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White Paper

Honeywell Thor VM1A: The Rugged Vehicle-Mounted Computer That Improves Forklift Productivity & Efficiency with Maximum ROI

In today's advancing era of technology and increased omnichannel shopping, manufacturing and warehouse industries cannot afford to lag behind. Warehouses and manufacturing facilities that use regular consumer grade tablets on their forklifts have to constantly replace their devices due to the rugged conditions of the environment and the abuse the devices are typically subjected to.

Vehicle-mounted computers also typically come with complicated mounting systems, slowing the process of changing out the computers. Average consumer grade tablets and computers are not suited for all possible conditions, such as deep freezer facilities. And most tablets and computers have to be completely replaced if the touchscreen or a keyboard is damaged.

Honeywell's Thor VM1A will maximize a company's ROI while providing forklift operators greater productivity to locate and move products quickly and efficiently. With modular components and a unique smart docking system, the Thor VM1A is the rugged computer for use with warehouses, manufacturing, and intermodal facilities.

What is the Thor VM1A Vehicle-Mounted Computer?

Honeywell's Thor VM1A is a merger of Honeywell's VM1 and CV41 computers. It is a top-of-the-line vehicle-mounted computer with a ruggedized purpose built to take the punishment associated with day-to-day use. Warehouses, manufacturers, and intermodal facilities are rough environments. The Thor VM1A is built specifically to match those demands with ease, from operating systems to easily replaceable parts and simple docking solutions.

Thor VM1A runs on the Android operating systems and features, with the Windows based HTML5 browser or Industrial browser, making the conversion to the Thor VM1A easy. Honeywell's Mobility Edge hardware and software provide an integrated and scalable approach to accelerate development, application certification, deployment, and device lifecycle management.

Thor VM1A uses a Qualcomm 2.2GHz SnapdragonTM 660 and an Octa-core CPU that has 4GB RAM and 32GM Flash memory. The user can also install mass a mass storage expansion of 1, 2, 4, or 8GB Micro SD card. The touchscreen and keyboard are field-replaceable, saving time and money.

The SmartTE (Terminal Emulator) with Honeywell maximizes productivity among all of the employees, from experienced workers to new and temporary workers. The Session Persistence eliminates lost time by keeping track of the information going into it and picking up where it left off once a connection is reestablished. These computers can even be rebooted and pick right back up where it left off.

With smart docking solutions, these computers can be easily removed without having to disconnect power or peripherals before removing it. Thor VM1A is even compatible with currently used VM1 and CV41 docking systems. And with the deep-freezer durability of the Thor VM1A, it can be used in all areas of a facility.

The Advantages of Using a Rugged Vehicle-Mounted Computer

Data collection and entry are a breeze with the physical, full 64-key QWERTY keyboard, number pad, and 10-function keys. The key functions are also programmable to address specific use cases. The keyboard supports ANSI 3270 & 5250, and the touchscreen has resistive and capacitive (PCAP) options. The touchscreen and keyboard are easily replaceable for on-the-go maintenance.

With the entire rugged computer having IP66 sealing against moisture and dust, it is also tested to MIL-STD-810F for vibration and composite wheeled vehicles. With a shock testing to SAE-J1455, Honeywell's Thor VM1A can withstand just about any wear and tear in warehouses, manufacturing, and intermodal.

The 8-inch WXGA display has a 900 NIT outside display brightness and 400 NIT indoor and cold storage display brightness. The rugged vehicle-mounted computer can handle cold storage facilities with defrosters down to -30C.

The Thor VM1A has the ability to be charged wirelessly while in the vehicle dock. There are several perks that are included with the Thor VM1A, including Honeywell's Mobility Edge hardware and software. Accessories can be obtained, and it is also backwards compatible with currently used VM1 and CV41 accessories.

Other accessories that can be obtained include:

- Two docking options
  - Basic (for most vehicle applications)
  - Premium – more USB ports and Ethernet (for IT support and wall mount applications)
- SD card for memory expansion
- Wired Scanner

Using Honeywell's Thor VM1A in Warehouses, Manufacturing, and Intermodal

E-commerce has driven the demand for warehouse growth to meet the demands of consumers. The rugged vehicle-mounted Thor VM1A is a top choice for warehouses, manufacturing, and intermodal to improve forklift productivity and efficiency.

Warehouses use it for picking small parts and cases, in shipping and receiving, and reverse logistics. With environmental temperatures ranging from -30C to +50C, it is an excellent option for cold storage warehouses.

Manufacturing facilities have reported using Honeywell's Thor VM1A for general materials handling transaction processing and work order and material tracking. Intermodals use it for on-site container tracking and automotive yard vehicle movement.

Expanding Operating Systems Lifecycle

The operating systems lifecycle of the Thor VM1A can be extended with a robust service offering to best suit a business's needs and budget. Honeywell's Mobility Edge provides a stable platform that can be extended out to 2025 for supported operating systems. Patch support for each version is based on the AOSP release date.

At the end of patch support for Android R, Honeywell's Sentinel service will provide an additional two years of support. Complete and Plus service plans can be added, which include Sentinel. Software updates are performed in the background while Android is running for minimum downtime, while extending the life of the operating systems.

Top Notch Security Measures

With Honeywell's Mobility Edge, the Thor VM1A has top of the line security measures that go beyond Android security updates. The Secure Boot and Verified Boot have encryption keys programmed into the processor. The PBL has an ROM code in the hardware itself. The Secure Boot prevents any loading of unsigned OS images and the Verified Boot protects the Android system and vendors.

Full Disk Encryption is incorporated into the Thor VM1A so that the user data area is always encrypted. Honeywell provides encrypted IPSM storage that remains intact even after a device is wiped. The optional SD card accessory has encryption is configurable and can be turned on and off when using it as adopted or portable storage. And, Secure Provisioning protects every Thor VM1A computer from unauthorized reconfiguration.

SmartTE Benefits

SmartTE is a centralized software management system that provides only the host to control patches and change the configuration and design. SmartTE provides real-time monitoring, sharing, and troubleshooting from a centralized hub regardless of the location of the vehicle-mounted computers. The application is resilient with Session Persistence and the High Availability License.

SmartTE is easy to implement as it is pre-installed on the Thor VM1A, and has no licensing requirements. The SmartTE Client can be added using MDM and is fully integratable with current a facilities current IT infrastructure. The compatibility provides the same user experience throughout the entire organization with no hidden costs.

SmartTE has three Terminal Emulation solutions to maximizes productivity among all of the employees, from experienced workers to new and temporary workers. Each solution can be implemented at your companies' pace to ease transition of use.

The basic solution is the green-screen text-mode with the same user interface as a legacy TE. This is perfect for experienced users. The Dynamic Modernization solution has a touch interface for faster user learning with minimal development effort. This is an automated conversion option from the Basic solution.

The Designer Modernization solution converts to GUI for maximum productivity gains. It has a numbers-based menu that becomes large with easy-to-press buttons. It includes pictures and graphics to aid user recognition and is highly customizable. This provides the fastest learning curve for new and temporary workers.

How to Know When it is Time to Upgrade Mounted Computers

In an environment that is rough and demanding, warehouses, manufacturing, and intermodal industries may find that they are constantly replacing damaged mobile computers that are not suited for shock, vibration, and just overall rough environments. Most mobile computers are also not suited for deep freeze conditions, such as a cold storage with temperatures dropping to -30C.

Forklift and cherry picker operators may find themselves constantly dealing with a damaged keyboard because of continual use of commonly used keyboard buttons. Maybe the operators are having to swap equipment out because the forklift or cherry picker is down for maintenance. How long does it take them to pull the computer off the complicated docking system?

The Vehicle Mounted Computer that Improves Productivity

It is more important than ever for manufacturers and warehouses to keep up with on-demand omnichannel shopping and e-commerce traffic to stay ahead of the competition. Eliminate down-time from computer failure with field-replaceable touchscreens and keyboards. The Smart Dock system provides easy removal and installation from one vehicle to another.

The rugged, vehicle-mounted Thor VM1A computers provide increased productivity for forklift and cherry picker operators. Inventory costs can be reduced by no longer having spare parts taking up space. From hardware to software to support, Honeywell's Thor VM1A has everything to allow existing customer to deploy the devices without having to make additional hardware investments, including being backwards compatible with VM1 and CV41 accessories.

For More Information:

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