

# Thor VM1

## Vehicle-Mount Computer

In today's supply chain, the only constant is change. Disruptions, whether short-term like a forklift failure, or long-term like a natural disaster, are a fact of life. The supply chains best prepared to adapt to these disruptions will use mobile computing technology that gives them greater flexibility. The Thor VM1 vehicle-mount computer (VMC), the tenth generation of VMC developed by Honeywell, provides unprecedented flexibility, and with it, breakthroughs in supply chain productivity.

The VM1 combines a fast 1.6GHz Atom Z530 processor, WWAN, WLAN, and Bluetooth® wireless connectivity, and a Microsoft® Windows CE 6.0 or Windows® Embedded Standard operating system, with three breakthrough innovations that can create immediate time savings and productivity gains. A field-replaceable front panel empowers the end user to repair the most common breaking point of vehicle-mount computers, or convert a standard-temp unit to a freezer-ready unit, in a matter of minutes, with only a screwdriver. The VM1's Quick Mount Smart Dock separates the computer from the power supply, letting a user undock the unit from one forklift and redock it on a second vehicle, without missing a single transaction. And the VM1's ignition control feature allows the user to set power management preferences to save startup time and extend vehicle battery life.

Dramatic productivity gains become possible when innovation shatters conventional thinking, even in the most challenging environments. Ready to see how the VM1 can change your enterprise?



## Features

- **Smart Dock:** Enables mounting and removal in seconds like a laptop dock but with the ruggedness and sealing required for industrial applications; maximizes efficiency by dynamically shifting workers and computers as the workload changes, while minimizing maintenance cost by enabling a computer to be shifted from one vehicle to another in 1/6 the standard time
- **Field-Replaceable Front Panel:** Reduces capital and maintenance cost by integrating the two most wear and abuse prone components, the keyboard and touchscreen, into a user-replaceable part; reduces capital costs by substituting spare front panels for spare computers
- **Ignition Control:** Eliminates the maintenance expense and lost productivity caused by a dead vehicle battery; unit can be configured to automatically go into standby or hibernate at a selectable time after the ignition switch is turned off, saving time for associates while eliminating a point of concern for warehouse management

# Thor VM1 Technical Specifications

## Mechanical

|                              |                                                                                             |
|------------------------------|---------------------------------------------------------------------------------------------|
| <b>Dimensions</b>            | Computer: 10.6" x 8.4" x 1.7" (268 x 214 x 43); Dock: 7.1" x 6.1" x 2.5" (180 x 155 x 64mm) |
| <b>Weight</b>                | Computer: 5.6lb (2.1kg); Dock: 3.2 lb (1.2 kg)                                              |
| <b>Operating Temperature</b> | -22° to +122°F (-30° to +50°C)                                                              |
| <b>Storage Temperature</b>   | -22° to +140°F (-30° to +60°C)                                                              |
| <b>Humidity</b>              | 5% to 95% non-condensing                                                                    |
| <b>Environmental Sealing</b> | Independently certified to meet IP66 standards for moisture and particle resistance         |
| <b>ESD</b>                   | EN 55024:1998 (enhanced ESD to 8kV direct & 15kV air)                                       |
| <b>Vibration</b>             | MIL-STD-810F, composite wheeled vehicles                                                    |
| <b>Shock</b>                 | SAE-J1455                                                                                   |

## System Architecture

|                                |                                                                                                                                                                                                                                                  |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Processor</b>               | Intel® Atom Z530 1.6GHz                                                                                                                                                                                                                          |
| <b>Operating System</b>        | Microsoft® Windows® CE 6.0, Microsoft® Windows® Embedded Standard 2009 (WES 2009)                                                                                                                                                                |
| <b>Memory</b>                  | 1GB for Microsoft® Windows® CE or 2GB for WES DDR2 SDRAM                                                                                                                                                                                         |
| <b>System Software</b>         | Microsoft® Windows® CE 6.0: DCWedge barcode wedge; WES: Freefloat Link*One wedge                                                                                                                                                                 |
| <b>Optional Software</b>       | Microsoft® Windows® CE 6.0: RFTerm, Wavelink TE, Naurtech CETerm & Industrial Browser, and Stay-Linked Terminal Emulators Wavelink Avalanche & eXpressConfig network management; WES: Freefloat Access*One terminal emulator                     |
| <b>Mass Storage</b>            | 1GB for Microsoft® Windows® CE; 4GB, 8GB for Microsoft® WES operating system                                                                                                                                                                     |
| <b>Graphics Processor</b>      | Intel® GMA 500                                                                                                                                                                                                                                   |
| <b>Power Supply &amp; UPS</b>  | 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 -20°C                                                                             |
| <b>Display</b>                 | 8" (20cm) WVGA (800x480) LED backlit display, Standard 400 NIT indoor display, Optional 900 NIT outdoor display, Optional screen blanking                                                                                                        |
| <b>Touch Panel</b>             | Industrial touch panel with resistive touch and support for finger touch and stylus, Optional touchscreen defroster                                                                                                                              |
| <b>Keyboard</b>                | Full 64-key QWERTY keyboard w/number pad & 10 function keys, Optional 12-key minimized keyboard with 10 function keys, shift, 2nd & power keys, All keys except modifiers are mappable, All keys backlit, Optional 5250 & 3270 keyboard overlays |
| <b>Audio</b>                   | Audio for headset, Integrated stereo speakers w/ adjustable volume control, Integrated microphone                                                                                                                                                |
| <b>I/O Ports</b>               | 1x USB 2.0 host port, 1x USB 1.1 client port, 2x RS-232 COM ports, 1x CAN-bus port, 1x Headset port, DC power input & ignition control input, RF Antenna ports for WiFi (2), WWAN (1) & GPS (1)                                                  |
| <b>Storage Expansion</b>       | User installable expansion slot supports 1GB and 4GB SD card                                                                                                                                                                                     |
| <b>Development Environment</b> | SDK available for Windows® CE 6.0; Standard Windows® SDK for WES 2009                                                                                                                                                                            |
| <b>Warranty</b>                | 1 year factory warranty                                                                                                                                                                                                                          |
| <b>Service Plans</b>           | Optional one-, three- and five-year service programs offer worry-free mobile computing                                                                                                                                                           |

## Wireless Connectivity

|                      |                                                                                                                                                                                                                                                                                     |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>WWAN</b>          | Software definable Gobi 2000™ (data only) 3.75G radio with five-band UMTS/HSPA+ (800/850/900/1900/2100MHz), quadband GSM/GPRS/EDGE (850/900/1800/1900MHz) and dual-band EV-DO/CDMA (800/1900)                                                                                       |
| <b>WLAN</b>          | 802.11a/b/g/n, Wi-Fi™ - certified, CCX certified for data                                                                                                                                                                                                                           |
| <b>WLAN Security</b> | Authentication: Support for a full range of 802.1X (EAP) types, including EAP-TLS, PEAP-MSCHAPv2, PEAP-GTC, LEAP, and EAP-FAST Encryption: Support for Static, pre-shared, and dynamic encryption keys, 40-bit and 128-bit keys, WEP, WPA (TKIP), and WPA2 (AES) Encryption Methods |
| <b>WLAN Antennas</b> | Dual internal antennas standard, dual external remote antennas optional                                                                                                                                                                                                             |
| <b>WPAN</b>          | Bluetooth® 2.0+EDR standard, internal antenna                                                                                                                                                                                                                                       |
| <b>GPS</b>           | Integrated Assisted GPS (A-GPS) with fast position acquisition and low power consumption                                                                                                                                                                                            |

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