



NLS-N1-W

OEM SCAN ENGINE

FEATURES

○ **UIMG® Technology**

Armed with Newland's six-generation of **UIMG®** technology, the scan engine can swiftly and effortlessly decode even poor quality barcodes (e.g., low contrast, laminated, damaged, torn, warped or wrinkled).


○ **Ultra Wide-viewing FOV**

Featuring excellent near-field reading and wide viewing angle H:68°, the scan engine offers stunning performance on decoding 40mm 1D barcodes at a distance of 30mm or 65mm 1D barcodes at 50mm away. It is applied in medical

○ **Compact & Lightweight Design**

Seamless integration of imager and decoder board makes the scan engine extremely smallest and lightweight and easy to fit into miniature equipment.

○ **Outstanding Power Efficiency**

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



CMOS



1D Barcode



TTL232



USB



2D Barcode

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Performance

Image Sensor		640*480 CMOS
Illumination		3000K white LED
Aiming		625nm red LED
Symbolologies	2D	PDF417, QR Code, Micro QR, Data Matrix, Aztec
	1D	Code 128, EAN-8, EAN-13, UPC-E, UPC-A, Interleaved 2/5, ITF-14, ITF-6, Matrix 2/5, Code 39, Codabar, Code 93, UCC/EAN-128, GS1 Databar, Code 11, ISBN, ISSN, Industrial 2/5, Standard 2/5, Plessey, MSI-Plessey, AIM 128
Resolution		≥3mil (1D) ≥6.67mil (2D)
Typical Depth of Field ¹	PDF417	25mm-45mm (6.7mil)
	Code 39	25mm-50mm (5mil)
	Data Matrix	25mm-45mm (10mil)
	QR Code	20mm-60mm (15mil)
Min. Symbol Contrast		25%
Scan Angle ²		Roll: 360°, Pitch: ±50°, Skew: ±50°
Field of View		Horizontal 68°, Vertical 51°

Physical

Interface		TTL-232, USB
Operating Voltage		3.3VDC±5%
Current@3.3VDC	Operating ³ (RMS)	68mA (typical)
	Idle	11.8mA
	Sleep	< 0.3mA
Dimensions		23.8(W)×7.5(D)×7.0(H)mm (max.)
Weight		1.2g

Environmental

Operating Temperature	-20°C to 55°C (-4°F to 131°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)

Certificates

Certificates & Protection	FCC Part 15 Class B, CE EMC Class B, RoHS 2.0, IEC62471
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Accessories

NLS-EVK	Optional	Software development board, equipped with a trigger button, beeper and RS-232 & USB interfaces.
Cable	Optional	USB cable used to connect the NLS-EVK to a host device. RS-232 cable used to connect the NLS-EVK to a host device.
Power Adapter		DC5V power adapter used to power the NLS-EVK with RS-232 cable.

¹ Depth of Field: T=23°C; Illumination=300lux; sample barcodes made by Newland.

² Scan Angle: Scan Distance=(min. DOF + max. DOF)/2; 2D: QR Code; PCS=I; sample barcodes made by Newland.

³ Operating Current: Scan Distance=(min. DOF + max. DOF)/2; test in the normal mode.

Specifications are subject to change without notice.

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The following table lists the pin functions of the 13-pin FPC connector.

PIN#	Signal	I/O	Function
1	GND	-	Power-supply ground
2	EXT_TRIG#	I	Trigger signal input
3	EXT_RST#	I	Reset signal input
4	EXT_DSF	O	Good Read LED output
5	EXT_BUZ	O	Beeper output
6	EXT_LIGHT	O	External illumination control signal
7	USB_D+	-	USB_D+ signal
8	USB_D-	-	USB_D- signal
9	TTL232_TX	O	TTL level 232 transmit data
10	TTL232_RX	I	TTL level 232 receive data
11	GND	-	Power-supply ground
12	VCC	-	3.3V power input
13	VCC	-	3.3V power input

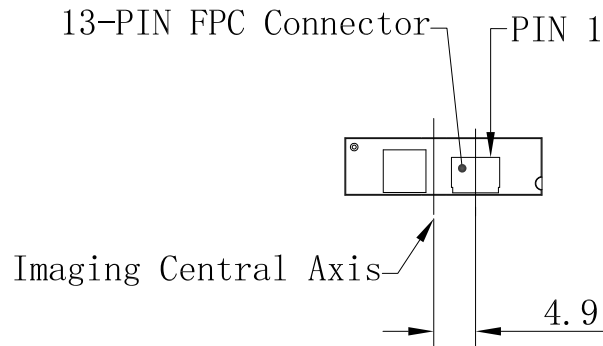
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Version: V1.0

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Interface

Pinouts

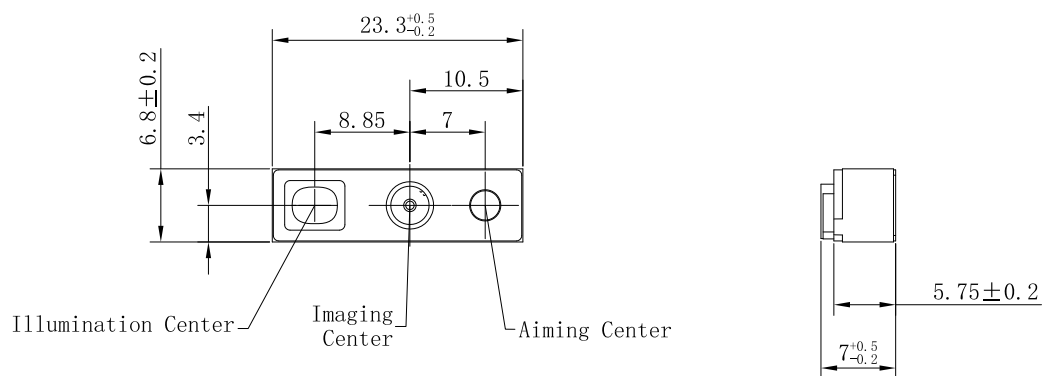
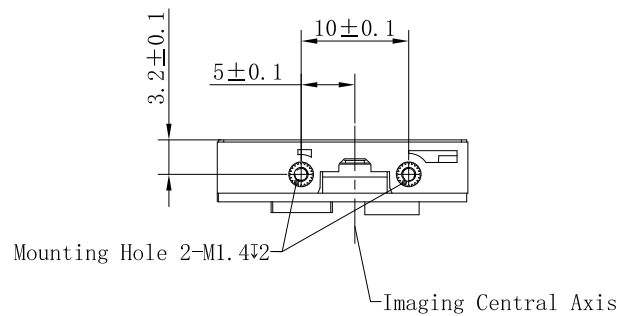


Mechanical

Mounting

Dimensions

(unit: mm)



Dimensions: 23.8 (W) \times 7.5 (D) \times 7.0 (H)mm (max)

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Version: V1.0

Newland AIDC

Add: No.1 Rujang West Rd.,
Mawei, Fuzhou, Fujian 350001, China
Tel: +86-591-83979500
Fax: +86-591-83979216
Email: info@newlandaidc.com
Web: www.newlandaidc.com

Asia Pacific

Add: 6 Raffles Quay #14-06
Singapore 048582
Email: info@newlandaidc.com

Europe & Middle East

Add: Rolweg 25, 4104 AV Culemborg,
The Netherlands
Tel: +31 (0) 345 87 00 33
Email: sales@newland-id.com
Tech Support: tech-support@newland-id.com

North America & Latin America

Add: 46559 Fremont Blvd.,
Fremont, CA 94538, USA
Tel: +1 510 490 3888
Fax: +1 510 490 3887
Email: info@newlandaidc.com