



Thor™ VM1

Vehicle-Mount Computer

Microsoft® Windows® Embedded CE 6 Operating System

User's Guide

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Chapter 1 - Introduction

The Honeywell Thor VM1 Vehicle Mount Computer (VMC) is a rugged, vehicle mounted computer running a Microsoft Windows®CE 6 operating system and capable of wireless data communications from a fork-lift truck or any properly configured vehicle.

The optional Bluetooth® module supports Honeywell Bluetooth printers and scanners. The Thor VM1 provides the power and functionality of a desktop computer in a vehicle mounted unit, with a wide range of options.

The Thor VM1 is designed for use with a vehicle Quick Mount Smart Dock. The dock installs in the vehicle and connects to vehicle power. The dock provides conditioned input power for the Thor VM1. Peripheral connections are on the dock. The Thor VM1 is designed to easily be removed from the dock with a latch on the lower rear of the Thor VM1 housing. Since the dock remains attached to the vehicle, the Thor VM1 computer can easily be moved from one vehicle equipped with a Quick Mount Smart Dock to another vehicle equipped with a Quick Mount Smart Dock.

The Thor VM1 contains a UPS battery which, when fully charged, can power the Thor VM1 for a minimum of 30 minutes. This can be when the Thor VM1 is not attached to a Quick Mount Smart Dock or when the Thor VM1 is attached to a dock but the vehicle power is interrupted, such as when the vehicle battery is being changed.

About this Guide

This Thor VM1 User's Guide provides instruction for the end-user or system administrator to follow when setting up a new Thor VM1.

This user's guide has been developed for a Thor VM1 with a Microsoft® Windows® Embedded CE 6 operating system.

End User License Agreement (EULA)

When a new Thor VM1 starts up a EULA is displayed on the touch screen. It remains on the screen until the Accept or Decline button is tapped with a stylus.

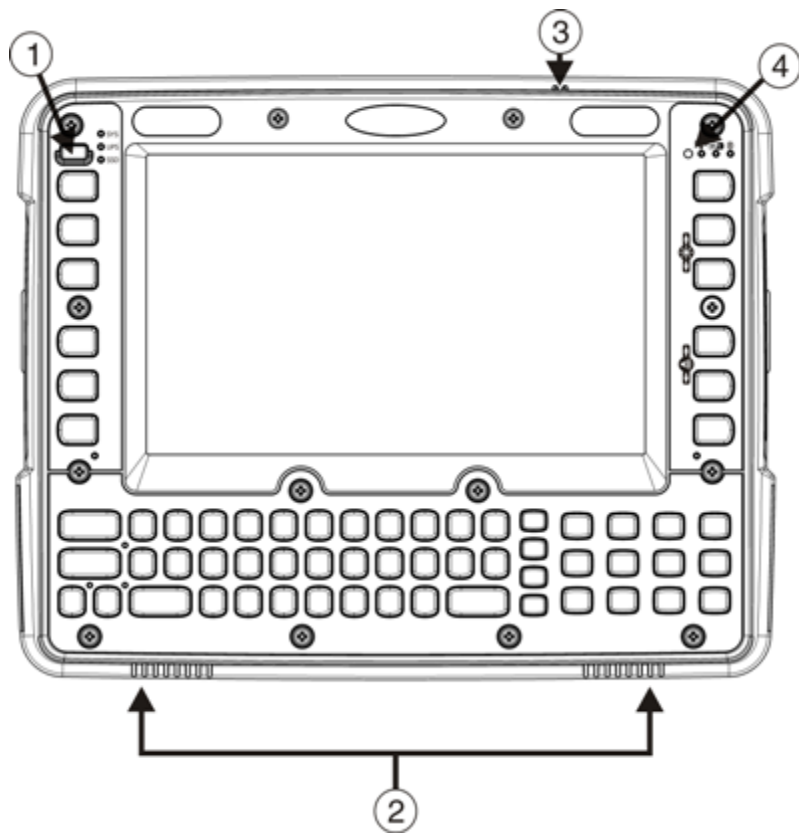
Tap the Accept button to accept the EULA terms and the Thor VM1 continues the startup process. The EULA is not presented to the user again.

Tap the Decline button to decline the EULA and the Thor VM1 will reboot. It will continue to reboot until the Accept button is tapped with the stylus.

Note: The EULA will be presented after any operating system upgrade or re-installation, including language-specific operating systems.

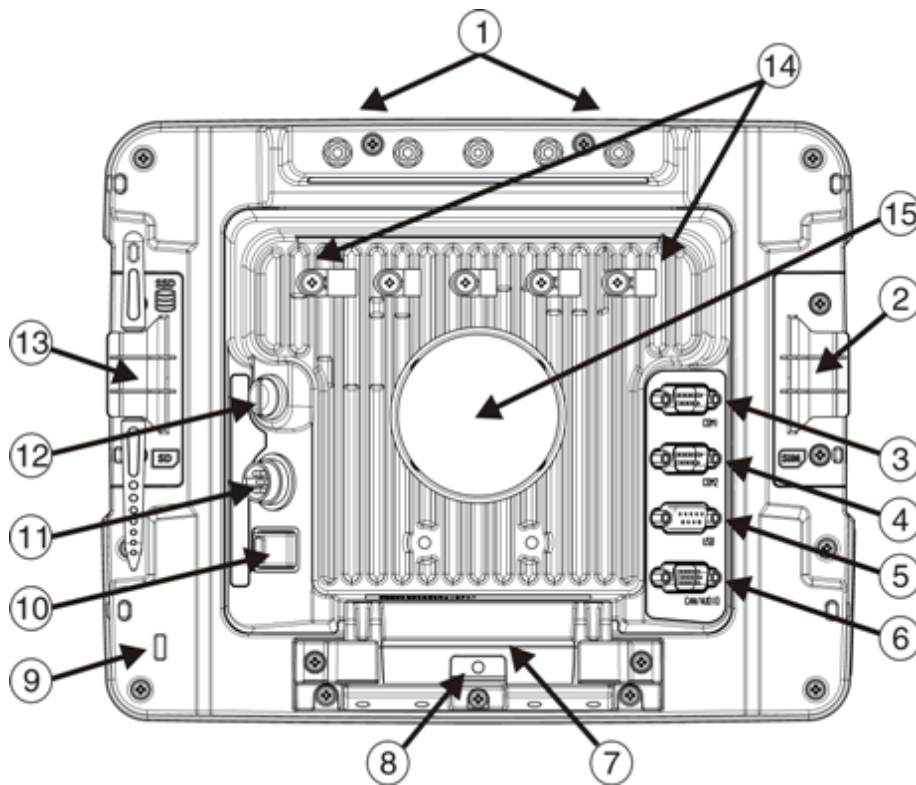
Components

Front View



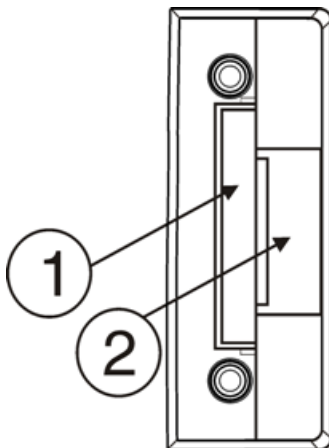
- 1. Power Button
- 2. Speakers
- 3. Microphone
- 4. Ambient Light Sensor

Back View Quick Mount Smart Dock



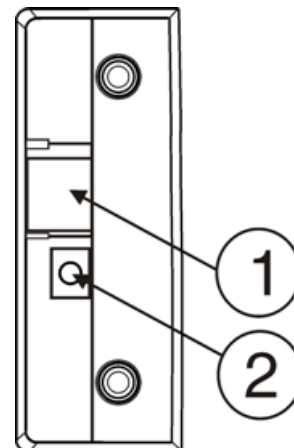
1. Antenna Connectors (on Thor VM1)
2. SIM card Access Panel (on Thor VM1)
3. COM1 Connector (on Dock)
4. COM2 Connector (on Dock)
5. USB Connector (on Dock)
6. CAN/Audio Connector (on Dock)
7. Quick Release Handle (On Thor VM1)
8. Provision for Padlock (on Thor VM1)
9. Provision for Laptop Security Cable (on Thor VM1)
10. Power Switch (on Dock)
11. Power Connector (on Dock)
12. Fuse (on Dock)
13. SD Card Access Panel (On Thor VM1)
14. Strain Relief Clamps (on Dock)
15. RAM Ball (on Dock)

Access Panels



Access Panel Door is labeled with **SSD** and **SD**.

1. CompactFlash Hard Drive
2. SD (Secure Digital) Memory Card Slot



Access Panel Door is labeled with **SIM**.

1. SIM card slot for WWAN radio
2. UPS battery disconnect

Keyboard Options

The Thor VM1 has either a 64-key or a 12-key keyboard.

The 2nd, ALT, CTRL and Shift keys (when present) are sticky keys. The [keyboard LED behavior](#) identifies the active sticky modifier mode state of the keyboard.

64-Key Keyboard



The Thor VM1 64-key keyboard is a QWERTY keyboard, available with a standard overlay, an IBM 3270 overlay or an IBM 5250 overlay.

12-Key Keyboard



The 12-key keyboard is available on the Thor VM1 running Windows CE 6.0.

Shift Keys

Note: The 64-key Thor VM1 has two Shift keys with an LED beside each key. The 12-key Thor VM1 has a single Shift key and LED.

The Shift LEDs indicate the state of the keyboard Shift mode. If Shift is enabled the Shift LEDs beside both Shift keys (64-key only) blink green. When CapsLock is enabled, both Shift LEDs (64-key only) are lit solid green. When Shift and CapsLock are both off, the LEDs are off.

Press either Shift key to toggle Shift On and Off. press 2nd plus either Shift key to toggle CapsLock On or Off.

Secondary Key

The Thor VM1 keyboard is equipped with several secondary keys. These keys are identified by the superscript text found on the keyboard keys.

The secondary keys are accessible by using two (2) keystrokes: the 2nd key followed by the superscript key.

Once the 2nd state is enabled (by pressing the 2nd key) the Secondary Mode LED is illuminated and the 2nd state is enabled until another key is pressed.

The 2nd key is toggled on with a 2nd key press and then immediately off with another 2nd key press.

For example:

Press 2nd and F1 to generate F11.

Ctrl and Alt Key

Note: Ctrl and Alt keys and the associated LEDs are not present on the 12-key version.

When the modifier keys (Ctrl or Alt) are active, the LED located next to the key is illuminated. The modifier key remains active until:

- The modifier key is pressed again, or
- A non-modifier key is pressed.

USB Keyboard / Mouse

A standard USB keyboard or mouse can be attached to the Thor VM1 using the appropriate dongle cable.

The dongle cable attaches to the Thor VM1 and provides a USB connector. Please refer to documentation provided with the USB keyboard or mouse for more information on their operation.

Chapter 2 - Set Up A New Thor VM1

This page lists a quick outline of the steps you might take when setting up a new Thor VM1. More instruction for each step is listed later in this guide. Please refer to the *Thor VM1 Reference Guide* for additional information and instruction.

Contact [Technical Assistance](#) if you need additional help.

Note: Installing or removing accessories should be performed on a clean, well-lit surface. When necessary, protect the work surface, the Thor VM1, and components from electrostatic discharge.

Caution 	Before shipping, the internal UPS battery must be disconnected. Please refer to the <i>Thor VM1 Reference Guide</i> for details.
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Hardware Setup

1. Connect accessories to the [Quick Mount Smart Dock](#).
2. [Connect cables](#).
3. Connect power cable to the dock.
4. Secure all cables to the dock with the Strain Relief Cable Clamps.
5. Secure the Thor VM1 in the dock.
6. Press the power switch on the dock.
7. Press the Power key.

Software Setup

Hardware setup should be completed before starting software setup.

1. [Calibrate Touch screen](#)
2. [Set Date and Time Zone](#)
3. Set Power Schemes Timers
4. [Adjust Speaker Volume](#)
5. [Pair Bluetooth devices](#)
6. Setup Wireless client parameters
7. Setup [terminal emulation](#) parameters
8. [Save changed settings](#) to the registry
9. Setup the AppLock parameters
10. Set the DC Wedge parameters

Please refer to the *Thor VM1 Reference Guide* for additional information and instruction.

Quick Mount Smart Dock

The Thor VM1 assembly consists of two parts, the Thor VM1 computer and the Quick Mount Smart Dock.

The Thor VM1 contains an internal UPS battery that, once fully charged, powers the Thor VM1 for a minimum of 30 minutes when the unit is not mounted in the dock.

The Dock provides:

- A mount for the Thor VM1 computer. The Dock attaches to a vehicle via a RAM or U-bracket mount.
- Conditioned power for the Thor VM1. The Dock accepts 10-60VDC power input directly or 72-144VDC power input with a DC/DC converter.
- COM1 and COM2 serial connections for a tethered scanner, printer, PC connection, etc.
- USB host and client connections via an adapter cable.
- CANbus connection via an adapter cable.
- Headset connection via an adapter cable. When a headset is not attached, the microphone and speakers on the Thor VM1 are active.
- Strain relief cable mounts.
- Mobility of the Thor VM1, since the Dock remains attached to the vehicle the Thor VM1 computer can easily be moved from one vehicle equipped with a Dock to another.

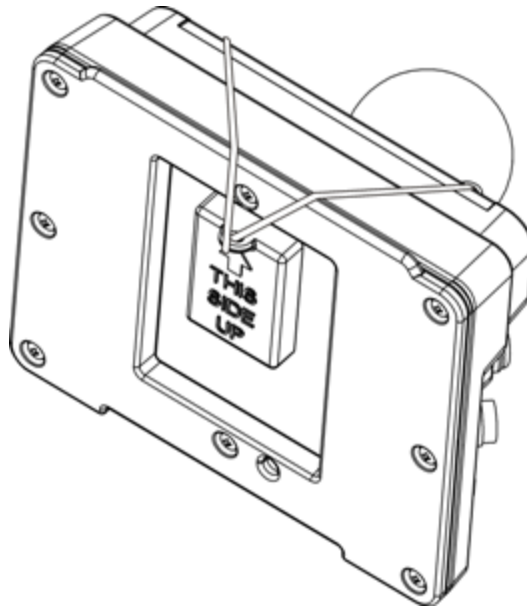
External antenna connectors may be present on the back of the Thor VM1. The connectors may include:

- 802.11 antenna connectors, used when the Thor VM1 is not equipped with internal antennas.
- External GPS antenna connector, when the Thor VM1 is equipped with GPS.
- External WWAN antenna connectors, when the Thor VM1 is equipped with WWAN.

Optional WWAN radio (available in North America, Europe, New Zealand, and Australia only).

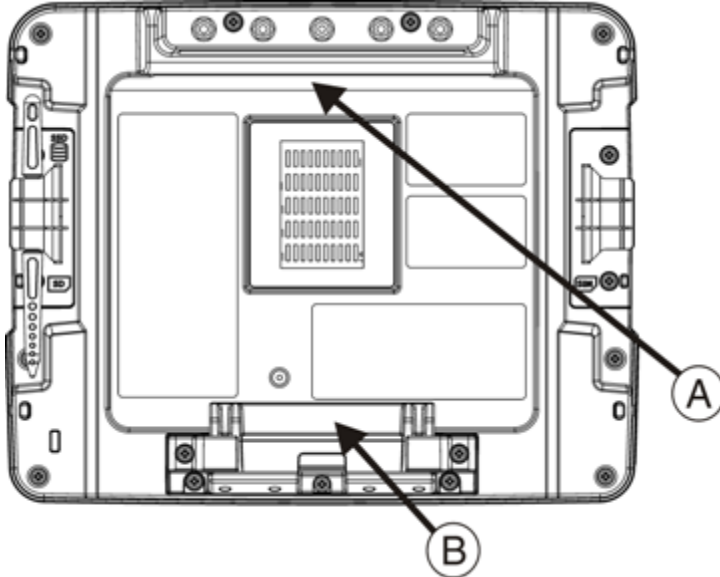
Preparing the Dock

1. Attach RAM mount to vehicle (see *Thor VM1 Vehicle Mounting Reference Guide*).
2. [Attach accessories](#) to dock.
3. Attach power cable, [10-60VDC](#) or [72-144VDC](#).
4. If the tethered I/O port cover is in place, lift the cover to expose the I/O port on the dock. The tether allows the cover to be swung over the back of the dock.

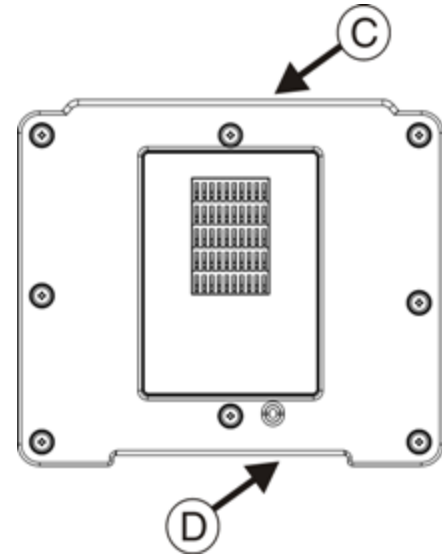


Place the Thor VM1 in the Dock

Back of Thor VM1



Front of Quick Mount Smart Dock



A. Notch on Thor VM1

B. Release lever

C. Upper Lip on Dock

D. Lower Lip on Dock

1. Locate the notch on the upper rear of the Thor VM1 (item A above).
2. Slide this notch over the top lip (C) of the Dock. Slide the Thor VM1 from side to side on the Dock to make sure it fully engages on the lip of the Dock. If the Thor VM1 cannot be slid side to side, the lip is engaged.
3. Pull the quick release lever (B) on the Thor VM1 down and push the Thor VM1 against the Dock.
4. Release the quick release lever. The quick release lever catches the lower lip on the Dock and secures the Thor VM1 to the Dock.
5. If necessary, adjust the viewing angle of the Thor VM1.

Removing the Thor VM1 from the Dock

The Thor VM1 may be removed from the Quick Mount for limited periods of use or the transfer from vehicle to vehicle.

The UPS battery inside the Thor VM1 powers a fully functional Thor VM1 for a minimum of 30 minutes.

To remove the Thor VM1 from the Dock:

1. Pull the quick release lever (item B) downward on the back of the Thor VM1.
2. Pull the bottom of the Thor VM1 away from the Dock.
3. Lift the Thor VM1 away from the Dock.

Backlights and Indicators

Display Backlight

There are several configuration options for the Thor VM1 display backlight:

Power Management

The display backlight is controlled by power management. When the user activity timer expires, the display backlight is turned off. Different timeouts can be set for when the Thor VM1 is operating on battery (UPS) or external power.

Please refer to the *Thor VM1 Reference Guide* for details.

Backlight Brightness

Note: When automatic brightness control is enabled, the manual display brightness controls described below have no effect.

The intensity of the display backlight can be manually configured:

Brightness control does not “roll-over” from minimum to maximum or from maximum to minimum. Continuously holding down the up or down arrow keys does not cause an automatic repeat of the up (or down) arrow key.

If the Thor VM1 is equipped with an outdoor display, the display can be configured to automatically adjust brightness depending on the level of ambient light.

Please refer to the *Thor VM1 Reference Guide* for details.

Screen Blanking

The Thor VM1 can be configured to blank (blackout) the display while the vehicle is in motion.

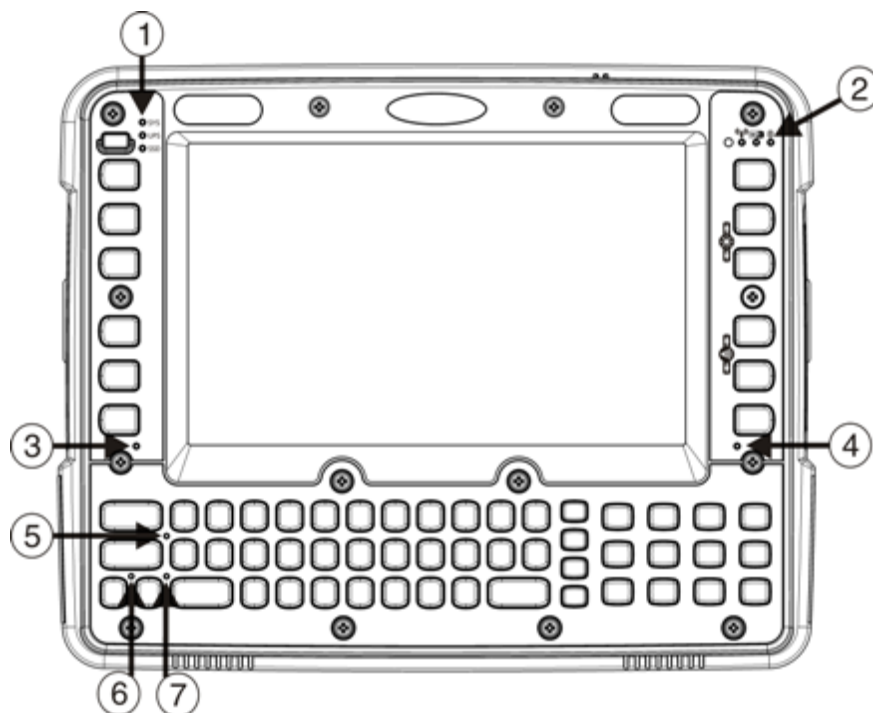
Please refer to the *Thor VM1 Reference Guide* for details.

Keypad Backlight

By default, the keypad backlight follows the display backlight. The keypad backlight can be disabled.

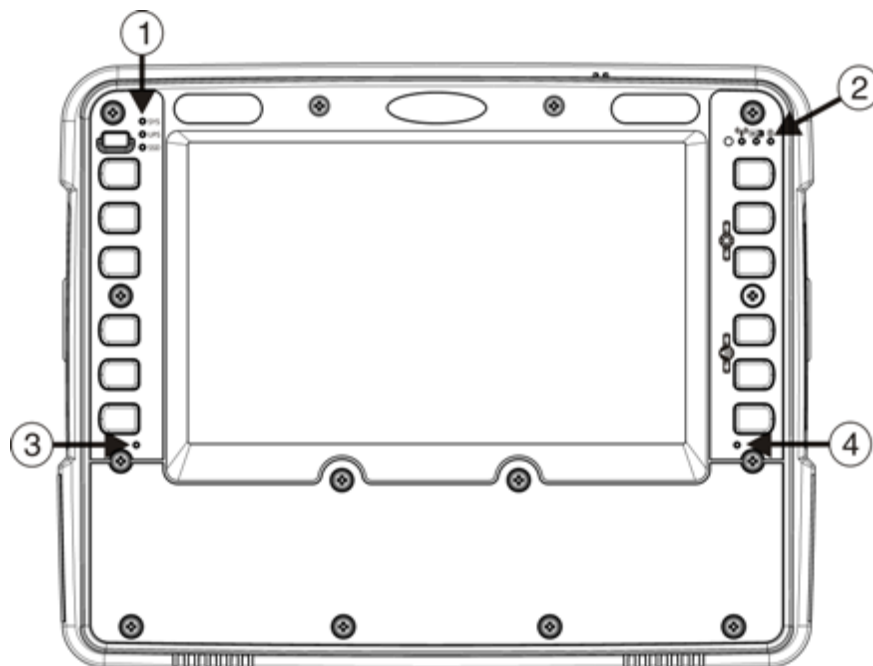
Please refer to the *Thor VM1 Reference Guide* for details.

LED Functions

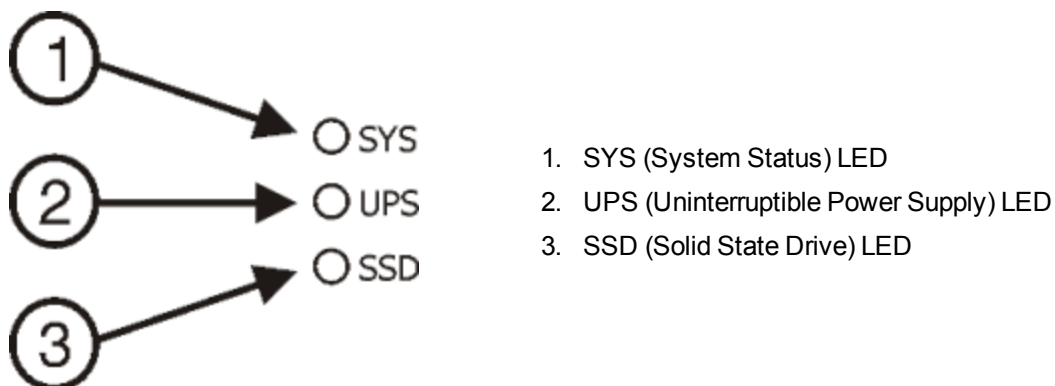


1. System LEDs
2. Connection LEDs
3. 2nd LED
4. Shift/CapsLock LED
5. Shift/CapsLock LED *
6. Ctrl LED *
7. Alt LED *

* 64-key keyboards only



System LEDs



SYS (System Status) LED

LED Behavior	System State
Solid Green	• On • On but Backlight Off • On but Display Off
Green blinking very slowly External power present (1/2 sec. on, 4 1/2 sec. off)	• Suspend
Off External power present	• Off
Off External power not present	• Off, • Suspend
Green blinking slowly External power present (1/2 sec. on, 1 1/2 sec. off)	CPU temperature less than -20°C, Heater warming CPU for 30 sec.
Green blinking slowly External power not present (1/2 sec. on, 1 1/2 sec. off)	CPU temperature less than -20°C, Need to move unit to warmer environment

UPS Status LED

The behavior of the UPS LED depends if external power is connected or not.

External Power Present

LED Behavior	Status
Off	• No UPS charging, • UPS charged
Solid Green	UPS charging
Solid Amber	• Any charging fault, • Out of charging temperature range, • No UPS present, • Charge timeout

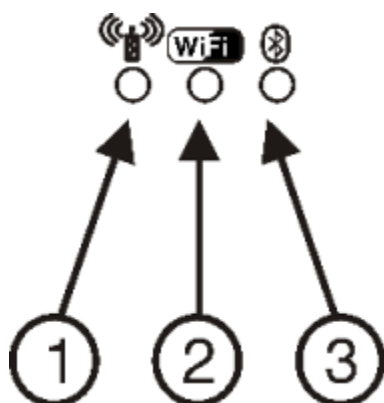
External Power Not Present

LED Behavior	Status
Off	• Unit off, • UPS not present
Solid Amber	UPS supplying power and discharging
Solid Red	Approximately 2 minutes runtime until shutdown

SSD (Solid State Drive) LED

LED Behavior	Status
Flashing Green	SSD read or write activity.
Off	No SSD read or write activity.

Connection LEDs



1. WWAN LED
2. WiFi LED
3. Bluetooth LED

WWAN LED

LED Behavior	Status
Solid Green	Indicates a WWAN connection to a network.
Off	Indicates no WWAN connection.

WiFi LED

LED Behavior	Status
Solid Green	Indicates a connection with an IP address to an Access Point
Off	Indicates no connection to an Access Point.

Bluetooth LED

LED Behavior	Status
Blue Blinking Slowly	Bluetooth is paired but not connected to a device.
Blue Blinking Medium	Bluetooth is paired and connected to a device.
Blue Blinking Fast	Bluetooth is discovering Bluetooth devices.
Off	Bluetooth hardware has been turned off.

Keyboard LEDs

The keyboard LEDs are located near the specified key.

2nd LED

LED Behavior	Status
Solid Green	- Indicates the 2nd modifier key is active. 2nd mode is invoked for the next keypress only. - Pressing the 2nd key a second time exits this modifier mode and turns off the LED.
Off	2nd mode is not invoked.

Shift LEDs

For the 64 key keyboard, there is one LED next to each **Shift** key. Both LEDs indicate the status of Shift or Caps Lock mode.

For the 12 key keyboard, there is a single **Shift** key and a single LED.

LED Behavior	Status
Blinking Green	- Indicates the keypad is in Shift mode. Shift mode is invoked for one keypress. - Pressing the Shift key places the system in Shift mode. - To exit Shift mode, press the Shift key again.
Solid Green	- When solid green, indicates the keypad is in Caps Lock mode. Caps Lock mode is invoked until canceled. - Pressing the 2nd key followed by the Shift key places the system in Caps Lock mode. - To exit Caps Lock mode, press 2nd + Shift again.
Off	Neither Shift or Caps Lock mode is invoked.

Ctrl LED

The **Ctrl** key is not present on the 12 key keypad.

LED Behavior	Status
Solid Green	- Indicates the Ctrl modifier key is active. Ctrl mode is invoked for the next keypress only. - Pressing the Ctrl key a second time exits this modifier mode and turns off the LED.
Off	Ctrl mode is not invoked.

Alt LED

The **Alt** key is not present on the 12 key keypad.

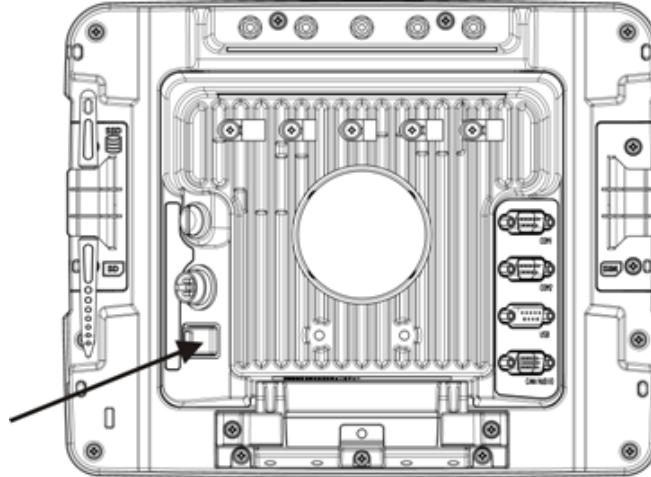
LED Behavior	Status
Solid Green	- Indicates the Alt modifier key is active. Alt mode is invoked for the next keypress only. - Pressing the Alt key a second time exits this modifier mode and turns off the LED.
Off	Alt mode is not invoked.

Power Up



If a USB drive, such as a thumb drive is attached to the Thor VM1, the device attempts to boot from the USB drive and cannot. Please remove the USB drive and power up the Thor VM1 again.

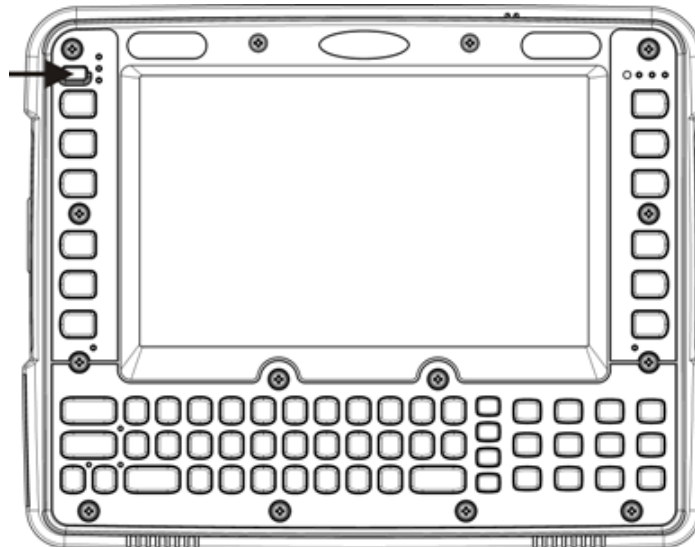
The Quick Mount Smart Dock has a power switch on the back.



The "On" side of this rocker switch has a raised bump to allow the state of the switch to be determined when the switch may not be easily viewed, for example, after the Dock is mounted in a vehicle.

After external power has been connected and the Thor VM1 has been mounted in the Dock, press the side of the power switch with the raised bump to pass power from the Dock to the Thor VM1. Generally, once the Dock is powered On, there is no need to power if Off.

Next locate the [power button](#) on the front of the Thor VM1.



Press the power button to turn the Thor VM1 on. When the Windows desktop is displayed or an application begins, the power up sequence is complete.

Tapping the Touch Screen with a Stylus

Note: Always use the point of the stylus for tapping or making strokes on the touch screen.

Never use an actual pen, pencil, or sharp/abrasive object to write on the touch screen.

Hold the stylus as if it were a pen or pencil. Touch an element on the screen with the tip of the stylus then remove the stylus from the screen.

Firmly press the stylus into the stylus holder when the stylus is not in use.

Using a stylus is similar to moving the mouse pointer then left-clicking icons on a desktop computer screen.

Using the stylus to tap icons on the touch screen is the basic action that can:

- Open applications
- Choose menu commands
- Select options in dialog boxes or drop-down boxes
- Drag the slider in a scroll bar
- Select text by dragging the stylus across the text
- Place the cursor in a text box prior to typing in data
- Place the cursor in a text box prior to retrieving data using a scanner/imager or an input/output device connected to a serial port.

A stylus replacement kit is available.

Set Power Scheme Timers

Start > Settings > Control Panel > Power > Schemes

Change the parameter values and tap OK to save the changes.

User Idle	An amount of time has passed, set by the User Idle timer, and the device shuts down a minimum number of services e.g., backlights. The System Idle timer and the Suspend timer have not expired yet.
System Idle	An amount of time has passed, set by the System Idle timer, and the device shuts down a few more services e.g., display. The System Idle timer has expired and the Suspend timer has not expired yet.
Suspend	Suspend mode is entered when (1) the unit is inactive for a predetermined period of time, (2) the user taps the Power key, or (3) Start > Suspend is chosen. Inactivity means that internal devices that reset the power state are not active and the Suspend Timer has expired.

Battery Power Scheme

Use this option to configure the Thor VM1 behavior when powered by the UPS battery.

Switch state to User Idle	Default is After 3 seconds
Switch state to System Idle	Default is After 15 seconds
Switch state to Suspend	Default is After 5 minutes

AC Power Scheme

Use this option when the Thor VM1 will be running on external power (e.g., connected to an A/C power source or vehicle power).

Switch state to User Idle	Default is After 2 minutes
Switch state to System Idle	Default is After 2 minutes
Switch state to Suspend	Default is After 5 minutes

The timers are cumulative. The System Idle timer begins the countdown after the User Idle timer has expired and the Suspend timer begins the countdown after the System Idle timer has expired. When the User Idle timer is set to “Never”, the power scheme timers never place the Thor VM1 in User Idle, System Idle or Suspend modes (even when the Thor VM1 is idle).

Using the Battery Power Scheme Defaults listed above, the cumulative effect results in the following:

- The backlight turns off after 3 seconds of no activity,
- The display turns off after 18 seconds of no activity (15 seconds + 3 seconds),
- And the Thor VM1 enters Suspend after 5 minutes and 18 seconds of no activity.

Adjust Speaker Volume

The Thor VM1 has two speakers, located on the bottom of the unit.

Speaker volume can be adjusted to a comfortable level for the listener by using the keypad or by changing parameters in the Volume & Sounds control panel.

Using the Keypad

Note: Sounds must be enabled (Settings > Control Panel > Volume & Sounds) before the following key sequences can adjust the volume.

The volume is increased or decreased one step each time the volume key sequence is pressed.

To adjust speaker volume, locate the **2nd** key to the left of the display. Press the **2nd** key.

Adjust the speaker volume :

- Use the **F9** key for volume Up and **F10** key for volume Down.
- Adjust volume until the speaker volume is satisfactory.
- Press the **Enter** key to exit this mode.

The LED for the 2nd key is lit until the special modifier mode (set audio speaker volume) is complete.

Volume control using a keypad key press has volume setting increments that match those supported by the Volume and Sounds control panel. Volume does not “roll-over” from minimum to maximum or from maximum to minimum. Continuously holding down the up or down arrow keys does not cause an automatic repeat of the up (or down) arrow key.

Using the Control Panel

Start > Settings > Control Panel > Volume & Sounds > Volume

Change the volume setting and tap **OK** to save the change.

You can also select / deselect sounds for key clicks and screen taps and whether each is loud or soft.

As the volume scrollbar is moved between Loud and Soft, the Thor VM1 emits a tone each time the volume increases or decreases in decibel range.

Set Date and Time Zone

Tap **Start > Settings > Control Panel > Date/Time** icon or tap the Date/Time in the taskbar.

Set Date, Time, Time Zone, and assign a Daylight Savings location on the Thor VM1 after a warm boot or anytime.

There is very little functional change from standard desktop PC Date/Time Properties options. Adjust the settings and tap the OK button or the Apply button to save changes to the registry. Any changes take effect immediately.

Double-tapping the time displayed in the Taskbar causes the Date/Time Properties screen to appear.

Grab Time Utility

The GrabTime utility can be configured to synchronize the time with a local server during each reboot function.

Tap the Sync button to synchronize date and time with a networked time server. By default, the Thor VM1 operating system first searches for a time server on the local intranet. If not found, it then searches the Internet for a time server. A connection to the Internet is required for this option.

Autolaunch Time-Sync

Start > Settings > Control Panel > Options > Communication

By default, TimeSync does not automatically run on the Thor VM1. To enable TimeSync to run automatically on the Thor VM1 using the GrabTime utility, check this checkbox.

Synchronize with a Local Time Server

By default, GrabTime synchronizes via an Internet connection. To synchronize with a local time server:

1. Use ActiveSync to copy GrabTime.ini from the My Device > Windows folder on the Thor VM1 to the host PC.
2. Edit the copy of GrabTime.ini on the host PC. Add the local time server's domain name to the beginning of the list of servers. You can optionally delete the remainder of the list.
3. Copy the modified GrabTime.ini file to the My Device > System folder on the Thor VM1. The System/GrabTime.ini file takes precedence over the Windows/GrabTime.ini file. System/Grabtime.ini also persists after a coldboot; Windows/Grabtime.ini does not persist.

Touch Screen

Calibrating the Touch Screen

If the touch screen is not responding properly to stylus taps, you may need to recalibrate the touch screen.

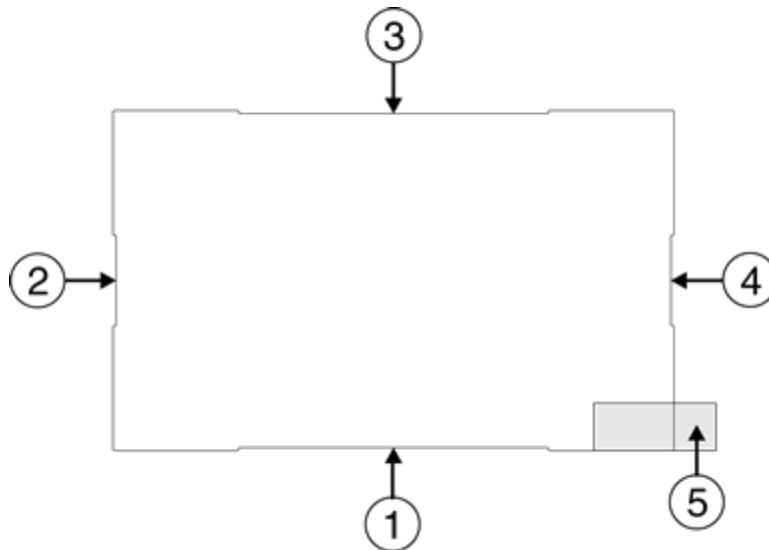
Recalibration involves tapping the center of a target. If you miss the center, keep the stylus on the screen, slide it over the target's center, and then lift the stylus.

To recalibrate the screen, select **Start > Settings > Control Panel > Stylus > Calibration** tab.

Follow the instructions on the screen. Tap the OK button when complete, if necessary.

Apply the Touch Screen Protective Film

The Thor VM1 touch screen protective film is shipped in packs of 10. The protective film is flexible and treated with an anti-glare coating on the outer surface.



The protective film is slightly larger than the Thor VM1 touch screen, however the notches on the edge of the protective film (indicated by arrows 1 - 4 above) correspond to the display size of the Thor VM1. The protective film is not adhesive. The corner edges are designed to fit between the Thor VM1 display and the display housing to hold the protective film in place.

A protective backing is applied to the rear surface of the protective film. A pull tab (item 5 above) is attached to the protective backing for easy removal of the protective backing from the film.

Installation

1. Make sure the touch screen is clean and dry before installation. Please review [Cleaning the Display](#) for instructions on suitable cleaning agents.
2. Pull the release tab to separate the protective backing from the rear of the protective film. Avoid touching the rear side of the protective film while removing the liner.
3. Place the rear side of the protective film against the Thor VM1 display, roughly centering the protective film over the display.

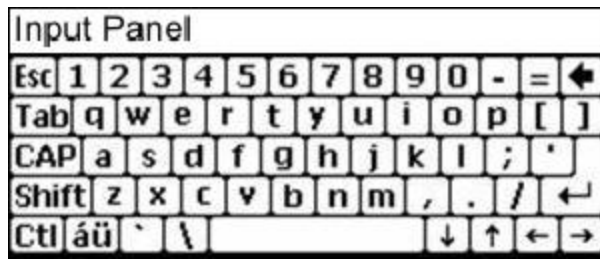
-
4. Slide the protective film until one corner can be slid back between the touch screen and the display housing as the protective film is re-centered on the display. It may be necessary to press the edges of the protective film against the display to ensure the entire edge slides under the display housing. It is easiest to start with one of the bottom corners.
 5. Slide the protective film away from the other bottom corner. The film may bulge slightly away from the User's Guide as it is being slid. Only slide the protective film enough so that the protective film can slide under the display housing on that corner when the protective film is returned to center.
 6. Repeat with each of the top corners, sliding the protective film away from the corner just enough that the protective film can slide under the display housing when the protective film is returned to center.
 7. It may be necessary to flex the protective film during the install, however use care not to flex the protective film so much that the protective film kinks.
 8. Once all corners are secure under the display housing, adjust the protective film, if necessary, so it is centered on the touch screen.

Removal

1. To remove the protective film, slide the protective film in one direction until the edge clears.
2. Lift up on the edge of the protective film so it does not slide between the touch screen and display housing when the protective film is slid back to the center.
3. Repeat until all edges are free and remove the protective film.

Contact [Technical Assistance](#) about protective film packs designed specifically for your Thor VM1 touch screen.

Using the Input Panel / Virtual Keyboard



The virtual keyboard is always available when needed e.g., text entry.

Place the cursor in the text entry field and, using the stylus:

- Tap the Shift key to type one capital letter.
- Tap the CAPS key to type all capital letters.
- Tap the áü key to access symbols.

Some applications do not automatically display the Input Panel. In this case, do the following to use the Input Panel:



Input Panel icon in the taskbar



Keyboard icon in the taskbar

- Tap the Input Panel or Keyboard icon in the taskbar.
- Select **Keyboard** from the menu.
- Move the cursor into the text entry field when you want to enter data using the Input Panel.

When finished entering data, tap the icon in the Taskbar again. Select **Hide Input Panel**.

Setup Terminal Emulation Parameters

Before you make a host connection, you will, at a minimum, need to know:

- the alias name or IP address (Host Address) and
 - the port number (Telnet Port) of the host system to properly set up your host session.
1. Make sure the mobile client network settings are configured and functional. If you are connecting over wireless LAN (802.11x), make sure your mobile client is communicating with the Access Point.
 2. From **Start > Program**, run **RFTerm** or tap the RFTerm icon on the desktop.
 3. Select **Session > Configure** from the application menu and select the "host type" that you require. This will depend on the type of host system that you are going to connect to; i.e., 3270 mainframe, AS/400 5250 server or VT host.
 4. Enter the "Host Address" of the host system that you wish to connect to. This may either be a **DNS name or an IP address of the host** system.
 5. Update the **telnet port number**, if your host application is configured to listen on a specific port. If not, just use the default telnet port.
 6. Select **OK**.
 7. Select **Session > Connect** from the application menu or tap the "Connect" button on the Tool Bar. Upon a successful connection, you should see the host application screen displayed.

To change options such as Display, Colors, Cursor, Bar Code, etc., please refer to these sections in the *RFTerm Reference Guide* for complete descriptions of these and other features.

Using the AppLock Switchpad

Note: The touch screen must be enabled. Select **Start > Settings > Control Panel > Options > Misc. tab** to verify touch screen status.



Click the switchpad icon in the taskbar.

A checkmark on the switchpad menu indicates applications currently active or available for Launching by the Thor VM1 user. When Keyboard, on the Switchpad Menu, is selected, the default input method (Input Panel, Transcriber, or custom input method) is activated.

Using the Keypad

One switch key sequence (or hotkey) is defined by the Administrator for the end-user to use when switching between locked applications. This is known as the **Activation key**.

When the switch key sequence is pressed on the keypad, the next application in the AppLock configuration is moved to the foreground and the previous application moves to the background. The previous application continues to run in the background. Thor VM1 key presses affect the application in focus only.

Using the Touch Screen

The figure shown above is an example and is shown only to aid in describing how the user can switch between applications using a stylus.

When the user taps the Switchpad icon with the stylus, a menu pops up listing the applications available to the user. The user can tap an application name in the popup menu and the selected application is brought to the foreground. The previous application continues to run in the background. Stylus taps affect the application in focus only. When the user needs to use the Input Panel, they tap the Keyboard option. Input Panel taps affect the application in focus only.

Connecting Bluetooth Devices

Before connecting to Bluetooth Devices:

- The system administrator has discovered, paired, connected and disconnected (using LXEZ Pairing) Bluetooth devices for each Thor VM1.
- The system administrator has enabled and disabled LXEZ Pairing parameters for the Thor VM1.
- The system administrator has also assigned a Computer Friendly Name using LXEZ Pairing for the Thor VM1.

To connect Bluetooth devices, the Thor VM1 should be as close as possible and in direct line of sight (distances up to 32.8 feet or 10 meters) with the targeted Bluetooth device during the discovery and pairing process.

If the devices are in Suspend, tap the power key to wake the Thor VM1.

Using the correct procedure, wake the targeted Bluetooth device if necessary.

There may be audible or visual signals as both devices discover and pair with each other.

Taskbar Connection Indicator

	Thor VM1 is connected to one or more of the targeted Bluetooth device(s).
	Thor VM1 is not connected to any Bluetooth device. Thor VM1 is ready to connect with any Bluetooth device. Thor VM1 is out of range of all paired Bluetooth device(s). Connection is inactive.

There may be audible or visual signals from paired devices as they move back into range and re-connect with the Bluetooth hardware in the Thor VM1.

Reboot

When the Windows desktop is displayed or an application begins, the power up (or reboot) sequence is complete.

Warmboot

A warmboot reboots the computer without erasing any registry data. Configuration settings and data in RAM are preserved during a warmboot. Network and ActiveSync sessions are lost and any data in running applications that had not been previously saved may be lost. CAB files already installed remain installed.

There are several methods available:

- Using the Registry, select **Start > Settings > Control Panel > Registry** and tap the **Warmboot** button. The Thor VM1 immediately warmboots.
- Using the Start menu, select **Start > Run** and type WARMBOOT in the text box. Press Enter. The Thor VM1 immediately warmboots. The WARMBOOT text command is not case-sensitive.
- For the 64-key keypad, use the **Ctrl + Alt + Del** keypress sequence to reboot the Thor VM1. The keys may be pressed in sequence; they do not need to be held down simultaneously.
- For the 12-key keypad, use the **2nd + F5 + Shift** keypress sequence to reboot the Thor VM1. The keys may be pressed in sequence; they do not need to be held down simultaneously. This reboot sequence also works on the 64-key keypad.

Restart

A restart reboots the computer without erasing any registry data. Configuration settings are preserved during a restart. The contents of RAM are erased. Network and ActiveSync sessions are lost and any data in running applications that had not been previously saved may be lost. The OS and CAB files are reloaded.

To restart, select **Start > Settings > Control Panel > Registry** and tap the **Restart** button.

Cleaning the Touch Screen

Note: These instructions are for components made of glass. If there is a removable protective film sheet on the display, remove the film sheet before cleaning the screen.

Keep fingers and rough or sharp objects away from the bar code reader scanning aperture and the mobile device touch screen.

If the glass becomes soiled or smudged, clean only with a standard household cleaner such as Windex® without vinegar or use Isopropyl Alcohol. Dampen the cloth with the cleaner and then wipe the surface.

Do not use paper towels or harsh-chemical-based cleaning fluids since they may result in damage to the glass surface. Use a clean, damp, lint-free cloth.

Do not scrub optical surfaces. If possible, clean only those areas which are soiled. Lint and particulates can be removed with clean, filtered canned air.

Startup Help

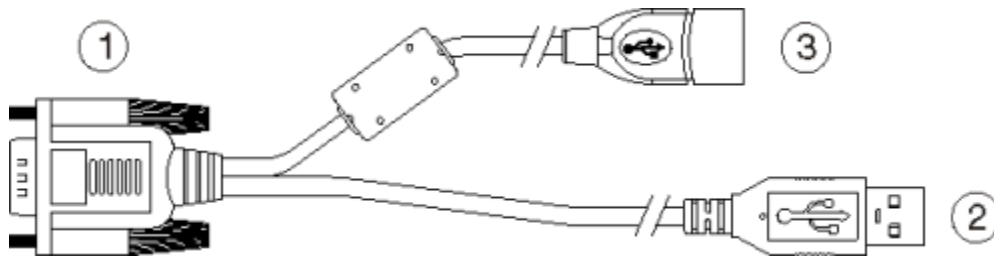
Contact [Technical Assistance](#) if you need more help.

Touch screen is not accepting stylus taps or needs recalibration.	See Also: "Calibrating the Touch Screen" when the touch screen needs recalibration, orPress Ctrl+Esc to force the Start Menu to appear. Use the tab, backtab and arrow keys to move the cursor from element to element.
Thor VM1 seems to lockup as soon as it is rebooted.	There may be slight delays while the wireless client connects to the network, authorization for voice-enabled applications complete, and Bluetooth relationships establish or re-establish. When an application begins, the Thor VM1 is ready for use.

Chapter 3 - Connecting Cables to the Thor VM1

Connect Cable - USB Client

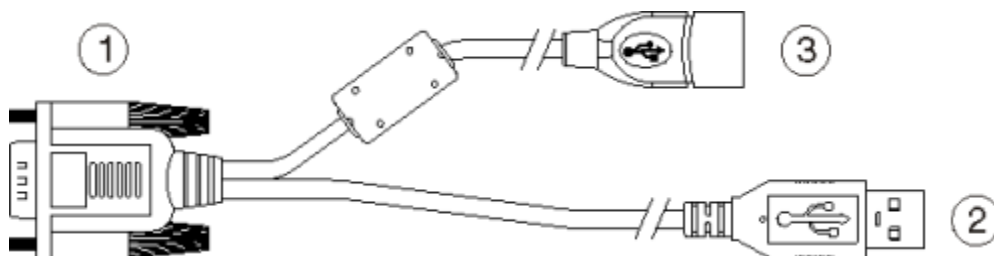
USB-C Cable Assembly



1. D9 Connector
2. USB Client Connector (for connecting to a USB host)
3. USB Host Connector (for connecting to a USB device)

1. Seat the cable end connector (connector 1) firmly over the USB Cable Connector on the Quick Mount Smart Dock.
2. Tighten the thumbscrews in a clockwise direction. Do not over tighten.
3. Connector 2 on the cable provides a USB-Client connection. Connector 3 (USB-Host) is not used for the USB-C connection.

Connect Cable - USB Host

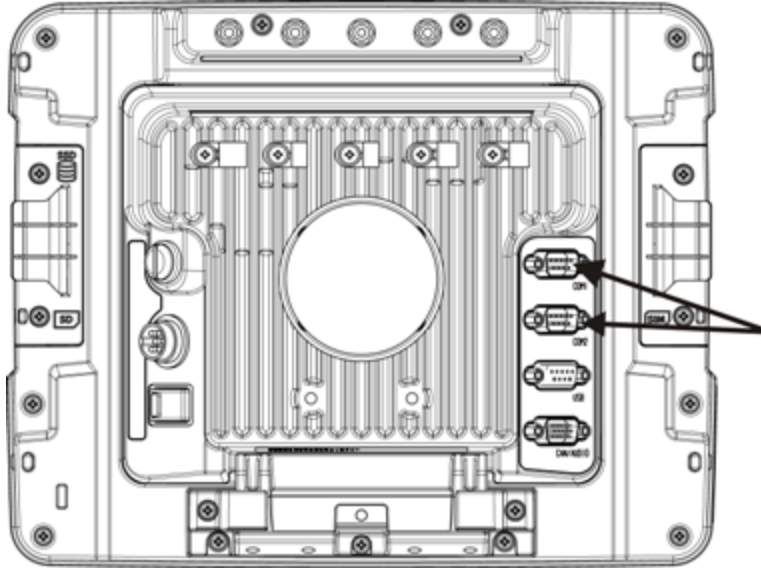


1. D9 Connector
2. USB Client Connector (for connecting to a USB host)
3. USB Host Connector (for connecting to a USB device)

1. Seat the cable end connector (connector 1) firmly over the USB Cable Connector on the Quick Mount Smart Dock.
2. Tighten the thumbscrews in a clockwise direction. Do not over tighten.
3. Connector 3 on the cable provides a USB-Host connection. Connector 2 (USB-Client) is not used for the USB-H connection.

Connect Cable - Serial

Note: Pin 9 of the desired COM port must be configured to provide +5V or RI as needed for the connected device. See the Thor VM1 Reference Guide for details.

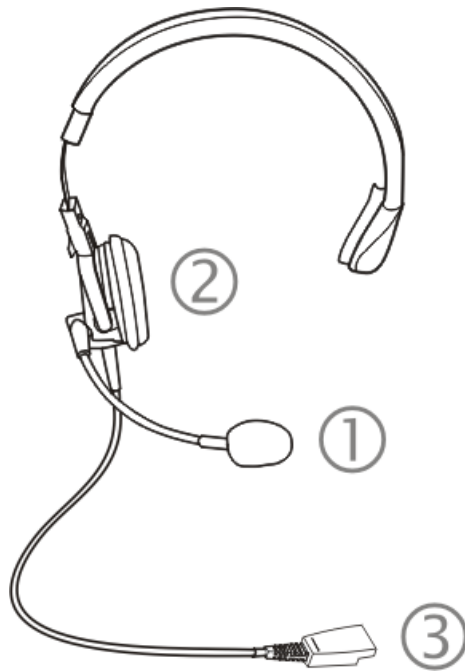


1. Seat the cable end connector firmly over the serial COM port on the Quick Mount Smart Dock.
2. Turn the thumbscrews in a clockwise direction. Do not over tighten.
3. Use a strain relief clamp to secure the cable to the Thor VM1.
4. Connect the other cable end to the desired serial device.

Connect a Tethered Scanner

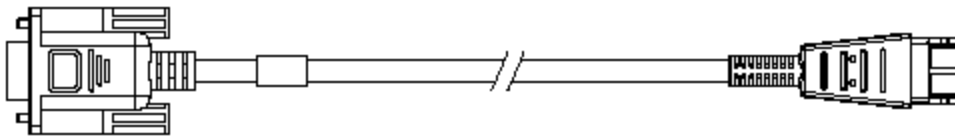
1. The scanner cable is attached to either the COM1 or COM2 port on the Quick Mount Smart Dock.
2. Connect the serial cable for the scanner as directed above.
3. When the Thor VM1 is powered on, it provides power to the serial scanner.

Connecting the Headset Cable



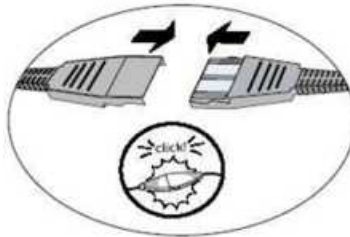
Headset

1. Microphone
2. Headphones
3. Connects to end of voice cable



Thor VM1 **Audio Cable**

1. Seat the D15 cable end connector firmly over the CANbus/Audio Connector on the Quick Mount Smart Dock.
2. Tighten the thumbscrews in a clockwise direction. Do not over tighten.



3. Slide the cable ends together until they click shut. Do not twist or bend the connectors. The Thor VM1 internal microphone and speakers are automatically disabled when the headset is connected.

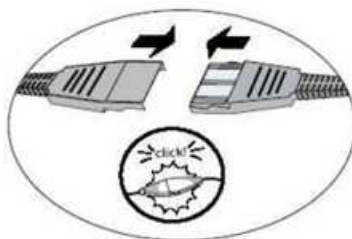
The Thor VM1 is ready for voice-enabled applications.

Adjust Headset / Microphone and Secure Cable



The headset consists of an earpiece, a microphone, a clothing clip and a cable. The headset attaches to the audio cable end of the voice cable which attaches to the Thor VM1.

Align the audio connector and the headset quick connect cable end. Firmly push the cable ends together until they click and lock in place.



Do not twist the microphone boom when adjusting the microphone. The microphone should be adjusted to be about two finger widths from your mouth.

Make sure the microphone is pointed at your mouth. Note the small "Talk" label near the mouthpiece. Make sure the Talk label is in front of your mouth. The microphone cable can be routed over or under clothing.

Under Clothing

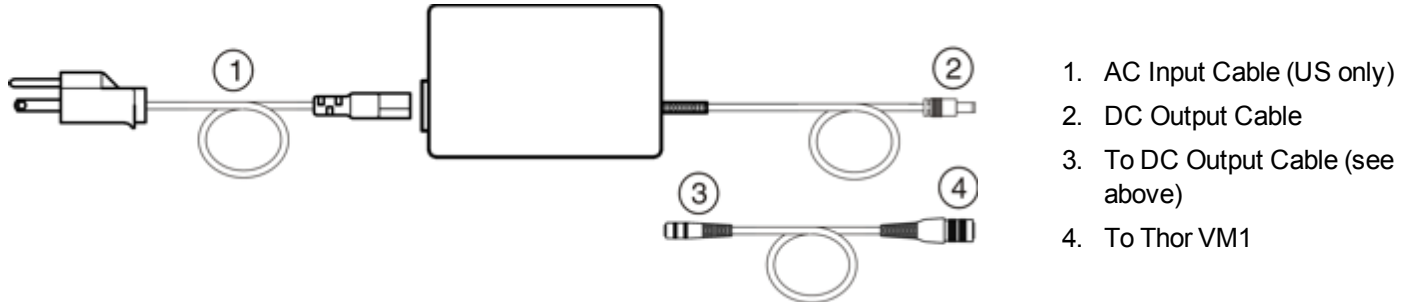
- Leave the cable exposed only at the top of the collar.
- Be sure to leave a small loop of cable to allow movement of your head.

Over Clothing

- Use clothing clips to hold the cable close to your body.
- Tuck the cable under the belt, but leave a small loop where it goes under the belt.
- Do not wear the cable on the front of your body. It may get in your way or get caught on protruding objects.

Connecting an AC/DC Power Supply

Note: The Honeywell-approved AC Power Supply and Adapter Cable are only intended for use in a 25°C (77°F) maximum ambient temperature environment.



In North America, this unit is intended for use with a UL Listed ITE power supply with output rated 12 – 80VDC, minimum 60W. Outside North America, this unit is intended for use with an IEC certified ITE power supply with output rated 12 – 80VDC, minimum 60W.

The external power supply may be connected to either a 120V, 60Hz supply or, outside North America, to a 230V, 50Hz supply, using the appropriate detachable cordset. In all cases, connect to a properly grounded source of supply provided with maximum 15 Amp overcurrent protection (10 Amp for 230V circuits).

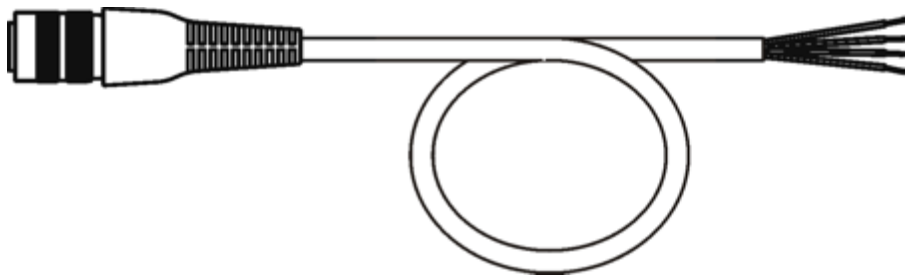
1. Turn the Thor VM1 off.
2. Connect the detachable cordset provided by Honeywell (US only, all others must provide their own cable) to the external power supply (IEC 320 connector).
3. Plug cordset into appropriate, grounded, electrical supply receptacle (AC mains).
4. Connect the DC Output Cable end to the power connector on the Thor VM1 Quick Mount.
5. Turn the Thor VM1 on.

Connecting Vehicle Power

Complete vehicle cradle mounting and power instruction is contained in the *Thor VM1 Vehicle Mounting Reference Guide*.

Vehicle 10-60VDC Power Connection

Caution: 	For installation by trained service personnel only.
Caution: 	For proper and safe installation, the input power cable must be connected to a fused circuit on the vehicle. This fused circuit requires a 10 Amp maximum time delay (slow blow) high interrupting rating fuse. If the supply connection is made directly to the battery, the fuse should be installed in the positive lead within 5 inches of the battery positive (+) terminal. Note: For North America, a UL Listed fuse is to be used.



VM1054CABLE

Wire Color	Connection
Red	DC + (10-60VDC)
Black	DC -
Green	Ground
Blue	Ignition Input (optional)

Note: Correct electrical polarity is required for safe and proper installation. See the figures below for additional wire color-coding specifics.

The Thor VM1 DC input wires (Red DC+ and Black DC-) and the Blue ignition input wire are galvanically isolated. The Green ground input is used for electrostatic discharge (ESD) protection.

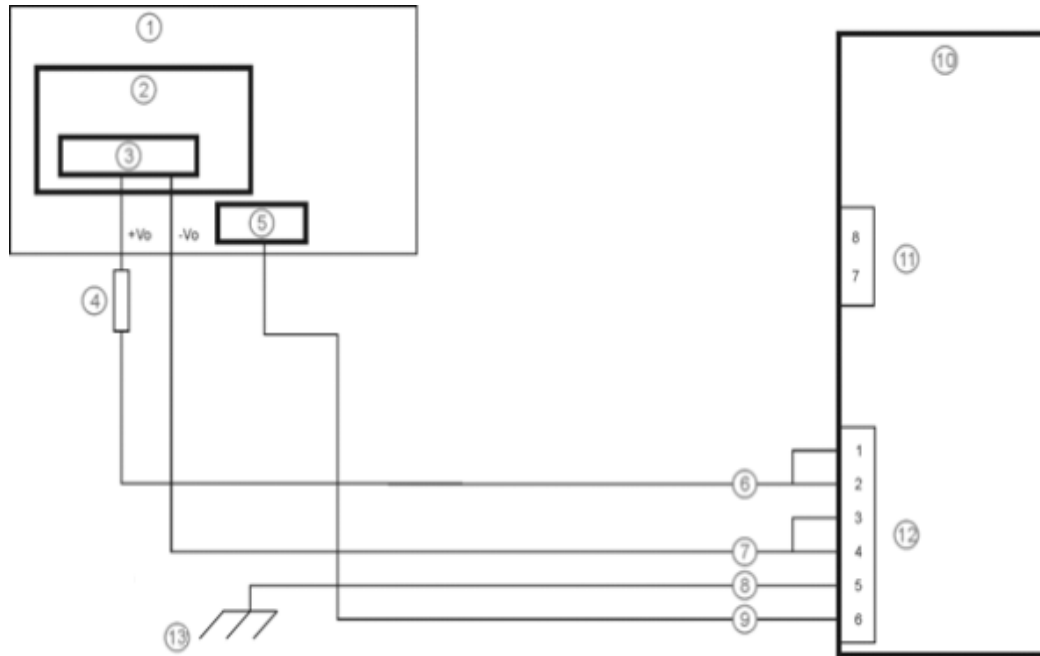
Connect Vehicle 10-60VDC

1. The Thor VM1 must not be mounted in the Quick Mount Smart Dock. The power switch on the Dock must be turned **Off**. The power cable must be UNPLUGGED from the Dock.
2. While observing the fuse requirements specified above, connect the power cable as close as possible to the actual battery terminals of the vehicle (if using unswitched power).
3. Wiring installation
 - Use proper electrical and mechanical fastening means for terminating the cable. Properly sized “crimp” type electrical terminals are an accepted method of termination. Please select electrical connectors sized for use with 20AWG (0.81mm²) conductors.
 - Refer to the diagrams following this section for wire colors and connections:
 - [Ignition Control](#)
 - [Auto-On Control](#)
 - [Manual Control](#)
 - [VX6/VX7 Adapter Cable](#)
5. Route the power cable:
 - Route the power cable the shortest way possible removing any left-over cable
 - The cable is rated for a maximum temperature of 105°C (221°F). Therefore, routing this cable it should be protected from physical damage and from surfaces that might exceed this temperature.
 - Cable should be protected from physical damage from moving parts
 - Do not expose the cable to chemicals or oil that may cause the wiring insulation to deteriorate
 - Always route the cable so that it does not interfere with safe operation and maintenance of the vehicle.
 - Provide mechanical support for the cable by securing it to the vehicle structure at approximately one foot intervals, taking care not to over tighten and pinch conductors or penetrate outer cable jacket.
5. Connect the DC power cable to the input connector on the back of the Dock.
6. Flip the power switch on the back of the Dock to On.
7. The Thor VM1 can be installed in the Dock.
8. If using the [optional screen blanking feature](#), install the screen blanking box or switch.

Once installation is complete, remember to start the Thor VM1 and configure the Auto-On behavior. Please see the *Thor VM1 Reference Guide* for details: **Start > Settings > Control Panel > Options > Misc** tab.

Ignition Control

Ignition wire must be connected and Auto-On must be disabled. When switched vehicle power is available the Thor VM1 ignition signal wire can be connected (less than 1mA over input voltage range) to the switched circuit to allow the Thor VM1 to power on when the vehicle is switched on and go into suspend when the vehicle is switched off.

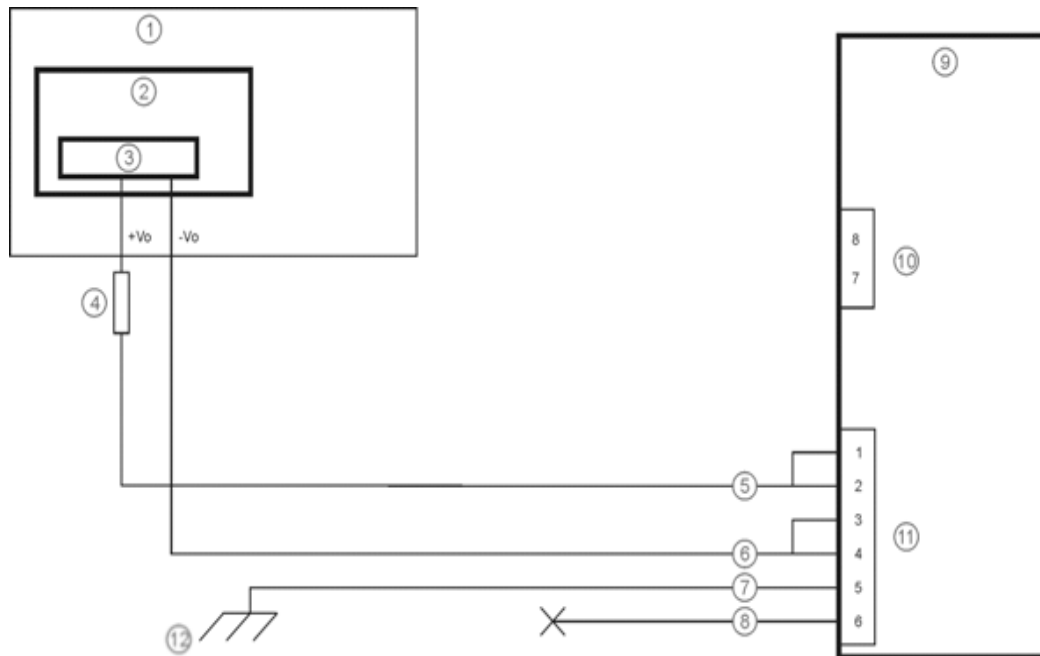


1. Existing Circuitry on Vehicle
2. Forklift Battery
3. Main Switch
4. 10A Slow blow Fuse close to power source
5. Ignition
6. Red Wire (DC +)
7. Black Wire (DC -)

8. Green Wire (Ground)
9. Blue Wire (Ignition Signal)
10. Thor VM1 Computer in Quick Mount Smart Dock
11. COM1 or COM2 Connector on Dock
12. Circular Power Connector on Dock
13. If the vehicle chassis is not a suitable ground, connect the Green wire to the negative terminal (-Vo) of the power source.

Auto-On Control

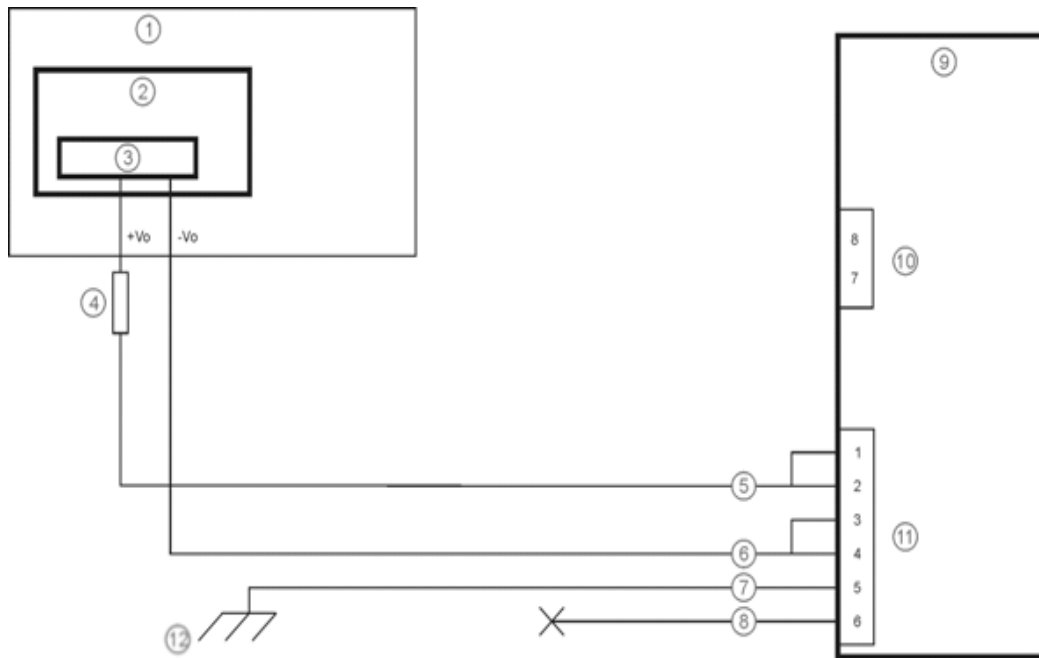
Auto-On mode must be selected. The vehicle supply connections should be made to vehicle switched power to allow the terminal to automatically power-up when vehicle power is switched on or when the power switch on the back of the Dock is placed in the On position. The Ignition wire is not used and should be left disconnected.



- | | |
|---|---|
| 1. Existing Circuitry on Vehicle | 9. Thor VM1 Computer in Quick Mount Smart Dock |
| 2. Forklift Battery | 10. COM1 or COM2 Connector on Dock |
| 3. Main Switch | 11. Circular Power Connector on Dock |
| 4. 10A Slow blow Fuse close to power source | 12. If the vehicle chassis is not a suitable ground, connect the Green wire to the negative terminal (-Vo) of the power source. |
| 5. Red Wire (DC +) | |
| 6. Black Wire (DC -) | |
| 7. Green Wire (Ground) | |
| 8. Blue Wire (not connected) | |

Manual Control

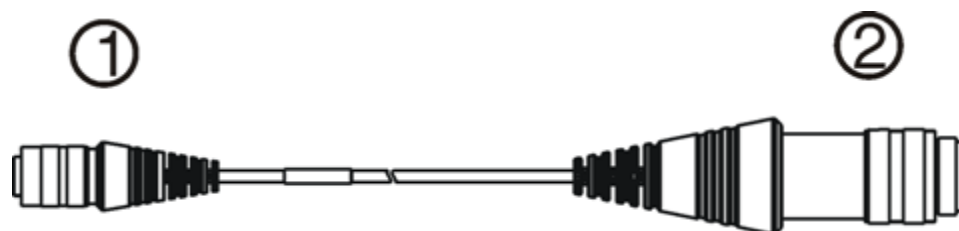
Ignition wire must be left unconnected and Auto-On must be disabled.



- | | |
|---|---|
| 1. Existing Circuitry on Vehicle | 8. Blue Wire (not connected) |
| 2. Forklift Battery | 9. Thor VM1 Computer in Quick Mount Smart Dock |
| 3. Main Switch | 10. COM1 or COM2 Connector on Dock |
| 4. 10A Slow blow Fuse close to power source | 11. Circular Power Connector on Dock |
| 5. Red Wire (DC +) | 12. If the vehicle chassis is not a suitable ground, connect the Green wire to the negative terminal (-Vo) of the power source. |
| 6. Black Wire (DC -) | |
| 7. Green Wire (Ground) | |

VX6 / VX7 Adapter Cable

An adapter cable is available to attach the Thor VM1 to a vehicle previously equipped with a VX6/VX7 DC power cable. The adapter cable has a 5-pin connector to match with the VX6/VX7 power supply cable on one end and a 6-pin connector to match to the Thor VM1 on the other.



1. To Thor VM1
2. To VX6/VX7 Power Supply Cable

Caution:	
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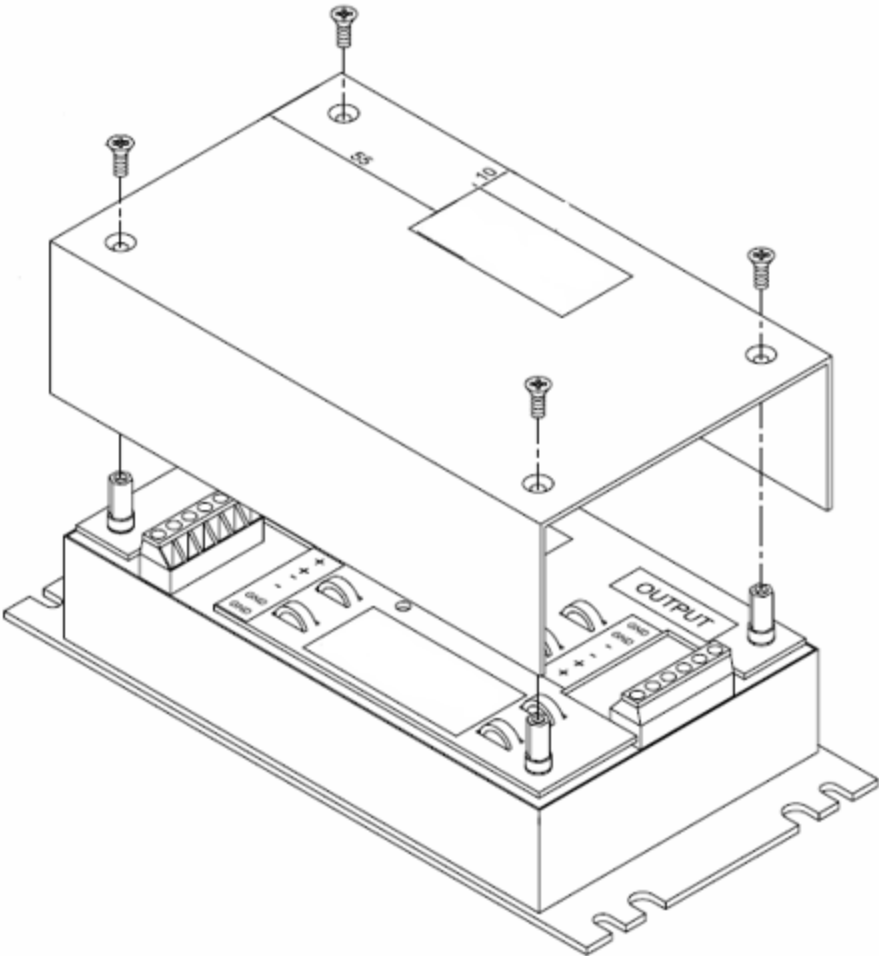
Caution:	Because the Thor VM1 supports 10-60VDC power input, verify input voltages before using this adapter cable with an existing VX6 or VX7 power connection installation.
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When this adapter cable is used there is no provision for an ignition switch input. Therefore the vehicle ignition control function is not available when using this cable.

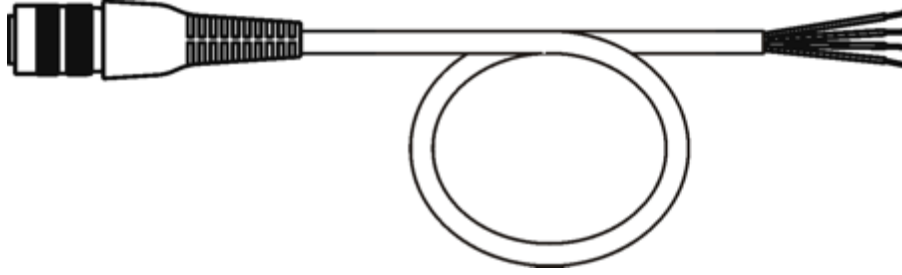
Vehicle 72-144VDC Power Connection

This option requires DC/DC external power supply Part no. VX89303PWRSPLY.

Caution: 	For installation by trained service personnel only.
Caution: 	For proper and safe installation, the input power cable must be connected to a fused circuit on the vehicle. This fused circuit requires a 10 Amp maximum time delay (slow blow) high interrupting rating fuse. If the supply connection is made directly to the battery, the fuse should be installed in the positive lead within 5 inches of the battery positive (+) terminal. Note: For North America, a UL Listed fuse is to be used.
Caution: 	The VX89303PWRSPLY power supply is sealed per IPXX. Usage in areas where moisture can affect the power supply connections should be avoided. The power supply should be mounted in a dry location within the vehicle or placed in a suitable protective enclosure.



VX89303PWRSPLY



VM1054CABLE

Wire Color	Connection
Red	DC + output from DC/DC Power Supply
Black	DC - output from DC/DC Power Supply
Green	Ground output from DC/DC Power Supply
Blue	Ignition Input (not connected)

Note: Correct electrical polarity is required for safe and proper installation. See the figure below for additional wire color-coding specifics.

The Thor VM1 DC input wires (Red DC+ and Black DC-) and the Blue ignition input wire are galvanically isolated. The Green ground input is used for electrostatic discharge (ESD) protection.

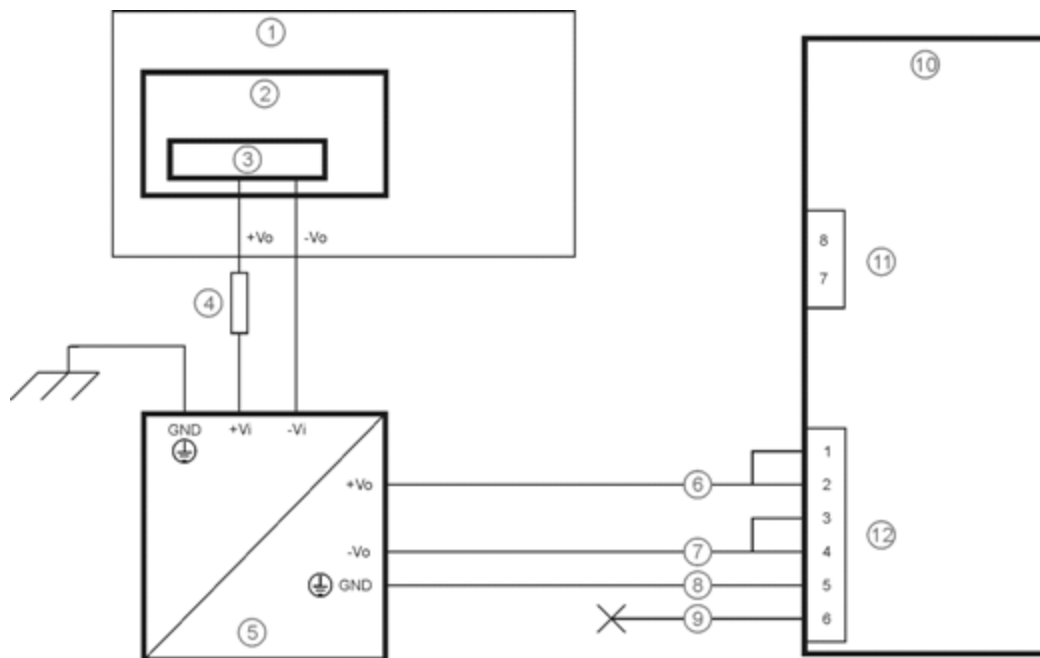
Connect Vehicle 72-144VDC

1. The Thor VM1 must not be mounted in the Quick Mount Smart Dock. The power switch on the Dock must be turned **Off**. The power cable must be UNPLUGGED from the Dock.
2. While observing the fuse requirements specified above, connect the power cable as close as possible to the actual battery terminals of the vehicle.
3. Wiring installation:
 - The user must supply wiring from the vehicle to the DC/DC power supply.
 - Use proper electrical and mechanical fastening means for terminating the cable. Properly sized “crimp” type electrical terminals are an accepted method of termination. Please select electrical connectors sized for use with 20AWG (0.81mm²) conductors.
 - Remove the lid from the DC to DC converter. Attach the stripped wire ends to the output side of the DC to DC converter. Attach stripped wire ends to the input side of the DC to DC converter.
 - The input and output blocks each have two + and two – minus connectors. Either connector in the block can be used to connect the matching polarity wire.
 - Use the looms and wire ties to secure all wiring then reattach the cover with the screws.
 - Connect as shown in [wiring diagram](#).
4. Route the power cable:
 - Route the power cable the shortest way possible removing any left-over cable
 - The cable is rated for a maximum temperature of 105°C (221°F). Therefore, routing this cable it should be protected from physical damage and from surfaces that might exceed this temperature.
 - Cable should be protected from physical damage from moving parts
 - Do not expose the cable to chemicals or oil that may cause the wiring insulation to deteriorate

- Always route the cable so that it does not interfere with safe operation and maintenance of the vehicle.
 - Provide mechanical support for the cable by securing it to the vehicle structure at approximately one foot intervals, taking care not to over tighten and pinch conductors or penetrate outer cable jacket.
5. Connect the DC power cable to the input connector on the back of the Dock.
 6. Flip the power switch on the back of the Dock to On.
 7. The Thor VM1 can be installed in the Dock.
 8. If using the [optional screen blanking feature](#), install the screen blanking box or switch.

Once installation is complete, remember to start the Thor VM1 and configure the Auto-On behavior. Please see the *Thor VM1 Reference Guide* for details: **Start > Settings > Control Panel > Options > Misc** tab.

Wiring Diagram



- | | |
|---|---|
| 1. Existing Circuitry on Vehicle | 7. Black Wire (DC -) |
| 2. Forklift Battery | 8. Green Wire (Ground) |
| 3. Main Switch | 9. Blue Wire (not connected) |
| 4. 10A Slow blow Fuse close to power source | 10. Thor VM1 Computer in Quick Mount Smart Dock |
| 5. Isolated DC/DC Power Supply | 11. COM1 or COM2 Connector on Dock |
| 6. Red Wire (DC +) | 12. Circular Power Connector on Dock |

Thor VM1 Screen Blanking

Note: Before this process begins, the steps outlined in *Power Cable Connection* need to be performed for either the [10-60VDC Connection](#) or the [72-144VDC Connection](#).

Caution: 	For installation by trained service personnel only.
Caution: 	For proper and safe installation, the input power lead to the Screen Blanking Box requires a 3 Amp maximum time delay (slow blow) high interrupting rating fuse. Note: For North America, a UL Listed fuse is to be used.

An optional Screen Blanking Box Cable (VM1080CABLE) is available from Thor VM1 to connect the Screen Blanking Box to the COM port on the Thor VM1. A user-supplied cable can also be used.

Please refer to the *Thor VM1 Reference Guide* for specifications on building a serial cable for the screen blanking feature and Screen Control (in the Windows Control Panel) to configure the Thor VM1 for screen blanking.

When routing any additional cables for screen blanking:

- Route the cable the shortest way possible removing any left-over cable
- Fuses and cabling are user supplied. Therefore, route these cables so they are protected from physical damage and from surfaces that might exceed the cable's rated temperature threshold.
- Cable should be protected from physical damage from moving parts
- Do not expose the cable to chemicals or oil that may cause the wiring insulation to deteriorate
- Always route the cable so that it does not interfere with safe operation and maintenance of the vehicle.
- Provide mechanical support for the cable by securing it to the vehicle structure at approximately one foot intervals, taking care not to over tighten and pinch conductors or penetrate outer cable jacket.

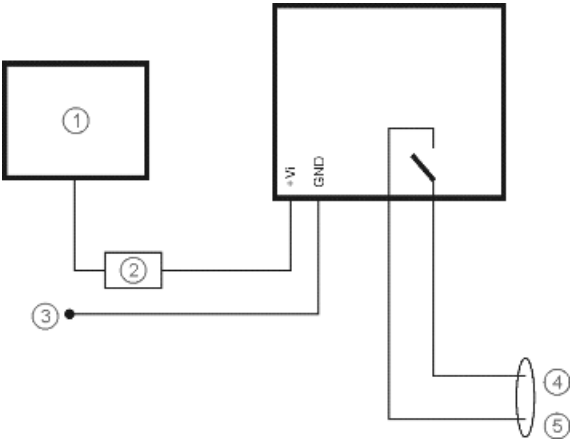
Screen Blanking Box

Screen Blanking Box Terminal	Connection
12-xxV	Input from vehicle motion sensing circuitry. Please refer to label on Screen Blanking Box for allowable voltage input range.
GND	DC -
	These two terminals are for a user provided serial cable. The cable must be constructed so that Pin 7 (RTS) connects to switched side of the connection and Pin 8 (CTS) connects to the other terminal .

Please refer to the appropriate illustration below for Screen Blanking Box wiring diagrams.



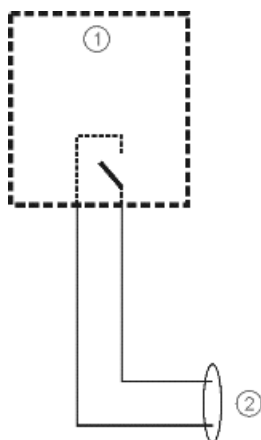
Caution:
Do not exceed the maximum input voltage, either 60 or 72VDC, specified on the Screen Blanking Box label when using this configuration.



- 1. Motion Circuitry - The voltage at the +Vi input on the Screen Blanking Box must be between 10VDC and 60 or 72VDC (see Screen Blanking Box label) when the vehicle is in motion and less than 5VDC when the vehicle is not in motion.
- 2. 3 Amp Fuse
- 3. To -Vo on Vehicle, i.e., Negative Battery Terminal
- 4. To Pin 7 of COM1 or COM2 (Gray wire when using VM1080CABLE)
- 5. To Pin 8 of COM1 or COM2 (Black wire when using VM1080CABLE)

Screen Blanking with Switch

In applications where it is impractical to use the screen blanking box due to vehicle voltage or lack of a motion sensing signal, screen blanking can be controlled via a user supplied switch or relay that provides an electrical conductive connection on vehicle motion.



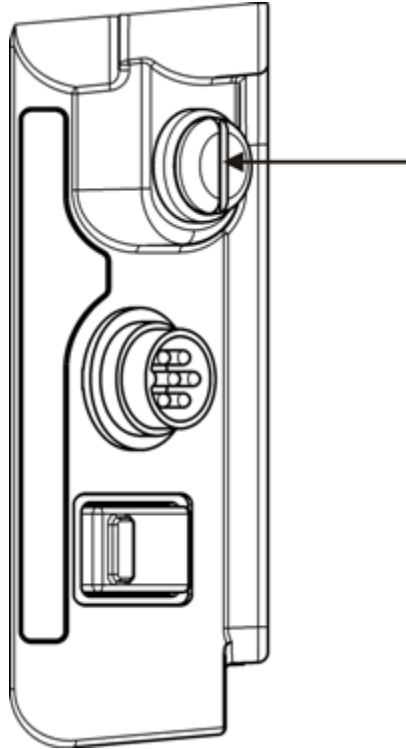
1. Switch
2. To Pins 7 and 8 of COM1 or COM2

Fuse

The Thor VM1 uses an 8A time delay (slow blow), fuse that is externally accessible and user replaceable. The fuse is located on the back of the Quick Mount Smart Dock. The fuse is accessed by unscrewing the cap as indicated below.

Should it need replacement, replace with same size, rating and type of fuse – Littelfuse 0215008.MXP or equivalent.

Fuse has voltage on it even when power is off. Always disconnect input power before changing the fuse.



Chapter 4 - Product Agency Compliance - Thor VM1

Class A Digital Device

FCC Rules, Part 15

This device complies with FCC Rules, part 15. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Notice

Changes or modifications made to this equipment not expressly approved by Honeywell may void the FCC authorization to operate this equipment.

EMC Directive Requirements

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Canada, Industry Canada (IC) Notices

This Class A digital apparatus complies with Canadian RSS-GEN issue 3:2010 and RSS-210 issue 8:2010.

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Radio Frequency (RF) Exposure Information

The radiated output power of the Honeywell Thor VM1 is below the Industry Canada (IC) radio frequency exposure limits. The Honeywell Thor VM1 should be used in such a manner such that the potential for human contact during normal operation is minimized.

This device has been certified for use in Canada. Status of the listing in the Industry Canada's REL (Radio Equipment List) can be found at the following web address: <http://www.ic.gc.ca/app/sitt/reldtel/srch/nwRdSrch.do?lang=eng>

Additional Canadian information on RF exposure also can be found at the following web address:
<http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf08792.html>

Canada, avis d'Industry Canada (IC)

Cet appareil numérique de classe A est conforme aux normes canadiennes RSS-GEN numéro 3:2010 et RSS-210 numéro 8:2010.

Son fonctionnement est soumis aux deux conditions suivantes : (1) cet appareil ne doit pas causer d'interférence et (2) cet appareil doit accepter toute interférence, notamment les interférences qui peuvent affecter son fonctionnement.

Informations concernant l'exposition aux fréquences radio (RF)

La puissance de sortie émise par le Honeywell Thor VM1 est inférieure à la limite d'exposition aux fréquences radio d'Industry Canada (IC). Utilisez le Honeywell Thor VM1 de façon à minimiser les contacts humains lors du fonctionnement normal.

Ce périphérique est homologué pour l'utilisation au Canada. Pour consulter l'entrée correspondant à l'appareil dans la liste d'équipement radio (REL - Radio Equipment List) d'Industry Canada rendez-vous sur:

<http://www.ic.gc.ca/app/sitt/relet/srch/nwRdSrch.do?lang=eng>

Pour des informations supplémentaires concernant l'exposition aux RF au Canada rendez-vous sur :

<http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf08792.html>

ANATEL (Brazil)

Este equipamento opera em caráter secundário, isto é, não tem direito a proteção contra interferência prejudicial, mesmo de estações do mesmo tipo, e não causar interferência a sistema operando em caráter primário.

Li-Ion Battery

When disposing of the Thor VM1 UPS battery, the following precautions should be observed: The battery should be disposed of properly. The battery should not be disassembled or crushed. The battery should not be heated above 212°F (100°C) or incinerated.

RF Safety Notice



This device is intended to transmit RF energy. For protection against RF exposure to humans and in accordance with FCC rules and Industry Canada rules, this transmitter should be installed such that a minimum separation distance of at least 20 cm (7.8 in.) is maintained between the antenna and the general population. This device can only be co-located with FCC ID: TWG-SDCMSD30G.

Waste Electrical and Electronic Equipment (WEEE)



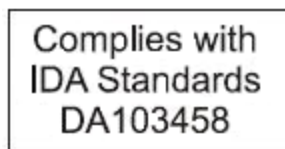
Important:

This symbol is placed on the product to remind users to dispose of Waste Electrical and Electronic Equipment (WEEE) appropriately, per Directive 2002-96-EC. In most areas, this product can be recycled, reclaimed and re-used when properly discarded. Do not discard labeled units with trash. For information about proper disposal, visit www.honeywellaidc.com.

R&TTE Directive Requirements



Dealer License - Republic of Singapore



Republic of Singapore - LXE Dealer License Number DA103458 complies with IDA Standards.

Lithium Battery Safety Statement

Caution: Lithium battery inside. Danger of explosion if battery is incorrectly replaced. Replace only with same or equivalent type recommended by battery manufacturer. (US)

Attention: Contient une pile de lithium. Risque d'explosion dans le cas où la pile ne serait pas correctement remplacée. Remplacer uniquement avec une pile semblable ou équivalente au type de pile recommandé par le fabricant. (FR)

Forsigtig: Indeholder lithiumbatterier. Risiko for eksplosion, hvis batteriet udskiftes forkert. Må kun udskiftes med samme eller tilsvarende type, som anbefalet af fabrikanten. (DK)

Varoitus: Tämä tuote käyttää laservaloa. Skannerissa on jokin seuraavista tarroista. Lue Huomio-kohta. (FI)

Vorsicht: Enthält Lithium-Batterie. Bei unsachgemäßem Ersatz besteht Explosionsgefahr. Nur durch gleichen oder vom Hersteller empfohlenen Typ ersetzen. (DE)

Attenzione: Batteria al litio. Pericolo di esplosione qualora la batteria venga sostituita in maniera scorretta. Sostituire solo con lo stesso tipo o equivalente consigliato per il fabbricante. (IT)

Atenção: Contém pilha de lítio. Há perigo de explosão no caso de uma substituição incorreta. Substitua somente pelo mesmo tipo, ou equivalente, recomendado pelo fabricante. (PT)

Varning: Innehåller litiumbatteri. Fara för explosion om batteriet är felaktigt placerat eller av fel typ. Använd endast samma eller motsvarande typ batterier rekommenderade av tillverkaren. (SE)

Advarsel: Innmontert Lithium batteri. Eksplosjonsfare ved feil montering av batteri. Benytt kun batteri anbefalt av produsent. (NO)

Cuidado: Pila de litio adentro. Peligro de explosión si la pila se reemplaza incorrectamente. Reemplace solamente con el mismo tipo o equivalente recomendado por el fabricante. (ES)

Oppassen: Bevat Lithium-batterij. Incorrecte plaatsing van batterij kan leiden tot explosiegevaar. Alleen vervangen door hetzelfde of door fabrikant aanbevolen gelijkwaardig type. (NL)

Προσοχή: Υπάρχει μπαταρία από λίθιο εσωτερικά. Υπάρχει κίνδυνος έκρηξης εάν η μπαταρία αντικατασταθεί με λανθασμένο τρόπο. Αντικαταστήστε μόνο με τον ίδιο ή ισοδύναμο τύπο που συνιστάται από τον κατασκευαστή. (GR)	주의: 리튬 배터리 내부. 배터리가 잘못 설치되었을 경우 폭발의 위험이 있습니다. 동일한 배터리, 또는 배터리 제조업체가 권장하는 배터리로 교체하십시오. (KR)
注意: リチウム電池が入っています。間違った種類の電池を使用すると、破裂する恐れがあります。同じ電池、または電池製造元が推奨する同等の電池を使用してください。 (JP)	小心: 内装锂电池。如电池更换不当，则有发生爆炸的危险。只能用电池制造商推荐的相同或同等电池进行更换。 (CN)
Dikkat: İçinde lityum bataryası bulunur. Bataryanın yanlış değiştirilmesi patlama tehlikesi yaratır. Aynısıyla veya üreticinin önerdiği eşdeğer tiplerle değiştirin. (TR)	

Legend: Chinese – CN; Danish – DK; Dutch – NL; English – US; Finnish – FI; French – FR; German – DE; Greek – GR; Italian – IT; Japanese – JP; Korean – KR; Norwegian – NO; Portuguese – PT; Spanish – ES; Swedish – SE; Turkish – TR.

Vehicle Power Supply Connection Safety Statement

Vehicle Power Supply Connection: If the supply connection is made directly to the battery, a 10A slow-blow fuse should be installed in the positive lead within 5 inches (12.7 cm.) of the battery positive (+) terminal. (US)

Raccordement de l'alimentation du véhicule Si l'alimentation est raccordée directement à la batterie, un fusible à action retardée de 10A doit être installé sur le câble positif à moins de 12,7 cm de la borne positive (+) de la batterie. (FR)

EL forsyning af køretøjet. Er forsyningsforbindelsen direkte tilknyttet til batteriet og og tilsluttet til den positive part indenfor 12,7 cm (+ delen). vil der være en langsom tændelse af 10 ampere. (DK)

Kytchentä ajoneuvon virtalähteeseen Jos virtaa otetaan suoraan akusta, 10 ampeerin hidas sulake on asennettava positiiviseen johtoon enintään 12 cm:n etäisyydelle akun positiivisesta (+) navasta. (FI)

Anschluss an Fahrzeugbatterie Bei direktem Anschluss an die Fahrzeugbatterie sollte eine träge 10A-Sicherung in die positive Leitung zwischengeschaltet werden, und zwar nicht weiter als ca. 13 cm von der positiven (+) Batterieklemme entfernt. (DE)

Σύνδεση Τροφοδοτικού Ισχύος Οχήματος Αν η σύνδεση του τροφοδοτικού γίνει κατευθείαν στη μπαταρία, μια ασφάλεια βραδείας τήξης των 10Α θα πρέπει να τοποθετηθεί στο θετικό καλώδιο εντός 5 ιντσών (12,7 εκ.) του θετικού (+) ακροδέκτη της μπαταρίας. (GR)

Collegamento dell'alimentazione del veicolo Se il collegamento dell'alimentazione viene stabilito direttamente con la batteria, è necessario installare un fusibile ad azione lenta da 10A nel conduttore positivo a meno di 5 in. (12,7 cm) dal terminale positivo (+) della batteria. (IT)

Tilkople strømforsyningen til kjøretøyet Hvis strømforsyningen koples direkte til batteriet, skal det installeres en 10A treg sikring i den positive ledningen innen 12,7 cm fra plusspolen (+) på batteriet. (NO)

Ligação do fornecimento de corrente do veículo Se a ligação de fornecimento de corrente for ligada directamente à bateria, deve instalar-se um fusível de 10A no terminal positivo, a 12,7 cm. do terminal positivo (+) da bateria. (PT)

Conexión de suministro eléctrico para el vehículo Si el suministro eléctrico se proporciona directamente a la batería, se debe instalar un fusible de retardo de 10A en el conductor positivo, como máximo a 12,7 cm (5 pulgadas) del terminal positivo (+). (ES)

Fordonets strömförsörjningskoppling Om strömkopplingen görs direkt till batteriet, måste en 10A-säkring installeras i den positivt laddade ledningen inom 12.7 cm från batteriets pluspol (+). (SE)

Taşıt Güç Kaynağı Bağlantısı Kaynak bağlantısı doğrudan aküye yapılırsa, pozitif bağlantı kablosu üzerinde akünün pozitif (+) kutbuna 12.7 cm mesafede 10A'lık yavaş atan bir sigorta monte edilmelidir. (TR)

Legend: Danish – DK; English – US; Finnish – FI; French- - FR; German – DE; Greek – GR; Italian – IT; Norwegian – NO; Portuguese – PT; Spanish – ES; Swedish – SE; Turkish – TR.

Chapter 5 - Technical Assistance

If you need assistance installing or troubleshooting your device, please contact us by using one of the methods below:

Knowledge Base: www.hsmknowledgebase.com

Our Knowledge Base provides thousands of immediate solutions. If the Knowledge Base cannot help, our Technical Support Portal (see below) provides an easy way to report your problem or ask your question.

Technical Support Portal: www.hsmsupportportal.com

The Technical Support Portal not only allows you to report your problem, but it also provides immediate solutions to your technical issues by searching our Knowledge Base. With the Portal, you can submit and track your questions online and send and receive attachments.

Web form: www.hsmcontactsupport.com

You can contact our technical support team directly by filling out our online support form. Enter your contact details and the description of the question/problem.

Telephone: www.honeywellaidc.com/locations

For our latest contact information, please check our website at the link above.

Product Service and Repair

Honeywell International Inc. provides service for all of its products through service centers throughout the world. To obtain warranty or non-warranty service, please visit www.honeywellaidc.com and select **Support > Contact Service and Repair** to see your region's instructions on how to obtain a Return Material Authorization number (RMA #). You should do this prior to returning the product.

Limited Warranty

Honeywell International Inc. ("HII") warrants its products to be free from defects in materials and workmanship and to conform to HII's published specifications applicable to the products purchased at the time of shipment. This warranty does not cover any HII product which is (i) improperly installed or used; (ii) damaged by accident or negligence, including failure to follow the proper maintenance, service, and cleaning schedule; or (iii) damaged as a result of (A) modification or alteration by the purchaser or other party, (B) excessive voltage or current supplied to or drawn from the interface connections, (C) static electricity or electro-static discharge, (D) operation under conditions beyond the specified operating parameters, or (E) repair or service of the product by anyone other than HII or its authorized representatives.

This warranty shall extend from the time of shipment for the duration published by HII for the product at the time of purchase ("Warranty Period"). Any defective product must be returned (at purchaser's expense) during the Warranty Period to HII factory or authorized service center for inspection. No product will be accepted by HII without a Return Materials Authorization, which may be obtained by contacting HII. In the event that the product is returned to HII or its authorized service center within the Warranty Period and HII determines to its satisfaction that the product is defective due to defects in materials or workmanship, HII, at its sole option, will either repair or replace the product without charge, except for return shipping to HII.

EXCEPT AS MAY BE OTHERWISE PROVIDED BY APPLICABLE LAW, THE FOREGOING WARRANTY IS IN LIEU OF ALL OTHER COVENANTS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, ORAL OR WRITTEN, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT.

HII'S RESPONSIBILITY AND PURCHASER'S EXCLUSIVE REMEDY UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT OF THE DEFECTIVE PRODUCT WITH NEW OR REFURBISHED PARTS. IN NO EVENT

SHALL HII BE LIABLE FOR INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, AND, IN NO EVENT, SHALL ANY LIABILITY OF HII ARISING IN CONNECTION WITH ANY PRODUCT SOLD HEREUNDER (WHETHER SUCH LIABILITY ARISES FROM A CLAIM BASED ON CONTRACT, WARRANTY, TORT, OR OTHERWISE) EXCEED THE ACTUAL AMOUNT PAID TO HII FOR THE PRODUCT. THESE LIMITATIONS ON LIABILITY SHALL REMAIN IN FULL FORCE AND EFFECT EVEN WHEN HII MAY HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH INJURIES, LOSSES, OR DAMAGES. SOME STATES, PROVINCES, OR COUNTRIES DO NOT ALLOW THE EXCLUSION OR LIMITATIONS OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

All provisions of this Limited Warranty are separate and severable, which means that if any provision is held invalid and unenforceable, such determination shall not affect the validity of enforceability of the other provisions hereof. Use of any peripherals not provided by the manufacturer may result in damage not covered by this warranty. This includes but is not limited to: cables, power supplies, cradles, and docking stations. HII extends these warranties only to the first end-users of the products. These warranties are non-transferable.

The duration of the limited warranty for the Thor VM1 is 1 year.

The duration of the limited warranty for the Thor VM1 Quick Mount Smart Dock is 1 year.

The duration of the limited warranty for the Thor VM1 Vehicle Mount Assembly is 1 year.

The duration of the limited warranty for the Thor VM1 internal UPS battery is 1 year.

The duration of the limited warranty for the Thor VM1 AC power supply and cables is 1 year.

The duration of the limited warranty for the Thor VM1 DC-DC Converter is 1 year.

The duration of the limited warranty for the Thor VM1 cables (USB, Serial, Communication, Power) is 1 year.

Honeywell Scanning & Mobility
9680 Old Bailes Road
Fort Mill, SC 29707
www.honeywellaidc.com