



# NLS-FR80

## DESKTOP BARCODE SCANNER

### FEATURES

- **Superior Scanning Performance**

Armed with Newland's **UIMG®**+AIBD technology, this scanner can scan ID and 2D barcodes and delivers stunning performance on decoding the wrinkled, reflective and curved barcodes.

- **Powerful OCR Recognition Capability**

Equipped with advanced OCR technology, the scanner is ideal for applications requiring accurate data capture from IDs and documents. It instantly scans and extracts text with high accuracy.

- **Advanced Multi-core Processing Platform**

Integrated with a multi-core processing platform, the NLS-FR80 V2 offers powerful computing capabilities, ensuring faster and more stable decoding performance.

- **Multiple Status indicators**

6 kinds of status indicators show current working status of the scanner, including decoding, configuration, communication and abnormal status.

- **Large Scan Window**

Large scan window meets demands of goods with different sizes.

- **High Motion Tolerance**

With high motion tolerance, the scanner can quickly capture moving goods.

- **Sound Effect & Volume keys**

Sound effect and volume keys are provided for users to select one suitable for their application environment.



CMOS



1D Barcode



2D Barcode



USB



RS232



IP 52

# NLS-FR80

## Performance

Image Sensor		1280 * 1088 CMOS
Illumination		Red LED (610nm-620nm)
Symbologies	ID	Code 11, Code 128, Code 39, GS1-128 (UCC/EANI28), AIM 128, ISBT 128, CodaBar, Code 93, UPC-A/UPC-E, Coupon, EAN-13, EAN-8, ISSN, ISBN, Interleaved 2/5, Matrix 2/5, Industrial 2/5, ITF-14, ITF-6, Standard 2/5, China post 25, MSI-Plessey, Plessey, GS1 Composite, GS1 Databar (RSS)
	2D	QR, DataMatrix, PDF417, Aztec
	OCR	Passport OCR, Chinese ID Card, China Travel Permit OCR
Resolution <sup>1</sup>		≥3mil (ID)
Typical Depth of Field <sup>1</sup>	EAN-13	50mm-90mm (5mil)
	EAN-13	0mm-140mm (13mil)
Min. Symbol Contrast <sup>2</sup>		15%
Scan Angle <sup>2</sup>		Roll: 360°, Pitch: ±50°, Skew: ±50°
Field of View		Horizontal 42.4°, Vertical 36°

## Physical

Interface		RS-232, USB
Operating Voltage		5 VDC±5%
Current@5VDC <sup>3</sup>	Operating	280mA (typical), 800mA (max.)
	Idle	155mA
Dimensions		Without base: 151 (W) ×141.5 (H) ×97.5 (D) mm (max.) With base: 151 (W) ×156.5 (H) ×108.5 (D) mm (max.)
Weight		549g (without base), 681g (with base)
Notification		speaker, LED

## Environmental

Operating Temperature	-20°C to 50°C (-4°F to 122°F)
Storage Temperature	-40°C to 70°C (-40°F to 158°F)
Humidity	5% to 95% (non-condensing)
ESD	±15 KV (air discharge); ±8 KV (direct discharge)
Sealing	IP52

## Certificates

Certificates & Protection	FCC Part 15 Class B, CE EMC Class B
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## Accessories

Cable	Optional	2m/3m USB or RS-232 data cable, used to connect the scanner to a host device.
Power Adapter	Standard	DC5V power adapter to power the scanner.
Base	Standard	Used to install the scanner on a desktop

<sup>1</sup> Depth of Field: T=23°C; Illumination=300lux using incandescent lamp; sample barcodes made by Newland.

<sup>2</sup> Scan Angle: Scan Distance=(min. DOF + max. DOF)/2; ID: EAN-13; PCS=1; sample barcodes made by Newland.

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

Specifications are subject to change without notice.

Version: V1.0

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## Pin Definition

The following table lists the pin functions of the 10-pin connector for the main RJ45 interface and secondary RJ45 interface.

### Main RJ45 interface

PIN#	Signal	I/O	Function	Remark
1	EF_3V3	O	Good read indicator/ for other functions	3.3V
2	EF_5V	O	Good read indicator/ for other functions	5V
3	VCC5V	I	5V power input	
4	RS232_TX	O	RS-232 level TX output	to connect the host
5	RS232_RX	I	RS-232 level RX input	to connect the host
6	RS232_CTS	I	RS-232 level CTS input	to connect the host
7	RS232_RTS	O	RS-232 level RTS output	to connect the host
8	GND	Ground	Ground	
9	USB_D-	I/O	USB_D-	
10	USB_D+	I/O	USB_D+	

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## Secondary RJ45 interface

PIN#	Signal	I/O	Function	Remark
1	EF_IN#	I	Reserved interrupt signal input (low level is valid)	3.3V level
2	EF_OUT	O	Good read indicator/for other functions	5V level
3	5V_OUT	O	5V power output (for the handheld barcode scanner)	
4	EX_RX	I	RS-232 level RX input	to connect the handheld barcode scanner
5	EX_TX	O	RS-232 level TX output	to connect the handheld barcode scanner
6	EX_RTS	O	RS-232 level RTS output	to connect the handheld barcode scanner
7	EX_CTS	I	RS-232 level CTS input	to connect the handheld barcode scanner
8	GND	Ground	Ground	
9	Antenna-	I/O	Reserved aerial interface	
10	Antenna+	I/O	Reserved aerial interface	

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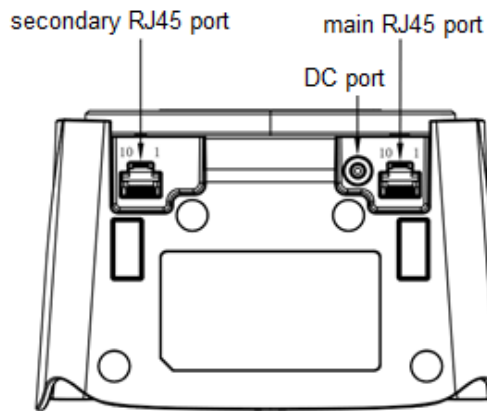
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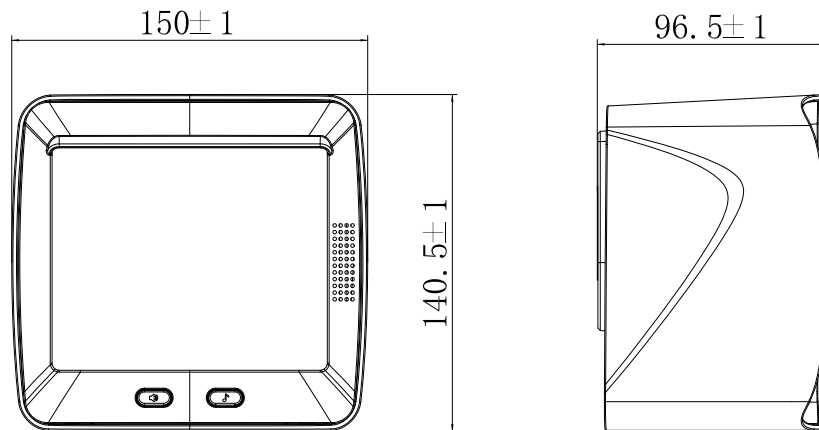
## Interface & Dimension

### Interface

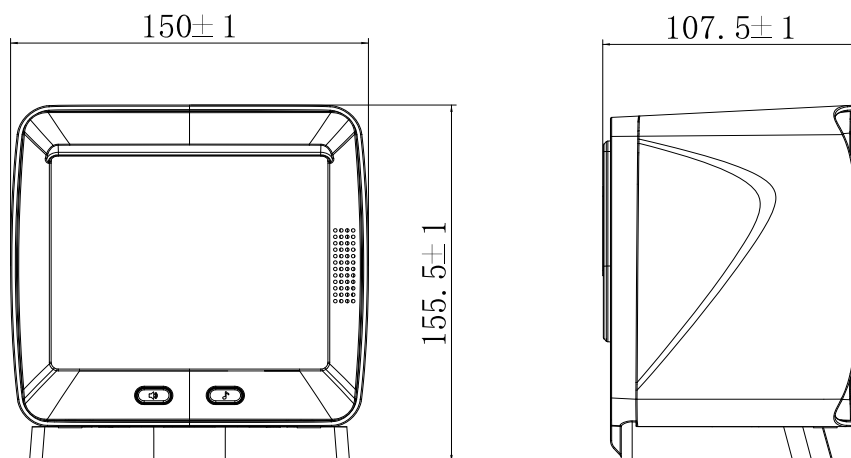


### Dimension

Without base dimension(mm)



With base dimension(mm)



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