



EM2049
OEM scan engine

FEATURES

Advanced technology.

The EM2049s' 2D barcode decoder chip ingeniously blends UIMG technology and advanced chip design & manufacturing, which significantly simplifies application design and delivers superior performance and solid reliability with low power consumption.

Bright LED aimer.

Highly visible and safe LED-based aimer makes targeting and scanning easier and faster.

Multiple Interfaces.

The EM2049 supports USB and TTL-232 interfaces to meet diverse customer needs.

Flexible Integration.

The EM2049 provides all-in-one type (imager and decoder board assembled as one) and split type (imager and decoder board separated) to cater for different mounting needs.

Low Power Consumption.

The advanced NLDC technology incorporated in the scan engine promises low power consumption and prolonged service life.

Application Scenarios

Image capture • illumination/aiming and decoder are built into such compact • lightweight engines that fit easily into even the most space-constrained equipments such as data collectors • meter readers • ticket validators • PDAs • self-service kiosks.

Performance	Image Sensor	752×480 CMOS		
	Illumination	Red LED (612nm~624nm) Green		
	Aimer	LED (517.5nm~535.5nm)		
	Symbolologies	2D	PDF417, QR Code (QR1/2, Micro), Data Matrix (ECC200, ECC000, 050, 080, 100, 140), Chinese Sensible Code	
		1D	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.	
	Resolution*	≥3mil		
	Typical Depth of Field*	EAN-13	55mm-385mm (13mil)	
		PDF 417	60mm-135mm (6.7mil)	
		Code 39	45mm-200mm (5mil)	
		Data Matrix	55mm-135mm (10mil)	
		QR Code	35mm-190mm (15mil)	
	Symbol Contrast*	≥25%		
	Scan Angle**	Roll: 360°, Pitch: ±50°, Skew: ±50°		
	Field of View	Horizontal 42°, Vertical 27.5°		
Mechanical/ Electrical	Interface	TTL-232, USB (HID-KBW, COM Port Emulation, HID-POS)		
	Operating Voltage	3.0~5.5VDC		
	Rated Power Consumption	542mW (typical)		
	Current@5.0VDC	Operating	123mA (typical), 159.5mA (max.)	
		Idle	14mA (typical)	
		Low Power	<200uA	
	Dimensions	41.0(W)×20.5(D)×25.0(H)mm (including bracket)		
Weight	11g (including bracket)			
Environmental	Operating Temperature	-20°C to 60°C (-4°F to 140°F)		
	Storage Temperature	-40°C to 70°C (-40°F to 158°F)		
	Humidity	5% to 95% (non-condensing)		
	Ambient Light	0~100,000lux (natural light)		
Certifications	FCC Part15 Class B, CE EMC Class B			
Accessories	EVK	Software development board for the NLS-EM2049, 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, used to provide power for the NLS-EVK.		

*Test conditions: T=23°C; Illumination=300lux using incandescent lamp; sample 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; 10Bytes; Resolution=15mil; PCS=0.8.

Specifications are subject to change without notice.

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