Codabar, Interleaved 2 of 5, ISBN/ISSN, Code 93, UCC/EAN-128, GS1 Databar, etc.	
Reading Precision		≥ 5mil	
Depth of Field	**UPC-A**	13mil	65mm -375mm
	CODE 39	5mil	80mm -165mm
		20mil	60mm - 400mm
	PDF417	6.67mil	70mm -155mm
	Data Matrix	10mil	60mm -165mm
	QR Code	20mil	45mm -265mm
Symbol Contrast		≥ 30%	
Scan Angle**		Roll: 360°; Pitch: ±50°; Skew: ±50°	
Field of View		Horizontal 37.5°; Vertical 24.5°	
Mechanical/Electrical			
Interface		RS-232/TTL-232, USB (HID-KBW, DataPipe, COM Port Emulation)	
Power Consumption		1.7 W (@3.3VDC)	
Operating Voltage		TTL-232/RS-232: 3.0-5.5VDC; USB: 5.0VDC±5%	
Current	**Operating Current**	365mA (3.3V); 250mA (5.0V)	
	Idle Current	60 mA (3.3V); 50mA (5.0V)	
	Sleep Current	1.2 mA (3.3V); 1.2mA (5.0V)	
Dimensions		Imager: 13.6(D)×20.6(W)×12.0(H)mm; Decoder Board: 25.3(W)×38.0 (L)×5.8(H)mm	
Weight		10.7g	
Environmental			
Operating Temperature		-20℃ to +55℃	
Storage Temperature		-40℃ to +80℃	
Humidity		5% to 95% (non-condensing)	
Ambient Light		0 ~ 100000 lux (natural light)	
Certifications			
FCC Part15 Class B, CE EMC Class B			
Accessories			
NLS-EVK2045		Software development board for the EM2045, equipped with a trigger button, beeper and RS-232 & USB interfaces.	
Cable	**RS-232 Cable**	Used to connect the NLS-EVK2045 to a host device; equipped with a power connector.	
	USB Cable	Used to connect the NLS-EVK2045 to a host device.	
Power Adaptor		Used to provide power for the NLS-EVK2045. Output: DC5V, 2A; Input: AC100~240V, 50~60Hz.	

****Test conditions:**

Code 39; 3 Bytes; Resolution=10mil; W:N=3:1; PCS=0.8; Barcode Height=11mm; Scan Distance=120mm; T=23℃; Illumination=200 lux

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