















EM50S-10/ EM50S-20 oem scan engines

### **Features**

#### Superior Scanning Performance.

The EM50S-10 / EM50S-20 is a CPU based scan engine that delivers stunning performance. Armed with Newland's sixth-generation of UIMG technology, decoding damaged or poor-quality barcodes is no match for this scan engine.

#### Megapixel CMOS.

Thanks to its 1280x800 pixel CMOS sensor, the EM50S-10 / EMISaSH200 capture high resolution images and decode high density barcodes with ease.

## Dynamic Design.

Compact, lightweight and integration friendly is just the start for the all-in-one EM50S-10. The EM50S-20 takes it a step further with separate mountings for the imager and decoder board for a wider variety of integration, even in thin and light equipment.

#### User Friendly Illumination & Aiming.

Designed with the end user in mind, the EM50S-10 / EM50S-20 features a flicker-free, soft white illumination and a highly visible laser aimer for accurate targeting.

#### Multiple Interfaces.

The EM50S-10 / EM50S-20 supports USB and TTL-232 interfaces to meet diverse customer needs.

# **Application Scenarios**







# EM50S-10 / EM50S-20 technical specifications

	Performance	Image Sensor	1280x800 CMOS
Popt of Field EAN13   70-500mm   10mm   10		_	White LED
		Aiming	650nm laser diode
			70-500mm
Copt of Field Data   Copt o		•	90-265mm
Mark (10mil)   Depth of Field QR (15mil)   Depth of Field QR (15mil)   Minimal Print Contrast   25%   Scan Angle Roll   360°   Scan Angle Pitch   ±60°   Scan Angle Pitch   ±60°   Field of View Horizontal   42°   Field of View Horizontal   42°   Field of View Vertical   28°   Data capture   DP-417, QR code, Micro QR, Data Markix, Aztec, MaxiCode, GM Code, Chinese Sensible Code, Micro QR, Data Matrix, Aztec, MaxiCode, GM Code, Chinese Sensible Code, Micro QR, Data Matrix, Aztec, MaxiCode, GM Code, Chinese Sensible Code, MicroPDF417, Code One   PDF417, QR code, Micro QR, Data Matrix, Aztec, MaxiCode, GM Code, Chinese Sensible Code, MicroPDF417, Code One   PDF417, QR code, Micro QR, Data Matrix, Aztec, MaxiCode, GM Code, Chinese Sensible Code, MicroPDF417, Code One   PDF417, QR code, Micro QR, Data Matrix, Aztec, MaxiCode, GM Code, Chinese Sensible Code, MicroPDF417, Code One   PDF417, QR code, Micro QR, Data Matrix, Aztec, MaxiCode, GM Code, Chinese Sensible Code, MicroPDF417, Code One   PDF417, QR code, Micro QR, Data Matrix, Aztec, MaxiCode, GM Code, Chinese Sensible Code, MicroPDF417, Code One   PDF417, QR code, Micro QR, Data Matrix, Aztec, MaxiCode, GM Code, Chinese Sensible Code, MicroPDF417, Code One   PDF417, QR code, Micro QR, Data Matrix, Aztec, MaxiCode, GM Code, Chinese Sensible Code, MicroPDF417, Code One   PDF417, QR code, Micro QR, Data Matrix, Aztec, MaxiCode, GM Code, Chinese Sensible Code, MicroPDF417, Code One   PDF417, QR code, Micro QR, Data Matrix, Aztec, MaxiCode, GM Code, Chinese Sensible Code, MicroPDF417, Code One   PDF417, QR code, Micro QR, Data Matrix, Aztec, MaxiCode, GM Code, Chinese Sensible Code, Micro QR, Data Matrix, Aztec, MaxiCode, GM Code, Chinese Sensible Code, Micro QR, Data Matrix, Aztec, MaxiCode, GM Code, Chinese Sensible Code, Micro QR, Data Matrix, Aztec, MaxiCode, GM Code, Chinese Sensible Code, Micro QR, Data Matrix, Aztec, MaxiCode, GM Code, Chinese Sensible Code, Micro QR, Data Matrix, Aztec, MaxiCode, GM Code, Chinese Sensible Code, Micro QR, Data Matrix, Aztec,		•	70-225mm
		•	65-215mm
Scan Angle Roll   260°   260   260°			40-295mm
Scan Angle Pitch   \$60°     Scan Angle Skew   \$60°     Field of View Horizontal   42°     Field of View Vertical   28°		Minimal Print Contrast	25%
Scan Angle Skew   £60°     Field of View Horizontal   42°     Field of View Wertical   28°     Field of View Read Park (RS), Code 49°, Code 49°, Code 49°, Code 16°, Code Onc (All) (Plum Meax.) Axis (Plum Meax		Scan Angle Roll	360°
Field of View Horizontal   42°     Field of View Vertical   28°     Field of View Vertical   28°		Scan Angle Pitch	±60°
Field of View Vertical   28°   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, GS1 Databar (RSS), Code 49, Code 16K, etc.		Scan Angle Skew	±60°
Data capture         ID         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.           Physical         Dimensions (mm)         EM50S-20: Imager: 21.5(W)x10.2(D)x8.6(H) mm (max.) decoder board: 21.5(W)x21.5(D)x4.2(H) mm (max.)           Physical         EM50S-20: Imager: 21.5(W)x10.2(D)x8.6(H) mm (max.) decoder board: 21.5(W)x21.5(D)x4.2(H) mm (max.)           Weight         EM50S-20: 4g EM50S-10: 3.9g           Input Voltage         3.3VDC±5%           Current @ 3.3VDC         269mA (RMS typical), 399mA (RMS max.)           Operating         <70mA		Field of View Horizontal	42°
Profession   Pro		Field of View Vertical	28°
MicroPDF417, Code One	Data capture	1D	UPC-E, Coupon, GS1 Composite, EAN-13, EAN-8, ISSN, ISBN, Interleaved 2 of 5, Matrix 2 of 5, ITF14, ITF6,
EM50S: 10: 21.7(W)x14.7(D)x11.9(H)mm (max.)   Weight		2D	PDF417, QR Code, Micro QR, Data Matrix, Aztec, MaxiCode, GM Code, Chinese Sensible Code,
Input Voltage 3.3VDC±5% Current @ 3.3VDC 269mA (RMS typical), 399mA (RMS max.) Operating Current @ 3.3VDC 570mA Standby Power Consumption 888mW (typical)  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)  Accessories Optional EVK, RS232 Cable, Adapter, USB Cable Standard 75mm FFC  Device Management Software EasySet (configuration)  Certifications Certifications FCC Part15 Class B, CE EMC Class B, RoHS	Physical	Dimensions (mm)	
Current @ 3.3VDC Operating Current @ 3.3VDC Standby Power Consumption Storage Temperature Humidity Curient Storage Temperature Five Device Management Certifications Certifications  Current @ 3.3VDC Current @ 3.		Weight	EM50S-20: 4g EM50S-10: 3.9g
Operating Current @ 3.3VDC		Input Voltage	3.3VDC±5%
Standby Power Consumption 888mW (typical)  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)  Accessories Optional EVK, RS232 Cable, Adapter, USB Cable Standard 75mm FFC  Device Management Software EasySet (configuration)  Certifications Certifications FCC Part15 Class B, CE EMC Class B, RoHS		_	269mA (RMS typical), 399mA (RMS max.)
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)         Accessories       Optional       EVK, RS232 Cable, Adapter, USB Cable         Standard       75mm FFC         Device Management       Software       EasySet (configuration)         Certifications       Certifications       FCC Part15 Class B, CE EMC Class B, RoHS		_	<70mA
Storage Temperature -40°C to 70°C (-40°F to 158°F) Humidity 5% to 95% (non-condensing)  Accessories Optional EVK, RS232 Cable, Adapter, USB Cable Standard 75mm FFC  Device Management Software EasySet (configuration)  Certifications Certifications FCC Part15 Class B, CE EMC Class B,, RoHS		Power Consumption	888mW (typical)
Humidity 5% to 95% (non-condensing)  Accessories Optional EVK, RS232 Cable, Adapter, USB Cable Standard 75mm FFC  Device Management Software EasySet (configuration)  Certifications Certifications FCC Part15 Class B, CE EMC Class B,, RoHS	Environmental	Operating Temperature	-20°C to 60°C (-4°F to 140°F)
Accessories Optional EVK, RS232 Cable, Adapter, USB Cable Standard 75mm FFC  Device Management Certifications Certifications FCC Part15 Class B, CE EMC Class B,, RoHS		Storage Temperature	-40°C to 70°C (-40°F to 158°F)
Standard 75mm FFC  Device Management Certifications Certifications FCC Part15 Class B, CE EMC Class B,, RoHS		Humidity	5% to 95% (non-condensing)
Standard   75mm FFC	Accessories	Optional	EVK, RS232 Cable, Adapter, USB Cable
Management  Certifications  Certifications  FCC Part15 Class B, CE EMC Class B, RoHS			
The factor of the court of the		Software	EasySet (configuration)
Waranty Warranty 2 years	Certifications	Certifications	FCC Part15 Class B, CE EMC Class B,, RoHS
	Waranty	Warranty	2 years

