

Dell™ Latitude™ XT2 Service Manual

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Notes, Cautions, and Warnings

 **NOTE:** A NOTE indicates important information that helps you make better use of your computer.

 **CAUTION:** A CAUTION indicates potential damage to hardware or loss of data if instructions are not followed.

 **WARNING:** A WARNING indicates a potential for property damage, personal injury, or death.

If you purchased a Dell™ n Series computer, any references in this document to Microsoft® Windows® operating systems are not applicable.

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Model PP12S

September 2009 Rev. A01

System BIOS

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Your Tablet-PC offers the following system BIOS options:

- ┆ Bring up a one-time boot menu by pressing <F12>
- ┆ Access the System Setup utility by pressing <F2>

BIOS Screen Navigation Keystrokes

Use the following keystrokes to navigate the BIOS screens.

Navigation Keystrokes	
Action	Keystroke
Expand and collapse field	<Enter>, left- and right-arrow keys, or +/-
Expand or collapse all fields	< >
Exit BIOS	<Esc> — Remain in Setup, Save/Exit, Discard/Exit
Change a setting	Left- and right-arrow keys
Select field to change	<Enter>
Cancel a modification	<Esc>
Reset defaults	<Alt><F> or Load Defaults menu option

 **NOTE:** Depending on your computer and any installed devices, the items listed in this section may or may not appear.

<F12> Menu

Press <F12> when the Dell™ logo appears to initiate a one-time boot menu with a list of the valid boot devices for the system. **Diagnostics** and **Enter Setup** options are also included in this menu. The devices listed on the boot menu depend on the bootable devices in the system. This menu is useful when you are attempting to boot to a particular device or to bring up the diagnostics for the system. Using the boot menu does not make any changes to the boot order stored in the BIOS.

Boot Menu

Your Tablet-PC features an enhanced one-time boot menu. The enhanced menu features the following improvements:

- ┆ **Easier access** — Access the menu by pressing <F12> during system boot.
- ┆ **User prompting** — The missing keystroke is now displayed on the BIOS splash screen.
- ┆ **Added diagnostics options** — The boot menu now includes two new options: **BIOS Setup** and **Diagnostics**.

Entering System Setup

Press <F2> to enter System Setup and change the user-definable settings. If you have trouble entering System Setup using this key, press <F2> when the keyboard LEDs first flash.

Follow the on-screen instructions to view and/or change any settings. On each screen, the system setup options are listed at the left. To the right of each option is the setting or value for that option. You can change settings that appear as white type on the screen. Options or values that you cannot change (because they are determined by your Tablet-PC) appear less bright.

The upper-right corner of the screen displays help information for the currently highlighted option. The lower-right corner displays information about the computer. System setup key functions are listed across the bottom of the screen.

The system setup screens display the current setup information and settings for your computer, such as:

- ┆ System configuration
- ┆ Boot order
- ┆ Boot (start-up) configuration
- ┆ Basic device configuration settings
- ┆ System security and hard drive password settings

Diagnostics

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- [Device Status](#)
- [Battery Status](#)
- [Keyboard Status](#)
- [LED Error Codes](#)

Device Status LEDs

Device status LEDs are a good source for diagnosing common problems that may occur on your Tablet-PC.

-  Turns on when you turn on the Tablet-PC and blinks when the Tablet-PC is in a power management mode.
-  Turns on when the Tablet-PC reads or writes data.
-  Turns on steadily or blinks to indicate battery charge status.
-  Turns on when wireless networking is enabled.
-  Turns on when a card with Bluetooth® wireless technology is enabled. To turn off only the Bluetooth wireless technology function, right-click the icon in the system tray and select **Disable Bluetooth Radio**.

Battery Status

If the computer is connected to an electrical outlet, the battery light operates as follows:

- **Alternately blinking amber light and blue light** — An unauthenticated or unsupported, non-Dell AC adapter is attached to your Tablet-PC.
- **Alternately blinking amber light with steady blue light** — Temporary battery failure with AC adapter present.
- **Constantly blinking amber light** — Fatal battery failure with AC adapter present.
- **Light off** — Battery in full charge mode with AC adapter present.
- **Blue light on** — Battery in charge mode with AC adapter present.

Battery Charge and Health

To check the battery charge, press and release the status button on the battery charge gauge to illuminate the charge-level lights. Each light represents approximately 20 percent of the total battery charge. For example, if four lights are on, the battery has 80 percent of its charge remaining. If no lights appear, the battery has no charge.

To check the battery health using the charge gauge, press and hold the status button on the battery charge gauge for at least 3 seconds. If no lights appear, the battery is in good condition and more than 80 percent of its original charge capacity remains. Each light represents incremental degradation. If five lights appear, less than 60 percent of the charge capacity remains, and you should consider replacing the battery.

Keyboard Status LEDs

The light located above the function key F4 turns on when the numeric keypad is enabled.

The light located above the function key F5 turns on when the Scroll Lock function is enabled.

The light located on the caps lock key turns on when the Caps Lock function is enabled.

LED Error Codes

Error Code Appearance			Description	Next Step
Caps Lock	Numeric Lock	Scroll Lock		
ON	FLASH	FLASH	No SODIMMs are installed	1. Install supported memory modules. 2. If memory is already present, reseal the module(s) one at time in each slot. 3. Try known good memory from another computer or replace the memory. 4. Replace the system board.
FLASH	ON	ON	System board error	1. Reseat the processor. 2. Replace the system board. 3. Replace the processor.
FLASH	ON	FLASH	LCD Panel Error	1. Reseat the LCD cable. 2. Replace the LCD panel. 3. Replace the video card / system board.
OFF	FLASH	OFF	Memory compatibility error	1. Install compatible memory modules. 2. If two modules are installed remove one and test. Try the other module in the same slot and test. Test the other slot with both modules. 3. Replace the memory. 4. Replace the system board.
				1. Reseat the memory. 2. If two modules are installed remove one and test. Try the other module in the

ON	FLASH	ON	Memory is detected but has errors	same slot and test. Test the other slot with both modules. 3. Replace the memory 4. Replace the system board.
OFF	FLASH	FLASH	Modem Error	1. Reseat the modem. 2. Replace the modem. 3. Replace the system board.
FLASH	FLASH	OFF	Option ROM Error	1. Reseat the device. 2. Replace the device. 3. Replace the system board.
OFF	ON	OFF	Storage device error	1. Reseat the hard drive and optical drive. 2. Test the computer with just the hard drive and just the optical drive. 3. Replace the device that is causing the failure. 4. Replace the system board.
FLASH	FLASH	ON	Video card error	1. Replace the system board.

Digitizer Options Tab

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The **Digitizer Options** tab is used for the following:

- Input mode selection
- Touch tuning
- Launching diagnostics
- Restoring default settings

Input Mode

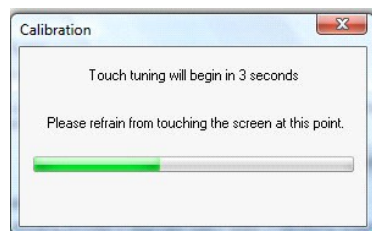
The N-trig applet has 4 operating modes:

- Pen Only** — In this mode, the stylus is the only device that can be used as the input device with the N-trig digitizer. Changing from Pen Only mode to any other mode is done by clicking with an active input device on the N-trig Applet icon in the system tray. When the applet is open, select desired mode and press OK.
- Touch Only** — In Touch Only mode, a single finger is the only input device that can be used with the N-trig digitizer. Using the stylus is not possible. It is important to note that only a single hand contact is allowed with the digitizer for proper execution. Changing Touch Only mode into any other mode is done by tapping the N-trig Applet icon in System Tray using a finger or other active input device and choosing the desired mode. Press OK to confirm.
- Auto Mode** — The N-Trig digitizer is capable of detecting a stylus as well as finger touch. The purpose of Auto Mode is to allow the user intuitive toggling between the Pen Only or Touch Only modes. The default input device for Auto Mode is the stylus as long as it is in range of the tablet screen (hovering in proximity or in contact). A basic principle in Auto Mode is that stylus detection in the digitizer proximity would turn the digitizer into Pen Only mode as an overriding priority. A double-tap finger gesture on the screen (similar in style to a mouse double-click) will switch the digitizer from Pen Only mode to Touch Only mode. The system will remain in Touch Only mode as long as the stylus is out of range. Once the stylus is detected in range the system will automatically switch to Pen Only mode.
- Dual Mode (Vista Only)** — Dual Mode is a unique operational mode that is functional only while using the Microsoft Vista operating system. In this mode, the OS switches automatically between the available pointing device according to its internal priority and attributes.

Touch Tuning

If you believe that the Tablet-PC's finger detection function is not working properly, a recalibration of the touch feature may be in order. To accomplish this click the **Reset** button and then follow the on-screen prompts.

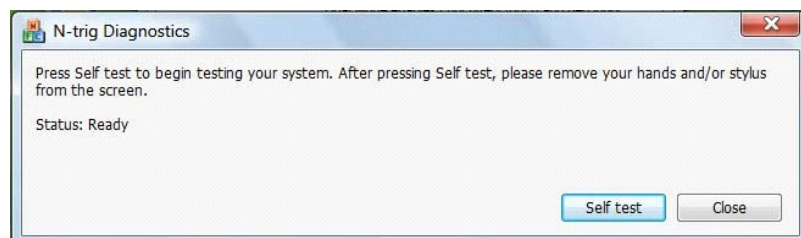
⚠ **CAUTION:** Do NOT touch the screen while touch reset is in progress.



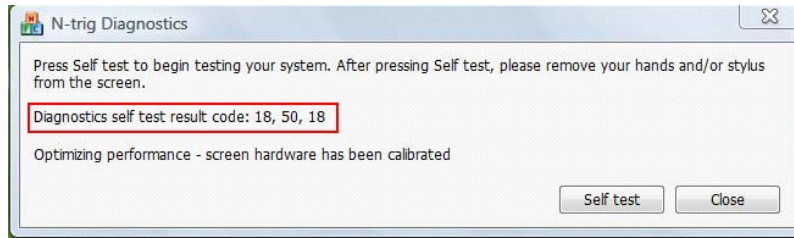
A message indicating success or failure appears once the reset routine completes. If the result is failure, try running the diagnostics.

Diagnostics

Running the diagnostics will help determine the functionality of the digitizer. Start by clicking the **Troubleshoot** button. Pressing the **Self Test** button on the subsequent pop-up window starts the diagnostics.



After the test is complete, the results are displayed as illustrated below.



Use this table to define the result codes.

Digitizer Self Test Result Codes			
Code	Test	Error Details	Symptoms
7	A-trigs connectivity	Digitizer analog processor fail	Digitizer is unable to initialize or read samples from analog processor. No pen or touch position is reported.
11	Stylus excitation	No pen excitation	Signals received during the stylus excitation test are below certain limit. Pen may be not functional or detected in tip only.
14	Sensor Antenna disconnects	Digitizer grid disconnect	There are disconnected lines. Pen or touch may be malfunctioning in a specific physical display area.
15	Sensor Antenna shorts	Digitizer grid shortcut	There are shorted lines. Pen or touch may be malfunctioning in a specific physical display area.
18	Channel imbalance	Digitizer channel degraded	There is an unbalanced channel. Pen or touch may be malfunctioning in a specific physical display area.
19	Capacitor calibration	Digitizer calibration degraded	The calibration capacitor in a certain channel is set to minimal or maximum value. Pen or touch may be malfunctioning in a specific physical display area.
47	Internal Firmware Error	Internal Firmware Error	Firmware resource problem in executing diagnostics. Diagnostics tool is not functional.
48	Critical Malfunction	Device Error	Critical malfunction was detected, test cannot continue.
49	Host Timeout Error	Host Timeout Error	Host communication or resources problem in executing diagnostics.
50	Capacitor Calibration Required	Hardware calibration is required	Hardware calibration is required to gain maximum performance.

Tablet-PC Features

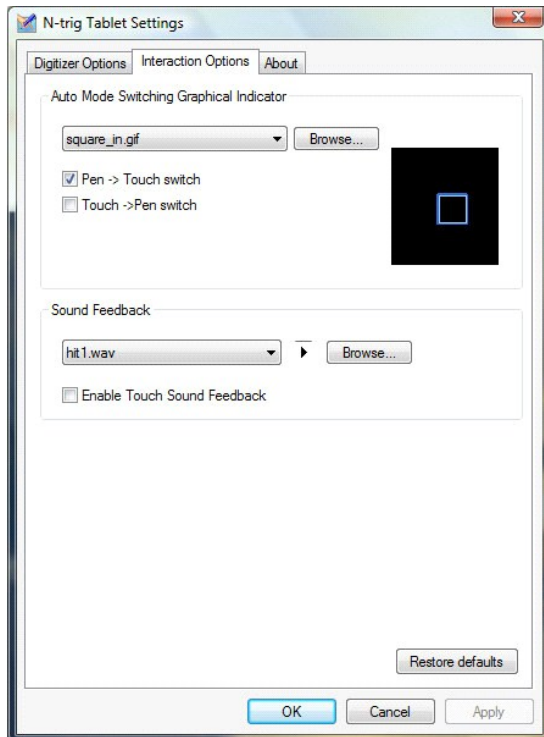
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- [Tablet-PC Modes](#)
 - [Tablet-PC Buttons](#)
 - [Tablet-PC Interface](#)
 - [Tablet-PC Settings](#)
 - [Tablet-PC Pen](#)
 - [Application Matrix](#)
-

Interaction Options Tab

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The **Interaction Options** tab controls the visual and sound effects that can modify the user experience while operating the system's various modes.



Auto Mode Switching Graphical Indicator

This section enables you to select a .gif file (image) to be displayed whenever an auto mode switching event is detected. You can select the event that will cause the graphical indicator to appear:

- 1 **Pen → Touch**: Pen is detected after finger usage.
- 1 **Touch → Pen**: Touch is detected after pen usage.

Sound Feedback

This section enables you to select which .wav file (sound) will be played when the finger touches the screen. The sound can be tested using the play button. One can enable/disable this functionality using the specified radio button.

Application Matrix

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The following matrix shows the gestures supported by the operating system and specific application software packages. Other applications may also respond to these gestures.

Operating System		Microsoft™ Windows Vista™			Microsoft Windows™ XP		
Application Family	Application Name	Pinch / Zoom	Horizontal Scroll	Vertical Scroll	Pinch / Zoom	Horizontal Scroll	Vertical Scroll
Windows	Explorer	Yes	Yes	Yes	No	Yes	Yes
	Photo Gallery	Yes	Yes	Yes	No	No	No
Windows Live	Photo Gallery	Yes	Yes	Yes	No	No	No
Virtual Earth		No	No	No	No	No	No
Microsoft Office 2007	Outlook®	Yes	Yes	No	Yes	Yes	No
	Word	Yes	Yes	Yes	Yes	Yes	No
	Excel®	Yes	Yes	Yes	Yes	Yes	No
	Power Point®	Yes	Yes	Yes	Yes	Yes	Yes
	One Note®	Yes	Yes	Yes	Yes	Yes	No
	Picture Manager	Yes	Yes	Yes	Yes	Yes	Yes
Microsoft Office 2003	Outlook®	Yes	Yes	Yes	Yes	Yes	Yes
	Word	Yes	Yes	Yes	Yes	Yes	Yes
	Excel®	Yes	Yes	Yes	Yes	Yes	Yes
	Power Point®	Yes	Yes	Yes	Yes	Yes	Yes
	One Note®	Yes	Yes	Yes	Yes	Yes	Yes
	Picture Manager	Yes	Yes	Yes	Yes	Yes	Yes
Web Browsers	Internet Explorer 6®	No	No	No	Yes	Yes	Yes
	Internet Explorer 7®	Yes	Yes	Yes	Yes	Yes	Yes
	FireFox®	Yes	Yes	Yes	Yes	Yes	Yes

Multi-Touch Gestures Feature

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Gestures

Gestures are expressions made while touching the screen of your Tablet PC with two fingers. They are interpreted as user commands to the operating system or active application software. When the operating system recognizes a gesture, an icon confirming the gesture appears on the screen. This multi-touch update includes three gestures: a scroll gesture, a zoom gesture, and a two-finger double-tap gesture. Gesture features and descriptive icons shown herein are sourced by N-trig.

Scroll Gesture

Placing two fingers on the screen and moving them horizontally or vertically generates scrolling in the direction of movement: right, left, up, or down.



Zoom Gesture

Touching the screen with two fingers and moving them together or apart generates a zoom-in or zoom-out command to the screen.



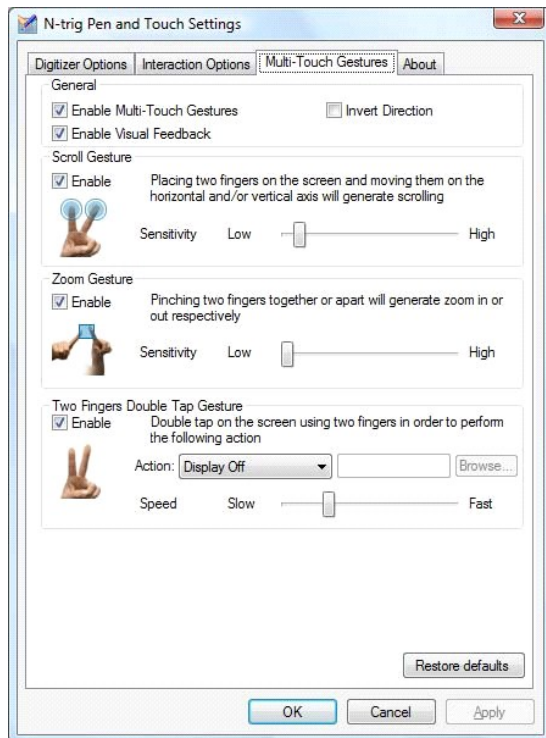
Two-Fingers Double-Tap Gesture

Tapping the screen twice with two fingers sends an operating system command that you can configure. It can be used to perform actions, such as turning the display off and disabling touch gestures (default), or run an executable program, such as one that opens Internet Explorer.



Sensitivity Setup

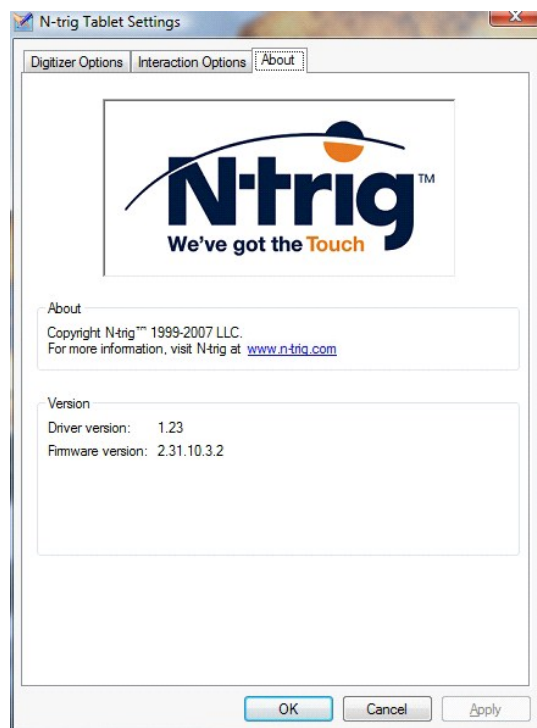
To adjust the sensitivity for the two-finger gestures, double-click the N-trig icon () in the system tray, and tap the Multi-Touch Gestures tab. Set the sliders for each gesture as desired.



About Tab

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The **About** tab is used to find information such as the driver version and firmware revision numbers. The firmware revision number can also be obtained by hovering your pointer over the N-trig Tablet Settings icon in the system tray.



Adding and Replacing Parts

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- [Main Battery](#)
 - [Memory and Mini-Card Cover](#)
 - [Memory](#)
 - [Hard Drive](#)
 - [Mini-Card](#)
 - [System Board](#)
 - [Heat Sink and Fan Assembly](#)
 - [Battery Latch](#)
 - [Coin-Cell Battery](#)
 - [Grip Cover](#)
 - [Display Assembly](#)
 - [Palm Rest](#)
 - [Speaker](#)
 - [Internal Card With Bluetooth® Wireless Technology](#)
 - [Hinge Cover](#)
 - [Keyboard](#)
-

Tablet-PC Pen

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• [Calibrating the Pen](#)

• [Troubleshooting](#)



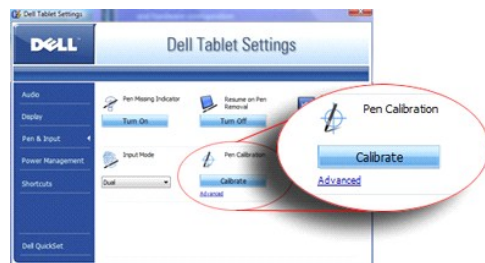
1	Pen	2	Eraser pen button
3	Right-click pen button	4	Pen tip

Your Tablet-PC uses a specifically designed electrostatic pen or *stylus* for use in tablet PC mode. Instead of relying on battery power, the energy source for the stylus is magnetic energy produced by the excitation coil built into the digitizer itself. The signal from the coil is picked up by the stylus and triggers the stylus to transmit an electric field.

The transmitted electric field is sensed by a matrix of conductive lines, accurate stylus position determined using the low amplitude signals received on the vertical and horizontal conductors, and an appropriate signal is transferred to the digitizer's on-board processor.

Tips come in two colors/types, blue and black. The blue tips are designed for a "softer" writing feel. The black tips present a "harder" writing feel. The system ships with a total of 5 (3 blue and two black) tips. These tips are easily replaced by using the pen-tip removal tool which looks similar to an oversized pair of tweezers. This tool also ships with the Tablet-PC.

 **NOTE:** In the event of a suspected digitizer failure, the pen tip should be examined. If the tip is damaged it needs to be replaced. This will oftentimes remedy to problem with the digitizer.



Calibrating the Pen

The pen can function at the default calibration or at a calibration set by you or by another user. It is recommended that you use the pen only while it is calibrated to your personal calibration settings. Calibration optimizes pen performance for each user.

To calibrate the pen:

1. Open **QuickSet**.
2. Click **System** → **Tablet Settings**.
3. On the **Dell Tablet Settings** window, click **Pen & Input** then click **Calibrate**.
4. Follow the instructions on the screen. The calibration markers are displayed on the screen as plus signs (+). Tap the pen in the exact center of each of the calibration markers.

 **NOTE:** Be sure to calibrate the pen for use in both portrait and landscape display orientations.

Troubleshooting

The pen is the first component to be investigated in the event of a suspected problem with the digitizer. Verify the tip is in good shape (free of chips, excessive wear, etc.) by closely examining it. If there is any doubt, you should change out the tip with a new one or one that is known to be in good condition.

You should also verify that the touch capabilities are not affected. Switch to touch mode and see if the problem still exists. If there are no symptoms present while in touch mode, the pen tip is the most likely suspect. If the problem does persist in touch mode you should run diagnostics and take the necessary steps depending on the results.

Specifications

- Processors
- System Information
- ExpressCard™
- SD™ Card
- Memory
- Smart Card
- Ports and Connectors
- Communications
- Video

- Audio
- Display
- Keyboard
- Touch Pad
- Battery
- AC Adapter
- Fingerprint Reader
- Physical
- Environmental

 **NOTE:** Offerings may vary by region. For more information regarding the configuration of your Tablet-PC, click **Start**  (or **Start** in Windows XP)→ **Help and Support**, and then select the option to view information about your Tablet-PC.

Processor	
Processor type	Intel® Core™ 2 Duo ULV
L2 cache	3 MB
External bus frequency	800 MHz

System Information	
System chipset	Intel SFF Chipset
Data bus width	64 bits
DRAM bus width	Dual-channel (2) 64-bit buses
Processor address bus width	36 bits
Flash EPROM	4 MB
PCI bus	32 bits

ExpressCard™	
 NOTE: The ExpressCard slot is designed only for ExpressCards. It does NOT support PC cards.	
ExpressCard connector	ExpressCard slot (supports both USB- and PCIe-based interfaces)
Cards supported	34 mm ExpressCards
External bus frequency	800 MHz

Secure Digital (SD) Memory Card Reader	
Cards supported	SD, SDIO, SD HC, Mini SD (w/adaptor) MMC, MMC+, Mini MMC (w/adaptor)

Memory	
Memory module connector	one user-accessible SODIMM socket
Memory module capacities	1 GB, 2 GB, 4 GB
Memory type	DDR3 SODIMM
Minimum memory	1 GB (onboard memory)
Maximum memory	5 GB capable (requires 64-bit Windows Vista® operating system)

Smart Card	
Read/write capabilities	Reads and writes to all ISO 7816 1/2/3/4 microprocessor cards (T=0, T=1)
Cards supported	3 V and 5 V
Program technology supported	Java cards

Interface speed	9600–115,200 bps
EMV level	Level 1 certified
WHQL certification	PC/SC
Compatibility	Compatible within a PKI environment
Insert/eject cycles	Certified for up to 100,000 cycles

Ports and Connectors	
Audio	microphone connector, stereo headphone/speakers connector
IEEE 1394	4-pin serial connector
E-dock	Standard E-Dock connector for devices such as E-Dock advanced port replicators and expansion stations The optional media base can be connected to the E-Dock connector.
Mini-card	One dedicated half-mini-card slot for WLAN One dedicated full-mini-card slot for WWAN / GPS (mobile broadband)
Network adapter	RJ-45 port
USB	two 4-pin USB 2.0-compliant connectors
Powered USB	5-pin power supply and 4-pin USB 2.0-compliant connector
USB	Two 4-pin USB 2.0-compliant connectors One USB connector can be used as an eSATA connector. The other USB connector with PowerShare can be used to charge a USB device when the computer is turned on or off.
Video	15-hole connector

Communications	
Network adapter	10 / 100 / 1000 Ethernet LAN on system board
Wireless	internal WLAN, WWAN, and Bluetooth® wireless support (if optional cards are purchased)

Video	
Video type	integrated
Video controller	Mobile Intel® GMA X4500 Graphics Controller
Data bus	integrated
Video memory	up to 256 MB shared memory

Audio	
Audio type	two-channel high definition audio codec
Audio controller	IDT 92HD71B
Stereo conversion	24-bit (analog-to-digital and digital-to-analog)
Interfaces:	
Internal	high definition audio
External	microphone-in connector, stereo headphones/speakers mini-connector
Speaker	one 4-ohm speaker
Internal speaker amplifier	2-Watt channel into 4 ohms
Volume controls	Volume control buttons and program menus

Display	
Type (active-matrix TFT)	
Active X / Y	12.1 inches WXGA
Dimensions	
Height	261.12 mm (10.28 inches)
Width	163.2 mm (6.43 inches)
Diagonal	307.34 mm (12.1 inches)

Maximum Resolutions	1280 x 800 at 262 K colors
Operating angle	0° (closed) to 160°
Refresh rate	60 Hz (40 Hz in All Day Battery Life (ADBL) mode)
Viewing angles	
Horizontal	40/40°
Vertical	15/30°
Pixel pitch	0.204
Power consumption (panel with backlight, typical)	3.0 W (max)

Keyboard	
Number of keys	87 (U.S. and Canada); 88 (Europe); 91 (Japan)
Layout	QWERTY/AZERTY/Kanji

Touch Pad	
X/Y position resolution (graphics table mode)	240 CPI
Size	
Width	73.0-mm (2.9-inch) sensor-active area
Height	42.9-mm (1.7-inch) rectangle

Battery	
Type	4-cell: 28 Whr/14.8V 6-cell: 58 Whr/11.1V Slice 48: Whr/11.1V
Dimensions:	
Depth	
4-cell lithium-ion battery	210 mm (8.27 inches)
6-cell lithium-ion battery	210 mm (8.27 inches)
Slice	9.5 mm (0.38 inch)
Height	
4-cell lithium-ion battery	18 mm (0.71 inch)
6-cell lithium-ion battery	23.2 mm (0.91 inch)
Slice	186 mm (7.32 inches)
Width	
4-cell lithium-ion battery	46.5 mm (1.83 inch)
6-cell lithium-ion battery	68.5 mm (2.7 inches)
Slice	279 mm (10.98 inches)
Weight	
4-cell lithium-ion battery	0.2 kg (0.44 lb)
6-cell lithium-ion battery	0.37–0.38 kg (0.82–0.84 lb)
Slice	0.59–0.61 kg (1.3–1.34 lb)
Voltage	11.1 VDC (6-cell, Slice) 14.8 VDC (4-cell)
Charge time (approximate)	
Computer off	approximately 1 hour to 80% capacity (4-cell battery) Approximately 2 hours to 100% capacity (4 cell battery)
Life span (approximate)	300 charge/discharge cycles
Temperature range	
Operating	0° to 35°C (32° to 95°F)
Storage	-10° to 60°C (14° to 140°F)
Coin-cell battery	CR-2032

AC Adapter	
Input voltage	90–264 VAC
Input current (maximum)	1.1 A
Input frequency	47–63 Hz

Output current	3.3 A (maximum at 10ms pulse) 2.3 A (continuous)
Output power	45 W or higher
Rated output voltage	19.5 ±1.0 VDC
Dimensions:	
Height	16 mm (0.63 inch)
Width	63 mm (2.48 inches)
Depth	88 mm (3.46 inches)
Temperature range:	
Operating	0° to 40°C (32° to 104°F)
Storage	−10° to 70°C (−50° to 158°F)

Fingerprint Reader (optional)	
Type	UPEK TCS3 TouchStrip™ strip sensor with CMOS active capacitive pixel-sensing technology
Array size	248 x 2 pixels

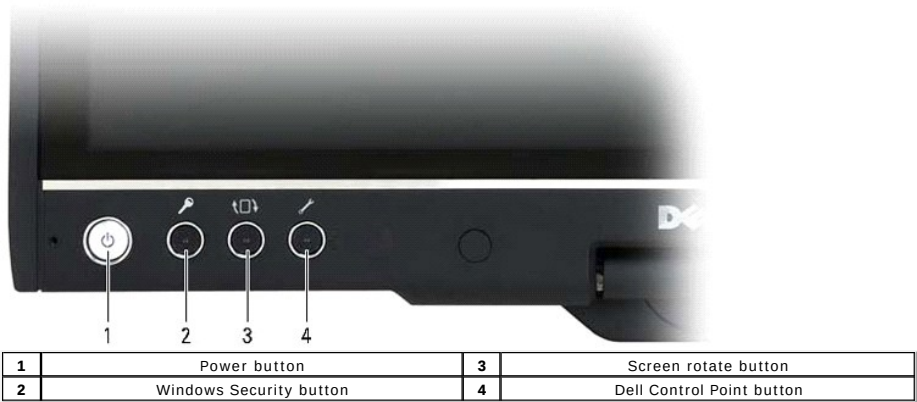
Physical	
Height	19.95–26.82 mm (0.79–1.06 inch)
Width	290.6 mm–296.6 mm (11.44–11.68 inches)
Depth	204 mm–226 mm (8.03–8.9 inches)
Weight	1 kg (2.2 lb)

Environmental	
Temperature range:	
Operating	0° to 35°C (32° to 95°F)
Storage	−40° to 65°C (−40° to 149°F)
Relative humidity (maximum):	
Operating	10% to 90% (non-condensing)
Storage	5% to 95% (non-condensing)
Maximum vibration (using a random-vibration spectrum that simulates user environment):	
Operating	0.66 GRMS
Storage	1.3 GRMS
Maximum shock (measured with hard drive in head-parked position and a 2-ms half-sine pulse):	
Operating	143 G
Storage	163 G
Altitude (maximum):	
Operating	−15.2 to 3048 m (−50 to 10,000 ft)
Storage	−15.2 to 3048 m (−50 to 10,000 ft)
Airborne contaminant level	G2 or lower as defined by ANSI/ISA-S71.04-1985

Tablet-PC Buttons

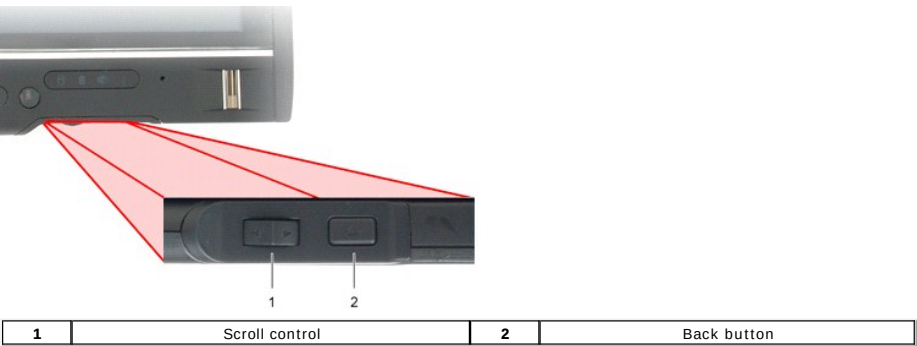
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Your Tablet-PC has three tablet buttons located beside the power button. In order for these buttons to function properly, **Dell Control Point System Manager** must be installed.



- Power button** — Used to power the system on and off.
- Windows Security button** — If you use your Tablet-PC in tablet mode, press this button to access the Windows Task Manager dialog box or a login screen, the same way you use the <Ctrl><Alt><Del> key sequence in notebook mode.
- Screen rotate button** — While the Tablet-PC is in tablet mode, use the screen rotate button to change the display orientation from portrait to landscape mode. Each time you press and release the screen rotate button, the screen image rotates clockwise 90 degrees.
- QuickSet tablet settings button** — Press this button to view and configure options for the Tablet-PC and the pen through Dell Control Point System Manager. You can configure this button to perform a different action using Windows Vista™ Tablet-PC Settings.

Scroll Buttons



Using the Scroll Control

- 1 To scroll through a list of items or a set of pages one at a time, shift the scroll control up or down and release. The control automatically returns to the center/neutral position when released.
- 1 To rapidly scroll through a list of items or a set of pages, shift the control up or down and hold it, releasing it when you wish to stop scrolling.
- 1 To select objects, press and release the scroll control when it is in the center/neutral position.
- 1 To launch context sensitive menus, press and hold the scroll control until a complete circle is drawn on the display then release. This is equivalent to clicking the right mouse button on a notebook computer.

Use the back button to move backwards in applications that support navigation, such as web browsers and Windows Explorer. It is also used to close the active window.

- 1 To move backward, press and release the back button.
- 1 To close the active window, press and hold the back button.
- 1 To customize the back button behavior, use the Tablet and Pen Settings in Windows Vista.

Tablet-PC Interface

Dell™ Latitude™ XT2 Service Manual

- [Microsoft™ Windows Vista™ /XP Tablet-PC Interface Comparison](#)
- [Windows Vista](#)
- [Windows™ XP](#)

Windows Vista/XP Tablet-PC Interface Comparison

Depending on the configuration you ordered, your Tablet-PC shipped with either the Windows Vista or Windows XP operating system. There are several differences in the Tablet PC-interfaces between the two. Listed below are the primary differences.

Tablet PC Interface Comparison Table			
Feature	Description	Vista	XP
Touch	Ability to use finger as an input device.	YES	YES
Windows Journal	Native note-taking application which takes input directly from pen or touch.	YES	YES
Snipping Tool	Tool used to capture portions of visual data (documents, pictures, etc.) via pen or touch.	YES	YES*
Flicks	Gesture activated shortcuts for common tasks.	YES	NO
Check Boxes	Visual identifier in folders for selecting files.	YES	NO
Cursor Feedback	Visual indicator for tap location.	YES	NO
Tablet Input Panel	Tool used to input data via pen or touch that takes the place of a keyboard.	YES	YES
Input device-sensitive tools	Tablet Input Panel and icon change size according to pen or touch being used.	YES	NO
Tablet Cursor	Special Tablet cursor used for Tablet PC functions as opposed to a standard mouse pointer.	YES	NO
Touch Widget	Separate tool that appears in Touch Mode used for right-clicking purposes.	YES	NO
Cursor Feedback	Ability to see if the target has been hit by using visual feedback for success.	YES	NO
Cursor Feedback	Ability to see if the target has been hit by using visual feedback for success.	YES	NO

* Available as a separate download from Microsoft.

Windows Vista

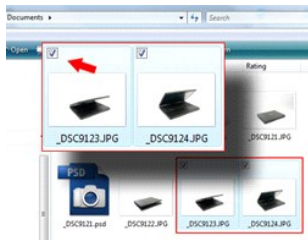
Pen Usage

Using the Pen as a Mouse

You can use the pen the same way you use a mouse or touch pad with a notebook computer. Holding the pen near the display makes a small cursor appear. Moving the pen moves the cursor.

The table below describes how to use the pen.

Electrostatic Pen Usage		
Appearance	Action	Function
	Gently tap the pen tip on the screen of your Tablet PC.	Same as a single-click on a mouse.
	Gently tap the pen tip twice in quick succession on the screen of your Tablet-PC.	Same as a double-click on a mouse.
	Touch the pen on the screen and hold it in place momentarily until Windows draws a complete circle around the cursor.	Same as a right-click on a mouse.



Working With Files

You can open, delete, or move many files or folders at one time by selecting multiple items from a list. Using a tablet pen, hover over one item at a time and select the check box that appears to the left of each item.

To turn check boxes on:

1. Go to **Folder Options**.
2. Click on the **View** tab.
3. Under **Advanced settings**, select the **Use check boxes to select items** check box, and then click **OK**.

Using the Pen as a Pen

The Windows Vista handwriting recognition software makes it easy to enter text into your applications with the pen. Some applications, such as Windows Journal, allow you to write with the pen directly into the application window.

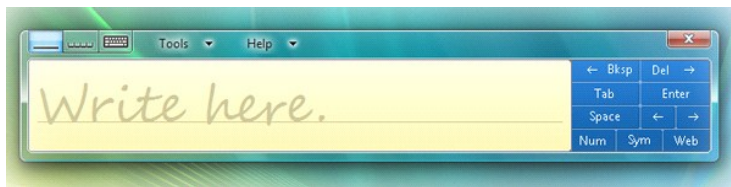
Tablet-PC Input Panel

When an application does not directly support pen input, you can use the **Tablet PC Input Panel** to enter text into your application. If you tap in an editable area, the Tablet PC Input Panel icon  appears. Tapping the icon makes Input Panel slide out from the edge of the display.

You can also open the Input Panel by tapping the Input Panel tab, which is docked at the edge of the screen when the Input Panel is hidden.



You can move the Input Panel tab by dragging it up or down along the edge of the screen. Then, when you tap it, the Input Panel opens at the same horizontal location on the screen that the tab appears.

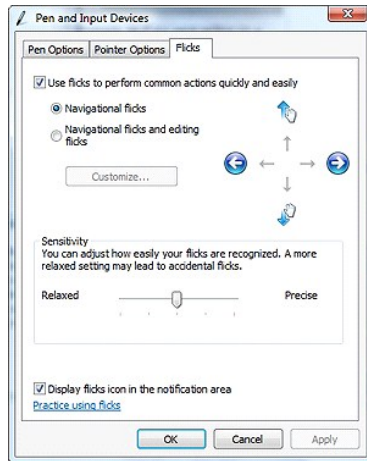


You can use the writing pad, the character pad, or the on-screen keyboard to enter text. The writing pad and the character pad convert your handwriting into typed text. The on-screen keyboard works just like a standard keyboard except that you enter text by tapping keys with your tablet pen. The following table describes the different choices for using the Input Panel.

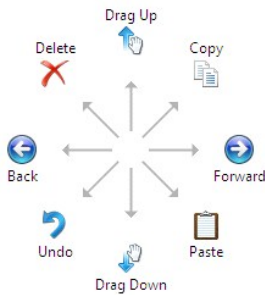
Input Panel Icons		
Icon	Name	Function
	Writing Pad	With the writing pad, you can write continuously as if you were writing on a lined piece of paper.
	Character Pad	The character pad converts your handwriting to typed text, one letter, number, or symbol at a time.
	On-screen Keyboard	The on-screen keyboard is similar to a standard keyboard.

The writing pad and character pad have a number pad, a symbol pad, and web quick keys to help you quickly and accurately enter these types of text. These quick keys are hidden when you start to write, but appear after you insert or delete your writing.

Pen Flicks



Pen flicks enable you to use the pen to perform actions that normally require a keyboard, such as pressing <Page Up> or using the directional arrow keys. Pen flicks are quick, directional gestures. You simply quickly draw a short line in one of eight directions. When a pen flick is recognized, the Tablet-PC performs the action assigned. The image below depicts the default pen flick settings. These can be customized by going to **Start>Control Panel>Pen and Input Devices** and clicking on the **Flicks** tab.



Touch Usage

One of the key advantages of the Latitude XT2 Tablet PC is the ability to easily switch from pen input to touch input.



When you use Touch Mode, a translucent image of a computer mouse, called the touch pointer, floats beneath your finger. The touch pointer has left and right mouse buttons that you can tap with your finger. You use the area beneath the buttons to drag the touch pointer.

Windows XP

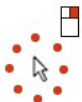
Pen Usage

Using the Pen as a Mouse

You can use the pen the same way you use a mouse or touch pad with a notebook computer. Holding the pen near the display makes a small cursor appear. Moving the pen moves the cursor.

Tapping on the screen once is the same as clicking with a mouse. A double-tap constitutes a double-click.

Right-clicking with the pen is accomplished by holding the pen tip down on the screen until a red circle surrounds the pointer as illustrated to the right. Lifting the pen from here opens up the corresponding submenu.



Using the Pen as a Pen

The native handwriting recognition software makes it easy to enter text into your applications with the pen. Some applications, such as Windows Journal,

allow you to write with the pen directly into the application window.

Tablet PC Input Panel

When an application does not directly support pen input, you can use the **Tablet PC Input Panel** to enter text into your application. If you tap in an editable area, the Tablet PC Input Panel icon  appears. Tapping the icon makes Input Panel appear.

You can move the Input Panel tab by dragging it up or down along the edge of the screen. Then, when you tap it, the Input Panel opens at the same horizontal location on the screen that the tab appears.

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The writing pad and character pad have a number pad, a symbol pad, and web quick keys to help you quickly and accurately enter these types of text. These quick keys are hidden when you start to write, but appear after you insert or delete your writing.

Touch Usage

One of the key advantages of your Tablet-PC is the ability to easily switch from pen input to touch input. Similar to how the pen works, tapping with your finger on the screen once is the same as clicking with a mouse. A double-tap constitutes a double-click.

Right-clicking in Touch Mode is accomplished by holding your finger tip down on the screen until a red circle surrounds the pointer. This can be difficult to see as often times user's fingers cover the pointer. Lifting your finger from this point opens up the corresponding submenu.

Tablet and Pen Settings

Most of the settings for the tablet and pen are located in Control Panel under Tablet and Pen Settings. These are also accessed through Dell Control Point System Manager.

Table-PC User Modes
Dell™ Latitude™ XT2 Service Manual



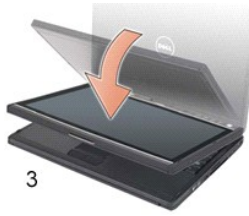
Notebook Mode

Your Tablet-PC can be used either in notebook mode or tablet mode. To use your Tablet-PC in notebook mode, open the display until it reaches a comfortable viewing angle as in the image to the right, and use the keyboard and display as you would those of any other notebook computer.

Tablet Mode

Your Tablet-PC converts from notebook mode to tablet mode with a 180-degree clockwise twist of the display's rotating hinge.

 **CAUTION:** Forcing the hinge beyond the 180-degree point will damage the Tablet-PC.

1  Open the display of the Tablet-PC until it reaches a 90-degree angle, perpendicular to the base.	2  Brace the base with one hand on the palm rest, grasp the top of the display with the other hand, and, following the directional arrow inscribed on the hinge cover, turn the rotating hinge clockwise 180 degrees until you feel the display engage securely.	3  Lay the display assembly on the base with the display facing upwards.
---	--	--

When you convert your Tablet-PC between notebook and tablet modes, the screen orientation of your Tablet-PC will automatically change according to the settings you have established in the Dell Control Point System Manager application or the Windows Vista Pen and Tablet settings application, most commonly from landscape (notebook mode) to portrait (tablet mode).

Tablet-PC Settings

Dell™ Latitude™ XT2 Service Manual

Installation

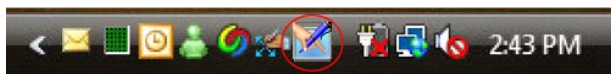
The N-trig Tablet Settings applet is built into the driver package. You can either install it directly from the ResourceCD or obtain the latest version from support.dell.com. Once the file has been extracted, an InstallShield Wizard will walk you through the process of installing the software. The appearance of the N-trig icon is an indication of a successful installation.

Windows™ XP vs. Windows Vista™

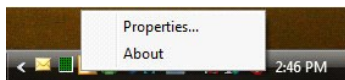
There is only one major difference in the N-trig applet between XP and Vista. On the Digitizer Options tab, under the Input Mode section, there is no listing for Dual Mode on the XP version. Windows XP does allow use of both pen and touch but the seamless switching capability that Vista offers is not available.

N-trig Applet

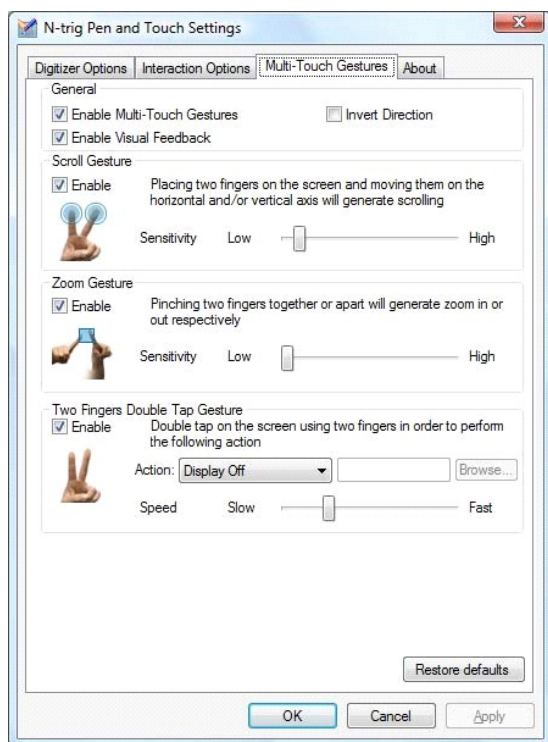
The N-trig Tablet Settings applet is used to adjust several settings for the digitizer. Once the N-trig drivers are loaded, an icon appears in the system tray.



Hovering over the icon with your pointer displays the firmware version number. Right-clicking the icon brings up the sub menu below.



Clicking on Properties opens up the N-trig Tablet Settings window.



There are four tabs on the N-trig Tablet Settings window:

- 1 [Digitizer Options](#)
- 2 [Interaction Options](#)
- 3 [Multi-Touch Gestures](#)
- 4 [About](#)

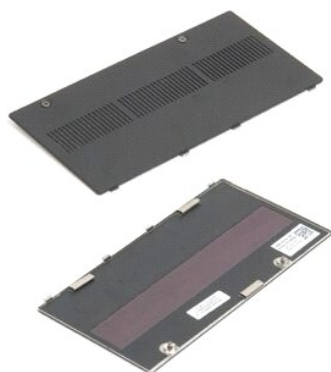
Memory and Mini-Card Cover

Dell™ Latitude™ XT2 Service Manual

- [Removing the Memory and Mini-Card Cover](#)
- [Replacing the Memory and Mini-Card Cover](#)

WARNING: Before working inside your Tablet-PC, read the safety information that shipped with your Tablet-PC. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

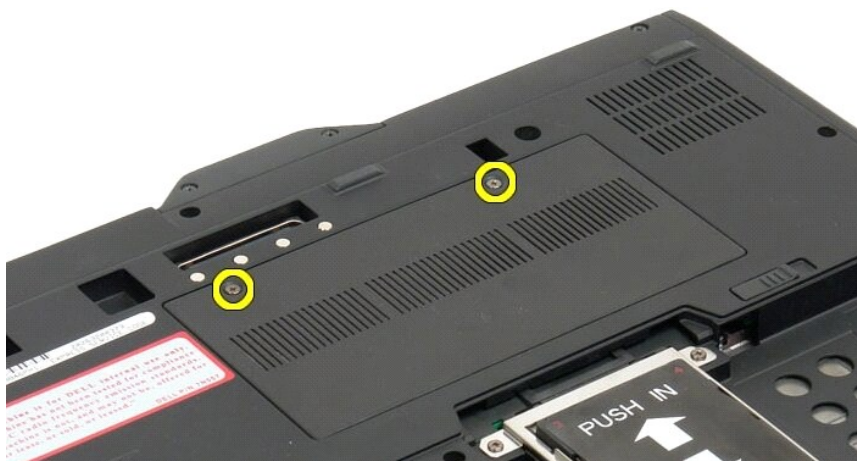
Removing the Memory and Mini-Card Cover



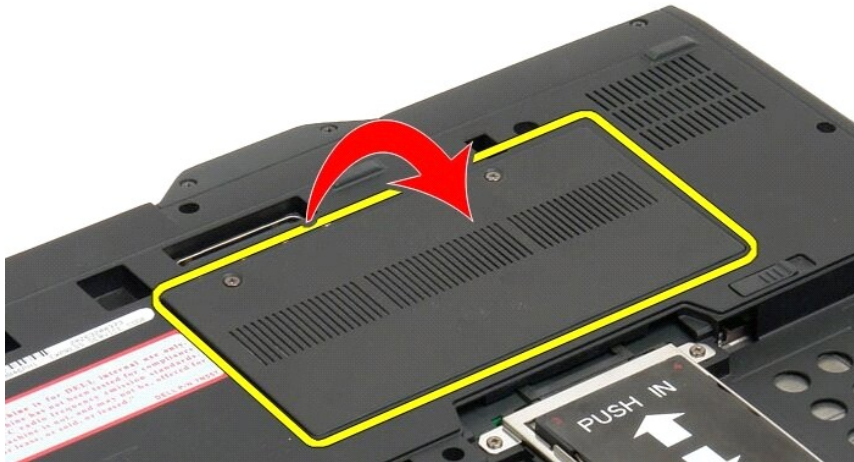
1. Follow the procedures in [Before Working Inside Your Tablet-PC](#).
2. Remove the [battery](#) from the Tablet-PC.



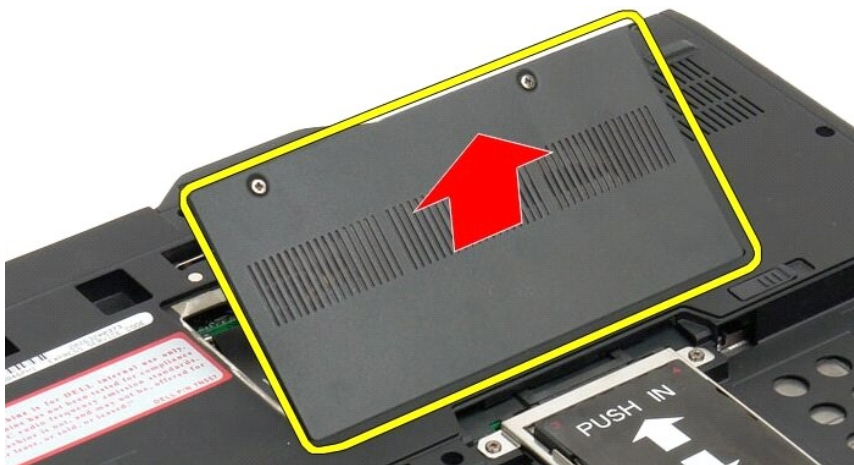
3. Loosen the two captive screws on the memory and mini-card cover.



4. Tilt the cover towards the front of the Tablet-PC.



5. Lift the cover at an angle, and remove from the Tablet-PC.



Replacing the Memory and Mini-Card Cover

1. Insert the tabs of the memory and mini-card cover into the slots of the base.
2. Rotate the cover down and into place.
3. Tighten the two captive screws on the memory and mini-card cover.

4. Install the battery. See [Replacing the Main Battery](#).

Main Battery

Dell™ Latitude™ XT2 Service Manual

- [Removing the Main Battery](#)
- [Replacing the Main Battery](#)

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Removing the Main Battery

1. Follow the procedures in [Before Working Inside Your Tablet-PC](#).



2. Slide the two battery-bay latch releases on the bottom of the Tablet-PC outward to each side.



3. Slide the battery out of the battery bay.



4. Remove the battery from the Tablet-PC.



Replacing the Main Battery

1. Slide the new battery into the battery bay.
2. Slide the battery until it locks into position.

When properly seated, the battery is flush with the bottom edge of the computer and the battery-bay release latches are in the inward position as shown in Step 4 above.

Battery Latch

Dell™ Latitude™ XT2 Service Manual

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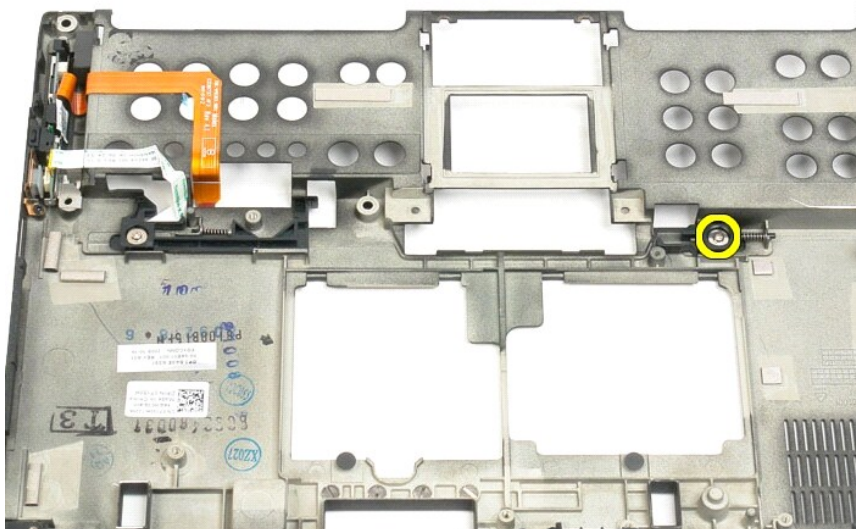
Removing the Battery Latch



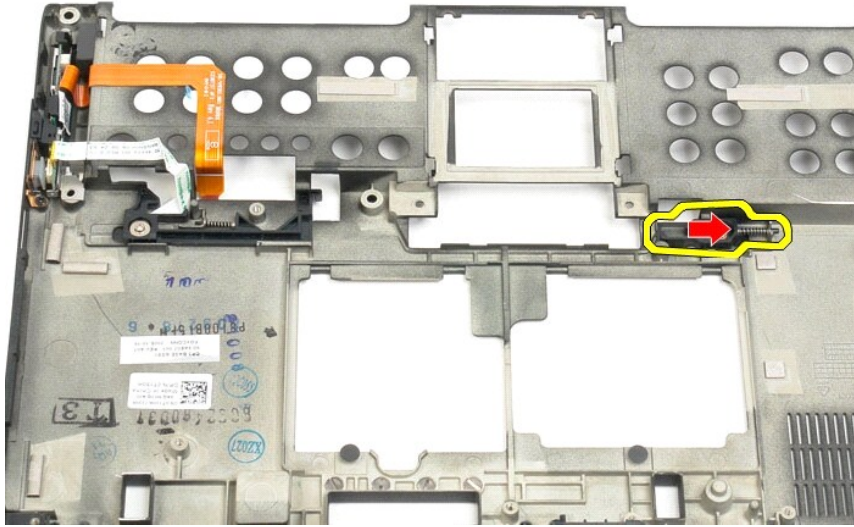
1. Follow the procedures in [Before Working Inside Your Tablet-PC](#).
2. Remove the [battery](#) from the Tablet-PC.
3. Remove the [hard drive](#) from the Tablet-PC.
4. Remove the [memory and mini-card cover](#) from the Tablet-PC.
5. Remove the [memory](#) from the Tablet-PC.
6. Remove the [mini-card](#) from the Tablet-PC.
7. Remove the [BIOS chip](#) from the Tablet-PC.
8. Remove the [Bluetooth module](#) from the Tablet-PC.
9. Remove the [hinge cover](#) from the Tablet-PC.
10. Remove the [keyboard](#) from the Tablet-PC.
11. Remove the [display assembly](#) from the Tablet-PC.
12. Remove the [palm rest](#) from the Tablet-PC.
13. Remove the [system board](#) from the Tablet-PC.



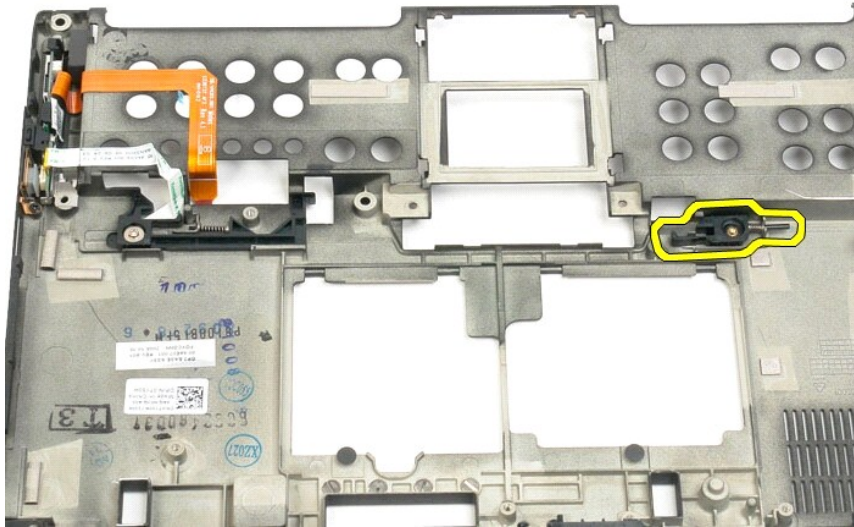
14. Remove the screw securing the right battery latch.



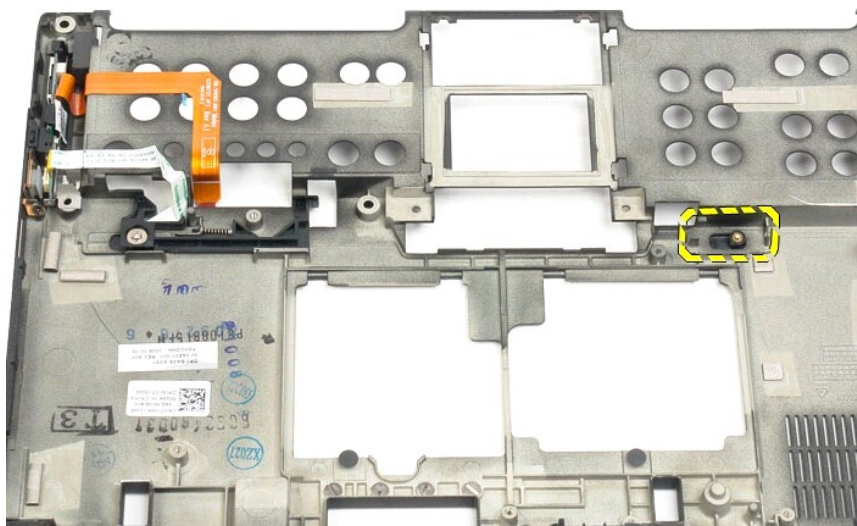
15. Slide the latch assembly to the right.



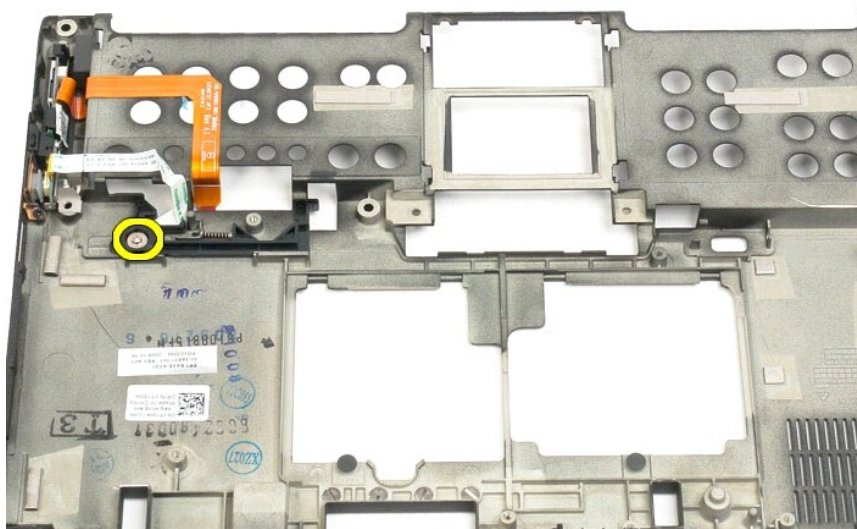
16. Remove the right latch inside assembly from the bottom plastics.



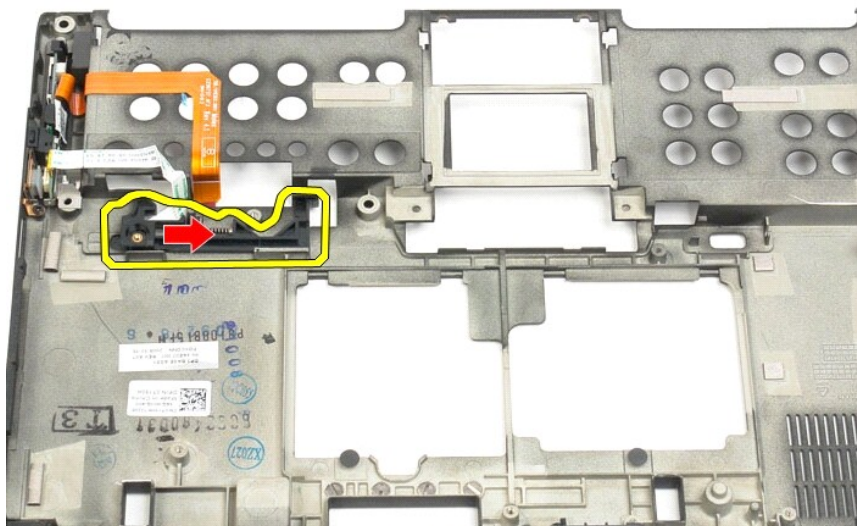
17. Remove the right latch from the outside of the Tablet-PC.



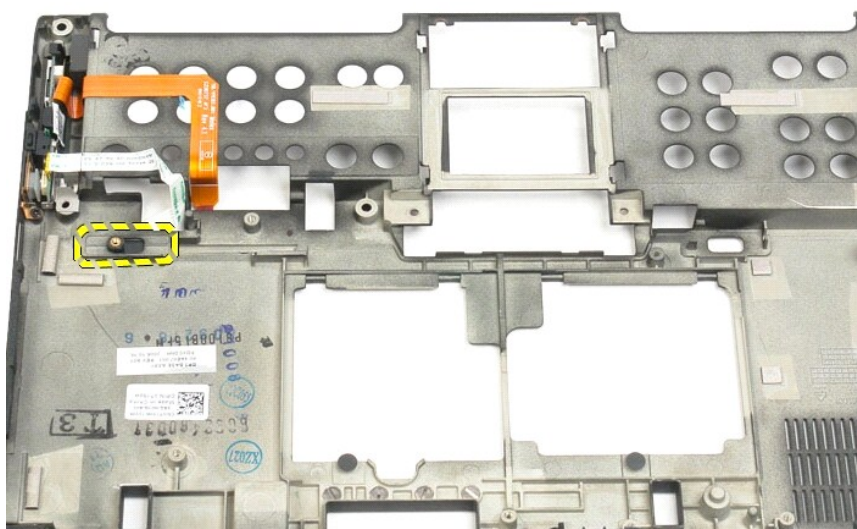
18. Remove the screw securing the left latch assembly to the Tablet-PC.

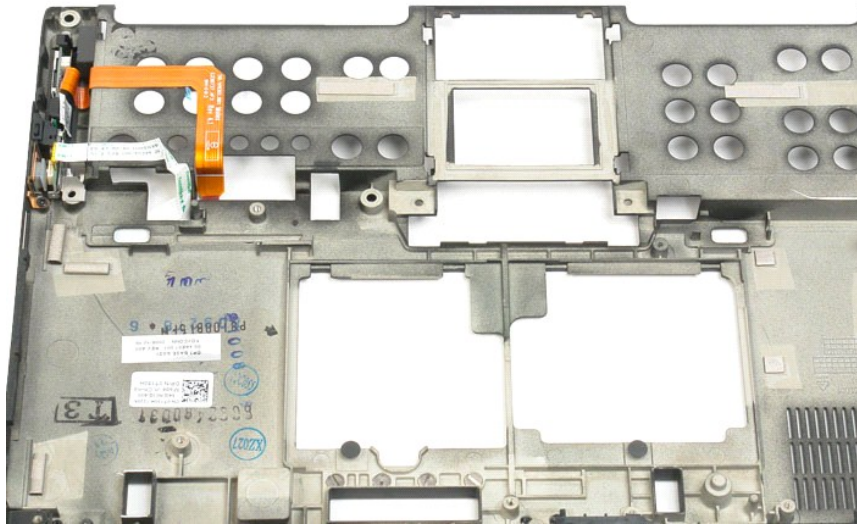


18. Slide the inside latch assembly to the right and lift out of the bottom plastic.



19. Remove the left battery latch from the outside of the Tablet-PC.





BIOS Chip

Dell™ Latitude™ XT2 Service Manual

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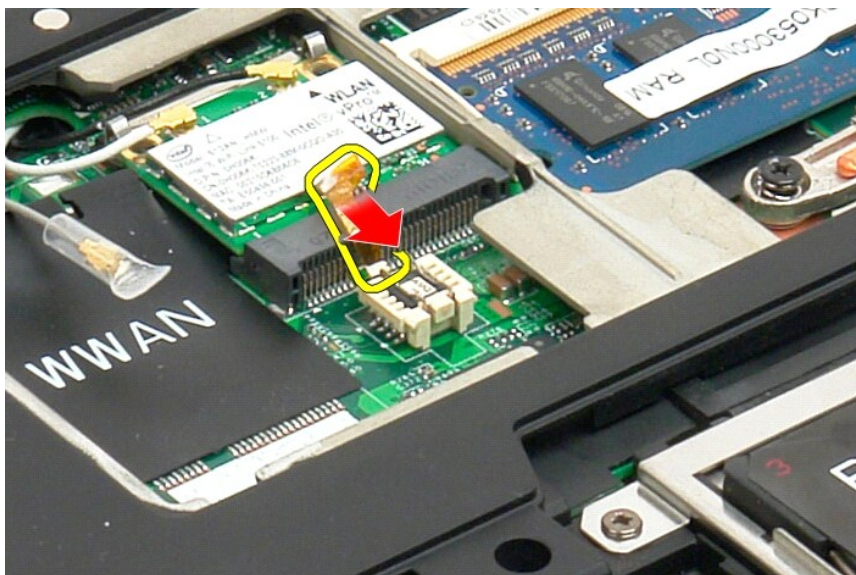
Removing the BIOS Chip



1. Follow the procedures in [Before Working Inside Your Tablet-PC](#).
2. Remove the [battery](#) from the Tablet-PC.
3. Remove the [memory and mini-card cover](#) from the Tablet-PC.



4. Use the orange tab to open the BIOS chip retaining clip.



5. Use your fingers or small tweezers so remove the BIOS chip from the Tablet-PC.

Internal Card With Bluetooth® Wireless Technology

Dell™ Latitude™ XT2 Service Manual

- [Removing the Internal Card With Bluetooth Wireless Technology](#)
- [Replacing the Internal Card With Bluetooth Wireless Technology](#)

WARNING: Before working inside your Tablet-PC, read the safety information that shipped with your Tablet-PC. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

Removing the Internal Card With Bluetooth Wireless Technology



1. Follow the procedures in [Before Working Inside Your Tablet-PC](#).
2. Remove the [battery](#) from the Tablet-PC.



3. Loosen the captive screw on the Bluetooth assembly.



4. Carefully lift the Bluetooth assembly out of the Tablet-PC.



5. Disconnect the Bluetooth cable from the Bluetooth.



6. Remove the Bluetooth assembly from the Tablet-PC.



Replacing the Internal Card With Bluetooth Wireless Technology

1. Connect the Bluetooth cable to the new Bluetooth assembly.
2. Carefully slide the Bluetooth assembly into the bay.

 **Note:** Ensure that the Bluetooth cable does not disconnect from the Bluetooth assembly when sliding it into the bay.

3. Replace the captive screw on the Bluetooth assembly to secure the Bluetooth assembly in place.
4. Replace the battery. See [Replacing the Main Battery](#).

Coin-Cell Battery

Dell™ Latitude™ XT2 Service Manual

- [Removing the Coin-Cell Battery](#)
- [Replacing the Coin-Cell Battery](#)

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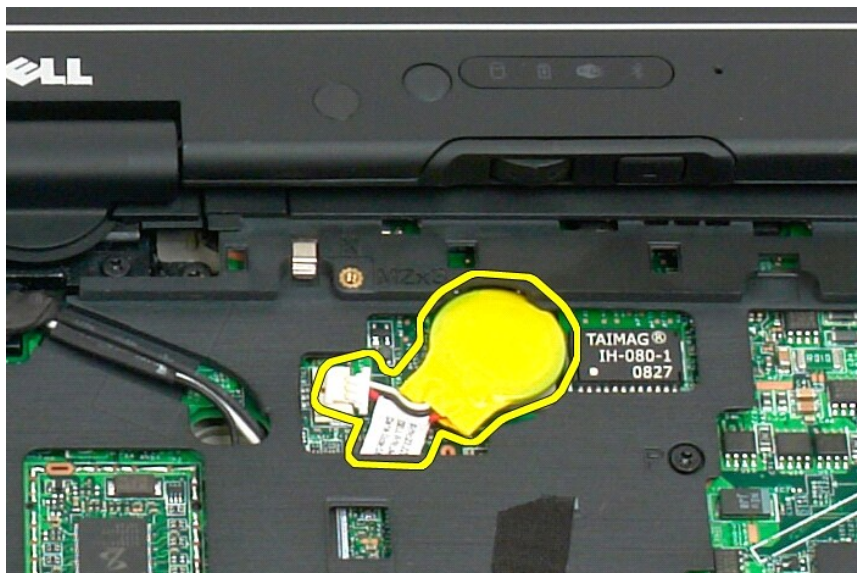
Removing the Coin-Cell Battery



1. Follow the procedures in [Before Working Inside Your Tablet-PC](#).
2. Turn the computer over and remove the [main battery](#) from the Tablet-PC.
3. Turn the computer over to the top side and remove the [hinge cover](#) from the Tablet-PC.
4. To get to the coin-cell battery, remove the [keyboard](#) from the Tablet-PC.
5. Disconnect the coin-cell cable from the system board.



6. Gently pry the coin-cell loose from the adhesive that attaches it to the system board and remove from the Tablet-PC.



Replacing the Coin-Cell Battery

1. Peel the backing from the new coin-cell battery.
2. Connect the coin-cell cable to the system board and press the coin-cell battery into place on the system board. See diagram in step 6 above for placement.
3. [Replace the keyboard](#), attaching it securely with the keyboard screws.
4. [Replace the hinge cover](#).
5. Turn the computer over and replace the battery. See [Replacing the Main Battery](#).

Dell™ Latitude™ XT2 Service Manual

- **WARNING:** Before working inside your Tablet-PC, read the safety information that shipped with your Tablet-PC. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

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4. Slide the grip cover away from the Tablet-PC and remove.



Replacing the Grip Cover

1. Slide the new grip cover onto the base of the Tablet-PC.
2. Attach the grip cover with the two grip cover screws.
3. Replace the battery. See [Replacing the Main Battery](#).

Hard Drive

Dell™ Latitude™ XT2 Service Manual

- [Removing the Hard Drive](#)
- [Replacing the Hard Drive](#)

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Removing the Hard Drive



1. Follow the procedures in [Before Working Inside Your Tablet-PC](#).
2. Remove the [battery](#) from the Tablet-PC.



3. Loosen the four captive screws on the hard drive bracket.



4. Remove the hard drive bracket.



5. Slide the hard drive towards the edge of the Tablet-PC to disconnect from the system board.



6. Remove the hard drive from the Tablet-PC.





Replacing the Hard Drive

1. Slide the new hard drive into position gently until the connector end fits into the system-board connector.
2. Secure the hard drive into place by replacing the hard drive bracket. Attach the bracket to the Tablet-PC with the four captive screws.
3. Replace the battery. See [Replacing the Main Battery](#).

Heat Sink and Fan Assembly

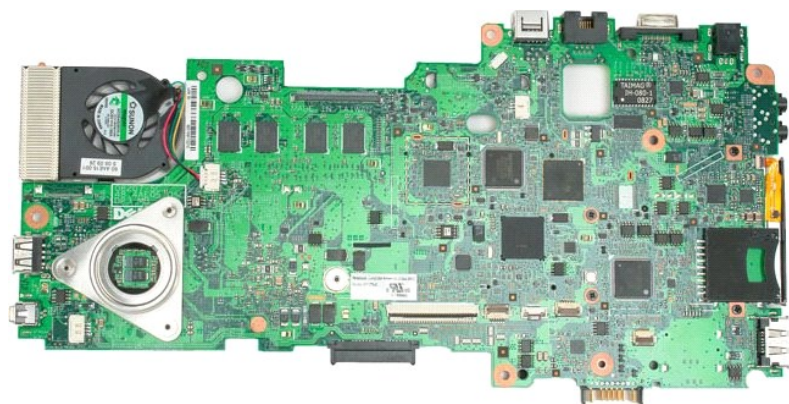
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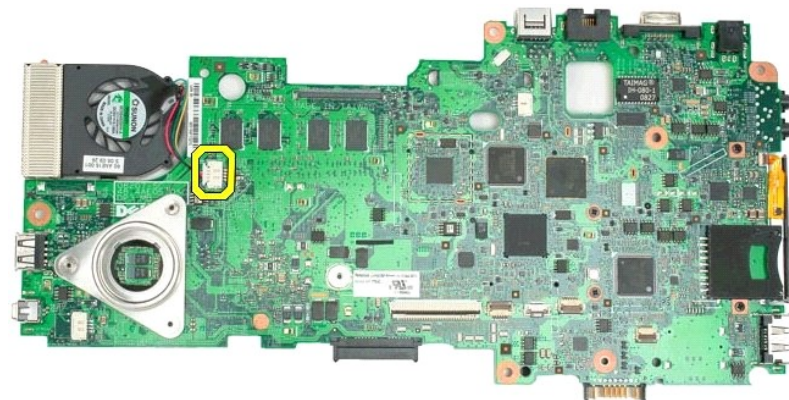
Removing the Heat Sink and Fan Assembly



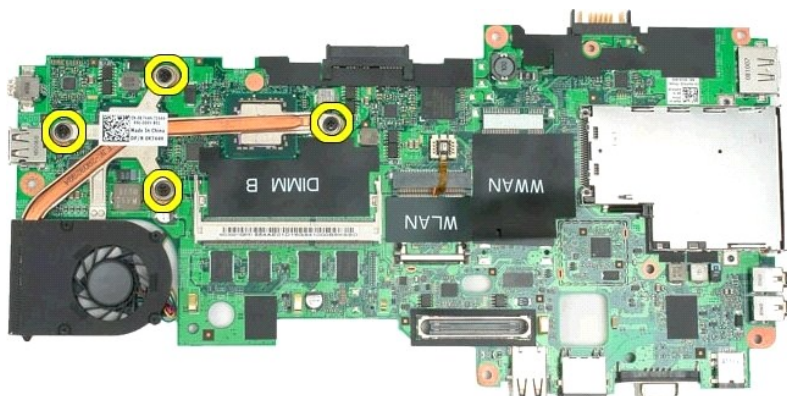
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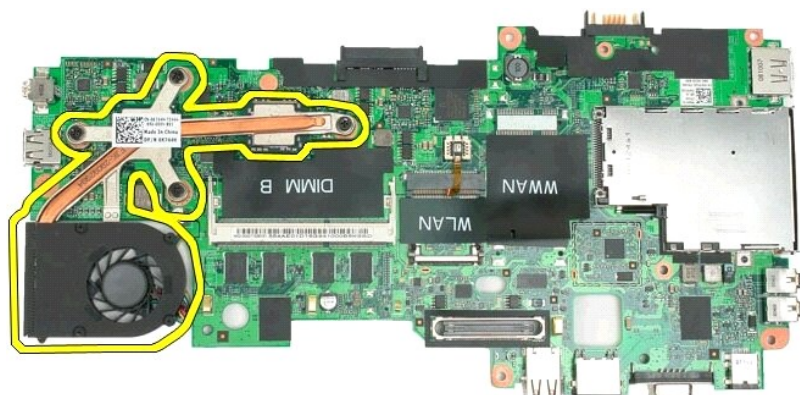
14. Disconnect the fan cable from the system board connector, then flip over the system board.



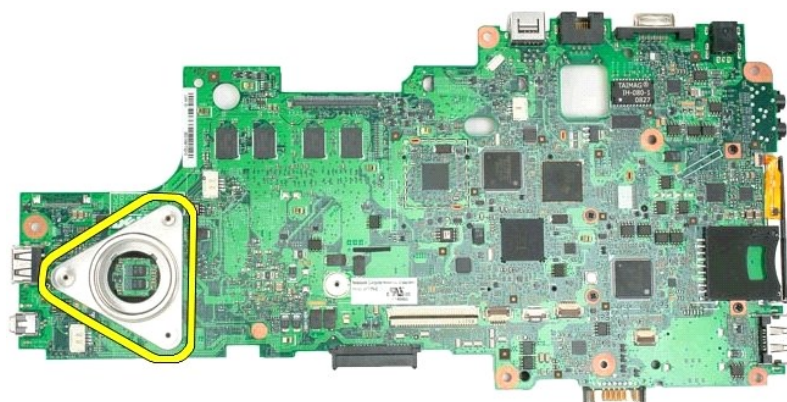
15. Loosen the four captive screws on the heat sink.

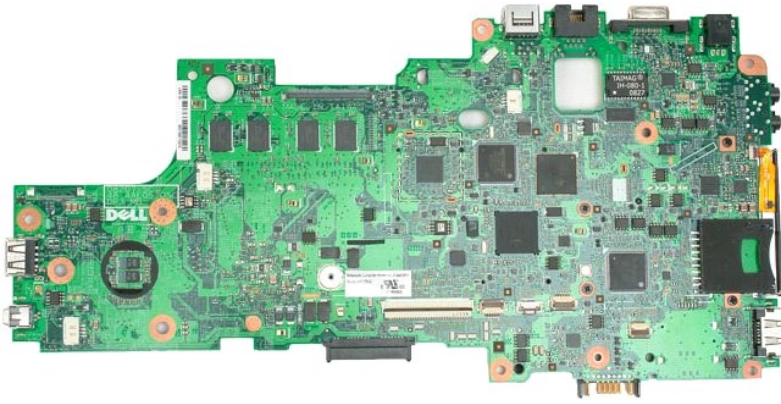


16. Remove the top section of the heat sink assembly from the system board, then turn over the system board again.



17. Remove the bottom section of the heat sink assembly.





Keyboard

Dell™ Latitude™ XT2 Service Manual

- [Removing the Keyboard](#)
- [Replacing the Keyboard](#)

WARNING: Before working inside your Tablet-PC, read the safety information that shipped with your Tablet-PC. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

Removing the Keyboard



1. Follow the procedures in [Before Working Inside Your Tablet-PC](#).
2. Remove the [battery](#) from the Tablet-PC.
3. Remove the [hinge cover](#) from the Tablet-PC.



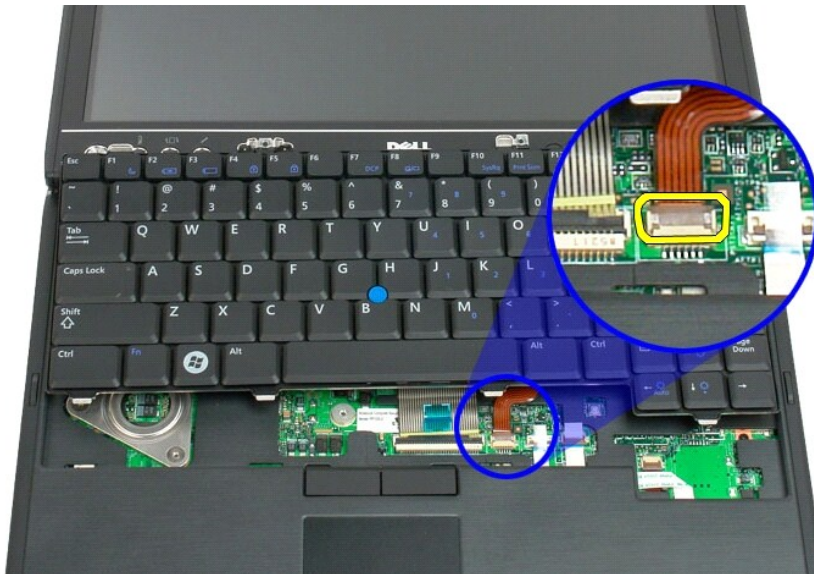
4. Remove the two screws securing the keyboard to the Tablet-PC.



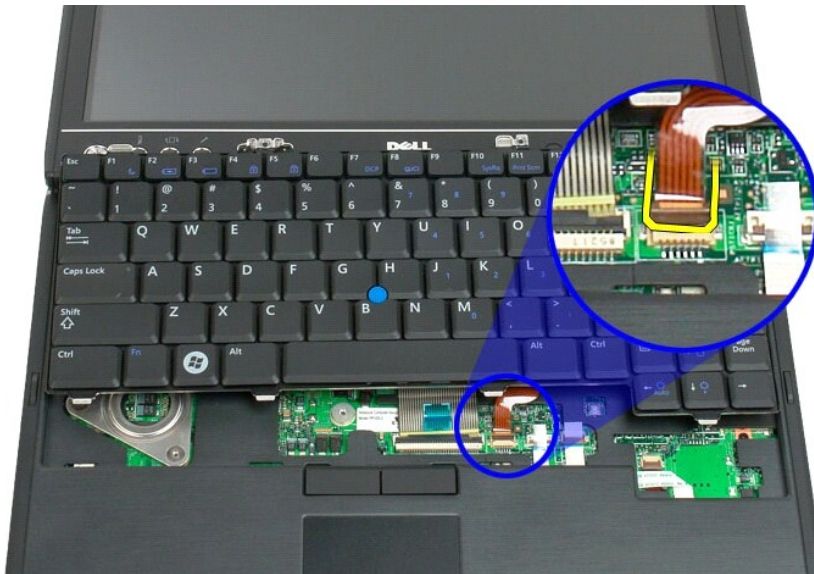
5. Gently slide the keyboard towards the display, being careful not to scratch the LCD bezel.



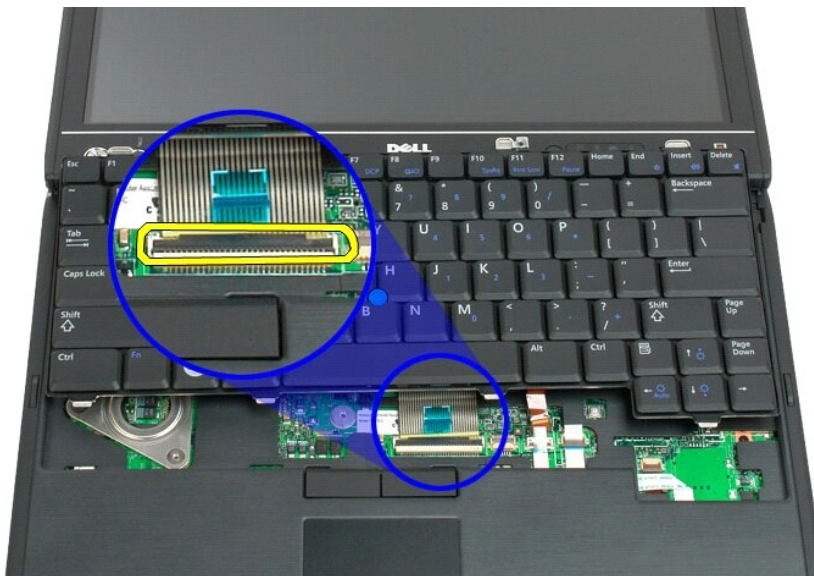
6. Release the zif connector on the touchpad connection.



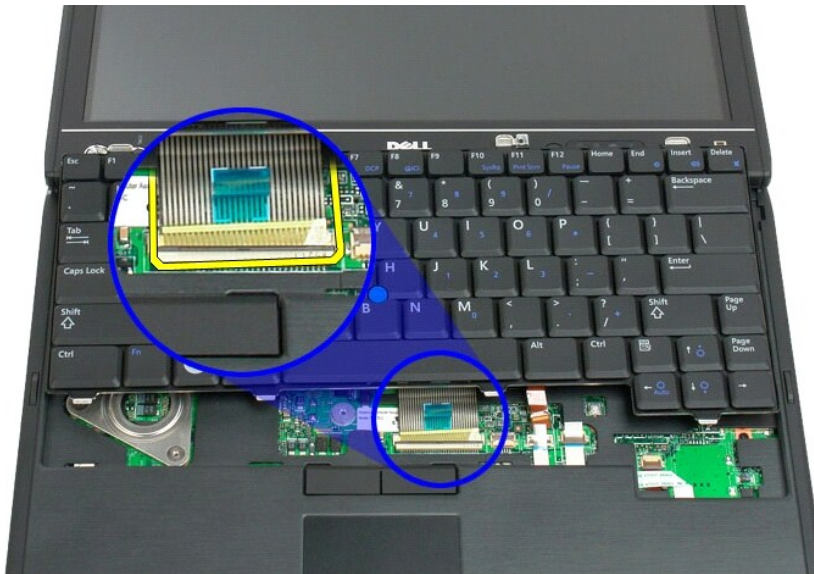
7. Disconnect the touch pad cable.



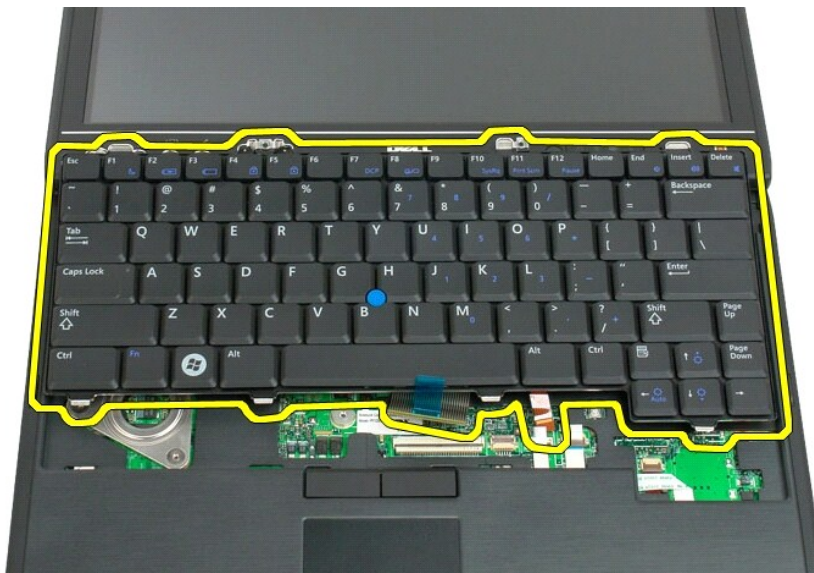
8. Release the retaining clip on the keyboard connector.

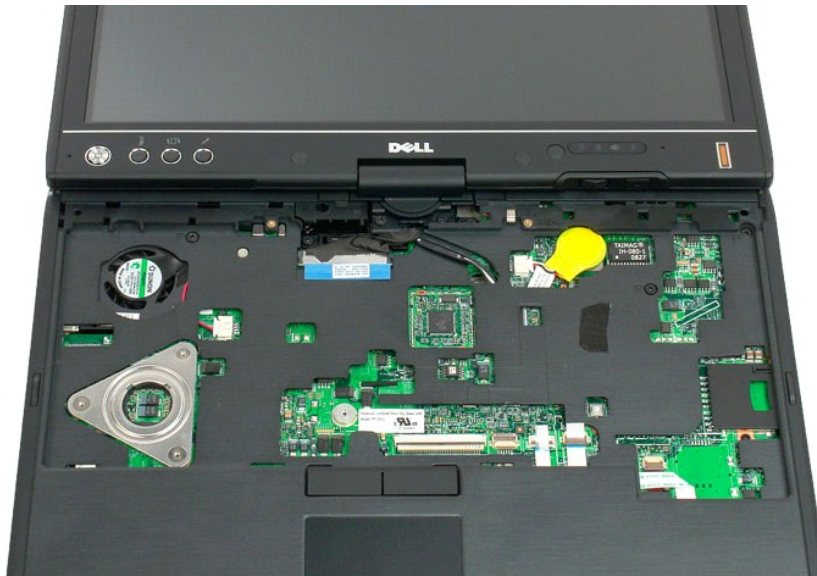


9. Disconnect the keyboard cable from the system board.



10. Remove the keyboard from the Tablet-PC.





Replacing the Keyboard

CAUTION: The key caps on the keyboard are fragile, easily dislodged, and time-consuming to replace. Exercise care when removing and handling the keyboard.

1. Holding the top of the keyboard slightly above the computer, connect the touchpad cable and the keyboard cable to the system board.
2. Carefully press each side to snap the keyboard into place.
3. Secure the keyboard to the Tablet-PC with the two keyboard screws as shown in the illustration in step 4 of Removing the Keyboard.
4. Replace the [hinge cover](#).
5. Close the display and turn the computer over.
6. Replace the battery. See [Replacing the Main Battery](#).

Display Assembly

Dell™ Latitude™ XT2 Service Manual

WARNING: Before working inside your Tablet-PC, read the safety information that shipped with your Tablet-PC. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

Removing the Display Assembly



1. Follow the procedures in [Before Working Inside Your Tablet-PC](#).
2. Remove the [battery](#) from the Tablet-PC.
3. Remove the [memory and mini-card cover](#) from the Tablet-PC.
4. Remove the [hinge cover](#) from the Tablet-PC.
5. Remove the [grip cover](#) from the Tablet-PC.



6. Disconnect any antenna cables from the bottom of the Tablet-PC.



7. From the top of the closed Tablet-PC, remove the two screws from the display assembly hinge grip.



8. From the inside of the Tablet-PC, disconnect the display assembly cable from the system board.



9. Unthread the antenna cables from the inside of the Tablet-PC.



10. Remove the five screws securing the display assembly to the Tablet-PC.



11. Lift the display assembly straight up to separate it from the Tablet-PC.



12. Remove the display assembly.



Hinge Cover

Dell™ Latitude™ XT2 Service Manual

- [Removing the Hinge Cover](#)
- [Replacing the Hinge Cover](#)

-
- WARNING:** Before working inside your Tablet-PC, read the safety information that shipped with your Tablet-PC. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.
- CAUTION:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching a connector on the back panel of the computer.
- CAUTION:** The hinge cover is fragile and can be damaged if extreme force is used. Be careful when removing the hinge cover.

Removing the Hinge Cover



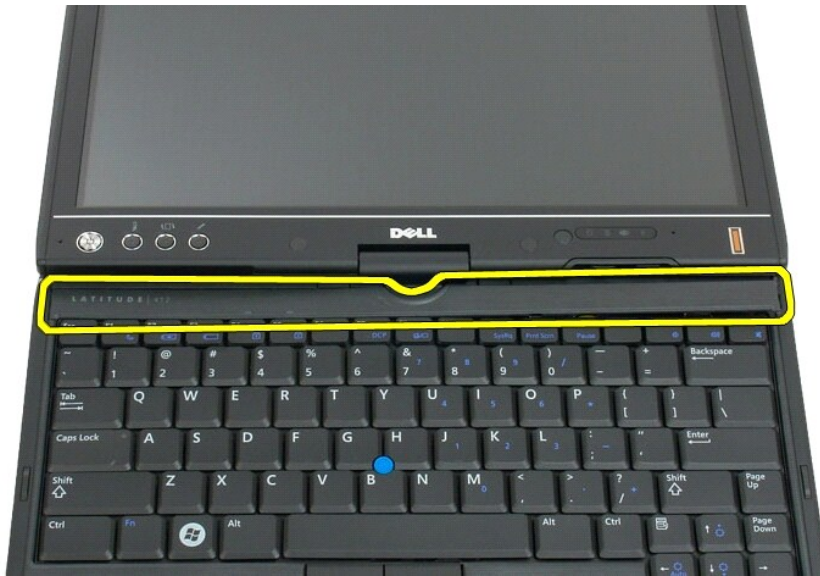
1. Follow the procedures in [Before Working Inside Your Tablet-PC](#).
2. Turn the computer top-side up, and then open the display all the way (180 degrees) so that it rests on your work surface.



3. Insert a plastic scribe or flathead screwdriver into the slot and gently pry up the hinge cover on the right side to release.



4. Ease the hinge cover up, moving from right to left, and remove it.



Replacing the Hinge Cover

To replace the hinge cover, insert the left edge of the cover into the hinge cover slot and press from left to right until the cover snaps into place.

Memory

Dell™ Latitude™ XT2 Service Manual

- [Removing a Memory Module](#)
- [Replacing a Memory Module](#)

⚠ WARNING: Before working inside your Tablet-PC, read the safety information that shipped with your Tablet-PC. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

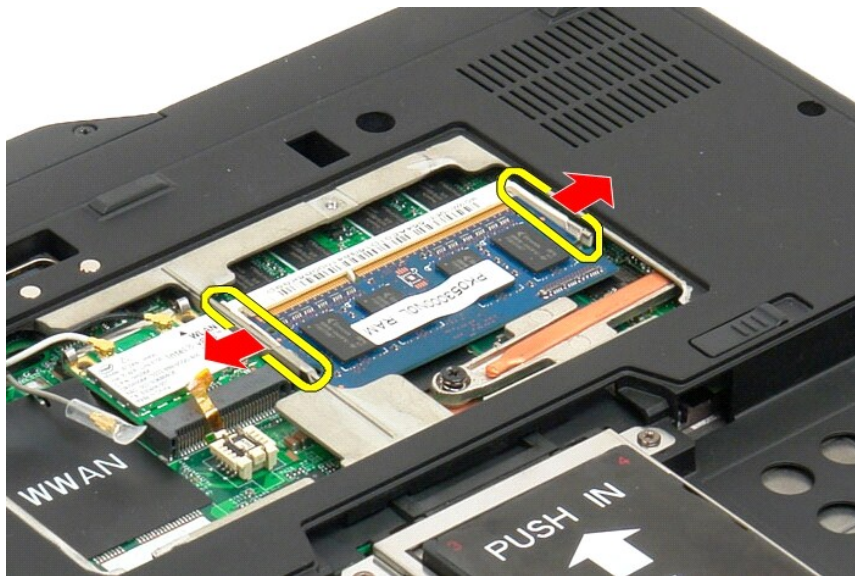
Removing a Memory Module



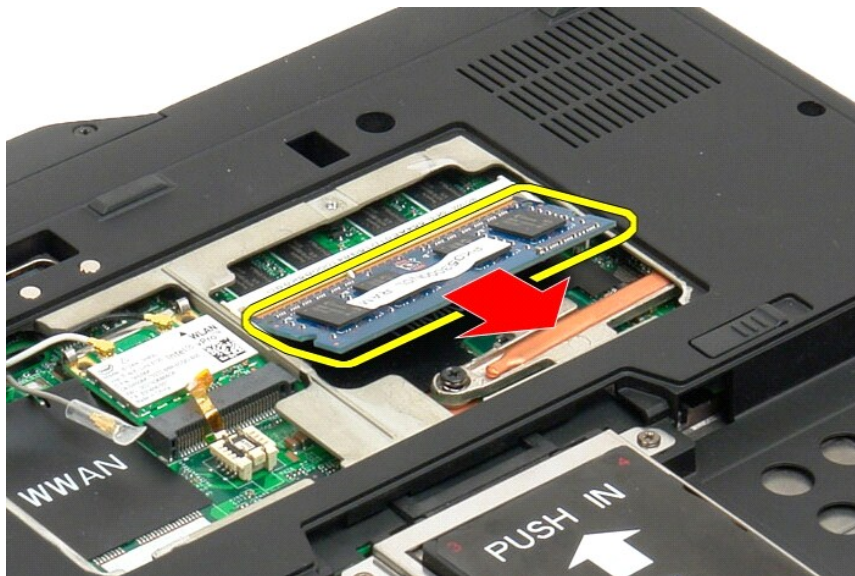
1. Follow the procedures in [Before Working Inside Your Tablet-PC](#).
2. Remove the [battery](#) from the Tablet-PC.
3. Remove the [memory and mini-card cover](#) from the Tablet-PC.

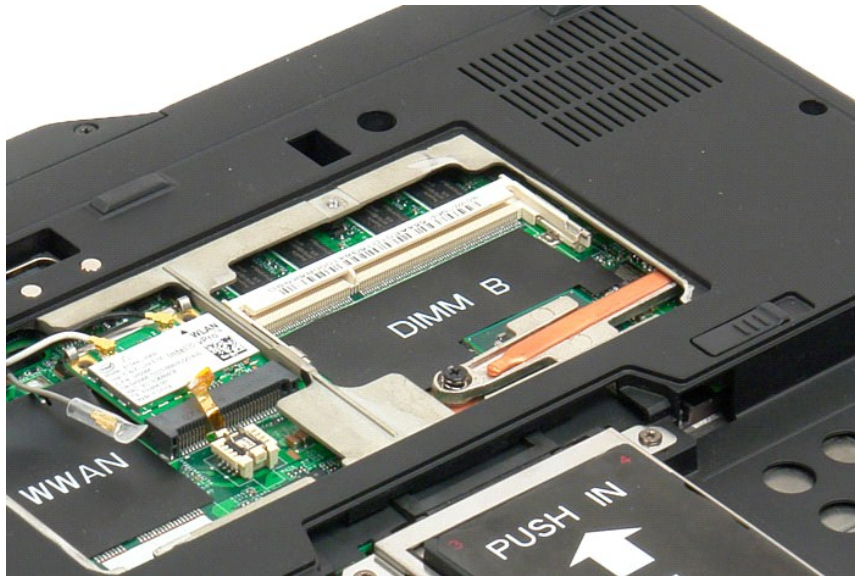


3. Use your fingers to gently pry the retaining clips away from the memory module.



4. Remove the memory module from the Tablet-PC at an angle.





Replacing a Memory Module

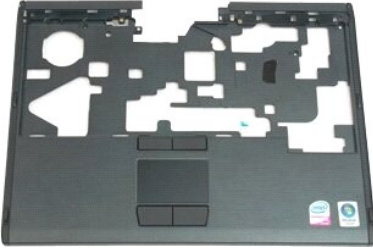
1. Position the memory module into place by starting with the top side of the module and easing it down into place at an angle.
2. Ease the memory module down until it snaps into place between the retainer clips.
3. Replace the [memory and mini-card cover](#).
4. Replace the battery. See [Replacing the Main Battery](#).

Palm Rest

Dell™ Latitude™ XT2 Service Manual

WARNING: Before working inside your Tablet-PC, read the safety information that shipped with your Tablet-PC. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

Removing the Palm Rest



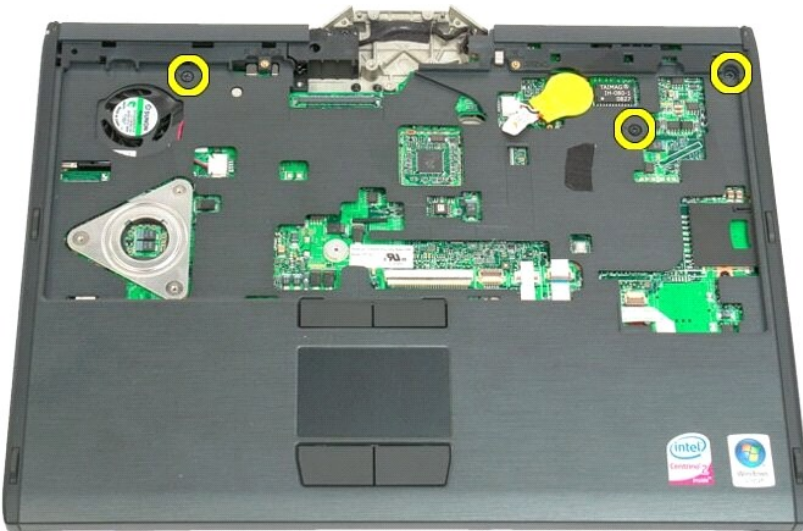
1. Follow the procedures in [Before Working Inside Your Tablet-PC](#).
2. Remove the [battery](#) from the Tablet-PC.
3. Remove the [hard drive](#) from the Tablet-PC.
4. Remove the [hinge cover](#) from the Tablet-PC.
5. Remove the [keyboard](#) from the Tablet-PC.
6. Remove the [display assembly](#) from the Tablet-PC.



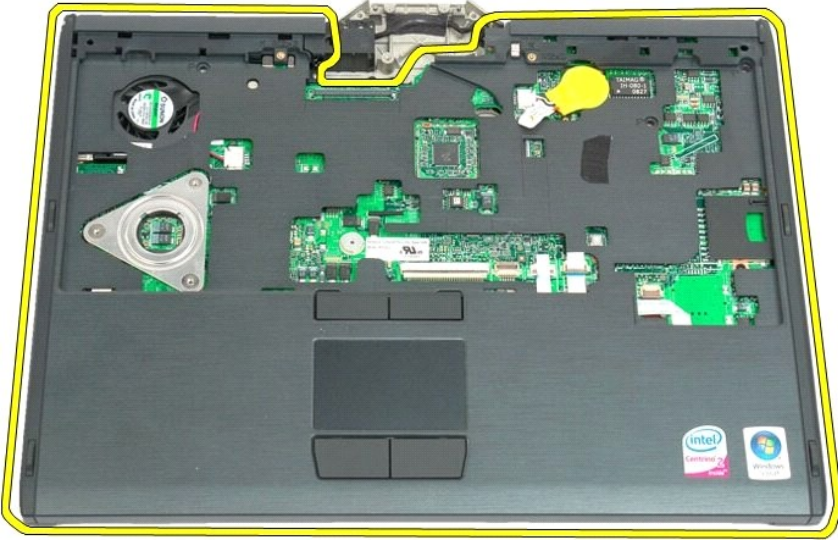
7. Remove the nine screws from securing the palm rest from the bottom of the Tablet-PC.



8. Turn the Tablet-PC over and remove three screws securing the palm rest to the top of the Tablet-PC.



9. Remove the palm rest from the Tablet-PC.



Speaker

Dell™ Latitude™ XT2 Service Manual

WARNING: Before working inside your Tablet-PC, read the safety information that shipped with your Tablet-PC. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

Removing the Speaker



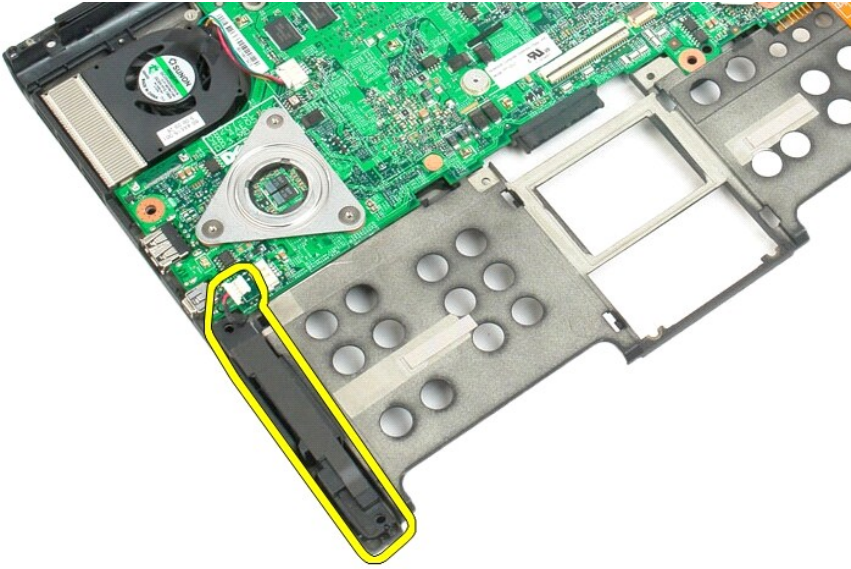
1. Follow the procedures in [Before Working Inside Your Tablet-PC](#).
2. Remove the [battery](#) from the Tablet-PC.
3. Remove the [hard drive](#) from the Tablet-PC.
4. Remove the [memory and mini-card cover](#) from the Tablet-PC.
5. Remove the [memory](#) from the Tablet-PC.
6. Remove the [mini-card](#) from the Tablet-PC.
7. Remove the [BIOS chip](#) from the Tablet-PC.
8. Remove the [Bluetooth module](#) from the Tablet-PC.
9. Remove the [hinge cover](#) from the Tablet-PC.
10. Remove the [keyboard](#) from the Tablet-PC.
11. Remove the [coin-cell battery](#) from the Tablet-PC.
12. Remove the [display assembly](#) from the Tablet-PC.
13. Remove the [palm rest](#) from the Tablet-PC.



14. Disconnect the speaker cable from the system board.



15. Remove the speaker assembly from the Tablet-PC.



System Board

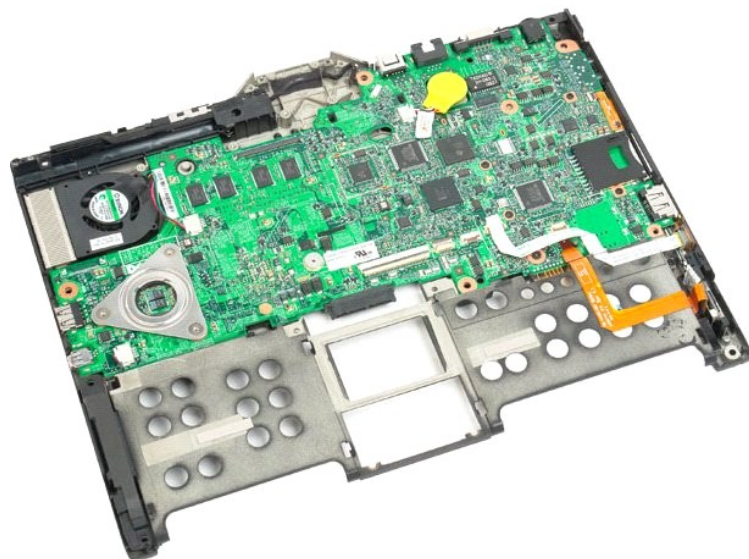
Dell™ Latitude™ XT2 Service Manual

WARNING: Before working inside your Tablet-PC, read the safety information that shipped with your Tablet-PC. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

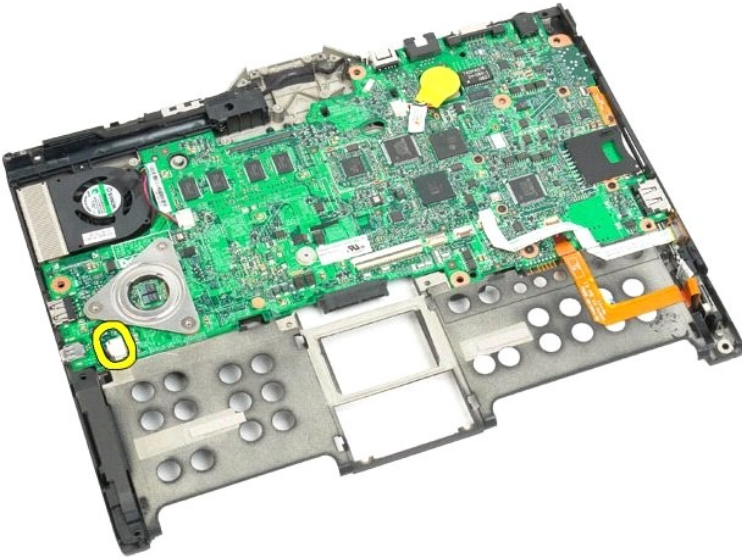
Removing the System Board



1. Follow the procedures in [Before Working Inside Your Tablet-PC](#).
2. Remove the [battery](#) from the Tablet-PC.
3. Remove the [hard drive](#) from the Tablet-PC.
4. Remove the [memory and mini-card cover](#) from the Tablet-PC.
5. Remove the [memory](#) from the Tablet-PC.
6. Remove the [mini-card](#) from the Tablet-PC.
7. Remove the [BIOS chip](#) from the Tablet-PC.
8. Remove the [Bluetooth module](#) from the Tablet-PC.
9. Remove the [hinge cover](#) from the Tablet-PC.
10. Remove the [keyboard](#) from the Tablet-PC.
11. Remove the [coin-cell battery](#) from the Tablet-PC.
12. Remove the [display assembly](#) from the Tablet-PC.
13. Remove the [palm rest](#) from the Tablet-PC.



14. Disconnect the speaker cable from the system board.



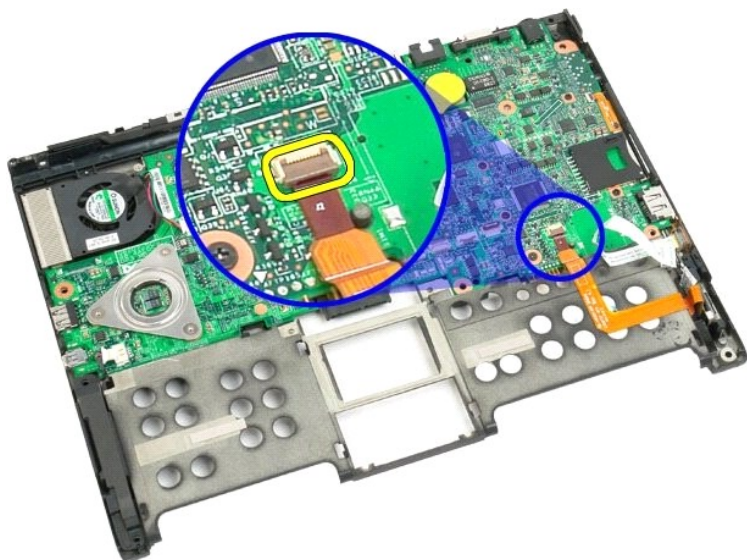
15. Lift the retaining clip on the SATA cable.



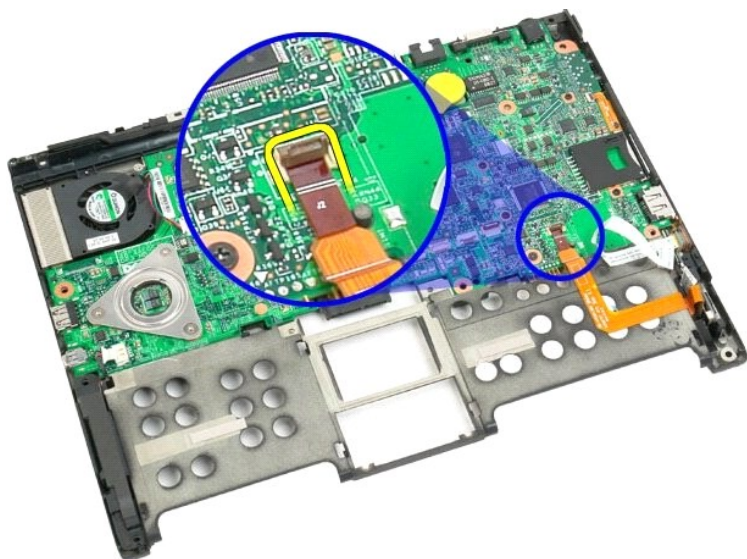
16. Disconnect the SATA cable from the system board.



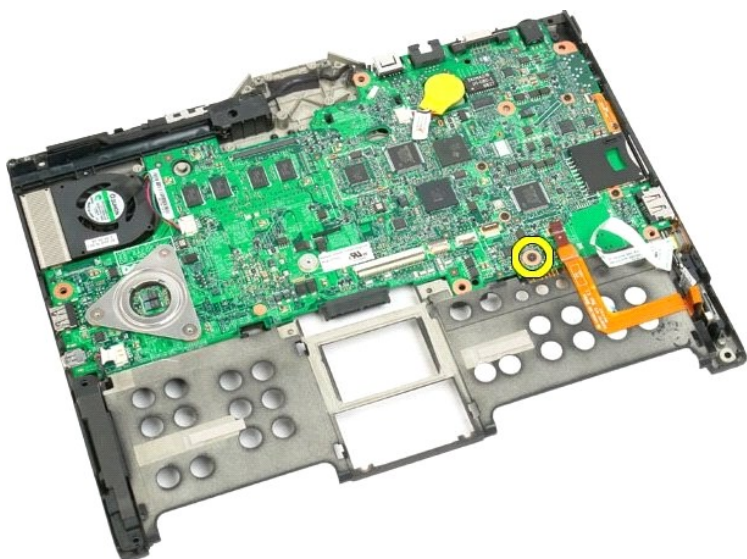
17. Lift the retaining clip on the wireless cable connector.



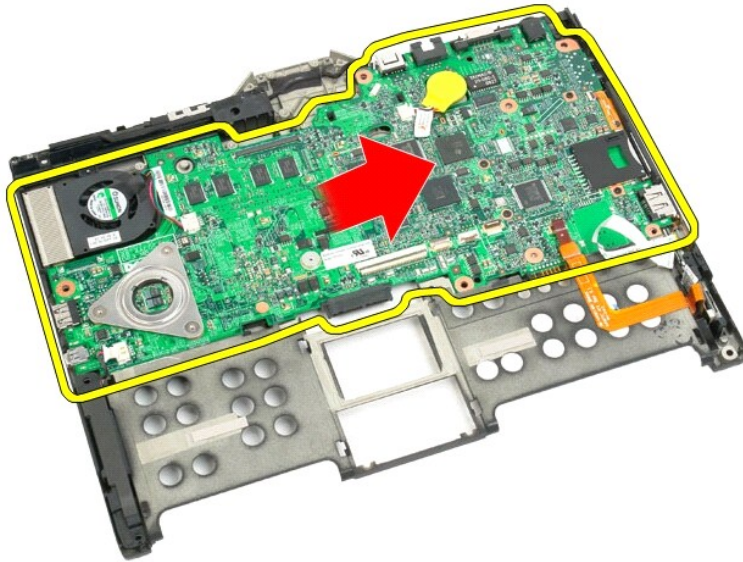
18. Disconnect the wireless cable connector from the system board.



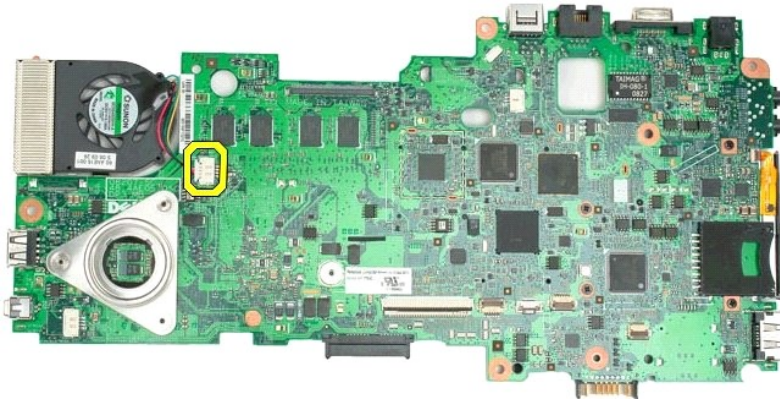
19. Remove the one screw securing the system board to the bottom plastic.



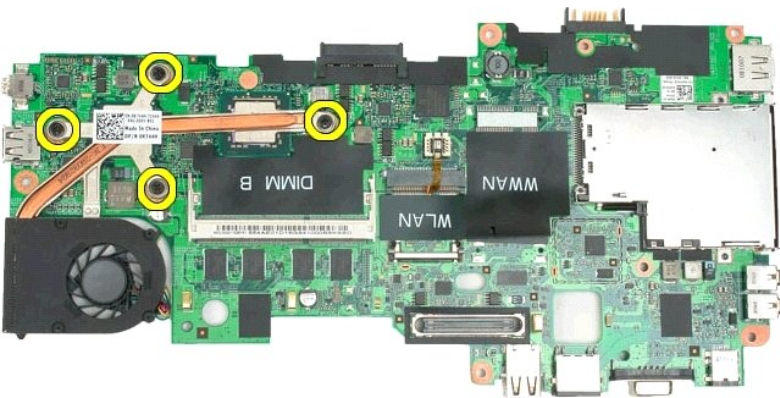
20. Lift the system board up at an angle and remove from the Tablet-PC.



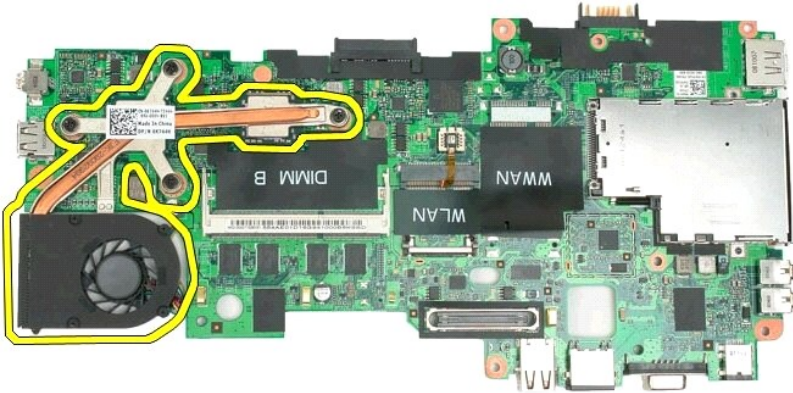
21. Disconnect the fan cable from the system board connector, then flip the system board over.



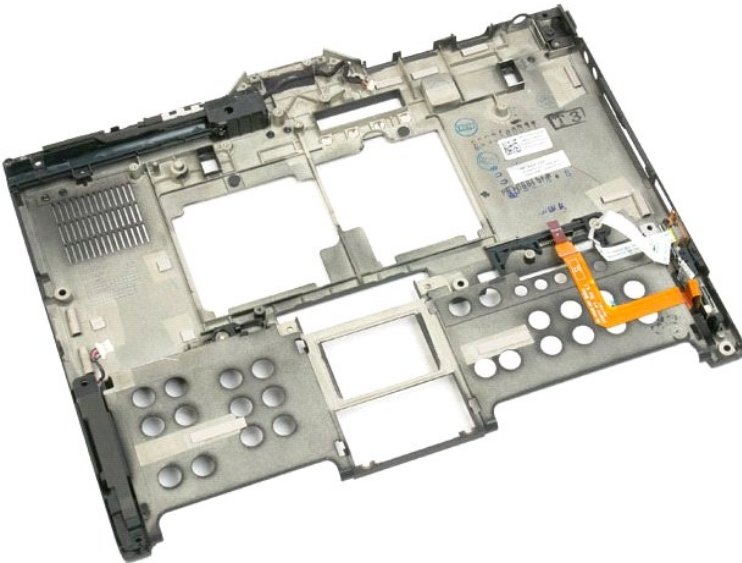
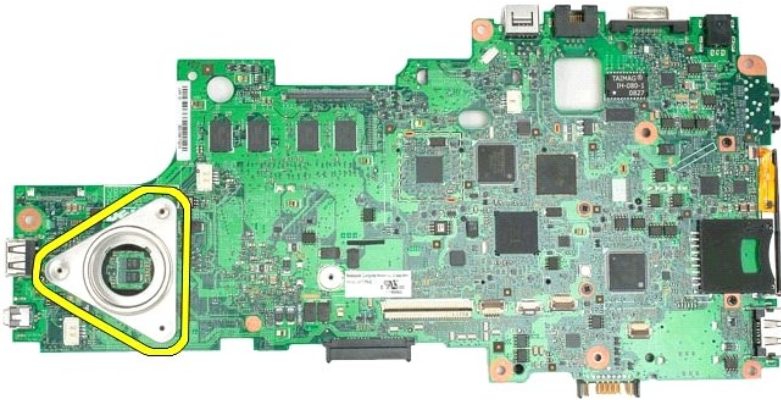
22. Loosen the four captive screws on the heat sink.



23. Remove the top section of the heat sink assembly from the system board, then turn the system board over again.



24. Remove the bottom section of the heat sink assembly.



Mini-Card

Dell™ Latitude™ XT2 Service Manual

- [Removing the Mini-Card](#)
- [Replacing the Mini-Card](#)

WARNING: Before working inside your Tablet-PC, read the safety information that shipped with your Tablet-PC. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

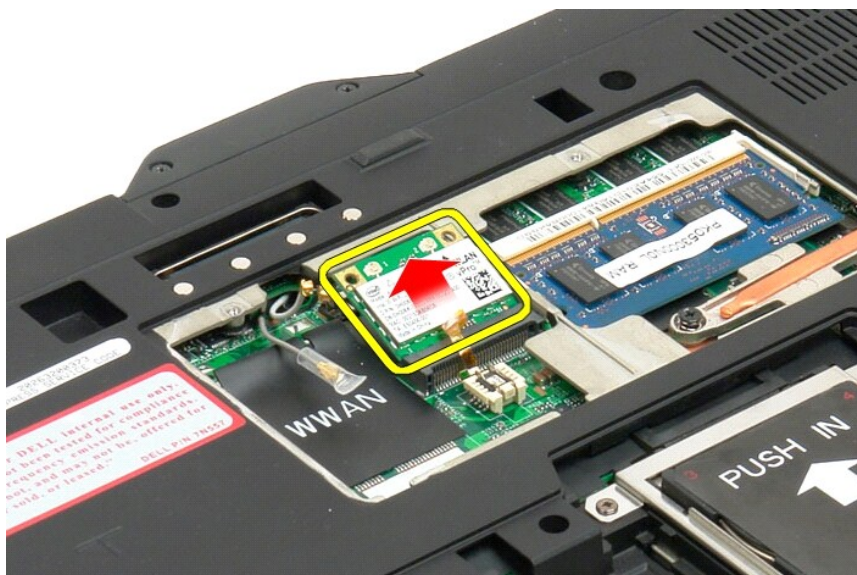
Removing the Mini-Card



1. Follow the procedures in [Before Working Inside Your Tablet-PC](#).
2. Remove the [battery](#) from the Tablet-PC.
3. Remove the [memory and mini-card cover](#) from the Tablet-PC.



4. Disconnect the two antenna cables from the mini-card.



Replacing the Mini-Card

CAUTION: The connectors are keyed to ensure correct insertion. If you feel resistance, check the connectors on the card and on the system board, and realign the card.

CAUTION: To avoid damage to the mini-card, ensure the cables are not under the card when you place the card.

NOTE: The card slot will be marked by a WLAN silk-screen. Do not install the mini-card into any other card slot. If you are installing a WWAN card, install the card in the slot marked by a WWAN silk-screen.

1. Slide the mini-card into the WLAN connector slot at an angle.
2. Press the card down to the alignment posts and hold in position.
3. Reseat the retainer clips that hold the card in position.
4. Connect the appropriate antenna cables to the card you are installing:
 - ▮ If the card has two triangles on the label (white and black), connect the white antenna cable to the connector labeled "main" (white triangle), and connect the black antenna cable to the connector labeled "aux" (black triangle). Place the remaining gray cable in the chassis next to holder next to the card.
 - ▮ If the card has three triangles on the label (white, black, and gray), connect the white antenna cable to the white triangle, connect the black antenna cable to the black triangle, and connect the gray antenna cable to the gray triangle.

 **NOTE:** Ensure the cables are tucked into the cable channel.

5. Replace the [memory and mini-card cover](#) on the Tablet-PC.
 6. Replace the battery (see [Replacing the Main Battery](#)).
-

Tablet-PC Modes

Dell™ Latitude™ XT2 Service Manual

- User Modes
- Tablet Buttons
- Tablet-PC Interface
- Tablet Settings

Working on Your Tablet-PC

Dell™ Latitude™ XT2 User's Guide

- [Before Working Inside Your Tablet-PC](#)
- [Recommended Tools](#)
- [Turning Off Your Tablet-PC](#)
- [After Working Inside Your Tablet-PC](#)

Before Working Inside Your Tablet-PC

Use the following safety guidelines to help protect your Tablet-PC from potential damage and to help to ensure your personal safety. Unless otherwise noted, each procedure included in this document assumes that the following conditions exist:

- You have performed the steps in [Working on Your Tablet-PC](#).
- You have read the safety information that shipped with your Tablet-PC.
- A component can be replaced or--if purchased separately--installed by performing the removal procedure in reverse order.

 **WARNING:** Before working inside your Tablet-PC, read the safety information that shipped with your Tablet-PC. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

 **CAUTION:** Only a certified service technician should perform repairs on your Tablet-PC. Damage due to servicing that is not authorized by Dell is not covered by your warranty.

 **CAUTION:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface, such as a connector on the back of the computer.

 **CAUTION:** Handle components and cards with care. Do not touch the components or contacts on a card. Hold a card by its edges or by its metal mounting bracket. Hold a component such as a processor by its edges, not by its pins.

 **CAUTION:** When you disconnect a cable, pull on its connector or on its pull-tab, not on the cable itself. Some cables have connectors with locking tabs; if you are disconnecting this type of cable, press in on the locking tabs before you disconnect the cable. As you pull connectors apart, keep them evenly aligned to avoid bending any connector pins. Also, before you connect a cable, ensure that both connectors are correctly oriented and aligned.

 **NOTE:** The color of your Tablet-PC and certain components may appear differently than shown in this document.

To avoid damaging your Tablet-PC, perform the following steps before you begin working inside the Tablet-PC.

1. Ensure that your work surface is flat and clean to prevent the Tablet-PC cover from being scratched.
2. Turn off your Tablet-PC (see [Turning Off Your Tablet-PC](#)).
3. If the Tablet-PC is connected to a docking device (docked) such as the optional Media Base or Battery Slice, undock it.

 **CAUTION:** To disconnect a network cable, first unplug the cable from your Tablet-PC and then unplug the cable from the network device.

4. Disconnect all network cables from the Tablet-PC.
5. Disconnect your Tablet-PC and all attached devices from their electrical outlets.
6. Close the display and turn the Tablet-PC upside-down on a flat work surface.

 **CAUTION:** To avoid damaging the system board, you must remove the main battery before you service the Tablet-PC.

7. Remove the main battery (see [Removing the Main Battery](#)).
8. Turn the Tablet-PC top-side up.
9. Open the display.
10. Press the power button to ground the system board.

 **CAUTION:** To guard against electrical shock, always unplug your Tablet-PC from the electrical outlet before opening the display.

 **CAUTION:** Before touching anything inside your Tablet-PC, ground yourself by touching an unpainted metal surface, such as the metal at the back of the Tablet-PC. While you work, periodically touch an unpainted metal surface to dissipate static electricity, which could harm internal components.

11. Remove any installed ExpressCards or Smart Cards from the appropriate slots.
12. Remove the hard drive (see [Removing the Hard Drive](#)).

Recommended Tools

The procedures in this document may require the following tools:

- Small flat-blade screwdriver
- #0 Phillips screwdriver
- #1 Phillips screwdriver
- Small plastic scribe
- Flash BIOS update program CD

Turning Off Your Tablet-PC

 **CAUTION:** To avoid losing data, save and close all open files and exit all open programs before you turn off your Tablet-PC.

1. Shut down the operating system:

In Windows Vista:

Click **Start** , then click the arrow in the lower-right corner of the **Start** menu as shown below, and then click **Shut Down**.



In Windows XP:

Click **Start**→ **Turn Off Computer**→ **Turn Off**.

The Tablet-PC turns off after the operating system shutdown process is complete.

2. Ensure that the Tablet-PC and all attached devices are turned off. If your Tablet-PC and attached devices did not automatically turn off when you shut down your operating system, press and hold the power button for about 4 seconds to turn them off.

After Working Inside Your Tablet-PC

After you complete any replacement procedure, ensure you connect any external devices, cards, and cables before turning on your computer.



CAUTION: To avoid damage to the Tablet-PC, use only the battery designed for this particular Dell computer. Do not use batteries designed for other Dell computers.

1. Connect any external devices, such as a port replicator, battery slice, or media base, and replace any cards, such as an ExpressCard.
2. Connect any telephone or network cables to your Tablet-PC.



CAUTION: To connect a network cable, first plug the cable into the network device and then plug it into the computer.

3. Replace the [main battery](#).
4. Connect your Tablet-PC and all attached devices to their electrical outlets.
5. Turn on your Tablet-PC.