FS20 Fixed Industrial Scanner

Easily integrate high-quality scanning into your network

Put powerful, high-quality barcode capture anywhere it's needed. The Zebra FS20 simplifies industrial automation with fast setup, flexible integration, and consistent results.

Set up, deployment, and management across your network is simple with Zebra Aurora™ software. Advanced imaging tools like ImagePerfect™ deliver sharp, accurate reads on every scan.

Add features, boost speed, and upgrade to machine vision to adapt to your evolving business through easy software licensing.



Easy to set up

Setup automatically with Auto-Tune
Read reliably from the start. With one press, Auto-Tune adjusts focus, brightness, and contrast for your environment—so setup is fast and accurate every time.

Cut clutter with Power-over-Ethernet
Get up and running faster with fewer cables to manage. Power-over-Ethernet (PoE) delivers both data and power to the FS20 and its accessories, reducing setup time and cost. You can also use a standard 24V DC power supply when PoE isn't available.

Accessorize to suit your setup
Customize your workspace with certified accessories. Scan reliably even in reflective areas with a polarizer. Stay hygienic in food and beverage environments with an optional cleanable, impact-resistant window. Flexible mounting options like compact brackets adapt to different workspaces.

Easy to deploy

Program flexible input/output (I/O) ports
Simplify your process and boost efficiency. Use four configurable I/O ports to trigger actions, activate indicators, and connect peripherals that help automate work.

Ready for industrial spaces
Work confidently in tough environments. The ultra-rugged FS20 is sealed against dust and moisture, built with chemical-resistant aluminum, and available with a durable, easy-clean plastic exit window for hygiene-sensitive operations.

Mount where space is tight
Simplify setup with a compact mounting bracket and a deflective mirror to maintain full scanning performance even in cramped areas.

Confirm instantly with fewer interruptions
Know immediately when scans succeed or need attention. Four bright status LEDs and an adjustable-volume beeper provide quick visual and audible feedback, reducing errors and keeping workflows moving.

See information on any browser
Access the Zebra Aurora HMI dashboard from any web browser to give operators real-time insight and control at their station. No dedicated PCs, less hardware to manage, and lower installation costs.

Integrate quickly and easily with your network infrastructure
Built-in Ethernet/IP, PROFINET and other network protocols will integrate with any common PLC or host system. T network architecture is simplified, reducing the overall cost and deployment time.

The FS20—Connected, configurable scaling that scales with your operation.
For more information, visit www.zebra.com/fs20

Easy to run

Capture data the first time and every time
Keep work flowing with consistent, accurate reads. Capture multiple barcodes at once, extend read ranges, and expand the field of view so your team can collect more information with less equipment and fewer delays.

Achieve high read rates with ImagePerfect™
Get sharp, reliable reads without extra cameras or lighting. Zebra's ImagePerfect™ captures up to three images of every item (with varying own focus, exposure, and illumination settings) to deliver consistent accuracy across varied distances and lighting conditions.

Get every read, on every surface
Easily capture 1D, 2D, and DPM barcodes, plus human-readable text. The optional polarizer reduces glare for accurate reads on reflective or uneven materials, while flexible configuration options grow with your business needs.

Resolve issues fast with Golden Image Compare
Spot and fix problems in seconds. Golden Image Compare highlights differences between current and reference images so you can keep throughput steady.

Scan all barcodes at once
Get faster workflows and fewer missed reads. ManyCode mode captures multiple barcodes simultaneously, regardless of type or layout.

Know you're covered
Protect uptime and simplify maintenance with Zebra OneCare™ Essential and Select. Coverage includes wear and tear, accidental damage, and fast service options like next-day replacement or on-site repair. Plus, get cloud-based visibility into device health and service activity.

Specifications

Device Characteristics	
Dimensions	1.1 in. H x 3.7 D in. x 2.1 in. W 28.3 mm H x 94.2 mm D 54.6 mm W
Weight	7.76 oz./195 g
Power	External power supply: 10-30 VDC, 313 mA max at 24 VDC (7.5 W) PoE supply: Class 2
Configurable IO	Two opto-isolated inputs: IN 1,2 Two opto-isolated outputs: OUT 1,2
Color and material	Industrial green aluminum housing
Interface ports and connectivity	One M12 X-Coded 1000/100/10 Mbps ethernet One M12 12-pin Power/GPIO/RS-232
Communication protocols	Ethernet/IP, PROFINET, Modbus TCP, TCP/IP, RS-232
User indicators	Decode/Job Status LEDs, Power LED, Online/Run LED, Beeper (adjustable volume)
Performance Characteristics	
Image sensor	1.0 MP (1280x800 pixels) CMOS sensor with global shutter and 3.0 µm pixel size
Acquisition rate	Up to 60 frames/second
Aimer	Amber LED; circular pattern
Illumination	Two 660nm red LEDs or two 2700K white LEDs
Imager field of view	6.0mm Liquid Lens: 35° H x 26° V Nominal
User Environment	
Operating temp.	32° F to 113° F/0° C to 45° C (10-30VDC external power supply, duty cycle-dependent) 32° F to 104° F/0° C to 40° C
Storage temp.	-40° F to 158° F/-40° C to 70° C
Environmental sealing	IP65 and IP67
Humidity	5% to 90% RH, non-condensing
Shock resistance	EN 60068-2-27, 30 g; 11 ms; 3 shocks on each axis
Vibration resistance	EN 60068-2-6, 14 mm @ 2 to 10 Hz, 1.5 mm @ 13 to 55 Hz; 2 g @ 70 to 500 Hz; 2 hours on each axis
Supported Symbologies[1]	
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 via an add-on license1. Supports latin letters (A-Z, a-z, digits or any of: !#$%&()*+,-./:;<=>?@[]^_`{|}~"'\€£¥)

Software	
Management	Zebra Aurora
Decoder packages	1D/2D Fast (60 FPS); 1D/2D DPM Full (60 FPS)
Machine Vision (MV) toolsets	Sensor, Standard, Advanced (Available via an upgrade license)
Regulatory	
Environmental	EN 50581:2012; EN IE C 63000:2018
Electrical safety	IIEC 62368-1 (Ed.2); EN 62368-1:2014/A11:2017ka
LED safety	IEC 62471:2006 (Ed.1); EN 62471:2008
EMI/EMS	EN 55032:2015/A11:2020 (Class B) EN 55035:2017 EN 61000-3-2:2014 (Class A) EN 61000-3-3:2013 47 CFR Part 15, Subpart B, Class B ICES-003, Issue 7, Class B
EU declaration of conformity	2014/30/EU; 2014/35/EU; 2011/65/EU. For more information visit: www.zebra.com/doc

Accesories

Brackets, cables, deflective mirror, power supplies

Warranty

Subject to the terms of Zebra's hardware warranty statement, the FS20 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

Recommended Services

Zebra OneCare Select™; Zebra OneCare Essential™

Footnotes

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

Markets and Applications

Warehousing / manufacturing

- Track & trace
- Parts identification
- Direct part mark (DPM) reading
- Assembly and work-in-progress traceability

Transportation & logistics

- Print & apply
- Tote identification and routing
- Packaging code reading
- Put away and replenishment
- Conveyor routing and side reading

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