



# THE MOTOROLA MC75

## 3.5G WORLDWIDE ENTERPRISE DIGITAL ASSISTANT (EDA)

### THE MC75: SETTING A NEW STANDARD FOR 3.5G ENTERPRISE DIGITAL ASSISTANTS

No matter what your workers need to get the job done, Motorola's MC75 Worldwide Enterprise Digital Assistant delivers all the features and functionality required to maximize workforce productivity in a rugged device with a minimum footprint...all at the right price. The MC75 re-defines the standard for EDA mobile computers with simultaneous voice, data and GPS services\* as well as an unprecedented number of enterprise class features. Users enjoy a 3.5G world cell phone with push-to-talk (PTT), integrated GPS with superior sensitivity and tracking capabilities, 1D and 2D bar code scanning, a high resolution color camera, 3.5G wireless WAN (WWAN), wireless LAN (WLAN), wireless PAN (WPAN) and IrDA connectivity — all in a single device.

When it comes to running business applications, the MC75 shines. The robust bandwidth of 3.5G combined with the latest mobile computing platform provides the maximum processing power required to handle virtually any business application — including voice and video. And the MC75 is extendable — a user accessible microSD slot enables the addition of storage and new functionality to meet evolving business needs.

From field sales, field service and fleet management to government applications such as public safety, first response and security screening, maximize the efficiency of your workforce with simultaneous anywhere, anytime mobile voice and data...with the MC75.

### MAXIMUM VALUE... AND RETURN ON INVESTMENT

The 3.5G based MC75 allows enterprises to standardize on one device for global deployments, reducing the complexity, support requirements and the cost of mobility solutions. By providing a single platform for worldwide voice and data services, the MC75 eliminates the need for multiple operating systems, multiple service providers and multiple devices. In addition, the multi-function MC75 eliminates the need to purchase and manage multiple devices per person — for example, a mobile computer and a cell phone. The reduction in capital and operational costs combines with increased workforce productivity to deliver a maximum return on your investment.

### SETTING THE STANDARD FOR RUGGED EDA DESIGN

Whether your workers are in a truck, in a customer facility or out on the street, you can count on the MC75

\* Simultaneous delivery of mobile voice, data and GPS services is carrier dependent. The GSM HSDPA cellular network supports all three services simultaneously. The CDMA EVDO Rev. A network enables the simultaneous delivery of GPS and either voice or data.

to deliver the maximum uptime you need to protect worker productivity and achieve a low total cost of ownership (TCO). Designed for all day every day use inside and outside the enterprise, the MC75 sets the bar for rugged design of EDA class devices. Motorola's drop test is performed over the entire operating temperature range, ensuring dependable operation whether drops occur at room temperature or in extreme cold or heat — even on concrete. And the unit is sealed to ensure reliable operation, even when exposed to dust, rain, snow and spills.

### **MAXIMUM VOICE QUALITY AND FUNCTIONALITY**

Designed from the ground up to support voice as well as data, the MC75 offers a superior voice experience. Functionality includes full duplex voice,

push-to-talk (PTT) and voice dialing over the wireless WAN (WWAN) and WLAN, enabling one-to-one calls as well as walkie-talkie style instant communications. The device is voice-recognition ready, able to support advanced voice applications. And headset, handset and speakerphone modes provide workers with the convenience and flexibility to meet the needs of the job...and the moment.

### **MAXIMUM WIRELESS FUNCTIONALITY: WWAN, WLAN, WPAN AND IRDA**

The MC75 offers your workers the convenience of comprehensive wireless connectivity — no need for any wires, anywhere, anytime. Support for 3.5G provides high-performance mobile voice and data services outside the four walls virtually anywhere in the world. Support for 802.11a/b/g provides a seamless

## **FEATURES**

### **Industry-leading drop test, IP54 sealing and integrated antennas**

Lightweight yet rugged; built for year-round use in nearly any environment

### **Powerful microprocessor designed for mobility: XScale PXA270 @ 624 MHz**

Desktop-like multimedia performance with lower power requirements

### **Microsoft's latest operating system: Windows Mobile 6.5**

Increased interoperability with existing enterprise infrastructure; enhanced security features; more flexible development platform; improved mobile messaging collaboration

### **Meets and exceeds applicable MIL-STD and IEC specs for drop, tumble and sealing**

### **3.5G WWAN: HSDPA or CDMA-EVDO Rev A broadband connectivity over the cellular network**

High performance wireless broadband voice and data anywhere in the world

- Connection to most carriers in the world with one platform
- Best in class cellular broadband throughput with up to 3 Mbps download
- Integrated voice and data services: allows workers to conduct a phone call while maintaining a data connection (where supported by carrier)
- Optimum operating cost and future proofed device

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

Cost-effective voice and data connectivity in the office and hot spots

### **An industry first: multi-mode data capture via a bar code scanner plus a color camera**

Ability to capture high quality pictures, documents and signatures as well as 1D and 2D barcodes in a single device improves workforce automation, increases productivity and reduces data errors

### **2 megapixel auto-focus flash-enabled color camera designed to meet the needs of enterprise class applications**

- Autofocus provides superior image quality and provides greater application flexibility — including document capture
- User controllable flash enables workers to activate or deactivate the flash as needed
- In bar code reading mode, the screen reticule provides an aiming aid to ensure accurate first-time capture of bar codes
- Preserves application investment: Bar code scanning applications that utilize the laser scanner or imager on other Motorola mobile computers require little if any changes, reducing application development costs and enabling rapid deployment

### **WPAN: Bluetooth® v2.0**

Wireless connectivity to modems, printers, headsets and more; v2.0 provides additional throughput (up to 2.1 Mbps), improved security and additional profiles for expanded connectivity to more device types with either Microsoft or Stonestreet stacks

wireless LAN connection, delivering a cost-effective voice and data connection inside the four walls and in hot spots. Wireless PAN connectivity provides a convenient wire-free connection to peripherals, such as Bluetooth® headsets and printers.\*\* And IrDA provides an additional means of wireless communications with mobile and desktop computers as well as other legacy business equipment.

## **ROBUST LOCATIONING WITH BEST-IN-CLASS GPS FUNCTIONALITY**

Chosen for its superior sensitivity and tracking capabilities, the high performance SiRFstarIII GSC3f/LP chipset enables a multitude of real-time location based applications, from directions for drivers to real-time fleet location for dispatchers. The chipset delivers expanded coverage for GPS applications by

enabling the rapid and highly accurate capture of signals in some of the most challenging environments, including urban canyons and areas where foliage is very dense. And the low-power chipset delivers top-notch accuracy with minimal power requirements, conserving battery power to help provide end-users with location-based services.

## **MAXIMUM ADVANCED DATA CAPTURE CAPABILITIES**

With the MC75 in hand, workers have the functionality needed to automate, enrich and error proof data collection. Choose between a 1D laser scanner or 2D bar code imager to enable the rapid and intuitive capture of the types of bar codes in use throughout your enterprise. And a 2 megapixel auto-focus color camera with flash can not only capture high quality pictures — for example,

## **FEATURES (continued)**

### **SiRFstarIII GSC3ef/LP GPS chipset**

Assisted and autonomous GPS support for robust location-based applications; SUPL 1.0 compliant; high performance, power-efficient processor capable of acquiring and maintaining a signal lock in areas where signals are typically weak, expanding the coverage area for GPS applications; faster time to first fix (TTFF); flexibility to operate in either standalone or assisted GPS (aGPS) mode (carrier dependent) for faster and more accurate positioning — especially in challenging areas

### **IEEE 1725 compliance for the entire MC75 system — including all models, all batteries and all power-related accessories (such as cradles and charging cables)**

Mitigates battery system failure, bringing a new level of reliability and quality to the entire MC75 system

### **128MB RAM/512MB Flash**

Provides memory space required to enable robust performance for database applications

### **User accessible microSD card slot**

Provides additional memory and expandable functionality

### **High quality speaker, microphone and receiver**

Superior voice quality and performance

### **Multiple voice modes: handset, headset and speakerphone**

Flexibility to use the right mode at the right time

### **3.5 inch color high definition VGA display (640 x 480)**

Easy to view in any lighting; supports display of high resolution images including video and maps

### **Backwards compatible with MC70 accessories**

Provides investment protection for existing investments

### **Mobility Platform Architecture (MPA) 1.5**

Enables easy and cost-effective porting of applications from other Motorola mobile computers

### **Multiple keyboard options: Numeric, QWERTY, QWERTZ, AZERTY and DSD**

Flexibility to meet diverse user and application needs

### **Internal WWAN diversity antenna**

Better signal reception, more dependable connection

### **Comprehensive accessory suite**

The MC75 re-uses and expands the comprehensive MC70 accessories offering

### **IrDA**

Wireless connectivity to legacy printers and other business equipment

\*\* The option to use either the standard Microsoft Bluetooth stack or the platform based Stonestreet One stack provides enhanced application portability.

**PRODUCT SPEC SHEET**  
THE MOTOROLA MC75

to document proof of condition for a damaged shipment or a broken piece of equipment, or a signature on a document — but can also decode 1D and 2D bar codes as well. As a result, paper forms can be eliminated and business processes streamlined, improving productivity and throughput throughout the enterprise.

**THE MOTOROLA ADVANTAGE**

When you choose the Motorola MC75, you enjoy the advantages of a world-class partner channel, world-class management solutions and world-class services. Our award-winning partner ecosystem offers a best-in-class, broad set of ready-to-go and custom applications for the MC75, minimizing deployment time and cost. Compatibility with Motorola’s Mobility Software Suite

offers extraordinary centralized control over your MC75 devices, including remote staging, provisioning, monitoring and troubleshooting of devices, the ability to secure data on the devices and much more. To help keep your MC75 up and running at peak performance, Motorola offers Service from the Start with Comprehensive Coverage. This unique service includes normal wear and tear, as well as coverage for internal and external components damaged through accidental breakage at no additional charge — significantly reducing your unforeseen repair expenses. And options such as Commissioning Service and Express Shipping help to further minimize downtime in the unlikely event your device requires repair.

For more information on how the MC75 can improve your operational efficiency, please visit us on the web at [www.motorola.com/MC75](http://www.motorola.com/MC75) or access our global contact directory at [www.motorola.com/enterprise/contactus](http://www.motorola.com/enterprise/contactus)

**SPECIFICATIONS CHART**

<b>PHYSICAL CHARACTERISTICS</b>	
Dimensions	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
Weight	Standard 1.5X battery: 14.9 oz./422 g Extended Capacity 2.5X battery: 15.7 oz./446 g
Display	Transflective color 3.5" full VGA with backlight, 640 x 480
Touch Panel	Glass analog resistive touch
Display Backlight	LED backlight
Standard Battery	Rechargeable Lithium Ion 3.7V, 3600 mAh Smart Battery
Extended Battery	Optional 3.7V, 4800 mAh Smart Battery
Backup Battery	Ni-MH battery (rechargeable) 15mAh 2.4V (not user-accessible)
Expansion Slot	microSD slot with SDHC Support
Comm. Interface	Ethernet (via cradle); full-speed USB, host or client
Notification	Vibrator and LED
Keypad Options	Numeric; QWERTY, AZERTY, QWERTZ and DSD
Audio	Speaker, receiver, microphone, headset jack, software support for full duplex record and playback (stereo)

<b>PERFORMANCE CHARACTERISTICS</b>	
CPU	XScale™ PXA270 624 MHz processor
Operating System	Microsoft® Windows Mobile® 6.5
Memory	128MB RAM; 512MB Flash
Interface	RS-232, USB 1.1
<b>USER ENVIRONMENT</b>	
Operating Temp.	14° F to 122° F/-10° C to 50° C
Storage Temp.	-40° F to 158° F/-40° C to 70° C (w/o battery)
Humidity	95% non-condensing
Drop Spec	Multiple 5 ft. drops to concrete at ambient temperature 73° F / 23° C; Multiple 4 ft. drops to concrete across operating temperature range; Meets and Exceeds MIL-STD 810G
Tumble Spec	1,000 1.6 ft./0.5 m tumbles (2,000 hits)
Sealing	IP54
IrDA	Integrated
Clock	Integrated real time clock
Light Immunity Display	Readability: Incandescent — 450 ft. candles; Sunlight — 8000 ft. candles; Fluorescent: 450 ft. candles
Electrostatic Discharge (ESD)	±15kV air discharge ±8kV direct discharge

# SPECIFICATIONS CHART (continued)

## BATTERY PERFORMANCE

Standby time	150 hours
Talk time	5 hours
User profiles	Outdoor WAN+GPS, 15min/hour voice communication, 10kB transmission every 10 min, and GPS on all time, 8 hours of operation. Outdoor Voice, 15min/hour voice communication, 8 hours of operation, and 75 hours standby time.

Note: Performance metrics above were measured with Battery reserve option set the highest (72 hours)

## WIRELESS WAN DATA AND VOICE COMMUNICATIONS

WWAN Radio	GSM: HSDPA; CDMA: EVDO Rev A
GPS	Integrated Assisted-GPS (A-GPS)

## WIRELESS LAN DATA AND VOICE COMMUNICATIONS

WLAN Radio	Tri-mode IEEE® 802.11a/b/g
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
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
Spreading Technique	Direct Sequence Spread Spectrum (DSSS) and Orthogonal Frequency Division Multiplexing (OFDM)
Antenna	Internal for LAN, External for WAN
Voice Communication	Integrated Voice-over-IP ready (P2P, PBX, PTT), Wi-Fi™-certified, IEEE 802.11a/b/g direct sequence wireless LAN

## WIRELESS PAN DATA AND VOICE COMMUNICATIONS

Bluetooth	Class II, v 2.0; on-board chip antenna
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## DATA CAPTURE SPECIFICATIONS

Options	1D laser scanner and camera; 2D imager and camera
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## COLOR CAMERA

Resolution	2 megapixel
Illumination	User controllable flash
Lens	Auto focus

## 1D LASER SCANNER (SE950)

Range on 100% UPCA	24 in./60 cm
Resolution	4 Mil minimum element width
Roll	± 35° from vertical
Pitch Angle	± 65° from normal
Skew Tolerance	± 50° 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: 8000 Ft Candles (86,111 Lux) <b>Note:</b> LED lighting with high AC ripple content can impact scanning performance.
Scan Rate	104 (± 12) scans/sec (bi-directional)
Scan Angle	47° ± 3° default; 35° ± 3° reduced

## 2D IMAGER ENGINE (SE4400)

Optical Resolution	640 H x 480 V pixels (gray scale)
Roll	360°
Pitch Angle	± 60° from normal
Skew Tolerance	± 50° from normal
Ambient Light	Total darkness to 9,000 ft. candles/96,900 lux
Range on 100% UPCA	16 in./40 cm
Aiming Element (VLD)	650 nm ± 5 nm
Illumination Element (LED)	635 nm ± 20 nm
Field of View	Horizontal: 32.2°; Vertical: 24.5°

## PERIPHERALS AND ACCESSORIES\*

Communication and Charging Cables	Serial and USB v1.1 charging cables, printer cables, vehicle charging cable, power/charging cable
Battery Chargers	4-slot battery charger (1X, 1.5X, 2X and 2.5X), universal battery charger (requires adapters for 1X, 1.5X, 2X and 2.5X capacity batteries)
Vertical-specific attachments	Snap-on magnetic stripe reader; Snap-on mobile payment module (debit and credit); trigger handle; Snap-on biometric fingerprint/smartcard reader
Electrical Safety	Certified to UL / cUL 60950-1, IEC / EN60950-1

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## SPECIFICATIONS CHART (continued)

EMI/RFI	USA: FCC Part 15; Canada: ICES 003 Class B; Europe: EN55022 Class B, EN 55024, EN60601-1-2; Australia: AS/NZS CISPR 22	CDMA-EVDO Rev. A	Verizon/Sprint/AllTel/Bell Mobility/Telus For latest information, contact your local Motorola representative
For countries outside USA, Canada, European Economic Area, Japan or Australia consult your local Motorola representative		RF Exposure	USA: FCC Part 2, FCC OET Bulletin 65 Supplement C Canada: RSS-102 EU: EN 50360 Australia: Radiocommunications Standard 2003
*For a complete list of MC75 Peripherals and Accessories, please visit <a href="http://www.motorola.com/mc75">www.motorola.com/mc75</a>		EMI/RFI	North America: FCC Part 15, Class B Canada: ICES 003 Class B EU: EN55022 Class B, EN 301 489-1, EN 301 489-7, EN 301 489-17, EN 301 489-19, EN 301 489-24, EN 60601-1-2 Australia: AS/NZS CISPR 22
<b>REGULATORY</b>			
Electrical Safety	Certified to UL / cUL 60950-1, IEC / EN60950-1	Laser Safety	IEC Class2/FDA Class II in accordance with IEC60825-1/EN60825-1
Environmental	RoHS-compliant	For countries outside USA, Canada, European Economic Area, Japan or Australia consult your local Motorola representative	
WLAN and Bluetooth	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	<b>HAZARDOUS LOCATION CERTIFICATIONS</b>	
Quad Band GSM/EDGE, plus Tri-band HSDPA:	Global: 3GPP TS 51.010, 3GPP TS 34.121, 3GPP TS 34.123 GCF approved module USA: FCC Part 22, Part 24 Canada: RSS-132, RSS-133 EU: EN301 511, EN301 908 Australia: AS/ACIF S 024, AS TS 001	UL Class I, II, III Division 2, Groups A, B, C, D, F, G (Select Configurations Only)	
<b>WARRANTY</b>			
The MC75 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.			