

# Thor™ VM3

## Vehicle-Mount Computer

Designed for use in the toughest distribution center environments, manufacturing facilities and freight operations, the Thor VM3 is the industry's most capable full-size vehicle-mounted mobile computer, delivering unmatched operational efficiencies.

Disruptions in the supply chain are costly, and those best prepared to adapt to these disruptions have significant competitive advantage. The Thor VM3 computer offers breakthrough features designed to eliminate downtime and maximize capital investment for the enterprise. The Smart Dock feature delivers immediate savings on support and maintenance costs while maximizing efficiency by enabling users to dynamically shift computers as vehicles fail or workload changes. Incorporating a field-replaceable front panel allows enterprises to minimize investments in spare costs by substituting spare front panels for spare computers and saves valuable time and maintenance costs by leveraging in-house support staff to service the most common breaking point.

With the Thor VM3 computer, you gain the compatibility you need to upgrade to next generation Windows® operating systems and the power to take advantage of the latest security and productivity-enhancing features and functionality. The VM3 supports multiple Windows®-based operating systems, so integration and application development are simple as business needs grow. For enterprises currently running on the Windows® CE operating system, the VM3 offers easy implementation and deployment into existing and future IT infrastructures. With memory expandable up to 4GB RAM and 64GB solid state Disk, the VM3 can run powerful programs and applications to maximize efficiencies in activities such as case picking, truck loading, putaway and replenishment- giving workers real time access to information anywhere it is needed.

Whether indoors, outdoors, in a warehouse, on a shop floor, or in intermodal facilities, the Thor VM3 computer enables enterprises to choose the options needed to maximize efficiencies in the most demanding environments. The VM3 supports standard resistive touchscreen or optional capacitive touchscreen for multi-touch applications. A WWAN radio option allows for use in expansive outdoor operations where a WiFi network can't be deployed. The VM3 is built to withstand extreme temperatures and supports an optional screen defroster for cold storage and freezer environments and a brighter outdoor display for outdoor applications. An optional screen blanking feature restricts driver access to the screen when the vehicle is in motion to comply with the highest safety standards.



## Features

- **Smart Dock:** Enables mounting and removal in seconds, saving on support and maintenance costs while maximizing efficiency by allowing dynamic shifting of computers as workload changes.
- **User Field-Replaceable Front Panel:** Reduces maintenance cost by allowing users to service the most wear- and abuse-prone components themselves rather than returning them to the depot.
- **Ignition Control:** Eliminates the maintenance expense and lost productivity caused by a dead vehicle battery.
- **Powerful, Versatile Platform:** The Intel® x86 architecture and Dual Core 1.5GHz processor enable superior performance of data-intensive applications. Plus, the Thor VM3 is Microsoft® Windows®-based, so integration and application development are simple.
- **Operating System Upgrade Path:** Enterprises have an upgrade path for customers who need backward compatibility to their Windows® CE installed base now but want to upgrade in the future.
- **Versatile:** Can be deployed in multiple application environments - from dry goods to cold storage, indoor or outdoor, in-premise or in intermodal facilities, in any IT environment.

# Thor VM3 Technical Specifications

## Mechanical

|                       |   |
|-----------------------|---|
| Dimensions            | Computer: 12.5" x 10.3" x 2.4" (318 x 260 x 62); Dock: 7.1" x 6.1" x 2.1" (180 x 155 x 54mm); Assembled depth: 4.1" (104mm) |
| Weight                | Computer: 6.65 lb (3.0 kg); Std Dock: 3.2 lb (1.5 kg); Enhanced Dock: 2.4 lbs (1.1kg); Dock weights include mounting ball   |
| Operating Temperature | -22° to +122°F (-30° to +50°C)  |
| Storage Temperature   | -22° to +122°F (-30° to +50°C)  |
| Humidity              | 5% to 95% non-condensing  |
| Environmental Sealing | Independently certified to meet IP66 standards for moisture and particle resistance   |
| ESD                   | EN 55024:2010 (enhanced ESD to 8kV direct & 15kV air)   |
| Vibration             | MIL-STD-810F, composite wheeled vehicles  |
| Shock                 | SAE-J1455 (MIL-STD-810g-4.6.6 Procedure V-Crash Hazard Shock Test)  |

## System Architecture

|                         |  |
|-------------------------|--|
| Processor               | Dual Core Intel® Atom E3826 @ 1.5 GHz  |
| Operating System        | Microsoft® Windows® Embedded Compact 7 (WEC 7), Microsoft® Windows® Embedded Standard 7 (WES 7), Microsoft® Windows® 7 (Win 7), Microsoft® Windows® Embedded 8.1 Industry Pro(Win 8)   |
| Memory                  | 2GB or 4GB DDR3  |
| System Software         | Data Collection Engine for support of external scanners, Bluetooth wireless technology configuration utilities, Microsoft® Internet Explorer, Microsoft® on-screen keyboard, Configuration Cloning Utility, Screen Blanking, Zoom Zone, Launcher   |
| Optional Software       | RFTerm & ETE Terminal Emulators, Enterprise Browser, Remote Mastermind (ReM) device management   |
| Mass Storage            | WEC 7: 2GB<br>WES 7: 32GB, 64GB, optional 4GB industrial mSATA secondary SSD<br>Win 7: 32GB, 64GB, optional 4GB industrial mSATA secondary SSD<br>Win 8 Industry: 32GB, 64GB, optional 4GB industrial mSATA secondary SSD  |
| Graphics Processor      | Intel® HD Graphics Base Freq 533 MHz, Burst Freq 667 MHz, supports two displays  |
| Power Supply & UPS      | 10 to 60 VDC isolated, Optional external converters for AC (90-240VAC) & extended range DC (60-150 VDC); Integrated Li-ION maintenance UPS with 30-min life at -30°C standard  |
| Display                 | Indoor: 12.1" (307 mm) XGA (1024x768) LED backlit display, 400 NIT, Optional screen blanking<br>Outdoor: 12.1" (307mm) XGA (1024x768) LED backlit display, 900 NIT, Optional screen blanking Mini HDMI port support additional remote display  |
| Touch Panel             | Standard: Industrial touch panel with resistive touch and support for finger touch and standard stylus.<br>Multitouch: Optional Industrial touch panel with Projected Capacitance touch for finger and conductive stylus; hardened glass overlay<br>Cold Storage: Optional industrial resistive touch screen with integrated defroster |
| Integrated Keypad       | Seven programmable multi-function keys   |
| Audio                   | Audio for headset, integrated stereo speakers w/ adjustable volume control, integrated microphone  |
| I/O Ports               | 1x USB 2.0 powered host port, 2x powered RS-232 COM ports, 1x CAN-bus port, 1x Headset port, DC power input & ignition control input, RF Antenna ports for WiFi (2), Optional RF Ports for WWAN (2) & GPS (1); Enhanced Dock adds 3 USB powered host ports and Ethernet  |
| Storage Expansion       | User installable expansion slot supports 4GB mSATA card  |
| Development Environment | Honeywell SDK available for Windows® Embedded Compact 7  |
| Warranty                | 1 year factory warranty  |
| Service Plans           | Optional three- and five-year service programs offer worry-free mobile computing   |

## Wireless Connectivity

|               |   |
|---------------|---|
| WWAN          | Optional software definable (data only) 4G radio: LTE/UMTS/HSPA+/ GSM/GPRS/EDGE/EV-DO Rev A/1xRTT with data speeds up to 100Mbps downlink and 50 Mbps uplink  |
| WLAN          | 802.11 a/b/g/n<br>Wi-Fi™ - certified, CCX certified for data  |
| WLAN Security | Authentication: Support for a full range of 802.1X (EAP) types, including EAP-TLS, PEAP-MSCHAPv2, PEAP-GTC, LEAP, and EAP Fast Encryption Support: Support for Static, pre-shared, and dynamic encryption keys, 40-bit and 128-bit keys, WEP, WPA (TKIP), and WPA2 (AES) Encryption Methods |
| WLAN Antennas | Dual internal antennas, dual external remote and direct connect antenna accessories   |
| WPAN          | WEC 7, WES 7, Win 7: Bluetooth® 2.0+EDR standard, internal antenna<br>Win 8: Bluetooth® 4.0 standard, internal antenna  |
| GPS           | Integrated Assisted GPS (A-GPS) with fast position acquisition and low power consumption. Included with WWAN radio  |

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