



EM3090
OEM scan engine

FEATURES

Unparalleled barcode reading performance.

Improve speed and productivity with the EM3090. The engine scans 1D and 2D barcodes without delay, with a particularly exceptional performance in linear barcode reading. Optimized design and Newland's sixthgeneration UIMG technology allow for first time every time scanning, even when a barcode is damaged or displayed on a screen set to its lowest brightness level.

Multi-interface.

The EM3090 supports USB and TTL-232 interfaces to meet diverse customer needs.

Compact and lightweight.

With seamless integration of image sensor and decoder board, this compact and lightweight engine can be easily integrated into the most space-constrained devices, including handheld scanners, self-service kiosks, ATMs, lottery terminals and more.

Low power consumption.

The advanced NLDC technology incorporated in the scan engine helps reduce the power consumption and prolong the service life of the device.

Application Scenarios

Self-service cabinets used in e-commerce • express delivery services • smart homes • ATMs • kiosks • queue machines • lottery terminals • certificate makers and more.

Performance	Image Sensor	752×480 CMOS		
	Light Source	Red LED 625±10 nm		
	Symbologies	2D	PDF417, QR Code (QR1/2, Micro), Data Matrix (ECC200, ECC000, 050, 080, 100, 140), Chinese Sensible Code	
		1D	Code128, UCC/EAN-128, AIM128, EAN-8, EAN-13, ISBN/ISSN, UPC-E, UPC-A, Interleaved 2 of 5, ITF-6, ITF-4, Matrix 2 of 5, Industrial 25, Standard 25, Code 39, Codabar, Code 93, Code 11, Plessey, MSI-Plessey, GS1-DataBar™(RSS), (RSS-14, RSS-Limited, RSS-Expand)	
	Resolution	≥5mil		
	Typical Depth of Field	EAN-13	50mm-445mm (13mil)	
		PDF417	70mm-170mm (6.67mil)	
		Code 39	50mm-285mm(5mil)	
		Data Matrix	60mm-160mm (10mil)	
		QR Code	30mm-220mm (15mil)	
	Symbol Contrast	≥25% reflectance difference		
	Scan Angle**	Roll: 360°, Pitch: ±55°, Skew: ±55°		
	Field of View	Horizontal 36°, Vertical 23°		
	Mechanical/	Interface	TTL-232, USB (HID-KBW, COM Port Emulation, HID-POS)	
Electrical				
	Operating Voltage	3.0~3.6VDC		
	Current@3.3VDC	Operating	190mA	
		Idle	7mA	
		Sleep	<5uA	
	Dimensions	28.0(W)×24.5(D)×13.9(H)mm		
	Weight	9.5g		
Environmental	Operating Temperature	-20°C~+55°C (-4°F~131°F)		
	Storage Temperature	-40°C~+80°C (-40°F~176°F)		
	Humidity	5%~95% (non-condensing)		
	Ambient Light	0~100000lux (natural light)		
Accessories	NLS-EVK3000	Software development board for the EM3090, equipped with a trigger button, beeper and RS-232 & USB interfaces.		
	Cable	USB	Used to connect the NLS-EVK3000 to a host device.	
		RS-232	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: Code 39; 3 Bytes; Resolution=10mil; W:N=3:1; PCS=0.8; Barcode Height=11mm; Scan Distance=120mm; T=23°C; Illumination=300lux.

Specifications are subject to change without notice.

Version: V1.0

Newland EMEA HQ
+31 (0) 345 87 00 33
info@newland-id.com
newland-id.com

D-A-C-H
+49 (0) 6182 82916-16
info@newland-id.de

United Kingdom
+44 (0) 1442 212020
sales@newland-id.co.uk

France
+39 (0) 345 8804096
france@newland-id.com

Russia
+31 (0) 345 87 00 33
russia@newland-id.com

Benelux
+31 (0) 345 87 00 33
benelux@newland-id.com

Turkey
+90 (0) 544 538 40 49
turkey@newland-id.com

Ibérica
+34 (0) 93 303 74 66
info@newland-id.es

Middle East
+39 (0) 345 8804096
middleeast@newland-id.com

Italy
+39 (0) 342 0562227
italy@newland-id.com

South Africa
Gauteng: +27 (0) 11 553 8010
Cape Town: +27 (0) 21 9140819
info@newland-id.co.za

Nordic & Baltic
+46 (0) 70 88 47 767
nordic@newland-id.com

Iran
+90 (0) 544 538 40 49
iran@newland-id.com