# MC70

## Enterprise Digital Assistant



## FEATURES

**Industry-leading double impact testing (drop and tumble), IP54 sealing, integrated antennas**
Lightweight yet rugged; built for year-round use in nearly any environment

**Marvell's processor, designed for mobility: XScale PXA270 @ 624 MHz**
Desktop-like multimedia performance with lower power requirements

**Microsoft's Windows Mobile 5.0 Premium or Phone Edition, or Windows Mobile 6.1 Classic or Premium**
Integrated multimedia, persistent memory

**Integrated GPS via Autonomous SiRF III GPS positioning system**
The optional integrated high-sensitivity GPS allows to track personnel and equipment and minimize transportation costs. Please refer to the MC70+GPS Specification Sheet for details.

### The first rugged enterprise digital assistant

The flagship MC70 Enterprise Digital Assistant (EDA) is a rugged handheld mobile device that incorporates a mobile phone, PDA, computer, scanner and imager in a single unit designed for the rigors of all-day, everyday usage. This compact, lightweight device combines multi-mode wireless networking, voice and data communications, and advanced data capture in an enterprise productivity tool that can support nearly any application in any environment. Superior voice functionality includes outstanding acoustic performance and voice quality, handset, headset and speakerphone modes. Your mobile workers will have everything they need to increase productivity and efficiency inside and outside your four walls — from field workers reading meters and repairing equipment to drivers delivering packages, hospital workers checking lab results and medication orders, and more.

### Rugged construction delivers a low TCO

The industry leading innovative mechanical design and technology platform offer superior construction and expandability, delivering outstanding investment protection and a low total cost of ownership (TCO). Engineered to withstand rigorous use in extreme environments and working conditions, the MC70, including the internal WLAN and external WWAN antennas, can endure multiple drops, a wide range of temperatures, moisture, dust, and more and still deliver reliable performance.

### Built-in WWAN/WLAN/WPAN

The MC70 offers robust and cost-effective anytime, anywhere voice and data connectivity. For workers outside of your facility, support for GSM/EDGE and CDMA-EVDO networks delivers global coverage, fast wireless data speeds that enable rich applications, and enterprise level security. Inside your facility, the MC70 connects to your wireless LAN for voice and data communications, providing better control over wireless WAN usage — and costs. And wireless PAN functionality, via Bluetooth, further increases employee productivity through wireless printing and more.

### Reduce the cost and complexity of mobility

The versatile, effective MC70 is a smart investment, providing a cell phone, PDA and more - all in a single rugged device. Capital expenditures and IT support costs are significantly reduced. Superior manageability enables you to easily and remotely provision, track and support all your MC70 devices from one central location through our Mobility Services Platform. A full suite of accessories provides maximum application flexibility. And when you purchase Service from the Start with Comprehensive Coverage, we will repair damaged displays, plastics, keyboards, circuit boards, and other internal and external components at no extra charge — helping you protect your investment and maintain peak performance. For more information on the MC70, visit us on the web at www.motorola.com/mc70

# MC70 Specifications

**WWAN: GSM/EDGE and CDMA-EVDO Rev. 0 compatibility**
Voice and high-speed wireless data

**WLAN: 802.11a/b/g tri-mode radio; comprehensive VoIP support**
Cost-effective voice and data connectivity in the office

**WPAN: Bluetooth v1.2, Class II**
Wireless modem, printing synchronization, and more

**High quality speakerphone, microphone and transducer**
Superior voice quality and performance

**On-board advanced data capture: 1D and 2D bar code scanning from near contact to 55 in./139.7cm**
Automate and error proof data collection and increase productivity

**3.5 in. QVGA color screen**
Easy to view in any lighting

**Multiple keyboard options: QWERTY or numeric**
Flexibility to meet diverse user and application needs

**Support for standard SD and SDIO cards**
Provides additional memory and expandable functionality

**Multiple battery options: standard and extended**
Ample power for full shifts in nearly any environment

## Physical Characteristics

| | |
|---|---|
| Dimensions: | 6 in. L x 3.1 in. W x 1.5 in D<br>15.3 cm L x 7.6 cm W x 3.7 cm D<br>CDMA/EVDO Rev. 0 configurations:<br>6 in. L x 3.1 in. W x 1.7 in. D<br>15.3 cm L x 7.9 cm W x 4.4 D |
| Weight (including standard battery): | LAN/PAN configs: 11.2 oz./314 g<br>WAN/LAN/PAN configs: 12 oz./336 g<br>CDMA/EVDO Rev. 0 configs: 14.1oz./400g |
| Display: | Transflective color 3.5″ QVGA with backlight, TFT-LCD, 65K colors, 240 W x 320 L (QVGA size) |
| Touch Panel: | Glass analog resistive touch |
| Backlight: | LED backlight |
| Main Battery: | Rechargeable Lithium Ion 3.7V, 1900 mAh, 3600 mAh, 3800 mAh or 4800 mAh Smart Battery |
| Backup Battery: | Ni-MH battery (rechargeable) 20mAh 1.2V, 2 cells (not user-accessible) |
| Expansion Slot: | User accessible SDIO slot (with secure cover); accommodates extended cards (with cover removed);<br>NOTE: terminals with extended cards cannot be accommodated in the charging cradle and will not be sealed |
| Network Connections: | Ethernet (via cradle); full-speed USB, host or client |
| Notification: | Vibrator and LED |
| Keypad Options: | 26 Numeric key; 44 QWERTY key |
| Audio: | Speaker, receiver, microphone, headset jack, software support for full duplex record and playback (stereo) |

## Performance Characteristics

| | |
|---|---|
| CPU: | XScale™ 624 Mhz processor |
| Operating System: | Microsoft® Windows™ Mobile 5.0 Premium, Microsoft® Windows™ Mobile 5.0 Phone Edition, Windows Mobile 6.1 Classic or Premium |
| Memory: | 64MB RAM/128MB ROM or, 128MB RAM/128MB ROM |
| Interface: | RS-232, USB 1.1 |

## User Environment

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|---|---|
| Operating Temp.: | 14°F to 122° F/-10°C to 50° C |
| Storage Temp.: | -40° F to 140° F/-40° C to 60° C (w/o battery) |
| Humidity: | 95% non-condensing |
| Drop Spec: | 5 ft. drop to concrete, 2 drops per 6 sides at ambient temperature 73° F/23° C;<br>4 ft. drop to concrete, 6 drops per 6 sides over operating temperature range |
| Tumble Spec: | 1,000 1.6 ft./.5 m tumbles (2,000 drops) |
| Sealing: | IP54 |
| Electrostatic Discharge (ESD): | ±15kV air discharge, ±8kV direct discharge |

## Wireless WAN Data and Voice Communications

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|---|---|
| WWAN Radio: | GSM/EDGE (850, 900, 1800 and 1900 MHz)<br>CDMA-EVDO Rev. 0 |

## Wireless LAN Data and Voice Communications

| | |
|---|---|
| WLAN Radio: | Tri-mode IEEE® 802.11a/b/g<br>Note: 802.11a not available in Thailand. |
| Data Rates Supported: | 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48 and 54 Mbps |
| Operating Channels: | Chan 8-169 (5040 – 5845 MHz)<br>Chan 1-13 (2412-2472 MHz)<br>Chan 14 (2484 MHz) Japan only<br>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

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|---|---|
| Bluetooth: | Class II, v 1.2 |

## Data Capture Specifications

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|---|---|
| Options: | 1D linear, 2D imager |

### Linear 1D Scanner (SE950)

| | |
|---|---|
| Optical Resolution: | – 0.004 in. minimum element width |
| Roll: | ±35° from vertical |
| Pitch Angle: | ± 65° from normal |
| Skew Tolerance: | ± 50° from normal |
| Ambient Light: | 10,000 candles |
| Scan Rate: | 104 (+/- 12) scans/sec (bi-directional) |
| Scan Angle: | 47° ± 3° default<br>35° ± 3° reduced |

### 2D Imager Engine (SE 4400) Specifications

| | |
|---|---|
| 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 (96,900Lux) |
| Focal Distance from Front of Engine: | Near: 5 inches<br>Far: 9 inches |
| 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, universal battery charger (requires adapters for MC70 capacity batteries) |

| | |
|---|---|
| Vertical-specific attachments: | Snap-on magnetic stripe reader, snap-on trigger handle, rigid case |
| Electrical Safety: | Certified to UL / cUL 60950-1, IEC / EN60950-1, |
| EMI/RFI: | USA: FCC Part 15; Canada: ICES 003 Class B; Europe: EN55022 Class B, EN 55024, EN60601-1-2; Australia: AS/NZS CISPRA 22 |

For countries outside USA, Canada, European Economic Area, Japan or Australia consult your local Motorola representative

*For a complete list of MC70 Peripherals and Accessories, go to www.motorola.com/mc70

### Regulatory

| | |
|---|---|
| Electrical Safety: | Certified to UL / cUL 60950-1, IEC / EN60950-1 |
| Environmental: | RoHS-compliant |
| WLAN and Bluetooth: | USA: FCC Part 15.247, 15.407; Canada: RSS-210; EU: EN 300 328-1, EN 301 893; Japan: ARIB STD-T33, ARIB STD-T66, ARIB STD-T71; Australia: AS/NZS 4268 |
| Quad Band GSM/ EDGE (850, 900, 1800 and 900 bands): | Global: 3GPP TS 51.010, GCF approved module; USA: FCC Part 22 , Part 24; Canada: RSS-132, RSS-133; EU: EN301 511; Australia: AS/ACIF S 018, AS TS 001 |
| RF Exposure: | USA: FCC Part 2, FCC OET Bulletin 65 Supplement C; Canada: RSS-102; EU: EN 50360; Australia: AS/NZ 2772.1, ARPANSA |
| CDMA-EVDO Rev. 0: | Verizon/Sprint/AllTel/Bell Mobility For latest information, contact your local Motorola representative. |
| EMI/RFI: | North America: FCC Part 15; Canada: ICES 003 Class B; EU: EN55022 Class B, EN 301 489-1, EN 301 489-7, EN 310 489-17, EN 60601-1-2; Australia: AS/NZS CISPRA 22 |
| Laser Safety: | IEC Class2/FDA Class II in accordance with IEC60825-1/EN60825-1 |

**Hazardous Location Certifications**
Class I, Division II, A,B,C,D (Select Configurations Only)

For countries outside USA, Canada, European Economic Area, Japan or Australia consult your local Motorola representative

**Warranty**

The MC70 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.
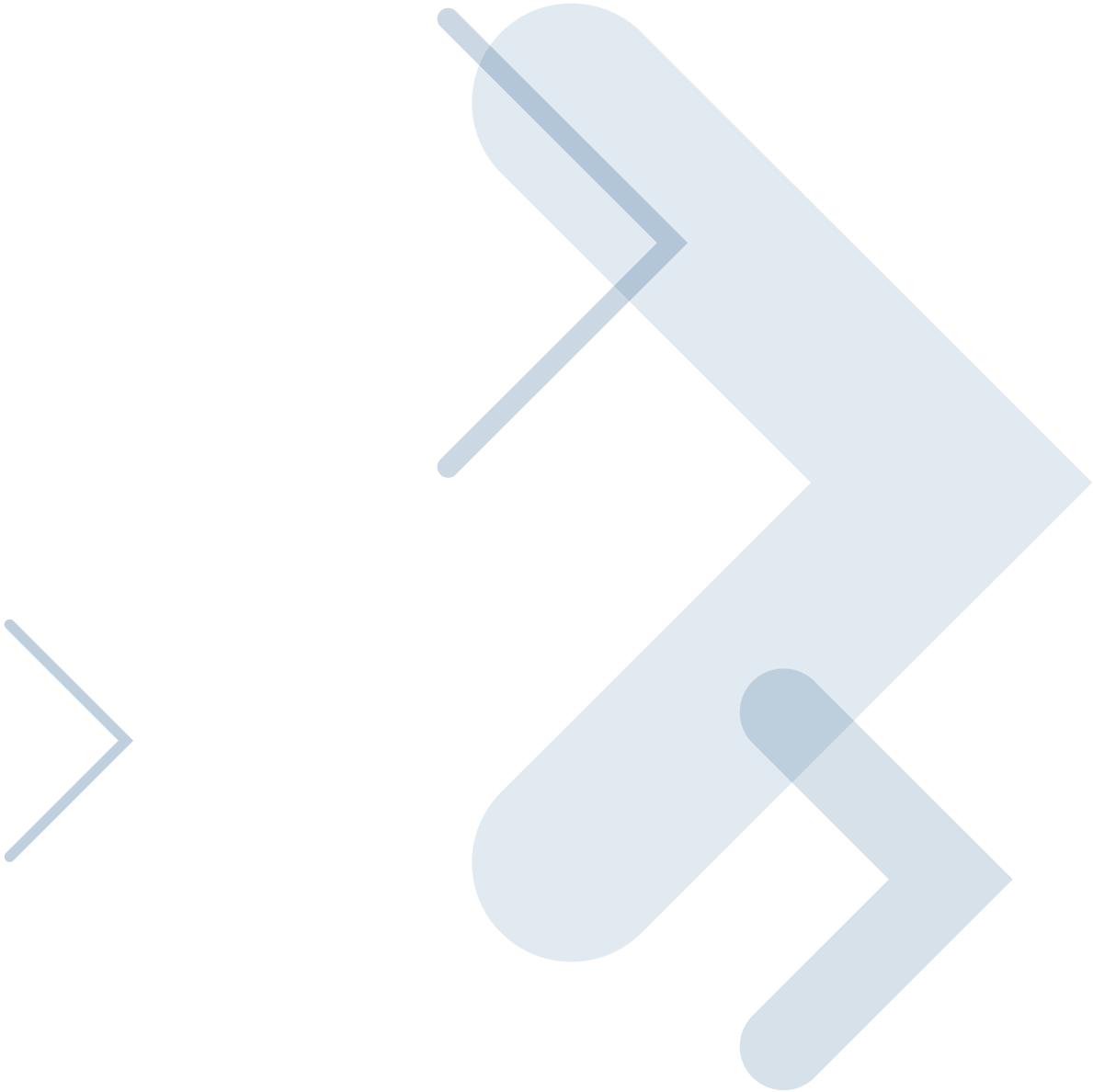


**Trigger handle**



**Vehicle cradle**



**Single-slot cradle**



**4-slot battery toaster**



**Magnetic Stripe Reader**



**Vehicle and charging cables**



**Snap-ons for GPS or RFID**



**Belt clip**



**4-slot cradle**

A full suite of accessories and 3rd-party peripherals provides convenient charging of MC70 devices and batteries as well as customization for a variety of vertical applications, from trigger handles that increase user comfort to Global Positioning Systems that provide 24-hour, three-dimensional position, velocity and time information to magnetic stripe readers that enable on-the-spot credit card processing and more.

**GSM/EDGE Network Certified**

at&t

**CDMA-EVDO Rev. 0 Network Certified**

alltel

Sprint

verizon wireless

**MOTOROLA**

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