



Motorola's Rugged Mobile Laptop: ML910



5/16/2008



Why Motorola?

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Rugged Mobile Computing Portfolio

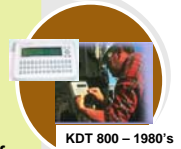
Motorola's Experience and Vision

• ONLY MOTOROLA

- Over 75 years of Reliable two-way radio Systems
- Over 65 years of *dedicated* Public Safety experience
- Over 35 years of experience in Wireless Mobile Data Systems & Rugged Mobile Data Devices

• KEY MILESTONES:

- 1970- First Wireless Data System
- 1991 – Introduction of RD-LAP 19.2
- 2001 - First Deployment of APCO P25 IP-Compliant Voice and Data System
- 2005 – Deployment of MESH Enabled Broadband Networks
 - Support of 4.9 GHz Public Safety Band



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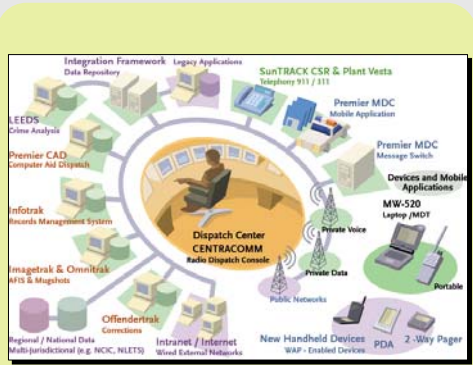
Thinking BEYOND the Box!

• **SOLUTIONS** are more than interconnected pieces, they a collection of features that must work well **TOGETHER**

▪ The design of any one system component must **Meet or Exceed that of the Overall Solution!**

• The design of our Mobile Devices and Applications take the **SOLUTION** into account

- Efficient Applications
- Robust Networks
- Reliable Devices
- =Mission Critical Solutions!



Integrated Solutions – A Total Solution for Law Enforcement

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What Makes A Device "Rugged"?



- For a device to be considered rugged it must pass the U.S. Department of Defense's MIL-STD-810F Test Method Standards for Environmental Engineering Considerations
- This standard includes the following tests:
 - High and low temperature
 - Temperature shock
 - Rain and humidity
 - Acceleration and shock
 - Vibration
 - Drop
 - Etc.

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Designed for Mission Critical Use



All Motorola Devices are Rugged and Designed for Mission Critical Use

- Mil810-F Spec is actually vague
- Motorola has developed more stringent durability specs: 12M



TEST

MIL810F

12M

- | | | |
|------------------------|-------------------|---------------|
| • Drop | • Steel or wood | • Concrete |
| • Rain | • 4 in/hr | • 5.8 in/hr |
| • <u>Vibration</u> | • Non-operational | • HD Spinning |
| • <u>Screen Impact</u> | • Not included | • INCLUDED |
| • Flammability | • Not included | • INCLUDED |
| • Reverse Voltage | • Not included | • INCLUDED |
| • Overvoltage | • Not included | • INCLUDED |

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Proof of Durability

• Motorola mobile computers work in the most demanding environments!

• We design & test our products to US Military standards (MIL810E/F) and Motorola proprietary tests

- Seal case for resistance to water, dust, other materials
- Dissipate heat to protect internal electronics
- Cushion hard drive to prevent platter damage
- Cushion and shield display to prevent LCD damage
- Use lock-down connectors to prevent loosening

• We don't stop at product design - we rigorously test to our specs and beyond



Motorola's MW520 continued functioning after this crash.

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ML910 & MW810 Use Case Examples

- **First Responder / Incident Scene**
 - Computer Aided Dispatch (CAD)
 - Remote Access to Databases, Apps
 - Report writing and Collaboration
- **Mobile Video Surveillance**
 - Monitoring of Multiple Camera Feeds
 - Video Push/Pull
- **Code Enforcement - eCitations**
 - Improve ticket processing, revenue generation
 - Tie to Barcode or Magnetic Stripe Readers
- **Vehicle Tracking / Dispatch**



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ML and MW Product Overviews



ML910™ Rugged Notebook

Designed for Mobile Workers
Docking Station for Vehicle Use
Portability with Extra Security

MW810 Mobile Workstation

Designed for Mission-Critical Vehicles
Versatile Three-Piece Design
Flexible I/O Choices for Your Fleet



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Both Are Optimized For:

- Computing Power
- Wireless Connectivity
- Sunlight Readability
- Use in Harsh Environments
- Operating Temperatures
- Peripheral Support
- Ease of Use



ML910 Rugged Laptop

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The New ML910 is....

- MORE Power
- MORE Intelligent
- MORE Connected
- MORE Secure
- MORE *True MOBILITY!!*

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FOR IMMEDIATE RELEASE

Innovators Take Top Honors as GCN Editors Choose Best of FOSE 2007

(WASHINGTON, D.C., March 21, 2007) - FOSE 2007, the government's largest gathering of information technology professionals, proved once again to be a major showcase for the introduction of new technology products and innovations.

Best in Show Category award recipients were:

Best in Show	Advanced Micro Devices (AMD)
Data Management Software	American Power Conversion (APC)
Desktop Computer	Hewlett-Packard dc5750
Displays	NEC
Enterprise Hardware	Gateway
Enterprise Systems	Hewlett-Packard
Handheld	Research in Motion
Network Administration Software	Splunk

Opteron Processor
 InfraStruXure Central v4.0
 Microtower PC
 LCD2690WUXJ LCD monitor
 Gateway E-9722R Server
 Neoview
 Blackberry 8800
 Splunk

Notebook Computer

Motorola

ML910 Rugged Notebook

Printer Xerox
 Scanner Kodak
 Security Hardware CPR Tools
 Security Peripherals MXI Security
 Security Software Ace Computers BioPassword
 Software Microsoft

Xerox Phaser 8560MFP Printer
 KODAK i1860 Scanner
 DefenDisk
 Stealth MXP
 Windows Vista

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• ML910 - Highlights

More Power

- Core Duo 1.66GHz processor with 667MHz front side bus
- ATI M54 graphics processor with 128MB dedicated video memory
 - Provides the fastest updates and real-time video information to the display
 - High performance graphics



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• ML910 – Highlights continued

More Visual

- **First 13.3” widescreen display for rugged notebooks**
 - 16:9 HDTV aspect ratio
 - Higher resolution than the competition – more information
- **Dedicated ATI Radeon X1400 graphics processor**
 - 128M dedicated video RAM for improved video performance and free up system memory for applications
 - Enhanced video processing to encode/decode video for better user experience than the competition
- **Video capture card**
 - Interface with in-car video or License Plate Recognition systems
 - Competition cannot support without a \$300 PCMCIA video capture card
- **Display brightness of standard 500+ NIT**
 - Provides true viewing clarity, even in direct sunlight



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• ML910 – Highlights continued

More Intelligent

– Updated diagnostic software

- Monitors internal conditions and prevents against outages due to extreme heat and cold

– Extend battery life

- Offers a secondary battery slot for situations and environments where battery power is the only option for several hours



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• ML910 – Highlights continued

More Wireless

– Optimized by design for wireless usage

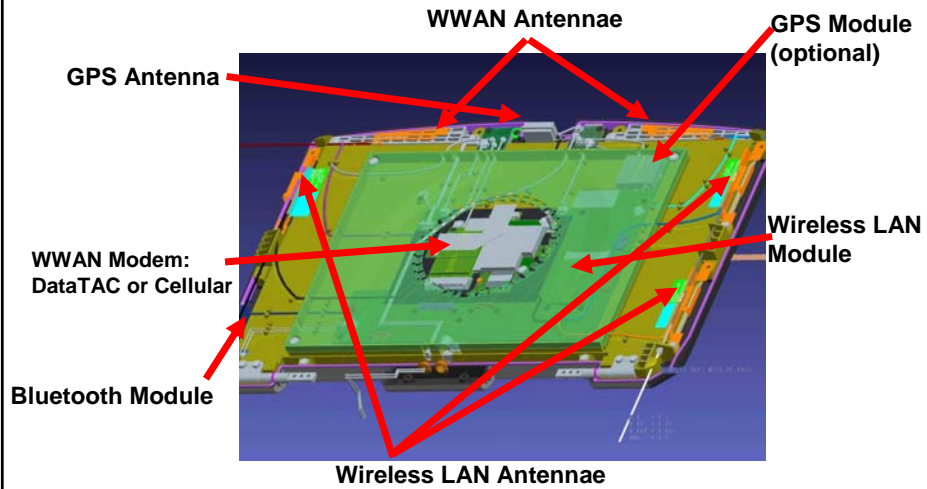
- Coverage in low and remote spots
- Better range and throughput than the competition
- Optional RF pass through to enhance coverage in-vehicle
- Verizon - EVDO Rev A
- Cingular - EDGE/UMTS/HSDPA (3G)



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ML910 – Optimized for Wireless By Design



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• ML910 – Highlights continued

More Security

- TPM v1.2 security – secure key management (PKI)
- 500 DPI Fingerprint Scan security for multi-factor authentication
- Smartcard reader (optional)



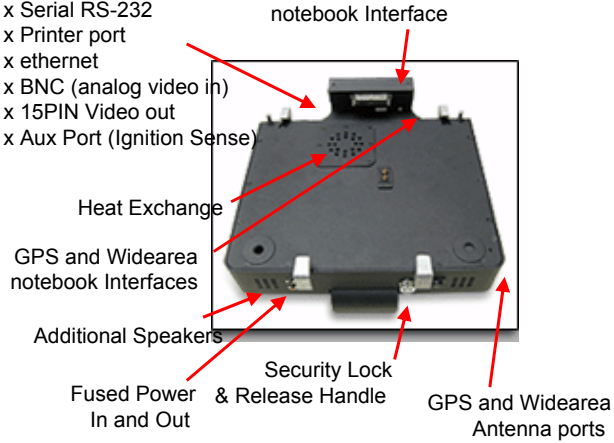
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The ML910 Vehicle Docking Station

- Interfaces to ML910 through notebook's rear docking connector
- Passes RF (GPS and widearea) through to external antennas
- Supports Ignition Sense and connection to external display & keyboard
- Accepts video input for digital video recorder

- 2 x USB 2.0
- 2 x Serial RS-232
- 1 x Printer port
- 1 x ethernet
- 1 x BNC (analog video in)
- 1 x 15PIN Video out
- 1 x Aux Port (Ignition Sense)



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• ML910 Rugged Notebook – The Motorola Difference



Feature	Benefit for YOUR Customer
Improved High-Bright Display	Operate in an outdoor environment
Optimized for Wireless	Better coverage and range, increased throughput, higher availability and better access to information
Built and Tested to Mil std 810F	Operate with confidence in mobile environments and under stressful conditions
Ruggedized	Have access to vital information even in harsh conditions
Enables Key Applications	Access critical information at crucial moments
Intelligence	Ability to perform more functions in less time, simultaneously

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• ML910 Rugged Notebook – The Motorola Difference

Feature	Benefit for YOUR Customer
Built-in Networks Access	Anytime, anywhere access to vital information, even while moving at speeds of up to 200 mph
Enhanced Widescreen	Ability to have multiple applications side by side on the desktop
Built-in Dual-factor Authentication	Only those authorized can have access to secure and sensitive data
More Adaptable	Highly customizable and user-configurable; purchase only the features you need and easily change the components you use
More Power	Extend the field use of the notebook

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Rugged Mobile Computing Portfolio



Sample Applications – Information Management, Video/Imaging

The ML / MW Series is reliable and powerful enough to run even the most demanding mission critical applications.



Premier MDC™ Reporting

Allows officers in their vehicles to Create Reports with separate workflows; Import Data from State, CAD, RMS and handheld scanners.

Manage report submission/approval/rejection.



AirMobile provides fully automated file upload/download between an entire fleet of vehicles using an IP transport over any IP-compliant network. Transfers are automatically scheduled as vehicles come in and out of range of a wireless network.



Automatic License Plate Recognition

Automatically captures and processes license plate images.

Compare plates to "hot list" database.

Displays "hits" for officer verification.



Digital Patroller II

Digital Patroller is an in car video system that records incidents with clarity and reliability. Seamlessly integrates video capture in the vehicle with management of collected data in the office..

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ML910 – We Aren't the Only Ones Talking!

“ Video was also the crucial feature of the new rugged notebook computer from [Motorola Inc.](#) It's tough to [beat the ToughBook from Panasonic](#), a multiple-year award winner at FOSE. But this Motorola unit comes with a dedicated video input jack, as well as a video card with [128MB of dedicated memory](#), [anticipating the increasing need to work with video](#) in challenging environments. We also liked that Motorola itself is entering the rugged computer space, because competition spurs innovation.”

Government Computer News

April 2, 2007