Symbol MT2000 Series
A new breed of handheld mobile terminals

The intelligence of a mobile computer and the simplicity of a scanner
The Symbol MT2000 Series represents another industry first from Motorola — the marriage of the simplicity of a scanner with the brainpower of a mobile computer and an ultra-ergonomic gun-style form factor. The result is a handheld mobile terminal, a highly flexible device capable of streamlining many scan-intensive business processes in a wide variety of industries — from the front to back door in manufacturing plants, retail establishments, warehouses, hospitals and more. The easy-to-use affordable mobile terminal offers a unique hybrid design, able to function as both a scanner and a mobile computer throughout the business day. The MT2000 Series can be utilized right out of the box as a scanner — either tethered to a point of sale (POS), laptop or other computing system — or as a standalone wireless mobile computer capable of enabling inventory and other scan-intensive applications anywhere in the enterprise.

Flexible deployment modes — wireless, cordless, corded and batch
Two models provide the flexibility to meet a wide variety of business needs — the MT2090 and the MT2070. The MT2090 offers integrated 802.11a/b/g for real-time direct application connectivity anywhere in your environment, ideal for put-away and picking in the retail backroom and warehouse aisles to material tracking, quality control and error-proofing on the manufacturing floor. Both models offer integrated Bluetooth® for a convenient cordless connection to a host device up to 300 feet (91.44 m) away — such as a Point-of-Sale (POS) or workstation. The MT2000 Series can operate in real-time or batch mode, increasing application flexibility. And regardless of whether the device is connected to your wireless LAN or to a host device, support for the latest wireless security protocols keeps your data safe — and helps ensure compliance with PCI and other government regulations.

Comprehensive data capture
The Symbol MT2000 Series is loaded with advanced data capture capabilities. Choose the scan engine that best meets your bar code scanning requirements — a 1D laser scanner or 2D imager, both delivering Motorola’s signature performance. The 1D laser scanner offers an extraordinary range, able to capture even damaged and poor quality bar codes from as close as one inch/2.54 cm to as far as 50 inches/127 cm away. The industry-leading 2D imager provides the flexibility to capture 1D and 2D bar codes as well as signatures, images and video. In addition, the world-class 2D imager re-sets the bar for imaging technology, providing extraordinary scan speeds on both 1D and 2D bar codes as well as signatures, images and video. Checkpoint EAS compatibility allows retail associates to scan and de-activate the theft-deterrent tags with a single press of the scan trigger — eliminating the need to purchase additional devices to support EAS requirements.

FEATURES

Comprehensive connectivity options — including wireless, cordless and corded
802.11a/b/g connectivity provides complete wireless freedom throughout your facility; Bluetooth® enables wireless connectivity as far as 300 feet (91.44 m) away from a Bluetooth-enabled host device; USB and RS-232 provides a flexible corded connection to host devices.

Comprehensive data capture options — 1D, 2D, image capture and EAS
Eliminates the need to purchase multiple devices to capture different types of data — today and in the future.

Superior 1D laser scanning technology
First time rapid capture of even damaged and poor quality bar codes for all 1D codes over a large working range — from 1 in./2.54 cm to as far as 50 in./127 cm.

The Symbol MT2000 Series is a new breed of handheld mobile terminals, combining the intelligence of a mobile computer with the simplicity of a scanner. It offers a unique hybrid design, allowing it to function as both a scanner and a mobile computer throughout the business day. The MT2000 Series can be utilized right out of the box as a scanner, either tethered to a point of sale (POS), laptop or other computing system, or as a standalone wireless mobile computer. This flexibility supports a wide variety of scan-intensive business processes in a wide range of industries, including manufacturing plants, retail establishments, warehouses, hospitals, and more.

The MT2000 Series is equipped with advanced data capture capabilities, including 1D laser scanners and 2D imagers. The 1D laser scanner offers an extraordinary range, able to capture even damaged and poor quality bar codes from close to 1 inch/2.54 cm to as far as 50 inches/127 cm away. The industry-leading 2D imager provides flexibility to capture 1D and 2D bar codes, as well as signatures, images, and video. It also re-sets the bar for imaging technology, providing extraordinary scan speeds on both 1D and 2D bar codes.

Checkpoint EAS compatibility allows retail associates to scan and de-activate theft-deterrent tags with a single press of the scan trigger, eliminating the need to purchase additional devices to support EAS requirements. This feature ensures compliance with PCI and other government regulations.

Flexible deployment modes — wireless, cordless, corded, and batch
The MT2000 Series offers two models: the MT2090, which provides integrated 802.11a/b/g for real-time direct application connectivity, and the MT2070, which offers USB and RS-232 for a flexible corded connection. Both models can be used in a variety of environments, from retail backrooms to warehouse aisles, to material tracking and error-proofing on the manufacturing floor.

In summary, the Symbol MT2000 Series is a versatile and powerful device that combines the intelligence of a mobile computer with the simplicity of a scanner, offering comprehensive connectivity options, advanced data capture capabilities, and flexible deployment modes to meet the needs of businesses in a wide range of industries.
Industry-leading ergonomics
The Symbol MT2000 Series exemplifies Motorola’s expertise in industrial design. The handle-forward design balances easily in the hand and combines with a gun form factor, bringing all day comfort to even the most scan-intensive applications. The shiftable alphanumeric keypad helps ensure easy data entry — regardless of whether your applications require primarily numeric or text-based entry — or both. And soft keys enable the completion of a wide range of actions with the single press of a button.

Extensive application flexibility
The industry standard Microsoft® .Net Framework development environment enables the easy creation of new applications. In addition, porting existing batch and real-time applications developed for Motorola’s mobile computers and scanners, such as the Phaser, is virtually effortless — the new MCL Designer Software (optional) includes a built-in legacy application converter, and the MCL client is pre-loaded on the MT2000. The result is a cost-effective migration path that allows enterprises to upgrade to the latest mobile device technology to further improve workflow automation and employee productivity — while preserving existing application investments.

Motorola’s signature rugged design for maximum reliability
The Symbol MT2000 Series delivers extraordinary value. This entry level value-priced mobile terminal offers the same drop specification as Motorola’s high-end rugged devices — a 6 ft./1.8m drop test performed across the entire operating temperature range. As a result, you can count on reliable performance regardless of whether the device is dropped at room temperature on carpet or tile — or out on the loading dock and in outdoor shopping areas in extreme winter cold or summer heat. While the drop specification defines the maximum survivable impact height, the tumble test defines endurance — the MT2000 Series experienced no degradation in performance after 250 tumbles in a rotating drum, which subjects the device to 500 consecutive 3.2 ft./1m drops. And IP54 sealing provides dependable performance in spite of exposure to dusty environments or splashing liquid, such as a beverage spill.

A rapid return on investment (ROI) — and a low total cost of ownership (TCO)
With the Symbol MT2000 Series, you can count on the exceptional ROI and TCO you need to easily justify this mobility solution. This multi-function hybrid device eliminates the need to purchase separate bar code scanners, mobile computers, and EAS deactivators — eliminating the need to purchase multiple device types and greatly reducing the associated capital and operational costs. Compatibility with Motorola’s flagship mobile device management solution, Mobility Services Platform (MSP), dramatically reduces the most expensive aspect of any mobility solution — day-to-day management of the mobile devices. MSP provides extraordinary centralized control of all your MT2000 mobile terminals, allowing IT to remotely stage, provision, monitor and troubleshoot devices — regardless of where in the world they are located. And finally, since even the most rugged devices need a support plan, Motorola offers Service from the Start with Comprehensive Coverage. This unique offering sets the standard for post-deployment support by including normal wear and tear as well as accidental damage to internal and external components — protecting device and employee uptime while significantly reducing your unforeseen repair expenses.

For more information on how you can leverage the power of the Symbol MT2000 Series in your enterprise, please visit us on the web at www.motorola.com/MT2000 or access our global directory at www.motorola.com/enterprisemobility/contactus
## Symbol MT2000 Specifications

### Physical Characteristics

- **Dimensions:** 7.8 in H x 3.1 in. W x 5.0 in. D  
  19.8cm H x 7.8 cm W x 12.7cm D
- **Weight:** 13.5 oz / 378 gm
- **Display:** 320 X 240 QVGA color graphic display
- **Battery:** 2400 mAh Li-Ion @3.7Vdc
- **Communication Interface:** USB 2.0 Host and RS-232
- **Keypad:** 21-key single stroke numeric and shifted alpha, 4-way navigation button with 2 soft keys for application control
- **Color:** Dark Gray

### Performance Characteristics

- **CPU:** IntelXScale PXA270 @312MHz
- **Operating System:** Microsoft® Windows CE 5.0
- **Memory:** 64MB/64MB
- **Application Development Environment:** Microsoft Windows CE EMDK, Motorola EMDK, MCL Designer V 3.0 (pre-loaded on both the MT2070 and the MT2090, pre-licensed on the MC-2070 only)

### User Environment

- **Operating Temperature:** -4° to 122° F / -20° TO 50° C
- **Storage Temperature:** -40° to 160° F / -40° TO 70° C
- **Humidity:** 5% to 95% non-condensing
- **Drop Specification:** 6 ft./1.8 m drop to concrete over the operating temperature range
- **Tumble Specification:** 250 3.2 ft./1m tumbles (500 drops)
- **Environmental Sealing:** IP54
- **ESD:** ±15kVDC air discharge, ±8kVDC direct/indirect discharge

### Data Capture Options

- **Options:** 4 configurations: 1D Laser, 1D/2D Imager, 1D/2D HD Imager, DPM Imager

### Symbology Decode Capability


- **2D:** TLC-39, Aztec (Standard, Inverse), Maxicode, DataMatrix/ECC 200 (Standard, Inverse), QR code (Standard, Inverse, Micro)
- **PDF417:** PDF417 (Standard, Macro), Composite Codes (CC-A,CC-B,CC-C)
- **Postal:** U.S. Postnet and Planet, U.K. Post, Japan Post, Australian Post, Netherlands KIX Code, Royal Mail 4 State Customer, upu fcs 4 State Postal, USPS 4CB

### Wireless LAN Voice and Data Communications

- **Radio:** Tri-mode IEEE® 802.11a/b/g
- **Output Power:** 100mW US and international
- **Antenna:** Internal
- **Data Rates Supported:** 802.11b – 11MBPS; 802.11a – 54MBPS; 802.11g – 54MBPS
- **Frequency Range:** Country dependant: typically 2.4 to 2.5 GHz for 802.11b/g and 5.15 to 5.825GHz for 802.11a

### Wireless PAN Data and Voice Communications

- **Bluetooth:** 2.4Ghz class I radio – 300 feet (91.44 m) open air

### Peripherals and Accessories*

- **Chargers:** Four slot battery charger
- **Other Accessories:** Belt holster, desk cup, Intellistand
- **Printers:** Supports Motorola approved 3rd party printers

### Regulatory

- **Electrical Safety:** Certified to UL60950-1, CSA C22.2 No. 60950-1, EN60950-1
- **EMI/RFI:** North American: FCC Part 2 (SAR), FCC Part 15 Subpart B - Class B, RSS210, EU: EN 301-489-1, 489-17
- **Laser Safety:** IEC Class 2/FDA Class II in accordance with IEC6825-1/EN6825-1

### Warranty

The MC2000 Series is warranted against defects in workmanship and materials for a period of 36 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

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*See Decode Zone charts on back...*

**Compatible with Motorola’s Mobility Services Platform (MSP)**

Provides complete centralized management capabilities, including the ability to stage, provision, monitor and troubleshoot all MT2090 devices from a single remote location; dramatically simplifies and reduces the time and cost of day-to-day device management.

**High resolution high contrast color QVGA display**

Easy to view regardless of lighting — from bright sunlight to dimly lit warehouses.

**21-key enhanced keypad**

Shifted alphanumeric functionality simplifies data entry; soft keys enable design of easy-to-use applications with a highly intuitive interface.

**Tempered glass exit window**

Resists scratching and increases device lifecycle.

**Microsoft .NET development environment**

Provides application flexibility: easily develop new applications as well as port existing applications to the MT2000.

**Optional Intellistand**

Increases application flexibility by providing a hands-free mode.

**Multiple indicators:** beeper mode, pager mode and LEDs

Provides dependable user feedback in a wide range of environments.
### Decode Zones

<table>
<thead>
<tr>
<th>Label Density</th>
<th>MT 2070/2090-SL (Laser)</th>
<th>MT 2070/2090-SD (Imager Standard Range)</th>
<th>MT 2070/2090-HD (Imager High Density Range)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MT 2070/2090-SL (Laser)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Code 39 - 4mil</td>
<td>0.1 - 2.8 in.</td>
<td>0.254 - 7.112 cm</td>
<td></td>
</tr>
<tr>
<td>Code 39 - 5mil</td>
<td>0.2 - 5.3 in.</td>
<td>0.508 - 13.462 cm</td>
<td></td>
</tr>
<tr>
<td>Code 39 - 7.5mil</td>
<td>0.5 - 10.4 in.</td>
<td>1.27 - 26.416 cm</td>
<td></td>
</tr>
<tr>
<td>UPC 100% - 13mil</td>
<td>0.2 - 21.9 in.</td>
<td>0.508 - 55.626 cm</td>
<td></td>
</tr>
<tr>
<td>Code 39 - 20mil</td>
<td>** - 29.1 in.</td>
<td>** - 73.914 cm</td>
<td>** - 100.934 cm</td>
</tr>
<tr>
<td>Code 39 - 40mil</td>
<td>** - 42.1 in.</td>
<td>** - 106.934 cm</td>
<td></td>
</tr>
<tr>
<td>Code 39 - 55mil</td>
<td>** - 51.2 in.</td>
<td>** - 130.048 cm</td>
<td></td>
</tr>
<tr>
<td><strong>MT 2070/2090-SD (Imager Standard Range)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Code 39 - 5mil</td>
<td>1.2 - 6.3 in.</td>
<td>3.048 - 16.002 cm</td>
<td></td>
</tr>
<tr>
<td>Code 39 - 7.5mil</td>
<td>0.2 - 10.6 in.</td>
<td>0.508 - 26.924 cm</td>
<td></td>
</tr>
<tr>
<td>UPC 100% - 13mil</td>
<td>** - 15.4 in.</td>
<td>** - 39.116 cm</td>
<td>** - 58.929 cm</td>
</tr>
<tr>
<td>Code 39 - 20mil</td>
<td>** - 23.2 in.</td>
<td>** - 61.929 cm</td>
<td></td>
</tr>
<tr>
<td>PDF - 6.67 mil</td>
<td>2.5 - 6.1 in.</td>
<td>6.35 - 15.494 cm</td>
<td></td>
</tr>
<tr>
<td>PDF - 10 mil</td>
<td>0.7 - 9.6 in.</td>
<td>1.778 - 24.384 cm</td>
<td></td>
</tr>
<tr>
<td>PDF - 15mil</td>
<td>** - 14.2 in.</td>
<td>** - 36.068 cm</td>
<td>** - 36.068 cm</td>
</tr>
<tr>
<td><strong>MT 2070/2090-HD (Imager High Density Range)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Code 39 - 3mil</td>
<td>0.5 - 2.9 in.</td>
<td>1.27 - 7.366 cm</td>
<td></td>
</tr>
<tr>
<td>Code 39 - 5mil</td>
<td>0 - 4.1 in.</td>
<td>0 - 10.414 cm</td>
<td></td>
</tr>
<tr>
<td>Code 39 - 7.5mil</td>
<td>0.1 - 5.5 in.</td>
<td>0.254 - 13.979 cm</td>
<td></td>
</tr>
<tr>
<td>UPC 100% - 13mil</td>
<td>0.6 - 6.1 in.</td>
<td>1.524 - 15.494 cm</td>
<td></td>
</tr>
<tr>
<td>Code 39 - 20mil</td>
<td>** - 10.3 in.</td>
<td>** - 26.162 cm</td>
<td></td>
</tr>
<tr>
<td>PDF - 4 mil</td>
<td>0.8 - 2.6 in.</td>
<td>2.032 - 6.604 cm</td>
<td></td>
</tr>
<tr>
<td>PDF - 5 mil</td>
<td>0.5 - 3.0 in.</td>
<td>1.27 - 7.62 cm</td>
<td></td>
</tr>
<tr>
<td>PDF - 6.67 mil</td>
<td>0.2 - 3.6 in.</td>
<td>0.508 - 9.144 cm</td>
<td></td>
</tr>
<tr>
<td>PDF - 10 mil</td>
<td>0.4 - 4.5 in.</td>
<td>1.016 - 11.43 cm</td>
<td></td>
</tr>
<tr>
<td>PDF - 15mil</td>
<td>** - 5.9 in.</td>
<td>** - 14.986 cm</td>
<td></td>
</tr>
</tbody>
</table>

** Near decode distance is limited by the field of view

Decode distances are measured under ambient light of 35 (±5) foot-candle in the plane of the farthest bar code.