

SM20 Series OEM Scan Module

Easy integration. Frictionless deployment. Reliable, cost-effective scanning for better self-service experiences

The demand for self-service solutions is growing fast—OEM developers need trusted technology partners to deliver quality without complexity. The SM20 Series OEM Scan Module makes it easy to integrate reliable scanning into self-checkout and kiosk designs while keeping costs low. Its compact cube design fits easily into tight enclosures and the unbranded housing puts your brand front and center. As the #1 global leader in scanning technology, Zebra gives OEMs a foundation they can trust—day in and day out. With multiple mounting options, simple integration, and free software tools that simplify setup and management, Zebra helps you move from concept to market faster. The result: lower development costs, greater reliability, and a better self-service experience.



Designed for OEM—Build Better Products, Faster

Easily adapts to a wide range of product designs

Whatever your design requirements, the SM20 Series provides the flexibility you need. Its compact cube shape fits easily into tight spaces, while the flat-face design mounts flush within your enclosure. The Flange Bracket simplifies installation in embedded applications, and the L-Bracket supports secure vertical or horizontal mounting. With similar dimensions to competitive products, the SM20 Series is an easy drop-in replacement for existing setups. Plus, a standard ¼-20 camera mount on the bottom adds even more versatility, accommodating third-party accessories such as clamps, poles, swivels, and wall mounts.

Unbranded housing puts you in the spotlight

The SM20 Series features a clean design with no external logos, keeping the focus where it should be—on your brand.

Setup made simple—ready to use in minutes

Get your customers up and running in minutes with a true plug-and-play experience that requires minimal training. The SM20 Series comes ready to use right out of the box, with simple, free configuration tools that make setup fast and frictionless. Zebra's Simple Setup Experience walks users through a quick, tailored setup process using clear visuals and a few yes/no questions to setup their scanner for their POS. For more advanced deployments, Zebra's no-cost 123Scan configuration tool provides powerful options to fine-tune settings, update firmware, and efficiently stage large device fleets.

Flexible integration with your designs

The SM20 Series supports both USB and RS232 interfaces, ensuring compatibility with a wide range of popular host systems. It can be powered directly through a 5V USB connection, eliminating the cost and effort of adding external power. And with USB Certification, you can rely on dependable, hassle-free connectivity. A variety of cable options—including 2 ft. and 7 ft. lengths, with straight or right-angle connectors—provide the perfect fit for your specific installation needs.



Get to market faster with the SM20 Series OEM Scan Module—dependable performance for self-service and kiosk designs without added complexity or cost.

For more information, please visit www.zebra.com/sm20-series

Create higher-quality products with purpose-built housing

The SM20 Series features a fully enclosed design for exceptional durability and longevity—eliminating the need to design around an open back or exposed components. Its compact housing allows you to build smaller, more versatile solutions that fit into a wider range of applications and environments.

Dependable Scanning Your Customers Can Count On

Intuitive scanning with clear visual guides

Bright green indicator lines on the scan window provide clear visual guidance for fast, accurate scanning—eliminating guesswork in aiming and positioning.

Faster transactions with less effort

With a field of view up to 80% larger than competitive models and up to 27% faster swipe speeds, the SM20 Series reads barcodes as they approach the scan window. This accelerates transactions and delivers a more intuitive experience for all users—no searching for the “sweet spot” or repositioning items required.

Read every barcode every time

With Zebra’s industry-leading scanning technology, the SM20 Series reads everything from damaged, poorly printed, and low contrast barcodes to mobile coupons with ease, ensuring smooth, efficient transactions.

Future-ready with GS1 Digital Link

The SM20 Series is fully compatible with GS1 Digital Link, giving your customers confidence that the solution they invest in today is ready for the future. With Zebra’s 123Scan tool, scanners can be configured for GS1 Digital Link in less than a minute—enabling anything from minimal disruption to full adoption. Your customers can unlock richer product data, including expiration dates, ingredients, traceability details for targeted product recalls, and more.

Eye-friendly illumination provides a better user experience

The SM20 Series uses recessed, deep-red LEDs that are gentle on the eyes and safe for customer environments. To reduce visual distractions in busy checkout areas, the illumination automatically turns off between scans, providing a comfortable user experience.

A Trusted Partner for OEM Success

Superior reliability

Zebra data capture products are proven to have less than 0.5% failure rates, so you can be confident in the long-term reliability of the scanner in your designs.

Dedicated OEM support, trusted service

Zebra’s dedicated OEM team provides focused support so you can build and deliver reliable solutions with confidence. Cover the SM20 Series with Zebra’s industry-leading Zebra OneCare™ maintenance and support plans to stay ahead of the unexpected, with troubleshooting and guidance from the team that knows our scanners best. Zebra OneCare offers comprehensive protection with tiered plans, letting you choose the coverage level and repair turnaround time that best fits your solutions.

No-cost, industry-preferred software tools

With Zebra, you get a suite of complimentary software tools designed to make your OEM journey simple to navigate. Our Simple Setup Experience gets customers up and running on day one, with scanner configuration taking less than five minutes. Turn to 123Scan, an intuitive no-cost tool for more advanced configuration needs and firmware updates. Our Scanner Software Development Kits (SDKs) for Windows®, Android™, iOS®, and Linux® provide everything you need to seamlessly integrate scanning into your applications. You can programmatically control SM20 Series scan modules to handle any business need. Minimize downtime with visibility into critical data and simplify management with remote tools that let you upgrade firmware and query asset information.

Proven technology from the world leader in scanning technology

The SM20 Series brings the reliability and confidence of Zebra’s well-tested, industry-leading technology. Every day, Zebra OEM products power tens of millions of devices across thousands of applications worldwide. With fast, straightforward integration and Zebra’s proven performance, you can design built-to-last data capture solutions that streamline operations, grow your profitability, and deliver a smoother, more intuitive experience for your end users.

Specifications

Physical Characteristics

Dimensions	H x W x D: 3.0 x 3.0 x 2.2 inches (75 x 75 x 57 mm)
Weight	3.9 oz. (110 g)
Input Voltage Range	4.75 to 5.25 VDC Host Powered; 4.75 to 5.25 VDC External Power Supply
Operating Current at Nominal Voltage (5.0V)	Presentation Mode: 280mA RMS (Typical) Host Trigger Mode: 260mA RMS (Typical)
Idle Current at Nominal Voltage (5.0V)	Presentation Mode: 110mA RMS (Typical) Host Trigger Mode: 80mA RMS (Typical)
Color	Midnight Black
Supported Host Interfaces	USB, RS232 (TTL)
Keyboard Support	Supports over 90 international keyboards
User Indicators	Power, Active Scan Zone, Good Decode LEDs; Beeper

Imaging Characteristics

Resolution	1 Megapixel (1280 x 800 pixels)
Illumination	(2) deep red LEDs
Field of View	62° H x 41° V nominal
Minimum Print Contrast	20% minimum reflective difference
Skew Tolerance	+/-70°
Pitch Tolerance	+/-60°
Roll Tolerance	0° - 360°

User Environment

Operating Temperature	32.0°F to 122°F (0.0°C to 50.0°C)
Storage Temperature	-40.0°F to 158.0°F (-40.0°C to 70.0°C)
Humidity	5% to 95% RH, non-condensing
Sealing	IP52
Drop/Impact Shock Specification	Designed to withstand multiple drops at 5 ft. (1.5 m) to concrete
Electrostatic Discharge (ESD)	ESD per EN61000-4-2, +/-15 KV Air, +/-10 KV Direct, +/-8 KV Indirect
Ambient Light Immunity	Sunlight: 0 to 10,000 Foot Candles/0 to 108,000 Lux Artificial indoor light: < 450 Foot Candles/4845 Lux
Approved Cleaners	Refer to the Product Reference Guide for the complete list of approved cleaners

Regulatory

Environmental	EN IEC 63000:2018
Electrical Safety	UL 62368-1; CAN/CSA-C22.2 No. 62368-1-19; IEC 62368-1; EN 62368-1
LED Safety	IEC 62471; EN 62471
EMI/RFI	47 CFR Part 15, Subpart B, Class B; ICES-003 Issue 7, Class B; EN55032, EN55035; EN61000-3-2; EN61000-3-3 EN61000-6-2, EN60601-1-2

Symbol Decode Capability

1D	All major 1D barcodes including Code 39, Code 128, Code 93, Codabar/NW7, Code 11, MSI Plessey, UPC/EAN, I 2 of 5, Korean 3 of 5, GS1 DataBar, Base 32 (Italian Pharma)
2D	All major 2D barcodes including QR Code, Micro QR, DataMatrix, GS1 Digital Link, PDF417, Micro PDF417, Composite Codes, TLC-39, Aztec, MaxiCode, Han Xin, Postal Codes, SecurPharm
GS1	Digital Link
Digimarc	Digimarc barcodes
Minimum Element Resolution	Code 39: 3.0 mil Code 128: 3.0 mil Data Matrix: 5.0 mil QR Code: 5.0 mil
	Refer to Product Reference Guide for a complete list of symbologies.

Decode Range¹

3 mil Code 39	0.7 inches (1.8 cm) to 2.5 inches (6.4 cm)
5 mil Code 39	0 inches (0 cm) to 5.5 inches (14.0 cm)
20 mil Code 39	0 inches (0 cm) to 16.0 inches (40.6 cm)
3 mil Code 128	0.7 inches (1.8 cm) to 2.3 inches (5.8 cm)
5 mil Code 128	0 inches (0 cm) to 5.0 inches (12.7 cm)
6.7 mil PDF 417	0 inches (0 cm) to 4.5 inches (11.4 cm)
13 mil UPC (100%)	0 inches (0 cm) to 10.0 inches (25.4 cm)
10 mil DataMatrix	0 inches (0 cm) to 5.0 inches (12.7 cm)
20 mil QR Code	0 inches (0 cm) to 7.8 inches (19.8 cm)

Utilities and Management

Simple Setup Experience	Provides a guided, web-based experience for basic out-of-the-box setup and configuration, enabling non-technical customers to get the device up and running in just 5 minutes. https://www.zebra.com/scannerssetup
123Scan	Programs scanner parameters, upgrades firmware, displays scanned barcode data, scanning statistics, battery health, asset data and prints reports. www.zebra.com/123scan
Scanner SDK	Generates a fully featured scanner

Markets and Applications

Solutions

- OEM kiosk integrators
- OEM self-checkout (SCO) solutions

Applications

- Self-checkout
- Point of Sale (POS)
- Self-service kiosks
- Parking entrance/exit
- Building access

Accessories

Flange Bracket, L-Bracket, third-party accessories that provide a standard 1/4"-20 camera mounting screw

Utilities and Management

	application, including documentation, drivers, test utilities and sample source code. www.zebra.com/scannersdkforwindows
Scanner Management Service (SMS)	Remotely manages your Zebra scanner and queries its asset information. www.zebra.com/sms

Recommended Services

Zebra OneCare Select; Zebra OneCare Essential

Warranty

Subject to the terms of Zebra's hardware warranty statement, the SM20 Series is warranted against defects in workmanship and materials for a period of 15 months from the date of shipment. Complete Zebra hardware product warranty statement: www.zebra.com/warranty

Footnotes

1. Distance dependent on symbology type and size, and under 30 foot-candles ambient
Specifications are subject to change without notice.