

VX6 User's Guide



Copyright © November 2007 by LXE Inc.
All Rights Reserved
E-EQ-VX6OGWW-F



LANGUAGE: ENGLISH

Notices

Notice:

LXE Inc. reserves the right to make improvements or changes in the products described in this manual at any time without notice. While reasonable efforts have been made in the preparation of this document to assure its accuracy, LXE assumes no liability resulting from any errors or omissions in this document, or from the use of the information contained herein. Further, LXE Incorporated, reserves the right to revise this publication and to make changes to it from time to time without any obligation to notify any person or organization of such revision or changes.

Copyright Notice:

This manual is copyrighted. All rights are reserved. This document may not, in whole or in part, be copied, photocopied, reproduced, translated or reduced to any electronic medium or machine-readable form without prior consent, in writing, from LXE Inc.

Copyright © 2007 by LXE Inc. An EMS Technologies Company.
125 Technology Parkway, Norcross, GA 30092 U.S.A. (770) 447-4224

Trademarks:

LXE® and **Spire** are registered trademarks of LXE Inc. **RFTerm®** is a registered trademark of EMS Technologies, Norcross, GA.

Microsoft, **Windows** and the **Windows logo** are registered trademarks of Microsoft Corporation in the United States and/or other countries.

Java® and **Java-based trademarks and logos** are trademarks or registered trademarks of Sun Microsystems, Inc. in the U.S. or other countries, and are used under license.

Intel and **Intel XScale** are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.

RAM® and **RAM Mount™** are both trademarks of National Products Inc., 1205 S. Orr Street, Seattle, WA 98108.

The **Cisco Square Bridge logo** is a trademark of Cisco Systems, Inc.; **Aironet**, **Cisco** and **Cisco Systems** are registered trademarks of Cisco Systems, Inc. and/or its affiliates in the United States and certain other countries.

Summit Data Communications, Inc. **Summit Data Communications**, the **Summit logo**, and “**The Pinnacle of Performance**” are trademarks of Summit Data Communications, Inc. All rights reserved.

Symbol, the **Symbol logo** and **Spectrum24** are registered trademarks of Symbol Technologies, Inc.

The **Bluetooth®** word mark and logos are owned by the Bluetooth SIG, Inc. and any use of such marks by LXE, Inc. is under license.

Wavelink® and **Wavelink Avalanche®** are registered trademarks and the **Wavelink logo**, tagline and **Avalanche MC** are trademarks of Wavelink Corporation, Kirkland, WA.

All other brand or product names are trademarks or registered trademarks of their respective companies or organizations.

When this manual is in PDF format: “**Acrobat® Reader®** Copyright © 2007 Adobe Systems Incorporated. All rights reserved. **Adobe®**, the **Adobe logo**, **Acrobat®**, and the **Acrobat logo** are registered trademarks of Adobe Systems Incorporated.” applies.



The user is strongly cautioned to read Appendix B, “Regulatory Notices and Safety Information”. Important safety cautions, warnings and regulatory information is contained in Appendix B.



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

Revision Notice
VX6 User's Guide
Upgrade From Revision E to Revision F

Section	Explanation
Entire Manual	Updated specific references to Microsoft Windows CE .NET to generic references to Microsoft Windows CE to reflect the availability of either Windows CE .NET or CE 5.0 operating systems on the VX6. Added Bluetooth information and instruction.
Accessories	Revised Accessories listing.
Strain Relief Cable Clamps	Added new section.
AppLock and the VX6	Revised section.
Appendix B – Regulatory Notices and Safety Information	Added translated Chinese Class A statement and Republic of Singapore IDA Standards text. Revised “R&TTE Directive Requirements”.

Note: A complete revision history is included in Appendix B, “Regulatory Notices and Safety Information”.



Table of Contents

THE VX6 VEHICLE MOUNT COMPUTER	1
Introduction	1
Document Conventions	2
Environmental Specifications	3
Quick Start	4
Troubleshooting	5
Components	6
The Half-Screen Display	9
VX6 Control Panel	9
Microsoft Windows CE Control Panel	9
PCMCIA, ATA and SD Slots	9
AppLock and the VX6	10
Single Application AppLock	10
Multi Application AppLock	10
Using the Touchscreen	10
Using the Keypad	11
The QWERTY Keyboard	12
IBM 3270 Overlay	12
IBM 5250 Overlay	12
Key Maps	13
Unused Key Functions	13
Custom Key Maps	13
NumLock and the VX6	13
Keyboard Backlight	13
Keyboard LEDs	14
CAPS LED	14
Secondary Keys LED	15
Control Keys	16
General Windows CE Keyboard Shortcuts	17
Input Panel (Virtual Keyboard)	18
Enabling the Input Panel	19
Power Supply	20
Uninterruptible Power Supply Battery Pack	20
Backup Battery	20
Getting Help	21
Manuals and Accessories	21

Manuals.....	21
Accessories	21
INSTALLATION	25
Install Mounting Brackets	25
RAM Mount System.....	26
Components.....	26
Torque Measurements	26
Procedure.....	27
Step 1a – Mount Vehicle RAM Ball Base	27
Mounting Dimensions	27
Step 1b – Mount Vehicle RAM Clamp Mount.....	28
Mounting Dimensions	29
Step 2 – Attach RAM Mount Ball to the VX6.....	30
Step 2 – Attach VX6 Assembly to RAM Mount	31
Completed Assembly.....	32
U-Bracket Mount System	33
Components.....	33
Mounting Positions	33
Torque Measurements	34
Procedure.....	35
Step 1 - Mount Bottom Mounting Bracket To Vehicle.	35
Mounting Dimensions	35
Step 2 - Connect Rear Bracket to VX6.....	36
Step 3 - Attach VX6 Assembly To Bottom Mounting Bracket.	37
Completed Assembly.....	39
Install Stylus Tether and Sleeve	40
Install/Remove Touchscreen Protective Film.....	41
UPS Battery Pack Remote Mount	42
UPS Battery Pack Remote Mounting Dimensions.....	42
Connect Antenna	43
External Antenna	43
Remote Vehicle Mount Antenna	43
Internal Antenna	44
Connect Serial Barcode Scanner	45
Connect Serial Printer or PC.....	47
Ethernet and USB Ports	48
USB Mouse.....	49
Connect External Headset.....	50
Connect Power Cable and Optional UPS Battery Pack	51
External Power Supply, Optional.....	52
Vehicle 12-80VDC Power Connection	53

Power Adapter Cable	59
Fuse Replacement for the VX6	60
Strain Relief Cable Clamps	61
OPERATION	63
Powering On/Off	63
Display and Touchscreen	64
Adjusting Screen Display	64
Cleaning the Display	64
Disabling the Touchscreen	64
Disabling the Touchscreen Heater.....	64
Calibrating the Touchscreen.....	65
Touchscreen Protective Film.....	65
Touchscreen and USB Mouse	65
Adjust Speaker Volume	66
Microsoft Windows CE Event Sounds.....	66
Power Management	66
Laser Barcode Scanner Warnings	67
Enter Data	67
Keyboard Entry.....	68
Touchscreen Entry	68
Right Click	68
Tethered Scanners.....	69
Aiming the Barcode Scanner.....	69
Distance from Label	69
Successful Scan.....	69
Unsuccessful Scan.....	69
Bluetooth Scanners	70
Voice Data	70
Bluetooth Devices	71
APPENDIX A KEY MAPS	73
The VX6 Keypad	73
Key Map 101-Key Equivalencies.....	73
IBM 3270 Keypad Overlay	78
IBM 5250 Keypad Overlay	78

APPENDIX B REGULATORY NOTICES AND SAFETY INFORMATION	79
Approvals	80
Revision History	91
INDEX	93

Illustrations

Figure 1 VX6 Components, Top View	6
Figure 2 VX6 Components, Front View	6
Figure 3 VX6 Components, Bottom View.....	7
Figure 4 VX6 Components, Back View	7
Figure 5 VX6 Control Panel	7
Figure 6 VX6 Access Panel	8
Figure 7 The VX6 PCMCIA, CF and SD Slots	9
Figure 8 Switchpad Menu.....	10
Figure 9 QWERTY Keyboard Standard.....	12
Figure 10 QWERTY Keyboard with IBM 3270 Overlay	12
Figure 11 QWERTY Keyboard with IBM 5250 Overlay	12
Figure 12 Keyboard LEDs.....	14
Figure 13 The CapsLock Key	14
Figure 14 The Secondary Key	15
Figure 15 Keyboard Display Controls	16
Figure 16 Small and Large Virtual Keyboards	18
Figure 17 Input Panel Properties.....	19
Figure 18 Connect Vehicle RAM Mount Bracket to Vehicle.....	27
Figure 19 VX6 RAM Bracket - Mounting Dimensions (Not To Scale).....	27
Figure 20 RAM Clamp Mount Components.....	28
Figure 21 Assembled RAM Clamp Mount	28
Figure 22 RAM Clamp Mount - Mounting Dimensions (Not To Scale)	29
Figure 23 Attach RAM Mount to VX6.....	30
Figure 24 RAM Assembly	31
Figure 25 Completed RAM Mount Assembly	32
Figure 26 Suggested Mounting Positions	33
Figure 27 Connect Bottom Bracket to Vehicle.....	35
Figure 28 VX6 Bracket - Mounting Dimensions (Not To Scale)	35
Figure 29 Attach Rear Bracket to VX6.....	36
Figure 30 Attach VX6 Assembly to Bottom Bracket	37
Figure 31 Integrated UPS Battery Pack Mount	38
Figure 32 VX6 in Vehicle Bracket	39
Figure 33 Stylus Tether Mounting Holes.....	40
Figure 34 Tethered Stylus, Typical Installation.....	40
Figure 35 VX6 Touchscreen Protective Film	41
Figure 36 Remote UPS Battery Pack Mount	42
Figure 37 UPS Battery Pack Remote Mounting Dimensions	42
Figure 38 Connect External 2.4GHz Antenna	43
Figure 39 Internal Antenna Cables	44
Figure 40 Connect Serial Scanner Cable	45
Figure 41 VX6 with Generic Barcode Scanner Attached	46

Figure 42	Generic Barcode Scanner	46
Figure 43	Connect Serial Cable to COM3	47
Figure 44	VX6 Ethernet/USB-H/USB-C Dongle Cables	48
Figure 45	Connect Ethernet/USB Dongle Cable	48
Figure 46	Connect USB Device to Dongle Cable.....	49
Figure 47	Connect Ethernet Cable to Adapter Cable.....	49
Figure 48	Connect External Headset	50
Figure 49	Connect Power Cable to VX6	51
Figure 50	Optional Power Configuration	52
Figure 51	Vehicle Power Connection Cable (Fuse Not Shown).....	53
Figure 52	Connecting the Power Cable to the Vehicle.....	53
Figure 53	Vehicle Connection Wiring Color Codes.....	54
Figure 54	Direct Connection (No UPS Battery Pack)	55
Figure 55	Integrated Mount UPS Battery Pack Connection	56
Figure 56	Remote Mount UPS Battery Pack Connection	57
Figure 57	Power Adapter Cable, VX1/2/4 to VX6.....	59
Figure 58	Fuse Replacement.....	60
Figure 59	Strain Relief Cable Clamps	61
Figure 60	Slide Clamp Over Cable.....	61
Figure 61	The VX6 Power Switch.....	63
Figure 62	Touchscreen Calibration, Calibration Targets.....	65
Figure 63	Caution Labels Class II Scanner.....	67
Figure 64	Caution Labels Class IIIA Scanner	67
Figure 65	Scan Beam.....	69
Figure 66	VX6 QWERTY Keyboard	73
Figure 67	IBM 3270 Specific Keypad	78
Figure 68	IBM 5250 Specific Keypad	78

The VX6 Vehicle Mount Computer

Introduction

The VX6 Vehicle Mount Computer (VMC) is a rugged, vehicle-mounted, Microsoft® Windows® CE equipped computer. The VX6 is capable of wireless data communications from a fork-lift truck or any properly configured vehicle using a 2.4 GHz radio.

The VX6 features a half screen SVGA color TFT display. The touch-screen display supports graphic features and Microsoft Windows CE icons that the Windows CE operating system supports. The keyboard is illuminated to facilitate use in dimly lit areas.



The VX6 provides the power and functionality of a desktop computer in a vehicle mounted unit, with a wide range of options:








- 400MHz Intel® PXA255 CPU
- Windows CE .NET or CE 5.0 Operating System
- Wireless LAN radios with internal, single external or dual external antenna options
- Optional Bluetooth module
- Ethernet port
- USB Host and Client ports
- Choice of indoor or outdoor half screen display
- Available touch screen protective film
- Available Uninterruptible Power Supply (UPS) Battery Pack

- Available RAM Mount™ options
- Extended temperature version includes touchscreen heater

Note: The “VX6 Reference Guide” contains VX6 technical information and advanced functions.

Document Conventions

This reference guide uses the following document conventions:

ALL CAPS	All caps are used to represent disk directories, file names, and application names.
Menu Choice	Rather than use the phrase “choose the Save command from the File menu”, this manual uses the convention “choose File Save ”.
“Quotes”	Indicates the title of a book, chapter or a section within a chapter (for example, “Document Conventions”).
< >	Indicates a key on the keyboard (for example, <Enter>).
	Indicates a reference to other documentation.
	Differences in operation or commands due to radio type.
ATTENTION	Keyword that indicates vital or pivotal information to follow.
	Attention symbol that indicates vital or pivotal information to follow. Also, when marked on product, means to refer to the manual or operator’s guide.
	International fuse replacement symbol. When marked on the product, the label includes fuse ratings in volts (v) and amperes (a) for the product.
<i>Note:</i>	Keyword that indicates immediately relevant information.
Caution 	Keyword that indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury.
WARNING 	Keyword that indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury.
DANGER 	Keyword that indicates an imminent hazardous situation, which, if not avoided, will result in death or serious injury.

Environmental Specifications

Feature	Specification
Operating Temperature	
Standard version	-4°F to 122°F (-20°C to 50°C) [non-condensing]
Extended Temperature version	-22° to 122° F (-30°C to 50°C [condensing]
Storage Temperature	
Standard version	-22°F to 140°F (-30°C to 60°C) [non-condensing]
Extended Temperature version	-22°F to 140°F (-30°C to 60°C) [condensing]
Water, Sand Dust	IP66 per IEC60529
Operating Humidity	
Standard version	Up to 90% non-condensing at 104°F (40°C)
Extended Temperature version	100%
Vibration	Based on MIL Std 810F
ESD	15 kV
Bluetooth Range	32.8 feet (10 meters) Direct line of sight only

Quick Start

This section's instructions are based on the assumption that your new system is pre-configured and requires only accessory installation (e.g. antenna and/or barcode scanner) and a power source.

Use this guide as you would any other source book -- reading portions to learn about the VX6, and then referring to it when you need more information about a particular subject. This guide takes you through installation and operation of the LXE VX6.

In general, the sequence of events is:

1. Install Vehicle Mounting Bracket on vehicle and secure VX6 in Mounting Bracket Assembly (see "Installation", later in this manual).
2. Connect power cable to the VX6. The power cable can also be connected to a UPS battery pack, which is then connected to the VX6.
3. Connect accessories to VX6, e.g. scanner, antenna, etc.
4. Secure all cables to the VX6 with the Strain Relief Cable Clamps.
5. Turn the VX6 on.
6. When instructed, calibrate the touchscreen.
7. The screen may appear white while applications and drivers are loading. When complete, set Date and Time (see the "VX6 Reference Guide").
8. Configure radio (see the VX6 Reference Guide").
9. Warmboot to ensure all registry settings are saved.
10. Device is ready for use.

The VX6 should be mounted in an area in the vehicle where it:

- Does not obstruct the vehicle driver's vision or safe vehicle operation.
- Can be easily accessed by anyone seated in the driver's seat.



If your VX6 has AppLock installed, please contact your system administrator for setup and processing information.

AppLock is configured by an administrator to limit general users to only certain programs.

Troubleshooting

Can't calibrate the touch screen, change the date/time or adjust the volume.	AppLock is installed and running on the mobile device. AppLock restricts User access to running programs. Changes or modifications require Administrator access. Refer to AppLock in the <i>VX6 Reference Guide</i> for setup and processing information.
RFterm opens and runs upon each cold reset and warm reset.	Tap File Exit to close the RFTerm application.
The VX6 seems to lockup as soon as it is warm booted.	There may be small delays while the wireless client connects to the network, authorization for Voxware-enabled applications complete, Wavelink Avalanche management of the VX6 startup completes, and Bluetooth relationships establish or re-establish.

Components

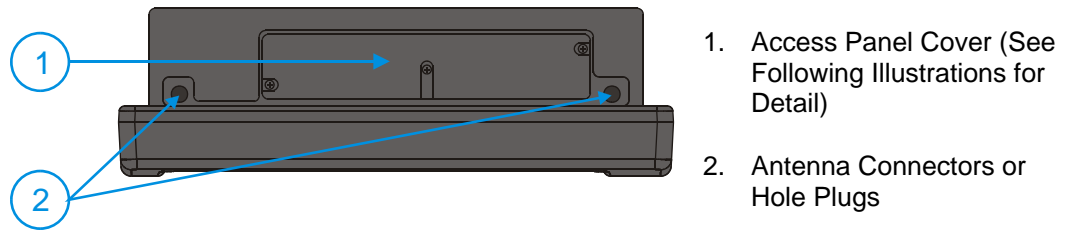


Figure 1 VX6 Components, Top View

Note: When the internal antenna option is ordered, the internal antenna is mounted on the inside of the Access Panel Cover.



Figure 2 VX6 Components, Front View

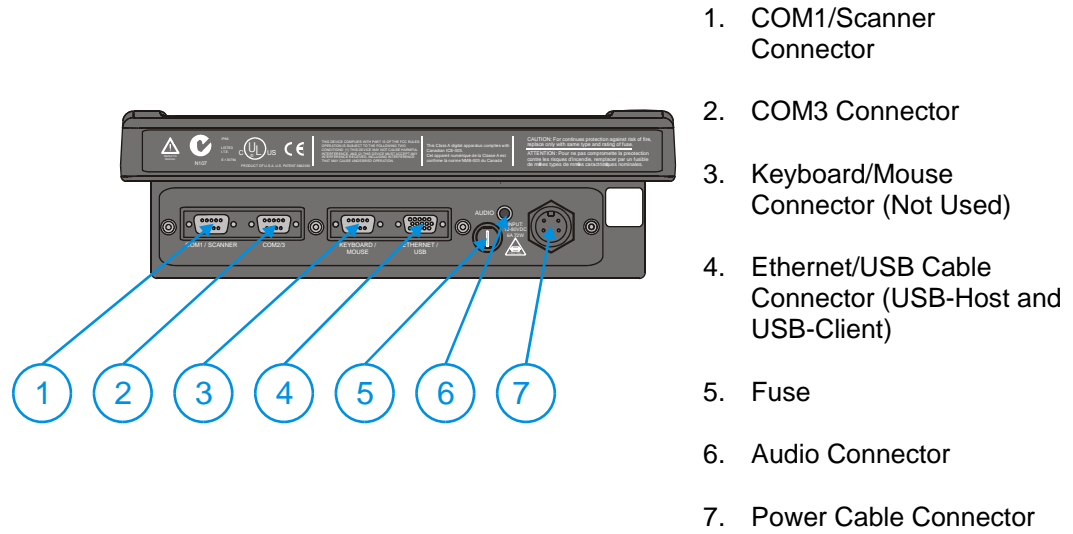


Figure 3 VX6 Components, Bottom View

Note: COM1 is configured with Pin 9 +5V. COM3 is labeled “COM2/3” and is configured with Pin 9 RI. Please see the VX6 Reference Guide for details.

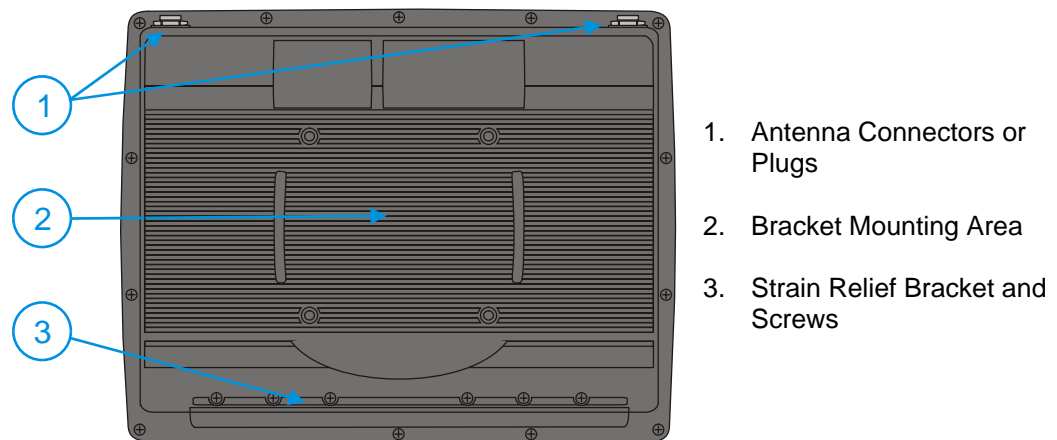


Figure 4 VX6 Components, Back View



Figure 5 VX6 Control Panel

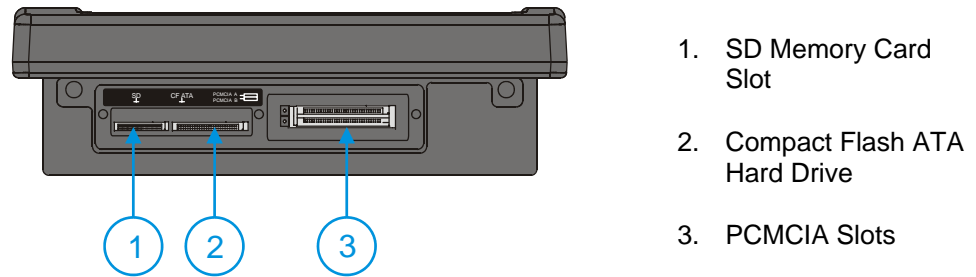


Figure 6 VX6 Access Panel

Note: The tethered access panel cover is not shown in the illustration above.

The Half-Screen Display

The VX6 has a half screen TFT color display capable of supporting SVGA graphics mode. The resolution is 800 x 320 pixels.

VX6 Control Panel

The VX6 control panel contains the status LED, power button and display brightness adjustment buttons. Please refer to the “Operation” section, later in this manual, for details on the VX6 Control Panel.

Microsoft Windows CE Control Panel

The Microsoft Windows CE .NET or CE 5.0 Control Panel provides standard Windows CE options for configuring the VX6, such as:

- Sounds and volume control
- Display configuration (including backlight power management)



Please consult your System Administrator or refer to commercially available Microsoft Windows CE user guides or the on-line Help application for these standard configuration options.

PCMCIA, ATA and SD Slots

The VX6 has two PCMCIA slots. These slots are intended for use with Type I or II cards, such as LXE’s 2.4GHz radios. These slots are hot swappable per PCMCIA specifications.

The Compact Flash (CF) slot contains the Compact Flash ATA hard drive. This drive contains the Operating System and the Documents and Settings. The VX6 does not operate without this card installed. The CF card is not hot swappable.

One Secure Digital (SD) slot is provided for SD memory cards. The SD card is hot swappable.

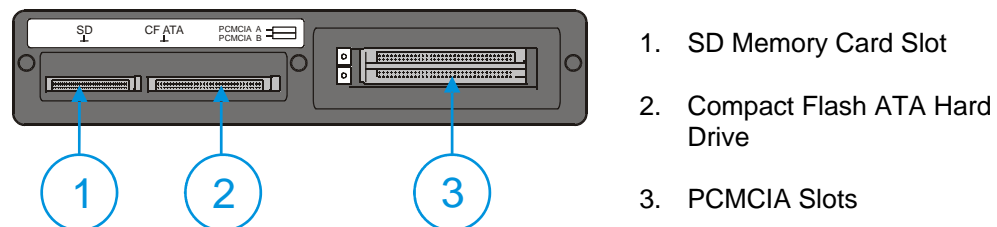


Figure 7 The VX6 PCMCIA, CF and SD Slots

Please see the “VX6 Reference Guide” for more details on the PCMCIA, CF and SD slots.

AppLock and the VX6

AppLock may be installed and running on the mobile device. AppLock restricts access to programs and the Windows CE Control Panel. Please contact your system administrator for details.

Single Application AppLock

Single application AppLock restricts a user to one application. The user is unable to exit the application (or if the application exits, it immediately restarts).

Note: Single application AppLock is obsolete. Please contact your LXE representative if you desire to upgrade to multi application AppLock.

Multi Application AppLock

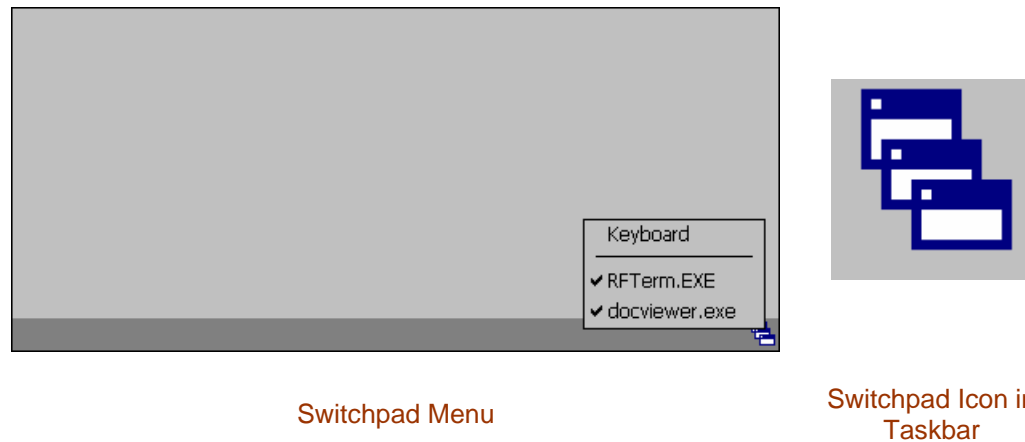


Figure 8 Switchpad Menu

A checkmark indicates applications currently active or available for Launching by the user. When Keyboard is selected, the VX6 default input method (Input Panel, Transcriber, or custom input method) is activated.

Note: If “Keyboard” is not present in the window, an older version of AppLock is installed. Please contact your LXE representative for upgrade information, if desired.

Using the Touchscreen

Note: The touch screen must be enabled.

When the mobile device enters end-user mode, a Switchpad icon (it looks like three tiny windows one above the other) is displayed in the taskbar. The taskbar is always visible on top of the application in focus.

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

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

Using the Keypad

One switch key sequence (or hotkey) is defined by the administrator for the end-user to use when switching between locked applications. This is known as the **Activation key**. When the switch key sequence is pressed on the keypad, the next application in the AppLock configuration is moved to the foreground and the previous application moves to the background. The previous application continues to run in the background. End-user key presses affect the application in focus only.

See the *VX6 Reference Guide* for AppLock setup instruction.

The QWERTY Keyboard

The VX6 has a QWERTY keyboard, available with a standard overlay, an IBM 3270 overlay or an IBM 5250 overlay. These keyboards have 101 keyboard functions, including a numeric keypad. Please refer to Appendix A, “Key Maps”, for keypress combinations.

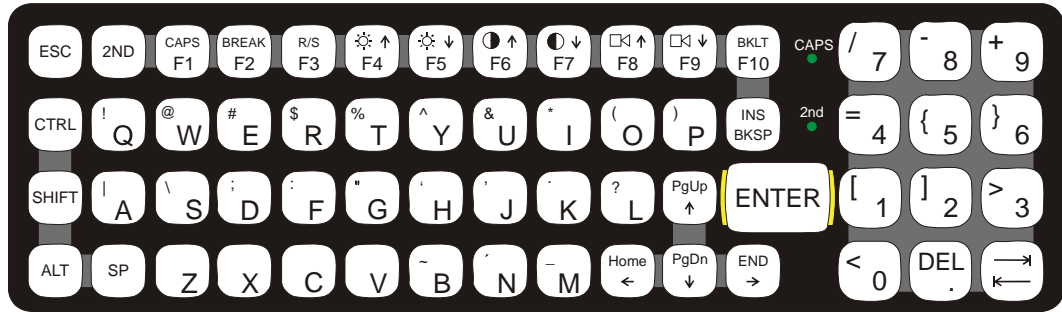


Figure 9 QWERTY Keyboard Standard

IBM 3270 Overlay



Figure 10 QWERTY Keyboard with IBM 3270 Overlay

IBM 5250 Overlay

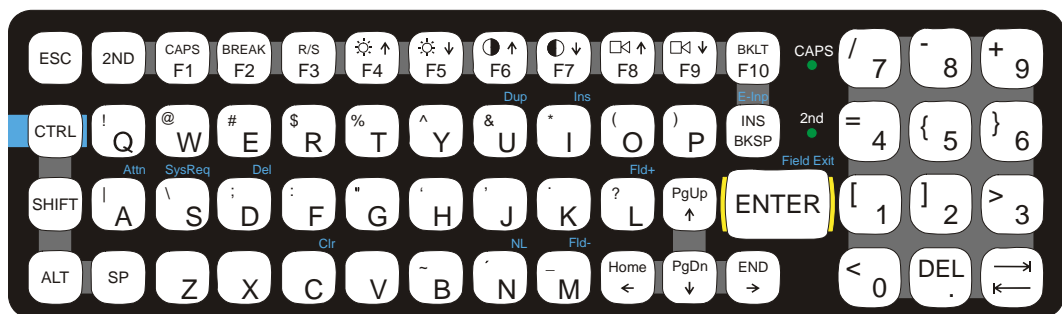


Figure 11 QWERTY Keyboard with IBM 5250 Overlay

Note: Press the <CTRL> + <Enter> keys to initiate the IBM 5250 Field Exit Function.

Key Maps

The keyboard supports all 101 keyboard functions. However, because the keyboard only has 60 keys, all functions are not visible (or printed on the keyboard). Therefore the VX6 keyboard supports what is called hidden keys -- keys that are accessible but not visible on the keyboard.

The hidden keys supported by the VX6 are listed in Appendix A, “Key Maps”.

Unused Key Functions

There are several key functions on the keyboard that are not used on the VX6. These include:

- <2nd> <F3> – The Resume/Suspend function is not used, as the VX6 does not support these power management modes.
- <2nd> <F4> and <2nd> <F5> – The Display Brightness functions are not used as the display brightness is adjusted by the buttons on the VX6 control panel.
- <2nd> <F6> and <2nd> <F7> – The Contrast functions are not used as the contrast is not adjustable on the TFT display on the VX6.
- <2nd> <F8> and <2nd> <F9> – The Volume control keys are not used as volume is adjusted via the Microsoft Windows CE Control Panel.
- <2nd> <F10> – The keyboard backlight is controlled by Windows CE Power Management.

Custom Key Maps

The System Administrator creates Custom Key Maps for the VX6. To activate the Custom keymap, select **Start | Settings | Control Panel | Keyboard** icon. Select the Custom keymap from the keyboard popup menu, and close the control panel with the OK button.

To return to the default keymap, select **0409** or **Preload**, depending on system version, from the keymap popup and click OK.

NumLock and the VX6

The keyboard does not have a NumLock indicator or key. By default, the VX6 turns NumLock On each time the VX6 is turned on.

NumLock can be toggled On or Off using the <2nd> <SHIFT> <F10> keypress sequence.

The warmboot behavior of NumLock can be configured. Please refer to the “VX6 Reference Guide” for more information on NumLock.

Keyboard Backlight

The LXE keyboard keys are backlit. The keyboard backlight and the display share the same timer, which is configured in the Windows CE Control Panel. When the display is On, the keyboard backlight is also On. Please refer to Control Panel Options in the “VX6 Reference Guide” for more information.

Keyboard LEDs

The VX6 keyboard has two (2) LED indicators.

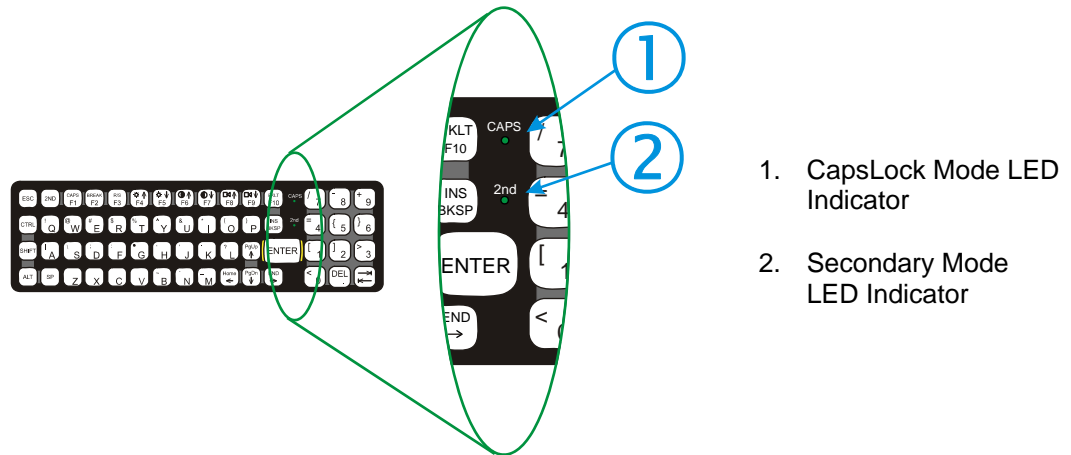


Figure 12 Keyboard LEDs

CAPS LED

This LED indicates the state of the keyboard CapsLock mode. If CapsLock is enabled this LED is illuminated green. When CapsLock is off, the LED is dark.

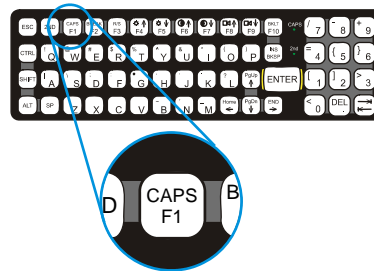


Figure 13 The CapsLock Key

Press <2nd> then <F1> to toggle CapsLock On and Off.

The default value of CapsLock is “Off”. For information on configuring the behavior of CapsLock after a reboot, please refer to the “VX6 Reference Guide”.

Secondary Keys LED

The keyboard is equipped with several secondary keys. These keys are identified by the superscripted text found on the keyboard keys. The secondary keys are accessible by using two (2) keystrokes: the <2nd> key followed by the superscripted key.

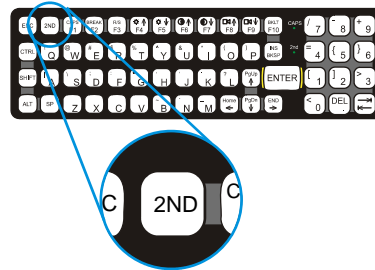


Figure 14 The Secondary Key

Once the <2nd> state is enabled (by pressing the <2nd> key) the Secondary Mode LED is illuminated and the <2nd> state is enabled until another key is pressed. The <2nd> key is toggled on with a <2nd> keypress and then immediately off with another <2nd> keypress.

For example:

Press <2nd> and <F1> to turn CapsLock on and off.

Press <2nd> and <↑> to initiate the PgUp command.

Press <2nd> and <Q> to type the “!” key.

Press <2nd> and <BkSp> to enter the Insert (Ins) mode.

Control Keys

The keyboard has several control keys, which are not used on the VX6.

Note: The 2nd functions of the <F4> and <F5> keys are not used as the display brightness is adjusted via the buttons on the control panel.

The 2nd functions of the <F6>, and <F7> keys are not used as the VX6 has TFT LCD screen with no provision for contrast adjustments.

The 2nd functions of the <F8> and <F9> keys are not used as the sound volume on the VX6 is controlled with the Volume and Sounds icon in the Microsoft Windows CE .NE Control Panel.

The 2nd function of the <F10> key is not used as the display backlight timer also controls the keyboard backlight.

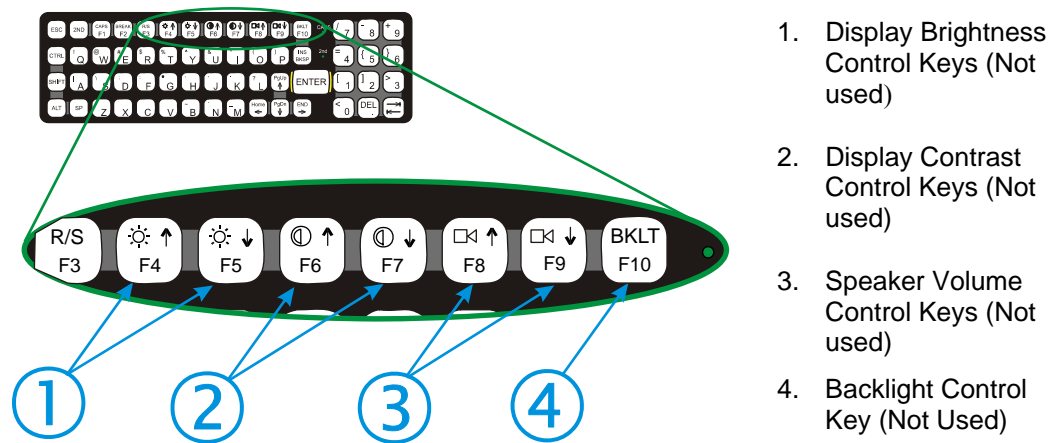


Figure 15 Keyboard Display Controls

General Windows CE Keyboard Shortcuts

Use the keyboard shortcuts in the chart below to navigate with the VX6 keyboard. These are standard keyboard shortcuts for Windows CE applications.

Press these keys ...	To ...
CTRL + C	Copy
CTRL + X	Cut
CTRL + V	Paste
CTRL + Z	Undo
DELETE	Delete
SHIFT with any of the arrow keys	Select more than one item in a window or on the desktop, or select text within a document.
CTRL+A	Select all.
ALT+ESC	Cycle through items in the order they were opened.
CTRL+ESC	Display the Start menu.
ALT+Underlined letter in a menu name	Display the corresponding menu.
Underlined letter in a command name on an open menu	Carry out the corresponding command.
ESC	Cancel the current task.

The touchscreen provides equivalent functionality to a mouse:

- A touch on the touchscreen is equivalent to a left mouse click.
- Many items can be moved by the “drag and drop” method, touching the desired item, moving the stylus across the screen and releasing the stylus in the desired location.
- A double stylus tap is equivalent to a double click.
- A touch and hold is equivalent to a right mouse click.

Input Panel (Virtual Keyboard)

The Input Panel may be enabled via the Input Panel icon in the Windows CE Control Panel. The Input Panel can be displayed as a large or small keyboard.

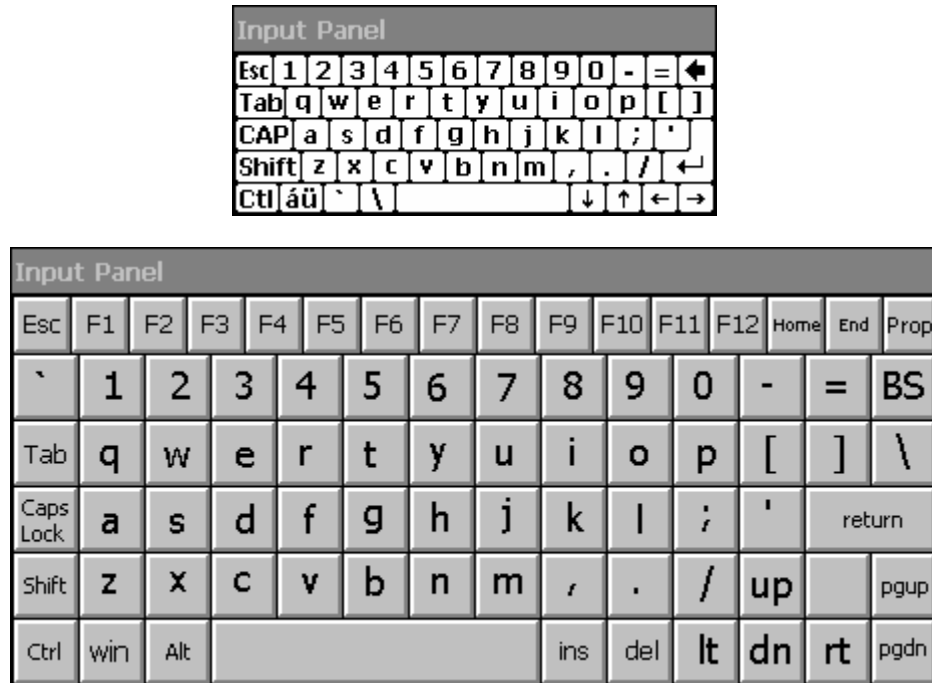


Figure 16 Small and Large Virtual Keyboards

Virtual keyboards display the actual character a keypress results in. For example, pressing the <Shift> key on the virtual keyboard toggles the characters displayed on the keys between upper and lower case. The <áü> key toggles the keys between standard and international symbols. The <Shift> and <áü> keys can be used in combination for capitalized international characters.

Note: When the virtual keyboard is displayed, the physical keyboard is still active. Therefore it is possible to input data from both keyboards.

Enabling the Input Panel

The Input Panel is disabled by default. To enable the Input Panel, select **Start | Settings | Control Panel | Input Panel** icon. Make sure the “Allow applications to change the input panel state” checkbox is checked and warmboot the VX6.

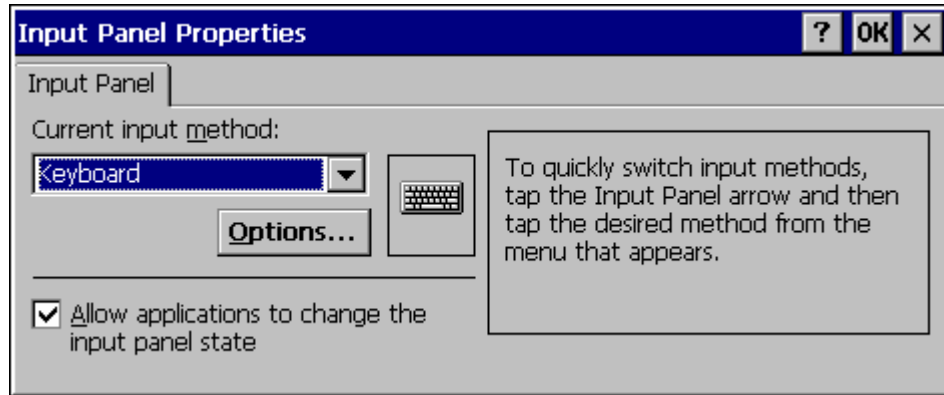


Figure 17 Input Panel Properties

Power Supply

Vehicle power input for the VX6 is 12V to 80V DC and is accepted without the need to perform any manual adjustments within the VX6. See the section titled “Installation”, sub-section titled “Vehicle 12-80V DC Direct Connection”. An optional Uninterruptible Power Supply (UPS) battery pack is available for the vehicle power supply connection.

If 12V to 80V DC power is not available – for example, in an office environment – an optional external Input Power Supply can be used to convert AC wall power to an appropriate DC level. See the section titled “Installation”, sub-section titled “External Power Supply”.

Power input is fused for protection and the fuse is externally accessible. See section titled “Installation”, sub-section titled “Fuse Replacement for the VX6”.

Uninterruptible Power Supply Battery Pack

An optional Uninterruptible Power Supply (UPS) battery pack is designed to provide power to the VX6 for short periods of time when vehicle power is unavailable (such as when vehicle batteries are swapped). Fully charged, the UPS battery powers the VX6 for a minimum of 15 minutes at 25° C (77° F) ambient temperature.

The Power Status LED on the VX6 indicates the UPS battery status:

Green – Running on 12V – 80V power input

Solid Yellow – Running on UPS battery, battery is not low on power

Flashing Yellow – Running on UPS battery, battery is critically low.

Backup Battery

The internal 190 mAh Lithium backup (coin cell) battery provides power to maintain date and time when the VX6 is not powered from an external source.

Caution



Danger of explosion if battery is incorrectly replaced.

Replace only with the same type or equivalent type recommended by the manufacturer.

Dispose of used batteries according to the manufacturer’s instructions.

Getting Help

All LXE manuals are now available on one CD and they can also be viewed / downloaded from the LXE ServicePass website on the ServicePass / Documentation page. Contact your LXE representative to obtain the LXE Manuals CD or logon information for the ServicePass web pages.

You can also get help from LXE by calling the telephone numbers listed on the LXE Manuals CD, in the file titled “Contacting LXE”. This information is also available on the LXE website.

Explanations of terms and acronyms used in this guide are located in the file titled “Glossary” on the LXE Manuals CD.

Manuals and Accessories

Manuals

The following manuals are available on the LXE Manuals CD:

- VX6 Reference Guide
- Contacting LXE
- LXE Technical Glossary

Accessories

The table below lists the available VX6 accessories.

- Where two parts numbers are listed for a given part, the part number ending in “-R” is the RoHS compliant version.
- When only one part number is listed, the part is RoHS compliant unless otherwise noted.

VX6 Brackets	
Bracket, U Style, VX6 VX77	9000A021UBRACKET-R
Kit, VXX U-Bracket to VX6 VX7 Adapter	9000A022BRKTADPTKIT-R
Bracket, RAM Mount VX6 VX7	9000A023BRKTRAMMOUNT-R
Bracket, VXX RAM ball on plate	9000A028RAMPLATEBALL-R
Bracket, RAM Squeeze Mount, VX6 VX7	9000A031BRKTRAMSQZMT-R
Bracket, RAM Backup Mounting Plate	9000A033BACKUPPLATE
Data Cables	
Cable, Combo D15 to USB and Ethernet Adapter 1 Ft	9000A071CBLD15USBETH
Cable, Combo D15 to USB-H, USB-C and Ethernet Adapter	9000A075CBLUSBHCETH
Cable, Printer/PC, D9 to D25	9000A053CBL6D9D25 (above part is <i>not</i> RoHS compliant)
Cable, PC, D9 to D9	9000A054CBL6D9D9

Power Cables	
Cable, Input Power, 12 FT, VX5 VX6 VX7	9000A073CBLPWR12FT-R
Adapter Cable, VX1 VX2 VX4 Power Cable to VX5 VX6 VX7	9000A077CBLPWRADPTR
Power Supplies	
Power Supply, External, AC, W/US Power Cord VX5 VX6 VX7	9000A317PSACUS-R
Power Supply, External, AC, No Power Cord VX5 VX6 VX7	9000A318PSACWW-R
UPS Battery and Cables	
Battery, UPS Lead Acid, VX5 VX6 VX7	9000A378UPSBATTPACK-R
Cable, UPS Battery, Remote Mount Extender, 6 Ft	9000A074CBLUPSEXTNDR
Antenna and Antenna Mount Kits	
Replacement antenna, 2.4GHz	153180-0001
Remote Mount Antenna Assembly Kit, 8 Ft Cable	9000A279ANTREMOTE8-R
Remote Mount Antenna Assembly Kit, 6 Ft Cable	9000A278ANTREMOTE6-R
Right Angle Remote Mount Antenna Assembly Kit, 6 Ft Cable	9000A280ANTREMOTE6RT
Right Angle Remote Mount Antenna Assembly Kit, 15 Ft Cable	9000A281ANTREMOT15RT
Miscellaneous	
Stylus, with Tethers and Sleeves, 5 Pack	9000A510STYLUS
Protective Film, Touchscreen, 10 Pack, VX6	VX6A512PROTFILM
Voice Recognition Accessories	
Headset coiled adapter cable, with quick disconnect connector to a 2.5 mm audio jack. A headset (see below) is required	9000A076CBLHEADSET1
Headset, Single Band	HX1A501SINGHEADSET
Headset, Dual Band	HX1A502DUALHEADSET
Headset, Behind the Ear, Dual Ear	HX1A503BTHHEADSET
Foam, Replacement Block, Headset	HX1A504HSBLOCKFOAM
Yoke, Replacement for Dual Band Headset	HX1A505DUALYOKE
Yoke, Replacement for Single Band Headset	HX1A506SINGLEYOKE
Replacement Microphone Foam, Wind Screen, 10 pack	HX1A508WINDSREEN10
Replacement Microphone Foam, Wind Screen, 50 pack	HX1A509WINDSREEN50
Replacement Headset Foam, Ear Cover, 10 pack	HX1A510FOAMEAR10
Replacement Headset Foam, Ear Cover, 50 pack	HX1A511FOAMEAR

Scanners	
Scanner, Powerscan, SR, 8' Cbl, WW	8300A326SCNRPWRSR8DA9F 8300A326SCNRPWRSR8DA9F-R
Scanner, Powerscan, SR, 12' Cbl, US	8300A327SCNRPWRSR12DA9F (above part is <i>not</i> RoHS compliant)
Scanner, Powerscan, SR, Low Temp, 8' Cbl	8300A332SCNRS8D9FLT (above part is <i>not</i> RoHS compliant)
Scanner, Powerscan, SR, Low Temp, 12' Cbl	8300A333SCNRS12D9FLT (above part is <i>not</i> RoHS compliant)
Scanner, Powerscan, LR, 8' Cbl, WW	8310A326SCNRPWRLR8DA9F 8310A326SCNRPWRLR8DA9F-R
Scanner, Powerscan, LR, 12' Cbl, US	8310A327SCNRPWRLR12DA9F 8310A327SCNRPWRLR12DA9F-R
Scanner, Powerscan, LR, Low Temp, 8' Cbl	8310A332SCNRL8D9FLT (above part is <i>not</i> RoHS compliant)
Scanner, Powerscan, LR, Low Temp, 12' Cbl	8310A333SCNRL12D9FLT (above part is <i>not</i> RoHS compliant)
Scanner, Powerscan, XLR, 8' Cbl, WW	8320A326SCNRPWRXLR8DA9F 8320A326SCNRPWRXLR8DA9F-R
Scanner, Powerscan, XLR, 12' Cbl, US	8320A327SCNRPWRXLR12DA9F (above part is <i>not</i> RoHS compliant)
Scanner, Powerscan, XLR, Low Temp, 8' Cbl	8320A332SCNRX8D9FLT (above part is <i>not</i> RoHS compliant)
Scanner, Powerscan, XLR, Low Temp, 12' Cbl	8320A333SCNRX12D9FLT (above part is <i>not</i> RoHS compliant)
Scanner, LS3408 Fuzzy Logic SR, D9 Interface Cable, 8ft	8510A326SCNRFZYDA9F 8510A326SCNRFZYDA9F-R
Scanner, LS3408 Extended Range, D9 Interface Cable, 8ft	8520A326SCNRERDA9F-R

Bluetooth Scanner and Accessories	
PowerScan 7000BT Scanner RS-232 with pointer	8700A301SCNRBTSRI
PowerScan 7000BT Base Station, RS232, without universal power supply.	8700A501BASERS232
PowerScan 7000BT Base Station Power Supply, Std US, 120V	8700A502PSACUS
PowerScan 7000BT, RS232 Cable for Base Station, DB9S, Coil, 8'	8700A001CBL8DA9F
PowerScan 7000BT Battery Charger with Power Supply, Four Station, US Std	8700A503CHGR4US
PowerScan 7000BT Battery Pack	8700A504BATT
Bluetooth Standard Range Fuzzy Logic laser scanner	8810A326SCNRBTFZ
Bluetooth Auto range "LORAX" scanner	8820A327SCNRBTER
Desk Cradle, Radio/Charging, Multi-Interface	8800A001CRADLERCFMI
Desk Cradle, Charge Only, Multi-Interface	8800A002CRADLECFMI
Forklift Cradle, Radio/Charging, Multi-Interface	8800A003CRADLEVRCMI
Forklift Cradle, Charge Only, Multi-Interface	8800A004CRADLEVCFMI
US AC Power Cord	8800A051POWERCORD
Universal Desktop Power Supply 90-264VAC	8800A301ACPS
9-60VDC Forklift Power Supply	8800A302DCPS
Power Cable (connects Power Supply to Forklift)	8800A052DCPWRCABLE
Cable Assembly, DA9F, 9 ft, Cradle to Terminal	8500A051CBL9DA9F
Forklift Rugged Scanner Holder with RAM mount	8800A005STAND
8800 Spare Battery	8800A376BATTERY
Single slot Universal Battery Charger Adapter Cup	8800A377CHGRADPTRCUP
Single Slot Battery Charger w/International Power	8800A378CHGR1SLOT
Universal Battery Charger, 4 slot. Requires 4 adapter cups	8800A379CHGRBASE
Scanner Holster for Belt	8200A501HOLSRBELT
Mounted take up Reel	8000A501INDREEL
Auto Sense Intellistand, Hands Free Scanning	8500A505STANDSMT
Strap with Scanner Clip	9000A411SCNRSTRAP

Installation

Install Mounting Brackets

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.

Equipment Needed: Phillips No. 1 screwdriver and a Torque wrench capable of measuring to 50 inch pounds (5.64±.56 N/m).

Note: *Torquing tool is not supplied by LXE. Bolts, washers, and wrench needed when attaching the bottom mounting bracket to the vehicle are not supplied by LXE.*

Several types of mounting systems are provided for the VX6:

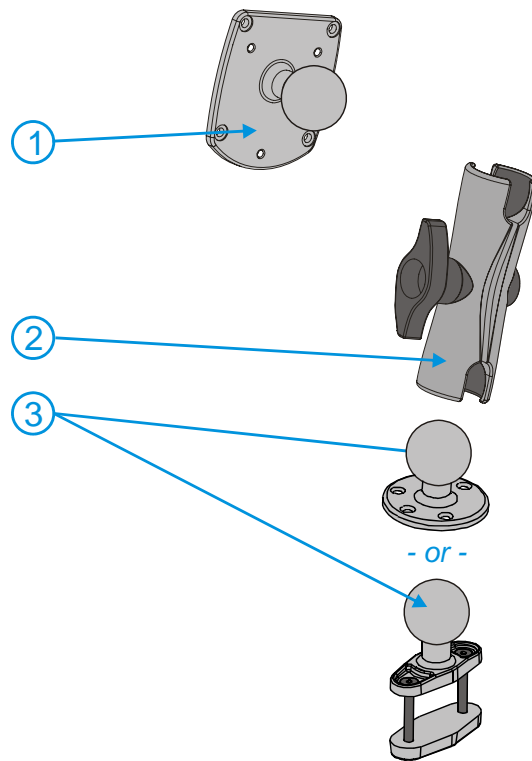
- RAM mount system:
 - Available RAM ball base or RAM clamp mount
- U-Bracket system:
 - Provision for integrated UPS battery mount
 - Available without U-Bracket for vehicles previously equipped with an LXE vehicle mounted computer
- Remote mount for UPS battery pack

Before installation begins, verify you have the applicable vehicle mounting bracket assembly components necessary for your mount type, as shown in the following figures.

RAM Mount System

Components

RAM Mounting Assembly



The RAM mounting assembly consists of the following parts:

1. VXX RAM ball bracket
2. RAM arm, size D
3. RAM ball base
- or -
RAM clamp mount
RAM Clamp Mount includes:
Upper Clamp Piece with Ball
Lower Clamp Piece
Bolts (2 each)
Nylon locking nuts (2 each)
4. Hardware (not shown):
Bolts, 1/4-20x5/8 (4 each)
Washers, 1/4 locking (4 each)
Washers, 1/4 flat (4 each)
RAM wrench

Torque Measurements

You will need a torquing tool capable of torquing to 50 inch pounds (5.64±.56 N/m).

Torque all screws and bolts according to the following table:

For these screws and bolts...	Torque to
1/4 bolts	50.0±5 in/lb (5.64±.56 N/m)

Procedure

Step 1a – Mount Vehicle RAM Ball Base

Note: If you are using the RAM clamp mount, please skip to Step 1b.

1. Determine the position for mounting the RAM ball base. Be sure to position the RAM ball base to allow access to the switches and ports on the bottom of the VX6.
2. Attach the RAM ball base to the vehicle mounting surface using four 1/4 bolts (or equivalent) fasteners.

Note: 1/4 bolts not included.

IMPORTANT: Mount to the most rigid surface available.

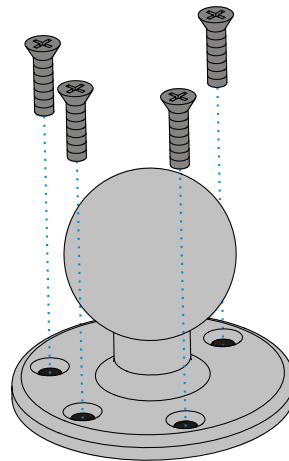


Figure 18 Connect Vehicle RAM Mount Bracket to Vehicle

Mounting Dimensions

Note: Drill and tap holes for 1/4 bolts.

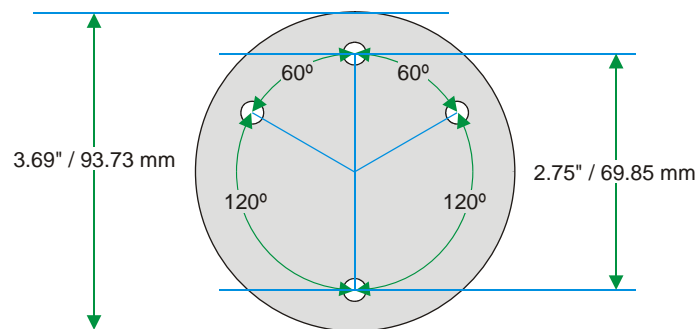


Figure 19 VX6 RAM Bracket - Mounting Dimensions (Not To Scale)

Step 1b – Mount Vehicle RAM Clamp Mount

Note: If you are using the RAM ball base, complete Step 1a and skip Step 1b.

1. Determine the position for mounting the RAM clamp mount. The clamp mount can be used on a beam (such as on a fork lift truck) up to 2.5" (63.5 mm) wide and approximately 2" (50.8 mm) thick. The clamp may be attached to a thicker beam by substituting longer bolts (not included). Be sure to position the RAM clamp mount to allow access to the switches and ports on the bottom of the VX6.
2. Position the upper clamp piece with ball (A) on the beam. Place the bolts (B) through the holes in the upper clamp piece.
3. Position the lower clamp piece (C) below the beam. Align the bolts with the holes in the lower clamp piece.
4. Place the nylon locking nuts (D) on the bolts and tighten the bolts.

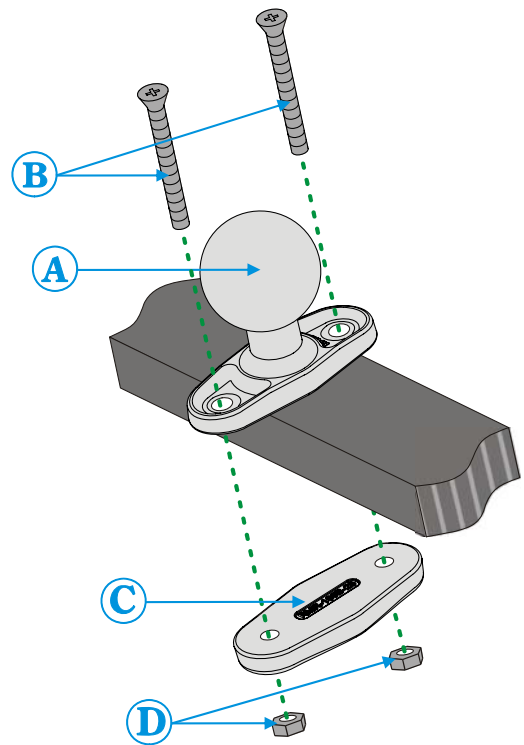


Figure 20 RAM Clamp Mount Components

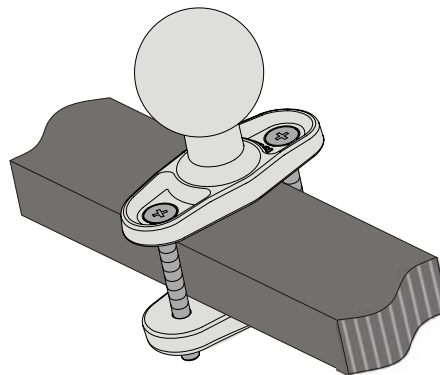
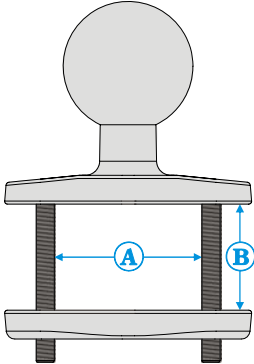


Figure 21 Assembled RAM Clamp Mount

Mounting Dimensions



- A 2.56" (65.02 mm)
- B 1.84" (46.74 mm)
Varies depending on bolt length

Figure 22 RAM Clamp Mount - Mounting Dimensions (Not To Scale)

Step 2 – Attach RAM Mount Ball to the VX6

1. Turn the VX6 off before attaching the RAM mount ball.
2. Place the VX6 face down on a stable surface.
3. Position the RAM ball bracket on the rear of the VX6, aligning the curved edge on the RAM mount bracket with the curved edge on the VX6. Attach with four 1/4-20x5/8 bolts, using one flat washer and one locking washer per bolt. Place the locking washer on the bolt before the flat washer.

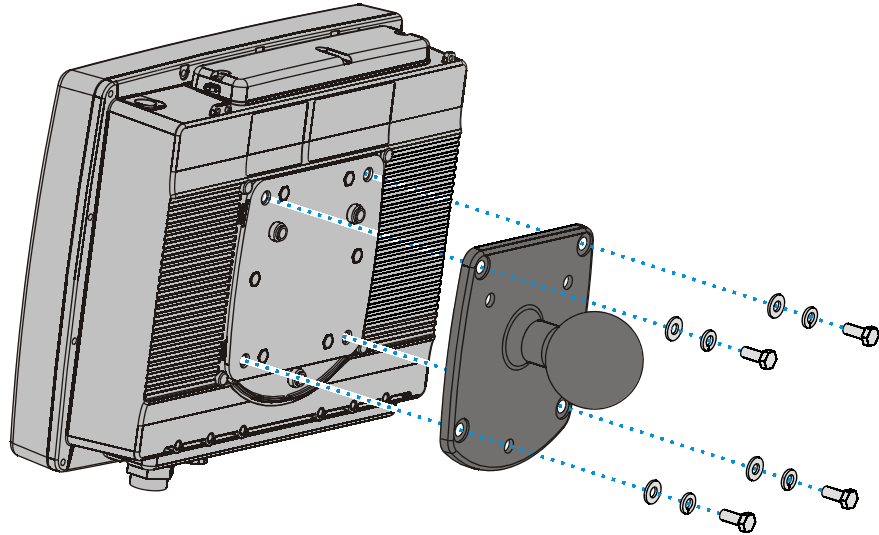


Figure 23 Attach RAM Mount to VX6

Caution



Failure to use one 1/4 flat washer and one 1/4 locking washer per bolt can result in damage to the backplate of the VX6 computer.

Step 2 – Attach VX6 Assembly to RAM Mount

1. Slip the RAM arm over the ball on the vehicle RAM ball bracket. Insert the ball of the RAM mount bracket into the RAM arm. Adjust the VX6 to the desired position and tighten the knob on the RAM arm using the supplied RAM wrench.

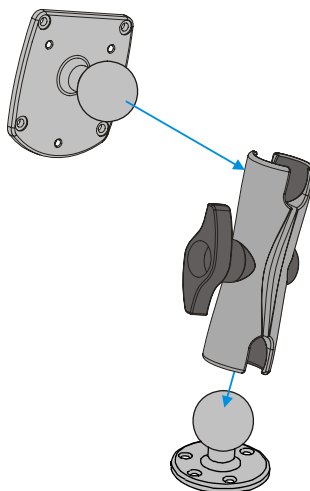


Figure 24 RAM Assembly

Note: RAM ball base shown.

Completed Assembly

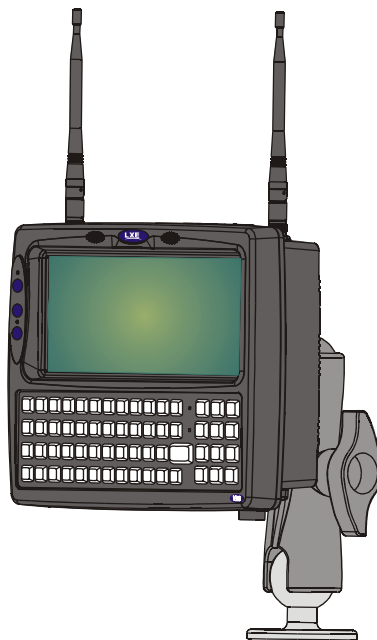


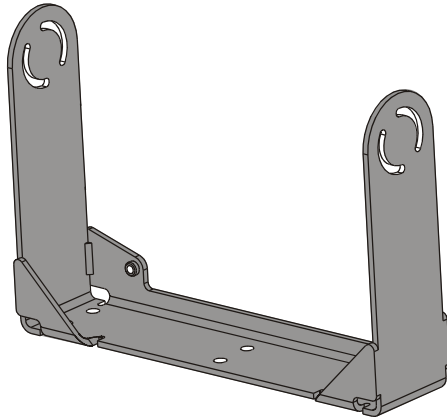
Figure 25 Completed RAM Mount Assembly

Note: RAM ball base shown.

U-Bracket Mount System

Components

Bottom Mounting Bracket

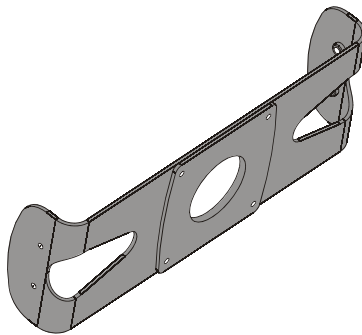


This bracket is mounted to the vehicle. The VX6 can be mounted to the bottom mounting bracket. The UPS battery pack may be mounted to the bottom mounting bracket.

If the optional UPS battery pack is to be mounted to the bottom bracket, use the following parts included with the UPS battery pack (not shown):

- 1" long aluminum spacer w/through hole (2 each)
- 1/4 flat washer (2 each)
- 1/4 locking washer (2 each)
- screw, pan head, 1/4-20x2 (2 each)

Back Bracket Assembly



1. Rear Bracket
2. Hardware (not shown):
 - 1/4 flat washer (8 each)
 - 1/4 locking washer (8 each)
 - 1/4 flat washer (8 each)

Mounting Positions

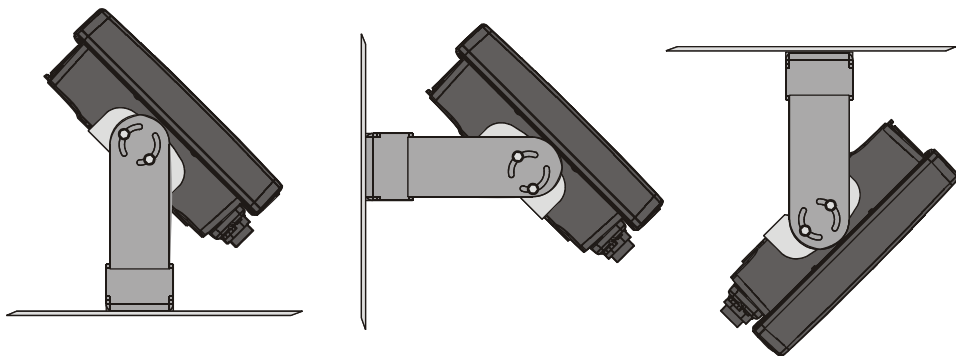


Figure 26 Suggested Mounting Positions

The viewing angle can be adjusted through a wide range to provide the best viewing angle.

Torque Measurements

You will need a torquing tool capable of torquing to 50 inch pounds (5.64±.56 N/m).

Torque all screws and bolts according to the following table:

For these screws and bolts...	Torque to
1/4 bolts	50.0±5 in/lb (5.64±.56 N/m)

Procedure

Step 1 - Mount Bottom Mounting Bracket To Vehicle.

1. Position the bracket to allow access to the switches and ports on the bottom of the VX6.
2. Attach the bottom mounting bracket to the vehicle mounting surface using a minimum of four 1/4 bolts (or equivalent) fasteners.

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

IMPORTANT: Mount to the most rigid surface available.

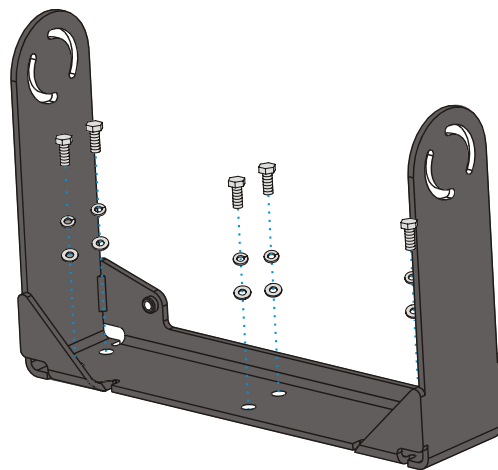


Figure 27 Connect Bottom Bracket to Vehicle

After the bottom bracket has been attached to a rigid surface, you are ready to assemble the VX6 bracket configuration.

Mounting Dimensions

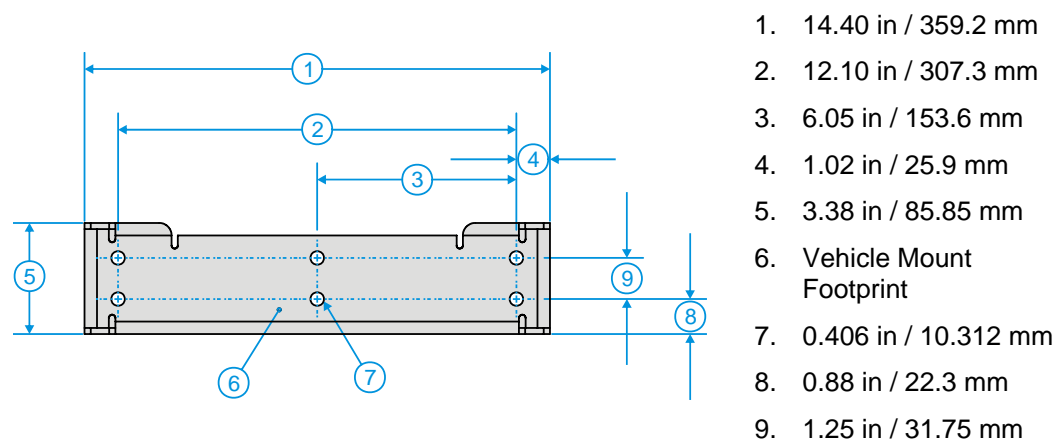


Figure 28 VX6 Bracket - Mounting Dimensions (Not To Scale)

Step 2 - Connect Rear Bracket to VX6

1. Turn the VX6 off before attaching the rear bracket.
2. Place the VX6 face down on a stable surface.
3. Align the rear bracket with the holes on the back of the VX6. Attach with four 1/4-20x5/8 bolts, using one flat washer and one locking washer per bolt. Place the locking washer on the bolt before the flat washer.

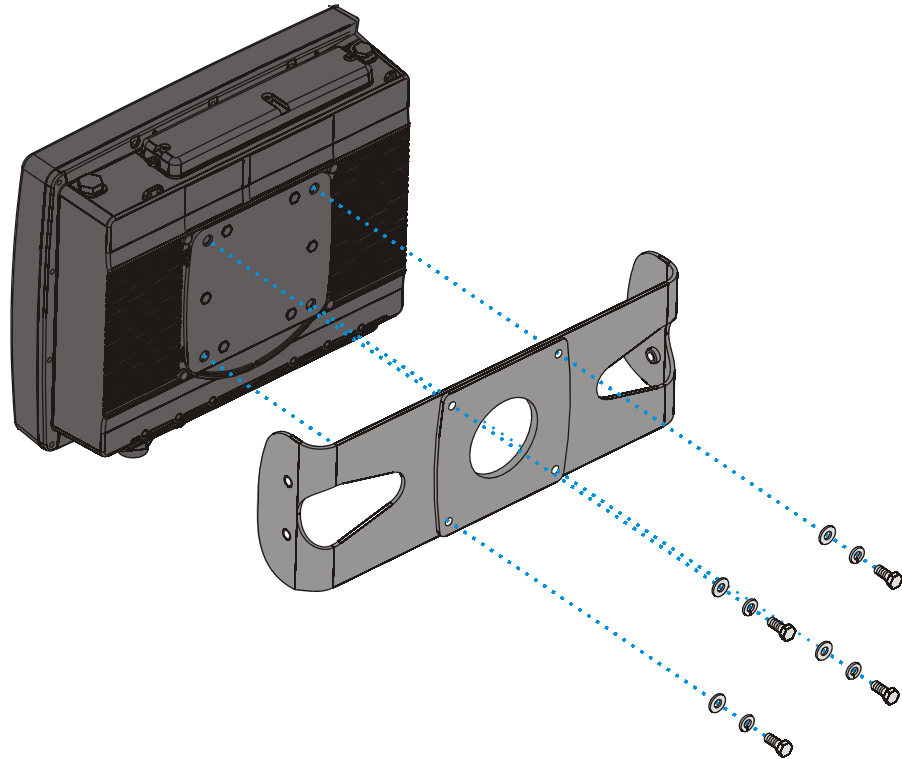


Figure 29 Attach Rear Bracket to VX6

Step 3 - Attach VX6 Assembly To Bottom Mounting Bracket.

1. Place lock washer first, then flat washer on 1/4-20x5/8 bolt. Next insert mounting bolts through the curved apertures in the bottom mounting bracket and into the screw holes on the side of the back mounting bracket.

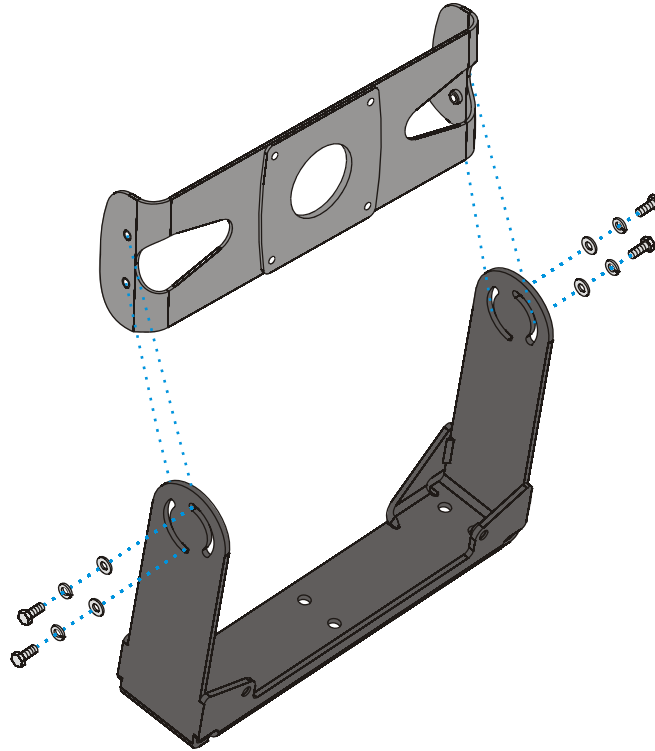


Figure 30 Attach VX6 Assembly to Bottom Bracket

2. Loosely tighten each bolt as it is inserted.
Important: Do not torque bolts until all bolts are in place and viewing angle is adjusted.
3. Loosen the hex bolts on both sides to adjust the viewing angle of the mounted VX6.
4. Torque the hex bolts to 50 ± 5 in lbf ($5.64 \pm .56$ N m).

Note: Test the torque on the bolts frequently during operation and re-tighten if necessary to 50 ± 5 in lbf ($5.64 \pm .56$ N m).

6. If using a UPS battery pack, the battery pack can be mounted to the bottom mounting bracket. Place a locking washer and then a flat washer on a 1/4-20x2 bolt. Thread the bolt through the UPS Battery Pack, then through the 1" aluminum spacer and into the mounting bracket.

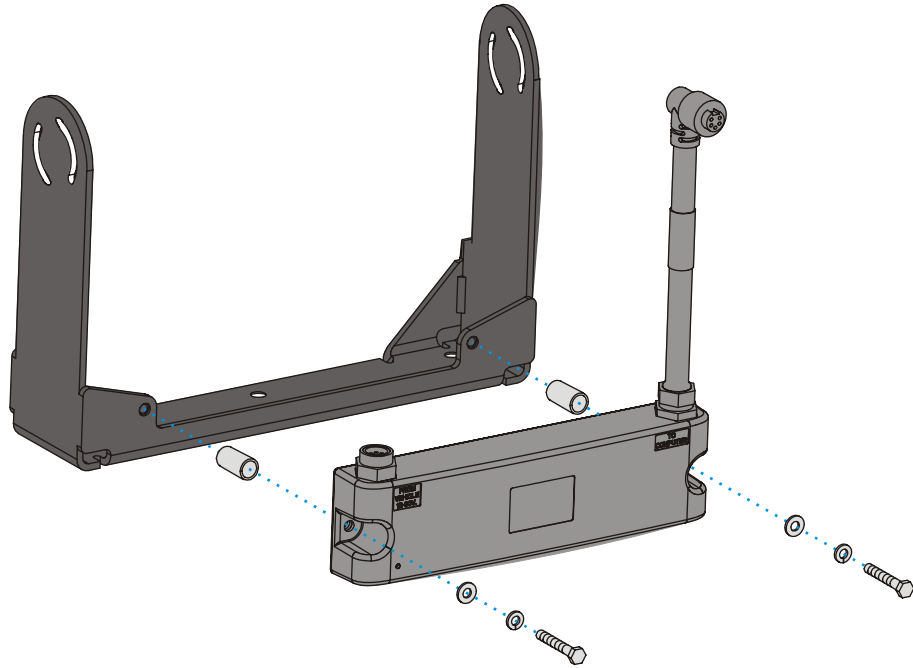


Figure 31 Integrated UPS Battery Pack Mount

7. Connect all cables to the VX6. Secure the cables with the strain relief cable clamps, ensuring a slack loop remains between the cable clamp and the accessory connector.
8. The vehicle mounted bracket and the VX6 are now ready to use.

Completed Assembly

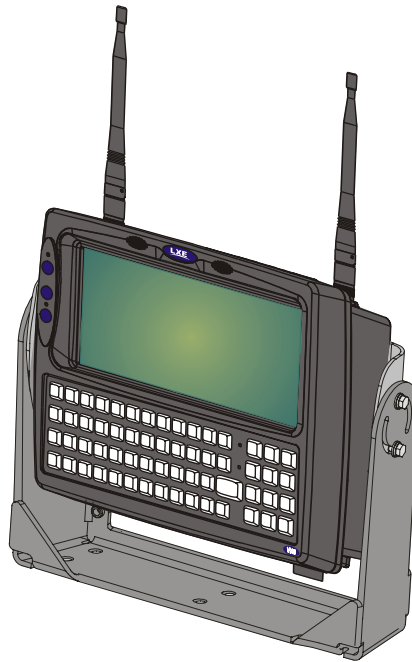


Figure 32 VX6 in Vehicle Bracket

Install Stylus Tether and Sleeve

The LXE stylus kit includes the stylus, tether and sleeves. The tether allows the stylus to be mounted to the VX6 and the sleeve provides storage for the stylus when not in use.

How To Install Stylus Tether and Sleeves

1. Locate the tether holes on the top of the VX6. (see below):

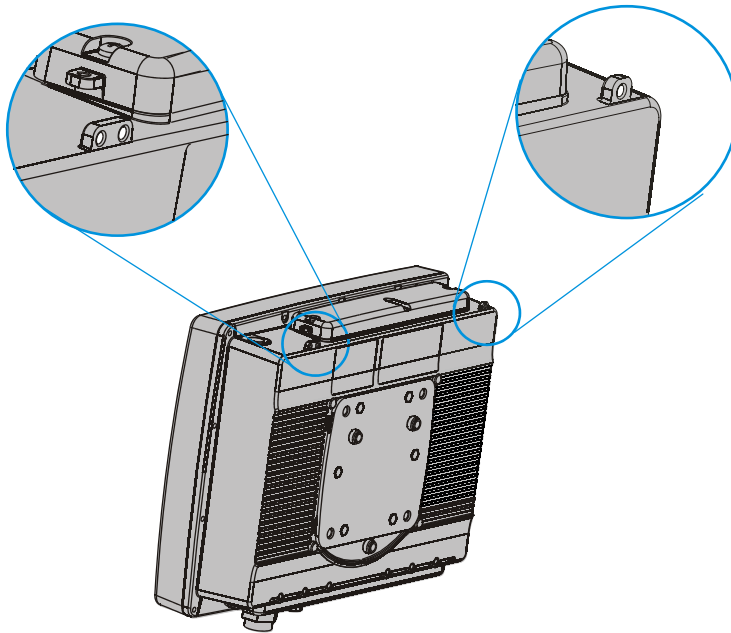


Figure 33 Stylus Tether Mounting Holes

2. Select the mounting hole most convenient for the particular VX6 installation.
3. Slide the clip end of the stylus tether into the tether mounting hole.
4. Determine a convenient location for the stylus sleeve. Apply the adhesive baked Velcro[®] loop strip to the VX6. Attach the Velcro[®] hook strip on the elastic stylus sleeve to the loop strip.

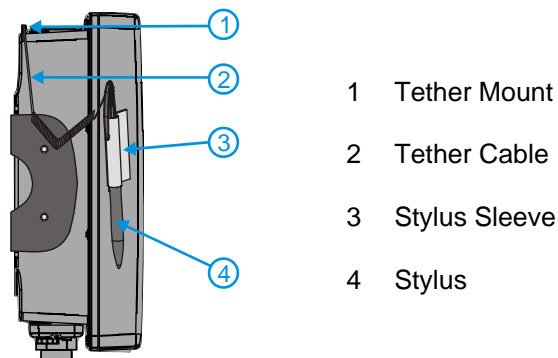


Figure 34 Tethered Stylus, Typical Installation