ZEBRA CAPTURE YOUR EDGE

FS20 Fixed Industrial Scanner

Compact networkable high-quality scanner

The smallest of Zebra's networkable Fixed Industrial Scanners, the FS20 easily fits wherever basic barcode scanning is required. Multiple connectivity options enable easy integration into a PLC or host network. Power-over-Ethernet simplifies deployment. Built-in IoT support and programmable input/output ports increase flexibility, enabling customers to expand application functionality and improve error-proofing.

Features & Benefits

Top 3 Customer Messages

Sets the bar for simplicity — easy to setup, deploy and run: Loaded with features that simplify and automate every phase of operation

1

Easy to setup

- Auto-Tune dials in the perfect image with the press of a button, right out of the box; enables faster and more accurate setup

- Support for PoE reduces setup complexity and cost — no power drops or power supplies required. No PoE infrastructure? Power with a standard 24V DC power supply for two flexible ways to power

- IoT ready — send images to Zebra Savanna™ or any cloud service

2

Easy to deploy

- Built-in Ethernet for painless integration with any common PLC or host system

- Ultra-rugged, designed for industrial spaces — the aluminum body is chemical and oil resistant, and with IP65 sealing, the FS20 is dust tight and is built to handle washdowns

- Four built-in camera status indicator LEDs let workers see at a glance if a decode was successful, and if the camera is operational or in need of attention

- Four programmable I/O ports for added application flexibility

- Web-based Zebra Aurora HMI dashboard for anywhere anytime system access — no need to install a PC at every station

3

Easy to run

- Unmatched first-time every time data capture with superior optics and PRZM Intelligent Imaging

- Achieve high read rates with ImagePerfect

- Capture 1D, 2D, and DPM codes from pristine to poor condition

- Capture multiple codes of various types with ManyCode and organize the output with our Advanced Data Formatting capability

- Fast troubleshooting with Zebra-only tools such as Golden Image Compare and Job Compare

- Industry leading service — everything is covered, including accidental damage; define your service level with options, including on-site support and next-day replacement device delivery

Key Differentiators

The most powerful software platform — Zebra Aurora™

Single tool simplicity. Use just one tool to manage the FS20, as well as all Fixed Industrial Scanners and Machine Vision Smart Cameras; makes it easy for customers to build out automation solutions and choose the right device for each step in their processes.

Ultra-modern simple interface. Sliders, radio buttons and online help for every aspect of the software make Zebra Aurora so intuitive a beginner can figure it out. Experienced users will appreciate the well designed interface, which enables easy access to all functions and minimal clicks to create and run jobs.

Software upgradeable

Easy upgrades. Your customers can purchase the model that supports the barcodes and the scanning speed needed today, and easily upgrade to support more symbologies, faster scanning speeds and machine vision tools tomorrow — all with the simple purchase of a software license.

Unsurpassed return on investment. Your customers can count on the device they buy today to meet their needs in the future — the FS20 can adapt as business needs change.

Applications

Enable track and trace in:

- Transportation and Logistics
- Manufacturing:
  - Automotive
  - Food and Beverage
  - Medical/Pharma
  - Semiconductor and Electronics

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Competitive Highlights

The following chart provides general hardware specifications for the FS20 and its key competitive devices.

	Zebra FS20	Cognex DataMan 260	Datalogic Matrix 210N	Keyence SR-1000	Omron MicroHAWK V430	Why it matters/the FS20 advantage
Hardware Features: GENERAL						
Dimensions	**mm:** 28.3 x 94.2 x 54.6 mm **in.:** 1.1 x 3.7 x 2.1	**mm:** 42.5 x 22 x 55 **in.:** 1.67 x .87 x 2.17	**mm:** 54 x 32 x 45 **in.:** 2.1 x 1.3 x 1.8	**mm:** 47.6 x 38.5 x 47 **in.:** 1.8 x 1.5 x 1.9	**mm:** 44.5 x 44.5 x 25.4 **in.:** 1.75 x 1.75 x 1	Size is not a crucial metric for this product. Sizes are provided for your convenience should the customer ask — and to illustrate that all devices in this category are similarly sized.
Monochrome/ Color	Monochrome	Monochrome	Monochrome	Monochrome	Monochrome and Color	Monochrome sensor is standard for this product class, sufficient for 99% of the barcodes in this product class. Color sensors are best for color barcodes, which would require the VS40 or VS70.
Lens Type	Liquid lens	S-mount 6.2 mm F:5 (with optional liquid lens) with IR blocking filter S-mount 16 mm F:7 (with optional liquid lens) with IR blocking filter	Liquid lens	Autofocus; mechanical	Liquid Lens (upcharge) or Fixed Focus	Liquid lenses offer several technology advantages. Moving parts typically found in mechanical lenses are eliminated, and the lenses are designed to focus across a variable working distance. Despite these advantages, many of your customers will likely have a personal preference for lens type, but what is most important about lens type is how the lens technology is used. Liquid lens technology is key in enabling ImagePerfect, which is a major competitive differentiating feature that delivers dependably high read rates.

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Hardware Features: GENERAL (continued)						
Lens Options	Standard range lens: 6 mm	6.2 mm (3 position or liquid lens) 16 mm (manual focus or liquid lens	7 mm and 12 mm	Standard and wide	Wide 5.2 mm Medium 7.7 mm Narrow 16 mm L 16 mm	The FS20 offers a single lens with a wide working range of 4 in. to 24 in. that is capable of handling the majority of applications. This purposeful single-lens design delivers two benefits — cost-effective pricing and upsell opportunities. By eliminating multiple models and the need to accommodate interchangeable lenses, the FS20 achieves a cost-effective price point to help close the sale with cost-sensitive customers. And if the FS20 doesn't meet application needs, you can upsell to the FS40 and FS70 models. Just test the FS20 in your customer's application to determine if it's a prospective fit — or if one of our more fully featured cameras is a better fit.
Aimer	Amber LED; circular pattern	2 Green Aimer LEDs	Blue ring Liquid Lens only: 2 Laser LEDs	LED	2 Blue LED	Customers will likely have their own preference. Laser allows for better power and visibility to best support performance, but some companies and users may have safety concerns. While LEDs are safer, they tend to be much less visible and powerful, potentially impacting performance.
Industrial Protocols	Ethernet/IP, PROFINET, Modbus TCP, TCP/IP	RS-232 and USB Interface	Ethernet/IP, PROFINET, Modbus TCP, TCP/IP	Ethernet/IP, PROFINET, Omron, TCP/IP, MC Protocol	RS-232C, Ethernet TCP/IP, Ethernet/IP, PROFINET	While some models support more protocols, the FS20 supports the most important protocols for the targeted markets: Ethernet IP and PROFINET. Note that support for more protocols will be added in the future as the product line matures.

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Competitive Highlights

The following chart outlines the key differences between the FS20 and its main competitors. Blue shading indicates a best-in-class feature.

	Zebra FS20	Cognex DataMan 260	Datalogic Matrix 210N	Keyence SR-1000	Omron MicroHAWK V430	Why it matters/the FS20 advantage
Hardware Features: COMPARISONS						
Sensor	1.2MP 1280 x800	0.3 and 1.2MP CMOS	0.3MP	1.2MP	Varies by model: 752 x 480 (.36 MP) 1280 x 960 (1.2 MP) 2592 x 1944 (5 MP)	The FS20 offers the highest resolution specification in this category — the higher the resolution, the smaller the code you can read in the field of view. But the quality of the decode algorithm also plays a role in device performance. While other sensors appear to be comparable to the FS20 in terms of resolution, Zebra's decode algorithms are known all over the world for their superior performance and are why Zebra owns many global markets, such as retail. In addition, the FS20's optical quality is top of the line. Special attention was given during design to ensure that image quality at the edges is superior to that of the competition. This factor could play a big role in winning opportunities. Put the FS20 to the test in your customer facility to showcase how its superior software and hardware technologies deliver superior performance on the production line.
Frames/Second	Up to 60	Up to 60	Up to 60	Up to 60	60, 42 or 5 (varies by model)	For the best decoding you need three things: a fast frame rate, great image quality and the best decode algorithms. Just because all the products in this category offer the same frame rate doesn't mean they will deliver the same level of performance, especially on a fast conveyor. Supporting high-speed conveyors takes more than a high frame rate — it also requires fast decode times. The system must be capable of capturing the image AND decoding the barcode at high speed — and the frames per second metric does not correlate to decode performance. Decode performance is dependent on the decode algorithms — and as the world's leader for many years in barcode scanning, Zebra is known for its superior decoding technology. Customers need to test devices to ensure that the product they are considering has the frame rate AND the decoding performance required to successfully capture barcodes on items on their fast moving conveyors. If you find yourself in a sales opportunity where customers have fast moving conveyors, the best way to overcome concerns is to put the FS20 to the test on the customer's conveyor.

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Hardware Features: COMPARISONS (continued)						
USB	No	No	Yes	USB 2.0 Full Speed compliant	No	The FS20 offers Ethernet connectivity. If your customer does not need Ethernet connectivity but does need USB connectivity, sell the FS10.
Ethernet	Yes 10/100/1000	Yes 10/100	Yes 10/100	Yes 10/100	Yes 10/100	The FS20 stands alone in its class as the only product to support the latest and fastest Ethernet protocol, Gigabit Ethernet. This provides the crucial support required to capture larger files and accommodate faster paced environments that require the constant and rapid transfer of large files.
PoE	Yes PoE Class 1	Optional: PoE Class 1	No	No	No	The FS20 is the only product in this class to offer PoE as a standard feature. PoE offers two key competitive advantages: installation is easier and less expensive — power drops, outlets and power supplies are not required.
Power Options	PoE Power supply	PoE Power supply	Power supply	Power supply	Power supply	The FS20 offers your customers two power options: PoE or a traditional standard power supply. Your customers get the flexibility to choose the easiest, most efficient and most cost-effective means of powering the FS20.
IP Rating	IP65 and IP67	IP65	IP66	IP65	IP65 and IP67	Sealing is crucial in this environment to ensure reliability. The FS20's IP65 and IP67 sealing rating delivers the industrial robustness required on the production line. The unit is dust proof, spray proof and waterproof to withstand hose washdowns and even complete submersion.

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Hardware Features: COMPARISONS (continued)						
Programmable Input/Output Ports	4 digital programmable I/O ports	2 Inputs 4 Outputs	2 Inputs 2 Outputs	2 Inputs 3 Outputs	4 Inputs 3 Outputs	If your customers need GPIO, the FS20 is the only product in this class to offer four fully configurable ports, instead of dedicated input and output ports. The result? Increased application flexibility. Customers can easily add peripherals, activate lights or trigger additional actions to more fully automate and error-proof processes.
Operating Temperature	32° F to 113° F 0° C to 45° C (10-30VDC external power supply) 32° F to 113° F 0° C to 40° C (PoE)	32º F to 104º F 0º C to 40º C	32° F to 122° F 0° C to 50° C For liquid lens models only: 32° F to 113°F 0° C to 45° C	32° F to 113° F 0° C to 45° C	32° F to 113° F 0 °C to 45 °C	At a glance, the operating temperature range for the FS20 appears to be a weakness, but when you dig into the details, you'll discover that safe operation at the higher temperatures in some competitive products requires additional accessories, such as heat sinks. The operating temperatures listed for the FS20 do not require the purchase and management of any additional components. All of the products in this class share the same low end of the operating temperature. While a few of the competitive products do have a higher upper operating temperature rating, most environments will not be that warm. Application requirements are also a consideration. A different heat profile is required for devices that are triggered once every 10 seconds versus devices that are triggered constantly.

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Software Features: COMPARISONS						
Barcode Quality Metrics	Yes	Yes	Yes	Yes	Yes	Tablestakes for this class of products – compares the barcode to industry standards to a) determine the quality of the barcode and b) help assess whether barcode quality is impacting the ability to scan and eroding throughput.
OCR	Yes	No	No	No	Yes	OCR is crucial in both healthcare and the food and beverage industry. Enables verification that expiration and/or lot code are present, printed properly and legible on products to protect patient and consumer safety. Can be purchased with OCR out of the box or added later via a simple software license.
Single Unified Software Platform	Yes	No	No	No	No	Zebra Aurora is the easiest to use tool in the industry, heavily driven by wizards for foolproof management, designed for beginners as well as experts. The FS20 and Zebra's complete portfolio of Fixed Industrial Scanners and Machine Vision Smart Cameras are all managed by the Zebra Aurora unified software platform, eliminating the complexities, time and cost associated with using different management tools for different devices.
Upgradeable	Yes — to new symbologies, scanning speeds and machine vision capabilities	No	No	No	Yes — to new scanning speeds	Customers can choose the FS20 with the software features they need now, and simply purchase a software license to upgrade to add support for new symbologies, faster scanning speed and machine vision tools, allowing workers to turn the FS20 into a VS20 Smart Sensor. The result? The device your customers buy today can adapt to meet new business needs, delivering a superior return on investment.

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Software Features: COMPARISONS (continued)						
ImagePerfect+	Yes	No	No	No	No	Additional cameras, external lights or complex custom code are often required when lighting is uneven or barcodes are at varying distances from the camera. A ground-breaking new software feature, ImagePerfect+, eliminates this expense. ImagePerfect+ takes up to 16 different images in one trigger event, each with their own definable setting for focus, exposure, gain, illumination control and more.
Golden Image Compare	Yes	No	No	No	No	If a barcode read fails, this Zebra-only tool allows you to compare the failed barcode to a golden 'perfect' image created at setup to quickly and easily identify and resolve the source of image degradation — from a dirty lens or lighting problem to misalignment of the camera.
Job Compare	Yes	No	No	No	No	This unique Zebra-only tool compares current settings in the job and camera to all initial settings. If settings were inadvertently changed, just one click restores all initial settings, enabling rapid troubleshooting and issue resolution.

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Qualifying Questions

Q **Are workers on a conveyor line or at receiving docks or other portals manually scanning barcode data into your networked applications to process, track and trace the items and packages moving through your warehouse or distribution center?**

A Now, you can automate the capture of barcode data on the items and packages moving through your warehouse and distribution center with the FS20. Just install the FS20 at conveyor stations and portals to automatically capture barcodes as they pass under the scanner. No more manual scanning of barcodes. No more paper and pen. No more errors that can lead to late deliveries or the delivery of the wrong items, impacting customer service and customer retention. And the time-savings means more productivity and more throughput. You get a workforce multiplier — the same workforce can move more packages and items in, through and out of your facility, every day.

Q **How are you enabling track and trace on your networked manufacturing production line?**

A Capturing the barcodes on the items coming down your production line enables better inventory management and rapid cost-effective recalls that increase customer safety. But if workers are manually capturing barcodes — either keying in barcodes on the items or picking up handheld scanners to capture barcodes — you're increasing your production cycle times and introducing the opportunity for keying errors and missed scans. The F20 eliminates all of those issues by automatically capturing all the barcodes required on all parts and items as they pass by on a conveyor or pass through a portal. Workers are more productive and all the barcodes required on all items are always captured. The result? Flawless track and trace — without inserting time and cost into your operations.

Q **Are you currently using fixed industrial barcode scanners connected to your PLC network?**

A Can non-technical staff manage your installed networked fixed industrial barcode scanners? Is the software intuitive? Is every barcode captured, regardless of condition? The FS20 delivers it all. The FS20 is so easy to set up, deploy and run that even a beginner with no experience can do it, thanks to the powerful Zebra Aurora™ software. The interface sets the bar for modern, intuitive design. And you get the superior barcode capture technology that has made Zebra the world's leader in barcode scanning — the FS20 will capture virtually any barcode in practically any condition, first time, every time.

Sales/Reference Materials

The Source (for internal Zebra only):
https://zebra.showpad.biz

FS20 Product Page:
www.zebra.com/fs20

Partner Gateway:
https://partnerportal.zebra.com

Services:
www.zebra.com/zebraonecare

Support pages:
www.zebra.com/support

Accessories

Accessories for the FS20 include:

- Power supplies
- Power cords
- External lighting

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Objection Handling

Services

Plant Engineer	Maintenance Manager	IT Manager
"Our processes are working fine today — and we can't afford any downtime to integrate new technology."	"We need to fully understand future needs before we make a technology investment."	"We're concerned about the fact that Zebra is new to this market. We want to buy tried and proven technology."
RESPONSE:	**RESPONSE:**	**RESPONSE:**
While your manual processes might be working today, they are impacting productivity and throughput in your distribution center and warehouse and on the production line. And in order to compete in today's world, you need your workforce to be as efficient as possible. The FS20 will shave valuable time out of your processes by eliminating the need to manually scan barcodes at conveyor stations and portals, as well as the opportunity for errors. The result? Increased productivity and throughput with very little setup time — and practically no disruptions: • The compact FS20 fits wherever you need scanning, even in space-constrained areas. And with built-in network support and PoE, you can just plug it into your network and you're ready to start scanning. • Superior barcode scanning technology means first-time every time dependable barcode capture — so workers won't lose time manually entering exceptions. • It's so easy to set up, deploy and run that even a beginner can do it.	Unlike competitive devices, when you purchase the FS20 — or any other Zebra Fixed Industrial Scanner or Machine Vision Smart Camera — you get built-in adaptability. The device you purchase today can easily meet tomorrow's needs too. This fully upgradeable product line allows you to easily add features and functionality with the purchase of a simple software license. You can add support for new symbologies, faster scanning speeds and basic to advanced machine vision toolsets that allow your FS20 Fixed Industrial Scanner to function like a VS20 Machine Vision Smart Camera. And since you can add new features right on site, there's no need to send the FS20 to the service depot — and no extended downtime.	While Zebra is new to this line of products, Zebra is the #1 market leader in many of the technologies that are in these products. That's why Zebra decided to enter this market — all the foundational technologies in the devices represent Zebra's core competencies, proven all over the world: companies of all sizes in virtually every vertical market count on Zebra barcode scanning and imaging technologies to streamline their business processes for a competitive edge. Zebra offers: • Global leadership: #1 in data capture, mobile computing, barcode printing and mobile RFID hardware.[1] • Zebra's Fixed Industrial Scanner and Machine Vision portfolio expands upon a 50+ year legacy of data capture innovation and intelligent edge solutions that leverage computer vision, AI and more into traditional line-side industrial automation applications. The unique unified software-led approach is driven by a deep understanding of workflows and customer needs that enable enterprises to do business better, smarter and faster than ever before. • Highly qualified channel partners chosen for their comprehensive FIS/MV expertise and experience, working together with Zebra to bring you the breadth and depth of knowledge required to deliver highly successful industrial automation solutions. • 4,900+ US and international patents issued and pending — Zebra creates core technologies that drive business efficiency. • $4.5 Billion in revenue (2019) • Global offices in 45 countries

1. Source: VDC Research and Zebra analysis

The FS20 and all Zebra Fixed Industrial Scanners and Machine Vision Smart Cameras are backed by a standard 2-year warranty. **Zebra OneCare® Support Services** go beyond the standard warranty to cover it all — helping to eliminate unexpected repair costs and maximize device uptime.

With Zebra OneCare contracts, customers get repair, technical and software support; options such as on-site service and next-day shipping of replacement devices; and access to VisibilityIQ™ OneCare to easily track devices in the repair cycle.

Zebra OneCare Essential:
• Comprehensive repair services
• 3-day repair turnaround time
• VisibilityIQ OneCare
• Full access to technical support resources
• Rights to download and use software releases
• 3 or 5 year coverage

Zebra OneCare Select:
All Zebra OneCare Essential features, plus:
• Advance device replacement
• 24/7 Level I support
• 3 or 5 year coverage

Refer to Solutions Pathway for the most up-to-date information, including global availability and pricing.

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