



# HEALTHCARE MOBILE COMPUTERS

## RUGGED DISINFECTANT-READY MOBILE COMPUTERS FOR NEXT GENERATION HEALTHCARE MOBILITY

### IMPROVE PATIENT CARE AND SAFETY WITH THE NEXT EVOLUTION IN MOBILE COMPUTERS

Take the quality of care, patient safety and healthcare worker productivity to the next level in your institution with Zebra's healthcare mobile computing portfolio. With our easy-to-use and easy-to-carry devices, your healthcare workers can access patient information, perform a triple check to verify the right medication is about to be administered to the right patient, monitor patient vital signs, place pharmacy and lab orders, access test results and more — all in just seconds, anywhere inside your healthcare facility.

Add government-grade security for HIPAA compliance, a rugged design to endure daily use inside the hospital, a disinfectant-ready housing designed to withstand regular exposure to the harsh cleaning agents required to prevent the spread of bacteria, powerful tools for centralized management of all your mobile devices — including attached device accessories — and you have maximum value in a minimum footprint, all at the right price.

### STREAMLINE AND ERROR-PROOF YOUR HOSPITAL APPLICATIONS WITH ZEBRA MAX DATA CAPTURE

With our healthcare mobile computers in hand, your staff can electronically capture and transmit virtually any type of data from patient bedside right to your business systems. Our revolutionary scan engine delivers unparalleled performance on every 1D and 2D bar code and is optimized for the read ranges and bar code densities common in healthcare — including those on small vials and test tubes. Omnidirectional scanning provides true point and shoot scanning simplicity — no need to align the bar code in the field of view. Firsttime, every time scanning of even damaged and poor quality bar codes enhances user confidence and data capture speed. In addition, the integrated 3.2 megapixel autofocus colour flash-enabled camera combines with the latest in display technology to enable the easy capture and viewing of high-resolution photographs, video footage and documents — complete with legible fine print.

### THE POWER TO SUPPORT ALL OF YOUR POINT-OF-CARE APPLICATIONS

With our healthcare mobile computers, your clinical staff can count on consistent best-in-class mobile application performance, regardless of whether your applications incorporate high resolution video, documents and images or large databases that must be resident on the device. This family offers a robust processing platform, from operating system to memory architecture, including Microsoft Windows Mobile 6.5; a MarvellITM PXA320 processor with 806 MHz of blazing speed; and 256MB RAM/1GB Flash with a user accessible microSD slot to accommodate up to 32GB of additional storage. And the ability to automatically switch between portrait and landscape display modes with a flick of the wrist provides additional real-estate and easier viewing for more complex applications.

### A RUGGED DESIGN BUILT FOR LIFE IN THE HOSPITAL

Our healthcare devices are built to last — and our toughness tests prove it. Zebra MAX Rugged, Zebra's set of signature rugged specifications — including MIL-STD 810G — ensures outstanding performance. Even after exposure to heat, cold, dust, drops, spills, wipedowns, constant disinfecting and 1,000 consecutive tumbles in our rotating tumble drum, the devices continue to operate reliably. The result is a dramatic reduction in repair requirements and downtime and a strong return on asset (ROA).

### FEATURES

#### MAXIMUM POWER

Powerful microprocessor designed for mobility: PXA320 @ 806 MHz  
Best in class mobile application performance optimized for longer shift life  
Microsoft's latest enterprise operating system: Windows® Mobile @ 6.5

Increased interoperability with existing enterprise infrastructure; enhanced security features; more flexible development platform; improved mobile messaging collaboration  
**256MB RAM/1GB Flash**  
Provides memory space required to enable robust performance for database applications

#### User accessible microSD card slot

Provides additional memory and expandable functionality up to 32GB

#### MAXIMUM RUGGED DESIGN

**Zebra MAX Rugged:**  
Industry-leading drop, tumble and sealing specifications with a disinfectant-ready housing  
Lightweight yet rugged; built for year-round use in nearly any environment; can be sanitized with common medical disinfectants to help prevent the spread of bacteria and disease

#### MAXIMUM WIRELESS PERFORMANCE

WLAN: 802.11a/b/g tri-mode radio; comprehensive VoIP support

In addition, the ability to frequently disinfect our mobile computers throughout the day helps prevent the spread of bacteria among patients and caregivers. The special housing can be safely sanitized with many common cleaning agents, without damaging the plastics or the sensitive electronic components.

### **TALK TO WORKERS WITH DIFFERENT DEVICE TYPES ON DIFFERENT NETWORKS**

Inside the hospital, different types of workers use different types of devices. Administrators may carry Zebra's VoWLAN phones. Physicians may carry Zebra's small pocketable mobile computers, the ES400. Nurses and lab technicians may carry our healthcare mobile computers for point-of-care applications as well as mobile voice. Biomedical engineers and materials management personnel may carry the MC75A or MC55A0. And campus security as well as custodial and patient transport staff may carry two-way radios. Typically, these devices cannot 'speak' to each other, resulting in 'islands of voice'. But Zebra's Solutions provide instant push-to-talk communications between these devices. And in the critical care setting of a hospital, the powerful and highly cost-effective one-to-one and one-to-many voice communications across workgroups ensures the lightning fast response times that save lives and improve the patient experience.

### **ADVANCED POWER MANAGEMENT FOR FULL SHIFT OPERATION**

Enterprise-class accelerometer technology injects our mobile computers with the intelligence to save power whenever a device is not in use. For example, devices can automatically revert to sleep mode if movement is not detected in the period of time you specify, or if the display is placed face down on a surface. In addition, Zebra-unique wireless LAN (WLAN) features also reduce processing requirements by filtering out unnecessary system traffic, conserving power for application access.

### **MAXIMUM CONNECTIVITY OPTIONS**

Simplify life for your clinical staff and your IT department with comprehensive wireless connectivity inside the facility. Support for 802.11a/b/g enables easy integration with virtually any wireless LAN — as well as the flexibility to segment voice traffic to ensure quality of service for VoWLAN communications. With the latest Bluetooth technology, clinical staff can connect wirelessly to a wide range of Bluetooth-enabled peripherals — from headsets and printers to medical equipment.

### **EASY HIPAA COMPLIANCE WITH GOVERNMENT-GRADE SECURITY**

Zebra MAX Secure keeps your data safe with the most advanced set of security features available in this product class. Native FIPS 140-2 Level 1 certification and support for the most advanced encryption and authentication algorithms as well as Virtual Private Networks (VPNs) provide the compliance required for government-level applications, easily meeting HIPAA regulations. And Zebra's deep knowledge of wireless infrastructure enables the integration of FIPS and other security requirements without negatively impacting WLAN performance.

### **GET YOUR APPLICATIONS UP AND RUNNING FAST**

In addition to offering the right set of features for your users and applications, our healthcare mobile computers also reduce IT time and cost by enabling rapid and cost-efficient application migration and development. The Zebra standard platform enables easy integration into your existing technology environment. Since all Zebra mobile computers share this common platform, existing applications developed for other Zebra mobile computers can be ported to our healthcare product line with minimal effort. If you are deploying new applications, our robust award winning partner channel offers well-tested best-in-class healthcare applications. And another Zebra tool, PocketBrowser, makes it easy for your own resources to develop applications in-house. This tool provides a familiar and easy-to-use environment that enables the easy incorporation of the wide range of advanced data capture capabilities available in our devices — from bar code scanning to document and signature capture.

### **POWERFUL CENTRALIZED MANAGEMENT OF YOUR MOBILE PRODUCTS — AND THEIR PERIPHERALS**

A Zebra-unique toolset provides unparalleled management of your mobile devices. Zebra Mobility Services Platform (MSP) allows your IT department to remotely stage, provision, monitor and troubleshoot tens of thousands of devices in locations all around the world, all from a central location. The result is a radical reduction of one of the largest costs associated with mobility — day-to-day management. Device-level intrusion protection solutions allow the addition of extra layers of security to protect data that is resident on the device and in transit to and from a wide variety of mobile products and your network. And AppCenter allows you to easily define which device features and software applications users can access, preventing unauthorized device usage that could reduce productivity.

### **THE ZEBRA ADVANTAGE: WORLD CLASS SUPPORT**

Cost-effective voice and data connectivity in the hospital, nursing home, clinic and beyond; 802.11a enables segmentation of voice traffic to ensure voice quality

#### **WPAN: Bluetooth® v2.1 with EDR**

Wireless connectivity to modems, printers, headsets and more; additional profiles for expanded connectivity to more device types with either Microsoft or Stonestreet stacks; v2.1 simplifies pairing, improves security and reduces power consumption

#### **IrDA (MC75A0-HC only)**

Wireless connectivity to legacy medical and other business equipment

### **MAXIMUM MANAGEABILITY**

#### **Comprehensive centralized device management**

Compatibility with Zebra Mobility Services Platform (MSP) and Zebra Mobility Suite provides superior centralized and remote management of a broad range of mobile products and their attached peripherals, anywhere in the world, all from a single console

### **MAXIMUM SECURITY**

#### **Zebra MAX Secure**

FIPS 140-2 certification and support for the most advanced encryption and authentication algorithms as well as Virtual Private Networks (VPNs) enables compliance with the most stringent industry security regulations, including sensitive government applications; MSP enables remote wipe and lock in the event a device is lost or stolen

### **MAXIMUM FLEXIBILITY**

**Zebra MAX MPA: Mobility Platform Architecture 2.0**  
Provides the latest

No matter what services you need, we have you covered. If you are implementing your first mobility solution, we can provide assistance at every stage — from planning through design and deployment. If you are adding new healthcare 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. And since even the most rugged devices require a support plan, our Service from the Start with Comprehensive Coverage will keep your devices up and running at peak performance, providing the peace of mind you need in your critical care environment. This unique all-inclusive service covering normal wear and tear as well as internal and external components damaged through accidental breakage, all at no additional charge, significantly reduces your unforeseen repair expenses. And options such as Commissioning Service and Express Shipping further minimize downtime in the unlikely event a repair is required.

For more information on how you can improve patient safety and worker efficiency in your healthcare organisation with our healthcare mobile computing portfolio, please visit us on the Web at [www.zebra.com/mc75a0hc](http://www.zebra.com/mc75a0hc), [www.zebra.com/mc55a0hc](http://www.zebra.com/mc55a0hc) or access our global contact directory at [www.zebra.com/contact](http://www.zebra.com/contact)

## SPECIFICATIONS CHART

PHYSICAL CHARACTERISTICS		2D IMAGER ENGINE (SE4500-DL)	
Dimensions	MC55A0-HC 5.78 in. L x 3.03 in. W x 1.1 in. D 14.7 cm L x 7.7 cm W x 2.8 cm D MC75A0-HC 6 in. L x 3.3 in. W x 1.7 in D 15.24 cm L x 8.4 cm W x 4.4 cm D	Sensor Resolution	752 H x 480 V pixels (gray scale)
Weight	MC55A0-HC 11.9 oz./338 g (including standard battery) MC75A0-HC 14 oz./398 g (including standard battery)	Roll	360°
Display	3.5 in. colour VGA (640x480) super bright 900 NITS (luminous)	Pitch Angle	± 60° from normal
Touch Panel	Glass analog resistive touch	Skew Tolerance	± 60° from normal
Display Backlight	LED backlight	Ambient Light	Total darkness to 9,000 ft. candles/96,900 lux
Standard Battery	Rechargeable Lithium Ion 3.7V, 3600 mAh Smart Battery	Aiming Element (VLD)	655 nm ± 10 nm
Extended Battery	MC55A0-HC N/A MC75A0-HC Rechargeable Lithium Ion 3.7V, 4800 mAh Smart Battery	Illumination Element	625 nm ± 5 nm
Backup Battery	MC55A0-HC Ni-MH battery (rechargeable) 18mAh 2.4V (not user accessible) MC75A0-HC Ni-MH battery (rechargeable) 15mAh 2.4V (not user accessible)	Field of View	Horizontal: 40°; Vertical: 25°
Expansion Slot	microSD slot with SDHC Support (maximum 32GB)	Ranges	
Comm. Interface	MC55A0-HC USB 1.1 host and client MC75A0-HC Ethernet (via cradle); full-speed USB 1.1 host or client; RS-232; Infra-red (IrDA) port for connection to printers and other devices	5 mil Code 39:	1.4 in./36 mm (Near) 7.3 in./185 mm (Far)
Notification	Audible tone plus multi-colour	100% UPC/EAN:	1.6 in./41 mm (Near) 12 in./305 mm (Far)
		5 mil PDF417:	2.8 in./71 mm (Near) 4.5 in./114 mm (Far)
		COLOR CAMERA	
		Resolution	3.2 megapixel
		Illumination	User controllable flash
		Lens	Auto focus
		WIRELESS LAN VOICE AND DATA COMMUNICATIONS	
		WLAN Radio	Tri-mode IEEE® 802.11a/b/g

best-in-class technology architecture; preserves existing application investments by enabling easy and cost-effective porting of applications from other Zebra mobile computers

### Zebra MAX Data

#### Capture: multi-mode data capture

Capture high quality pictures, documents and signatures as well as 1D and 2D bar codes in a single device to improve patient safety and reduce data errors; optimized for the read ranges and high density bar codes typical in healthcare

### Zebra MAX

#### Sensor

Enterprise-class Interactive

Sensor Technology (IST) enables leading edge motionbased applications, including dynamic screen orientation, power management and free-fall event logging

#### Multiple voice modes:

#### handset, headset and speakerphone

Flexibility to use the right mode at the right time; high quality speaker, microphone and receiver provide superior voice quality and performance

### Zebra MAX

#### Display: 3.5 inch colour high definition VGA

#### display (640 x 480)

Easy to view in any lighting; supports display of high resolution images enabling the easy capture and viewing of high-resolution photographs, video and documents

#### Comprehensive accessory suite

Add-on functionality expands solution reach, protects investment and maximizes TCO — rich accessory ecosystem offers hands-free scanning, RFID (3rd party accessory) and more

	LEDs, Vibrate
Keypad Options	QWERTY; Numeric
Audio	MC55A0-HC VoWLAN; support for Bluetooth headsets; handset and speaker phone modes MC75A0-HC VoWLAN; support for wired and Bluetooth headsets; handset and speaker phone modes

## PERFORMANCE CHARACTERISTICS

CPU	Marvell™ PXA 320 @ 806 MHz processor
Operating System	Microsoft® Windows Mobile® 6.5 Classic
Memory	256MB RAM; 1GB 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 Specification	Multiple 6 ft./1.8 m drops per MIL-STD 810G specifications
Tumble Specification	1,000 1.6 ft./0.5 m tumbles (2,000 hits)
Sealing	MC55A0-HC IP64 per IEC sealing specifications MC75A0-HC IP54 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
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## DATA CAPTURE OPTIONS

Options	2D SE4500-DL imager; 3.2 MP auto-focus flash-enabled digital colour camera; captures 1D and 2D bar codes, colour photographs and video, signatures and documents
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## REGULATORY

Electrical Safety	Certified to UL/cUL 60950-1, IEC/ EN60950-1
Environmental	RoHS-compliant

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)

## WIRELESS PAN DATA

Bluetooth	Class II, v 2.1 Enhanced Data Rate (EDR); integrated antenna
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## ZEBRA INTERACTIVE SENSOR TECHNOLOGY

**Motion-sensor: 3-axis accelerometer that enables motion-sensing applications for dynamic screen orientation, power management and free-fall detect**

## PERIPHERALS AND ACCESSORIES\*

Backwards Compatibility	MC55A0-HC MC55A0-HC is backwards compatible with MC55, MC55A0 and MC65 accessories MC75A0-HC MC75A0-HC is backwards compatible with MC70, MC75 and MC75A accessories
Communication and Battery Chargers/ Cradles	MC55A0-HC 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 MC75A0-HC Charge only cable; serial and USB v1.1 charging cables, serial charge/sync cable, USB charge/ sync cable, power/charging cable, vehicle charging cable, single slot USB or serial charge cradle, 4-slot ethernet cradle, 4-slot charge only cradle, vehicle cradle with charging capability (requires adapters for

<b>WLAN and Bluetooth (PAN)</b>	MC55A0-HC 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 MC75A0-HC USA: FCC Part 15.247, 15.407 Canada: RSS-210 EU: EN 300 328, EN 301 893 Japan: ARIB STD-T33, ARIB STD-T66, ARIB STD-T71 Australia : AS/NZS 4268	1.5X and 2.5X capacity batteries), 4-slot battery charger, universal battery charger, printer cables
<b>*Visit <a href="http://www.zebra.com/mc55a0hc">www.zebra.com/mc55a0hc</a> or <a href="http://www.zebra.com/mc75a0hc">www.zebra.com/mc75a0hc</a> for a complete list of available peripherals and accessories</b>		
<b>CLEANING INSTRUCTIONS</b>		
<b>RF Exposure</b>	MC55A0-HC USA: FCC Part 2, FCC OET Bulletin 65 Supplement C Canada: RSS-102 EU: EN 50392 Australia: Radiocommunications Standard 2003 MC75A0-HC USA: FCC Part 2, FCC OET Bulletin 65 Supplement C Canada: RSS-102 EU: EN 50360 Australia: Radiocommunications Standard 2003	<b>Approved Cleanser Active Ingredients:</b> 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
<b>EMI/RFI</b>	MC55A0-HC 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 MC75A0-HC North America: FCC Part 15, Class B Canada: ICES 003 Class B EU: EN55022 Class B , EN 301 489-1, EN 301 489-3 EN 301 489-7, EN 301 489-17, EN 301 489-24, EN 60601-1-2 Australia: AS/NZS CISPR-22	<b>Harmful Ingredients:</b> The following chemicals are known to damage the plastics on the MC55A0-HC/MC75A0-HC mobile computers 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; carbolic acid; TB-lysoform
<b>Laser Safety</b>	IEC/Class 2/FDA II in accordance with IEC60825-1/EN 60825-1	<b>Cleaning Instructions:</b> Do not apply liquid directly to the MC55A0-HC/MC75A0-HC mobile computers. 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.
<b>*For countries outside USA, Canada, European Economic Area, Japan or Australia consult your local Zebra representative</b>		<b>Special Cleaning Notes:</b> 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-HC/ MC75A0-HC mobile computers. The devices 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-HC/ MC75A0-HC mobile computers, such as hand sanitisers that contain ethanalamine, hands must be completely dry before handling the devices to prevent damage to the plastics.

## WARRANTY

All Zebra mobile computers are 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: Service from the Start with Comprehensive Coverage



**MAX**  
*Rugged*



**MAX**  
*Secure*



**MAX**  
*Sensor*



**MAX**  
*Data Capture*



**MAX**  
*MPA*



**MAX**  
*Display*



**ZEBRA**



**Windows Mobile®**



**Bluetooth®**

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**ZEBRA TECHNOLOGIES**