Industrial 2D wired scanner • 1 MP • Tri-colour multi-spectral light • 2 m/s motion tolerance

XL-8220AI Industrial 2D Wired Barcode Scanner

1280 x 800 (1 MP) | 3 mil precision | 2 m/s motion tolerance | Red / blue / white illumination | FOV 48° x 42° | 1.5 m drop resistance

01 Multi-Spectral Tri-Colour Light

Red / blue / white illumination with active switching and auto memory; laser cross aiming locates the right code in multi-barcode scenes and prevents mis-scans. Reads codes at 15% contrast.

02 Built for Industrial Codes

A 1280 x 800 (1-megapixel) sensor with a Cortex-A7 1.2 GHz dual-core processor and in-house decoding algorithms handles laser-etched, dot-peened, inkjet and chemically etched codes.

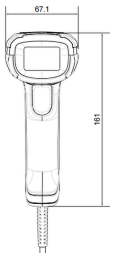
03 High-Speed Motion Tolerance

2 m/s motion tolerance and 3 mil precision read codes reliably on moving production lines and conveyors without stopping them.

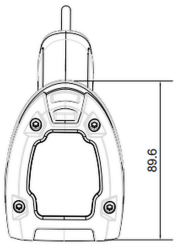
04 Rugged & Well Connected

Withstands repeated 1.5 m drops to concrete; ESD 8 kV contact and 15 kV air discharge; RS-232, USB HID, USB COM and optional Ethernet.





Dimensions (front view)



Dimensions (side view)

Applications

Designed for high-precision barcode scanning in manufacturing and commercial environments: production lines, warehouse logistics, automotive parts and electronics manufacturing where laser-etched, dot-peened, inkjet or chemically etched codes must be read.

Product Features

- 1-megapixel 1280 x 800 image sensor
- Red / blue / white illumination, active switching with auto memory
- 2 m/s motion tolerance, 3 mil precision
- RS-232, USB HID, USB COM and optional Ethernet
- Cortex-A7 1.2 GHz dual-core with in-house decoding algorithms
- Laser cross aiming prevents mis-scans in multi-barcode scenes
- Reads low-contrast codes down to 15% reflectance difference
- Repeated 1.5 m drops, ESD 8 kV / 15 kV, adjustable LED and buzzer feedback

SCAN PERFORMANCE

Illumination	Red / blue / white, active switching with auto memory
Sensor	1280 x 800 pixels (1 MP)
Processor	Cortex-A7 1.2 GHz dual-core
Precision	3 mils
Min. contrast	15% reflectance difference
Motion tolerance	2 m/s
Reading angle	Roll 0 – 360°; pitch ±60°; skew ±60°
Field of view	48° horizontal, 42° vertical
User feedback	Decode LED and buzzer (adjustable tone and volume)
2D symbologies	Aztec Code, Data Matrix, Maxi Code, QR Code, HAN XIN, Micro QR Code
Stacked codes	GS1 DataBar Expanded Stacked, Stacked, Stacked Omnidirectional, Composite, MicroPDF417, PDF417
1D symbologies	All standard 1D codes including GS1 DataBar linear codes, auto-discriminated and decoded

ELECTRICAL & ENVIRONMENT

Current	Operating (nominal): < 460 mA Standby / idle (nominal): < 160 mA
Input voltage	5 VDC（±5%）/ 500 mA
ESD protection	8 kV contact; 15 kV air
Drop resistance	Repeated 1.5 m drops onto concrete
Operating temp.	-10 ~ +50 ℃
Storage temp.	-40 ~ +70 ℃
Humidity	5 ~ 95%
Ambient light	0 ~ 100,000 lux
Interfaces	RS-232; USB HID; USB COM; Ethernet (optional)
Warranty	18 months

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Depth of Field & Maintenance

About Depth of Field 01

Minimum working distance depends on code length, scan angle, print resolution, contrast and ambient light. The table below lists typical measured values.

Maintenance 02

1) Keep the reading window clean. 2) Avoid hard or rough objects scratching the window. 3) Remove spots with a soft brush. 4) Clean with a soft cloth such as a lens cloth. 5) Never spray liquids onto the window. 6) Use clean water only - no other cleaners.

Typical Depth of Field

Density	Symbology	Range
3.34 mil	CODE 128	50 mm — 110 mm
5 mil	CODE 128	40 mm — 120 mm
3.34 mil	EAN-13	50 mm — 120 mm
5 mil	EAN-13	40 mm — 120 mm
13.34 mil	EAN-13	20 mm — 190 mm
5 mil	PDF417	50 mm — 120 mm
10 mil	DM	40 mm — 150 mm
20 mil	DM	20 mm — 190 mm

Notes

1) Tri-colour illumination switches automatically and remembers your setting; the laser cross aimer locates the target code in multi-barcode scenes. 2) For laser-etched, dot-peened, inkjet or chemically etched codes, select the light mode that suits the surface. 3) A decode LED and buzzer confirm each good read; tone and volume are adjustable. 4) 18-month warranty; specifications subject to change without notice.

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