This document will step you through setting up the T1400 Vehicle Dock installation and tips for a safe, clean and long lasting installation.

Preparation to Mount the Vehicle Dock

**Warning**: Dock mounting that does not use the designed mounting-hole patterns and profile can damage the dock and void the warranty for both the dock and the tablet. Please consult with your MobileDemand representative before using something other than the appropriate RAM Mount hardware.

Here are examples of the types of C or D Ball mounts that could be used with this unit. Consideration should be given to the mounting location (e.g. a wall, a cart, a fork truck, etc).

We strongly recommend using a D-Ball when mounting in a fork truck.

Highlighted is the 75mm VESA pattern on the T1400 Vehicle Dock is with a D Ball plate.
There are different ways to mount the VMT using mounting hardware from RAM

Let’s cover a regular fork truck, a regular vehicle and then a recreational vehicle.

**Fork Truck**

A VMT can be mounted in a fork truck two different ways that we recommend. A Top Cage Mount, or a Pinch Mount to a side rail.

**Top Cage Mount**

Here is a picture of a TOP Cage Mount. Be sure to really tighten the bolts down tight.

We also recommend to order D Ball size parts for this. Also use the appropriate D Arm that provides the driver with comfortable use and an optimal view for driving. DO NOT LET ANY PART OF THE TABLET OR DOCK EXTEND OUTSIDE THE FRAME OF THE CAGE!

**Pinch Mount to the Side Rail**

Here is a picture of a Rail Pinch Mount. They come in two sizes 2.5” and 4”. Have the customer measure the rail to know which one to order.

We also recommend to order D Ball size parts for this. Also use the appropriate D Arm that provides the driver with comfortable use and an optimal view for driving. DO NOT LET ANY PART OF THE TABLET OR DOCK EXTEND OUTSIDE THE FRAME OF THE CAGE!
Regular Vehicle

When spec’ing out parts for a regular auto install, you need to know the basic pieces that are used.

1. **The No-Drill Base piece** – This piece is different for each vehicle, and uses the passenger seat to mount the base plate to.

2. **Base Pole** – This is the pole that mounts to the No-Drill Base piece

3. **Telescopic Pole** – This is what the arm will attach to.

4. **Arm** – This can be a single (No Pivot) swing arm, or a Double (Pivoting) swing arm.

MobileDemand can spec these parts for you. Just ask your sales representative. Here is a brief explanation of the process.

1. Go to the RAM Mounts website.
   a. [www.rammount.com](http://www.rammount.com)
2. Find the Vehicle Wizard on the website
3. Select from the drop-down the MobileDemand as the Make
4. Select the XTABLET T8600 for the Model (this is just a starting point)
5. Select No-Drill Mounts as the Mount type
6. Select the Year of your Vehicle
7. Select the Make of your Vehicle
8. Select the Model of your Vehicle
9. A “kit” will come up, and when you click on the kit you can go to the “components” tab to find out what pieces to order.
Recreational Vehicle

When spec’ing out parts for a recreational vehicle, you have to keep in mind the amount of vibration and the limited amount of options available to mount.

On recreational vehicles, the only option available unless it is a boat with a dashboard, you will use a Handlebar Mount. D-size. As well as the shortest D Ball Arm which is 5”.

RAM-235U for C Size
RAM-D-235 for D Size
RAM-201-B for C Size
RAM-D-201U-C for D Size

Strain Relief the cables

A good measure when setting up your strain relief is to tie a knot in the cable and then zip tie the knot going through the Rain Guard on the bottom of the dock.
Views of the Vehicle Dock

Here is the T1400 mounted into the Vehicle Dock and mounted in a holder.

Here is the T1400 Vehicle Dock mounted in a holder.
Here is the T1400 Vehicle Dock mounted in a holder, showing the I/O ports, and power ports.

Here is the T1400 Vehicle Dock mounted in a holder, showing the right side of the Vehicle Dock.

Lock

There are two USB Ports are behind the weather resistant flaps. Shown with the flaps open and a USB stick in one of the USB ports.
Here is the T1400 Vehicle Dock mounted in a holder, showing the rear side of the Vehicle Dock. Here is the release latch on the rear of the Vehicle Dock.

Pull on the release latch to release the top latch.
Technical Alert

This alert applies if you have a monitor connected to the Vehicle Dock.

When you use the touch screen, the touch will react on the 2nd monitor and not the T1400 display as desired.

Here are the steps to follow:

1. Right click the start button.
2. Choose control panel from the popup menu.
3. Open the ‘Tablet PC Settings’ control panel. (grouped under ‘Hardware and Sound’ if you are using the category view)
4. Click the ‘Setup...’ button under the ‘Configure your pen and touch displays’ section.
5. The screen will turn white and display a message that says ‘Touch this screen to identify it as the touchscreen. If this is not the Tablet PC screen, press enter to move to the next screen.
6. Follow the instructions and touch the tablet screen at the appropriate time.
7. Close out of the control panel windows.
General Guidelines when Mounting a Vehicle Dock

Install the vehicle cradle in a non-obstructive, safe location within the vehicle cab. Avoid obstructing the following:

► Vehicle operation
► Visibility through windows
► Safe entry or exit
► Safety devices such as air bags

Firmly secure the cradle to stay in place despite vibrations, shocks, bumps, or vehicle accidents. Do not use this or any computer system while operating a motor vehicle.

Vehicle Wiring Kit Installation
The VMT can be wired directly from the vehicle power or from the Cigarette lighter port.

Powered from vehicle power

This scenario takes the power directly from the vehicle power to the xTablet T1400 Vehicle Dock. You would do this if your vehicle provides power in the range of 11VDC to 36VDC.
Kit Part Number - PC-TC14-1

This scenario is if the voltage of your vehicle is in the range of 36 VDC to 110 VDC. Some models of fork trucks have up to 72VDC for example.
Part Numbers - PC-60-1 (Battery Cable and Lind Power Converter)
T14-PC-L (Cable from Lind Power Converter to Vehicle Dock)
Powered from Cigarette Lighter

This scenario takes the power directly from the vehicle power through the cigarette lighter socket to the xTablet T1400 Vehicle Dock.
You would do this if your vehicle provides power in the range of 11VDC to 36VDC.
Kit Part Number - PC-T14-CIG

Installing the Direct Vehicle Wiring

1. Disconnect the vehicle battery.
2. Route the main power cable from the vehicle fuse panel to the vehicle cradle as discrete as possible.
3. Secure the cable with wire ties for looks and safety.
4. Secure the black wire cable to the negative (ground) location in the vehicle battery lead.
5. Secure the red wire cable to a constantly active 12V (nominal) power connector or terminal in the fuse block - not a terminal powered using a vehicle ignition key.
6. Attach the white connectors between the main power cable and the fused auto adapter assembly. Seat the connection firmly to engage the connector locks (tabs).
7. Reconnect the vehicle battery.
8. Tighten the threaded connector to fasten the fused auto adapter assembly onto the connector on the back of the vehicle cradle housing.
9. Loop and secure the cabling with wire ties.
10. Mount the Vehicle Dock and turn on the xTablet T1400. Verify the unit is running on vehicle power and not on battery. You can do this by checking to see if the tablet is being charged or is running on battery down on the taskbar by the clock.
Mounting a Power Converter to power the xTablet T1400 Vehicle Dock

The xTablet T1400 Vehicle Dock will accept input power from 11VDC to 36VDC. Depending on the supply voltage of your vehicle, you will use one of two power converters.

This wire kit is the PC-T14-1. You will use this wire kit to connect to your vehicle power, and run directly to the xTablet T1400 Vehicle Dock.

Note: The xTablet T1400 Vehicle Dock power range is from 11VDC to 36VDC. If your vehicle DC Power is above this, you will need to purchase the PC-60-1, or the PC-100-1 voltage adaptor. See below.

This power converter comes in two power ranges. 20VDC to 60VDC, and one from 72VDC to 100VDC.

**Part Numbers:**

- 20-60 VDC Input Power – PC-60-1 (Also use T14-PC-L)
- 72-100 VDC Input Power – PC-100-1 (Also use T14-PC-L)
This is the cable that will go from your power source and connect to the Vehicle Dock.

**Part Number:** T14-PC-L  

When using a cigarette lighter to power your Vehicle Dock, this what you will receive.

**Part Number:** PC-T14-CIG

If you will be using the Vehicle Dock with AC, you would use this adaptor.

**Part Number:** AC-VEH-T12  (Also use T14-PC-L)
Special Situations with the T1400 Vehicle Dock

Here are some items that we would like to mention that affect the T1400 Vehicle Dock.

1. **Hand strap fit to the alignment block in the back of the dock.**
   - If you are using the Hand Strap, you will need to ensure that it is not interfering with the alignment block in the back of the dock. Simply pull it down so the opening on the back of the tablet will align properly.

2. **Long-life (LL) pack can’t use in combination with hand strap.**
   - If you are using the hand strap and the long-life pack, you will need to remove hand strap because the space between the battery pack and back wall of the dock is not large enough to accommodate both. The other option is to use standard battery packs.

3. **Extra-Long Life (XL) pack –no**
   - The XL pack is designed for users who will be operating off of battery only during the day. As such, there is not enough room for the T1400, with XL pack, to fit into the Vehicle Dock.

4. **Extreme vibration**
   - The T1400 and Vehicle Dock will function normally with vehicle vibration. Some high frequency vibration can cause intermittent communications. If you experience this, you may have to undock and dock the tablet to restore communications. MobileDemand has other solutions if this is a constant problem.

5. **Touch**
   - When working in Dual Monitor Mode (using Extend The Desktop and a second display), the touch may not work correctly. When you touch the tablet, the cursor will move on the 2nd attached monitor. The fix is to use Clone Monitors.

**RS232 Power on Pin 9 of the Serial Port Connector**

The T1400 Vehicle Dock Serial Port connector has power provided on Pin 9. If you do not want power, then remove pin 9 on the peripheral’s cable.
T1400 Vehicle Dock Rain Guard

The T1400 Vehicle Dock is equipped with a Rain Guard on the back of the unit that provides IP52 protection to the I/O connectors from rain. The slots in the Rain Guard are also used for strain-relief for cables (please refer to the cable strain-relief section).

We suggest you use the holes in the Rain Guard for doing strain relief with your I/O cables.
T1400 Vehicle Dock Vehicle Battery Discharge protection

If you are concerned about the T1400 Vehicle Dock draining your vehicle's battery, refer to this Chargeguard-Select product. [http://www.havis.com/products/CHRGGRD_UNV_CNTRLMDL-38782-923.html](http://www.havis.com/products/CHRGGRD_UNV_CNTRLMDL-38782-923.html)

- Self-contained unit provides circuit protection for a vehicle's power system
- Regulated by a programmable timer
- Prevents dead batteries
- LED indicates under and over voltage conditions
- Protects mobile Electronics from voltage anomalies
- Height 1: 1.3 in (3.2 cm), height 2: 3.8 in (9.7 cm), width 1: 3.7 in (9.3 cm)

Connecting cables to the Vehicle Dock

Verifying Connections
Perform the following instructions to verify your connections.

To verify your connections
1. Use proper strain relief with the I/O cables using a small knot as shown below.
2. Use wire ties to connect to the Rain Guard on the back of the Vehicle Dock.

CAUTION: Do not use this computer system while operating a motor vehicle.

WARNING: Use of this system while operating a motor vehicle or heavy equipment may be distracting, dangerous, and prohibited based on your location.

WARNING: Failure to pay attention to operating the vehicle may cause an accident resulting in serious bodily injury and property damage.
Inserting the xTablet T1400 into the Vehicle Dock

The T1400 Vehicle Dock has the connectors at the bottom of the dock. You will want to place the T1400 in the bottom and then push the T1400 back into place.

Place the xTablet T1400 into the center of the T1400 Vehicle Dock.

Place the xTablet T1400 into the dock starting with the bottom
Push the xTablet T1400’s top back until the alignment block is in place. Then press down on the top latch until you hear the latch lock into position.

The xTablet T1400 is now secure. The key lock can be used for even more secure attachment.

Note: This lock can be bent or broken with excess force.

To release the xTablet T1400, simply pull the release lever and remove the tablet.
T1400 Vehicle Dock Keyboard Mounting Options

The T1400 Vehicle Mount has a keyboard mounting kit option. It is a plate that mounts under the mounting hardware on the back of the Vehicle Dock, and extends under the dock with mounting for AMPS pattern RAM Mount hardware to an arm that attaches to a keyboard with mounting hardware on the bottom.

Part Numbers:

Vehicle Dock Keyboard Mounting Kit C Ball   T14-VED-DB
Keyboard Tray for Kit                      KB-011

There is an optional bracket you can get that will allow an additional ram ball mount to interface to a mountable keyboard.

Here is a view of the TxTablet T1400 Vehicle Mount with the Keyboard mounting option. With this tablet, we strongly suggest staying with the Ram D-Ball size for the Vehicle Mount and Ram C-Ball for the keyboard when using the Vehicle Mount keyboard mounting option.
What makes this possible is the xTablet T1400 keyboard mounting option plate. One side mounts to the current Vehicle Mount, and the other has the pressed and mounted machined screws to mount a Ram C-Ball to the plate for mounting the arm to attach the ball mounted keyboard.

The keyboard mount plate is mounted between the Vehicle Mount and the Ram D-Ball. There is a mount at the base of this plate to mount a Ram C-Ball for the keyboard Mount.
This picture shows how to run your I/O connection cables for proper strain relief. This protects your cables and your USB ports from becoming damaged if the cable is pulled too tight.

We suggest you tie small knot in the cable, and then wire-tie the wires with some slack in the cable between the knot and the connection to the vehicle dock.

Secure RAM Arm Option

If you would like to add the ability to lock your mounting arm, this is a secure option provided by Ram Mounts.

RAP-S-KNOB5U FOR C SIZE

RAM-D-201-SU FOR D SIZE
Vehicle Dock Keyboard Mounting Kit Parts for your reference

Below is the top level kit part number (T14-VED-KB-01), and the individual parts for the T1400 optional Keyboard Mount Kit.

NOTE: The arm and the keyboard are extra and depends on your needs.

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>QTY</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stud, Press-In, 8-32 x .625 Long Stainless Steel</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Nut, Nylock, 8-32, SS</td>
<td>4</td>
<td>RAM Base to Brkt</td>
</tr>
<tr>
<td>Screw, M4 x 18, Pan Head, Phillips Drive, Stainless Steel</td>
<td>4</td>
<td>Brkt to T1400 V-Dock</td>
</tr>
<tr>
<td>Screw, 8-32 X .375 Pan Head Phillips Drive, Stainless Steel, Black</td>
<td>4</td>
<td>RAM Base to Kybd</td>
</tr>
<tr>
<td>Washer - Lock, Internal Shake, #8</td>
<td>4</td>
<td>RAM Base to Kybd</td>
</tr>
<tr>
<td>Washer - Flat, M4</td>
<td>4</td>
<td>RAM Base to Kybd</td>
</tr>
<tr>
<td>RAM C size Base</td>
<td>2</td>
<td>Mount to Brkt and Keyboard</td>
</tr>
<tr>
<td>RAM Ball Adhesive Pad</td>
<td>1</td>
<td>Adhere btwn RAM Base &amp; Keyboard.</td>
</tr>
<tr>
<td>Screw, 8-32 X 1.00 Pan Head Phillips Drive, Stainless Steel, Black</td>
<td>4</td>
<td>Brkt to Flex Snap Rail to RAM Base</td>
</tr>
<tr>
<td>Loctite 425</td>
<td>AR</td>
<td>Apply to screws in V-Dock &amp; Kybd.</td>
</tr>
</tbody>
</table>
xTablet T1400 Vehicle Dock Mechanical Drawings for your reference

Side view with the xTablet T1400 in the Vehicle Dock with a Ram D-Ball mounted on the xTablet T1400 Vehicle Dock
Front view with the xTablet T1400 in the xTablet T1400 Vehicle Dock
Rear view with the xTablet T1400 in the Vehicle Dock
Front view with the xTablet T1400 in the xTablet T1400 Vehicle Dock with the optional Keyboard Mounting Kit. Keyboard and arm not included in kit.
Side view with the xTablet T1400 in the xTablet T1400 Vehicle Dock with the optional Keyboard Mounting Kit. Keyboard and arm not included in kit.