



FS80 Fixed Industrial Scanner

Maximize visibility to optimize productivity and throughput

Across the entire supply chain—from high-throughput logistics and distribution centers to manufacturing facilities and ultimately the end customer—success hinges on the efficient movement and precise tracking of products and barcode data.

Zebra Technologies' FS80 fixed industrial scanner addresses a broad range of challenging track-and-trace applications. Its high-resolution sensors and powerful integrated lighting enable faster decode performance, a wider field of view, longer reading distance, greater depth of field, and high-powered illumination. Its robust features not only improve throughput but can replace multiple standard cameras to simplify installation and maintenance and minimize costs.



Integrated Multifunction Light (ZIML)

This integrated light enhances readability in a wide area and at longer ranges, which allows shorter exposure times when scanning items on fast-moving conveyors. It emits white, red, or infrared light and features a dual laser aimer to facilitate installations and adjustable settings for visual and audible feedback.

Zebra Aurora Focus™ Software

Zebra's Aurora Focus introduces a seamless, consolidated platform for managing both Zebra's fixed industrial scanners and machine vision portfolio. This innovative software elevates the control of logistics and manufacturing automation across the enterprise with its refined simplicity and efficiency. With Aurora Focus, users can effortlessly set up, deploy, and operate all Zebra fixed industrial scanners, streamlining operations by eliminating the requirement for multiple tools.

Software Licensing

Adapt to changing needs and add support for new decoding capabilities, faster data capture, deep learning-based OCR and machine vision tools with software license upgrades.

Flexible Application Support

The design and capabilities of the FS80, together with its powerful integrated illumination and a wide set of available C-mount lenses, make it an ideal solution for T&L and manufacturing use cases including conveyor-based scanning, scan tunnels, dock door and forklift scanning, overhead pack stations, and more to improve throughput across your logistics operations.

The FS80—See Farther. Scan Faster. Achieve More. Experience the difference with Zebra.

For more information, please visit www.zebra.com/fs80.

Easy to Set Up

Endless Connections

Real-time digital input/outputs (I/Os) for interfacing with automation devices allow full integration into existing setups with GigE and USB ports and VGA video output connections.

Zebra also offers two optional cable configurations that extend deployment flexibility. Active M12 to DB-9 cables support RS-232 serial communication, enabling direct integration with PLCs, legacy controllers, and PC serial ports without protocol bridges. Additionally, M12 to USB-HID cables let the FS80 act as a plug-and-play keyboard input device—no drivers required—with full HID customization in Aurora Focus, including keyboard country type, keyboard delay, and special key keystroke delay for international deployments and tuned data-entry workflows.

Detachable Mounting Bracket

The FS80 features a new detachable bracket for a secure mount that is easily installed and enables quick removal and reattachment of the FS80 to facilitate device maintenance while maintaining the precise mount position.

Multiple Lens Options and Aimers

Zebra offers 8 mm, 12 mm, 16 mm, 25 mm and 35 mm C-mount lens options for a variety of applications. Lens accessories are also available for polarization and bandwidth color filtering. The dual laser aimer on the integrated light allows for quick and precise alignment of the FS80 to facilitate device setup.

Polarizer Cover

The optional polarizer cover removes reflections from ambient and LED lighting to greatly improve reading performance on reflective or glossy surfaces, inclusive of labels under plastic films like shrink-wrap. It also allows for greater flexibility by allowing mounts at 90 degrees to the target surface.

Easy to Configure and Deploy

Designed for Tough Environments

With sturdy IP67-rated housing, robust M12 connectors for external interfaces, and standard C-mount lenses with dust- and liquid-proof caps, the FS80 is water-resistant and protected from dust for reliable deployment and operation in demanding environments.

Flexible Illumination Settings

Zebra's integrated multifunction light (ZIML) offers white, red, and infrared illumination options and four LED fan angle configurations at 20, 40, 60, and 80 degrees to match the selected C-mount lens so the lighting direction is optimized for the best decode performance.

JavaScript-Enabled

Developers can quickly implement customized data formatting directly on the FS80 using Aurora Focus, making it ideal for applications in retail, manufacturing, and logistics. JavaScript in Aurora Focus includes an editor environment with IntelliSense and a debug console for the best customer experience. Additionally, the JavaScript ecosystem features a vast collection of tools, frameworks, and resources to simplify development, updates, and integration of Zebra devices.

Easy to Run

Operational Excellence Across the Enterprise

With its wide field of view, greater focal depth, high-powered illumination and the ability to read at long distances, the FS80 provides exceptional flexibility for a variety of demanding scanning applications in transportation and logistics, as well as manufacturing. The FS80 improves throughput and optimizes efficiencies across a diverse range of applications, including single-camera configurations, multi-sided scan tunnels, dock door and forklift scanning, product aggregation barcode reading, print-and-apply verification, and overhead pack stations.

Feedback for Performance Monitoring

The integrated multifunction light has configurable 360-degree red and green status LEDs to provide immediate reading feedback visible from a distance, while its loudspeaker settings can be adjusted for audible feedback even in noisy environments.

HMI Dashboard for Added Flexibility

The Zebra Aurora human-machine interface (HMI) dashboard is accessible from any web browser to monitor device performance in real time. There's no need to install a PC at every workstation, reducing hardware requirements and installation costs.

Specifications

Device Characteristics	
Dimensions	75 x 120 x 75 mm (2.95 x 4.724 x 2.95 in) with lens cover 75 x 57 x 75 mm (2.95 x 2.24 x 2.95 in) without lens cover
Weight	504 g (17.8 oz) with lens cover, 407 g (14.4 oz) without lens cover
Power	15 W (625 mA @24 V DC)
Configurable I/O	3 opto-coupled inputs; 1 dedicated opto-coupled trigger input; 3 opto-coupled trigger outputs; voltage GPIO up to 24 V
Color and Material	Black and industrial green aluminum housing
Interface Ports	One M12 X-Coded 1GbE, one M12-A 12-pin (female) power and GPIO, one M12-A 12-pin (male) VGA\USB connector* *Reserved for service
Communication Protocols	TCP/IP, FTP, SFTP, EtherNet/IP, Modbus TCP
User Indicators	Power LED Device status LED Ethernet status LED and speed LED
Memory Storage	32 GB eMMC
Supported Lens Type	C-mount

Performance Characteristics	
Image Sensors	5MP, 9MP, 12MP, 16MP Global shutter, 3.2 x 3.2 µm pixels, monochrome
Acquisition Rate	5MP: up to 42 fps 9MP: up to 40 fps 12MP: up to 28 fps 16MP: up to 22 fps

User Environment	
Operating Temp.	32°F to 113° F/0°C to 45°C
Environmental Sealing	IP67
Humidity	Non-condensing relative humidity maximum of 99%.

Accessories	
Zebra integrated multifunction light, external illumination, polarizer cover, C-mount lenses, lens filters, brackets, cables, power supplies	

Warranty	
Subject to the terms of Zebra's hardware warranty statement, the FS80 is warranted against defects in workmanship and materials for a period of Two (2) Years from the date of shipment. Complete Zebra hardware product warranty statement: www.zebra.com/warranty	

Specifications subject to change without notice

1. Refer to Product Reference Guide for complete list of symbologies.

Shock Resistance	IEC 60068-2-27, 50 g, 3 ms half sine, 3 shocks per axis, 3 axes; 30 g, 11 ms half sine, 3 shocks per axis, 3 axes
Vibration Resistance	IEC 60068-2-64, random vibrations, 5 Hz to 500 Hz, 2.6 Grms, 60 min. per axis, 3 axes IEC 60068-2-6, sine vibration sweep, 10 Hz to 500 Hz, 0.35 mm pk or 5 g, 10 sweeps cycles per axis, 3 axes
Shock and Vibration	IEC 60721-3-3 (edition 2.2) /A2 Cat 3M8 sine vibration/sweep, 2 Hz to 200 Hz, 11.43 mm pk or 5 g, 266 min. per axis, 3 axes shocks, 25 g, 6 ms half sine, 10 shocks per axis, 3 axes +/-

Supported Symbologies ¹	
1D	Codabar, Code 39, Code 93, Code 128, I 2 of 5, MSI, UPC/EAN, Mailmark, Discrete 2 of 5, GS1 Databar, Pharmacode
2D	Aztec, Data Matrix, DotCode, MaxiCode, PDF417, Micro PDF417, QR Code, Micro QR
OCR	Aztec, Data Matrix, DotCode, MaxiCode, PDF417, Micro (A-Z, a-z, digits, or any of !#\$%&'()*+,-./:;<=>?@[_{}~""\€£¥)

Software	
SW Management	Zebra Aurora Focus, JavaScript
Decoder Packages	1D/2D standard (up to 5 fps for all SKUs) 1D/2D fast (up to the max fps of the sensor) 1D/2D DPM (up to the max fps of the sensor) DL OCR (up to 5 fps with standard, up to the max fps of the sensor with fast/DPM) Decoder packages vary by SKU

Regulatory	
Environmental	EN IEC 63000:2018
Electrical Safety	CSA C22.2 No. 61010-1-12, UPD1:2015, UPD2:2016, AMD1:2018 UL 61010-1, 3rd ed. (rev. November 21, 2018) IEC 61010-1:2010 IEC 61010-1:2010/AMD1:2016
EMI/EMS	EN 55011:2009+A1:2020, Class A EN 61326-1:2013 IEC 61326-1:2020 SANS 211:2010/CISPR 11:2010, Class A Group 1 Equipment SANS 61000-6-2:2005/IEC 61000-6-2:2005 VCCI-CISPR 32:2016, Class A ICES-003 Issue 7, Class A 47 CFR FCC Rules and Regulations Part 15, Subpart B, Class A EN61326-1/IEC61326-1
EU Declaration of Conformity	2014/30/EU; 2014/35/EU; 2011/65/EU.

Markets and Applications

- Logistics**
- Dock door
 - Forklift scanning
 - Conveyor routing
 - Scan tunnels
 - DL-OCR/OCR reading
 - Product aggregation
 - Process control
 - Tote and container ID

- Manufacturing**
- Barcode and OCR
 - Batch reading
 - Long-range identification (automotive)
 - High-resolution code reading (electronics)
 - Tires barcode, label identification, sorting, and tracking