

Hardware Guide HP Tablet PC Series

Document Part Number: 331734-001

October 2003

This guide explains how to identify, use, modify, and maintain the hardware features on the tablet PC and keyboard. It also includes power, networking, and environmental specifications, which may be helpful when traveling with the tablet PC.

© 2003 Hewlett-Packard Development Company, L.P.

Microsoft and Windows are trademarks of Microsoft Corporation in the U.S. and/or other countries. SD Logo is a trademark.

The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

Hardware Guide HP Tablet PC Series First Edition October 2003

Reference Number: TC1100/TR1105 Document Part Number: 331734-001

Contents

1 External Components

Pen	Components
Γab	elet PC Components 1–2
	Front: Lights and Bluetooth1–2
	Front: Pen-Activated Buttons
	Right Side: Power Switch and
	Power/Standby Light1–4
	Right Side: Windows Security and
	Display Toggle Buttons 1–5
	Right Side: Esc, Tab and Q Menu Buttons 1-6
	Right Side: Jog Dial and Antenna 1–7
	Lower Side
	Left Side: Attachment Slots and
	Keyboard Connector
	Left Side: Security Cable Slot, Vent and
	Antenna
	Top: Connectors and Jacks 1–11
	Top: Pen Holder and LAN Connection Lights 1–12
	Top: Card Slots, Buttons and Tether Eyelet 1–13
	Back: Attachment Features and
	Hard Drive Bay
	Back: Battery Bay
	Back: Memory and Mini PCI Compartment 1–16
	Back: Labels
	Back: Tilt Feet and Pad Feet

Hardware Guide iii

	Additional Tablet PC Standard Components 1–19
	Documentation CDs 1–20
	Cords and Cables
	Adapters and Accessories 1–22
	Tablet PC Keyboard Components 1–23
	Front: Lights and Pointing Device 1–23
	Front: Keys
	Front: Positioning and Security Features 1–25
	Top1–26
	Back1–27
	Additional Keyboard Standard Component 1–28
2	Pen, Command Controls and Keyboards
	Pen
	Entering Information with the Pen
	Calibrating the Pen 2–4
	Setting Pen Preferences
	Command Controls
	Identifying Command Controls
	Identifying Command Controls 2-6 Command Controls Quick Reference 2-7
	Identifying Command Controls 2-6 Command Controls Quick Reference 2-7 Using Command Controls 2-8
	Identifying Command Controls2-6Command Controls Quick Reference2-7Using Command Controls2-8Setting Command Control Preferences2-14
	Identifying Command Controls2-6Command Controls Quick Reference2-7Using Command Controls2-8Setting Command Control Preferences2-14On-Screen Keyboard2-17
	Identifying Command Controls2-6Command Controls Quick Reference2-7Using Command Controls2-8Setting Command Control Preferences2-14On-Screen Keyboard2-17Tablet PC Keyboard2-18
	Identifying Command Controls2-6Command Controls Quick Reference2-7Using Command Controls2-8Setting Command Control Preferences2-14On-Screen Keyboard2-17Tablet PC Keyboard2-18Using the Pointing Device2-19
	Identifying Command Controls2-6Command Controls Quick Reference2-7Using Command Controls2-8Setting Command Control Preferences2-14On-Screen Keyboard2-17Tablet PC Keyboard2-18

iv Hardware Guide

3 Battery Packs

Running the Tablet PC on Battery Power 3–1
Replacing a Battery Pack
Removing a Battery Pack
Inserting a Battery Pack
Securing a Battery Pack
Accessing the Battery Pack Security Screw 3–6
Inserting a Battery Pack Security Screw 3–7
Charging a Battery Pack
Charging a New Battery Pack
Charging an In-Use Battery Pack
Monitoring the Charge in a Battery Pack
Obtaining Accurate Charge Information 3–10
Displaying Charge Information on the Screen 3–10
Displaying Charge Information on a
Battery Pack
Managing Low-Battery Conditions
Identifying Low-Battery Conditions
Resolving Low-Battery Conditions
Initiating and Resuming from Standby or
Hibernation
Calibrating a Battery Pack
When to Calibrate 3–16
How to Calibrate
Battery Conservation Procedures and Settings 3-19
Conserving Power as You Work
Selecting Power Conservation Settings 3–19
Storing a Battery Pack
Disposing of a Used Battery Pack
Finding More Power Information 3–21

4 Drives

5

Adding a Drive to the System 4–1
Understanding Drive Terms 4–2
Terms for Types of Drives
Terms for Drive Media
Caring for Drives
Inserting or Removing Drive Media
Inserting a CD or DVD
Removing a CD or DVD (with Power) 4–5
Removing a CD or DVD (Without Power) 4–6
Inserting a Diskette
Removing a Diskette
Using Drive Media4–8
Avoiding Standby and Hibernation 4–8
Displaying Media Contents 4–8
Caring for Drive Media
Finding More Drive Software Information 4–10
Audio
Adjusting Volume
Using the Volume Control Icon 5–1
Using the Q Menu
Using the Internal Speakers 5–3
Using the Internal Microphone 5–4
Connecting an Audio Device
Identifying Audio Jacks
Using the Audio-Out Jack 5–6
Using the Headset Jack 5–6
Using the Microphone Jack
Finding Audio and Video Software Information 5–7

vi Hardware Guide

6	Internal Modem	
	Connecting the Modem Selecting Connectors Connecting the Modem to an RJ-11 Jack Connecting the Modem with an Adapter. Setting Country Preferences. Displaying the Current Country Configuration Adding a Country Configuration. Solving Travel Connection Problems Accessing Communication Software. Finding AT Command Information	6-2 6-3 6-4 6-5 6-5 6-5 6-6 6-8
7	Network Connections	
	Connecting the Network Cable Turning a Network Connection Off and On Using the LAN Connection Lights Accessing the Network at Startup Enabling a NIC for Startup Responding to a Network Service Boot Prompt Finding Wireless LAN Information	7–3 7–4 7–4 7–5
8	External Device Connections	
	Standard Device	8-2 8-3 8-3 8-5 8-6 8-7
	Cable Lock	

Hardware Guide vii

9	Additional Hardware Options
	Obtaining Upgrades
	Using a PC Card
	Selecting a PC Card9–2
	Configuring a PC Card 9–2
	Inserting a PC Card
	Stopping and Removing a PC Card 9–3
	Using an SD Card
	Configuring an SD Card 9–5
	Inserting an SD Card
	Stopping and Removing an SD Card 9–6
	Increasing Memory 9–7
	Displaying Memory Information 9–7
	Removing or Inserting a Memory Module 9–8
1 (Maintenance, Shipping and Travel
	Maintaining Software
	Protecting Hardware
	Using Portfolios
	Attaching a Portfolio
	Detaching a Portfolio
	Cleaning Hardware
	Cleaning the Screen
	Cleaning a Tablet PC Keyboard 10–7
	Replacing Hardware
	Replacing the System Hard Drive 10–8
	Replacing a Pointing Stick Cap 10–13
	Preparing the Tablet PC for Shipping or Travel 10–14
	Traveling with the Tablet PC
	C1 111 C F 1
	Checklist for Travelers

viii Hardware Guide

11 Specifications

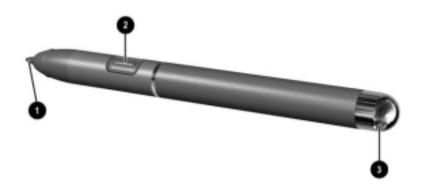
Tablet PC Operating Environment. 11-7 Tablet PC Rated Input Power. 11-7 Modem Specifications 11-7 Finding More Environmental Information 11-7	Tablet PC and Tablet PC Keyboard Dimensions	11-1
Modem Specifications	Tablet PC Operating Environment	11-2
•	Tablet PC Rated Input Power	11-2
Finding More Environmental Information 11–3	Modem Specifications	11-3
	Finding More Environmental Information	11-3

Index

Hardware Guide ix

External Components

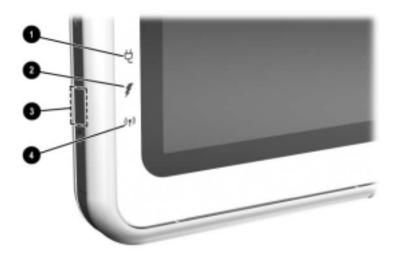
Pen Components



Component		Description
0	Pen tip	Interacts with the tablet PC whenever the tip is touching the screen or within 1.27 cm (0.5 inch) of the screen. When tapped on or held over a pen-activated button, activates the button.
2	Pen button	Functions like the right button on an external mouse.
8	Pen tether eyelet	Used with the tether eyelet on the tablet PC, enables you to tether the pen to the tablet PC.

Tablet PC Components

Front: Lights and Bluetooth



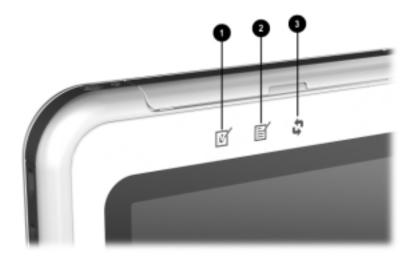
Со	mponent	Description
0	AC adapter light	On: AC power is being supplied through the AC adapter.
2	Battery light	On: A battery pack is charging. Flashing: A battery pack that is the only available power source has reached a low-battery condition.
8	Bluetooth antenna	Sends and receives Bluetooth* Integrated Wireless signals. [†]
4	Wireless activity light	On: The wireless mini PCI and/or Bluetooth are on. Off: The wireless mini PCI and/ or Bluetooth are off.

^{*}Bluetooth is not available on all models

1–2 Hardware Guide

 $^{^{\}dagger}\mbox{For optimal performance}$ when using Bluetooth, keep the area around the antenna free from obstructions.

Front: Pen-Activated Buttons



Co	mponent	Description
0	Tablet PC Input Panel launch button*	When Windows is running, opens the Microsoft Tablet PC Input Panel application, which includes a handwriting pad and an on-screen keyboard.
2	Journal launch button*	When Windows is running, opens and closes the Microsoft Journal application, which supports handwriting.
8	Rotate button*	Switches the image between landscape and portrait orientation.

*This table describes default settings. For information about changing the functions of the Tablet PC Input Panel launch, Journal launch, and rotate buttons, see Chapter 2, "Pen, Command Controls and Keyboards."

Right Side: Power Switch and Power/Standby Light



Component		Description
0	Power switch*	When the tablet PC is:
		Off: Turns on the tablet PC.
		On: Initiates Standby.*
		In Standby: Resumes tablet PC from Standby.
		In Hibernation: Resumes tablet PC from Hibernation.*
		If the system has stopped responding and Windows shut down procedures cannot be used, slide and hold for 4 seconds to turn off the tablet PC.
2	Power/standby light	On: Tablet PC is on. Flashing: Tablet PC is in Standby. Off: Tablet PC is off or in Hibernation.

*This table describes default settings. For information about changing the functions of the power switch and about using Standby and Hibernation, refer on this CD to the *Software Guide*, "Power" chapter.

1–4 Hardware Guide

Right Side: Windows Security and Display Toggle Buttons



Component		Description
0	Windows Security button*	When pressed with the pen tip or a small object like the end of a paper clip while:
		■ Windows is open, enters the ctrl+alt+delete command. [†]
		■ The Setup utility is open, enters the reset command.
0	Display Toggle button	When Windows is running, toggles the external monitor display settings:
		■ Internal only
		■ Internal and External
		■ Extended Desktop

^{*}This table describes default settings. For information about changing the functions of the Windows Security button, see Chapter 2, "Pen, Command Controls and Keyboards."

†To protect your work and the system, the ctrl+alt+delete command cannot be entered using the **Ctrl, Alt,** and **Del** keys on the on-screen keyboard.

Right Side: Esc, Tab and Q Menu Buttons



Со	mponent	Description
0	Esc button*	While the tablet PC is:
		Starting up and a flashing pointer is displayed on the screen, opens the Setup utility.
		In Windows, functions like esc on a standard keyboard.
0	Tab button*	When Windows is running, functions like tab on a standard keyboard. [†]
8	Q menu button*	When Windows is running, opens or closes the Q Menu.

^{*}This table describes default settings. For information about changing the functions of the esc, tab, and Q menu buttons, see Chapter 2, "Pen, Command Controls and Keyboards."

1–6 Hardware Guide

[†]The tab button can also be used, instead of an F12 command, to respond to a Network Service Boot prompt during startup.

Right Side: Jog Dial and Antenna

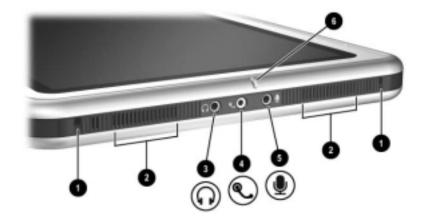


Со	mponent	Description
0	Jog dial*	Functions like enter and the up and down arrow keys on a standard keyboard.
		Press inward to enter a command.
		Rotate upward to scroll upward.
		Rotate downward to scroll downward.
2	Antennas, not visible from the outside of the tablet PC	Sends and receives internal wireless LAN signals. [†]

^{*}This table describes default settings. For information about changing the rotation functions of the jog dial, see Chapter 2, "Pen, Command Controls and Keyboards."

 $^{^{\}dagger}\text{For optimal performance, keep the antennas free from obstructions while you are using an internal wireless LAN.}$

Lower Side



Component		Description
0	Docking alignment slots (2)	Secure the tablet PC to an optional Tablet PC Docking Station.
2	Speakers (2)	Produce stereo sound.
8	Audio-out jack	Connects optional stereo headphones or powered stereo speakers.
4	Headset jack	Connects an optional headset, such as a mobile telephone headset with a microphone and a monaural ear piece.
0	Microphone jack	Connects an optional monaural or stereo microphone.
6	Microphone	Inputs monaural sound.*
+16		4 6 4 4 1 2 1

^{*}If you are using speech recognition or other software that requires optimal sound quality, you must use an optional external microphone or a headset.

1–8 Hardware Guide

Left Side: Attachment Slots and **Keyboard Connector**



Component		Description
0	Screen protector slots (2)	Secure the screen protector* when it is attached to the tablet PC.
2	Universal attachment slots (2)	Secure the portfolio, a screen protector*, or an attachment, such as a tablet PC keyboard, to the tablet PC.
8	Keyboard connector	Connects the tablet PC keyboard to the tablet PC.
4	Alignment key slot	Accepts an alignment key to safeguard attachment procedures. For example, matching the alignment key on the tablet PC keyboard to the alignment key slot helps you correctly orient the tablet PC to the keyboard as you attach the tablet PC to the keyboard.

Left Side: Security Cable Slot, Vent and Antenna



Component		Description
0	IrDA Fast Infrared Port	Transmits and receives infrared transmissions between the tablet PC and other infrared devices.
2	Security cable slot	Attaches an optional security cable to the tablet PC.
③	Vent	Allows airflow to cool internal components. To prevent overheating, do not obstruct the vent. Do not allow a hard surface, such as an adjoining optional printer, or fabric, such as bedding or clothing, to block airflow.
4	Antenna*, not visible from the outside of the tablet PC	Receives internal wireless LAN signals.†

^{*}The tablet PC has 2 antennas. The other antenna is found on the right side of the tablet PC.

1–10 Hardware Guide

 $^{^{\}dagger}\text{For optimal performance, keep the antennas free from obstructions while you are using an internal wireless LAN.$

Top: Connectors and Jacks



Со	mponent	Description
0	USB connector	Connects an optional USB 2.0- or 1.1-compliant device.*
2	External MultiBay connector	Connects an optional USB 2.0- or 1.1-compliant device.*
8	RJ-11 telephone jack	Connects a modem cable.
4	RJ-45 network jack	Connects an Ethernet network cable.
6	External monitor connector	Connects an optional VGA external monitor or projector.
6	AC power connector	Connects an AC adapter or an optional DC cable, Auto/Air Cable, or Automobile Power Adapter/Charger.

*If an optional External MultiBay is connected to the USB connector, the External MultiBay must also be connected to external power. If an External MultiBay is connected to the External MultiBay connector, it is not necessary to connect the External MultiBay to external power.

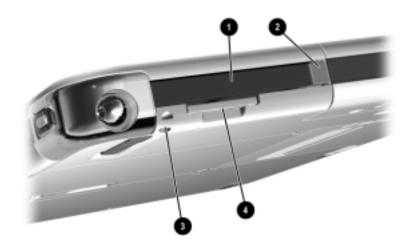
Top: Pen Holder and LAN Connection Lights



Со	mponent	Description
0	Pen holder (shown with pen ② inserted)	Secures the pen to the tablet PC.
8	LAN connection lights (2)	Both lights off: The tablet PC is not connected to a LAN.
		Both lights on: The tablet PC is connected to a LAN with a 100 Mbps link.
		Green light on and yellow light off: The tablet PC is connected to a LAN with a 10 Mbps link.

1–12 Hardware Guide

Top: Card Slots, Buttons and Tether Eyelet



Component		Description
0	PC Card slot	Supports an optional Type I or Type II 32-bit (CardBus) or 16-bit PC Card.
2	PC Card eject button	Ejects an optional PC Card from the PC Card slot.
8	Tablet PC tether eyelet	Used with the tether eyelet on the pen, enables you to tether the pen to the tablet PC.
4	SD (Secure Digital) Card slot	Supports an optional SD Card.

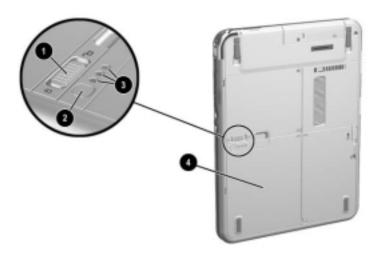
Back: Attachment Features and Hard Drive Bay



Component		Description
0	Docking connector	Connects the tablet PC to an optional Docking Station.
2	Docking restraint latch recess	Accepts the docking restraint latch on an optional Docking Station to secure the tablet PC to the Docking Station.
6	Attachment release switch	Releases an attachment, such as the portfolio, a screen protector*, or an optional tablet PC keyboard, from the universal attachment slots on the tablet PC.
4	Hard drive bay	Holds the system hard drive.
6	Hard drive bay retaining screws (2)	Secure the hard drive bay cover to the tablet PC.
*A screen protector is included with an optional Tablet PC Docking Station.		

1–14 Hardware Guide

Back: Battery Bay



Со	mponent	Description
0	Battery pack release latch	Releases the battery pack from the battery bay.
2	Battery quick check button on battery pack*	Activates the battery quick check lights (see below) which display how much charge remains in the battery pack.
©	Battery quick check lights (3) on battery pack*	On: Each light represents a percent of a full charge. For example, when all 3 lights are on, the battery pack is fully charged. Flashing: When one light is flashing, less than 5 percent of a full charge remains in the battery pack.
4	Battery bay	Holds the battery pack. Also, contains one battery pack security screw.*

^{*}This illustration shows the battery pack inserted in the battery bay. The battery pack is included with the tablet PC, but is not inserted. For insertion instructions and information about using a battery pack security screw for protection against theft, see Chapter 3, "Battery Packs."

Back: Memory and Mini PCI Compartment



Component

Description

Memory and mini PCI (Peripheral Component Interconnect) compartment, not visible from the outside of the tablet PC Contains one memory slot for a PC133-compliant memory module. Also, holds an optional mini PCI board such as a wireless board. (A mini PCI board is included with some tablet PC models.)



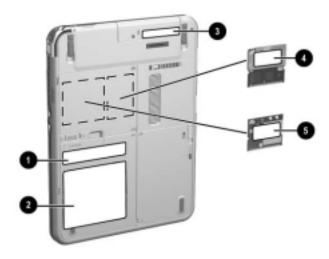
The FCC does not allow unauthorized mini PCI devices to be used in the tablet PC. Installing an unsupported mini PCI device can prevent your tablet PC from operating properly and may result in a warning message. To resume proper operation, remove the unauthorized device. Contact your HP Customer Care Center if a warning message about your mini PCI device displays in error.

Memory and mini PCI compartment retaining screws (2)

Secure the memory and mini PCI compartment cover to the tablet PC.

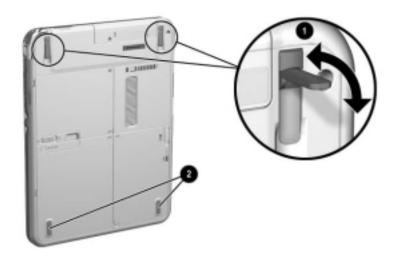
1–16 Hardware Guide

Back: Labels



Component		Description
0	Microsoft Certificate of Authenticity label (inside the battery bay)	Contains the Product Key number. You may need this number to update or troubleshoot the operating system.
2	System label	Provides regulatory information about the tablet PC.
•	Product identification label	Contains the serial number of the tablet PC and a code describing the original configuration of the tablet PC. You will need the serial number if you call HP Customer Care.
4	Modem approvals label	Lists the countries in which the modem has been approved for use.*
6	Wireless certification label (on mini PCI wireless device)	Lists the countries in which the wireless device has been approved for use.*
*You may need this information when traveling.		

Back: Tilt Feet and Pad Feet



Со	mponent	Description
0	Tilt feet (2)	While the tablet PC is being used in portrait orientation as a free-standing tablet, can elevate the top of the tablet PC to provide a comfortable writing and viewing angle.
2	Pad feet (2)	Stabilize the tablet PC when the tablet PC is placed as a free-standing tablet on a flat surface.

1–18 Hardware Guide

Additional Tablet PC Standard Components

The components included with the tablet PC vary by geographical region and the tablet PC hardware ordered. The following illustrations and tables identify the standard external components included with most tablet PC models.

These illustrations do not include supplementary documentation, supplementary CDs, the portfolio that shipped attached to the tablet PC or an optional keyboard, or optional devices such as PC Cards or drives. The system hard drive ships inside the hard drive bay.

Documentation CDs

Among the CDs included are:

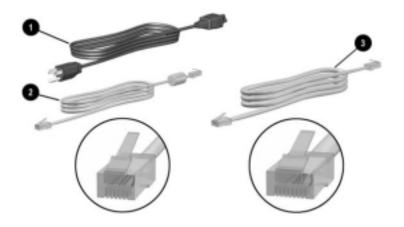
- *Documentation Library* CD, which includes product-specific documentation for the tablet PC, along with modem, networking, safety, and regulatory information.
 - For information about using the *Documentation Library* CD, refer to the printed *Startup Guide* included with the tablet PC.
- Documentation Library Wireless LAN CD, which includes documentation on the wireless devices available for the tablet PC.
- *Documentation Library Bluetooth* CD, which includes the guides and software for Bluetooth wireless connection.



Wireless information may vary depending upon the exact configuration of your tablet PC.

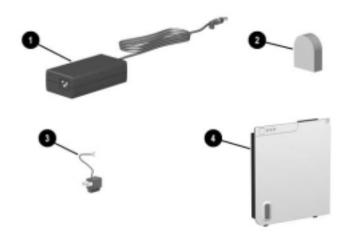
1–20 Hardware Guide

Cords and Cables



Component		Description	
0	Power cord*	Connects the AC adapter to an AC electrical outlet.	
2	Modem cable	Connects the modem to an RJ-11 telephone jack or to a country-specific modem adapter. The modem cable has a <i>6-pin</i> RJ-11 telephone connector at each end.	
8	Network cable	Connects the tablet PC to an RJ-45 (Ethernet network) jack. (A network cable is included with network models only.) The network cable has an 8-pin RJ-45	
*Po	wer cords vary in app	network connector at each end.	

Adapters and Accessories



Component		Description
0	AC adapter*	Converts AC power to DC power.
2	Country-specific modem adapter (included by region as required with modem models only)	Adapts the modem cable to a non-RJ-11 telephone jack.
8	Japan-specific outlet adapter (Japan only)	Connects the AC adapter to a 2-prong electrical outlet.
4	Battery pack	Runs the tablet PC when the tablet PC is not connected to external power.
*AC	adapters vary in appearance b	y region. The only AC adapter that

*AC adapters vary in appearance by region. The only AC adapter that should be used with the tablet PC is the AC adapter included with the tablet PC or a replacement AC adapter provided by HP.

1–22 Hardware Guide

Tablet PC Keyboard Components

This section identifies the hardware components of an optional tablet PC keyboard.

- For information about detaching, attaching, and adjusting the keyboard, see Chapter 8, "External Device Connections."
- For information about using the keyboard, see Chapter 2, "Pen, Command Controls and Keyboards."

Front: Lights and Pointing Device



Component		Description
0	Num lock light	On: The keypad is on.
2	Caps lock light	On: Caps lock is on.
8	Pointing stick	Moves the pointer and selects and activates items on the screen.
4	Left and right pointing stick buttons	Function like the left and right buttons on an external mouse.

Front: Keys



Component		Description
exam		Perform system and application tasks. For example, in Windows and many applications, pressing F1 opens a Help file.
		■ To enter an F11 function, press F11/F12.
		■ To enter an F12 function, press Fn+F11/F12.
2	Fn	Combines with other keys to perform system tasks. For example, pressing Fn+num lk turns on the keypad.
8	Keypad keys (15)*	Can be used like the keys on an external numeric keypad.
4	Microsoft logo key	Displays the Windows Start menu.
6	Applications key	Displays a shortcut menu for an item beneath the pointer.
	r more information abo	out using keypad keys, see Chapter 2, "Pen,

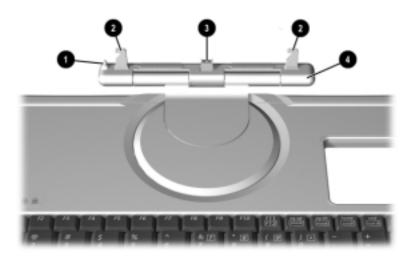
1–24 Hardware Guide

Front: Positioning and Security Features



Со	mponent	Description
0	Rotation disk	Rotates the tablet PC while it is attached to the keyboard.
2	Docking alignment notches (4)	Help guide the tablet PC and keyboard into an optional Docking Station.
•	Keyboard latch	When the tablet PC and keyboard are closed, locks the tablet PC to the keyboard:
		Slide to the right to lock the tablet PC to the keyboard.
		Slide to the left to unlock the tablet PC from the keyboard.

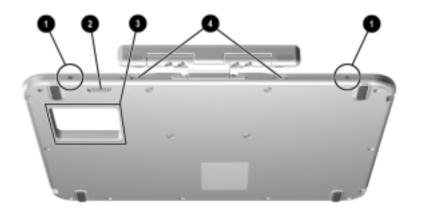
Тор



Со	mponent	Description
0	Alignment key	Inserts into the alignment key slot on the tablet PC to safeguard attachment procedures. For example, matching the alignment key to the alignment key slot on the tablet PC helps you correctly orient the tablet PC to the keyboard as you attach the tablet PC to the keyboard.
2	Keyboard hooks (2)	Secure the tablet PC to the keyboard.
8	Keyboard connector	Connects the tablet PC to the keyboard.
4	Tilt adjustment	Tilts the tablet PC upward or downward while it is connected to the keyboard.

1–26 Hardware Guide

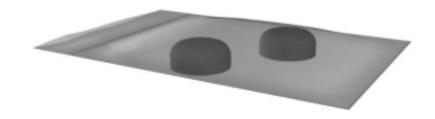
Back



Component		Description
0	Screen protector slots (2)	Secure a screen protector* to the keyboard.
2	Attachment release switch	Releases attachments, such as the portfolio, a screen protector*, or the tablet PC, from the keyboard.
8	Docking connector pass-through	Allows the tablet PC to be connected to an optional Docking Station while the tablet PC is attached to the keyboard.
4	Universal attachment slots (2)	Secure the portfolio, a screen protector*, or the tablet PC to the keyboard.

^{*}A screen protector is included with an optional Tablet PC Docking Station.

Additional Keyboard Standard Component



Component	Description
Spare pointing stick caps (2)	Replace a worn pointing stick cap.

1–28 Hardware Guide