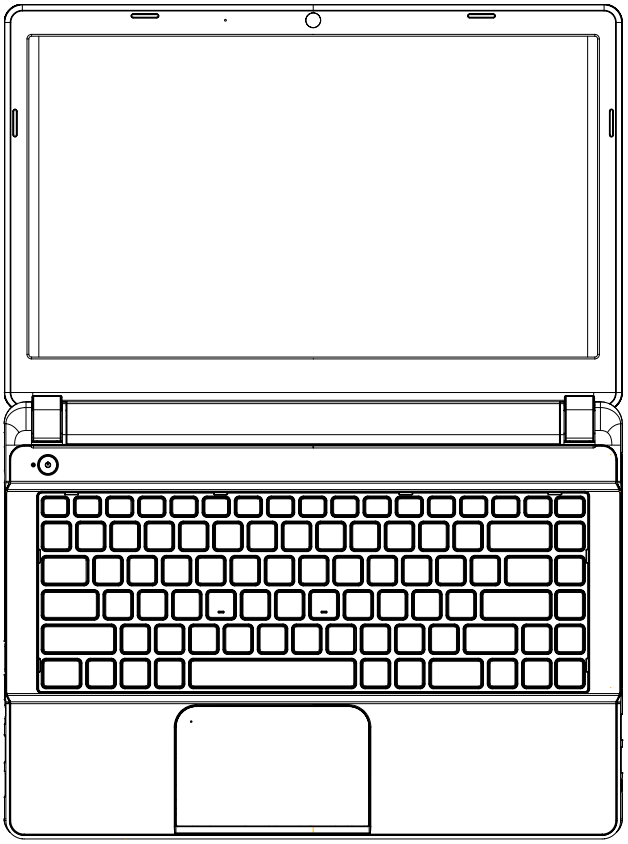
Laptop

Hardware User Guide



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Notes

1. Introducing the Laptop

About This User Guide
Safety Precautions
Transportation Precautions
Preparing your Laptop

NOTE: Photos and icons in this document are used for artistic purposes only and do not show what is actually used in the product itself.

1 Introducing the Laptop

General Overview

This document provides information on the various components in the Laptop and how to use them. The following are the major sections of this document:

1. Introducing the Laptop
   Introduces you to the Laptop and its documentation.

2. Knowing the Parts
   Gives you information on the Laptop's components.

3. Getting Started
   Gives you information on getting started with the Laptop.

4. Using the Laptop
   Gives you information on using the Laptop's components.

Notes For The User

A few notes and warnings in bold are used throughout this document that you should be aware of in order to complete certain tasks safely and completely. These notes have different degrees of importance as described below:

NOTE: Tips and information for special situations.

TIP: Tips and useful information for completing tasks.

IMPORTANT! Vital information that must be followed to prevent damage to data, components, or persons.

WARNING! Important information that must be followed for safe operation.

< > [ ] **Text enclosed in < > or [ ] represents a key on the keyboard; do not actually type the < > or [ ] and the enclosed letters.**

Safety Precautions

The following safety precautions will increase the life of the Laptop. Follow all precautions and instructions. Except as described in this document, refer all servicing to qualified personnel. Do not use damaged power cords, accessories, or other peripherals. Do not use strong solvents such as thinners, benzene, or other chemicals on or near the surface.

IMPORTANT! Disconnect the AC power and remove the battery pack(s) before cleaning. Wipe the Laptop using a clean cellulose sponge or chamois cloth dampened with a solution of nonabrasive detergent and a few drops of warm water and remove any extra moisture with a dry cloth.

SAFE TEMP: This Laptop should only be used in environments with ambient temperatures between 5°C (41°F) and 35°C (95°F).

DO NOT carry or cover a Laptop that is powered ON with any materials that will reduce air circulation such as a carrying bag.

DO NOT press or touch the display panel. Do not place together with small items that may scratch or enter the Laptop.

DO NOT leave the Laptop on your lap or any part of the body in order to prevent discomfort or injury from heat exposure.

DO NOT expose to strong magnetic or electrical fields. The electromagnetic field may cause the computer to malfunction.

DO NOT place or drop objects on top and do not shove any foreign objects into the Laptop. Do not block air vents.

DO NOT place on uneven or unstable work surfaces. Seek servicing if the casing has been damaged.

DO NOT expose to or use near liquids, rain, or moisture.

DO NOT expose to dirty or dusty environments. DO NOT operate during a gas leak. DO NOT use cut or damaged connection cables.

CAUTION! Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer.

INPUT RATING: Refer to the rating label on the bottom of the Laptop and be sure that your power adapter complies with the rating.

Battery safety warnings:
DO NOT throw the battery in fire.
DO NOT disassemble the battery.
DO NOT short circuit the contacts.
DO NOT handle damaged or leaking batteries.

DO NOT throw the Laptop in municipal waste. Check local regulations for disposal of electronic products.

System Power Rating: **65W, 19V, 3.42A / 90W, 19V, 4.74A**

IMPORTANT: Listening to audio at full volume for long periods of time can damage the user's hearing, to prevent this please adjust audio levels to middle levels.

WARNING: To avoid bodily injury, DO NOT attempt to troubleshoot your Laptop if any of the above conditions have damaged it, the battery, or the battery charger. Instead, unplug your Laptop and contact a qualified computer technician.

Transportation Precautions

To prepare the Laptop for transport, you should turn it OFF and disconnect all external peripherals to prevent damage to the connectors. The hard disk drive's head retracts when the power is turned OFF to prevent scratching of the hard disk surface during transport. Therefore, you should not transport the Laptop while the power is still ON. Close the display panel and check that it is latched securely in the closed position to protect the keyboard and display panel.

IMPORTANT! The Laptop's surface is easily dulled if not properly cared for. Be careful not to rub or scrape the Laptop surfaces.

Cover Your Laptop

Purchase a carrying bag to protect the Laptop from dirt, water, shock, and scratches.

Charge Your Batteries

If you intend to use battery power, be sure to fully charge your battery pack and any optional battery packs before going on long trips. Remember that the power adapter charges the battery pack as long as it is plugged into the computer and an AC power source. Be aware that it takes much longer to charge the battery pack when the Laptop is in use.

Airplane Precautions

Contact your airline if you want to use the Laptop on the airplane. Most airlines will have restrictions for using electronic devices. Most airlines will allow electronic use only between and not during takeoffs and landings.

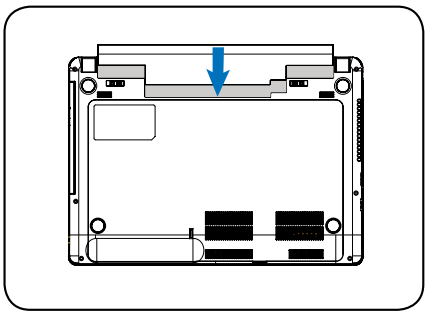
IMPORTANT! There are three main types of airport security devices: X-ray machines (used on items placed on conveyor belts), magnetic detectors (used on people walking through security checks), and magnetic wands (hand-held devices used on people or individual items). You can send your Laptop and diskettes through airport X-ray machines. However, it is recommended that you do not send your Laptop or diskettes through airport magnetic detectors or expose them to magnetic wands.

Preparing your Laptop

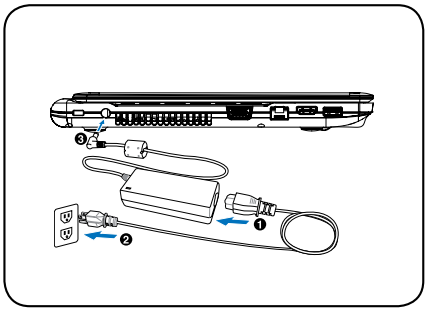
These are only quick instructions for using your Laptop. Read the later pages for detailed information on using your Laptop.

IMPORTANT! Selected models may feature display panels that do not fully open to a 180-degree angle, with such models do not attempt to force the display panel beyond its limit as it may cause damage to the device.

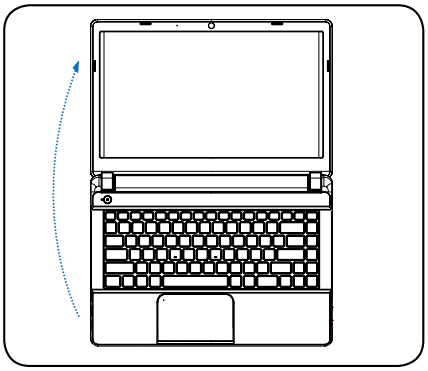
1. Install the battery pack



2. Connect the AC Power Adapter

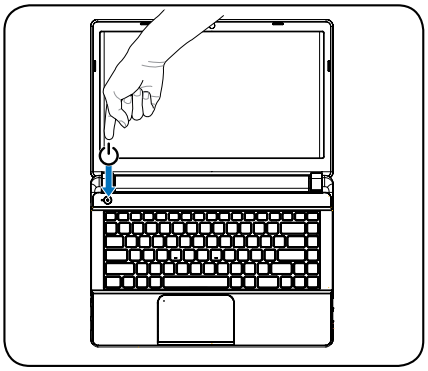


3. Open the Display Panel



IMPORTANT! When opening, do not force the display panel down to the table or else the hinges may break! Never lift the Laptop by the display panel!

4. Turn ON the Laptop



The power switch turns the Laptop ON and OFF or puts the Laptop into sleep or hibernation modes. Actual behavior of the power switch can be customized in Windows Desktop > Settings > Control Panel > System and Security > Power Options.

Notes

2. Knowing the Parts

Basic sides of the Laptop

NOTE: Photos and icons in this document are used for artistic purposes only and do not show what is actually used in the product itself.

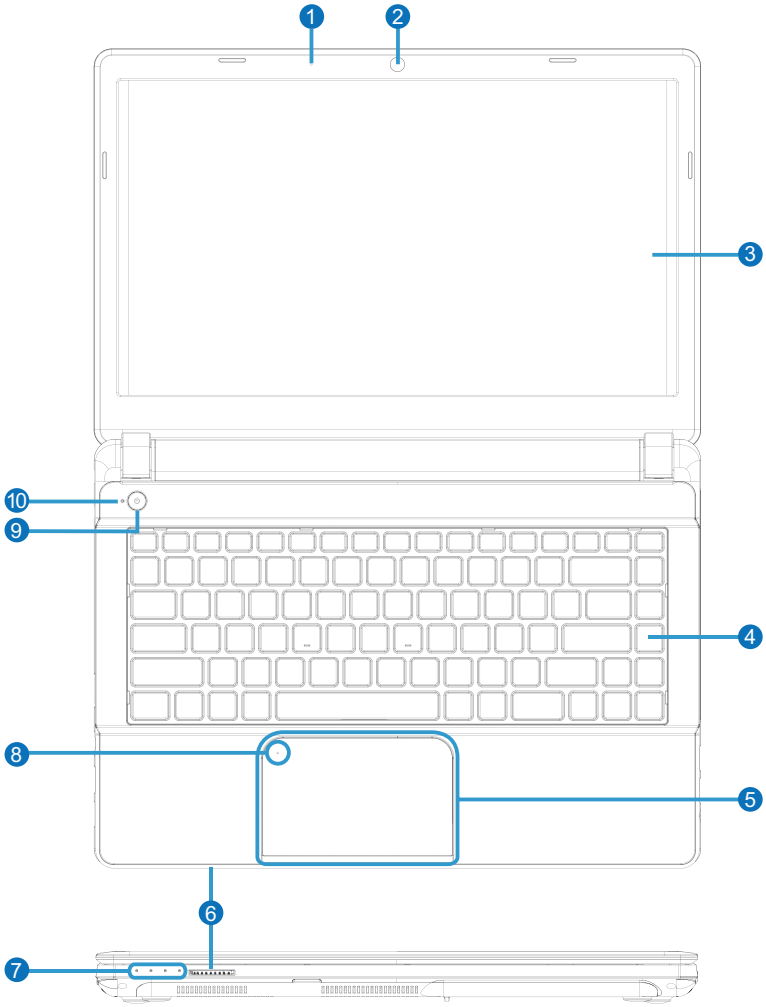
2 Knowing the Parts

Top and Front Sides

Refer to the diagram below to identify the components on these sides of the Laptop.

NOTE: The keyboard will be different for each territory.

IMPORTANT! Selected models may feature display panels that do not fully open to a 180-degree angle, with such models do not attempt to force the display panel beyond its limit as it may cause damage to the device.



1 **Microphone (Built-in)**

The built-in mono microphone can be used for video conferencing, voice narrations, or simple audio recordings.

2 **Camera**

The built-in camera allows picture taking or video recording. Can be used with video conferencing and other interactive applications.

3 **Display Panel**

The Laptop uses an ultra-clear flat panel which provides excellent viewing like that of desktop monitors without any harmful radiation or flickering, so it is easier on the eyes. Use a soft cloth without chemical liquids (use plain water if necessary) to clean the display panel. WARNING: The display panel is fragile. Do not to bend or press the panel.

4 **Keyboard**

The keyboard provides keys with comfortable travel (depth at which the keys can be depressed) and palm rest for both hands. A Windows function key is provided to help ease navigation in the Windows operating system.

5 **Touchpad and Buttons**

The touchpad with its buttons is a pointing device that provides the same functions as a desktop mouse. A software-controlled scrolling function is available after setting up the included touchpad utility to allow easy Windows or web navigation.

6 **Flash Memory Card Reader** MMC.SD

This Laptop has a built-in high-speed memory card reader that can conveniently read from and write to many flash memory cards used in devices such as digital cameras, MP3 players, mobile phones, and PDAs.

7 **Status Indicators**

Status indicators represent various hardware/software conditions. See indicator details in Section 3.

8 **Touchpad Lock Indicator**

The touchpad lock indicator lights when the touchpad lock is turned ON and the touchpad is disabled. **NOTE: Double-tapping the icon on the touchpad enables or disables the touchpad lock.**

9 **Power Switch**

The power switch turns the Laptop ON and OFF or puts the Laptop into sleep or hibernation modes. Actual behavior of the power switch can be customized in Windows Control Panel “Power Options.”

10 **Power Indicator**

The power indicator lights when the Laptop is turned ON and blinks slowly when the Laptop is in the Suspend-to-RAM (Sleep) mode. This indicator is OFF when the Laptop is turned OFF or in the Suspend-to-Disk (Hibernation) mode.

Right Side

Refer to the diagram below to identify the components on this side of the Laptop.

1 **Headphone Output / Microphone Input Combo Jack**

The stereo combo jack (3.5mm) is used to connect the Laptop to amplified speakers, headphones, or a microphone. Using this jack automatically disables the built-in speakers.

2 **USB Ports (2.0/1.1)**

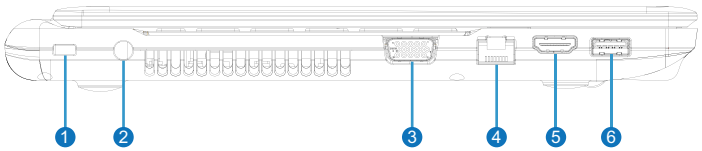
USB (Universal Serial Bus) allows many devices to run simultaneously on a single computer, with some peripherals acting as additional plug-in sites or hubs. USB supports hot-swapping of devices so that most peripherals can be connected or disconnected without restarting the computer.

3 **Optical Drive**

The Laptop comes in various models with different optical drives. The Laptop's optical drive may support compact discs (CD) and/or digital video discs (DVD) and may have recordable (R) or re-writable (RW) capabilities. See the marketing specifications for details on each model.

Left Side

Refer to the diagram below to identify the components on this side of the Laptop.



1 Kensington® Lock Port

The Kensington® lock port allows the Laptop to be secured using Kensington® compatible Laptop security products. These security products usually include a metal cable and lock that prevent the Laptop to be removed from a fixed object. Some may also include a motion detector to sound an alarm when moved.

2 Power (DC) Input

The supplied power adapter converts AC power to DC power for use with this jack. Power supplied through this jack supplies power to the Laptop and charges the internal battery pack. To prevent damage to the Laptop and battery pack, always use the supplied power adapter.

CAUTION: The adapter may become warm to hot when in use. Be sure not to cover the adapter and keep it away from your body.

3 Display (Monitor) Output

The 15-pin D-sub monitor port supports a standard VGA-compatible device such as a monitor or projector to allow viewing on a larger external display.

4 LAN Port

The RJ-45 LAN port with eight pins is larger than the RJ-11 modem port and supports a standard Ethernet cable for connection to a local network. The built-in connector allows convenient use without additional adapters.

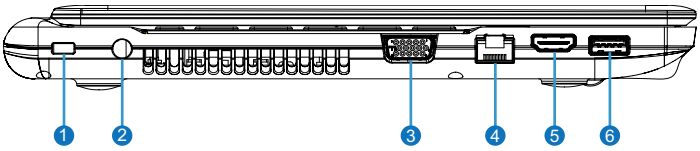
5 HDMI Port

HDMI (High-Definition Multimedia Interface) is an uncompressed all-digital audio/video interface between any audio/video source, such as a set-top box, DVD player, and A/V receiver and an audio and/or video monitor, such as a digital television (DTV). Supports standard, enhanced, or high-definition video, plus multi-channel digital audio on a single cable. It transmits all ATSC HDTV standards and supports 8-channel digital audio.

(continued on the next page)

Left Side (cont.)

Refer to the diagram below to identify the components on this side of the Laptop.



6 **USB Port 3.0 *with High-Powered USB Port capability***

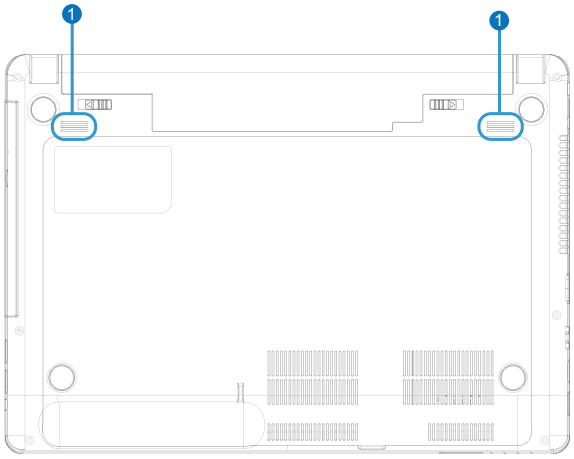
USB (Universal Serial Bus) allows many devices to run simultaneously on a single computer, with some peripherals acting as additional plug-in sites or hubs. USB supports hot-swapping of devices so that most peripherals can be connected or disconnected without restarting the computer.

The High-Powered USB Port function allows the USB port to charge at a higher current (with a maximum current of 2.5A) than traditional USB ports when the Laptop is in Suspend/Hibernate mode or when it is powered OFF.

- When the Laptop is powered ON and in a normal power state, the port will function as a traditional USB port with normal charging (with a maximum of 500mA) and normal data transmission.
- The High-Powered charging function will not activate if the battery level is critically low and the AC adapter is not plugged in.
- The High-Powered USB Port does not support USB wakeup.
- The High-Powered charging function can be enabled or disabled in BIOS setup.

Bottom Side

Refer to the diagram below to identify the components on this side of the Laptop.



1 **Audio Speakers**

The built-in stereo speaker system allows you to hear audio without additional attachments. The multimedia sound system features an integrated digital audio controller that produces rich, vibrant sound (results improved with external stereo headphones or speakers). Audio features are software controlled.

Notes

3. Getting Started

Power System
Special Keyboard Functions
Status Indicators

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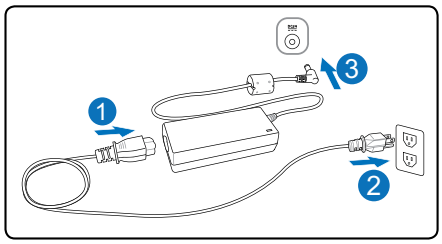
Power System

Using AC Power



The Laptop power is comprised of two parts, the power adapter and the battery power system. The power adapter converts AC power from a wall outlet to the DC power required by the Laptop. Your Laptop comes with a universal AC-DC adapter. That means that you may connect the power cord to any 100V-120V as well as 220V-240V outlets without setting switches or using power converters. Different countries may require that an adapter be used to connect the provided US-standard AC power cord to a different standard. Most hotels will provide universal outlets to support different power cords as well as voltages.

TIP: You can buy travel kits for the Laptop that includes power and modem adapters for almost every country.

With the AC power cord connected to the AC-DC converter, connect the AC power cord to an AC outlet (preferably with surge-protection) and then connect the DC plug to the Laptop. Connecting the AC-DC adapter to the AC outlet first allows you to test the AC outlet's power and the AC-DC converter itself for compatibility problems before connecting the DC power to the Laptop. The power indicator on the adapter (if available) will light if the power is within accepted ranges. If you use a power strip with your AC adapter, ensure that the total ampere rating of the products plugged in to the power strip does not exceed the ampere rating of the power strip.

IMPORTANT! Damage may occur if you use a different adapter to power the Laptop or use the Laptop's adapter to power other electrical devices. If there is smoke, burning scent, or extreme heat coming from the AC-DC adapter, seek servicing. Seek servicing if you suspect a faulty AC-DC adapter. You may damage both your battery pack(s) and the Laptop with a faulty AC-DC adapter.

NOTE: This Laptop may come with either a two or three-prong plug depending on territory. If a three-prong plug is provided, you must use a grounded AC outlet or use a properly grounded adapter to ensure safe operation of the Laptop DO NOT remove the grounding prong from the power cable plug. If you use a power extension cable, use the appropriate type, two-prong or three-prong, to mate with the AC adapter power cable.

WARNING! THE POWER ADAPTER MAY BECOME WARM TO HOT WHEN IN USE. BE SURE NOT TO COVER THE ADAPTER AND KEEP IT AWAY FROM YOUR BODY.

IMPORTANT! When in use plug the AC adapter cord into an AC outlet that is easily accessible at all times and place the adapter in a ventilated area, such as a desk top or on the floor. DO NOT place heavy objects on the AC adapter or cover it with papers or other items that will reduce cooling; also, DO NOT use the AC adapter inside a carrying case.

Using Battery Power

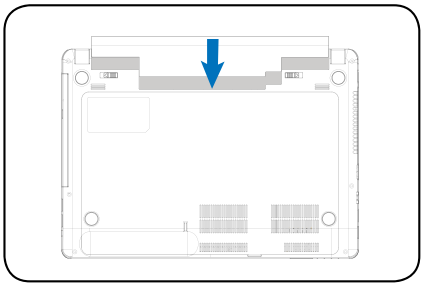
The Laptop is designed to work with a removable battery pack. The battery pack consists of a set of battery cells housed together. A fully charged pack will provide several hours of battery life, which can be further extended by using power management features through the BIOS setup. Additional battery packs are optional and can be purchased separately through a Laptop retailer.

Installing and Removing the Battery Pack

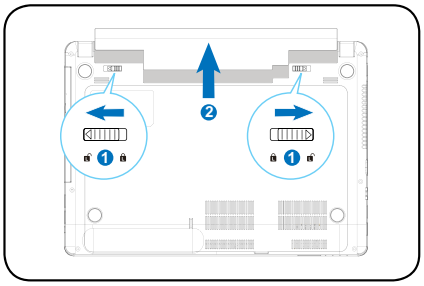
Your Laptop may or may not have its battery pack installed. If your Laptop does not have its battery pack installed, use the following procedures to install the battery pack.

IMPORTANT! Never attempt to remove the battery pack while the Laptop is turned ON, as this may result in the loss of working data.

To install the battery pack:



To remove the battery pack:



IMPORTANT! Only use battery packs and power adapters supplied with this Laptop or specifically approved by the manufacturer or retailer for use with this model or else damage may occur to the Laptop.

Battery Care

The Laptop's battery pack, like all rechargeable batteries, has a limit on the number times it can be recharged. The battery pack's useful life will depend on your environment temperature, humidity, and how your Laptop is used. It is ideal that the battery be used in a temperature range between 5˚C and 35˚C (41˚F and 95˚F). You must also take into account that the Laptop's internal temperature is higher than the outside temperature. Any temperatures above or below this range will shorten the life of the battery. But in any case, the battery pack's usage time will eventually decrease and a new battery pack must be purchased from an authorized dealer for this Laptop. Because batteries also have a shelf life, it is not recommended to buy extras for storing.

WARNING! For safety reasons, DO NOT throw the battery in fire, DO NOT short circuit the contacts, and DO NOT disassemble the battery. If there is any abnormal operation or damage to the battery pack caused by impact, turn OFF the Laptop and contact an authorized service center.

3 Getting Started

Powering ON the Laptop

The Laptop's power-ON message appears on the screen when you turn it ON. If necessary, you may adjust the brightness by using the hot keys. If you need to run the BIOS Setup to set or modify the system configuration, press [F2] upon bootup to enter the BIOS Setup. If you press [Tab] during the splash screen, standard boot information such as the BIOS version can be seen. Press [ESC] and you will be presented with a boot menu with selections to boot from your available drives.

NOTE: Before bootup, the display panel flashes when the power is turned ON. This is part of the Laptop's test routine and is not a problem with the display.

IMPORTANT! To protect the hard disk drive, always wait at least 5 seconds after turning OFF your Laptop before turning it back ON.

WARNING! DO NOT carry or cover a Laptop that is powered ON with any materials that will reduce air circulation such as a carrying bag.

Power Options

The power switch turns ON and OFF the Laptop or puts the Laptop into sleep or hibernation modes. Actual behavior of the power switch can be customized in Windows Control Panel "Power Options."

For other options, such as "Restart, Sleep, or Shut Down," click the power icon in the Settings menu of the Windows sidebar.

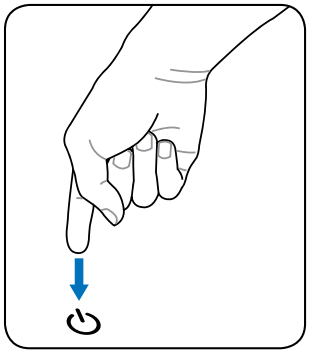
Restarting or Rebooting

After making changes to your operating system, you may be prompted to restart the system. Some installation processes will provide a dialog box to allow restart. To restart the system manually, choose Restart.

Emergency Shutdown

In case your operating system cannot properly turn OFF or restart, there is a manual way to shutdown your Laptop:

Hold the power button ⏻ over 4 seconds

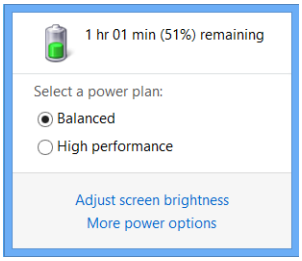


IMPORTANT! Do not use emergency shutdown while data is being written; doing so can result in loss or destruction of your data.

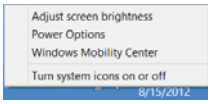
Checking Battery Power

The battery system implements the Smart Battery standard under the Windows environment, which allows the battery to accurately report the amount of charge left in the battery. A fully-charged battery pack provides the Laptop a few hours of working power. But the actual figure varies depending on how you use the power saving features, your general work habits, the CPU, system memory size, and the size of the display panel.

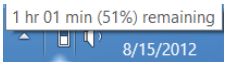
NOTE: Screen captures shown here are examples only and may not reflect what you see in your system.



Left-click the battery icon.



Right-click the battery icon.



Cursor over the battery icon without power adapter.

Cursor over the battery icon with power adapter.

NOTE: You will be warned when battery power is low. If you continue to ignore the low battery warnings, the Laptop eventually enters suspend mode (Windows default uses STR).

WARNING! Suspend-to-RAM (STR) does not last long when the battery power is depleted. Suspend-to-Disk (STD) is not the same as power OFF. STD requires a small amount of power and will fail if no power is available due to complete battery depletion or no power supply (e.g. removing both the power adapter and battery pack).

Charging the Battery Pack

Before you use your Laptop on the road, you will have to charge the battery pack. The battery pack begins to charge as soon as the Laptop is connected to external power using the power adapter. Fully charge the battery pack before using it for the first time. A new battery pack must completely charge before the Laptop is disconnected from external power. It takes a few hours to fully charge the battery when the Laptop is turned OFF and may take twice the time when the Laptop is turned ON. The battery status indicator on the Laptop turns OFF when the battery pack is charged.

NOTE: The battery stops charging if the temperature is too high or the battery voltage is too high.

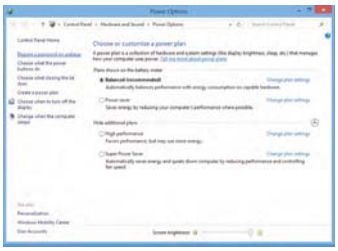
WARNING! Do not leave the battery pack discharged. The battery pack will discharge over time. If not using a battery pack, it must continued to be charged every three months to extend recovery capacity or else it may fail to charge in the future.

Power Management Modes

Power Options

The Laptop has a number of automatic or adjustable power saving features that you can use to maximize battery life and lower Total Cost of Ownership (TCO). You can control some of these features through the Power menu in the BIOS Setup. ACPI power management settings are made through the operating system. The power management features are designed to save as much electricity as possible by putting components into a low power consumption mode as often as possible but also allow full operation on demand.

Sleep and Hibernate



Power management settings can be found in Windows Desktop > Settings > Control Panel > System and Security > Power Options. In System Settings, you can define “Sleep/Hibernate” or “Shut Down” for closing the display panel or pressing the power button. “Sleep” and “Hibernate” saves power when your Laptop is not in use by turning OFF certain components. When you resume your work, your last status (such as a document scrolled down half way or email typed half way) will reappear as if you never left. “Shut Down” will close all applications and ask if you want to save your work if any are not saved.

Sleep is the same as Suspend-to-RAM (STR). This function stores your current data and status in RAM while many components are turned OFF. Because RAM is volatile, it requires power to keep (refresh) the data. Click the power icon in the Settings menu of the Windows sidebar to see this option. You can also use the keyboard shortcut [Fn F1] to activate this mode. Recover by pressing any keyboard key except [Fn]. (NOTE: The power indicator will blink in this mode.)

Hibernate is the same as Suspend-to-Disk (STD) and stores your current data and status on the hard disk drive. By doing this, RAM does not have to be periodically refreshed and power consumption is greatly reduced but not completely eliminated because certain wake-up components like LAN needs to remain powered. “Hibernate” saves more power compared to “Sleep”. Click the power icon in the Settings menu of the Windows sidebar to see this option. Recover by pressing the power button. (NOTE: The power indicator will be OFF in this mode.)

Thermal Power Control

There are three power control methods for controlling the Laptop’s thermal state. These methods cannot be configured by the user and should be known in case the Laptop should enter these states. The following temperatures represent the chassis temperature (not CPU).

- The fan turns ON for active cooling when temperature reaches the safe upper limit.
- The CPU decreases speed for passive cooling when the temperature exceeds the safe upper limit.
- The system shuts down for critical cooling when temperature exceeds the maximum safe upper limit.

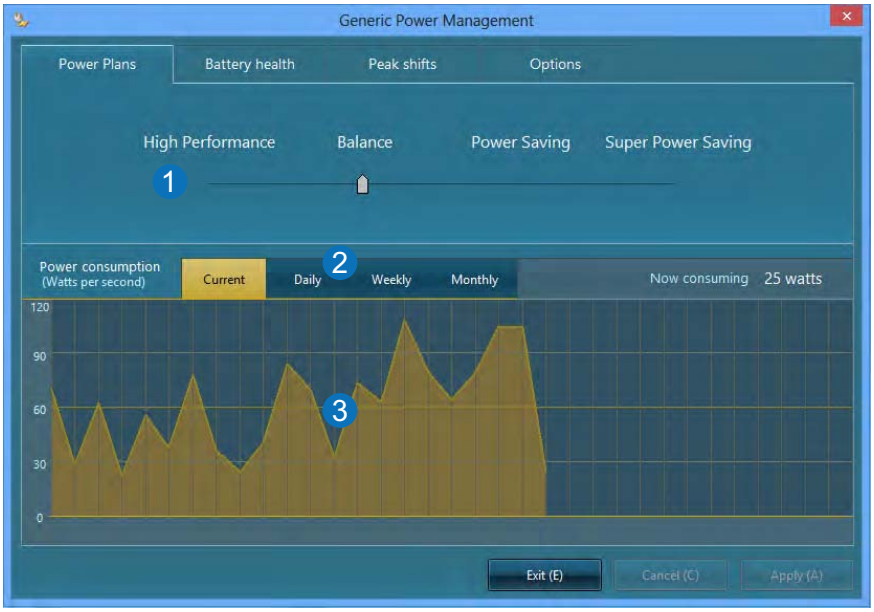
Power Manager Utility

The Power Manager Utility provides the user with an integrated power management tool that:

- Features an integrated user interface which lets the user easily control/set a power plan.
- Provides a battery maintenance tool to extend battery life.
- Provides an add-on value tool, such as the peak-shift utility, for saving electricity.

Power Plans (*for monitoring power consumption*)

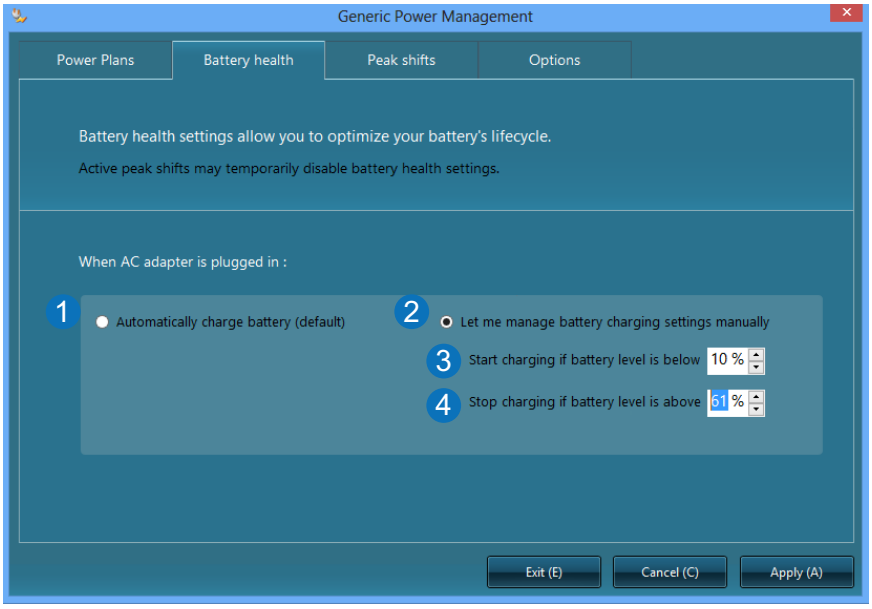
Power Plans shows real-time power consumption for the power mode selected by the user.



1. Choose the specific power plan you want to view the power consumption chart for here.
2. Choose the time frame you want for the power consumption chart here.
3. The power consumption chart will be displayed in this area.

Battery Health

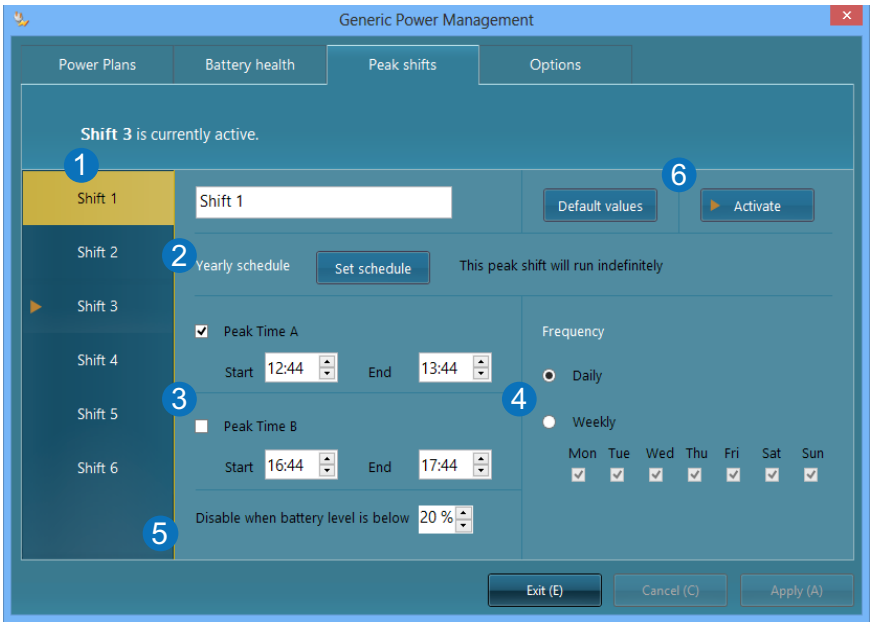
Battery Health provides the user with tools to extend the life of the battery by allowing the user to select battery charging behavior when the AC adapter is plugged in. When peak-shift is enabled by the user, this option will not function.



1. Choose this option if you want the battery to continuously charge until full.
2. Choose this option if you want to manually set battery charging behavior.
3. Set the battery level at which to start charging here. This field cannot be over 96% and cannot be lower than the low battery warning level set by the operating system.
4. Set the battery level at which to stop charging here.

Peak Shift

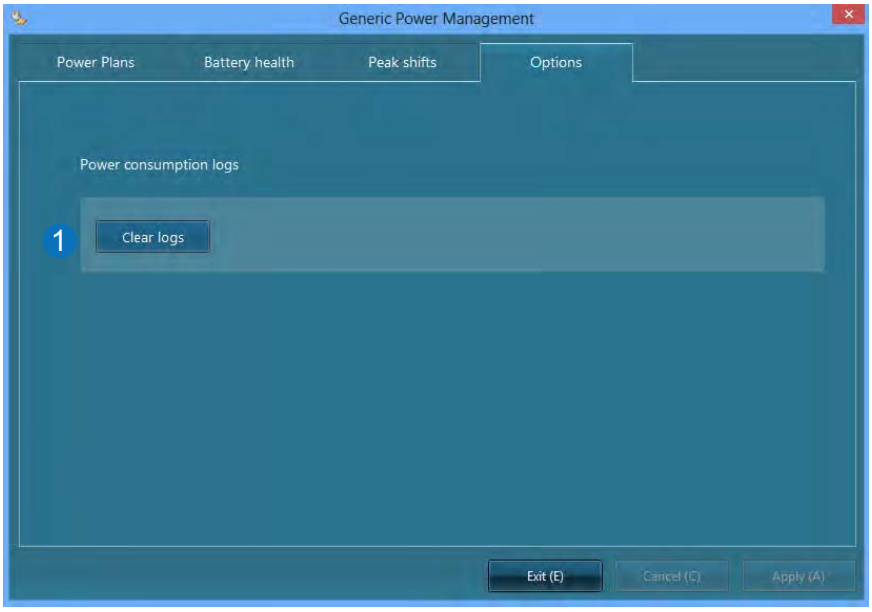
Peak shift allows the user to set specific time periods in which the Laptop will only use battery power even when the AC adapter is plugged in order to stop the Laptop from using energy from the power socket during periods of peak power demand. When the adapter is plugged in and peak shift is activated, Windows will still show that the adapter is plugged in.



1. Choose an individual peak shift you want to activate or edit.
2. Choose this option if you want the selected peak shift to only be activated for a specific time span. A menu to select start and end dates will open if this option is chosen.
3. Choose the start and end time for the selected peak shift, you may choose up to two different time periods for each individual peak shift.
4. Choose how frequently the selected peak shift will occur.
5. Choose the minimum battery level at which the battery will start charging during the peak shift.
6. Choose whether to activate or reset the selected peak shift.

Options

Options allows the user additional functions:



1 You can clear your power consumption logs here.

Special Keyboard Functions

Colored Hot Keys

The following defines the colored hot keys on the Laptop's keyboard. The colored commands can only be accessed by first pressing and holding the function key while pressing a key with a colored command.

NOTE: The Hot Key locations on the function keys may vary depending on model but the functions should remain the same.

Fn F1	"Zz" Icon (F1): Places the Laptop in suspend mode (either Save-to-RAM or Save-to-Disk depending on sleep button setting in power management setup).
Fn F2	Radio Tower Icon (F2): Toggles the internal wireless LAN & Bluetooth ON or OFF. When enabled, the corresponding wireless indicator will light. Windows software settings are necessary to use the wireless LAN or Bluetooth.
Fn F4	Lightning Icon (F4): Toggles the Laptop between various power management modes. The power management modes control many aspects of the device to maximize performance versus battery time.
Fn F5	Dim Sun Icon (F5): Decreases the display brightness
Fn F6	Bright Sun Icon (F6): Increases the display brightness
Fn F7	LCD Icon (F7): Toggles the display panel ON and OFF. (On certain models; stretches the screen area to fill the entire display when using low resolution modes.)
Fn F8	LCD/Monitor Icons (F8): Toggles between the Laptop's LCD display and an external monitor in this series: Laptop LCD -> External Monitor -> Both. (This function does not work in 256 Colors, select High Color in Display Property Settings.) NOTE: Must connect an external monitor "before" booting up.
Fn F9	Crossed-out Touchpad (F9): Toggles the built-in touchpad LOCKED (disabled) and UNLOCKED (enabled). Locking the touchpad will prevent you from accidentally moving the cursor while typing and is best used with an external pointing device such as a mouse. **NOTE: Double-tapping the icon on the touchpad also enables or disables the touchpad lock.**

(continued on the next page)

Colored Hot Keys (cont.)

Fn + F10	Speaker Icons (F10): Toggles the speakers ON and OFF (only in Windows OS)
Fn + F11	Speaker Down Icon (F11): Decreases the speaker volume (only in Windows OS)
Fn + F12	Speaker Up Icon (F12): Increases the speaker volume (only in Windows OS)
Fn + Ins Num Lk	Num Lk (Ins): Toggles the numeric keypad (number lock) ON and OFF. Allows you to use a larger portion of the keyboard for number entering.
Fn + Del Scr Lk	Scr Lk (Del): Toggles the “Scroll Lock” ON and OFF. Allows you to use a larger portion of the keyboard for cell navigation.
Fn + ↑	Stop Icon (↑): Stops a media player during playback.
Fn + ↓	Play/Pause Icon (↓): Plays or pauses media in the media player.
Fn + ←	Previous Icon (←): Moves the media to the previous section/track during playback.
Fn + →	Next Icon (→): Moves the media to the next section/track during playback.

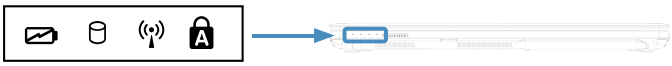
Microsoft Windows Keys

There are two special Windows keys on the keyboard as described below.

The key with the Windows Logo toggles between the Windows Start screen and the most recently opened window.

The other key, that looks like a Windows menu, activates the properties menu and is equivalent to pressing the right mouse button on a Windows object.

Status Indicators



Battery Charge Indicator

The battery charge indicator shows the status of the battery's power as follows:

ON: The Laptop's battery is charging when AC power is connected.
OFF: The Laptop's battery is charged or completely drained.
Blinking: Battery power is less than 10% and the AC power is not connected.

Drive Activity Indicator

Indicates that the Laptop is accessing one or more storage device(s) such as the hard disk. The light flashes proportional to the access time.

Wireless Indicator

This is only applicable on models with built-in wireless LAN. When the built-in wireless LAN is enabled, this indicator will light. (Windows software settings are necessary.)

Capital Lock Indicator

Indicates that capital lock [Caps Lock] is activated when lighted. Capital lock allows some of the keyboard letters to type using capitalized letters (e.g. A, B, C). When the capital lock light is OFF, the typed letters will be in the lower case form (e.g. a,b,c).

Notes

4. Using the Laptop

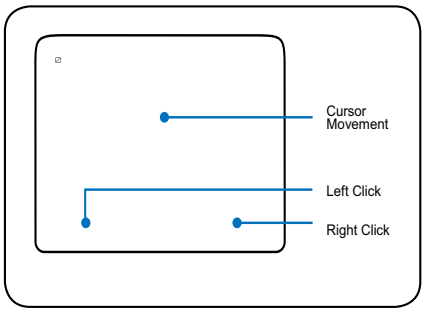
Pointing Device
Storage Devices
Connections

NOTE: Photos and icons in this document are used for artistic purposes only and do not show what is actually used in the product itself.

Pointing Device

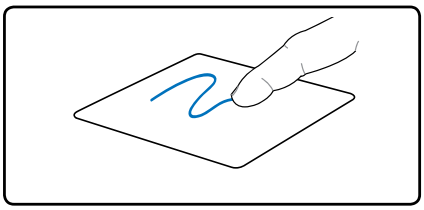
Using the Touchpad

Light pressure with the tip of your finger is all that is required to operate the touchpad. Because the touchpad is electrostatic sensitive, objects cannot be used in place of your fingers. The touchpad's primary function is to move the cursor around or select items displayed on the screen with the use of your fingertip instead of a standard desktop mouse. The following illustrations demonstrate proper use of the touchpad.



Moving The Cursor

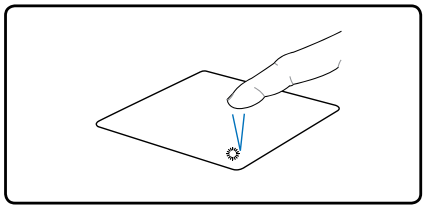
Place your finger in the center of the touchpad and slide in a direction to move the cursor.



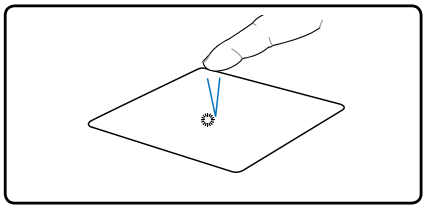
IMPORTANT! Do not use any objects in place of your finger to operate the touchpad or else damage may occur to the touchpad's surface.

Touchpad Usage Illustrations

Clicking Function

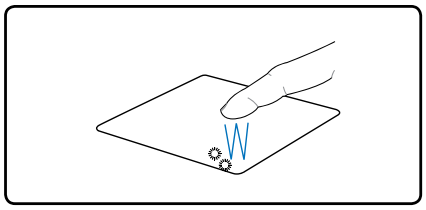


Press the left cursor button and release.

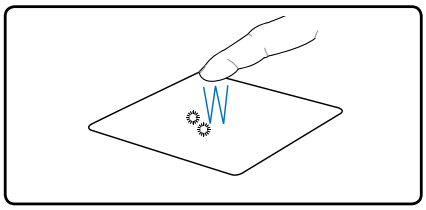


Lightly but rapidly strike the touchpad.

Double-Clicking Function

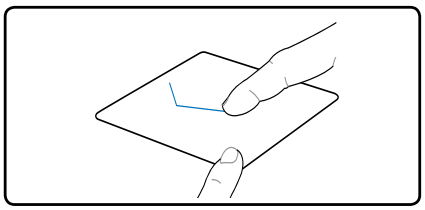


Press the left button twice and release.

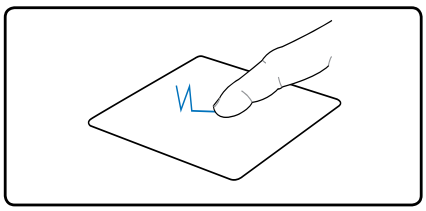


Lightly but rapidly strike the touchpad twice.

Dragging-Clicking Function

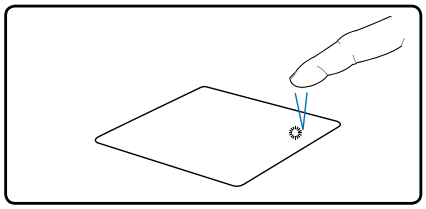


Hold left button and slide finger on touchpad.



Lightly strike the touchpad twice, sliding finger on touchpad during second strike.

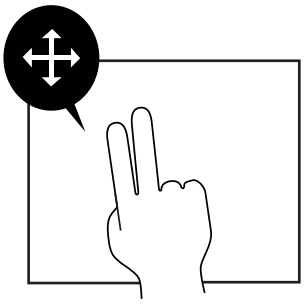
Right-Clicking Function



Press the right cursor button and release.

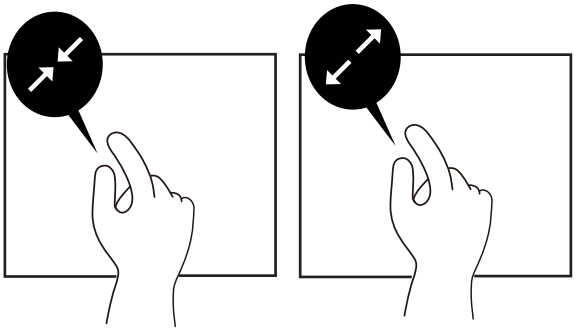
Multi-touch gesture usage

Multi-touch recognizes multiple simultaneous touch points to allow advanced software actions using your fingers. Gesture availability depends on Laptop model.



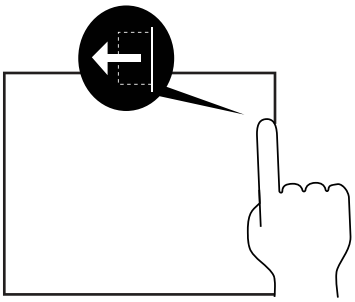
Two Finger Scrolling

Slide two fingers up/down/left/right to scroll within an application window.



Two Fingers Pinch Zoom

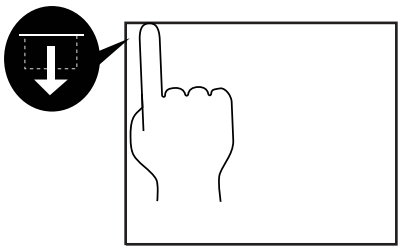
Slide two fingers outwards to zoom in. Slide two fingers inwards to zoom out. Convenient for viewing photos.



Edge Swipe (Right)

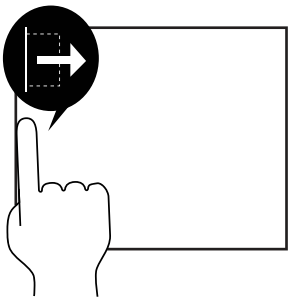
Slide inwards from the right edge to open the sidebar.

Multi-touch gesture usage (cont.)



Edge Swipe (Top)

Slide inwards from the top edge to open the Applications bar.



Edge Swipe (Left)

Slide inwards from the left edge to switch to the last opened application.

Caring for the Touchpad

The touchpad is pressure sensitive. If not properly cared for, it can be easily damaged. Take note of the following precautions.

- Make sure the touchpad does not come into contact with dirt, liquids or grease.
- Do not touch the touchpad if your fingers are dirty or wet.
- Do not rest heavy objects on the touchpad or the touchpad buttons.
- Do not scratch the touchpad with your finger nails or any hard objects.

NOTE: The touchpad responds to movement not to force. There is no need to tap the surface too hard. Tapping too hard does not increase the responsiveness of the touchpad. The touchpad responds best to light pressure.

Storage Devices

Storage devices allow the Laptop to read or write documents, pictures, and other files to various data storage devices. This Laptop has the following storage devices:

- Optical Disc Drive
- Flash Memory Card Reader

Optical Drive

Using the Optical Drive

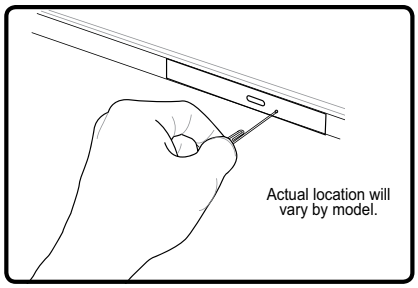
Optical discs and equipment must be handled with care because of the precise mechanics involved. Keep in mind the important safety instructions from your disc suppliers. Unlike desktop optical drives, the Laptop uses a hub to hold the disc in place regardless of the angle. When inserting a disc, it is important that the disc be pressed onto the center hub or else the optical drive tray will scratch the disc.

WARNING! If the disc is not properly locked onto the center hub, the disc can be damaged when the tray is closed. Always watch the disc closely while closing the tray slowly to prevent damage. DO NOT exert pressure on ODD tray.

An optical drive letter should be present regardless of the presence of a disc in the drive. After the disc is properly inserted, data can be accessed just like with hard disk drives; except that nothing can be written to or changed on the disc. Using the proper software, a CD-RW drive or DVD+CD-RW drive can allow CD-RW discs to be used like a hard drive with writing, deleting, and editing capabilities.

Vibration is normal for high-speed optical drives due to unbalanced discs or prints. To decrease vibration, use the Laptop on an even surface and do not place labels on the disc.

Emergency eject



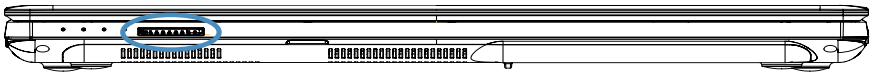
The emergency eject is located in a hole on the optical drive and is used to eject the optical drive tray in case the electronic eject does not work. Do not use the emergency eject in place of the electronic eject. Note: Make sure not to stab the activity indicator located in the same area.

Flash Memory Card Reader MMC.SD

Normally a memory card reader must be purchased separately in order to use memory cards from devices such as digital cameras, MP3 players, mobile phones, and PDAs. This Laptop has a built-in memory card reader that can use many flash memory cards as shown in the example below. The built-in memory card reader is not only convenient, but also faster than most other forms of memory card readers because it utilizes the internal high-bandwidth PCI bus.

IMPORTANT! Flash memory card compatibility varies depending on Laptop model and flash memory card specifications. Flash memory card specifications constantly change so compatibility may change without warning.

Flash Memory Card Examples



MMC (Multimedia Card)
MMC Plus
RS-MMC (Reduced Size) (with MMC adapter)

SD (Secure Digital)
miniSD (with SD adapter)

SDHC (Secure Digital High Capacity)
microSD (with SD adapter)

SDXC (Secure Digital eXtended Capacity)

IMPORTANT! Never remove cards while or immediately after reading, copying, formatting, or deleting data on the card or else data loss may occur.

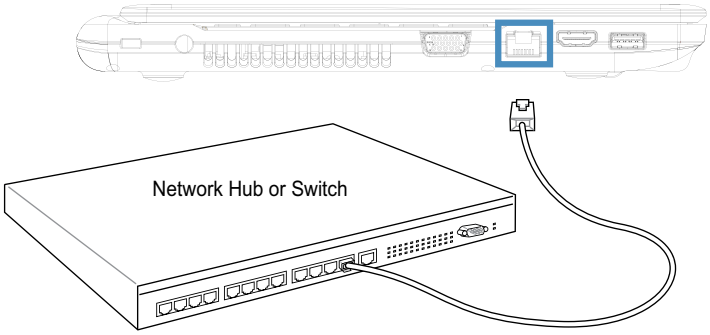
WARNING! To prevent data loss, use "Windows Safely Remove Hardware" on the taskbar before removing the flash memory card.

Network Connection

Connect a network cable, with RJ-45 connectors on each end, to the modem/network port on the Laptop and the other end to a hub or switch. For 100 BASE-TX / 1000 BASE-T speeds, your network cable must be category 5 or better (not category 3) with twisted-pair wiring. If you plan on running the interface at 100/1000Mbps, it must be connected to a 100 BASE-TX / 1000 BASE-T hub (not a BASE-T4 hub). For 10Base-T, use category 3, 4, or 5 twisted-pair wiring. 10/100 Mbps Full-Duplex is supported on this Laptop but requires connection to a network switching hub with “duplex” enabled. The software default is to use the fastest setting so no user-intervention is required.

1000BASE-T (or Gigabit) is only supported on selected models.

Example of the Laptop connected to a Network Hub or Switch for use with the built-in Ethernet controller.



Network cable with RJ-45 connectors

CAUTION: To reduce the risk of electric shock, fire, or damage to the equipment, DO NOT plug a modem cable or telephone cable into the RJ-45 (network) jack.

Wireless LAN Connection

The optional built-in wireless LAN is a compact easy-to-use wireless Ethernet adapter. Implementing the IEEE 802.11 standard for wireless LAN (WLAN), the optional built-in wireless LAN is capable of fast data transmission rates using Direct Sequence Spread Spectrum (DSSS) and Orthogonal Frequency Division Multiplexing (OFDM) technologies on 2.4GHz/5GHz frequencies. The optional built-in wireless LAN is backward compatible with the earlier IEEE 802.11 standards allowing seamless interfacing of wireless LAN standards.

The optional built-in wireless LAN is a client adapter that supports an Infrastructure mode giving you flexibility on your existing or future wireless network configurations for distances up to 40 meters between the client and the access point.

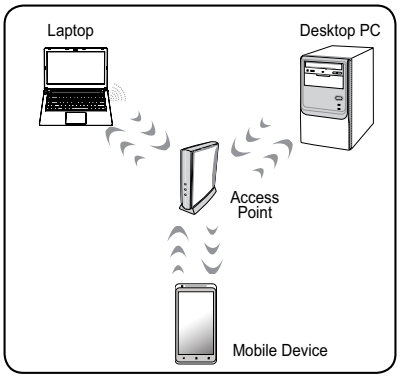
To provide efficient security to your wireless communication, the optional built-in wireless LAN comes with a 64-bit/128-bit Wired Equivalent Privacy (WEP) encryption and Wi-Fi Protected Access (WPA) features.

Infrastructure mode

The Infrastructure mode allows the Laptop and other wireless devices to join a wireless network created by an Access Point (AP) (sold separately) that provides a central link for wireless clients to communicate with each other or with a wired network.

(All devices must install optional 802.11 wireless LAN adapters.)

This is an example of the Laptop connected to a Wireless Network.



CAUTION: DO NOT use wireless LAN on hospital premises or near a pacemaker, doing so may cause medical devices to malfunction. DO NOT use wireless LAN on an aircraft, as doing so may cause the aircraft's equipment to malfunction.

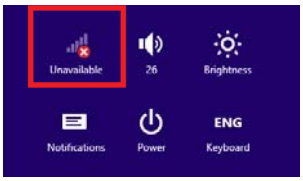
Windows Wireless Network Connection

Connecting to a network

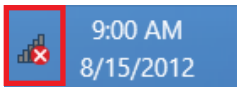
1. Switch ON the Wireless function if necessary for your model (see switches and/or special keyboard functions in Section 3).

2. A network icon will appear in the Sidebar or Taskbar depending on your network status:

No connection (Wireless function OFF)

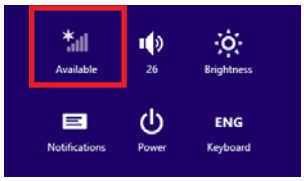


Sidebar

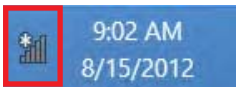


Taskbar

Not connected (Connections available)



Sidebar



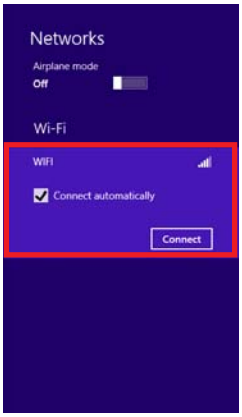
Taskbar

3. Clicking on the network icon will open the network connection panel:

No connection (Wireless function OFF)

If the wireless function on your device has not been switched on you will see no open connections available. Make sure the wireless function is switched on and try again.

Not connected (Connections available)



Click on a connection to connect

NOTE: Screen captures shown here are examples only and may not reflect what you see in your system.

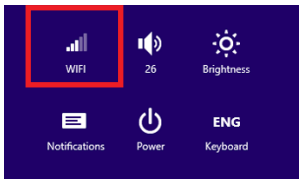
(continued on the next page)

Windows Wireless Network Connection (cont.)

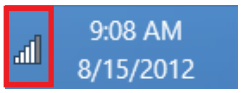
4. When connecting, you may have to enter a password:

5. When you have successfully connected you will see the following icon in the Sidebar or Taskbar:

Connected

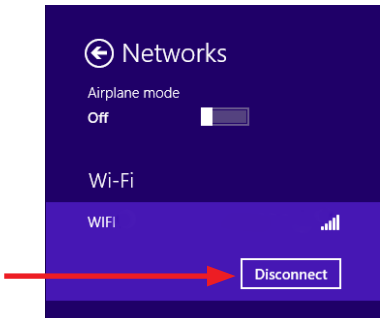


Sidebar

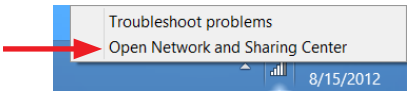


Taskbar

6. To disconnect, click on the network icon and select the option as shown:



7. For more options, right-click on the network icon in the taskbar and select the option as shown:



A. Appendix

Declaration and Safety Statements

Federal Communications Commission Statement

NOTE: Photos and icons in this document are used for artistic purposes only and do not show what is actually used in the product itself.

A Appendix

Declarations and Safety Statements

Federal Communications Commission Statement

This device complies with FCC Rules Part 15. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the Federal Communications Commission (FCC) rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

WARNING! The use of a shielded-type power cord is required in order to meet FCC emission limits and to prevent interference to the nearby radio and television reception. It is essential that only the supplied power cord be used. Use only shielded cables to connect I/O devices to this equipment. You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

(Reprinted from the Code of Federal Regulations #47, part 15.193, 1993. Washington DC: Office of the Federal Register, National Archives and Records Administration, U.S. Government Printing Office.)

FCC Radio Frequency Interference Requirements

This device is restricted to INDOOR USE due to its operation in the 2.4 GHz frequency range. FCC requires this product to be used indoors to reduce the potential for harmful interference to co-channel of the Mobile Satellite Systems.

IMPORTANT: This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.

FCC Radio Frequency (RF) Exposure Caution Statement

This equipment complies with FCC RF exposure limits set forth for an uncontrolled environment. To maintain compliance with FCC RF exposure compliance requirements, please follow operation instructions in the user guide. This equipment is for operation within the 2.4 GHz frequency range and is restricted to indoor environments only.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. "The manufacturer declares that this device is limited to Channels 1 through 11 in the 2.4 GHz frequency by specified firmware controlled in the USA."

FCC RF Exposure Guidelines (Wireless Clients)

This device has been tested for compliance with FCC RF Exposure (SAR) limits in typical portable configurations. In order to comply with SAR limits established in the ANSI C95.1 standards, it is recommended when using a wireless LAN adapter that the integrated antenna is positioned more than [20cm] from your body or nearby persons during extended periods of operation. If the antenna is positioned less than [20cm] from the user, it is recommended that the user limit the exposure time.

R&TTE Directive (1999/5/EC)

The following items were completed and are considered relevant and sufficient for the R&TTE (Radio & Telecommunications Terminal Equipment) directive:

- Essential requirements as in [Article 3]
- Protection requirements for health and safety as in [Article 3.1a]
- Testing for electric safety according to [EN 60950]
- Protection requirements for electromagnetic compatibility in [Article 3.1b]
- Testing for electromagnetic compatibility in [EN 301 489-1] & [EN 301]
- Testing according to [489-17]
- Effective use of the radio spectrum as in [Article 3.2]
- Radio test suites according to [EN 300 328-2]

CE Mark Warning

This is a Class B product, in a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

A Appendix

Optical Drive Safety Information

Laser Safety Information

Internal or external optical drives sold with this Laptop contains a CLASS 1 LASER PRODUCT. Laser classifications can be found in the glossary at the end of this user guide.

WARNING: Making adjustments or performing procedures other than those specified in the user guide may result in hazardous laser exposure. Do not attempt to disassemble the optical drive. For your safety, have the optical drive serviced only by an authorized service provider.

Service warning label

CAUTION: INVISIBLE LASER RADIATION WHEN OPEN. DO NOT STARE INTO BEAM OR VIEW DIRECTLY WITH OPTICAL INSTRUMENTS.

HDMI, the HDMI logo, and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing, LLC.

DVD-ROM Drive Information

The Laptop comes with an optional DVD-ROM drive or a CD-ROM drive. In order to view DVD titles, you must install your own DVD viewer software. Optional DVD viewer software may be purchased with this Laptop. The DVD-ROM drive allows the use of both CD and DVD discs.

Regional Playback Information

Playback of DVD movie titles involves decoding MPEG2 video, digital AC3 audio and decryption of CSS protected content. CSS (sometimes called copy guard) is the name given to the content protection scheme adopted by the motion picture industry to satisfy a need to protect against unlawful content duplication.

Although the design rules imposed on CSS licensors are many, one rule that is most relevant is playback restrictions on regionalized content. In order to facilitate geographically staggered movie releases, DVD video titles are released for specific geographic regions as defined in “Region Definitions” below. Copyright laws require that all DVD movies be limited to a particular region (usually coded to the region at which it is sold). While DVD movie content may be released for multiple regions, CSS design rules require that any system capable of playing CSS encrypted content must only be capable of playing one region.

NOTE: The region setting may be changed up to five times using the viewer software, then it can only play DVD movies for the last region setting. Changing the region code after that will require factory resetting which is not covered by warranty. If resetting is desired, shipping and resetting costs will be at the expense of the user.

Region Definitions

Region 1

Canada, US, US Territories

Region 2

Czech, Egypt, Finland, France, Germany, Gulf States, Hungary, Iceland, Iran, Iraq, Ireland, Italy, Japan, Netherlands, Norway, Poland, Portugal, Saudi Arabia, Scotland, South Africa, Spain, Sweden, Switzerland, Syria, Turkey, UK, Greece, Former Yugoslav Republics, Slovakia

Region 3

Burma, Indonesia, South Korea, Malaysia, Philippines, Singapore, Taiwan, Thailand, Vietnam

Region 4

Australia, Caribbean (Except US Territories), Central America, New Zealand, Pacific Islands, South America

Region 5

CIS, India, Pakistan, Rest of Africa, Russia, North Korea

Region 6

China