

# FS80 Fixed Industrial Scanner

Maximize visibility to optimize productivity and throughput

In today's economy, enterprises require greater flexibility and agility than ever to meet increasing demand. 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 the products and barcode data.



Meet the FS80 Fixed Industrial Scanner—Zebra's high-end solution to address a broad range of challenging track-and-trace applications. The FS80 features high-resolution sensors and powerful integrated lighting for use cases where faster decode performance, wider field of view, farther reading distance, greater depth of field and high-powered illumination is needed. With these robust features the FS80 can not only improve throughput, but it can replace multiple standard cameras to reduce the number of devices needed—simplifying installation and maintenance and minimizing costs.



Zebra's Integrated Multifunction Light (ZIML) enhances readability in a wide area and at long ranges and is especially useful when scanning items on fast moving conveyors, because more light equates to shorter exposure times. Available in white, red, or infrared, it also features a dual laser aimer to facilitate installations and adjustable settings for visual and audible feedback.

The FS80 is powered by Zebra's Aurora Focus software, an intuitive platform packed with exclusive features such as ImagePerfect+, Golden Image Capture, Advanced Filter and Formatting to further optimize device performance.

## **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, visit [www.zebra.com/fs80](http://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.

### 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 8mm, 12 mm, 16mm, 25mm and 35mm 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° 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 T&L and manufacturing. From single camera configurations to multi-sided scan tunnels, dock door and forklift scanning, product aggregation barcode reading, print-and-apply verification, and overhead pack stations, the FS80 improves throughput and optimizes efficiencies across a diverse range of logistics applications.

### Feedback for Performance Monitoring

The integrated multifunction light has a configurable 360-degree red and green status LED's to provide immediate reading feedback visible from far, while its loud speaker settings can be adjusted for an 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.

## Introducing the Zebra Fixed Industrial Scanner Portfolio

FS10



FS20



FS40



FS42



FS70



FS80



GS20



## Specifications

The specifications table applies to the FS80 standalone model. Accessories are not included.

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 VDC)
Configurable I/O	Three (3) opto-coupled inputs (with incremental rotary encoder support) One (1) dedicated opto-coupled trigger input Three (3) opto-coupled trigger outputs. Voltage GPIO: up to 24V
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, Ethernet/IP *, PROFINET *, Modbus TCP *  *available soon
User indicators	Power LED, Device Status LED, Ethernet Status and Speed LED
Memory Storage	32 GB eMMC
Supported Lens Type	C-Mount
Performance Characteristics	
Image Sensors	<b>5MP, 9MP, 12MP, 16MP</b> Global shutter, 3.2 x 3.2 µm pixels, Monochrome
Acquisition rate	5MP: up to 42 fps 9MP: up to 40fps 12MP: up to 28 fps 16MP: up to 22fps
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%.
Shock Resistance	IEC 60068-2-27, 50 g, 3 ms half sine, 3 shocks per axis 3 axis. 30 g, 11 ms half sine, 3 shocks per axis, 3 axis
Vibration Resistance	IEC 60068-2-64, Random vibrations, 5 Hz to 500 Hz, 2.6 Grms, 60 min. per axis, 3 axis  IEC 60068-2-6, Sine vibration sweep, 10 Hz to 500 Hz, 0.35mm pk or 5 g, 10 sweeps cycles per axis, 3 axis
Shock and Vibration	IEC 60721-3-3 (Edition 2.2) /A2 Cat 3M8 Sine vibration/sweep, 2 Hz to 200 Hz, 11.43mm pk or 5 g, 266 min. per axis, 3 axis Shocks, 25 g, 6ms half sine, 10 shocks per axis, 3 axis +/-

Supported Symbolologies	
1D	Codabar, Code 39, Code 93, Code 128, I 2 of 5, MSI Plessey, UPC/EAN
2D	Aztec, Data Matrix, DotCode, MaxiCode, PDF417, Micro PDF417, QR Code, Micro QR
OCR	Deep Learning-based OCR, depending on SKU. Supports Latin Letters (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 5fps 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. Nov 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.

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**Accessories**

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

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**Warranty**

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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](http://www.zebra.com/warranty)

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Specifications subject to change without notice

Refer to Product Reference Guide for additional information and a complete list of symbologies.



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