

**PRODUCT SPEC SHEET**  
**THE ZEBRA MC55N0 SERIES**



# THE ZEBRA MC55N0 SERIES

## RUGGED WI-FI ENTERPRISE MOBILE COMPUTER FOR MANAGERS AND TASK WORKERS

### DRIVE PRODUCTIVITY AND EFFICIENCY INSIDE THE ENTERPRISE TO A NEW LEVEL

With the MC55N0 Series, managers and task workers who spend their days inside your company walls have everything they need to take instant action, anywhere in your facility — indoors and outside. When it comes to meeting the needs of your workforce, the MC55N0 excels, offering organizations in the U.S. and Europe the right level of features, the right level of rugged design and support for the most demanding business applications. The result? Workers in retail, hospitality, manufacturing, healthcare and government agencies can complete more tasks more accurately in less time, improving productivity and customer care.

### THE MOST RUGGED DESIGN YET IN THIS CLASS — PERIOD

The MC55N0 Series is built to last, giving workers a device they can count on and businesses a maximum return on investment (ROI). This rugged device is built for use inside your buildings as well as outdoor areas of your facilities — and our toughness tests prove it. The MC55N0 delivers outstanding performance, even after exposure to heat, cold, dust, water — and 1,000 consecutive tumbles in our rotating tumble drum. And all models can be sanitized with many common cleaners without harming the housing or the sensitive electronics, helping prevent the spread of bacteria when devices are shared.

### PURE BUSINESS ON THE INSIDE — SMART STYLING ON THE OUTSIDE

The MC55N0 Series is the perfect blend of form and function. The comprehensive capabilities allow workers to scan bar codes; snap pictures; view videos and access business critical applications. The compact and lightweight mobile computer is easy to carry and easy to use, with a sleek design that is at home in front of customers.

### THE POWER TO HANDLE VIRTUALLY ANY APPLICATION

Give your workers the best in class mobile application performance, even for the most demanding multimedia applications. Packed with the latest in technology, our powerful platform offers the most current mobile operating system for the enterprise, as well as the fastest processor and largest memory footprint in this device class. And the 802.11n radio substantially increases wireless bandwidth — so you can count on your wireless applications to perform just as well as applications running on a wired desktop computer.

### CAPTURE THE DATA YOU NEED — WHEN AND WHERE YOU NEED IT

Three scanner options let you pick the model that will deliver the best performance for your organization. Our SE960 1-D laser scan engine provides best-in-class performance for 1-D bar codes, including near contact to medium range decoding of even the widest bar code. And the two variants of our revolutionary SE4500 2-D imager deliver true laser-like performance and omnidirectional scanning of both 1-D and 2-D bar codes. The SE4500-SR offers the best range on medium and low density 1-D and 2-D bar codes. The SE4500-DL is optimized for medium to high density bar codes in addition to the bar codes found on driver's licenses and other identification documents — ideal for border crossings as well as the healthcare and electronics industry. And if you need to capture photos, videos, or documents in addition to bar codes, no problem — just add our high-resolution 3.2 MP autofocus color camera.

### FEATURES HIGH-POWERED PLATFORM

**MPA** Zebra MAX MPA  
2.0

Our latest best-in-class standards-based technology architecture that provides numerous benefits  
**Powerful microprocessor designed for mobility**  
The Marvell® PXA320 @ 806 MHz provides best-in-class application performance coupled with ubiquitous mobility inside the enterprise — even on the most demanding multi-media applications

**The memory to support any application**  
256MB RAM/1GB Flash and a user accessible microSD card slot with support up to 32GB provide the memory space required to enable robust performance for database and other processing intensive applications

**The most advanced mobile operating system for the Enterprise**

Microsoft's Windows® Mobile® 6.5 increases interoperability with existing enterprise infrastructure; enhances security features; provides a more flexible development platform; improves mobile messaging collaboration

**Protects your application investments**

Support for Zebra's Enterprise Mobility Developer Kit (EMDK) APIs preserves existing application investments by enabling easy and cost-effective porting of applications from other Zebra mobile computers

## THE INTELLIGENCE TO SENSE AND ACT ON THE ENVIRONMENT

Get real value with our business-class implementation of the accelerometer. We start with the typical ability to automatically switch the display between portrait and landscape modes based on device orientation, and build from there. Right out of the box, you can get the power saving functionality that helps ensure full shift operation on a single battery charge. With just a few clicks, you can configure the device to enter sleep mode if movement is not detected in a specified period of time, or if the display is face down. In addition, the MC55N0 automatically detects and logs drops, helping to increase worker accountability for device condition. And the open architecture allows enterprises to integrate the accelerometer data into customized applications to improve the safety of technicians working in remote areas of your facility — and prevent device theft.

## THE ZEBRA ADVANTAGE: WORLD CLASS PARTNERS SUPPORT

When you choose Zebra, our award-winning partner channel provides access to a best-in-class, broad set of ready-to-go and custom applications in your industry, minimizing deployment time and cost. No matter what help your business might need, we have a service that delivers. If you are implementing your first mobility solution, we can provide assistance at every stage — from planning and assessment through design, deployment and ongoing management and support. If you are adding new applications, we can help you identify whether your present wireless LAN can handle the increased load — as well as any other gaps that need to be addressed to ensure smooth deployment. Since even the most rugged devices require a support plan, Service from the Start with Comprehensive Coverage will keep your devices up and running at peak performance. This unique all-inclusive service covers normal wear and tear as well as internal and external components damaged through accidental breakage, significantly reducing unforeseen repair expenses.

## EMPOWER YOUR INDOOR WORKFORCE TO GET MORE DONE IN A DAY — WITH THE ZEBRA MC55N0 SERIES

To find out how, visit [www.zebra.com/mc55N0](http://www.zebra.com/mc55N0) or access our global contacts directory at [www.zebra.com/contact](http://www.zebra.com/contact)

## ADVANCED WIRELESS CONNECTIVITY

### Works on virtually any wireless LAN

The 802.11a/b/g/n quad-mode radio offers maximum WLAN bandwidth and throughput, improving application performance and availability; connects easily to any wireless LAN (WLAN) — 2.4 GHz and 5 GHz bands

**The most advanced Bluetooth functionality**  
Bluetooth® v2.1 with EDR provides a wireless connection to more device types, including modems and printers; simplifies pairing; improves security; reduces power consumption; supports either Microsoft or Stonestreet stacks

## GOVERNMENT GRADE SECURITY OVER VIRTUALLY ANY WLAN



Make sure only authorized users access your

devices, your data and your network with Zebra **MAX Secure**

Bring wired-line security to your wireless communications without impacting wireless performance through a multitude of security features, including: support for all the latest encryption and authentication protocols; compatibility with Zebra's Mobile Security Suite for device-level protection (device level firewall, intrusion prevention, enforced authentication, data encryption and integrity monitoring protect the data that is resident on and in transit to and from your MC55A0/MC55N0 devices); and compatibility with Zebra's Mobile Virtual Private Networks (MVPNs)

## THE MOST RUGGED DESIGN



Zebra **MAX Rugged** for industry leading rugged design — and

## SPECIFICATIONS CHART AVAILABLE IN U.S. AND EUROPE

COLOR CAMERA		1-D LASER SCANNER (SE960)	
Resolution	3.2 megapixel	Optical Resolution	0.005 in. minimum element width
Illumination	User controllable flash	Roll	± 35° from vertical
Lens	Auto focus	Pitch Angle	± 65° from normal
<b>PHYSICAL CHARACTERISTICS</b>		Skew Tolerance	± 40° from normal
		Ambient Light Immunity	Tolerant to typical artificial indoor and natural outdoor (direct sunlight) lighting conditions. Fluorescent, Incandescent, Mercury Vapor, Sodium Vapor, LED: 450 Ft Candles (4,844 Lux) Sunlight: 10000 Ft Candles (107,640 Lux) <b>Note:</b> LED lighting with high AC ripple content can impact scanning performance.
Dimensions	With rechargeable 2400 mAh Lithium Ion battery: 5.78 in. L x 3.03 in. W x 1.06 in. D 147 mm L x 77 mm W x 27 mm D	Scan Rate	104 (± 12) scans/sec (bidirectional)
Weight	11.1 oz./315 g (with rechargeable 2400 mAh Lithium Ion battery)	Scan Angle (typical) *	Wide: (Default) 47°; Medium: 35°; Narrow: 10°
Display	3.5 in Color VGA, super bright 900 NITS	<b>2-D IMAGER ENGINE (SE4500-SR AND SE4500-DL)</b>	
Touch Panel	Glass analog resistive touch	Sensor Resolution	752 H x 480 V pixels (gray scale)
Display Backlight	LED backlight		
Standard Battery	Rechargeable Lithium Ion 3.7V, 2400 mAh Smart Battery		
Extended Battery	Rechargeable Lithium Ion 3.7V, 3600 mAh Smart Battery		
Backup Battery	Ni-MH battery (rechargeable)		

	18mAh 2.4V (not user accessible)
<b>Expansion Slot</b>	microSD slot (maximum 32GB)
<b>Comm. Interface</b>	USB 1.1 Host and Client
<b>Notification</b>	Audible tone plus multi-color LEDs, Vibrate
<b>Keypad Options</b>	Numeric, QWERTY, AZERTY and QWERTZ
<b>Audio</b>	Speaker, microphone, receiver (for handset mode use) and Bluetooth audio headsets

## PERFORMANCE CHARACTERISTICS

<b>CPU</b>	Marvell™ PXA 320 @ 806 MHz processor
<b>Operating System</b>	Microsoft® Windows Mobile® 6.5 Classic
<b>Memory</b>	256 MB RAM/1 GB Flash

## USER ENVIRONMENT

<b>Operating Temp.</b>	14° F to 122° F/-10° C to 50° C
<b>Storage Temp.</b>	-40° F to 158° F/-40° C to 70° C
<b>Humidity</b>	95% non-condensing
<b>Drop Spec</b>	Multiple 6 ft./1.8 m drops per MIL-STD 810G specifications
<b>Tumble Spec</b>	1000 1.6 ft./0.5 m tumbles (equivalent to 2,000 hits) per IEC tumble specifications
<b>Sealing</b>	IP64 per IEC sealing specifications
<b>Clock</b>	Integrated real time clock
<b>Electrostatic Discharge (ESD)</b>	15KV Air 8KV Touch

## WIRELESS LAN VOICE AND DATA COMMUNICATIONS

<b>Radio</b>	Quad-mode IEEE® 802.11a/b/g/n
<b>Security</b>	Legacy, WPA and WPA2 WEP (40 or 104 bit), TKIP and AES TLS, TTLS (MS-CHAP), TTLS (MS-CHAP v2), TTLS (CHAP), TTLS (MD5), TTLS (PAP), PEAP-TLS, PEAP (MSCHAP v2), PEAP (EAP-GTC), EAP-FAST-TLS, EAP-FAST (MS-CHAP v2), EAP-FAST (EAP-GTC) and LEAP
<b>Antenna</b>	Internal
<b>Data Rates Supported</b>	802.11b/g: 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48 and 54 Mbps

<b>Roll</b>	360°
<b>Pitch Angle</b>	± 60° from normal
<b>Skew Tolerance</b>	± 60° from normal
<b>Ambient Light</b>	Total darkness to 9,000 ft. candles/96,900 lux
<b>Aiming Element (VLD)</b>	655 nm ± 10 nm
<b>Illumination Element</b>	625 nm ± 5 nm
<b>Field of View</b>	Horizontal: 40°; Vertical: 25°

### Ranges

#### SR Focus Range

<b>5 mil Code 39:</b>	Near: 2.1 in./53 mm Far: 7.5 in./191 mm
<b>100% UPC/EAN:</b>	Near: 1.6 in./41 mm Far: 15.5 in./394 mm
<b>6.7 mil PDF417:</b>	Near: 3.4 in./86 mm Far: 7.1 in./180 mm

#### DL Focus Range

<b>5 mil Code 39:</b>	Near: 1.4 in./36 mm Far: 7.3 in./185 mm
<b>100% UPC/EAN:</b>	Near: 1.6 in./41 mm Far: 12 in./305 mm
<b>5 mil PDF417:</b>	Near: 2.8 in./71 mm Far: 4.5 in./114 mm

## BATTERY PERFORMANCE

<b>User Profiles</b>	Minimally 8 hours based on 600 scans and WLAN transmits per hour with display on and standard capacity battery
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## DATA CAPTURE OPTIONS

<b>Options</b>	Multiple configurations available: 1-D SE960 laser scanner; 2-D SE4500-SR imager; 2-D SE4500-DL imager; 3.2 megapixel color camera option available
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## PERIPHERALS AND ACCESSORIES\*

<b>Communication and Battery Chargers/Cradles</b>	Charge only cable; auto charge cable; USB charge/sync cable; 4 slot battery charger toaster; 4-slot Ethernet cradle; 4-slot charge only cradle; single slot USB cradle; vehicle holder using auto charge cable; vehicle cradle with charging capabilities
<b>Vertical Specific Attachments</b>	Snap-on magnetic stripe reader (MSR); snap-on trigger handle

### reliability

#### Drop (impact) test

Multiple 6 ft./1.8 m drops per MIL-STD 810G

#### Tumble (endurance) test per IEC tumble specifications

Reliable operation after 1,000 1.6 ft./0.5 m consecutive tumbles (2,000 hits) in Zebra's tumble drum

#### IP64 sealing per IEC sealing specifications

Complete protection against dust and splashing liquids

#### Patented Monocoque 'unibody' housing

Greatly improves structural stability and ability to handle the twisting common in a fall or bump

#### Patented industrial-grade connector

Improves the reliability and durability of the accessory point of interface

#### Improved shock absorption for internal components

A rigid yet lightweight magnesium frame encases the main circuit board and all electronics

#### Rugged display construction

Space between display and touchscreen helps prevent damage to the display

## AUTOMATE THE CAPTURE OF VIRTUALLY ANY TYPE OF DATA

**101100** Zebra MAX Data Capture for advanced high-

#### performance multi-mode data capture

Choose one of four bar code scanning options that can read even damaged and poor quality codes:

#### 1-D Scanners

**SE960:** High performance 1-D scanning — adaptive scanning maximizes the range and enables scanning of codes that are damaged or underneath shrinkwrap.

#### 2-D Imagers

Zebra's SE4500 latest generation 2-D imager offers unparalleled laser-like performance on both 1-D and 2-D bar codes and

802.11a: 6, 9, 12, 18, 24, 36, 48 and 54 Mbps  
802.11n: MCS0 to MSC7 up to 72.2 Mbps

**Operating Channels** Chan 36-165 (5180 – 5825 MHz),  
Chan 1-13 (2412-2472 MHz)

## WIRELESS PAN DATA

**Bluetooth** Class II, v 2.1 Enhanced Data Rate (EDR); integrated antenna

## CLEANING INSTRUCTIONS

**Approved Cleanser Active Ingredients:** 100% of the active ingredients in any cleaner must consist of one or some combination of the following: isopropyl alcohol; bleach/sodium hypochlorite; hydrogen peroxide; mild dish soap

**Harmful Ingredients:** The following chemicals are known to damage the plastics on the MC55N0 Series and should not come in contact with the device: ammonia solutions, compounds of amines or ammonia; acetone; ketones; ethers; aromatic and chlorinated hydrocarbons; aqueous or alcoholic alkaline solutions; ethanalamine; toluene; trichloroethylene; benzene; carbonic acid and TB-lysoform.

**Cleaning Instructions:** Do not apply liquid directly to the MC55N0 Series. Dampen a soft cloth or use premoistened wipes. Do not wrap the device in the cloth or wipe, but gently wipe the unit. Be careful not to let liquid pool around the display window or other places. Allow the unit to air dry before use.

**Special Cleaning Notes:** Many vinyl gloves contain phthalate additives, which are often not recommended for medical use and are known to be harmful to the housing of the MC55N0 Series. The mobile computers should not be handled while wearing vinyl gloves containing phthalates, or before hands are washed to remove contaminant residue after gloves are removed. If products containing any of the harmful ingredients listed above are used prior to handling the MC55N0 Series, such as hand sanitizers that contain ethanalamine, hands must be completely dry before

**Soft Goods** Rigid and soft case holsters,  
Bluetooth headsets

\* Visit [www.zebra.com/mc55n0](http://www.zebra.com/mc55n0) for a complete list of available peripherals and accessories

## REGULATORY

**Electrical Safety** Certified to UL 60950-1, second edition, CAN/CSA-C22.2 No. 60950-1-07, IEC 60950-1 Edition 2.0 2005-12, EN 60950-1:2006 + A11:2009

**Environmental** RoHS-compliant

**WLAN and Bluetooth (PAN)** **USA:** FCC Part 15.247, 15.407  
**EU:** EN 300 328, EN 301 893

**RF Exposure** **USA:** FCC Part 2, FCC OET Bulletin 65 Supplement C  
**EU:** EN 50360: 2001 (Max average 10g SAR 0.472 W/Kg), EN 62311: 2008, EN 62209-1:2006, EN62209 -2:2010, EN62479:2010

**EMI/RFI** **USA:** FCC Part 15, Class B  
**EU:** EN55022 Class B, EN 55024: 1998 + A1: 2001 + A2: 2003, EN 61000-3-2: 2006 (Class B), EN 61000-3-3: 2008, EN 50121-3-2: 2006, EN 50121-4: 2006, EN 301 489-1, EN 301 489-17, EN 60601-1-2, IEC 60601-1-2: 2007, (Modified)

**Laser Safety** IEC/Class 2/FDA II in accordance with IEC60825-1: (Ed 2.0)/EN 60825-1:2007

## WARRANTY

The MC55N0 Series is warranted against defects in workmanship and materials for a period of 12 months from date of shipment, provided that the product remains unmodified and is operated under normal and proper conditions

## RECOMMENDED SERVICES

Customer Services: Managed Device Service Support; Service from the Start with Comprehensive Coverage


omnidirectional rapid-fire easy scanning — no need to align bar code and aiming pattern. Choose one of two options:

**SE4500-SR:** Optimized for low/medium density standard range scanning of 1-D/2-D bar codes

**SE4500-DL:** Optimized for medium to high density 1-D/2-D bar codes as well as the PDF bar codes found on driver's licenses and other identification cards — ideal for gate access and border crossings for identity management; patient wristbands and unit doses in healthcare point of care applications; and the high density codes common in the electronics industry

**High resolution camera**  
Add a 3.2 MP auto-focus flash-enabled digital color camera with user-controllable flash to capture photos, videos, documents with legible fine print and bar codes (for intermittent scanning applications)


## BUSINESS-CLASS MOTION SENSING

 **Zebra MAX Sensor for the intelligence to sense — and**

**act — on motion**  
Automatically rotates screen to match device orientation; automatically reverts to sleep mode when not in use to preserve battery power; landscape mode improves the display of data-intensive applications; enables utilization of sensor data in custom applications

## ADVANCED ERGONOMICS

**Advanced sleek design for ease of use and user comfort**  
Specifically designed for one-handed operation — data entry is easy regardless of hand size with minimal movement

 **Crystal clear text and graphics with Zebra MAX**

**Display**

handling the MC55N0 Series to prevent damage to the plastics.

3.5 inch extra-crisp high-resolution color VGA touchscreen display is easy to view in virtually any lighting condition — indoors and outside; additional white pixel improves contrast; energy-efficient engineering delivers twice the brightness at half the power of typical displays

**A family of keypads for global data entry flexibility**  
Numeric, QWERTY, AZERTY and QWERTZ support a wide range of applications all around the world

### **PRESERVE EXISTING ACCESSORY INVESTMENTS**

**Backwards compatibility with all MC55 accessories**  
Upgrade to the latest mobile technology advancements while preserving your existing accessory investments

### **EASY CENTRALIZED MANAGEMENT**

**Easy global remote management of your devices — and their accessories**

Compatibility with Zebra's Mobility Services Platform (MSP) enables comprehensive and flexible centralized management of a broad range of mobile products and their attached peripherals, anywhere in the world, all from a single console

### **END-TO-END SUPPORT SERVICES**

**Increase uptime and reduce support costs with all-inclusive support plan**  
Optional Service from the Start with Comprehensive Coverage covers normal wear and tear as well as internal and external components damaged through accidental breakage for both device and select accessories



**MAX**  
*Rugged*



**MAX**  
*Secure*



**MAX**  
*Sensor*

101100

**MAX**  
*Data Capture*



**MAX**  
*MPA*



**MAX**  
*Display*



**ZEBRA**



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**ZEBRA TECHNOLOGIES**