

AI DEEP LEARNING DECODING · 1296 × 816 IMAGE SENSOR · 1D ≥ 3 mil · DOF 75–250 mm

F5310

Fixed-Mount Barcode Scan Engine

AI Deep Learning Decoding

1296 × 816 CMOS

1D ≥ 3 mil · 2D ≥ 5 mil

DOF 75–250 mm

FOV ±48° / ±28°

USB / TTL · 3.3 V

01 In-House Core Technology

Core technology is developed in house, and we work with customers on development and customisation requirements.

02 AI Deep Learning Algorithms

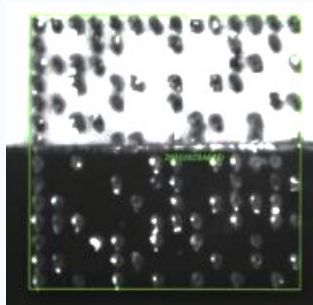
Reads awkward codes such as inverted (yin-yang) and low-contrast barcodes.

03 Multicolor Smart AE

Red and white illumination by default, with one-channel external light control so the light source can be matched to each scene.

04 Setup Software

A bundled image debugging tool covers parameter configuration and reading tuning, so integration comes up to speed quickly.



Inverted code



Low contrast



Tilted DPM

TYPICAL VERTICALS

Supplied as a **fixed-mount OEM scan engine**, F5310 is built into customer equipment to read 1D / 2D barcodes. Different light sources can be deployed to suit each scene, and typical use is **DPM direct part marking** together with fixed-mount barcode reading on production, inspection and test stations.

F5310 Fixed-Mount Barcode Scan Engine

PRODUCT FEATURES

- **In-house core technology** — developed independently, with customer development and customisation supported
- **Multicolor smart AE** — red and white by default, plus one-channel external light control
- **Low power, compact body** — under 180 mA at 3.3 V in a 30 × 21 × 15.5 mm envelope

READING PERFORMANCE

Image Sensor	1296 × 816 CMOS
Illumination	White LED / red LED
Aimer	Red cross laser aimer
Resolution	1D ≥ 3 mil; 2D ≥ 5 mil
Print Contrast Signal (PCS)	≥ 15%
Pitch / Skew / Tilt	±60° / ±60° / ±360°
Field of View (FOV)	±48° / ±28°
Depth of Field (DOF)	Code 39 (5 mil): 75–250 mm QR Code (10 mil): 75–230 mm
Ambient Light Immunity	0–100,000 lux

MECHANICAL & ELECTRICAL

Dimensions	30 (D) × 21 (W) × 15.5 (H) mm
Host System Interfaces	USB (default) / TTL
Input Voltage	3.3 V
Operating Current	< 180 mA at 3.3 V (typical)
Warranty	2 years

- **AI deep learning algorithms** — reads inverted and low-contrast codes that defeat conventional decoders
- **Large image format** — large target surface and large pixel design with intelligent multispectrum
- **Setup software** — image tool for parameter configuration and reading tuning

SUPPORTED SYMBOLOGIES

1D	EAN-13, EAN-8, UPC-A, UPC-E, Code 39, Code 128, ISBN, Code 93, Code 11, UCC/EAN-128, GS1 Databar, Interleaved 2 of 5, Matrix 2 of 5, Industrial 2 of 5, Codabar, Standard 2 of 5, MSI-Plessey, GS1 composite code
2D	PDF417, Data Matrix, QR Code, HanXin, Aztec, MaxiCode

ENVIRONMENTAL

Operating Temperature	–20 °C to +50 °C
Storage Temperature	–40 °C to +60 °C
Humidity	5–95% RH, non-condensing

THERMAL SHOCK RESISTANCE

High Temperature	60 °C (140 °F)
Low Temperature	–20 °C (–4 °F)
Cycles	30 min high / 30 min low, 24 cycles Thermal-shock tested

CONFIGURATION

Setup	Image debugging tool Parameter configuration and tuning
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HOST INTERFACE

USB by default with TTL-level serial on board; a fixed-mount OEM engine wired straight into the host controller.

MOUNTING

A 30 × 21 × 15.5 mm body fits production, inspection and test stations where space is tight.

POWER

3.3 V input at under 180 mA typical keeps the engine inside the budget of portable and in-line equipment.