



# Motorola FR6000

## Enterprise Mobile Computer



### FEATURES

**Business-essential ruggedness**  
Withstands tough use in variety of environments.

**Industry-leading drop test, IP54 sealing and integrated antennas**  
Lightweight yet rugged, with 3 ft / 0.91 m drop to concrete. Built for year-round use in nearly any environment.

**3.5G WWAN: HSDPA broadband support**

- High performance wireless broadband voice and data anywhere in the world
- Connection to most carriers worldwide
- 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)

**Highly customizable, modular and flexible hand-held terminal**

Today's mobile workforce requires a converged, well-styled, compact and ergonomic device. The Motorola FR6000 exceeds these needs and is built for such demanding conditions as warehouses, distribution centers and manufacturing plants. Impact testing across the operating temperature range has been carried out to ensure the Motorola FR6000 performs reliably despite inevitable everyday drops.

The Motorola FR6000 raises the bar for value, with a rugged, compact form factor and low total cost of ownership. The device also features simultaneous voice, data and GPS. This powerhouse packs an unprecedented number of enterprise class features. Users are equipped with a 3.5G world cell phone, an integrated GPS with superior sensitivity and tracking capabilities, 1D barcode scanner, 3.5G wireless WAN (WWAN), wireless LAN (WLAN), wireless PAN (WPAN) and IrDA connectivity.

Featuring Microsoft Windows Mobile® 6.1 Professional and 3.5G connectivity, the Motorola FR6000 has the capability to manage data, voice, video and auto-id capture, making it an ideal partner for mission critical business applications.

Designed to grow as your business grows, the Motorola FR6000 incorporates a user-accessible microSD slot and compact flash (CF) support. MicroSD provides for storage

expansion while the CF interface creates access to third party accessories. These features make the Motorola FR6000 highly customizable, modular and flexible to meet changing business needs while being versatile enough to be applicable to virtually all industries.

Perfect for on-the-go employees, the Motorola FR6000 excels in line-of-business applications for retail management, utility, warehousing, security and identification, government, track and trace, logistics, transportation or fleet management and public safety. With the Motorola FR6000, your business continues running as your mobile workers are constantly connected and informed, regardless of whether they are inside or outside the four walls of your enterprise.



## FEATURES

### **WLAN: 802.11 b/g**

Reliable and cost-effective data connectivity within the enterprise.

### **WPAN: Bluetooth® v2.0**

Wireless connectivity to modems, printers, headsets and more; provides improved security and additional profiles for expanded connectivity to more device types. In order for Bluetooth devices to communicate with one another, they must utilize the same Bluetooth profile.

### **1D Laser Scanner (SE955)**

Optimal for scan intensive operations. Vibrate alert mode ideal for noisy environment.

### **Diverse variety of applications**

Large number of third party applications available on the Windows Mobile platform.

### **Powerful microprocessor designed for mobility:**

Marvell PXA312 624 MHz desktop-like multimedia performance with lower power requirements.

### **Microsoft® operating system: Windows Mobile® 6.1 Professional**

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

### **Industry standard for mobile management**

Microsoft System Center Mobile Device Manager.

### **128MB RAM/256MB Flash**

Generous memory space to enable robust performance for a wide range of applications.

### **Assisted GPS radio**

Supports a wide range of value-add location-based services and applications.

### **QVGA color screen**

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

## **Standards based, convergence of critical mobile and Auto-ID technologies in a rugged form factor**

Using the Motorola FR6000, deployments can be simplified, reducing complexity and service requirements. Built on industry standards, a diverse range of mobility solutions is also made possible. Incorporating the Marvell PXA312 624 MHz processor allows for high performance, while enabling the Motorola FR6000 to provide a single platform for 3.5G voice and data services. Reducing deployment complexity lowers capital and operational costs while increasing performance productivity delivers strongly in terms of return on investment.

Running on the Microsoft Windows Mobile® 6.1 allows many ISV developed applications to be ported on to the Motorola FR6000, allowing enterprises choices for business applications.

### **Versatile and feature packed, designed to support a wide range of applications**

The Motorola FR6000 has the converged capabilities of a mobile phone with GPS, laptop computer, barcode scanner and much more. GPS helps delivery workers locate destinations quickly, while sales personnel can demonstrate promotions and products with the video functionality. The onboard barcode scanner is ideal for stock-taking, warehouse receiving, pick-and-pack, shipping, distribution and customer service operations. Dispatch drivers can also use the Motorola FR6000 to identify parcels and packages, providing real time status updates on deliveries.

When it comes to scanning, the Motorola FR6000 outperforms the competition in loud and busy conditions, such as those in manufacturing environments. A vibrate mode affirms and alerts operators to successful data captures.

### **OEM and system integration value add**

The Motorola FR6000 onboard integrated feature set, combined with the modular and flexible compact flash interface, enables OEM and system integrators to offer new solutions to make your enterprise's operations even more productive. This allows the Motorola FR6000 to be reconfigured, repurposed and redeployed as and when needed.

### **Tough, rugged, anywhere, anytime**

The Motorola FR6000 is a converged, compact and ergonomic handheld computer that has been built to withstand tough operating conditions.

Internal WWAN, WLAN and WPAN radios ensure an aesthetically pleasing design whilst maintaining the integrity and ruggedness of the device. Industrial-grade connectors are employed to withstand regular connection of headset jacks and charging cables throughout every business day. The Motorola FR6000 keypad is rated to a minimum of a million key presses, the touch screen to a million taps and 300 thousand strokes, ensuring the Motorola FR6000 delivers dependable performance daily.

### **Featuring Microsoft Windows Mobile® 6.1 for enterprise needs**

Built on Microsoft Windows Mobile® 6.1, the Motorola FR6000 offers considerable business advantages to enterprises. Microsoft Windows Mobile® 6.1 has been designed to support mobile applications and data access. It features significant enhancements such as a

comprehensive set of security policies, industry leading, government and industry approved security and encryption protocols, central device management, inventory and reporting; and an unrivaled platform for deploying and developing mobile applications.

### **Asian Language Localization**

In addition to the standard English operating system, the Motorola FR6000 offers Microsoft Windows Mobile® 6.1 in Japanese, Korean, Simplified and Traditional Chinese. The Motorola FR6000 offers these four localized Asian language keypad interfaces for highly productive data entry.

### **The Motorola value proposition**

When you choose the Motorola FR6000, you enjoy the advantages of a world-class partner ecosystem, management solutions and service offerings.

Our award-winning partner program offers a best-in-class, broad set of applications from our partner ecosystem.

The Motorola value proposition also includes a long product life cycle, protecting your investment and software application base.

To keep your business always-on and at optimum performance levels, Motorola offers Service from the Start with Comprehensive Coverage. Experience a new standard of service from the very first day of your hardware purchase.

While the Motorola FR6000 is a rugged device, accidents may happen - Service from the Start with Comprehensive Coverage extends beyond normal wear and tear repair coverage to include accidental breakage such as cracked plastics, broken screens and keypads.

Comprehensive Coverage is built right into your Service from the Start contract for the Motorola FR6000 providing more service at a lower annualized price than a standard service contract. This enhanced level of coverage virtually eliminates surprise repair costs, helps to lower your total cost of ownership, protects your investment and productivity, and provides service peace of mind. However, the Motorola FR6000 is currently only available in Asia-Pacific until further notice.

For more information on how your enterprise can benefit from the Motorola FR6000, visit us on the web at: [www.motorola.com/fr6000](http://www.motorola.com/fr6000)

# Motorola FR6000 Specifications

## Physical Characteristics

|                                      |  |
|--------------------------------------|--|
| Dimensions:                          | 7.4 in. L x 2.83 (2.05) in. W x 1.78 in D<br>188 mm L x 72 (52) mm W x 45.3 mm D                         |
| Weight (including standard battery): | Standard battery: 12.17 oz./345 g  |
| Display:                             | Transflective color 2.8i full QVGA with backlight, 320x240   |
| Touch Panel:                         | Glass analog resistive touch   |
| Backlight:                           | LED backlight  |
| Main Battery:                        | Rechargeable Lithium Ion 3.7V, 3600 mAh battery  |
| Backup Battery:                      | Lithium battery (rechargeable) 25mAh 3V (not user-accessible)  |
| Expansion Slot:                      | microSD slot (SDHC compliant)<br>Compact Flash: 1 Type II CF card slot                                   |
| Notification:                        | Vibrate and LED  |
| Keypad Options:                      | 29-key Numeric in English, Japanese, Korean, Simplified Chinese and Traditional Chinese                  |
| Audio:                               | Speaker, receiver, microphone, headset jack, software support for full duplex record and playback (mono) |

## Performance Characteristics

|                   |  |
|-------------------|--|
| CPU:              | Marvell PXA312 624 MHz processor           |
| Operating System: | Microsoft Windows Mobile® 6.1 Professional |
| Memory:           | 128MB RAM; 256MB Flash                     |
| Interface:        | RS232, USB 2.0 client                      |

## User Environment

|                                |  |
|--------------------------------|--|
| Operating Temperature          | 14 F to 104 F/-10 C to 40 C  |
| Storage Temperature:           | -22 F to 140 F/-30 C to 60 C (w/o battery)   |
| Humidity:                      | 90% non-condensing   |
| Drop Spec:                     | 3 ft. drop to concrete, 6 drop per 6 sides over operating temperature range                            |
| Tumble Specification:          | 250 x 0.5 m tumbles (500 drops)  |
| Sealing:                       | IP54   |
| IrDA:                          | Integrated   |
| Clock:                         | Integrated real time clock   |
| Light Immunity:                | Readability: Incandescent ó 450 ft. candles; Sunlight ó 8000 ft. candles; Fluorescent: 450 ft. candles |
| Electrostatic Discharge (ESD): | ±12kV air discharge, ±8kV direct discharge   |

## Battery Performance

|               |           |
|---------------|-----------|
| Standby time: | 150 hours |
| Talk time:    | 5 hours   |

## Wireless WAN Data and Voice Communications

|             |                                 |
|-------------|---------------------------------|
| WWAN Radio: | EDGE or HSDPA                   |
| GPS:        | Integrated Assisted-GPS (A-GPS) |

## Wireless LAN Data and Voice Communications

|                       |   |
|-----------------------|---|
| WLAN Radio:           | Dual-mode IEEE 802.11b/g  |
| Data Rates Supported: | 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48 and 54 Mbps (average 12Mbps)  |
| Operating Channels:   | Channels 1-13 (2412-2472 MHz)<br>Channels 14 (2484 MHz) Japan only<br><br>Actual operating channels/frequencies depend on regulatory rules and certification agency |
| Security:             | WPA2, WEP (40 or 128 bit), TKIP, TLS, PEAP-TLS, PEAP (MS-CHAP v2), AES, LEAP (TTLS not supported)   |
| Spreading Technique:  | Direct Sequence Spread Spectrum (DSSS) and Orthogonal Frequency Division Multiplexing (OFDM)  |
| Antenna:              | Internal for LAN, Internal for WAN  |

## Wireless PAN Data and Voice Communications

|            |  |
|------------|--|
| Bluetooth: | Class II EDR, v 2.0; on-board chip antenna |
|------------|--|

## Data Capture Specifications

|          |  |
|----------|--|
| Options: | 1D laser scanner. Typical range on a 13 mil: 100% UPC - 90% MRD: 1.5 - 24 (in) / 3.81 - 60.96 (cm) |
|----------|--|

## 1D Laser Scanner (SE955)

|                         |   |
|-------------------------|---|
| Range on 100% UPCA:     | 13 mil: 100% UPC - 90% MRD: 1.5 - 24 (in) / 3.81 - 60.96 (cm) |
| Resolution:             | 4 Mil minimum element width                                   |
| Roll:                   | Condition: 100% UPC at 5 in. ± 35 from vertical               |
| Pitch Angle:            | Condition: 100% UPC at 5 in. ± 65 from normal                 |
| Skew Tolerance:         | Condition: 100% UPC at 5 in. ± 50 from normal                 |
| Ambient Light Immunity: | 10,000 ft. candles (107,640 lux)                              |
| Scan Rate:              | 104 (±) 12 scans/sec (bi-directional)                         |
| Scan Angle:             | 47 ± 3 (typical) / 35 ± 3 (narrow)                            |

## FEATURES

### Touch screen and optional keypad functionality

Allows multiple data input methods to maximize application functionality and serve user preference. Support for Asian language keypads.

### Multiple voice modes: Handset, headset and speaker phone

Versatile - able to use the right mode at the right time. Flexible voice communication options to meet the needs of any business environment.

### IrDA

Connectivity to legacy printers and other business equipment

### User accessible microSD slot (SDHC compliant)

Provides additional memory and expandable functionality.

### User accessible Compact Flash

Type II expansion slot is ideal for extending the use of the Motorola FR6000 by enabling third party devices for customized data capture and data communication solutions.

### Comprehensive accessory suite

The Motorola FR6000 incorporates its own accessory suite and re-uses the MC75 battery and cradle offerings.

### Backward compatibility with MC75 charging cradle

Provides protection for existing investments.

# Motorola FR6000 Specifications

## Motorola FR6000 Accessories

- Single Slot Serial/USB charging cradle with a bay for spare battery charging.
- Cradle adaptor clip - adapts FR6000 mobile computer to the cradle.
- 4-Slot Battery Charger "Toaster" Kit. Charges spare standard and high capacity batteries.
- Hands free headset (earbud).
- Screen protector for 2.8" QVGA display, pack of 3.
- Spare stylus, pack of 3.
- Mobile computer hand strap.
- Standard capacity spare battery 3600 mAh and battery cover door.
- Spare CF slot cover door and fasteners.
- Auto Charge/Cigarette Lighter Adapter Cable.

## Peripherals and Accessories\*

|                    |   |
|--------------------|---|
| Cradles:           | Single slot USB/Serial cradle   |
| Battery Chargers:  | 4-slot battery charger  |
| 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, EN 60601-1-2; Australia: AS/NZS CISPR 22 |
|                    | For countries outside of USA, Canada, European Economic Area, Japan or Australia consult your local Motorola representative.  |
|                    | For a complete list of FR6000 Peripherals and Accessories, please visit <a href="http://www.motorola.com/fr6000">www.motorola.com/fr6000</a>                                    |

## Quad Band GSM/ EDGE, plus Tri-band HSDPA

|               |   |
|---------------|---|
| Global:       | 3GPP TS 51.010, 3GPP TS 34.121<br>USA: FCC Part 22, Part 24<br>EU: EN301 511, EN301 908<br>Australia: AS/ACIF S042  |
| RF Exposure:  | RF Exposure: USA: FCC Part 2, FCC OET Bulletin 65 Supplement C<br>EU: EN 50360<br>Australia: Radiocommunication Standard 2003   |
| EMI/RFI:      | North America: FCC Part 15, Class B<br>EU: EN55022 Class B, EN 301 489-1<br>EN 301 489-7, EN 301 489-17, EN 301 489-19, EN 301 489-24, EN 60601-1-2<br>Australia: AS/NZS CISPR-22 |
| Laser Safety: | IEC Class2/FDA Class II in accordance with IEC60825-1/EN60825-1   |

## Regulatory

|                     |   |
|---------------------|---|
| Electrical Safety:  | Certified to UL / cUL 60950-1, IEC / EN60950-1  |
| Environmental:      | RoHS-compliant  |
| WLAN and Bluetooth: | USA: FCC Part 15.247<br>EU: EN 300 328<br>Japan: ARIB STD-T33, ARIB STD-T66, ARIB STD-T71<br>Australia: AS/NZS 4268 |

## Accessories



• Single Slot Serial/USB charging cradle with a bay for spare battery charging.

• Cradle adaptor clip



• Hands free headset (earbud)



• Spare CF slot cover door and fasteners



• 4-Slot Battery Charger "Toaster" Kit. Charges spare standard and high capacity batteries.



• Auto Charge/Cigarette Lighter Adapter Cable



• Standard capacity spare battery 3600 mAh



• Spare stylus, pack of 3



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The Motorola FR6000 is only available in Asia-Pacific.

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