PRODUCT SPEC SHEET
THE ZEBRA MC55A0 SERIES





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

DRIVE PRODUCTIVITY AND EFFICIENCY INSIDE THE ENTERPRISE TO A NEW LEVEL

With the MC55A0 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 MC55A0 excels, offering 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. And with healthcare friendly colors, MC55A0-HC brings mobility to point-of-care applications, helping nurses and other caregivers eliminate errors at the patient bedside to improve the quality of care — and the patient experience.

PURE BUSINESS ON THE INSIDE — SMART STYLING ON THE OUTSIDE

The MC55A0 Series is the perfect blend of form and function. The comprehensive capabilities allow workers to scan bar codes; snap pictures; view videos; access business applications, the Internet and email as well as make and receive private and push-to-talk voice calls. The compact and lightweight mobile computer is easy to carry and easy to use, with a sleek design that is equally at home in front of customers and patients.

THE MOST RUGGED DESIGN YET IN THIS CLASS — PERIOD

The MC55A0 Series is built to last, giving workers a device they can count on and businesses a maximum return on investment (ROI). This rugged device family is built for use inside your buildings as well as outdoor areas of your facilities — and our toughness tests prove it. The MC55A0 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 to patients and caregivers in a hospital as well as shift workers in other industries where devices are shared.

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.

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

Four 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 three variants of our revolutionary SE45002D 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. Our DPM option, the SE4500-HD, is tailored for very high density bar codes as well as virtually any direct part mark (DPM) — including dot peen, laser etch, ink mark, chemical

ZEBRA

FEATURES

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

etch, inkjet mold, cast and thermal spray — enabling automotive and aeronautics manufacturers to easily track and trace every part to improve safety and comply with government regulations. 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.

PROTECT YOUR DATA WITH GOVERNMENT-GRADE SECURITY
Wireless solutions create an instant concern for businesses and government agencies — data security. In addition to standard support for all the latest wireless authentication and encryption protocols and Zebra's tested and certified Virtual Private Networks (VPNs), the MC55A0 adds native FIPS 140-2 Level 1 certification, bringing government grade security to businesses and government agencies alike. Unlike many other mobile computers, our security features protect your data and productivity, without impacting performance.

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 MC55A0 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.

UNPARALLELED VOICE FUNCTIONALITY AND QUALITY
Unlike many mobile computers, the MC55A0 is designed from the ground up to enable voice as well as data over your WLAN. The result is a superior user experience, highly cost-effective voice communications and a broad voice feature set. Start with the ability to turn the MC55A0 into a mobile version of your deskphones. Then add a push-to-talk connection to practically any other Zebra mobile device, including other mobile computers, EAM smartphones and even two-way radios on completely different networks.* This powerful combination allows workers to place one-to-one calls in sensitive environments, such as healthcare, while retail and other managers can easily reach an entire workgroup at the press of a button — eliminating intrusive overhead paging systems that affect the customer experience. Handset and speakerphone modes allow workers to choose privacy or hands-free convenience, meeting the needs of the job…and the moment. And since voice and data services are delivered over the WLAN, in-building cellular coverage issues that can affect voice quality are eliminated.

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 mobilitysolution, 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 MC55A0 Series.

To find out how, visit **www.zebra.com/mc55a0** or access our global contacts directory at **www.zebra.com/contact**

ADDITIONAL FEATURES

HIGH-POWERED PLATFORM

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® Windows Embedded Handheld 6.5 Classic 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

ADVANCED WIRELESS CONNECTIVITY

Works on virtually any wireless LAN

The 802.11a/b/g tri-mode radio connects to both 2.4GHz and 5GHz WLANs for cost-effective voice and data connectivity in the office and hot spots; 802.11a (5GHz band) support enables segmentation of voice traffic to ensure voice quality

The most advanced Bluetooth functionality

Bluetooth® v2.1 with EDR provides a wireless connection to more device types, including modems, printers, headsets ; 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: native FIPS 140-2 Level 1 certification; 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 devices); and compatibility with Zebra's Mobile Virtual Private Networks (MVPNs)

THE MOST RUGGED DESIGN

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

Drop (impact) test

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

Tumble (endurance) test

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

IP64 sealing

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

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 omnidirectional rapid-fire easy scanning — no need to align bar code and aiming pattern. Choose one of three 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
SE4500-HD: Optimized for very high-density 1-D/2-D codes and the direct part marks common in manufacturing
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*
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, QWERTZ and NAV PIM support a wide range of applications all around the world

* Two-way radios require the Radio Link Server (RLS)

SPECIFICATIONS CHART

PHYSICAL CHARACTERISTICS

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
Weight	11.1 oz./315 g (with rechargeable 2400 mAh Lithium Ion battery)
Display	3.5 in Color VGA, super bright 900 NITS

1-D LASER SCANNER (SE960)

Optical Resolution	0.005 in. minimum element width
Roll	± 35° from vertical
Pitch Angle	± 65° from normal
Skew Tolerance	± 40° from normal
Ambient Light Immunity	Tolerant to typical artificial indoor and natural outdoor (direct sunlight

Touch Panel	Glass analog resistive touch
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)
Expansion Slot	microSD slot (maximum 32GB)
Comm. Interface	USB 1.1 Host and Client
Notification	Audible tone plus multi-color LEDs, Vibrate
Keypad Options	Numeric, QWERTY, AZERTY, QWERTZ and NAV PIM
Audio	Speaker, microphone, receiver (for handset mode use) and Bluetooth audio headsets

PERFORMANCE CHARACTERISTICS

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

USER ENVIRONMENT

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

BATTERY PERFORMANCE

User Profiles	Minimally 8 hours based on 600 scans and WLAN transmits per hour with display on and standard capacity battery

DATA CAPTURE OPTIONS

	) lighting conditions. Fluorescent, Incandescent, Mercury Vapor, Sodium Vapor, LED: 450 Ft Candles (4,844 Lux) Sunlight: 10000 Ft Candles (107,640 Lux) Note: LED lighting with high AC ripple content can impact scanning performance.
Scan Rate	104 (± 12) scans/sec (bidirectional)
Scan Angle (typical) *	Wide: (Default) 47°; Medium: 35°; Narrow: 10°

2-D IMAGER ENGINE (SE4500, SE4500-DL, SE4500-HD)

Sensor Resolution	752 H x 480 V pixels (gray scale)
Roll	360°
Pitch Angle	± 60° from normal
Skew Tolerance	± 60° from normal
Ambient Light	Total darkness to 9,000 ft. candles/96,900 lux
Aiming Element (VLD)	655 nm ± 10 nm
Illumination Element	625 nm ± 5 nm
Field of View	Horizontal: 40°; Vertical: 25°
Ranges	
SR Focus Range	
5 mil Code 39:	Near: 2.1 in./53 mm) Far: 7.5 in./191 mm
100% UPC/EAN:	Near: 1.6 in./41 mm) Far: 15.5 in./394 mm
6.7 mil PDF417:	Near: 3.4 in./86 mm Far: 7.1 in./180 mm
DL Focus Range	
5 mil Code 39:	Near: 1.4 in./36 mm Far: 7.3 in./185 mm
100% UPC/EAN:	Near: 1.6 in./41 mm Far: 12 in./305 mm
5 mil PDF417:	Near: 2.8 in./71 mm Far: 4.5 in./114 mm
HD Focus Range	
3 mil Code 39:	Near: 1.6 in./41 mm Far: 3.8 in./97 mm
4 mil PDF417:	Near: 1.8 in./46 mm Far: 3.5 in./89 mm

Options	Multiple configurations available: 1-D SE960 laser scanner; 2-D SE4500-SR imager; 2-D SE4500-HD imager; 2-D SE4500-DL imager; 3.2 megapixel color camera option available

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 MC55A0 Series and should not come in contact with the device: ammonia solutions, compounds of amines or ammonia; acetone; ketones; ethers; aromatic and chlorinated hydrocarbons; acqueous or alcoholic alkaline solutions; ethanolamine; toluene; trichloroethylene; benzene; carbolic acid; TB-lysoform

Cleaning Instructions:
Do not apply liquid directly to the MC55A0 Series. Dampen a soft cloth or use pre-moistened 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 MC55A0 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 MC55A0 Series, such as hand sanitizers that contain ethanolamine, hands must be completely dry before handling the MC55A0 Series to prevent damage to the plastics.

COLOR CAMERA

Resolution	3.2 megapixel
Illumination	User controllable flash
Lens	Auto focus

WIRELESS LAN VOICE AND DATA COMMUNICATIONS

Radio	Tri-mode IEEE® 802.11a/b/g
Security	WPA2, WEP (40 or 128 bit), TKIP, TLS, TTLS (MS-CHAP), TTLS (MS-CHAP v2), TTLS (CHAP), TTLS-MD5, TTLS-PAP, PEAP-TLS , PEAP (MS-CHAP v2), AES, LEAP, CCXv4 certified; FIPS 140-2 certified
Antenna	Internal (Primary and Diversity)
Data Rates Supported	1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48 and 54 Mbps
Operating Channels	Chan 8-165 (5040 – 5825 MHz), Chan 1-13 (2412-2472 MHz), Chan 14 (2484 MHz) Japan only, Actual operating channels/frequencies depend on regulatory rules and certification agency
Voice Communication	Voice-over-IP ready, Wi-Fi™-certified, IEEE 802.11a/b/g direct sequence wireless LAN, Wi-Fi Multimedia™ (WMM), Zebra Voice Quality Manager (VQM)

REGULATORY

Electrical Safety	Certified to UL/cUL 60950-1, IEC/EN60950-1
WLAN and Bluetooth (PAN)	USA: FCC Part 15.247, 15.407 Canada: RSS-210, RSS 310 EU: EN 300 328, EN 300 440-2, EN 301 893 Japan: ARIB STD-T33, ARIB STD-T66, ARIB STD-T70 & T71 Australia: AS/NZS 4268
RF Exposure	USA: FCC Part 2, FCC OET Bulletin 65 Supplement C Canada: RSS-102 EU: EN 50392 Australia: Radio communications Standard 2003
EMI/RFI	North America: FCC Part 15, Class B Canada: ICES 003 Class B EU: EN55022 Class B, EN 301 489-1, EN 301 489-17, EN 301 489-19, EN 60601-1-2
Laser Safety	IEC/Class 2/FDA II in accordance with IEC60825-1/EN 60825-1

WARRANTY

The MC55A0 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



Rugged



MAX Secure



MAX Sensor



MAX Data Capture



MAX MPA









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