



EM50S-10
OEM scan engine

FEATURES

Advanced technology.

The EM50S-10 ingeniously blends Newland's UIMG technology and advanced chip design & manufacturing, which significantly simplifies application design and delivers superior performance and solid reliability with low power consumption.

Megapixel CMOS.

With 1280×800 pixel CMOS sensor, the EM50S-10 is able to capture high resolution images and decode high density barcodes.

Multiple interfaces.

The EM50S-10 supports USB and TTL-232 interfaces to meet diverse customer needs.

User-friendly illumination & aiming.

Designed with the end user in mind, the EM50S-10 employs highly visible laser aimer to achieve crisp and accurate targeting while using flicker-free white soft illumination to reduce eye strain and fatigue from long-time operation.

All-in-one design.

Ultra-compact, light and integrator-friendly, the scan engine can easily fit into miniature equipment.

Application Scenarios

PDA's, tablets, thin-and-light equipment, traditional self-service devices, etc.

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Performance	Image Sensor		1280×800 CMOS
	Illumination		White LED
	Aimer		650nm laser diode
	Symbolologies	2D	PDF417, QR Code, Micro QR, Data Matrix, Aztec, MaxiCode, GM Code, Chinese Sensible Code, MicroPDF417, Code One
		1D	Code 11, Code 128, Code 39, GS1 128 (UCC/EAN-128), AMI 128, Codabar, ISBT 128, Code 93, UPC-A, UPC-E, Coupon, GS1 Composite, EAN-13, EAN-8, ISSN, ISBN, Interleaved 2 of 5, Matrix 2 of 5, ITF14, ITF6, Industrial 25, Standard 25, China Post 25, MSI Plessey, Plessey, GS1 Databar(RSS), Code 49, Code 16K, etc.
		Postal	USPS PostNet, Royal Mail, USPS Planet, KIX Post, Australian Postal, etc.
		OCR	Passport OCR
	Resolution*		≥3mil
	Typical Depth of Field*	EAN-13	70mm-500mm (13mil)
		Code39	90mm-265mm (5mil)
		PDF417	70mm-225mm (6.7mil)
		Data Matrix	65mm-215mm (10mil)
		QR Code	40mm-295mm (15mil)
	Min. Symbol Contrast*		25%
	Scan Angle**		Roll: 360°, Pitch: ±60°, Skew: ±60°
	Field of View		Horizontal 42°, Vertical 28°
Mechanical/ Electrical	Interface		TTL-232, USB
	Operating Voltage		3.3VDC±5%
	Rated Power Consumption		888mW (typical)
	Current@3.3VDC	Operating	269mA (RMS typical), 399mA (RMS max.)
		Idle	<70mA
		Sleep	<1mA
Environmental	Dimensions		21.7(W)×14.7(D)×11.9(H) mm (max.)
	Weight		3.9g
	Operating Temperature		-20°C to 60°C (-4°F to 140°F)
	Storage Temperature		-40°C to 70°C (-40°F to 158°F)
Certifications	Humidity		5% to 95% (non-condensing)
	Ambient Light		0~100,000LUX
Accessories	FCC Part15 Class B, CE EMC Class B, RoHS		
	NLS-EVK		Software development board for the NLS-EM50S, 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	R 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 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.

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