

FUZZYSCAN IM680

All-in-One Embedded Scan Module



Designed for indoor and outdoor self-service applications

Purpose built to meet the booming demand for self-service applications, the IM680 scan module features an all-in-one design that enables effortless integration. Thanks to its rich functionality, flexible mounting design with EVA compliance, adaptable IP67 protection and a wide operating temperature range, the IM680 is an ideal solution for various indoor and outdoor applications.

Powered by Cino's exclusive AI-driven imaging technology and ultra-wide-angle optical design, the IM680 works seamlessly under low-light conditions and also reads large barcodes at near-contact range. In addition, it is specially optimized for reading digital barcodes, even for those displayed on smartphones screens with low brightness. The IM680 is well-suited for a wide range of customer-facing applications, including self-service kiosks, smart vending machines, smart lockers, fare gateways, gas stations, parking terminals, access control and more.

- All-in-one design for effortless integration
- Flexible mounting design with EVA compliance
- Easy adaption for IP67 sealing
- Chemically-tempered window glass
- Wide operating temperature range from -30°C to 60°C
- Optimized for reading barcodes on smartphone screens
- 5-30Vdc wide input voltage range
- Read large barcodes at near-contact range
- Read barcodes under low-light conditions
- Multiple interfaces supported
- Inherit Cino's powerful FuzzyScan DNA

Effortless Integration

The IM680 consolidates rich functionalities with useful features in a compact single unit for effortless integration.

All-in-One Design

Thanks to its all-in-one design, the IM680 is able to significantly reduce your development costs and integration efforts. In particular, you don't need to deal with the complicated optical design and water-dust protection.

Rich Host Interface

The IM680 offers multiple interfaces to fulfill diverse connectivity requirements, including RS232, USB and TTL Serial (UART). For long-distance communication requirements, optional Ethernet PoE and RS485 are available upon request.

Flexible Mounting Design

Constructed with multiple mounting options, the IM680 allows easy integration into diverse host equipments. Along with EVA (European Vending & Coffee Service Association) compliance, it is highly compatible across various self-service applications, such as self-service kiosks and auto vending machines, offering seamless interchangeability and replacement.



Effortless Integration



Customer-Facing Applications



Ideal for Outdoor Applications

Wide Input Voltage Range

Designed with a 5–30V DC input voltage, it easily adapts to various hosts by eliminating the need for extra power converters, ensuring seamless integration and cost efficiency.

Outdoor Reliability

Purpose-built to deliver high reliability for both indoor and outdoor applications, the IM680 ensures maximum uptime even in challenging environments.

Easy Adaption for IP67 Sealing

For challenging outdoor applications that require a high level of water and dust protection, the IM680 can be easily adapted for IP67 sealing by installing an additional low-cost waterproof material.

Chemically Strengthened Window Glass

Chemically strengthened for maximum durability, the exit window of the IM680 is not only highly **scratch-resistant**, but also withstands external impact and pressure.

Wide Operating Temperature Range

The IM680 offers a wide operating temperature range from -30°C to 60°C , allowing consistent performance in outdoor environments without compromise.

Optimal User Experience

Designed to ensure an efficient yet intuitive user experience, the IM680 comes with all the imaging and sensing technologies necessary for your scanning applications.

Unparalleled Mobile Phone Reading

Optimized for mobile phone reading, the IM680 can easily perform fast and accurate barcode readings, even from smartphone screen with **low brightness**.

Enormous Scanning Field

Thanks to the ultra-wide-angle optical design, the IM680 offers a super large scanning field that allows **near-contact** reading for large printed barcodes, as well as those displayed on smartphone screens.

Work under Low Ambient Light

Equipped with purpose-built optics and a high sensitivity image sensor, the IM680 not only overcomes glare and reflection under bright ambient light, but also delivers consistent, peak reading performance under low ambient light.

Responsive Activation

Equipped with an IR proximity sensor, the IM680 automatically activates the illumination when an object approaches the near-field zone, preventing discomfort to the user's eyes from direct illumination. For different application scenarios, **motion sensing** and **image proximity sensing** are available to fulfill your desired activation requirements.



FUZZYSCAN DNA

Value Beyond Measure

FuzzyScan DNA is a collection of useful features with added-values available for every Cino scanner at no additional cost. These exclusive features not only elevate your user experience, but also help you overcome various technical limitations beyond barcode scanning.

DataWizard

A powerful feature that allows advanced formatting on GS1 and UDI data. By using data scripts, it is able to perform sophisticated data validation and complex data processing, such as US driver's license parsing or medical data parsing

iCode

A useful macro command barcode for enabling configuration with a single scan

Multilingual Edge

A comprehensive function for converting data output into your desired languages

Smart Scene

A series of preset configurations for easy adaptation to specific scenarios

Security Plus

A programmable security script for preventing unauthorized access

FuzzyScan Enabling Solution

A suite of software utilities and SDK that enables easy integration, management, and deployment of scanners

SPECIFICATIONS

Performance Characteristics

Image Sensor	1280 x 800 Pixels
Print Contrast	15% minimum reflective difference
Light Source	Warm white LED
Field of View	75.6° H x 50.9° V
Min. Resolution	4.0 mil Code 39, 7.0 mil DM/QR
Reading Range ^{*1}	13 mil (0.33mm) UPC/EAN, 0 to 10.2"
Roll, Pitch, Skew	Roll: 360°; Pitch: ± 75°; Skew: ± 65°
Configuration Setup	FuzzyScan Barcode commands FuzzyScan iCode FuzzyScan PowerTool FuzzyScan Serial Command
Host Interfaces	USB HID (USB Keyboard, Full Speed) USB VCOM (USB COM port emulation, Full Speed) Standard RS232 TTL Serial (3.3VDC UART) Optional RS485 (upon request) Optional Ethernet PoE (upon request)
Data Processing	DataWizard
Image Capture	BMP, JPG

Physical & Electrical Characteristics

Dimensions	55 mm (D) x 105 mm (W) x 72 mm (H) 2.17 inch (D) x 4.13 inch (W) x 2.83 inch (H)
Weight	132g
Integration ^{*2}	4 forward-facing mounting holes (EVA compliant) 2 additional M4 mounting holes
Exit Window	Chemically tempered glass 61 mm (D) x 73 mm (W) x 1.5 mm (H) 2.4 inch (D) x 2.87 inch (W) x 0.059 inch (H)
Connector	USB-C 10-pin RJ-50 (USB, Standard RS232) 12-pin ZIF (TTL Serial) 4-pin Wire-to-Board (Standard RS232)
Operating Voltage	RJ50: 5-30Vdc (USB and RS232) USB-C: 5Vdc ± 10% RS232 Serial Port: 5-30Vdc TTL Serial Port: 3.3-5Vdc DC Jack: 5-30Vdc
Operating Current	Operating: Typical 419mA@3.3Vdc Typical 327mA@5Vdc Typical 218mA@12Vdc Typical 97mA@24Vdc Idle: Typical 199mA@3.3Vdc Typical 163mA@5Vdc Typical 135mA@12Vdc Typical 64mA@24Vdc

Supported Symbolologies

1D Linear Codes	Code 39, Code 39 Full ASCII, Code 32, Code 128, GS1-128, Codabar, Code 11, Code 93, GS1 DataBar, Standard & Industrial 2 of 5, Interleaved & Matrix 2 of 5, IATA, UPC/EAN/JAN, UPC/EAN/JAN with Addendum, Telepen, MSI/Plessey & UK/Plessey
2D Codes ^{*3}	PDF417, Micro PDF417, Composite Codes, DataMatrix, MaxiCode, QR Code, MicroQR, Aztec, Codablock F, Code 16K, Code 49, Chinese Sensible (Han Xin) Code
Postal Barcodes	Australian Post, US Planet, US POSTNET, Japan Post, Posi LAPA 4 State Code, German Post, British Post, Intelligent Mail, Korean Post, Dutch KIX Post, China Post
OCR	OCR A/B, MICR-E13B, US Currency

User Environment

Environmental Sealing	Adaptable for IP67 protection
Operating Temperature	-30 °C to 60 °C (-22 °F to 140 °F)
Storage Temperature	-40 °C to 70 °C (-40 °F to 158 °F)
Humidity	85% relative humidity, non-condensing at 70 °C
Ambient Light Immunity	0 ~ 100,000 Lux

Safety & Regulatory

Safety ^{*4}	LED Eye Safety: IEC 62471/EN 62471, Exempt Group
Environmental	Compliant with RoHS 2.0 and REACH

Accessories

Cables	USB-A Cable USB-C Cable RS232 Serial Cable
Others	Power Supply Unit (5VDC, 2A outlet)

1. The Reading Range is measured under Cino's test environmental condition.
2. EVA: European Vending & Coffee Service Association.
3. Codablock F, Code 16K, Code 49 and Chinese Sensible (Han Xin) Code are available upon request.
4. For safety reasons, please refrain from staring directly into the LED beam.

