

FUZZYSCAN FA590

Elite Fixed-Mount Scanner



Easy Integration, Unsurpassed Performance

Powered by Cino's exclusive AI-driven imaging technology, the FA590 Series fixed-mount scanner delivers unmatched reading performance, even on the most challenging real-world barcodes. It not only offers a comprehensive lineup to meet diverse scanning needs, but also features the purpose-built **Auxiliary Illumination** to enhance scan speed and accuracy. The DP model excels at reading very high-density and challenging DPM codes, while the UW model offers both extremely high motion tolerance and snappy reading of large barcodes at close range. Optimized for the needs of high motion tolerance and extended reading range, the MR model is a well-balanced solution. Designed with ruggedness and durability in mind, the FA590 features IP65 sealing and a secure cable-locking clip, delivering the ultimate reliability for demanding outdoor applications, even across a wide operating temperature range of -30°C to 60°C. It can also be easily integrated into a wide variety of enclosures from multiple sides, making the FA590 an ideal solution for both embedded and standalone applications.

- 1.3-megapixel global shutter image sensor
- Enhances scan speed with Auxiliary Illumination
- Durable design with IP65 sealing
- Wide operating temperature range of -30°C to 60°C
- Optimizes readability via iTune smart training
- High motion tolerance with UW and MR models
- Ultra-large field of view with UW model
- Advanced DPM decoding with DP model
- Multiple mounting holes for flexible integration
- Supports both USB and RS232 connections with a detachable cable design

Engineered to Scan it All

Powered by AI technology, the FA590 offers unrivaled reading performance and snappiness to enhance productivity and efficiency. It reliably decodes even the most challenging barcodes, including those that are wrinkled, curved, low-contrast, or contaminated.

A Comprehensive Lineup

To meet different scanning requirements across diverse application scenarios, a lineup of models is available for selection.

Ultra-Wide-Angle Model (UW)

The UW model provides an exceptionally large scanning field, enabling rapid reading of large barcodes at close range. It also offers high motion tolerance to capture fast-moving barcodes.

Direct Part Marking Model (DP)

Equipped with an advanced DPM decoding algorithm, the DP model is ideal for scanning DPM and extremely high-density barcodes.

Middle-Range Model (MR)

The MR model is optimized for the needs of high motion tolerance and extended reading range, providing a well-rounded solution.



Exclusive FuzzyScan Imaging Technology

High-Density Model (HD)

The HD model is capable of reading high-density barcodes and DPM-like codes with a moderate reading range.

Standard-Range Model (SR)

Ideal for various general-purpose applications, the SR model reads most real-world barcodes with an excellent reading range.

Auxiliary Illumination

The purpose-built Auxiliary Illumination speeds up scanning by improving barcode readability and motion tolerance. It also enhances reading accuracy for challenging barcodes, ensuring a smooth and efficient user experience.

iTune, Smart Training

The FA590 features a dedicated AI-powered iTune button, which automatically optimizes scanner settings across various working conditions. It eliminates the need for manual adjustments, ensuring consistent performance and high efficiency.

Ultimate Reliability and Effortless Integration

The FA590 combines flexibility and durability, allowing seamless integration into various challenging environments. Its robust construction ensures smooth operation, while its broad host compatibility meets diverse application requirements.

Built to Last

The FA590 is rated IP65 for protection against dust ingress and water splashes. In addition, with a wide operating temperature of -30°C to 60°C , it operates reliably in both demanding indoor and outdoor environments to ensure uninterrupted operation.

Easy to Integrate

With compatible dimensions and mounting design, the FA590 offers a drop-in replacement for other popular scanners, enabling effortless system upgrades and minimizing deployment time. It can be easily integrated into a wide range of applications, including self-service kiosks, in vitro diagnostics (IVD) systems, reverse vending machines (RVMs), logistics hubs, and factory floors.

Flexible to Deploy

The FA590 supports both USB and RS232 connections. Its detachable cable design enables flexible deployment and easy maintenance. In addition, a sliding cable clip securely locks the cable in place, ensuring a reliable connection during operation.



FUZZYSCAN DNA

Values beyond Measure

FuzzyScan DNA is a collection of useful features with added-values available for every Cino imager 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 complex data processing, such as US driver's license parsing.

iCode

A useful macro command barcode for enabling one-step 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 1080 Pixels
Print Contrast	15% minimum reflective difference
Light Source	Warm white LED
Imager Field of View	FA590-DP 39.7° H x 33.1° V FA590-HD 39.9° H x 33.3° V FA590-SR 40.2° H x 33.5° V FA590-MR 45.9° H x 38.2° V FA590-UW 73.2° H x 63.8° V
Min. Resolution	FA590-DP 2.0mil Code39, 4.0mil DM/QR FA590-HD 2.3mil Code39, 4.5mil DM/QR FA590-SR 2.7mil Code39, 4.8mil DM/QR FA590-MR 3.0mil Code39, 5.0mil DM/QR FA590-UW 3.8mil Code39, 7.0mil DM/QR
Reading Range *1	FA590-DP 13 mil UPC/EAN up to 9" FA590-HD 13 mil UPC/EAN up to 20" FA590-SR 13 mil UPC/EAN up to 28" FA590-MR 13 mil UPC/EAN up to 17" FA590-UW 13 mil UPC/EAN up to 14"
Roll, Pitch, Skew	Roll: 360°; Pitch: ± 75°; Skew: ± 65°
Motion Tolerance	FA590-DP Steadily read over 153 cm/s, with max. speed up to 617 cm/s (243 in/s) FA590-HD Steadily read over 153 cm/s, with max. speed up to 617 cm/s (243 in/s) FA590-SR Steadily read over 153 cm/s, with max. speed up to 617 cm/s (243 in/s) FA590-MR Steadily read over 335 cm/s, with max. speed up to 780 cm/s (307 in/s) FA590-UW Steadily read over 460 cm/s, with max. speed up to 920 cm/s (362 in/s)
Configuration Setup	FuzzyScan Barcode commands FuzzyScan iCode FuzzyScan PowerTool
Host Interfaces	USB HID (USB Keyboard) USB VCOM (USB COM port emulation) Standard RS232 serial
User Interfaces	3 LEDs for power, good read, status indications Programmable beeper
Data Processing	DataWizard
Image Capture	BMP or JPEG format

Physical & Electrical Characteristics

Dimensions	48 mm (L) x 55 mm (W) x 28mm (H) 1.89in.(L) x 2.17in.(W) x 1.10in.(H)
Weight	51g (cable excluded)
Connector	USB Type C
Input Voltage	5VDC ± 10%
Current	Operating: Typical 351 mA @5VDC Auxiliary Illumination on: 602 mA @5VDC Idle: Typical 195 mA @5VDC

Decode Capabilities

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 *2	PDF417, Micro PDF417, Composite Codes, DataMatrix, MaxiCode, QR Code, MicroQR, Aztec, Codablock F, Code 16K, Code 49, 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 *3	OCR A/B, MICR-E13B, US Currency

User Environment

Drop Specifications	Withstands drops from 1.5m (5ft) to concrete
Environmental Sealing	IP65
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	5% to 95% relative humidity, non-condensing
Ambient Light Immunity	0 ~ 100,000 Lux
ESD Protection	Functional after 15KV discharge

Safety & Regulatory

EMC	CE, UKCA, FCC, BSMI, VCCI, KC
Safety *4	LED Eye Safety IEC62471, Exempt Group
Environmental	Compliant with RoHS 2.0 and REACH

Accessories

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

1. The Reading Range are measured under Cino's test environmental condition.
2. Codablock F, Code 49, Han Xin Code, and DotCode are available upon request.
3. MICR-E13B and US Currency are available upon request.
4. Don't stare into the LED beam.

