

Motorola Solutions

MC2100

Channel Overview

December, 2011





MC2100 SERIES

- **Automated Inventory Mgt for the value conscious Enterprise**

- MC2100 introduces a new category of mobile computers in MSI's industrial WLAN portfolio that addresses growing Value Tier needs
- Solid offering built around Core MC fundamentals
- A Complement to other MSI products, adding more options to a total solution that increases enterprise productivity

- **MC2100 is a solid industrial handheld solution for cost-sensitive markets/applications within the four walls**

- User-optimized Ergonomics
- Class leading CPU performance
- Selection of scan engines
- Durable and sealed housing
- Numerical keypad
- 2.8" QVGA display with touch panel
- Batch and WLAN configurations



MC2100 SERIES TARGET MARKETS



Market	Applications	User
PRIMARY MARKET		
Retail	<ul style="list-style-type: none"> • Back Room to Shelf Stocking • Inventory Control • Price Marking/Shelf Labeling 	<ul style="list-style-type: none"> • Store Clerk • Receiving Personnel
SECONDARY MARKET		
Manufacturing	<ul style="list-style-type: none"> • Shipping/Receiving • Inventory management • WIP Tracking • Asset tracking • Stock reordering 	<ul style="list-style-type: none"> • Shipping/Receiving Personnel • Shift Supervisors • Loading Dock Personnel • Pharma Personnel

Primary Target: WLAN / Batch Industrial Enterprise
New Opportunity: Tier III / IV (SMB)

MC2100 DIFFERENTIATION



Delivers a solid set of mobile computing core features and differentiates with solutions beyond hardware

- **RhoElements**: First Value Tier product in the mobile computing industry to support HTML5 via RhoElements
- **MCD Platform**: Leverages the same platform tools, utilities, APIs and solutions deployed across our MCD portfolio
- **Ergonomics**: Industrial design is ergonomically optimized to increase comfort for one-handed use
- **TEAM Express***: First MCD product to optimize the PTT and Private PTT with dedicated side buttons for Group and private PTT functions
- **Configurations**: Three scan engine configurations with batch and WLAN connectivity
- **Service & Support**: Motorola Solutions commitment to Enterprise class services, support, and product life cycles

* As Available

MC2100 KEY FEATURES



- **Marvell PXA 320 624 MHz CPU**
- **128 MB RAM/256 MB ROM**
- **2.8" QVGA display, resistive touch**
- **Windows CE 6**
- **3 Scan engine options**
 - Linear Imager, 1D Laser, 2D Area Imager
- **802.11b/g/n + BT2.0**
- **27 key numerical keypad**
- **2400 mAh Li-Ion**
- **4 foot drop to concrete, IP54**
- **Full suite of accessories, cradles and cables**



MSI TASK WORKER HH MAPPING



MC9500-O



MC9090-K



MC9090-G



MC9090-S



**Premium
Tier**

**Perform/
Mid
Tier**

MC3190-R



MC3190-S



MC3190-G



Mid Tier Clump

MC2100



MC1000






**Value
Tier**

**MC2100 covers a range
of value tier needs,
features, and price
points**

PRODUCT POSITIONING WITHIN MCD

Worst
Medium
Good
Best

	MC1000	MC2100	MT2090	MC2180	MC3100
					
Physical Characteristics					
Processor	Intel Xscale 312 MHz	Marvell PXA320 (Monahan-P) 624 MHz	Intel Xscale 312 MHz	Marvell PXA320 (Monahan-P) 624 MHz	Marvell PXA320 (Monahan-P) 624 MHz
OS Options	Win CE CORE	Win CE CORE + RhoElements	Win CE CORE	Win CE CORE + RhoElements	Win CE PRO; Window Mobile + RhoElements
Memory (RAM/Flash)	32MB / 64MB	128MB / 256MB	64MB / 64MB	128MB / 256MB	128MB RAM / 256 MB Flash up to 256MB RAM / 1 GB Flash
Form	Small handy terminal	Ergonomically optimized	Gun Configuration	Ergonomically optimized	Large handy terminal, gun, rotating scan head
Data Capture	1D Laser	1D Linear Imager, 1D Laser	1D Laser, 2D Area Imager	Linear Imager, 1D Laser, 1D/2D Imager	1D Laser, 1D/2D Area Imager; Rotating Head, Terminal, Gun
User Interaction (UI)					
Display	2.2", mono, 240x240	2.8" QVGA indoor viewable	2.1" QVGA color, no touch	2.8" QVGA indoor viewable, 64K colors	3" 320x320, touch
Touch Panel	No	No	No	Yes	Yes
Key pad	21-key, numeric/shifted alpha	27 key, numerical configuration	21-key, numerical configuration	27 key, numerical configuration 2 programable side keys	28-key Num, 38-key Alpha, 48-key Alpha-Num
Power					
Standard Battery	3 AAA or Lith-Ion, 1,800 mAh	Lithium Ion 2400 mAh Smart Battery	2400 mAh Li-Ion	Lithium Ion 2400 mAh Smart Battery	Lithium Ion 2740 mAh Smart Battery
Extended Battery	No	No	No	No	Yes - 2X
Communications					
LAN	No	No	802.11 a/b/g	802.11 b/g/n	802.11 a/b/g
PAN	No	No	BT	BTv2.0 + EDR	BTv2.1 EDR
Environmental					
Drop Specification	4-foot/1.2-m drops to concrete,	4 ft to concrete 4 ft MIL STD 810G	6 ft. drop to concrete across the operating temp	4 ft to concrete 4 ft MIL STD 810G	Multiple 4 ft/1.2 m drops to concrete across the operating temperature range
Tumble Spec	500 0.5-m tumbles	500 0.5-m tumbles	250 1.0-m tumbles	500 0.5-m tumbles	500 0.5 m tumbles
Sealing	IP54	IP54	IP54	IP54	IP54
Operating/Storage Temp	Op Temp: -10° to 50°C Storage Temp: -40° to 70°C	Op Temp: -10° to 50°C Storage Temp: -40° to 70°C	Op Temp: -20° to 50°C Storage Temp: -40° to 70°C	Op Temp: -10° to 50°C Storage Temp: -40° to 70°C	Op Temp: -20° to 50°C Storage Temp: -40° to 70°C
Others					
Dev Platform	MPA Lite	MPA 2.0	MPA	MPA 2.0	MPA 2.0
Voice and Audio Support	No	No	No	Yes - Simple VoIP PTT (no fast roaming, no echo cancellation, no full duplex)	VoWLAN; speakerphone; headset, (wired or Bluetooth); handset and speaker phone modes
TARGET ASP					
List Range	\$515 to \$695	\$850 to \$910		\$990 to \$1195	\$1295 to \$1870

MC2100 PORTFOLIO POSITIONING



MC2100 vs. MC1000

MC2100 excels with significant feature premiums over our existing Value Tier (MC1000) solution:

- Faster CPU (PXA320)
- Large 2.8" color display
- 2X RAM, 4X ROM
- Robust numerical keypad
- Touch panel
- Diverse accessory set
- WLAN / PAN or batch configs
- Larger standard battery
- Multiple scan engines (linear imager, 1D laser, 2D area imager)
- Optimized ergonomics and low weight

MC2100 vs. MC3100

Mid Tier (MC3100) and Premium Tier (MC9100) innovate in hardware technology and mobile computing performance:

- Multiple keypad configurations
- Multiple form factors (gun, rotating turret)
- OS choices and more memory
- Larger display
- IST
- Large extended batteries
- More rugged
- Multiple memory options
- 802.11a

MC2100 Part Numbers

Package includes: MC + hand strap + pick stylus + battery



- **WLAN / BT:**

	<u>List Price</u>
– MC2180-AS01E0A: 2D Imager	\$1,195
– MC2180-MS01E0A: 1D Laser	\$1,050
– MC2180-CS01E0A: Linear Imager	\$990
- **Batch:**

– MC2100-MS01E00: 1D Laser	\$910
– MC2100-CS01E00: Linear Imager	\$850
- **Open Product Category is being offered**
- **For comparative MC3100 List Prices:**

– Low end - Batch, CE PRO, Laser:	\$1,295
– High end - WLAN, CE PRO, 2D Imager:	\$1,868





Accessory Schedule

Milestone (FCS)	Commit (FCS)	Status
Standard 1X 2400mAH Battery	Dec-30-2011	Dec-30-2011
Active Sync USB cable	Dec-30-2011	Dec-30-2011
Singles-slot cradle	Dec-30-2011	Dec-30-2011
4-slot battery charger	Dec-30-2011	Dec-30-2011
Hand strap	Dec-30-2011	Dec-30-2011
Lanyard	Dec-30-2011	Dec-30-2011
Soft Holster	Dec-30-2011	Dec-30-2011
PTT Headset audio dongle	Bring to Rev-A; no FCS	Dec-30-2011
4-slot charge only cradle (based on common cradle)	Mar-31-2012	Mar-31-2012
4-slot Ethernet cradle (based on common cradle)	Mar-31-2012	Mar-31-2012
Cable for Gemini dialup modem	Mar-31-2012	Mar-31-2012

SUPPORT SERVICES FOR THE MC2100



Enterprise Mobility Services	Time of Purchase	Length of Coverage	Part Number
Service from the Start – Bronze with Comprehensive Coverage	Up front with the product (prepaid) or within 30 days thereafter	Three years Five years	SSB-MC21XX-30 SSB-MC21XX-50
Service from the Start – Gold with Comprehensive Coverage			SSG-MC21XX-30 SSG-MC21XX-50
Service from the Start – Bronze with Device Management (U.S. and Canada only; minimum of 500 devices required)	Up front with the product (prepaid) or within 30 days thereafter	Three years	MSSBE-MC21XX-30
Service from the Start – Gold with Device Management (U.S. and Canada only; minimum of 500 devices required)			MSSGE-MC21XX-30
Service Center Support – Bronze	Any time	One year Three years	SCB-MC21XX-10 SCB-MC21XX-30
Service Center Support – Gold			SCG-MC21XX-10 SCG-MC21XX-30
Enterprise Mobility Software Support	Any time	One year Three years Five years	SWS-EMHW-0250-10 SWS-EMHW-1000-10 SWS-EMHW-5000-10 SWS-EMHW-0250-30 SWS-EMHW-1000-30 SWS-EMHW-5000-30 SWS-EMHW-0250-50 SWS-EMHW-1000-50 SWS-EMHW-5000-50



MC21XX SERIES TIMELINE







Activity	Dates
First Customer Ship	12/30/2011
Product Announcement	12/12/2011
Partner Training	11/30/2011
Internal TA Training	10/30/2011
Beta Deployment	9/26/2011



VALUE-TIER COMPETITORS

Worst
Medium
Good
Best



	Motorola MC2180	Honeywell 6100	Datalogic Memor	Psion Teklogix Neo	Panasonic JT-H300HT	Honeywell 05100 (APAC)
						
Physical Characteristics						
Processor	Marvell PXA320 (Monahan-P) 624 MHz	PXA300 (Monahan-L) 624 MHz	XScale PXA310 @ 624 MHz	PXA270 312 or 624 MHz	Freescall i.MX27 400MHz	PXA300 (Monahan-L) 624 MHz
OS Options	Win CE CORE + RhoElements	Win CE 5.0 PRO	Win CE 5.0 PRO / Win Mobile 6.1	CE CORE/PRO; WinMob 6.1	Win embedded CE 6.0 Pro	Win CE 5.0 CORE
Memory (RAM/Flash)	128MB / 256MB	128MB / 128 MB	128 MB / 256 MB	128 MB / 128 MB	64MB / 128MB	64MB / 128 MB
Dimensions	171.7 x 60.9 x 34.1 mm (max)	175 mm x 66 mm x 26.8 mm	152 x 55 x 40 mm	168 x 64 x 34 mm	174 x 66 x 45 mm	157 mm x 57 mm x 41 mm
Weight	236g	250g	210g	275g	265g	231g
Data Capture Options						
Data Capture	Linear Imager, 1D Laser, 1D/2D Imager	1D Laser, 1D/2D Imager	1D Laser, 1D/2D imager	<ul style="list-style-type: none"> 1D Laser Scanner Option 1D Imager Option 2D Imager Option 	1D Laser, 1D/2D imager	1D Laser, 1D/2D Imager
User Interaction (UI)						
Display	2.8" QVGA indoor viewable, 64K colors	2.8" QVGA	2.2" QVGA, reflective	2.7" QVGA Sunlight readable transmissive	2.7" QVGA	2.4" QVGA
Key pad	27 key, numerical configuration 2 programable side keys	28-key Num with backlit keys	23 rubber keys, 5-position joystick, backlit	48 key Alpha Num, backlit 26 large key Num backlit	30 keys, Backlit Keypad	28-key Num
Keypad Overlay	Yes		No	No	No	
Power						
Standard Battery	Lithium Ion 2400 mAh Smart Battery	Lithium Ion 2200 mAh	Lithion Ion 1100 mAh	Li-ion 3300 mAh	Lithium-Ion Battery Pack (3.7 V, 1700 mAh)	Lithium Ion 2200 mAh
Extended Battery	No	Yes - 1.5X	Yes - 2X	No	No	Yes - 1.5X
Communications						
WAN	No	No	GSM / GPRS / Edge	No	3G Variant	No
LAN	802.11 b/g/n	802.11 b/g	802.11 b/g (Optional)	802.11b/g	802.11 b/g	802.11 b/g
PAN	BTv2.0 EDR	BTv2.0 EDR	Bluetooth 802.15 (Optional)	Bluetooth® 2.0 + EDR radio	BTv2.0 EDR	BTv2.0 EDR
IrDA	No	No	No	No	IrDA Ver.1.2 (Max 115 kbps)	No
Environmental						
Drop Specification	4 ft to concrete 4 ft MIL STD 810G	4 ft.drops to concrete across the operating temp	4' drop to concrete	1.2 m (4 ft) – 26 drops to polished concrete	2m MIL-STD-810F516	4 ft.drops
Tumble Spec	500 0.5-m tumbles	500 1 m tumbles		Shock and Vibe: Random		
Sealing	IP54	IP54	IP54	IP54	IP64	IP54

MC2100 COMPETITOR COMPARISONS



- **MC2100 is a ground up solution architected, designed, and tested by MCD**
 - Utilizes MPA2 and leverages industry proven platform solutions, tools, and utilities
 - Uses Corning Gorilla Glass on the scan engine exit window to improve durability
 - Includes a robust and highly reliable bottom connector, adapted from our MC65
 - Significant industrial design, effort, and time invested to optimize comfort and one-handed use
 - Attention to detail is unquestionable:
 - ... Contoured lip to prevent accidental key presses
 - ... Keypad accommodates keypad overlays for further customer-specific customization
 - ... Firm, tactile feedback of the keypad for assured key engagement
 - ... Integrated DC barrel jack connector for simplified, low-cost charging
 - ... Robust hand strap to complement comfort and ease of use
 - ... Simplified battery removal
- **MC2100 is a prime example of attentive design, execution, and thorough testing**

MC2100 SUMMARY



- Complements MC3100 where MC1000 falls short
- Industry-proven platform that excels at speeds & feeds. Same platform leveraged across MCD's portfolio.
- Superior ergonomics for superior ease of use
- Rugged and durable design with multiple industry leading scan options and configurations
- Differentiation beyond hardware with industry-first HTML5 framework (RhoElements), EMDK, MSP, TEAM Express*, Fusion, value-added software tools & utilities

**High Value Without Compromising
Features, Ergonomics, or Performance**

Announce December 12, 2011

Ships January, 2012

THANK YOU



MOTOROLA SOLUTIONS

MC2100 FEATURES

MC2100 (BATCH) / MC2180 (WLAN / BT)



Data Capture:

- Options for Linear Imager, 1D Laser, or 2D Area Imager (MC2180 only)
- Signature capture with stylus

Environmental Specifications:

- 4' drop to concrete
- IP54 sealed
- 0.5m tumbles, 500 cycles at room temperature
- 10°C to 50°C operating temperature

Connectivity:

- Bluetooth 2.0 + EDR
- WLAN 802.11 b/g/n
- Batch configuration available
- USB host / client

Design and Ergonomics:

- Weight: 236 grams (MC2180)
228 grams (MC2100)
- Optimized for one handed use
- 27 key numerical keypad
(Can accommodate keypad overlays)
- 2 programmable side keys (MC2180 only)



Enterprise Software

- MPA2.0: MSP, Fusion, Date Wedge, EMDK, Rapid Deployment, Ent. Utilities
- RhoElements, HTML5 based app development framework and browser application
- TEAM Express Push-to-Talk* (MC2180 only)

Display:

- 2.8" Transmissive QVGA
- Resistive touch (MC2180 only)

System:

- Marvell PXA320 624 MHz
- 128 MB RAM / 256 MB Flash
- Microsoft Windows CE6 R3 Core
- Micro SD expansion slot (under battery)

Battery / Power:

- Removable Smart Li-Ion, 2400 mAh, UL certified
- Backup battery
- Integrated DC barrel jack connector

Accessories

- Single slot and 4-slot charging cradles
- 4-slot Ethernet cradle
- 4-slot battery charger
- Dial up serial modem
- USB cable adapter
- Soft shell holster
- Hand strap and hand lanyard