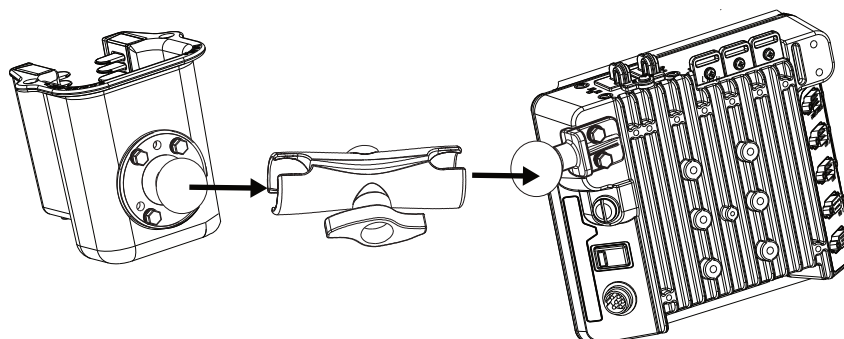


3. Slip the RAM arm over the accessory RAM ball.
4. Slip the RAM ball on the scanner holder into the RAM arm.



5. Tighten the knob on the RAM arm while adjusting to the desired angle.

Install U Bracket Mount or Adapter

Note: This mounting system does not have a provision for an integrated scanner holder. This accessory can be mounted separately, if desired. Contact [Technical Assistance](#) for details.



Caution: 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 is not to be co-located with other transmitters.

- Step 1. Before installation begins, verify you have the applicable vehicle mounting assembly components necessary.

Mount Kit	Components
Adapter Bracket with U Bracket (For new installations only) (VM1010BRKTKIT)	<ul style="list-style-type: none"> • U Bracket • Adapter Bracket • Hardware: screws, flat washers, and lock washers
Adapter Bracket without U Bracket (VM1010BRACKET)	<ul style="list-style-type: none"> • Adapter Bracket • Hardware: screws, flat washers, and lock washers

Note: Individual RAM mounting components are also available.

Step 2. You will need the following tools for mounting the RAM:

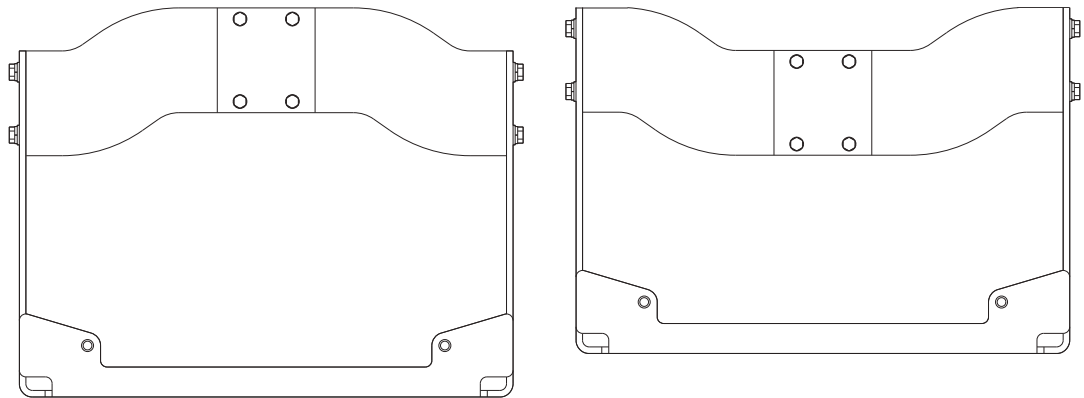
- Sockets
- Torque wrench capable of torquing to 50 inch pounds (5.64±.56 N/m).

For these bolts...	Torque to
1/4-20x5/8 Bolts	50 in/lb (5.6 N/m)
M5x16mm Bolts	35 in/lb (4.0 N/m)
1/4 Bolts (user supplied)	50.0±5 in/lb (5.64±.56 N/m)

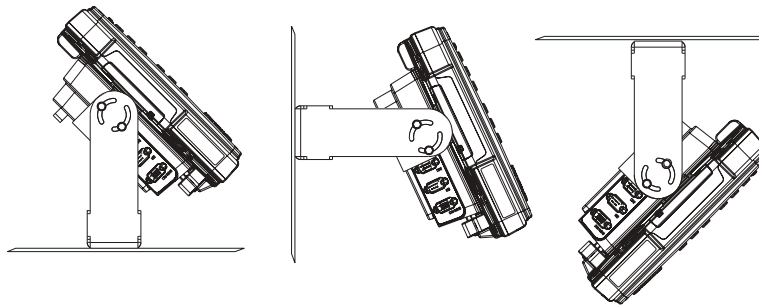
Note: Torque tool is not supplied by Honeywell.

Step 3. Determine the mounting position.

- The adapter bracket can be mounted in a high or low position, depending on viewing position, as shown below.



- Additionally, the slotted U bracket allows the computer to be mounted vertically or tilted forward or backward for best viewing angle.



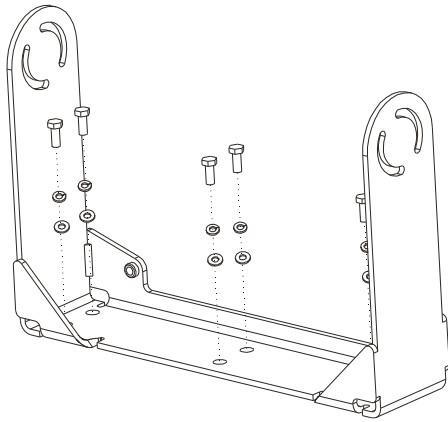
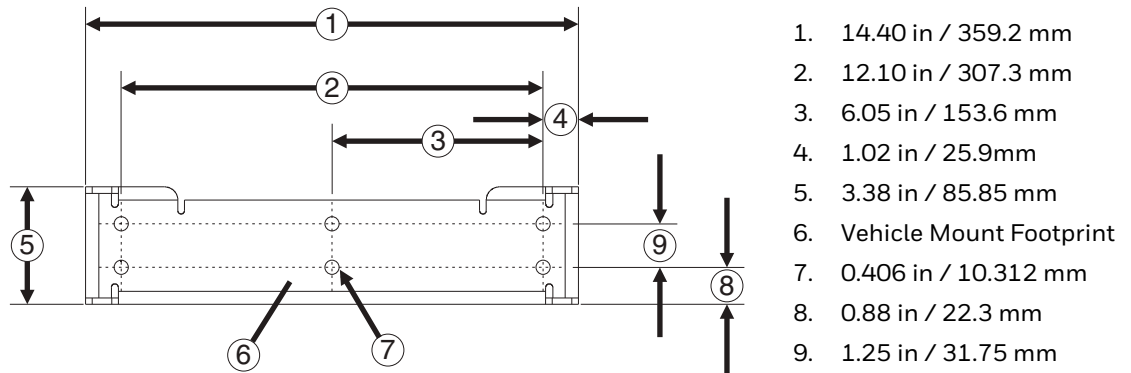
Step 4. Install U Bracket to Vehicle

1. Position the bracket to allow access to the switches and ports on the bottom of the computer. Skip this step if installing a U Bracket mount adapter bracket.

2. Attach the bottom mounting bracket to the vehicle mounting surface using a minimum of four 1/4 bolts (or equivalent) fasteners. (Drawing no to scale.)

Note: 1/4 bolts and washers not included and vary per vehicle type. It is recommended to use lock washers and flat washers on the fasteners.

Note: Mount to the most rigid surface available.



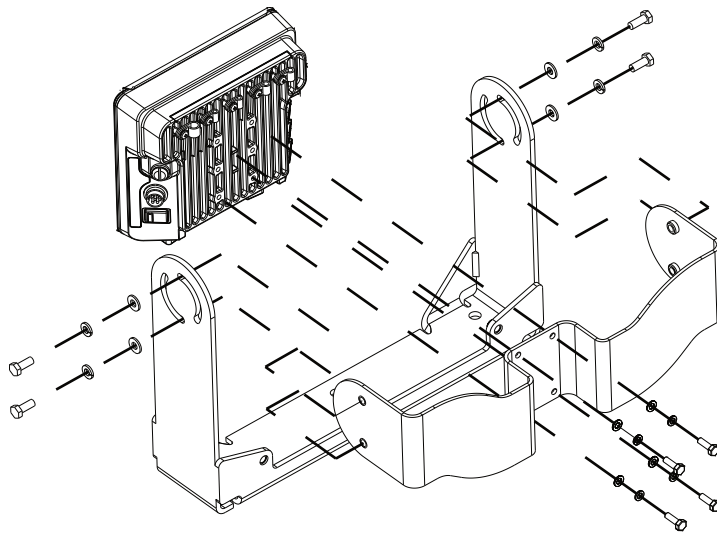
Step 5. If the dock has a RAM ball attached, the RAM ball must be removed from the dock to use the U Bracket mount. The hardware used to attach the RAM ball to the dock is not reused for the U Bracket mount.

Step 6. Attached the Adapter Bracket to dock.

1. Attach the Adapter Bracket to the dock using four each M5x16mm bolt, M5 lock washer and M5 flat washer. Torque to 35 in/lbs (4.0 N/m).

Note: For the steps below, always place the lock washer on the bolt before the flat washer.

2. Attach the Adapter Bracket assembly to the U Bracket using 4 each 1/4- 20x5/8 bolt, 1/4 lock washer and 1/4 flat washer.

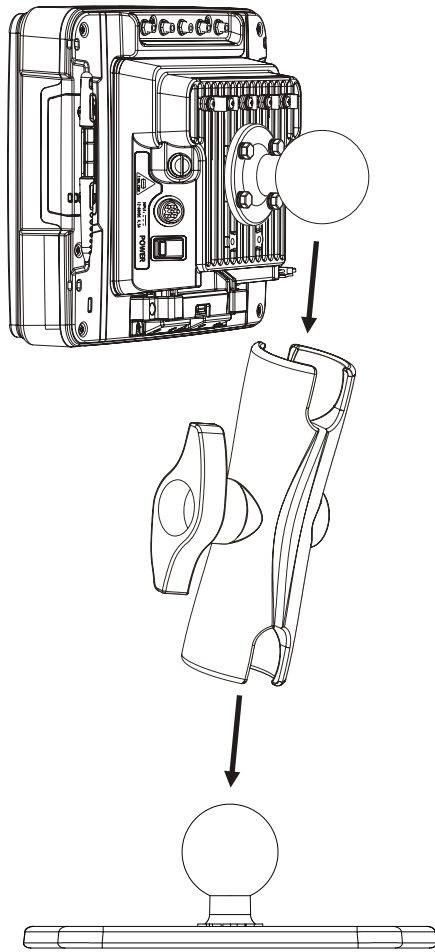


3. If the computer is not already mounted to the dock, [Place Thor VM1A in the Dock.](#)
4. Adjust the computer to the desired viewing angle.
5. Torque the 14-20 bolts to 50 in/lbs (5.6 N/m).

Install Table Stand

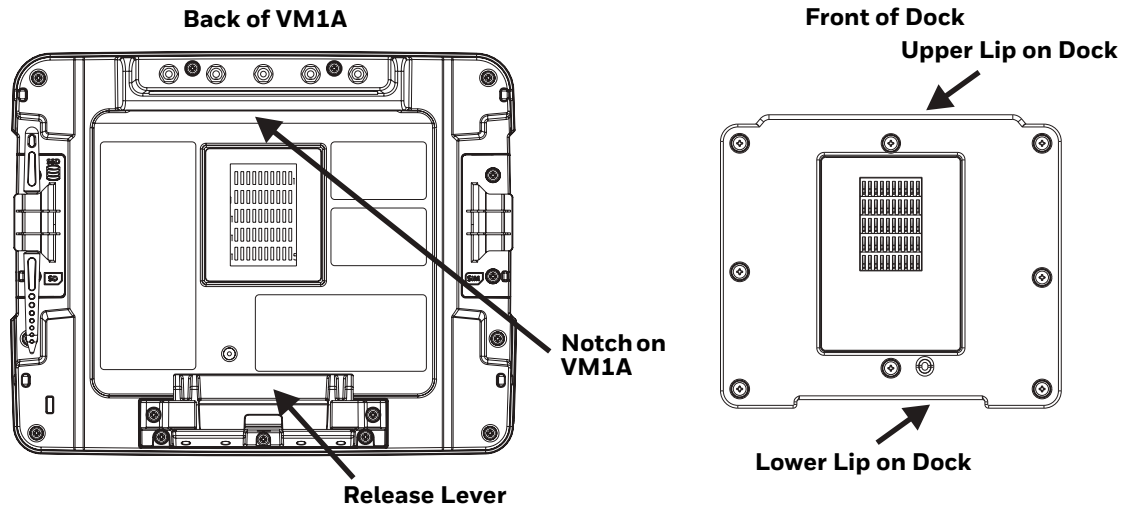
When the VM1A is used in an office environment, it can be mounted in a table stand. To use the table stand:

1. Attach the RAM ball to the RAM Metal Table Stand with the supplied bolts and nuts.
2. If not present, attach a RAM ball to the VMXD off-vehicle dock.
3. Slide the size D RAM arm over the ball on the table mount.
4. Insert the ball on the dock into the RAM arm and tighten the knob on the RAM arm.



5. If the computer is not already mounted to the dock, Place Thor VM1A in the Dock.

Place Thor VM1A in the Dock



1. Locate the notch on the upper rear of the VM1A.
2. Slide this notch over the top lip of the dock. Slide the VM1A from side to side on the dock to make sure it fully engages on the lip of the dock. If the computer cannot be slid side to side, the lip is engaged.
3. Pull the quick release lever on the computer down and push the computer against the dock.
4. Release the quick release lever. The quick release lever catches the lower lip on the dock and secures the computer to the dock. Be sure the red quick release lever is pushed all the way in to secure the computer to the dock.
5. If necessary, adjust the viewing angle of the computer.

When the Thor VM1A is placed in the dock, the following may happen:

- If the computer is Off and power is connected to the dock, the computer may boot when placed in the dock. See [Auto-On](#).
- If the computer is On and power is connected to the dock, the power management timers may change when the computer is placed in the dock. See [Power Options](#).

When the Thor VM1A is removed from the dock, the following may happen:

- If the computer is On and power is connected to the dock, the power management timers may change when the computer is placed in the dock. See [Select a Power Scheme](#).

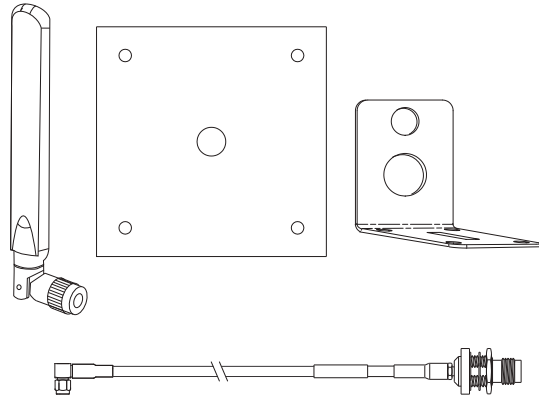
About the 802.11 Remote Antenna

Remote antennas are available for the 802.11 WLAN radio.



Caution: If the Thor VM1A is setup for use with external antennas, do not power up the computer without the external antennas connected. Damage to the WLAN radio may result. Never operate with only one external antenna connected.

The Remote Antenna Installation Kit consists of two brackets (base plate and right angle), cable, and antenna. Tools are not included.

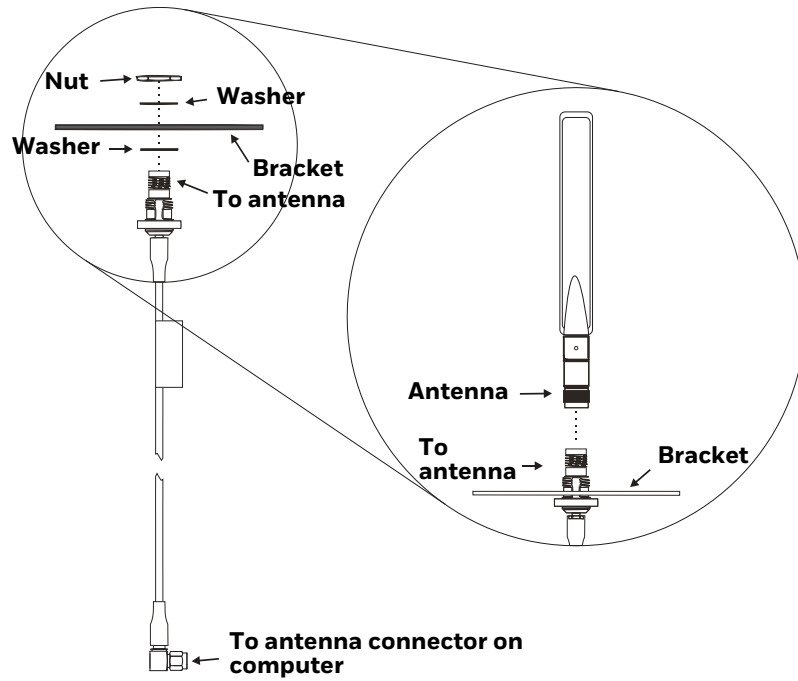


The desired remote antenna bracket is mounted on the top of a forklift, truck, or other vehicle and cabled to the computer inside the vehicle.

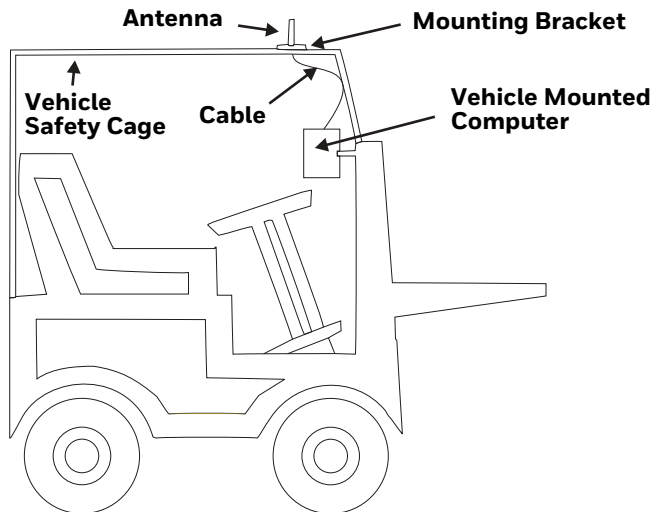
The Vehicle Remote Mount Antenna cannot be used by devices with internal antennas.

Mount the 802.11 Remote Antenna

Components



Typical Installation



Instructions

1. Attach and secure the desired mounting bracket to the highest point on the safety cage, following these precautions:
 - The plate must be mounted so the antenna is not damaged while the vehicle or any of its parts are moving.
 - The antenna mounting portion of the bracket must be parallel to the floor.
 - If using two antennas, they should be mounted at least 12 inches (304.8mm) apart for best performance.
2. Secure the whip antenna to the mounting bracket.
3. Connect the antenna cable to the whip antenna.
4. Use cable ties to secure the coaxial cable to the vehicle as necessary. Make sure the cable is routed so it is not damaged by any moving parts of the vehicle.
5. Connect the cable to the antenna connector (Wi-Fi Main or Wi-Fi Aux) on the computer.
6. Repeat the steps above for the second 802.11 antenna.

Connect Power

See [Power Supply Connector](#) for connector pinout.

For the VM1D Standard Dock and VM3D Enhanced Dock, power options include:

- [12-48 VDC Vehicles \(10-60 VDC Direct Connection\)](#) - Direct connection to vehicle power.
- [60-144 VDC Vehicles \(50-150 VDC Power Supply, Screws on Side of Lid\)](#) - Requires the use of a DC/DC power supply.
- [60-144 VDC Vehicles \(50-150 VDC Power Supply, Screws on Top of Lid\)](#) - Requires the use of a DC/DC power supply.
- [VX5/VX6/VX7 Adapter Cable](#) - For applications where the VM1A replaces a previously installed VX6 or VX7.
- [Thor VX8/Thor VX9 Adapter Cable](#) - For applications where the Thor VM1A (with a VM1D Standard Dock or VM3D Enhanced dock (replaces a previously installed Thor VX8 or Thor VX9.
- [CV60/CV61 Adapter Cable](#) - For applications where the VM1A replaces a previously installed CV61.
- [Screen Blanking Installation](#) - Optional connection to blank the VM1A display while the vehicle is in motion.

When using the Thor VM1A with AC power, use the VMXD Enhanced Dock for Off-Vehicle Use and:

- [External AC/DC Power Supply](#) - For use when DC power is not available to power the computer, such as in an office environment.

12-48 VDC Vehicles (10-60 VDC Direct Connection)



Caution: For installation by trained service personnel only.



Caution: These instructions for use with **VM1D Standard Dock** and **VM3D Enhanced Dock** only.

Fuse Requirements for 10-60 VDC Direct Connection



Warning: For proper and safe installation, the input power cable must be connected to a fused circuit on the vehicle. 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's positive (+) terminal. If an unused fuse holder is not available on the vehicle, use **VM3055FUSE** (or equivalent) to install the fuse as shown below:

- For 12VDC input, use the 10A fuse from the kit or a slow blow fuse that has a DC voltage rating greater than 12VDC.
- For 24VDC input, use the 6A fuse from the kit or a slow blow fuse that has a DC voltage rating greater than 24VDC.
- For 36VDC input, use the 4A fuse from the kit or a slow blow fuse that has a DC voltage rating greater than 36VDC.
- For 48VDC input, use the 3A fuse from the kit or a slow blow fuse that has a DC voltage rating greater than 48VDC.

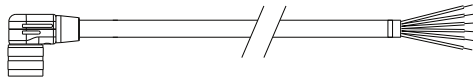
Note: For North America, a UL Listed fuse is to be used.

Power Cable Identification for 10-60 VDC Direct Connection

The DC power cable is included with the dock:



Caution: Twist the red and red/white wires together and twist the black and black/white wires together before connecting to vehicle power.



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

10-60 VDC Direct Power Connection

1. The Thor VM1A must not be mounted in the 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 for 10-60 VDC Direct Connection](#), connect the power cable as close as possible to the actual battery terminals of the vehicle (if using unswitched power).
3. 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.
4. Refer to the wiring diagrams following this section for wire colors and connections:
 - [Ignition Control Wiring Diagram for 10-60 VDC Direct Power](#)
 - [Auto-On Control Wiring Diagram for 10-60 VDC Direct Connection](#)
 - [Manual On/Off Control Wiring Diagram for 10-60 VDC Direct Connection](#)
5. 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, when 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.
6. 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.
7. Connect the watertight connector end of the power cable to the dock power connector by aligning the connector pins to the power connector; push down on the watertight connector and twist it to fasten securely.
8. Secure the power cable to the computer using the [Strain Relief Cable Clamps](#).
9. [Place Thor VM1A in the Dock](#)
10. If using the [Screen Blanking Installation](#) feature, install the screen blanking box or switch.
11. [Power On the Computer](#).

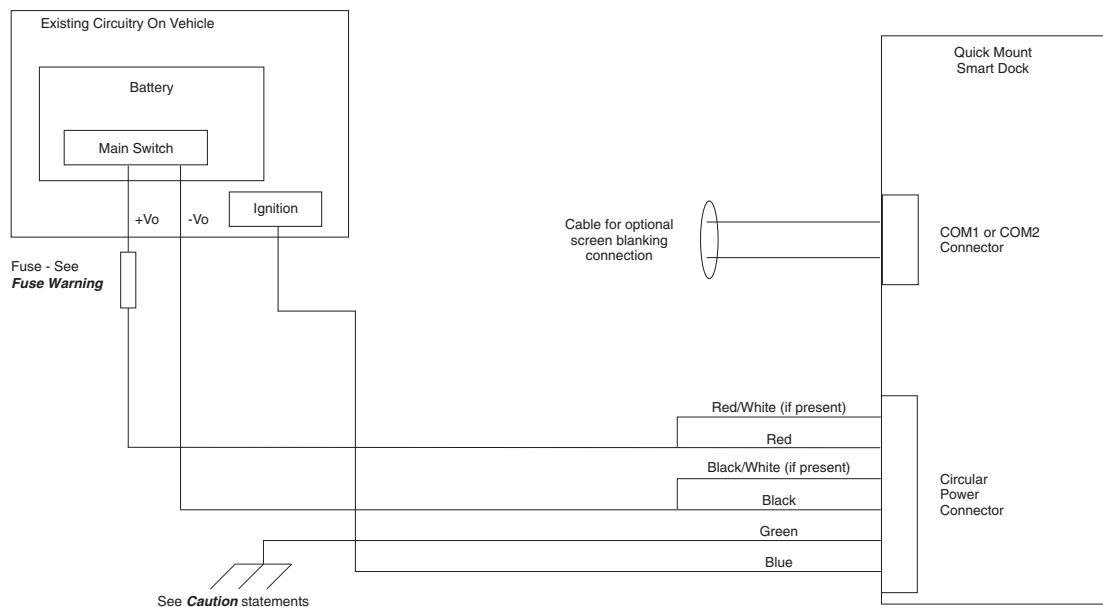
Once installation is complete, remember to start the computer and configure the [Power Mode](#).

See the [Auto-On](#) control panel.

Ignition Control Wiring Diagram for 10-60 VDC Direct Power

Ignition wire must be connected and Ignition Control must be selected on the [Power Mode](#) control panel. When switched vehicle power is available the Thor VM1A ignition signal wire can be connected (less than 1mA over input voltage range) to the switched circuit to allow the computer to power on when the vehicle is switched on and go into shut down (see note below) when the vehicle is switched off.

Note: When the vehicle is switched off, the Thor VM1A treats this event as a power button press. The default setting for a power button press is to power the device off, however additional options are available on the [Advanced](#) tab of the [Power Options](#) control panel.



Caution: For battery powered vehicles:

- VIN+ (red wire) is connected to battery positive. If there is a red wire and a red/white wire, twist them together and connect to battery positive.
- VIN- (black wire) must be connected to battery negative. If there is a black wire and a black/white wire, twist them together and connect to battery negative.
- GND (green wire) must be connected to the vehicle chassis ground.



Caution: For internal combustion engine powered vehicles:

- VIN+ (red wire) is connected to battery positive. If there is a red wire and a red/white wire, twist them together and connect to battery positive.
- VIN- (black wire) must be connected to battery negative. If there is a black wire and a black/white wire, twist them together and connect to battery negative.

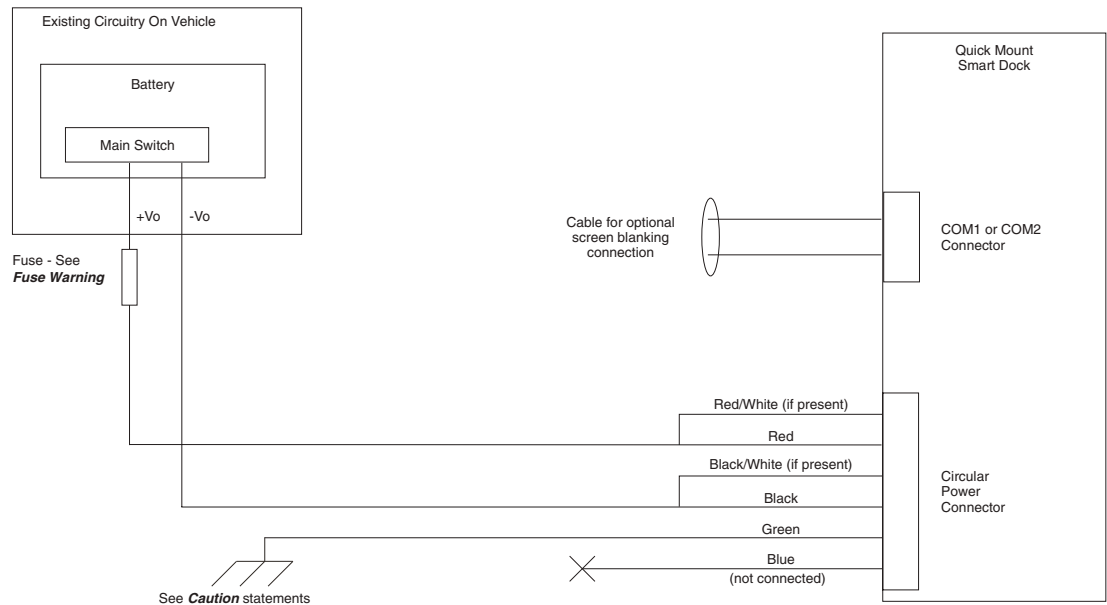
- GND (green wire) is connected to the vehicle chassis ground, which can also be battery negative.



Warning: For proper and safe installation, follow the [Fuse Requirements for 10-60 VDC Direct Connection](#).

Auto-On Control Wiring Diagram for 10-60 VDC Direct Connection

Auto-ON must be selected on the [Power Mode](#) control panel. The vehicle supply connections should be made to vehicle switched power to allow the terminal to automatically powerup 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.



Caution: For battery powered vehicles:

- VIN+ (red wire) is connected to battery positive. If there is a red wire and a red/white wire, twist them together and connect to battery positive.
- VIN- (black wire) must be connected to battery negative. If there is a black wire and a black/white wire, twist them together and connect to battery negative.
- GND (green wire) must be connected to the vehicle chassis ground.



Caution: For internal combustion engine powered vehicles:

- VIN+ (red wire) is connected to battery positive. If there is a red wire and a red/white wire, twist them together and connect to battery positive.
- VIN- (black wire) must be connected to battery negative. If there is a black wire and a black/white wire, twist them together and connect to battery negative.

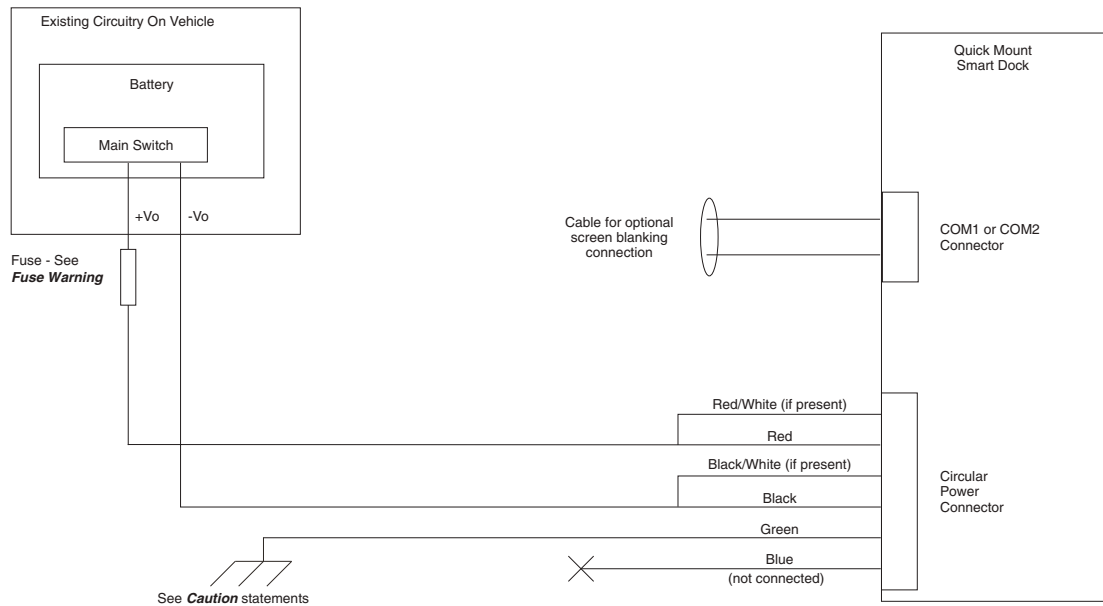
- GND (green wire) is connected to the vehicle chassis ground, which can also be battery negative.



Warning: For proper and safe installation, follow the **Fuse Requirements for 10-60 VDC Direct Connection.**

Manual On/Off Control Wiring Diagram for 10-60 VDC Direct Connection

Ignition wire must be left unconnected. Standard must be selected from the **Power Mode** control panel.



Caution: For battery powered vehicles:

- VIN+ (red wire) is connected to battery positive. If there is a red wire and a red/white wire, twist them together and connect to battery positive.
- VIN- (black wire) must be connected to battery negative. If there is a black wire and a black/white wire, twist them together and connect to battery negative.
- GND (green wire) must be connected to the vehicle chassis ground.



Caution: For internal combustion engine powered vehicles:

- VIN+ (red wire) is connected to battery positive. If there is a red wire and a red/white wire, twist them together and connect to battery positive.
- VIN- (black wire) must be connected to battery negative. If there is a black wire and a black/white wire, twist them together and connect to battery negative.

- GND (green wire) is connected to the vehicle chassis ground, which can also be battery negative.



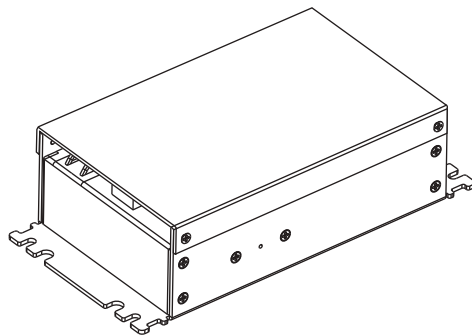
Warning: For proper and safe installation, follow the [Fuse Requirements for 10-60 VDC Direct Connection](#).

60-144 VDC Vehicles (50-150 VDC Power Supply, Screws on Side of Lid)

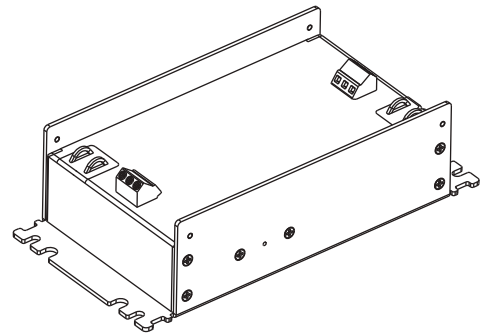



Caution: These instruction are for use with the [VM1D Standard Dock](#) and [VM3D Enhanced Dock](#) only.

This option requires DC/DC external power supply Honeywell Part no. 9000313PWRSPLY.



Shown with Lid Attached
Lid is secured with screws on the side of lid.



Shown with Lid Removed
Input and output connector blocks under lid.
One positive (VIN+), negative (VIN-), and ground () connection in input block.
One positive (Vo+) and negative (Vo-) connection in output block.

If the DC/DC power supply does not have screws in the side of the lid, see [60-144 VDC Vehicles \(50-150 VDC Power Supply, Screws on Top of Lid\)](#).



Caution: For installation by trained service personnel only.



Caution: 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.



Caution: Use caution when routing the power cable. See [12-48 VDC Vehicles \(10-60 VDC Direct Connection\)](#).

Fuse Requirements 50-150VDC Power Supply, Screws on Side of Lid



Warning: For proper and safe installation, the input power cable must be connected to a fused circuit on the vehicle. 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's positive (+) terminal. Use VM3055FUSE (or equivalent) to install the fuse as shown below:

For all voltages, use the 3A fuse from the kit or a slow blow fuse that has a DC voltage rating greater than the vehicle input voltage.

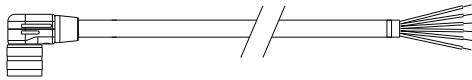
Note: For North America, a UL Listed fuse is to be used.

Power Cable Identification for 50-150VDC Power Supply, Screws on Side of Lid

The DC power cable is included with the dock:



Caution: Twist the red and red/white wires together and twist the black and black/white wires together before connecting to vehicle power.



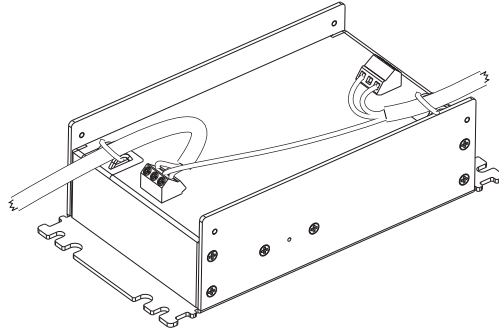
Wire Color	Connection
Red	DC + (10-60 VDC)
Red/White	DC + (10-60 VDC)
Black	DC -
Black/White	DC -
Green	Ground
Blue	Ignition Input (optional)

Vehicle 50-150 VDC Power Connection

1. Please review the [Wiring Diagram for 50-150 VDC Power Supply, Screws on Top of Lid](#), before beginning power cable install.
2. The computer must not be mounted in the dock. The power switch on the dock must be turned Off. The power cable must be UNPLUGGED from the dock.
3. Route the cable from the VM1A to the DC/DC power supply. Route the power cable the shortest way possible. The cable is rated for a maximum temperature of 105°C (221°F). When routing this cable, it should be protected from physical damage and from surfaces that might exceed this temperature. 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.
4. Cut the cable to length and strip the wire ends. Retain the portion of the cut off cable for use in the connection to the vehicle.

5. Remove the lid from the DC/DC power supply.
6. Connect the stripped end of the positive wires (red and red/white twisted together) to the output block. See [Power Cable Identification for 10-60 VDC Direct Connection](#).
7. Connect the stripped end of the negative wires (black and black/white twisted together) to the output. See [Power Cable Identification for 50-150VDC Power Supply, Screws on Side of Lid](#).

Note: The input block has V_{IN+} , V_{IN-} and GND terminals. The output block has V_{O+} and V_{O-} terminals.



8. Use the portion of the power cable that was previously cut off to connect from the DC/DC power supply input side the vehicle electrical system. Connect the ground (green) wire from the computer to the GND terminal on the input side of the DC/DC power supply.
9. Route the wiring from the DC/DC power supply to the vehicle's electrical system. Do not connect to vehicle power at this time.
10. Strip the wire ends and connect to the input side of the DC/DC power supply.
11. Use looms and wire ties to secure all wiring as shown.
12. Reattach the cover with the screws.
13. Connect the DC/DC power supply to the vehicle's electrical system as directed below:



Caution: For battery powered vehicles only.

- V_{IN+} is connected to battery positive
- V_{IN-} must be connected to battery negative
- GND must be connected to the vehicle chassis ground



Caution: For internal combustion engine power vehicles.

- V_{IN+} is connected to battery positive
- V_{IN-} must be connected to battery negative

- GND is connected to the vehicle chassis ground, which can also be battery negative

14. While observing the [Fuse Requirements 50-150VDC Power Supply, Screws on Side of Lid](#) connect the power cable as close as possible to the actual battery terminals of the vehicle. When available, always connect to unswitched terminals in the vehicle fuse panel, after providing proper fusing.



Caution: For uninterrupted power, electrical supply connections should not be made at any point after the ignition switch of the vehicle.

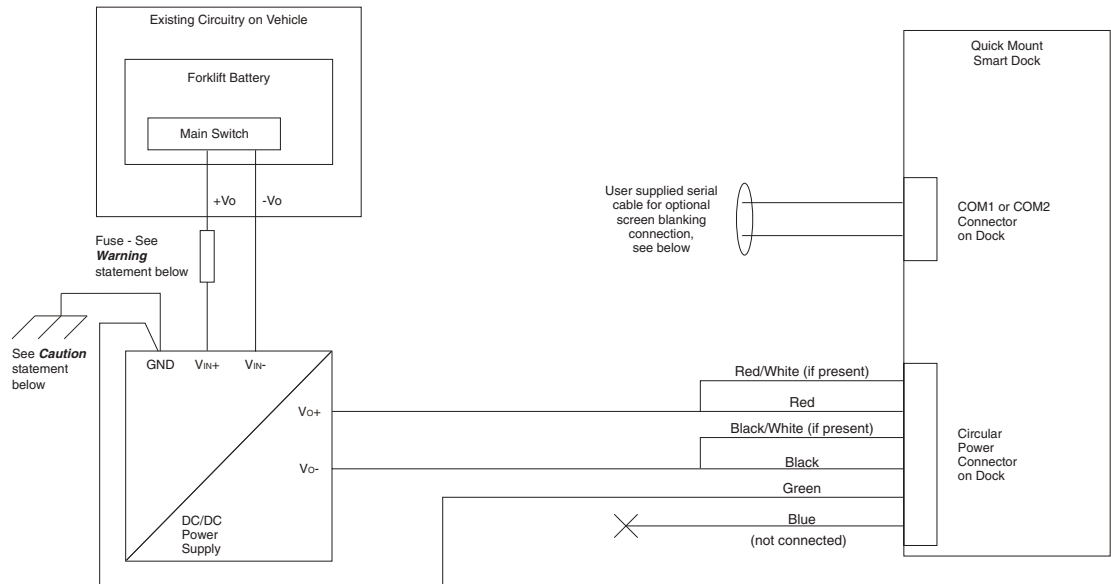
15. Use proper electrical and mechanical fastening means for terminating the cable. Properly sized “crimp” type electrical terminals are an accepted method of termination. Select electrical connectors sized for use with 18AWG (1mm²) conductors.
16. Provide mechanical support for the cable by securing it to the vehicle structure at approximately one foot intervals, taking care not to over tighten and pinch conductors or penetrate the outer cable jacket.
17. Connect the watertight connector end of the power cable to the dock power connector by aligning the connector pins to the power connector; push down on the watertight connector and twist it to fasten securely. Flip the power switch on the back of the dock to On.
18. Secure the power cable to the computer using the [Strain Relief Cable Clamps](#).
19. [Place Thor VM1A in the Dock](#).
20. If using the [Screen Blanking Installation](#) feature, install the screen blanking box or switch.
21. [Power On the Computer](#).

Once installation is complete, remember to start the computer and configure the [Power Mode](#).

See the [Auto-On](#) control panel.

Note: *Ignition control is not available for trucks over 60VDC.*

Wiring Diagram for 50-150VDC Power Supply, Screws on Side of Lid



Caution: For battery powered vehicles:

- GND must be connected to the vehicle chassis ground.



Caution: For internal combustion engine powered vehicles:

- GND is connected to the vehicle chassis ground, which can also be battery negative.



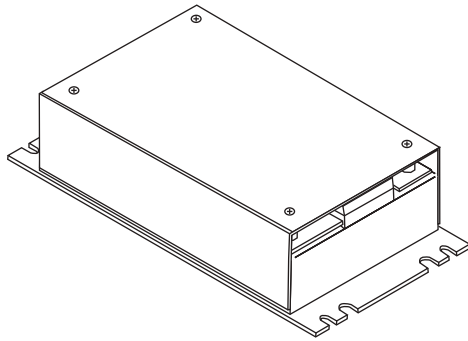
Warning: For proper and safe installation, follow the [Fuse Requirements 50-150VDC Power Supply, Screws on Side of Lid](#).

60-144 VDC Vehicles (50-150 VDC Power Supply, Screws on Top of Lid)

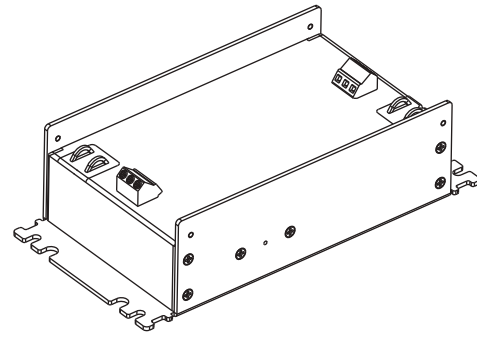


Caution: These instructions are for use with [VM1D Standard Dock](#) and [VM3D Enhanced Dock](#) only.

This option requires DC/DC power supply Honeywell Part no. VX89303PWRSPLY shown below.



Shown with Lid Attached
Lid is secured with screws on the side of lid.



Shown with Lid Removed
Input and output connector blocks under lid.
Two positive (+), negative (-), and ground (⊖) connection per terminal block.

If the DC/DC power supply does not have screws in the top of the lid, see [60-144 VDC Vehicles \(50-150 VDC Power Supply, Screws on Side of Lid\)](#).



Caution: For installation by trained service personnel only.



Caution: 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.



Caution: Use caution when routing the power cable. See [12-48 VDC Vehicles \(10-60 VDC Direct Connection\)](#).

Fuse Requirements for 50-150 VDC Power Supply, Screws on Top of Lid



Warning: For proper and safe installation, the input power cable must be connected to a fused circuit on the vehicle. 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's positive (+) terminal. Use VM3055FUSE (or equivalent) to install the fuse as shown below:

For all voltages, use the 3A fuse from the kit or a slow blow fuse that has a DC voltage rating greater than the vehicle input voltage.

Note: For North America, a UL Listed fuse is to be used.

Power Cable Identification for 50-150 VDC Power Supply, Screws on Top of Lid

The DC power cable is included with the dock:



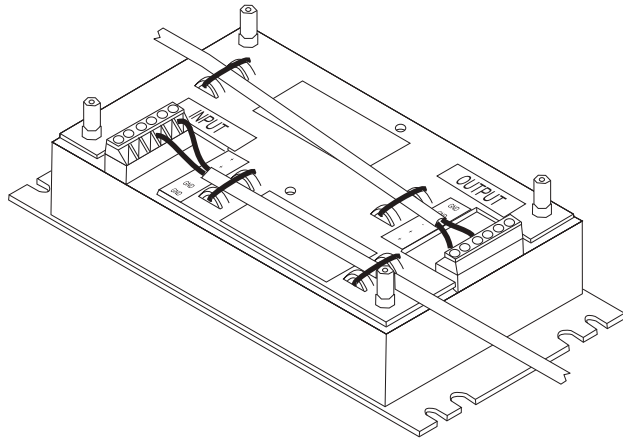
Caution: Twist the red and red/white wires together and twist the black and black/white wires together before connecting to vehicle power.

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

Vehicle 50-150 VDC Power Connection

1. Please review the [Wiring Diagram for 50-150 VDC Power Supply, Screws on Top of Lid](#), before beginning power cable install.
2. The Thor VM1A must not be mounted in the dock. The power switch on the dock must be turned Off. The power cable must be UNPLUGGED from the dock.
3. Route the cable from the computer to the DC/DC power supply. Route the power cable the shortest way possible. The cable is rated for a maximum temperature of 105°C (221°F). When routing this cable, it should be protected from physical damage and from surfaces that might exceed this temperature. 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.
4. Cut the cable to length and strip the wire ends. Retain the portion that was cut off for use in connecting to the vehicle power.
5. Remove the lid from the DC/DC power supply.
6. Connect the stripped end of the positive wires (red and red/white twisted together) to the output block. See [Power Cable Identification for 50-150 VDC Power Supply, Screws on Top of Lid](#).
7. Connect the stripped end of the negative wires (black and black/white twisted together) to the output. See [Power Cable Identification for 50-150 VDC Power Supply, Screws on Top of Lid](#).

Note: The input and output blocks each have two + (positive), two – (negative) and two ⊕ (ground) connectors. Either connector in the block can be used to connect the matching polarity wire.



8. Route the wiring from the DC/DC power supply to the vehicle's electrical system using the portion of the power cable previously cut off. Do not connect to vehicle power at this time.
9. Strip the wire ends and connect to the input side of the DC/DC power supply.
10. Use looms and wire ties to secure all wiring as shown.
11. Reattach the cover with the screws.
12. Connect the DC/DC power supply to the vehicle's electrical system as directed below:



Caution: For battery powered vehicles:

- VIN+ is connected to battery positive
- VIN- must be connected to battery negative
- GND must be connected to the vehicle chassis ground



Caution: For internal combustion engine powered vehicles:

- VIN+ is connected to battery positive
- VIN- must be connected to battery negative
- GND must be connected to the vehicle chassis ground

13. While observing the [Fuse Requirements for 50-150 VDC Power Supply, Screws on Top of Lid](#), connect the power cable as close as possible to the actual battery terminals of the vehicle. When available, always connect to unswitched terminals in the vehicle fuse panel, after providing proper fusing.



Caution: For uninterrupted power, electrical supply connections should not be made at any point after the ignition switch of the vehicle.

14. Use proper electrical and mechanical fastening means for terminating the cable. Properly sized “crimp” type electrical terminals are an accepted method

of termination. Select electrical connectors sized for use with 18AWG (1mm²) conductors.

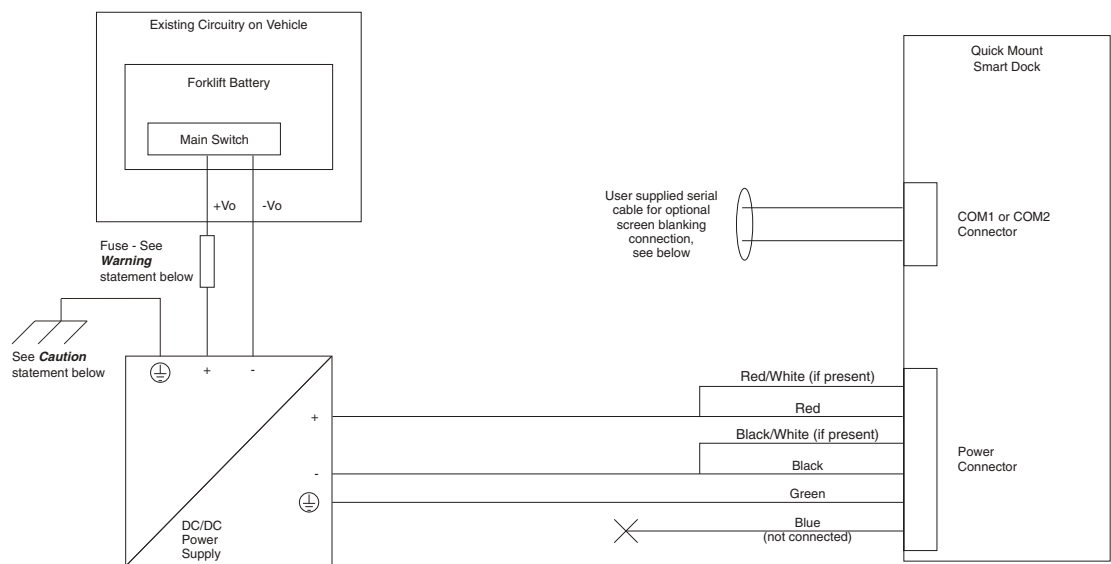
15. Provide mechanical support for the cable by securing it to the vehicle structure at approximately one foot intervals, taking care not to over tighten and pinch conductors or penetrate the outer cable jacket.
16. Connect the watertight connector end of the power cable to the dock power connector by aligning the connector pins to the power connector; push down on the watertight connector and twist it to fasten securely. Flip the power switch on the back of the dock to On.
17. Secure the power cable to the computer using the [Strain Relief Cable Clamps](#).
18. [Place Thor VM1A in the Dock.](#)
19. If using the [Screen Blanking Installation](#) feature, install the screen blanking box or switch.
20. [Power On the Computer.](#)

Once installation is complete, remember to start the computer and configure the [Power Mode](#).

See the [Auto-On](#) control panel.

Note: Ignition control is not available for trucks over 60VDC.

Wiring Diagram for 50-150 VDC Power Supply, Screws on Top of Lid



Caution: For battery powered vehicles:

- GND must be connected to the vehicle chassis ground.



Caution: For internal combustion engine powered vehicles:

- GND is connected to the vehicle chassis ground, which can also be battery negative.



Warning: For proper and safe installation, follow the [Fuse Requirements for 50-150 VDC Power Supply, Screws on Top of Lid.](#)

VX5/VX6/VX7 Adapter Cable



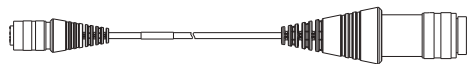
Caution: These instructions are for use with [VM1D Standard Dock](#) and [VM3D Enhanced Dock](#) only.

An adapter cable (VM1077CABLE) is available to attach the Thor VM1A to a vehicle previously equipped with a VX5/VX6/VX7 DC power cable. The adapter cable has a 5-pin connector to match with the VX5/VX6/VX7 power supply cable on one end and a 6-pin connector to match to the VM1A on the other end. This section assumes the VX5/VX6/VX7 power cable is properly connected to vehicle power. Refer to the X5, VX6, or VX7 Vehicle Mounting Reference Guide for details.



Warning: Because the VX5/VX6/VX7 supports 10-60 VDC power input, verify input voltages before using this adapter cable with an existing VX5, VX6, or VX7 power connection installation.

To Power Connector on Dock



To VX5/VX6/VX7 Power Supply Cable

When this adapter cable is used, there is no provision for an ignition switch input. Therefore the vehicle ignition monitoring function is not available when using this cable.

Connect to VX5/VX6/VX7 Power Cable

1. Connect the adapter cable to the VX5/VX6/VX7 power cable by aligning the connector pins to the power connector; push down on the watertight connector and twist it to fasten securely.
2. 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.

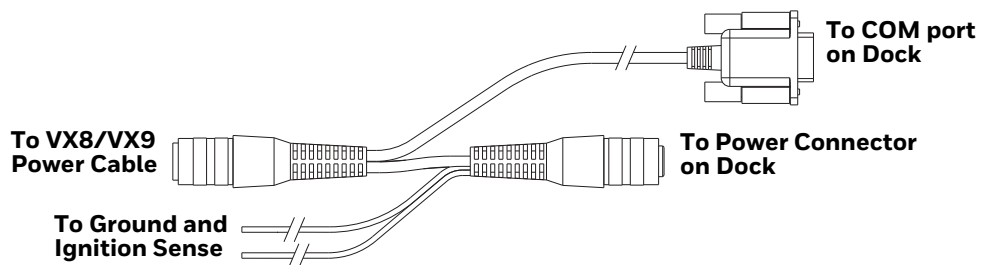
3. Provide mechanical support for the cable by securing it to the vehicle structure at approximately one foot intervals, taking care not to over tighten and pinch conductors or penetrate outer cable jacket.
4. Connect the watertight connector end of the power cable to the dock power connector by aligning the connector pins to the power connector; push down on the watertight connector and twist it to fasten securely.
5. Secure the power cable to the computer using the [Strain Relief Cable Clamps](#).
6. [Place Thor VM1A in the Dock](#)
7. If using the [Screen Blanking Installation](#) feature, install the screen blanking box or switch.
8. [Power On the Computer](#).

Thor VX8/Thor VX9 Adapter Cable



Caution: These instructions are for use with **VM1D Standard Dock** and **VM3D Enhanced Dock** only. This cable is not used for the **VMXD Enhanced Dock**.

An adapter cable is available to attach the Thor VM1A to a vehicle previously equipped with a VX8/VX9 DC power cable. with a screen blanking box installed. If screen blanking is not used, the VX8/VX9 power cable can be connected directly to the dock power connector and an adapter cable is not required. The adapter cable has a 6-pin connector to match the VX8/VX9 power supply cable on one end and a 6-pin connector to match the VM1A on the other end. The cable also has bare wires for ground and ignition sense connection plus a D9 cable to connect to a COM port on the dock to provide a screen blanking signal. This section assumes the VX8/VX9 power cable is properly connected to vehicle power. Refer to the VX8 or VX9 Vehicle Mounting Reference Guide for details.



Connect to Thor VX8/VX9 Power Cable

1. Connect the adapter cable to the Thor VX8/VX9 power cable by aligning the connector pins to the power connector; push down on the watertight connector and twist it to fasten securely.
2. Connect the green wire to vehicle ground.



Caution: For battery powered vehicles:

- GND (green wire) must be connected to the vehicle chassis ground.



Caution: For internal combustion engine powered vehicles:

- GND (green wire) is connected to the vehicle chassis ground, which can also be battery negative.
3. If ignition control will be used, connect the blue wire to an ignition switched circuit (less than 1mA over input voltage range). If ignition control is not used, the blue wire can be left disconnected,
 4. If the VX8/VX9 cable is connected to a screen blanking box or switch, connect the D9 connector to a COM port on the dock.
 5. The cable is rated for a maximum temperature of 105°C (221°F). Therefore, when 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.
 6. 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.
 7. Connect the watertight connector end of the power cable to the dock power connector by aligning the connector pins to the power connector; push down on the watertight connector and twist it to fasten securely.
 8. Secure the power cable to the computer using the [Strain Relief Cable Clamps](#).
 9. [Place Thor VM1A in the Dock](#).
 10. If using the [Screen Blanking Installation](#) feature, install the screen blanking box or switch if not previously installed.
 11. [Power On the Computer](#).

CV60/CV61 Adapter Cable



Caution: These instructions are for use with **VM1D Standard Dock** and **VM3D Enhanced Dock** only.

An adapter cable is available to attach the Thor VM1A to a vehicle previously equipped with a CV60 (VM3078CABLE) or CV61 (VM3079CABLE) DC power cable. The adapter cable has a 5-pin connector to match with the CV60 or CV61 power supply cable on one end and a 6-pin connector to match to the VM1A on the other end. This section assumes the CV60 or CV61 power cable is properly connected to vehicle power. Refer to the CV60 or CV61 documentation for details.

To Power Connector on Dock



To VM1A Power Supply Cable

When this adapter cable is used, there is no provision for an ignition switch input. Therefore the vehicle ignition monitoring function is not available when using this cable.

Connect to CV60 or CV61 Power Cable

1. Connect the adapter cable to the CV60 or CV61 power cable by aligning the connector pins to the power connector; push down on the watertight connector and twist it to fasten securely.
2. 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.
3. 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.
4. Connect the watertight connector end of the power cable to the dock power connector by aligning the connector pins to the power connector; push down on the watertight connector and twist it to fasten securely.
5. Secure the power cable to the computer using the [Strain Relief Cable Clamps](#).
6. [Place Thor VM1A in the Dock](#)
7. If using the [Screen Blanking Installation](#) feature, install the screen blanking box or switch.
8. [Power On the Computer](#).

Screen Blanking Installation

Screen blanking (blackout) can be enabled when the vehicle is in motion. Once screen blanking is enabled, the display is blanked out (or a preselected zoom area is displayed) any time when the cable sends the signal that the vehicle is in motion. If the cable is removed, screen blanking is disabled and the display remains on.

Prerequisite: The steps outlined in either [12-48 VDC Vehicles \(10-60 VDC Direct Connection\)](#), [60-144 VDC Vehicles \(50-150 VDC Power Supply, Screws on Side of Lid\)](#) or [60-144 VDC Vehicles \(50-150 VDC Power Supply, Screws on Top of Lid\)](#) have been completed.

Screen blanking is accomplished by either a Screen Blanking Box or a user supplied switch.



Caution: For installation by trained service personnel only.

Fuse Requirements for Screen Blanking



Warning: 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. The fuse and the fuse holder must be supplied by the user.

Screen Blanking Cable

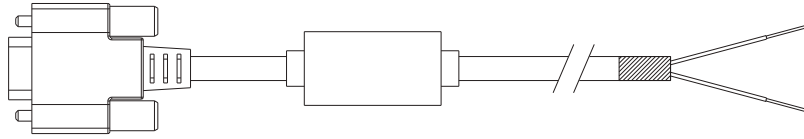
Refer to [Screen Blanking](#) to configure the VM1A for screen blanking.

When routing any additional cables for screen blanking:

- Route the cable the shortest way possible removing any left-over cable
- Route the 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.

Honeywell Screen Blanking Box Cable

An optional Honeywell Screen Blanking Box Cable is available (VM1080CABLE).



DB9 Female	Function with Screen Blanking Box	Wire color
1 -6, 9	Not Used	
7 (RTS)	Connected to Screen Blanking Box, unswitched side	Black (see note)
8 (CTS)	Connected to Screen Blanking Box, switched side	Gray (see note)

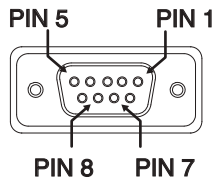
Note: Wire colors only apply to optional Honeywell Screen Blanking Box Cable, VM1080CABLE. Wire colors may vary in a user-supplied cable.

The optional Honeywell Screen Blanking Box Cable, VM1080CABLE, is installed as follows:

1. Connect the gray wire of the cable to the switched side of the Screen Blanking Box.
2. Connect the black wire of the cable to the unswitched side of the Screen Blanking Box.
3. Connect the D9 serial connector to either COM1 or COM2 serial port on the dock.

User-Supplied Cable for Screen Blanking

A user-supplied cable can be used as well. Pins 7 and 8 must be connected as detailed below. No other pins are to be connected.

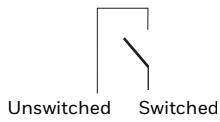


DB9 Female	Function with Screen Blanking Box	Function with Switch
1 -6, 9	Not Used	Not Used
7 (RTS)	Connected to Screen Blanking Box, unswitched side	Connected to Switch
8 (CTS)	Connected to Screen Blanking Box, switched side	Connected to Switch

The user-supplied cable is installed as follows:

1. Connect the wire from Pin 8 of the cable to the switched side of the Screen Blanking Box or to a user-supplied switch.
2. Connect the wire from Pin 7 of the cable to the unswitched side of the Screen Blanking Box or to a user-supplied switch.
3. Connect the D9 serial connector to either COM1 or COM2 serial port on the dock.

Screen Blanking Box

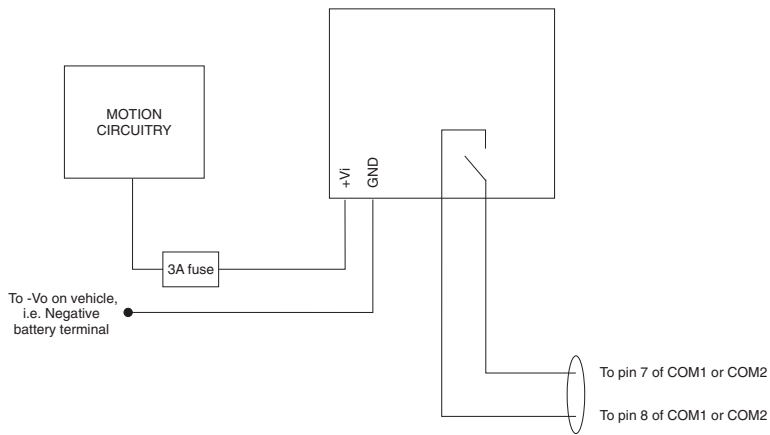
Screen Blanking Box Terminal	Connection
+VI	Input from vehicle motion sensing circuitry. Please refer to label on Screen Blanking Box for allowable voltage input range.
GND	DC -
	<p>These two terminals are for connecting a serial cable:</p> <ul style="list-style-type: none"> • If using an optional Honeywell screen blanking cable, VM1080CABLE, connect the <i>gray</i> wire to the <i>switched</i> side of the connection and connect the <i>black</i> wire to the <i>unswitched</i> side. • If using a user-supplied cable, the cable must be constructed so that Pin 7 (RTS) connects to <i>switched</i> side of the connection and Pin 8 (CTS) connects to the <i>unswitched</i> side.

It is assumed that the motion sensing circuitry in the illustrations below is powered by internal vehicle circuitry.

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



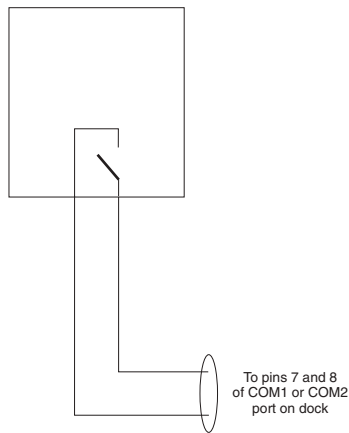
Warning: Do not exceed the maximum input voltage, either 60 or 72VDC, specified on the Screen Blanking Box label when using this configuration.



Note: The black and gray wire colors in the illustration only apply to the optional Honeywell Screen Blanking Box Cable, VM1080CABLE. The wire colors may be different in a user-supplied cable.

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.



Pins 7 and 8 must be connected as shown in the illustration above. No other pins are to be connected.

Enhanced Dock with Thor VX8/Thor VX9 Screen Blanking



Caution: This dock (VMX004VMCRADLE) is recommended for use when replacing an existing Thor VX8 or Thor VX9 where screen blanking is used. This dock eliminates the need for wiring changes by enabling the existing VX8/VX9 power cable and screen blanking box to be used when the VX8/VX9 is replaced by Thor VM1A. These instructions are for this dock model only! The Ignition Control feature is not available when this dock is used.



Warning: The external DC/DC converter previously used with the Thor VX8 or Thor VX9 must be left in place to provide ground isolations. Connecting the dock power input directly to vehicle power could result in a safety hazard or equipment damage.



Warning: The cable shielding must be connected to chassis ground. Consult the instructions later in this section for the respective power supply type.



Caution: COM1 is used for screen blanking (via the power cable connector) and is unavailable when the screen blanking box is attached. When a screen blanking box is attached, any external serial device, such as a scanner, must be connected to the COM2 port on the dock. If a screen blanking box is not connected via the power cable, the COM1 port on the dock is available for a serial device connection.



Caution: These instructions for use with [Enhanced Dock with Thor VX8/VX9 Screen Blanking](#) only.

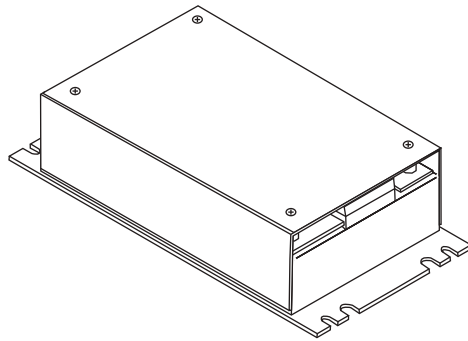
Determine the type of power supply used with the previous Thor VX8 or Thor VX9 installation:

- [DC/DC Power Supply with Screws on Top of Lid](#)
- [DC/DC Power Supply with Screws on Side of Lid](#)

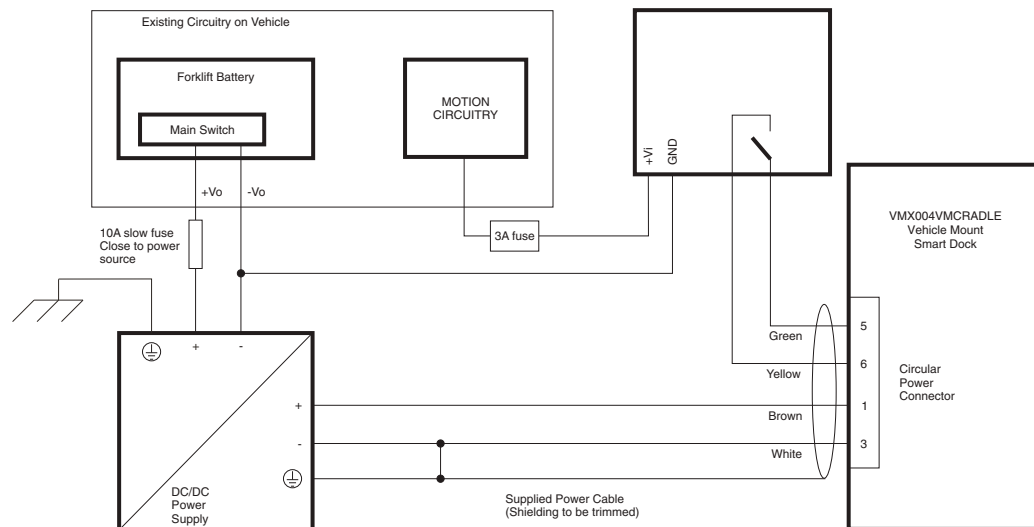
DC/DC Power Supply with Screws on Top of Lid



Caution: Inspect the cable shield to verify it is connected to chassis ground. If there is no connection from the cable shield to chassis ground, one must be added at this time. Use a jumper wire to connect the cable shield to chassis ground as shown below for the appropriate type of power supply installed on the vehicle. A jumper wire, as shown in the illustrations below, may be present to attach the chassis ground to the white wire of the power cable. This wire is not necessary but can be left in place if present. For proper screen blanking, verify the yellow and green wires are attached to the screen blanking box as shown in the illustrations below.



For this model, follow the diagram below to attach the power cable shield to chassis ground:



Caution: For battery powered vehicles:

- VIN+ is connected to battery positive.
- VIN- must be connected to battery negative.

- GND must be connected to the vehicle chassis ground.



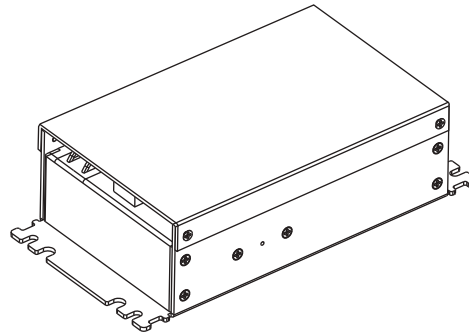
Caution: For internal combustion engine powered vehicles:

- VIN+ is connected to battery positive.
- VIN- is connected to battery negative.
- GND is connected to the vehicle chassis ground, which can also be battery negative.

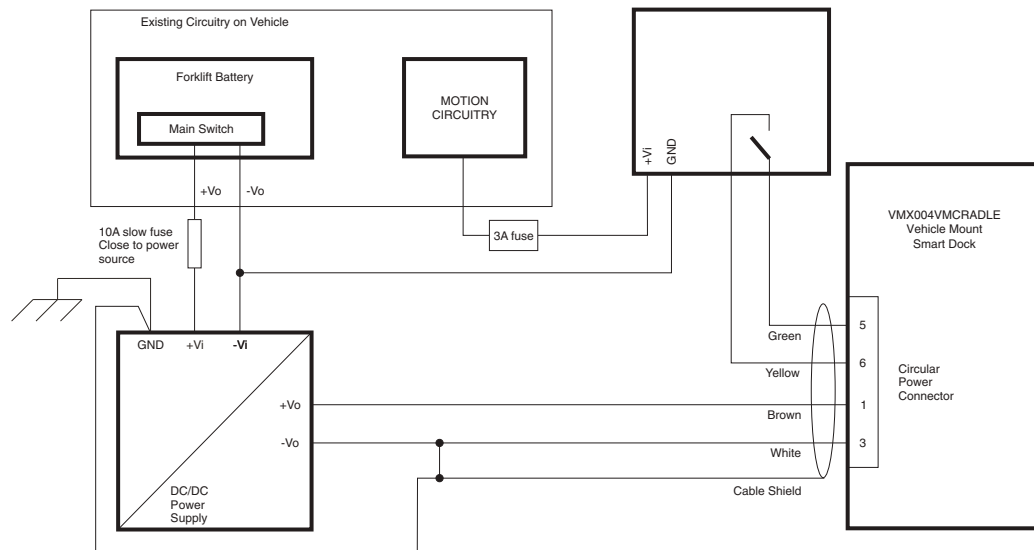
DC/DC Power Supply with Screws on Side of Lid



Caution: Inspect the cable shield to verify it is connected to chassis ground. If there is no connection from the cable shield to chassis ground, one must be added at this time. Use a jumper wire to connect the cable shield to chassis ground as shown below for the appropriate type of power supply installed on the vehicle. A jumper wire, as shown in the illustrations below, may be present to attach the chassis ground to the white wire of the power cable. This wire is not necessary but can be left in place if present. For proper screen blanking, verify the yellow and green wires are attached to the screen blanking box as shown in the illustrations below.



For this model, follow the diagram below to attached the power cable shield to chassis ground:



Caution: For battery powered vehicles:

- VIN+ is connected to battery positive.
- VIN- must be connected to battery negative.
- GND must be connected to the vehicle chassis ground.



Caution: For internal combustion engine powered vehicles:

- VIN+ is connected to battery positive.
- VIN- is connected to battery negative.
- GND is connected to the vehicle chassis ground, which can also be battery negative.

External AC/DC Power Supply



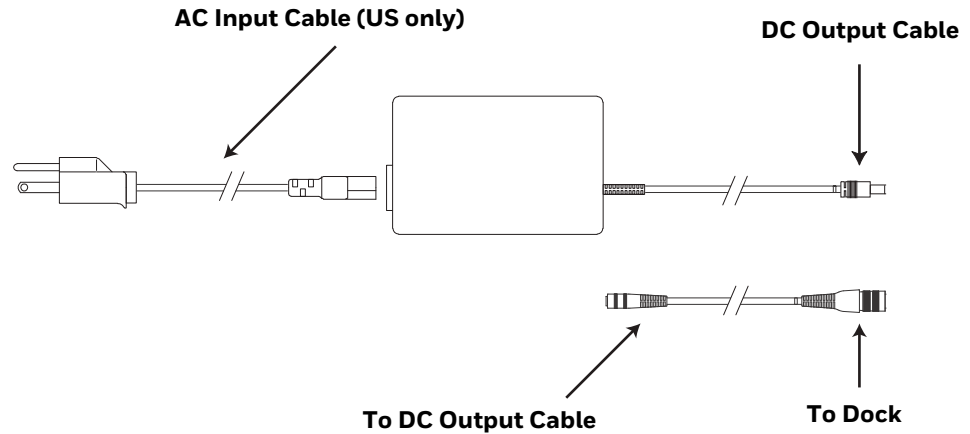
Caution: These instructions for use with VMXD Enhanced Dock for Off-Vehicle Use only.

The optional external AC/DC power supply is for use in environments, such as an office, where DC power is not available.

Note: *The Honeywell-approved AC/DC Power Supply and Adapter Cable (VM1078CABLE) are only intended for use in a 40°C (104°F) maximum ambient temperature environment.*

In North America, this unit is intended for use with a UL Listed ITE power supply with output rated 15 VDC, 4 Amp (maximum), 60 W (maximum). Outside North America, this unit is intended for use with an IEC certified ITE power supply with output rated 15 VDC, 4 Amp (maximum), 60 W (maximum).

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).

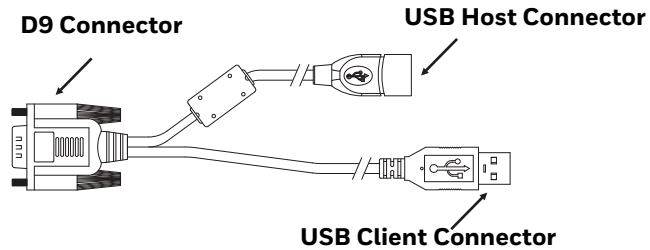


Connect External Power Supply

1. Connect the provided detachable cordset (US only, all others must order cable separately) to the external power supply (IEC 320 connector).
2. Plug cordset into appropriate, grounded, electrical supply receptacle (AC mains).
3. Connect the DC output cable end to the corresponding connector on the adapter cable. (VM1301PWRSPPLY or VM1302PWRSPPLY)
4. Connect the watertight connector end of the Adapter Cable to the VMXD Off-Vehicle Dock power connector by aligning the connector pins to the power connector; push down on the watertight connector and twist it to fasten securely.
5. [Power On the Computer.](#)

Connect USB Host

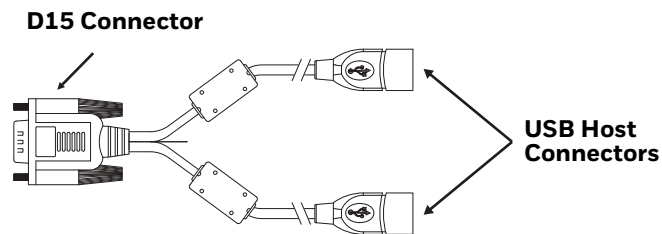
Host/Client Y Cable



See [USB and USB1 Connector](#) for connector pinouts.

1. Seat the D9 connector firmly over the USB (Standard Dock) or USB1 (Enhanced Dock) connector on the dock.
2. Tighten the thumbscrews in a clockwise direction. Do not over tighten.
3. The USB-host connector provides a connector for a USB device such as a USB thumb drive. The VM1A does not support the USB client port on this cable.
4. Secure the cables to the computer with [Strain Relief Cable Clamps](#).

Dual Host Y Cable



See [USB2 Connector](#) for connector pinouts.

1. Seat the D15 connector firmly over the USB2 (Enhanced Dock only) connector on the dock.
2. Tighten the thumbscrews in a clockwise direction. Do not over tighten.
3. The USB-host connectors provide a connector for a USB device such as a USB thumb drive.
4. Secure the cables to the computer with [Strain Relief Cable Clamps](#).

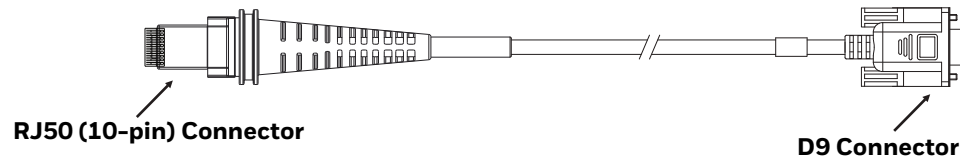
USB Scanner

There are several ways to attach a USB scanner:

- A USB scanner can be attached to the host port on either USB adapter Y-cable.

- Certain USB scanners can be attached directly to the USB or USB-1 connector using cable CBL-501-300-S00, as shown below.

To use the CBL-501-300-S00 cable:

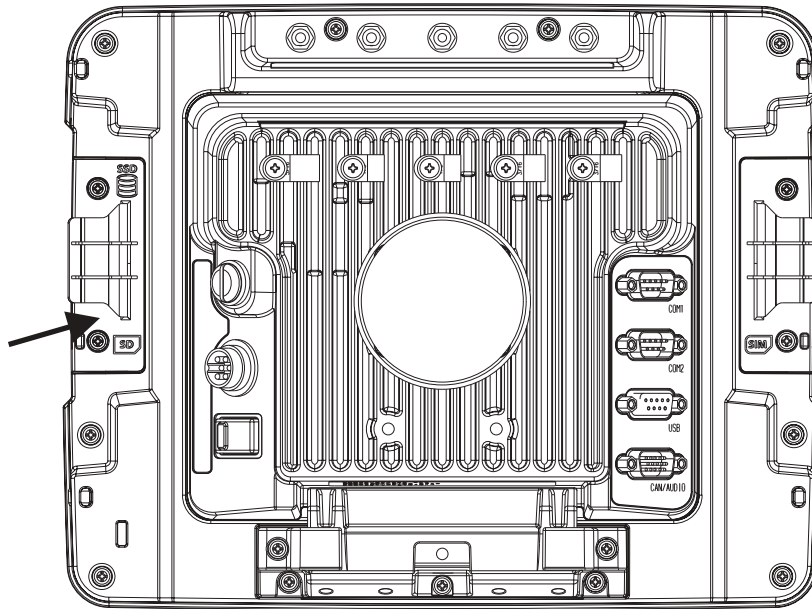


1. Seat the D9 connector of the cable over the USB or USB11 connector on the dock.
2. Tighten the thumbscrews in a clockwise direction. Do not over tighten.
3. Follow the instructions provided with the scanner to attach the RJ50 end of the cable to the scanner.

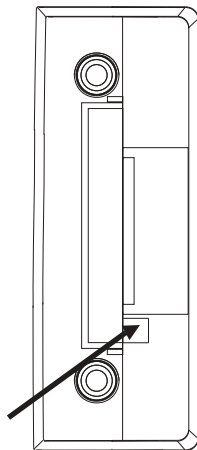
See [USB Host to Scanner Cable](#) for pinout details.


Connect USB Client

1. For convenience, the computer can be removed from the dock, though it is not necessary.
2. If the computer remains in the dock, disconnect the power cable from the dock.
3. Press and hold the **Power** button until the options menu appears. Tap **Power Off**.
4. Place the computer face down on a stable surface.
5. Using a #2 Phillips bit loosen the M3 screws and then remove the access panel with the SD label. This panel is on the left hand side when the computer is face down with the top away from the user.



6. Insert the micro USB type B cable into the port below the SD card slot.



7. If removed, reinstall the computer in the dock.
8. Insert the USB type A cable into the PC.
9. Press the **Power** button.
10. Swipe up from the bottom of the Home screen to access all apps.
11. Tap **Settings**  > **Connected Devices** > **USB**.
12. Choose one of the following options:
 - **Charge this device**
 - **Transfer files**
 - **Transfer photos (PTP)**

Connect Serial Device

Note: Pin 9 of the COM port is configured to provide +5V.

See [COM1 and COM2 Connector](#) for connector pinouts.

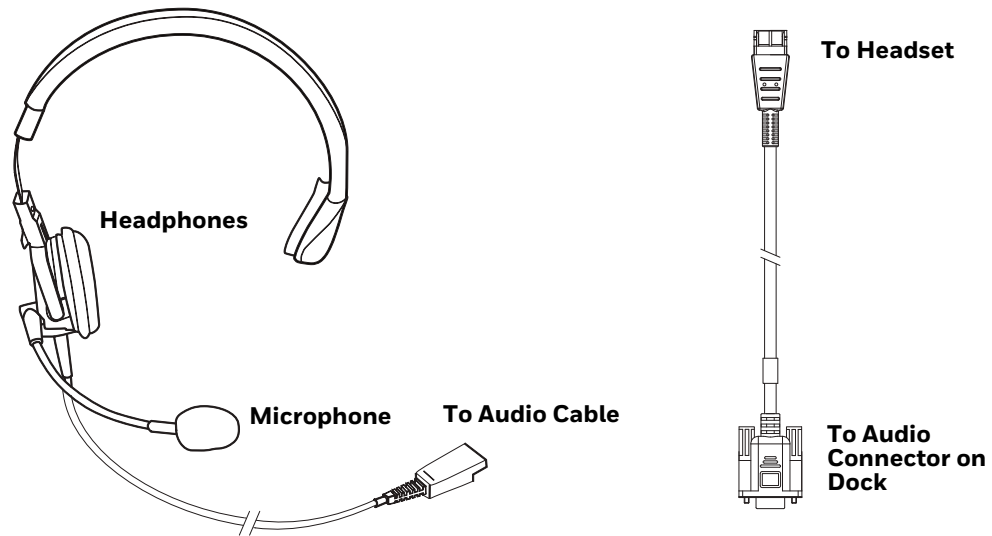
1. Seat the cable end connector firmly over the serial COM port on the dock.
2. Turn the thumbscrews in a clockwise direction. Do not over tighten.
3. Secure the cables to the computer with [Strain Relief Cable Clamps](#).
4. Connect the other cable end to the desired serial device.

Connect a Tethered Scanner

1. The scanner cable is attached to either the COM1 or COM2 port on the dock.
2. Connect the serial cable for the scanner as directed above.
3. When the computer is powered on, it provides power to the serial scanner.
4. Configure the Data Collection (DC) Wedge to manipulate scanned data as desired.

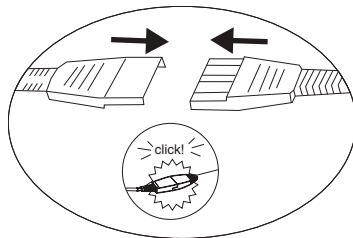
Connect Headset Cable

The Audio connector supports a headset adapter cable.

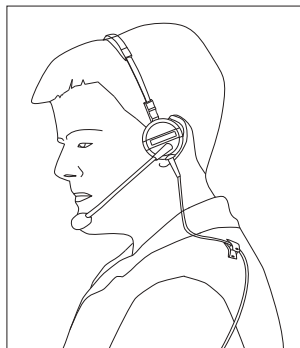


See [Audio Connector](#) for connector pinouts.

1. Seat the D15 cable end connector firmly over the Audio Connector on the 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 internal microphone and speakers are automatically disabled when the headset is connected.



Adjust Headset/Microphone and Secure Cable



The headset consists of an earpiece, a microphone, a clothing clip, and a cable.

1. Do not twist the microphone boom when adjusting the microphone. The microphone should be adjusted to be about two finger widths from your mouth.
2. 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.
3. Follow the safety guidelines below when wearing the headset.

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.

Strain Relief Cable Clamps

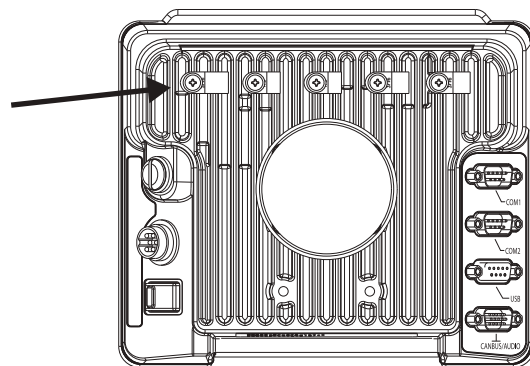
Equipment Required: Phillips screwdriver (not supplied by Honeywell)

There are five strain relief cable clamps secured to the Standard Dock.

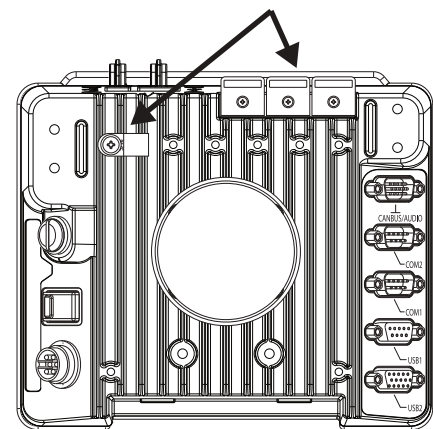
There is one strain relief cable clamp and three strain relief brackets for securing cables to the Enhanced Dock.

Use the strain relief clamps to secure audio, power, and I/O cables attached to the dock.

Use the left-most strain relief clamp for the power cable.



Standard Dock



Enhanced Dock

To use the strain relief clamp(s):

1. Determine the proper strain relief cable clamp. There are three sizes of cable clamps on the Standard Dock which should be matched to the cable to be secured. For example, the largest clamp (on the left when viewing the back of the dock) is designed to secure the power cable. For the Enhanced Dock there is a single cable clamp. Use this clamp for the power cable, Use the brackets for all other cables.
2. Remove the strain relief clamp from the computer by turning the screw counterclockwise. Put the screw aside in a safe location.
3. Slide the strain relief clamp over the cable.
4. Using a Phillips screwdriver and the screw that was removed, refasten the clamp holding the cable to the dock. Do not stretch the cable. Leave enough slack in the cable to allow it to be connected and disconnected easily when needed.
5. Continue in this manner until all cables are secured to the dock.

To use the strain relief brackets (Enhanced Dock only):

1. Secure the cable to the bracket with plastic tie straps (cable ties).
2. If necessary, the cable ties can be trimmed to length after installation. Cut the excess tie length off flush and not at an angle to prevent sharp edges that may cause cuts.

MANAGE AND MAINTAIN THE COMPUTER

Use this chapter to understand how to upgrade software, reset, and maintain the computer.

About Software Updates and Cyber Security

Cyber security best practices include keeping your device apps and OS up to date. To help, Honeywell offers maintenance patches, security updates and operating system upgrades through our Honeywell Edge services.

Availability and cost depend on the following:

- Date of purchase of the device or software app.
- Warranty status.
- Service agreement status (devices) or Maintenance plan status (apps).

To learn more about Honeywell Edge Services, go to <https://sps.honeywell.com/us/en/services/productivity/support-services>.



Caution: Honeywell recommends routinely checking honeywell.com/SPS-cyber-security for critical Cyber Security Notifications and to download the latest Network and Security Guides.

Software Downloads



Product support is available online through [Technical Support](#). Software updates can be accessed through the [Software Downloads](#) portal. You will need to create a login account for portal access. Additional information such as purchased date, service agreement number, maintenance plan number, or software license number may be required for downloads.

1. Go to honeywell.com/PSSsoftware-downloads.
2. Create a login account if you have not already created one.
3. Install the Honeywell Download Manager tool. See “Note” on the portal page. This tool is required for downloads.

4. Locate the app or upgrade you want to download in the Software directory.
5. If prompted, enter additional information, and click **Submit**.
6. Select **Download**. Follow the prompts to download the file.

Install Software Updates with AutoInstall

Important: *The Thor VM1A must have power for the entire length of the upgrade process or it could become unstable.*

1. Swipe up from the bottom of the Home screen to access all apps.
2. Tap **Settings**  > **Honeywell Settings** > **Provisioning mode**.
3. Tap the toggle button to turn Provisioning mode **On**.
4. Save the upgrade file (*.zip or *.apk) in one of the following folders on the VM1A computer:
 - **Internal shared storage\honeywell\autoinstall**
Software upgrades saved to this folder for installation, do not persist when a Full factory reset or Enterprise data reset is performed.
 - **IPSM card\honeywell\autoinstall**
Software upgrades saved to this folder, do not persist when a Full factory reset is performed. However, the upgrade does persist if an Enterprise data reset is performed.
5. Swipe up from the bottom of the Home screen to access all apps.
6. Tap **AutoInstall Settings**  and verify **Enable Autoinstall** is enabled .
7. Tap **Packages upgrade** from the AutoInstall Settings screen.



The computer automatically initiates a reboot and installs the software upgrade. The system update screen appears during the upgrade process. When the update is finished, the lock screen appears.
8. Once installation is complete, turn Provisioning mode **Off**.

Note: *Some updates do not require the computer to reboot before installation.*

Optional SD Card Method

The VM1A comes equipped with a SD card socket. You can install an upgrade from a SD card you insert in the computer.

Important: *The Thor VM1A must have power for the entire length of the upgrade process or it could become unstable.*

1. On the computer, swipe up from the bottom of the Home screen to access all apps.
2. Tap **Settings**  > **Provisioning mode** under *Honeywell Settings*.
3. Tap the toggle button to turn Provisioning mode **On**.
4. Tap **AutoInstall Settings** . Verify **AutoInstall** is enabled .
5. Press and hold the **Power** button, and then tap **Power off**.
6. On your workstation (e.g., laptop, desktop computer), format the SD card and create a **\honeywell\autoinstall** folder on the root of the card.
7. Save the upgrade file in the **autoinstall** folder.
8. Install the SD card, and then press the **Power** button.

The computer automatically runs the upgrade found in the autoinstall folder on the card. The system update screen appears during the upgrade process. When the upgrade is finished, the lock screen appears.


9. Once installation is complete, turn Provisioning mode **Off**.

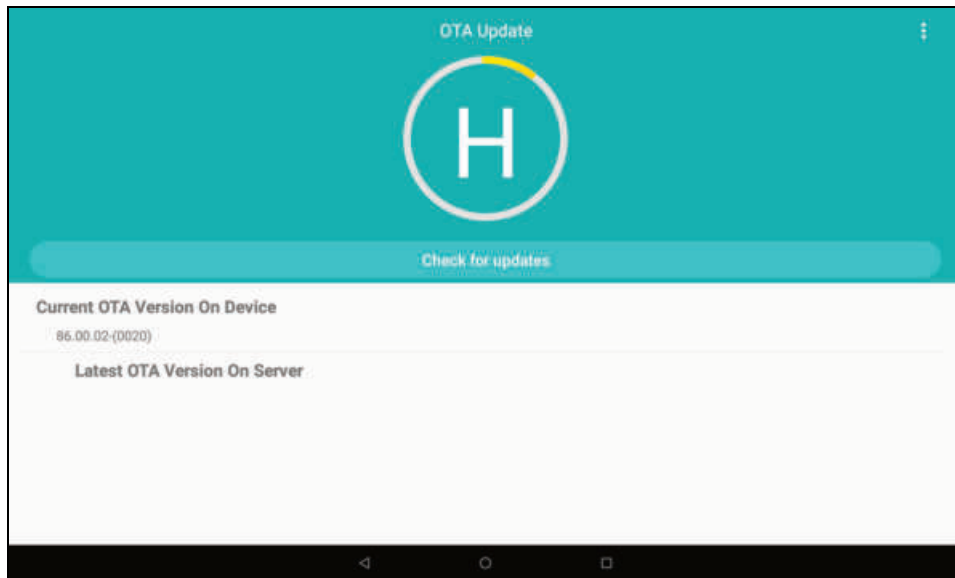
About the Honeywell Upgrader


Use the Honeywell Upgrader app (HUpgrader) to check for and install OTA updates or view the current OTA version installed on the computer.

Install OTA Updates

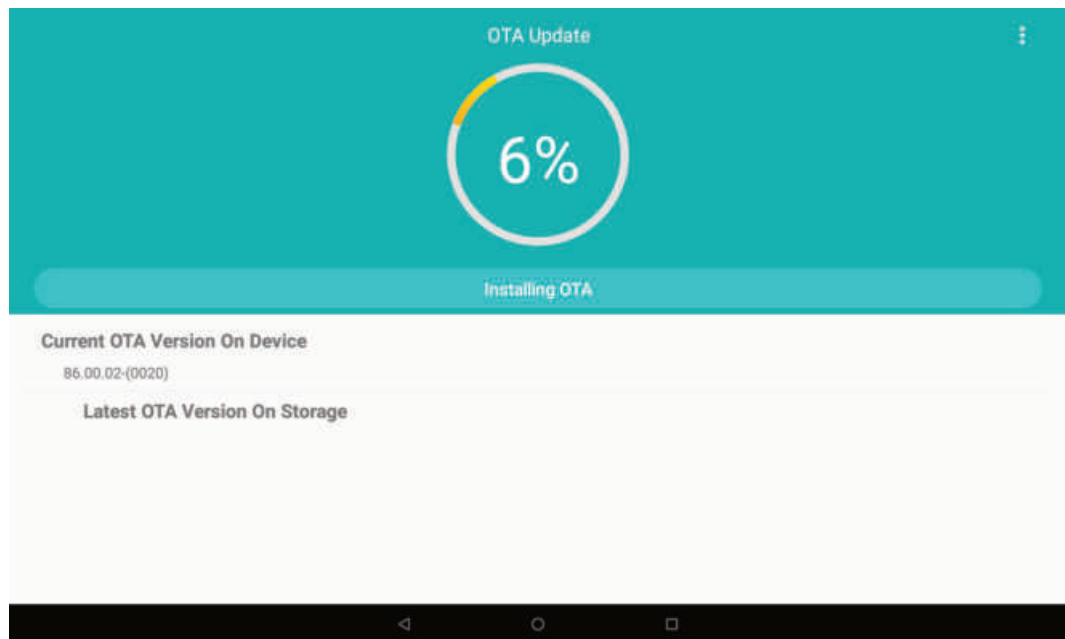
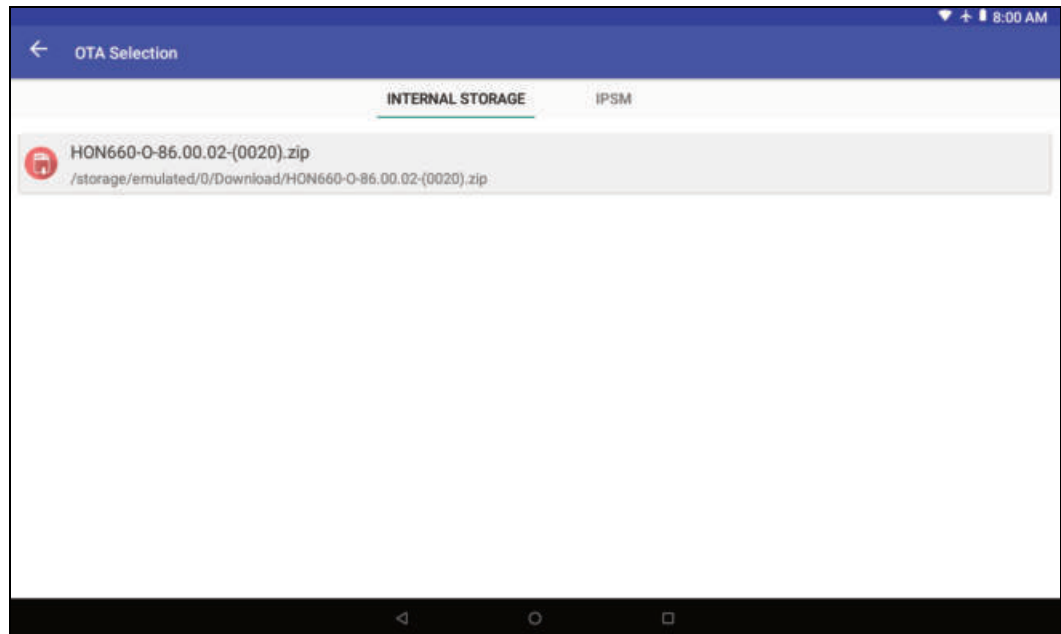
To use the HUpgrader to install an OTA update file downloaded from the [Technical Support Downloads Portal](#):

1. Save the OTA file (*.zip) in the following folder on the VM1A computer:
 - **Internal shared storage\Download**
2. Tap **HUpgrader**  to open the Honeywell Updater app.



3. Tap  in the upper right corner, and then tap **Select OTA from storage**.
4. Select the storage location (i.e., Internal Storage) where you saved the file.

5. Tap the OTA update file. The computer examines the file, and then starts the installation.



6. Once the installation is complete (100%), select **OK** when prompted to **Reboot** the computer. The computer reboots and finishes the update.

Restart (Reboot) the Computer

You may need to restart the computer to correct conditions where an application stops responding to the system.

1. Save your files and close any open applications.
2. Press and hold the **Power** button until the options screen appears.
3. Tap **Restart**.

If the touch panel display is unresponsive:

- Press and hold the **Power** button for approximately 8 seconds until the computer reboots.

About an Enterprise Data Reset

You can perform an Enterprise data reset if a Reboot did not improve the condition and all other troubleshooting methods have not resolved the issue. This method provides a clean configuration for troubleshooting by erasing all data from the **Internal shared storage** location on the computer. Data is not erased from the **IPSM Card** location.





Caution: An Enterprise data reset results in data loss, only perform this procedure if all other recovery methods have failed. All personal content is erased including, but not limited to emails, pictures, contacts, Google account information, system settings and app settings.

Note: *This method of recovery may not be available if your system administrator has set policies to prevent the reset use.*

Before You Begin

- If you recently reset your Google Account password, wait 24 hours before performing a Enterprise data reset.
- Make sure you have your screen lock password, PIN or pattern if you activated one. You will need this to reset the computer.
- If you have a Google Account, back up your data and settings to your Google Account so you can restore them if needed.
- Connect the computer to an external power source or make sure you have a full battery charge.
- Make sure you have an Internet connection.

Enterprise Data Reset the Computer

1. Swipe up from the bottom of the Home screen to access all apps.
2. Select **Settings**  > **System** > **Advanced** > **Reset Options**.
3. Tap **Enterprise data reset**.
4. If prompted, type your screen lock security pattern, PIN, or password, and tap next ().
5. Tap **Erase all data**. A message appears informing you an Enterprise data reset is being performed.

About a Factory Data Reset

A Factory Data Reset should only be performed if you have exhausted all other troubleshooting options. This method reverts the computer back to the factory state by erasing all data in **Internal shared storage** and the **IPSM Card** storage locations on the computer.





Caution: A factory data reset results in data loss. Perform this procedure only if all other recovery methods have failed and have no other option. All personal content is erased including, but not limited to emails, pictures, contacts, Google account information, system settings, and app settings.

Note: *This method of recovery may not be available if your system administrator has set policies to prevent the reset use.*

Before You Begin

- If you added a Google Account to the computer, make sure you have your Google username and password associated with the computer. If you do not have the username and password, you will not be able to use the computer after the reset. This is a security measure that prevents unauthorized users from using the device if they try a Full factory reset.
- If you did not add a Google Account to the computer, the extra security level is not enabled and you will not need a Google username and password.
- If you recently reset your Google Account password, wait 24 hours before performing a Full factory reset.
- Connect the computer to an external power source or make sure you have a full battery charge.
- Make sure you have an Internet connection.

Factory Data Reset the Computer

1. Swipe up from the bottom of the Home screen to access all apps.
2. Select **Settings**  > **System** > **Advanced** > **Reset Options**.
3. Tap **Erase all data (factory reset)**.
4. If prompted, type your screen lock security pattern, PIN, or password, and tap next ().
5. Tap **Erase all data**. A message appears informing you a Full factory reset is being performed.

Clean the Computer

To keep the computer in good working order, you may need to clean the touch screen. Clean the touch screen as often as needed for the environment in which you are using the computer. The computer withstands application of the following cleaning agents when applied to a clean soft cloth and removed immediately with a dry soft cloth:

- Acetic acid, 10% in water
 - Ethyl alcohol, 10% in water
 - Mild soap solutions
1. Press the **Power** button to put the computer into Sleep mode.
 2. Dip a clean cloth towel in the cleaning agent and wring out the excess.
 3. Wipe dry.
 4. Let the computer completely air dry before using again.

Maintenance - Vehicle Mounted Devices

Check the vehicle mounting hardware frequently and re-tighten if necessary.

If the vehicle mounting hardware and connections become broken, loose or cracked, the assembly must be taken out of service and replaced. Contact [Technical Assistance](#) for help.

Replace the Front Panel

Front Panel Options

The front panel of the computer is field replaceable. The front panel assembly contains the keypad, touch screen and optional defroster. Should any of these components fail, the front panel assembly can easily be replaced to reduce downtime. The replacement front panel is available in these configurations:

- Thor VM1A replacement front panel, indoor resistive (VM1A540FRONTPNL)
- Thor VM1A replacement front panel, outdoor resistive (VM1A541FRONTPNL)
- Thor VM1A replacement front panel, defroster resistive (VM1A542FRONTPNL)
- Thor VM1A replacement front panel, PCAP indoor (VM1A543FRONTPNL)
- Thor VM1A replacement front panel, PCAP outdoor (VM1A544FRONTPNL)

Equipment Required

The following equipment is user-supplied:

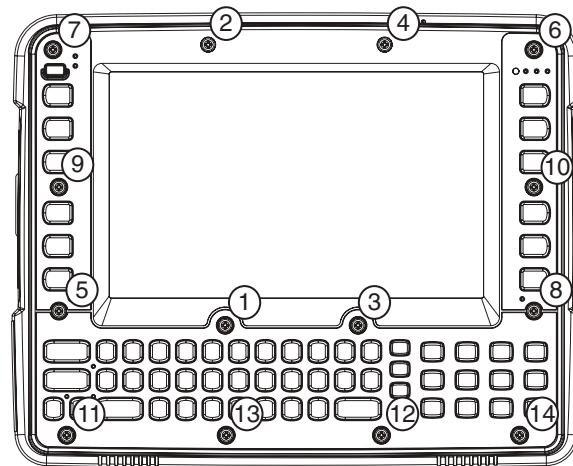
- Torque tool capable of measuring inch pounds
- #2 Phillips screwdriver bit

Replacement Procedure

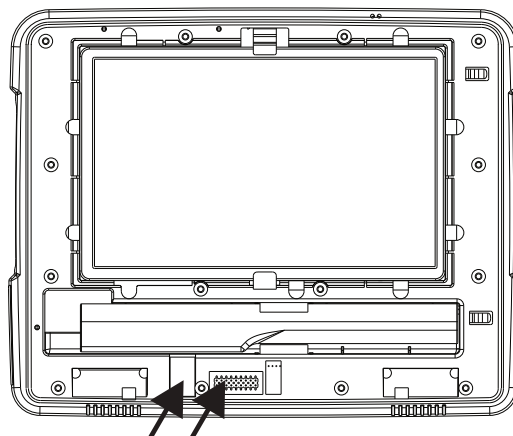


Caution: Before replacing the Thor VM1A front panel, **Disconnect the UPS Battery.**

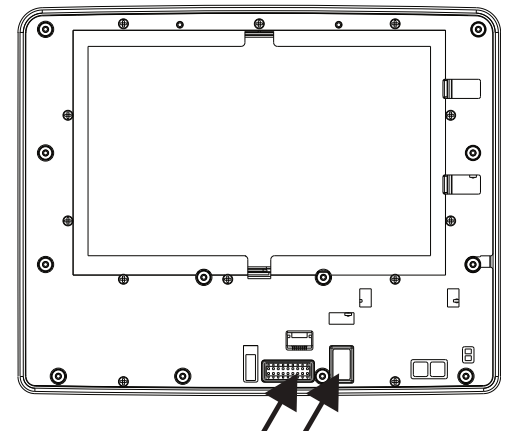
1. Place the computer on a clean, well-lit surface before performing the front panel replacement.
2. Press and hold the **Power** button until the options menu appears. Tap **Power Off**.
3. Remove the computer from the dock.
4. **Disconnect the UPS Battery.**
5. Loosen the fourteen (14) captive M3 screws holding the front panel. Use a #2 Phillips bit.



6. Carefully lift the front panel away from the device.






Alignment Slot on Thor VM1A **Wiring Connector on Thor VM1A**



Wiring Connector on Front Panel **Alignment Key on Front Panel**

7. Position the replacement front panel so the tab on the back of the front panel lines up with the alignment slot on the VM1A. Be sure the two wiring connectors are also aligned.
8. Position the replacement front panel so wiring connector on the back of the front panel lines up with the connector on the computer.
9. Gently press the front panel into place.
10. Tighten the fourteen (14) captive M3 screws. In the order shown in the top figure above, use a #2 Phillips bit and torque the screws to 6-7 inch pounds.
11. Reinstall the computer in the dock.
12. When the computer is placed in the powered dock, the UPS battery automatically reconnects.
13. Press the **Power** button to turn on the computer.
14. The computer is ready for use.

Keypad Key Map

To get this Key/Function	Press These Keys in this Order	
Power On/Suspend/Restart	Power	
Blue Key	Blue Key	
Orange Key	Orange Key	
Volume Up	Blue Key	F9
Volume Down	Blue Key	F10
Display Backlight Brightness Up	Blue Key	F7
Display Backlight Brightness Down	Blue Key	F8
PCAP Touch Screen Sensitivity Mode	Blue Key	F6
Shift	Shift	
Alt	Alt	
Ctrl	Ctrl	
Esc	Esc	
Space	Space	
Caps Lock	Orange Key	Shift
Enter	Enter	
Delete	Del	
. (VK_DECIMAL)	.	
Back Space	BkSp	
Insert	Orange Key	4
Tab	Tab	
Back Tab	Orange Key	Tab
 Back	Blue Key	C
 Home	Blue Key	V
 Recent Apps	Blue Key	B
Up Arrow	Up Arrow	
Down Arrow	Down Arrow	

To get this Key/Function	Press These Keys in this Order	
Right Arrow	Right Arrow	
Left Arrow	Left Arrow	
Page Up	Blue Key	Up Arrow
Page Down	Blue Key	Down Arrow
End	Blue Key	Right Arrow
Home	Blue Key	Left Arrow
F1 - F10	F1 - F10	
F11 - F20	Orange Key	F1 - F10
a	A	
b	B	
c	C	
d	D	
e	E	
f	F	
g	G	
h	H	
i	I	
j	J	
k	K	
l	L	
m	M	
n	N	
o	O	
p	P	
q	Q	
r	R	
s	S	
t	T	
u	U	
v	V	
w	W	
x	X	
y	Y	
z	Z	
A	Shift	A
B	Shift	B
C	Shift	C
D	Shift	D
E	Shift	E

To get this Key/Function	Press These Keys in this Order	
F	Shift	F
G	Shift	G
H	Shift	H
I	Shift	I
J	Shift	J
K	Shift	K
L	Shift	L
M	Shift	M
N	Shift	N
O	Shift	O
P	Shift	P
Q	Shift	Q
R	Shift	R
S	Shift	S
T	Shift	T
U	Shift	U
V	Shift	V
W	Shift	W
X	Shift	X
Y	Shift	Y
Z	Shift	Z
	Orange Key	Bksp
~	Orange Key	Space
:	Orange Key	D
#	Orange Key	E
;	Orange Key	F
"	Orange Key	G
'	Orange Key	H
*	Orange Key	I
,	Orange Key	J
.(VK_PERIOD)	Orange Key	K
?	Orange Key	L
_	Orange Key	M
`	Orange Key	ESC
(Orange Key	O
)	Orange Key	P
!	Orange Key	Q
\$	Orange Key	R
\	Orange Key	S

To get this Key/Function	Press These Keys in this Order	
%	Orange Key	T
&	Orange Key	U
@	Orange Key	W
^	Orange Key	Y
1	1	
2	2	
3	3	
4	4	
5	5	
6	6	
7	7	
8	8	
9	9	
0	0	
>	Orange Key	V
[Orange Key	N
]	Orange Key	B
=	Orange Key	2
{	Orange Key	Z
}	Orange Key	X
/	Orange Key	A
-	Orange Key	5
+	Orange Key	8
<	Orange Key	C
F11	Orange Key	F1
F12	Orange Key	F2
F13	Orange Key	F3
F14	Orange Key	F4
F15	Orange Key	F5
F16	Orange Key	F6
F17	Orange Key	F7
F18	Orange Key	F8
F19	Orange Key	F9
F20	Orange Key	F10
P2	Orange Key	P1
View ^	Orange Key	^
View v	Orange Key	v
View <	Orange Key	<

To get this Key/Function	Press These Keys in this Order	
View >	Orange Key	>
Field Exit	Orange Key	Del
PrvScr	Orange Key	7
Field +	Orange Key	1
NxtScr	Orange Key	9
Delete	Orange Key	6
Help	Orange Key	3
F21	Blue Key	F1
F22	Blue Key	F2
F23	Blue Key	F3
F24	Blue Key	F4
SysReq	Blue Key	Q
EEOF	Blue Key	W
Erase	Blue Key	E
Remove	Blue Key	R
PA1	Blue Key	T
PA2	Blue Key	Y
PA3	Blue Key	U
Hex	Blue Key	I
Mode	Blue Key	O
Print	Blue Key	P
Reset	Blue Key	ESC
Attn	Blue Key	A
Autolog	Blue Key	S
Dup	Blue Key	D
Find	Blue Key	F
FldMrk	Blue Key	G
Home	Blue Key	H
Keypad	Blue Key	K
OK	Blue Key	P1
Select	Blue Key	Z
NewLn	Blue Key	N
Menu	Blue Key	M
Return	Blue Key	Enter
Field-	Blue Key	1
Roll ^	Blue Key	8
Roll v	Blue Key	5
Clear	Blue Key	6

SPECIFICATIONS AND REFERENCE MATERIALS

Technical Specifications

Thor VM1A

Processor	2.2 GHz Qualcomm Snapdragon™ 660 octacore processor
Memory	4 GB SDRAM
Storage Expansion	User installable, supports 512GB SD card
Operating System	Android 11, upgradeable through Android R
Radio Modules	802.11 a/b/g/n/ac radio / Bluetooth
Scanner Options	No integrated scanner, Optional serial, USB or Bluetooth scanners
Display Technology	Intel GMA 500 graphics processor, WVGA compatible Active matrix TFT Resolution: 1280x768 pixels 400 NIT (indoor) or 900 NIT (outdoor) brightness 8" (measured horizontal) display Transmissive with LED backlight Automatic brightness control on outdoor display Vehicle motion screen blanking available
Keyboard	Integrated keyboard, 64-key QWERTY
Touch Screen	eGalaxCalibrator Mercury Impact resistant Signature capture capability Resistive and Capacitive (PCAP) options Optional defroster resistive Field replaceable front panel optional indoor, outdoor, defroster resistive, indoor PCAP, or outdoor PCAP
External Connectors	Optional external 802.11 antenna connectors Additional connectors on dock
Beeper	Minimum loudness greater than 95dBm at 10 cm in front of unit
Power Supply	10 to 60 VDC isolated
Uninterruptible Power Supply	Internal UPS battery, field replaceable, 30-minute life at 20°C (68°F)
Backup Battery (RCT)	Internal lithium battery maintains Real Time Clock

VM1D Standard Dock



Caution: This dock is designed for DC power vehicle-mounted applications only.

SKUs	VM1001VMCRADLE (with DC power cable) VM1002VMCRADLE (with RAM ball) VM1003VMCRADLE (dock only)
Power Connector	6-pin connector: Direct 10-60 VDC input power Optional external converter for extended range DC (60-150 VDC)
COM1 Connector	9-pin male, RS-232 serial port, COM1 with power on pin 9
COM2 Connector	9-pin male, RS-232 serial port, COM1 with power on pin 9
CANbus/Audio Connector	15-pin male, Audio connector supports either audio/microphone via adapter cable
USB Connector	9-pin female, USB connector supports USB host port via adapter cable
Power Switch	Sealed power switch
Input Power	DC Input Voltage: 10-60 VDC, Input Current: 4.6 Amps (typical) Input Fuse: 8A Time Delay, Replace with same size, rating and type of fuse: <ul style="list-style-type: none"> • Littlefuse 0215008.MXP • Cooper Bussmann BK1/S506-8-R • Bel Fuse 5HT 8-R • or equivalent
External Power Supply	50-150 VDC DC power supply available for vehicles over 60 VDC Note: Use dock VMX005VMCRADLE (VMXD Enhanced Dock of Off-Vehicle Use) in AC power applications.

VM3D Enhanced Dock



Caution: This dock is designed for DC power vehicle-mounted applications only.

SKUs	VM3001VMCRADLE
Power Connector	6-pin connector: Direct 10-60 VDC input power Optional external converter for extended range DC (60-150 VDC)
COM1 Connector	9-pin male, RS-232 serial port, COM1 with power on pin 9
COM2 Connector	9-pin male, RS-232 serial port, COM1 with power on pin 9
CANbus/Audio Connector	15-pin male, Audio connector supports either audio/microphone via adapter cable
USB1 Connector	9-pin female, USB connector supports USB host port via adapter cable
USB2 Connector	15-pin female, USB connector supports two USB host ports via adapter cable
USB Host Connector	One USB type A Host connector behind waterproof cap
Ethernet	One RJ45 Ethernet connector behind waterproof cap
Power Switch	Sealed power switch

Input Power	DC Input Voltage: 10-60 VDC, Input Current: 4.6 Amps (typical) Input Fuse: 8A Time Delay, Replace with same size, rating and type of fuse: <ul style="list-style-type: none"> • Littlefuse 0215008.MXP • Cooper Bussmann BK1/S506-8-R • Bel Fuse 5HT 8-R • or equivalent
External Power Supply	50-150 VDC DC power supply available for vehicles over 60 VDC Note: Use dock VMX005VMCRADLE (VMXD Enhanced Dock of Off-Vehicle Use) in AC power applications.

VMXD Enhanced Dock



Caution: This dock is designed for DC power vehicle-mounted applications only.

SKUs	VMX004VMCRADLE (when replacing VX8 or VX9 installation that uses screen blanking)
Power Connector	6-pin connector: 13.2 VDC input power; requires DC power supply Connector is also used for screen blanking via COM1 CTS and RTS signals
COM1 Connector	9-pin male, RS-232 serial port, COM1 with power on pin 9 Do not use COM1 when screen blanking box is attached to avoid port conflicts
COM2 Connector	9-pin male, RS-232 serial port, COM1 with power on pin 9
CANbus/Audio Connector	15-pin male, Audio connector supports either audio/microphone via adapter cable
USB1 Connector	9-pin female, USB connector supports USB host port via adapter cable
USB2 Connector	15-pin female, USB connector supports two USB host ports via adapter cable
USB Host Connector	One USB type A Host connector behind waterproof cap
Ethernet	One RJ45 Ethernet connector behind waterproof cap
Power Switch	Sealed power switch
Input Power	DC Input Voltage: 13.2 VDC, Input Current: 4.6 Amps (typical) Input Fuse: 8A Time Delay, Replace with same size, rating and type of fuse: <ul style="list-style-type: none"> • Littlefuse 0215008.MXP • Cooper Bussmann BK1/S506-8-R • Bel Fuse 5HT 8-R • or equivalent
External Power Supply	50-150 VDC DC power supply available for vehicles over 60 VDC Note: Use dock VMX005VMCRADLE (VMXD Enhanced Dock of Off-Vehicle Use) in AC power applications.

VMXD Enhanced Dock for Off-Vehicle Use (QM3AC)



Caution: This dock is designed for AC power (non vehicle-mounted) applications only.

SKUs	VMX005VMCRADLE
Power Connector	6-pin connector: 15 VDC input power via required AC/DC power
COM1 Connector	9-pin male, RS-232 serial port, COM1 with power on pin 9
COM2 Connector	9-pin male, RS-232 serial port, COM1 with power on pin 9
CANbus/Audio Connetor	15-pin male, Audio connector supports either audio/microphone via adapter cable
USB1 Connector	9-pin female, USB connector supports USB host port via adapter cable
USB2 Connector	15-pin female, USB connector supports two USB host ports via adapter cable
USB Host Connector	One USB type A Host connector behind waterproof cap
Ethernet	One RJ45 Ethernet connector behind waterproof cap
Power Switch	Sealed power switch
Input Power	DC Input Voltage: 10-60 VDC, Input Current: 4.6 Amps (typical) Input Fuse: 8A Time Delay, Replace with same size, rating and type o f fuse: <ul style="list-style-type: none"> • Littlefuse 0215008.MXP • Cooper Bussmann BK1/S506-8-R • Bel Fuse 5HT 8-R • or equivalent
External Power Supply	AC Adapter, 120-240 VAC to 15 VDC required Note: <i>This dock for use in AC power applications. See other docks for DC power applications.</i>

Dimensions

Thor VM1A

Width	10.6" (26.8 cm)
Height	8.4" (21.4 cm)
Depth	1.7" (4.3 cm)
Weight	5.6 lb. (2.5 kg)

VM1D Standard Dock

Note: The RAM ball is not included in the following measurements.

Length	7.1" (18.0 cm)
Width	6.1" (15.5 cm)
Height	2.5" (6.4 cm), measurement includes strain relief cable clamps
Weight	3.2 lb. (1.5 kg)

VM3D and VMXD Enhanced Dock

Note: The RAM ball is not included in the following measurements.

Length	7.1" (18.0 cm)
Width	6.1" (15.5cm)
Height	2.1" (5.4 cm), measurement includes strain relief cable clamps
Weight	2.4 lb. (1.1 kg)

Environmental Specifications

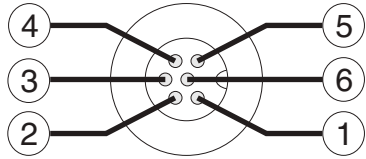
Thor VM1A and Dock

Operating Temperature	Standard: -4°F to 122°F (-20°C to 50°C) [non-condensing] Cold Storage: -22°F to 122°F (-30°C to 50°C) [condensing]
Storage Temperature	Standard and Cold Storage: -22°F to 140°F (-30°C to 60°C) [non-condensing]
ESD	8 KV air, 4kV direct contact
Operating Humidity	Standard: Up to 90% non-condensing at 104°F (40°C) Cold Storage: 100%
Water and Dust	IEC 60529 compliant to IP66
Vibration	MIL-STD-810F, composite wheeled vehicles
Crash	SAE-J1455

Port and Connector Pinouts

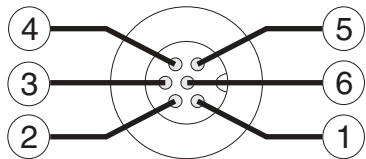
Power Supply Connector

VM1D Standard Dock and VM3D Enhanced Dock



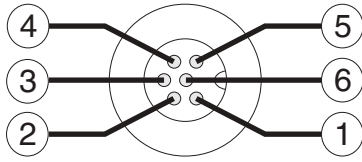
Pin	Signal	Description
1	V In+	10-60V DC Input +
2	V In+	10-60V DC Input +
3	V In-	Input -
4	V In-	Input -
5	GND	Chassis ground
6	Ignition	+0V to 60V to start terminal

VMXD Enhanced Dock



Pin	Signal	Description
1	V In+	13.2V DC input + provided by AC/DC adapter
2	V In+	13.2V DC input + provided by AC/DC adapter
3	V In-	Input -
4	V In-	Input -
5	COM1 RTS	Screen Blanking Box + The green wire in the power cable must be connected to the switched side of the screen blanking box. See the applicable wiring diagram below.
6	COM1 CTS	Screen Blanking Box - The white wire in the power cable must be connected to the unswitched side of the screen blanking box. See the applicable wiring diagram below.
Cable shell provides chassis ground connection.		

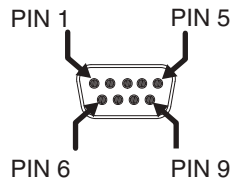
VMXD Enhanced Dock for Off-Vehicle Use (QM3AC)



Pin	Signal	Description
1	V In+	15V DC Input + provided by AC/DC adapter
2	V In+	15V DC Input + provided by AC/DC adapter
3	V In-	Input -
4	V In-	Input -
5	GND	No Connection
6	Ignition	No Connection

VMXD enhanced dock for off-vehicle use requires adapter cable VM1076CABLE to connect the dock to the AC/DC adapter. This cable is included in the AC kit for off-vehicle use.

COM1 and COM2 Connector

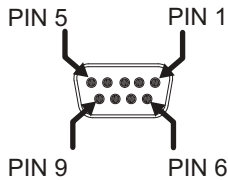


Pin	Signal	Description
1	DCD	Data Carrier Detect - Input
2	RXD	Receive Data - Input
3	TXD	Transmit Data - Output
4	DTR	Data Terminal Ready - Output
5	GND	Signal/Power Ground
6	DSR	Data Set Ready - Input
7	RTS	Request to Send - Output
8	CTS	Clear to Send - Input
9	+5VDC	Barcode Scanner Power - 500mA max
Shell	CGND	Chassis Ground

VMXD Enhanced Dock only: Because the power supply connector port for the VMXD Enhanced Dock contains COM1 RTS and CTS signals, the COM1 port on the dock should not be used when the power cable is used for screen blanking to avoid port conflicts.

USB and USB1 Connector

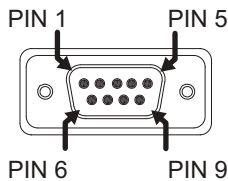
The Standard Dock has a USB connector. The Enhanced Dock has a USB1 connector.



Pin	Signal	Description
1	GND	Common ground
2	USBC_D+	USB client data signal (not used)
3	USBC_D-	USB client data signal (not used)
4	USB_H1_PWR	USB host 1; 5V output power
5	GND	Common ground
6	GND	Common ground
7	USB_H1_D+	USB host 1 data signal
8	USB_H1_D-	USB host 1 data signal
9	USBC_VBUS	USB client 5V detect from attached host (not used)

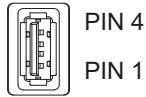
USB Host/Client Y Cable

D9 Male Connector



Pin	Signal	Description
1	GND	Common ground
2	USBC_D+	USB client data signal (not used)
3	USBC_D-	USB client data signal (not used)
4	USB_H1_PWR	USB host 1; 5V output power
5	GND	Common ground
6	GND	Common ground
7	USB_H1_D+	USB host 1 data signal
8	USB_H1_D-	USB host 1 data signal
9	USBC_VBUS	USB client 5V detect from attached host (not used)

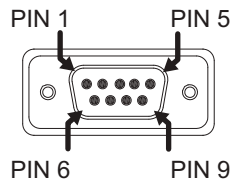
USB Host Connector



Pin	Signal	Description
1	5V_USB	USB Power, Current Limited
2	USB_H1_D-	USB D-
3	USB_H1_D+	USB D+
4	GND	USB Power Return
Shell	CGND	Chassis Ground

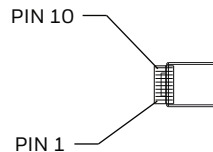
USB Host to Scanner Cable

D9 Male Connector



Pin	Signal	Description
1	Not used	
2	Not used	
3	Not used	
4	USB_H1_PWR	USB host 5V output power
5	GND	Common ground
6	Not used	
7	USB_H1_D+	USB host 1 data signal (twisted pair)
8	USB_H1_D-	USB host 1 data signal (twisted pair)
9	USBC_VBUS	USB client 5V detect from attached host

RJ50 Connector

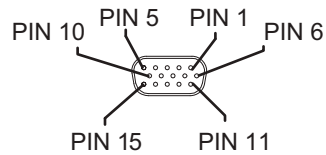


Pin	Signal	Description
1	Drain	To D9 connector shell

Pin	Signal	Description
2	Not used	
3	GND	Common Ground
4	Not used	
5	Not used	
6	Not used	
7	USB_H1_PWR	USB host 5V output power
8	Not used	
9	USB_H1_D+	USB host 1 data signal (twisted pair)
10	USB_H1_D-	USB host 1 data signal (twisted pair)

USB2 Connector

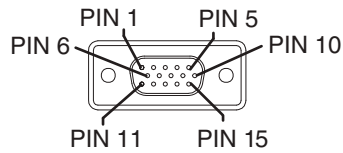
The USB2 connector is only present on the Enhanced Dock.



Pin	Signal	Description
1	Not used	
2	Not used	
3	Not used	
4	Not used	
5	Not used	
6	USB_H2_PWR	USB host 2 5V output power
7	USB_H2_D+	USB host 2 data signal
8	USB_H2_D-	USB host 2 data signal
9	GND	Common ground
10	GND	Common ground
11	USB_H3_PWR	USB host 3 5V output power
12	USB_H3_D+	USB host 3 data signal
13	USB_H3_D-	USB host 3 data signal
14	GND	Common ground
15	GND	Common ground

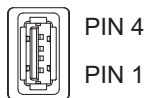
USB Dual Host Y Cable

D15 Male Connector



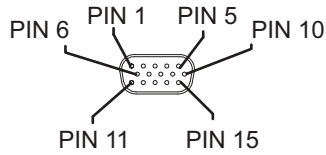
Pin	Signal	Description
1	Not Used	
2	Not Used	
3	Not Used	
4	Not Used	
5	Not Used	
6	USB_H2_PWR	USB host 2 5V output power
7	USB_H2_D+	USB host 2 data signal
8	USB_H2_D-	USB host 2 data signal
9	GND	Common ground
10	GND	Common ground
11	USB_H3_PWR	USB host 3 5V output power
12	USB_H3_D+	USB host 3 data signal
13	USB_H3_D-	USB host 3 data signal
14	GND	Common ground
15	GND	Common ground

USB Host Connectors



Pin	Signal	Description
1	5V_USB	USB Power, Current Limited
2	USB_H2_D-	USB D-
3	USB_H2_D+	USB D+
4	GND	USB Power Return
Shell	CGND	Chassis Ground

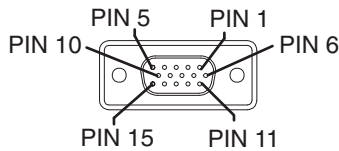
Audio Connector



Pin	Signal	Description
1	-	CAN reserved
2	CAN_L	CAN_L bus line dominant low
3	CAN_GND	CAN Ground
4	-	CAN reserved
5	GND	Optional ground
6	Audio return	Headset return
7	Audio output	Headset output
8	Mic input	Microphone input
9	Mic return	Microphone output
10	Audio return	
11	GND	Optional ground
12	CAN_SHLD	
13	CAN_H	CAN_H bus line dominant high
14	-	CAN reserved
15	CAN_V+	Optional CAN external Power Supply

Headset Adapter Cable

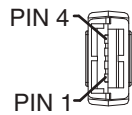
D15 Female Connector



Pin	Signal	Description
1	Not used	
2	Not used	
3	Not used	
4	Not used	
5	Not used	
6	Audio return	Headset return
7	Audio output	Headset output

Pin	Signal	Description
8	Mic input	Microphone input
9	Mic return	Microphone return
10	Not used	
11	Not used	
12	Not used	
13	Not used	
14	Not used	
15	Not used	

Quick Connect Headset Connector



Pin	Signal	Description
1	Mic input	Microphone input
2	Mic return	Microphone return
3	Audio output	Headset output
4	Audio return	Headset return

AGENCY INFORMATION

Thor VM1A vehicle-mount computers meet or exceed the requirements of all applicable standards organizations for safe operation. The best way to ensure safe operation is to use the vehicle-mounted computer according to the agency guidelines in this user guide and on the regulatory sheet shipped with the vehicle-mounted computer. Read all guidelines before using your vehicle-mounted computer. To download product documentation for the Thor VM1A computer, go to sps.honeywell.com.

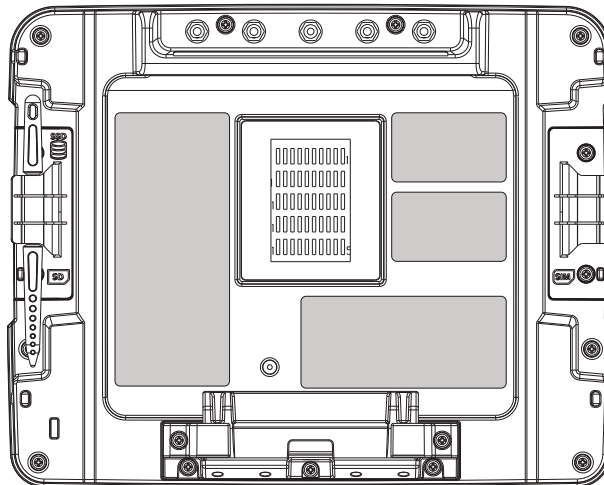
This documentation is relevant for the following Thor models: VM1A-LON.

The EU declaration of conformity, if applicable, and other publicly downloadable certificates are available at honeywell.com/PSScompliance.

Label Locations

Compliance labels are located in the dock well area on the back of the Thor VM1A, as indicated by the shaded areas below. The VM1A must be removed from the dock to view the labels.

Model number, serial number and other identifiers are located on these labels.



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