ULTRA-COMPACT 21.7 × 7.2 × 9 mm · 640 × 480 CMOS · READS IN COMPLETE DARKNESS

XL-M100P

Ultra-compact Embedded 2D Scan Module

640 × 480 @ 30 fps | 21.7 × 7.2 × 9 mm | Under 5 g | 1D ≥ 4 mil · 2D ≥ 10 mil | TTL-232 · USB 2.0 | +3.3 V DC

Ultra-Compact, Highly Integrated 01

Just 21.7 × 7.2 × 9 mm and under 5 g, ready to embed in ring scanners, neck-worn readers and pocket Bluetooth readers.

Fast 1D & 2D Decoding 02

Advanced imaging algorithms with wide-angle optics (37° H × 28° V) read every common 1D and 2D code at speed.

Reads in Complete Darkness 03

6500 K white illumination plus a red aiming LED deliver solid reading from pitch dark to strong ambient light.

Easy to Integrate 04

13-pin 0.3 mm FPC connector with TTL-232 and USB 2.0 outputs, plus external LED and beeper interfaces.





Scan window



Optical lens

TYPICAL VERTICALS

Ring scanners, neck-worn readers, pocket Bluetooth scanners, self-service terminals and industrial handhelds — built to cope with shock, vibration and strong ambient light.

PRODUCT FEATURES

- **Ultra-compact** — 21.7 × 7.2 × 9 mm and under 5 g
- **Illumination** — 6500 K white LED with red aiming LED
- **Low power** — +3.3 V DC ±5%, 170 mA working, 800 µA standby
- **Optics** — 37° (H) × 28° (V) field of view, 1D ≥ 4 mil / 2D ≥ 10 mil
- **Host interfaces** — TTL-232 and USB 2.0 Full Speed
- **Connector** — 13-pin 0.3 mm pitch FPC, external LED and beeper drivers

SCAN PERFORMANCE

Image Sensor	640 × 480 CMOS 30 fps
Illumination	6500 K white LED
Aimer	Red LED aimer
Field of View (FOV)	37° (H) × 28° (V)
Resolution	1D ≥ 4 mil / 2D ≥ 10 mil
Print Contrast Signal (PCS)	≥ 15%
Pitch / Skew / Tilt	±60° / ±60° / 360°
Trigger Mode	Continuous / Sensing / Manual / Command
Depth of Field (DOF)	Code 39 5 mil: 50–90 mm EAN-13 13 mil: 40–210 mm Code 128 15 mil: 45–250 mm QR 15 mil: 40–180 mm

SUPPORTED SYMBOLOGIES

2D	QR, PDF417, Data Matrix (ECC200), Aztec, HanXin, MaxiCode, Micro QR, MicroPDF417
1D	EAN-13, EAN-8, UPC-A, UPC-E0, UPC-E1, Code 128, Code 39, Code 93, Codabar, Interleaved 2 of 5, Industrial 2 of 5, Matrix 2 of 5, Code 11, MSI-Plessey, Standard 2 of 5, Plessey, China Post, Code 16K, GS1 DataBar (RSS-Expand / RSS-Limited / RSS-14 / GS1 Composite)

ELECTRICAL & PHYSICAL

Host System Interfaces	TTL-232 / USB 2.0 Full Speed
Connector	13-pin, 0.3 mm pitch Bottom contact
User Indicators	LED and beeper External interfaces
Input Voltage	+3.3 V DC ±5%
Operating Current	170 mA
Standby Current	800 µA
Dimensions	21.7 × 7.2 × 9 mm L × W × H
Weight	< 5 g

ENVIRONMENTAL

Operating Temperature	−20 °C to +60 °C
Storage Temperature	−40 °C to +70 °C
Humidity	5–95% RH, non-condensing
Warranty	2 years

HOST INTERFACE

A 13-pin 0.3 mm pitch FPC connector carries TTL-232 and USB 2.0 Full Speed, with LED and beeper drivers brought out for the host to use.

MOUNTING

21.7 × 7.2 × 9 mm and under 5 g — small enough for ring scanners, neck-worn readers and pocket Bluetooth readers.

POWER

+3.3 V DC ±5% with 170 mA working and 800 µA standby, sized for battery-powered wearables.

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Specifications subject to change without notice.