MT2000 Series

A new breed of handheld mobile terminals

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 intelligence of a mobile computer and the simplicity of a scanner

The 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 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 — eliminating the need for businesses to sacrifice scanning performance for 2D capability. 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.

A new standard for 2D imaging
Aggressive performance on 1D and 2D bar codes plus the ability to capture signatures, still photos and video; omnidirectional 1D and 2D bar code scanning improves productivity by eliminating the need to align scanner and bar code

Windows CE 5.0 operating system
Easy to scale and highly reliable industry-standard open architecture

Pre-loaded MCL client
Provides the platform independence required to easily connect to legacy applications as well as develop new ones

Forward-scanning pistol grip
Easy-to-grip well-balanced design; reduces fatigue in scan-intensive environments for full shift comfort

Rugged design
A 6 ft./1.8 m drop specification plus a tumble specification of 500 3.2 ft./1m drops (250 tumbles) and IP54 sealing combine to help ensure reliable operation in spite of everyday drops, bumps and exposure to dust and liquids

Industry-leading ergonomics
The 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 to easily port new applications. 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 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 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 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

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 client CE EMDK; Motorola EMDK; MCL Designer V 3.0 (MCL Client pre-loaded on both the MT2070 and the MT2090; pre-licensed on the MT2070 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

1D:	UPC/EAN (UPCA/UPCE/UPCE1/EAN-8/EAN-13/JAN-8/JAN-13 plus supplements, ISBN (Bookland), Code 39 (Standard, Full ASCII, UCC/EAN-128, ISBT-128 Concatenated), Code 93, Codabar/NW7, MSI Plessey, I 2 of 5 (Interleaved 2 of 5 / ITF, Discrete 2 of 5, IATA, Chinese 2 of 5), GS1 DataBar (Omnidirectional, Truncated, Stacked, Stacked Omnidirectional, Limited, Expanded, Expanded Stacked, Inverse), Base 32 (Italian Pharmacode)
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 fics 4 State Postal, USPS 4CB

Wireless LAN 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

Cordless Data Communications

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

Peripherals and Accessories

Cradles:	Single slot charge only cradle, Single slot multi-interface with Bluetooth cradle, Single slot charge only fork lift cradle, 4-slot charge only cradle, 4-slot Ethernet cradle
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 IEC60825-1/EN60825-1

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

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

Label Density	Depth of Field	
	English	**Metric**
MT 2070/2090-SL (Laser)		
Code 39 - 4mil	0.1 - 2.8 in.	0.254 - 7.112 cm
Code 39 - 5mil	0.2 - 5.3 in.	0.508 - 13.462 cm
Code 39 - 7.5mil	0.5 - 10.4 in.	1.27 - 26.416 cm
UPC 100% - 13mil	0.2 - 21.9 in.	0.508 - 55.626 cm
Code 39 - 20mil	** - 29.1 in.	** - 73.914 cm
Code 39 - 40 mil	** - 42.1 in.	** - 106.934 cm
Code 39 - 55mil	** - 51.2 in.	** - 130.048 cm
MT 2070/2090-SD (Imager Standard Range)		
Code 39 - 5mil	1.2 - 6.3 in.	3.048 - 16.002 cm
Code 39 - 7.5mil	0.2 - 10.6 in.	0.508 - 26.924 cm
UPC 100% - 13mil	** - 15.4 in.	** - 39.116 cm
Code 39 - 20mil	** - 23.2 in.	** - 58.928 cm
PDF - 6.67 mil	2.5 - 6.1 in.	6.35 - 15.494 cm
PDF - 10 mil	0.7 - 9.6 in.	1.778 - 24.384 cm
PDF - 15mil	** - 14.2 in.	** - 36.068 cm
MT 2070/2090-HD (Imager High Density Range)		
Code 39 - 3mil	0.5 - 2.9 in.	1.27 - 7.366 cm
Code 39 - 5mil	0 - 4.1 in.	0 - 10.414 cm
Code 39 - 7.5mil	0.1 - 5.5 in.	0.254 - 13.97 cm
UPC 100% - 13mil	0.6 - 6.1 in.	1.524 - 15.494 cm
Code 39 - 20mil	** - 10.3 in.	** - 26.162 cm
PDF - 4 mil	0.8 - 2.6 in.	2.032 - 6.604 cm
PDF - 5 mil	0.5 - 3.0 in.	1.27 - 7.62 cm
PDF - 6.67 mil	0.2 - 3.6 in.	0.508 - 9.144 cm
PDF - 10 mil	0.4 - 4.5 in.	1.016 - 11.43 cm
PDF - 15mil	** - 5.9 in.	** - 14.986 cm

** 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.

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