

FUZZYSCAN FM590

Linear Fixed-Mount Scanner



Slim, Reliable, and Easy to Integrate

Powered by Cino's exclusive imaging technology, the FM590 linear fixed-mount scanner reads a wide range of challenging barcodes at speeds of up to **800** scans per second. The scanner features a purpose-built optical system that provides a wide scan field at short range. Featuring a durable construction with **IP64** protection and a wide operating temperature range of **-20°C to 50°C**, the FM590 delivers high reliability even in harsh environments. To support diverse application requirements, the scanner offers flexible scan window options, with the side-view version specifically optimized for space-constrained installations. It also provides multiple interface alternatives, including USB, RS232 and Universal. With multiple mounting holes, the scanner can be seamlessly integrated into diverse applications. Built for ultra-fast reading performance, a wide scan field, and long-lasting durability, the FM590 provides an ideal solution for healthcare, laboratory, and factory automation applications.

- Reads stacked, composite and PDF417 codes
- Supports GS1 and UDI standards
- Reads 3-inch-wide barcodes from as close as 1.2 inches
- Up to 800 scans per second
- Durable design with IP64 protection
- Operating temperature range of -20°C to 50°C
- Multiple mounting holes for flexible integration
- Side-view model for space-constrained applications
- Supports USB, RS232, and Universal interfaces
- Digital I/O supported by Universal interface

Engineered to Scan it All

Powered by Cino's exclusive imaging technology, the FM590 delivers exceptional reading performance, reliably decoding a wide range of challenging barcodes. It helps businesses accelerate operations and improve productivity.

Read Wide Barcode at Close Range

Equipped with a purpose-built optical system, it reliably captures barcodes at long distances and reads **3-inch-wide** barcodes from as close as **1.2 inches**. This makes it the ideal scanning solution for space-constrained IVD and laboratory applications.

Up to 800 Scans per Second

With scanning speeds of up to **800 scans per second**, the FM590 reliably captures fast-moving barcodes. Along with superior motion tolerance, the FM590 is well suited for conveyor line and industrial automation applications.

Reads 1D, stacked and PDF417 barcodes

The FM590 supports not only most 1D barcodes, but also stacked, composite, and PDF417 codes. It can reliably decode even the most challenging barcodes, including those that are low-contrast, blurred, curved, or contaminated.

Supports GS1 and UDI Standards

The FM590 can read GS1 barcodes such as GS1-128 and GS1 DataBar. It supports both **GS1** and **UDI** standards and is capable of parsing GS1 Application Identifier (AI) and UDI Device Identifier (DI) data. This makes the scanner ideal for a wide range of applications that require accurate product traceability and data verification.



Exclusive FuzzyScan Imaging Technology

Effortless Integration

Designed for maximum flexibility and effortless integration, the FM590 seamlessly fits into a wide range of applications. Its compatibility with popular scanners in dimensions and mounting design makes it a seamless drop-in replacement. Built with durability at its core, it delivers consistent performance even in the most demanding environments.

Two Scanning Directions

To meet different integration requirements, it offers **front-view** and **side-view** models, with the side-view version specifically optimized for space-constrained installations.

Multiple Interfaces

The scanner offers multiple connection options, including **USB**, **RS232**, as well as a **Universal interface** that supports external triggers and **OK/NG** signal outputs, enabling it to handle more complex application scenarios.

Intelli Button™ for Optimal Installation

The FM590 features an **Intelli button** that not only serves as a trigger for manual programming, but also initiates the **Test Mode**. Upon activation, the scanner automatically conducts multiple scans and displays the successful read rate, allowing users to test different placements and identify the optimal position for maximum performance.

Drop-In Replacement

Thanks to its compatibility with popular scanners in dimensions and mounting design, the FM590 serves as an ideal drop-in replacement, ensuring quick and seamless integration into existing systems. It minimizes installation time and reduces deployment costs.

Ultimate Usability and Proven Reliability

Flexible Operation Modes

To meet diverse application needs, **multiple operating modes** are available. When using **Presentation** or **Force** mode, the scanner automatically captures barcodes upon detection.

User-Defined Serial Trigger Command

Users can customize the serial trigger command to match host application requirements. As a result, the FM590 can work as your previous scanner for easy replacement.

Long-Lasting Durability

The FM590 is rated **IP64** for protection against dust and water splashes. Moreover, it operates over a wide working temperature range of **-20°C to 50°C**, making it ideal for demanding **indoor and outdoor** environments.



FUZZYSCAN DNA

Value 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

Optical System	High-performance linear imaging engine
Print Contrast	20% minimum reflective difference
Light Source	660nm visible red LED
Minimum Resolution	Typical 3 mil (Code 39, PCS 0.9)
Reading Range ^{*1}	Front-view: 13 mil (0.33mm) UPC/EAN up to 20.6" Side-view: 13 mil (0.33mm) UPC/EAN up to 20.1"
Scan Rate	Dynamic scanning rate up to 800 scans per second
Pitch/Skew/Tilt	± 65° / 65° / 55°
Reading Direction	Bi-directional (forward and backward)
User Interfaces	3 LEDs for power, Status, OK/NG indications Test button Programmable beeper
Configuration Setup	FuzzyScan Barcode commands FuzzyScan iCode FuzzyScan PowerTool FuzzyScan Serial Command
Data Editing	DataWizard

Physical & Electrical Characteristics

Dimensions	55 mm (L) x 47 mm (W) x 20 mm (D) 2.2 in. (L) x 1.9 in. (W) x 0.9 in. (D)
Weight	130g (RS232 or Universal version) 105g (USB version)
Scan Window	Choice of front-view or side-view scan window
Connectors ^{*2}	9-pin D-sub female (RS232 version) USB 4-pin Type A (USB version) 15-pin D-sub HD female (Universal version)
Mounting	6 screw holes (M3 x 4mm in depth)
Input Voltage	5VDC ± 10%
Current	Operating : Typical 254 mA @5VDC Idle : Typical 102 mA @5VDC

Supported Symbolologies

1D Linear Codes	1D Linear Codes Code 39, Code 39 Full ASCII, Code 32, Code 39 Trioptic Code 128, GS1-128, Codabar, Code 11, Code 93 Standard & Industrial 2 of 5, Interleaved & Matrix 2 of 5 German Postal Code, China Postal Code, IATA UPC/EAN/JAN, UPC/EAN/JAN with Addendum Telepen, MSI/Plessey & UK/Plessey GS1 DataBar (formerly RSS) Linear & Linear Stacked
Linear-stacked ^{*3}	PDF417, Micro PDF417, Composite Codes, Codablock F, Code 16K, Code 49, Linear-stacked
Postal Codes	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

User Environment

Drop Specifications	Withstands drops from 1.5m (5ft) to concrete
Environmental Sealing	IP64
Operating Temperature	-20°C to 50°C (-4°F to 122°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 ~ 100,800 Lux
ESD Protection	Functional after 15KV discharge

Safety & Regulatory

EMC	CE, UKCA, FCC, BSMI, VCCI, KC, RCM
LED Safety ^{*4}	LED IEC 62471/EN 62471, Exempt Group
Environmental	Compliant with RoHS 2.0 and REACH

Accessories

Cables	USB Cable Converter RS232 Cable Converter
Others	USB Power Cable 5VDC Power Supply Unit

1. The Reading Range are measured under Cino's test environmental condition.
2. The OPOS driver is supported.
3. Codablock F, Code 16K and Code 49 are available upon request.
4. Don't stare into the LED beam.

