



NLS-FM431

FIXED MOUNT BARCODE SCANNER

FEATURES

○ **UIMG® Technology**

Armed with Newland's seven-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).

○ **Automatic Exposure Control (AEC)**

The sensor in the NLS-FM431 automatically adjusts the supplementary lighting duration based on the light reflected off barcode.

○ **Improved Motion Tolerance**

NLS-FM431 can capture and decode the barcode in motion up to 3.5m/s.

○ **Dual Aimer Systems**

The FM431 contains a red laser aimer that produces a crosshair aiming pattern. It is clear and bright even in bright sunlight, ensuring first time accurate aim. Besides, the scanner provides a green LED aimer.



Green LED



CMOS



1D Barcode



2D Barcode



USB



RS232



OCR



Laser Aimer



IR

NLS-FM431

Performance

Image Sensor		1280 * 800 CMOS
Illumination		3000K white LED
Aiming		518nm green LED 650nm red laser aimer
Symbolologies	2D	PDF417, QR Code, Data Matrix, Aztec, Chinese Sensible Code, Maxicode, Micro QR, Micro PDF417, GM Code, Code One
	1D	Code 128, EAN-8, EAN-13, UPC-E, UPC-A, Coupon, Interleaved 2/5, ITF-14, ITF-6, Matrix 2/5, Code 39, Codabar, Code 93, China Post 2/5, UCC/EAN-128, GSI Databar, GSI Composite, Code 11, ISBN, ISSN, Industrial 2/5, Standard 2/5, Plessey, MSI-Plessey, AIM 128, ISBT 128, Code 49, Code 16K
	Postal	USPS Postnet, USPS Intelligent Mail, Royal Mail, USPS Planet, KIX Post, Australian Postal, Japan Post
	OCR	Passport OCR, Chinese ID Card, China Travel Permit OCR
Resolution	ID	≥3mil
Motion Tolerance		3.5m/s
Typical Depth of Field ¹	SR Version	
	PDF417	55-190mm (6.7mil)
	EAN-13	55-460mm (13mil)
	Code 39	65-230mm (5mil)
	QR Code	40-310mm (15mil)
	Data Matrix	50-230mm (10mil)
	HD Version	
	PDF417	38-130mm (6.7mil)
	Code 39	48-70mm (3.3mil)
	Code 39	38-140mm (5mil)
Min. Symbol Contrast	Data Matrix	53-70mm (5mil)
	Data Matrix	35-145mm (10mil)
Scan Angle ²		Roll: 360°, Pitch: ±55°, Skew: ±55°
Field of View		Horizontal 51°, Vertical 32°

Physical

Interface		RS-232, USB
Operating Voltage		5VDC±5%
Current@5VDC	Operating	258.5mA (typical), 400mA (max.)
	Idle	93.72mA
Dimensions		41.5(W)×49.5(D)×24.7(H)mm (max) (without cable)
Weight		56g
Notification		Beeper, LED indicator

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)
ESD	±14 kV (air discharge), ±8 kV (direct discharge)
Drop	1.5m
Sealing	IP54
Humidity	5% to 95% (non-condensing)
Ambient Light	0-100,000lux (natural light)

Certificates

Certificates	FCC Part 15 Class B, CE EMC Class B, RoHS 2.0, IEC62471, IEC60825
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¹ Depth of Field: T=23°C; Illumination=300lux using incandescent lamp; 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.

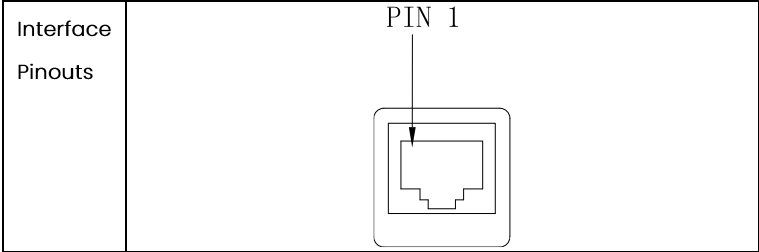
³ Operating Current: Scan Distance=(min. DOF + max. DOF)/2; test in the normal mode.

Specifications are subject to change without notice.

NLS-FM431

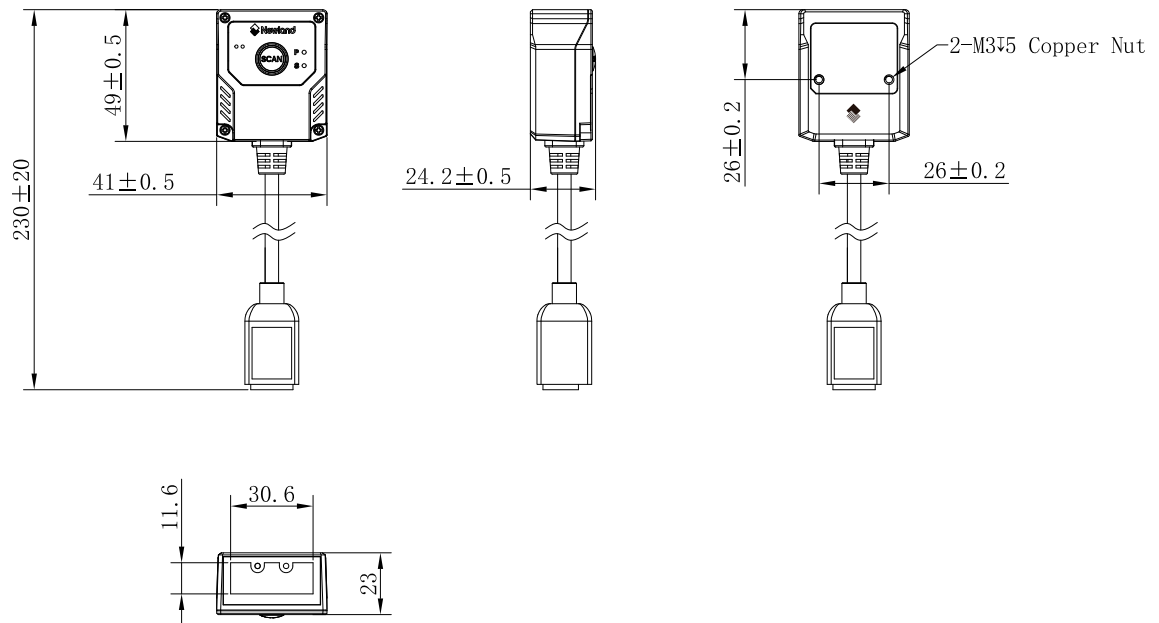
The following table lists the pin functions of the RJ50 port.

PIN#	Signal	I/O	Function
1	NC	NC	NC
2	IO	reserved	Used as trigger signal
3	VCC	P	5V power supply
4	RS232_TX	O	RS-232 input
5	RS232_RX	I	RS-232 output
6	RS232_CTS	I	RS level 232 clear to send
7	RS232_RTS	O	RS level 232 request to send
8	GND	P	Ground
9	USB_D-	A	USB_D- signal
10	USB_D+	A	USB_D+ signal



NLS-FM431

Mechanical
Mounting
Dimensions
(unit: mm)



Dimensions: 41.5(W)×49.5(D)×24.7(H)mm (max.) (without cable)

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Version: V1.1

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