



EM20-80
OEM scan engine

FEATURES

Snappy on-screen barcode capture.

Featuring excellent near field reading, wide viewing angle and snappy performance, the CPU-powered EM20-80 can easily read barcodes from smartphone & tablet displays.

Robust design with high vibration resistance.

The single PCB construction and vibration-proof connectors make the scan engine more resistant against vibration and help improve its reliability.

Multiple interfaces.

The EM20-80 supports USB, RS-232 and TTL-232 interfaces to meet diverse customer needs.

Slimmer, more compact construction.

Compared with its predecessor, the new generation of EM20 is thinner, lighter and more compact, and thus easier to be integrated into devices.

Outstanding power efficiency.

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

Application Scenarios

Kiosks; self-service cabinets used in e-commerce • express delivery services and smart homes
• ATMs; queue machines; lottery machines, etc.

Performance	Image Sensor	640 * 480 CMOS		
	Illumination	White LED		
	Symbologies	2D	PDF 417, QR Code, Micro QR, Data Matrix, Aztec, Maxicode, Chinese Sensible Code, GM Code, Micro PDF417 Code, Code One	
		Postal	USPS Postnet, Royal Mail, KIX Post, Australian Postal, etc	
		1D	EAN-8, EAN-13, UPC-E, UPC-A, Code 128, UCC/EAN128, I2Of5, ITF-14, ITF-6, Matrix 25, CodaBar, Code 39, Code 93, ISSN, ISBN, Industrial 25, Standard 25, Plessey, Code11, MSI-Plessey, UCC/EAN Composite, GS1 Databar, Code 49, Code 16K	
	Resolution*	5mil		
	Typical Depth of Field*	EAN-13	25mm-110mm (13mil)	
		QR Code	0mm-90mm (15mil)	
		PDF417	35mm-45mm (6.7mil)	
		Data Matrix	35mm-50mm (10mil)	
	Min. Symbol Contrast*	30%		
	Scan Angle**	Roll: 360°, Pitch: ±40°, Skew: ±45°		
	Motion Tolerance*	Max. 260cm/s (WeChat Pay QR code)		
	Field of View	Horizontal 68°, Vertical 51°, Diagonal 84.8°		
Mechanical/ Electrical	Interface	TTL-232, RS-232, USB		
	Operating Voltage	12-pin FPC connector: 3.3-5VDC±5%		
		4-pin box connector: 3.3-5VDC±5%		
	Rated Power Consumption@5VDC	1129mW (typical)		
	Current@5VDC	Operating	237mA (typical), 319mA (max.)	
		Idle	69mA	
	Rated Power Consumption@3.3VDC	1103mW (typical)		
	Current@3.3VDC	Operating	335mA (typical), 479mA (max.)	
		Idle	93mA	
	Dimensions	61.5(W)×65.5(D)×31.9(H)mm (max.)		
	Weight	33g		
	Environmental	Operating Temperature	-40°C to 60°C (-40°F to 140°F)	
		Storage Temperature	-40°C to 75°C (-40°F to 167°F)	
Humidity		5% to 95% (non-condensing)		
Ambient Light		0~100,000lux (natural light)		
Certifications	FCC Part15 Class B, CE EMC Class B			
Accessories	NLS-EVK	Software development board for the NLS-EM20-80, equipped with a trigger button, beeper and RS-232 & USB interfaces.		
	Cable	USB	Used to connect the NLS-EVK to a host device.	
		RS-232	Used to connect the NLS-EVK to a host device.	
Power Adapter	DC5V power adapter to power the NLS-EVK with RS-232 cable.			

*Test conditions: T=23°C; Illumination=300lux using incandescent lamp; sample printed barcodes made by Newland.

Version:V1.0

**Test conditions: Scan Distance=(min. DOF + max. DOF)/2; T=23°C; Illumination=300lux using incandescent lamp; 2D: QR Code; 10 Bytes; Resolution=15mil; PCS=0.8.

* Specifications are subject to change without notice.*