












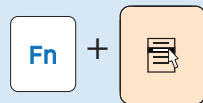


Shortcut Keys	Name	Function
	Easy Settings	The Samsung software control program, the Easy Settings , is launched.
 	Screen Brightness Control	Controls the screen brightness.
	LCD/External Monitor	Switches the screen output to the LCD or external monitor when an external monitor (or TV) is connected to the computer.
	Touchpad	Turns the Touchpad function on or off. When using an external mouse only, you can turn the Touchpad off.
	Mute	Press this button to turn the audio on or off.
 	Volume Control	Controls the volume.
	View active apps	The list of currently running apps appears.
	Desktop screen	Switch to the desktop.
	Exit App	Close a running application.

Shortcut Keys	Name	Function
	Wireless network	<p>You can easily turn multiple wireless network functions on or off at the same time.</p> <p>You can conveniently use this hot key to turn the wireless network functions off when you are on an airplane or other such location.</p> <ul style="list-style-type: none">• On: When the wireless network functions are turned on.• Off: When the wireless network functions are turned off. <p> You can control each individual wireless network function by selecting Easy Settings > Wireless Network.</p>

Other Function Keys (Optional)

- Performs the right-click mouse function (touchpad).




- If you press the **Fn Lock** key, you can use the hot key functions without pressing the **Fn** key.



- If you press the **Num Lock key**, you can use the numeric keys.



-  If the hot keys do not work properly, you have to install the **Easy Settings.**

The touchpad provides the same function as a mouse and the left and right buttons of the touchpad plays the role of the left and right buttons of a mouse.

To use the touchpad, the touchpad driver is required.

The driver provided by the touchpad manufacturer is already installed in this product by default when you purchase this product. **When you reinstall Windows or change the operating system, using the driver provided by the corresponding manufacturer is recommended.**

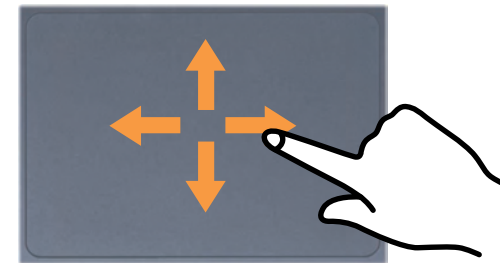


- Touch the touchpad with your fingers only. Anything other than your fingers, such as a ball-point pen, will not be recognized by the touchpad.
- If you touch the Touchpad or press the Touchpad buttons while booting up, the Windows boot time may be extended.

Basic Touchpad Functions

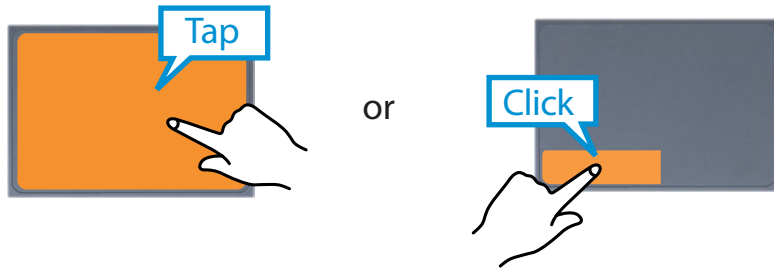
Moving the cursor on the screen

Place your finger on the touchpad slightly and move your finger. The mouse cursor will move accordingly. Move your finger in the direction you wish to move the cursor.



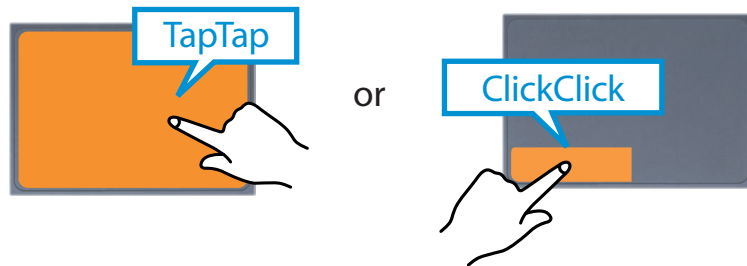
Click Function

Place a finger on the touchpad and click on an item once.
Alternatively, press the left button once quickly and release it.



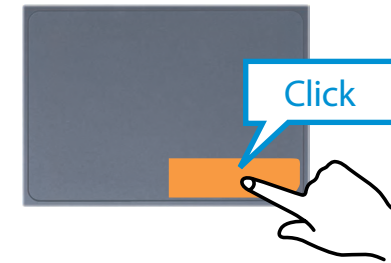
Double-Click Function

Put your finger on the touchpad and quickly tap twice with your finger on an item you want.
Alternatively, press the left touchpad button twice quickly.



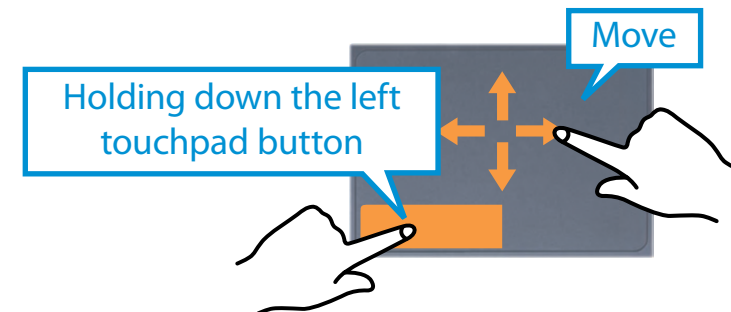
Right Button Function

This corresponds to clicking the right mouse button.
Press the right touchpad button once. The corresponding pop-up menu appears.



Drag Function

Dragging refers to moving an item to another place after selecting it.
Press and hold down the left touchpad button over an item you want to drag and move the item to the new location.



The Gesture Function of the Touchpad



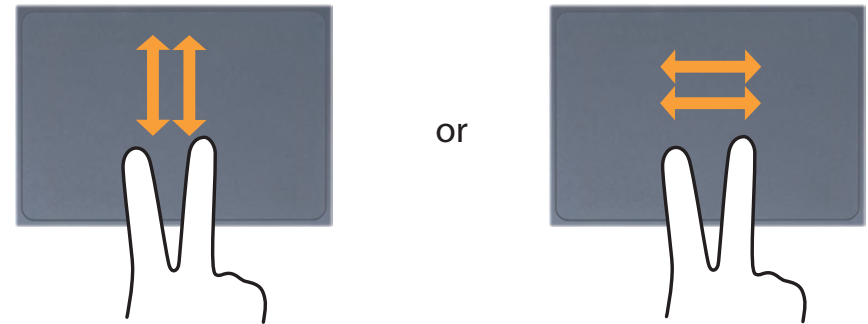
The Touchpad Gesture function may not be provided and the version of the function may differ depending on the model. Some usage procedures may differ depending on the version.

Using the Touchpad, you can use the following additional Gesture functions.

- **Scroll function**
- **Zoom functions**

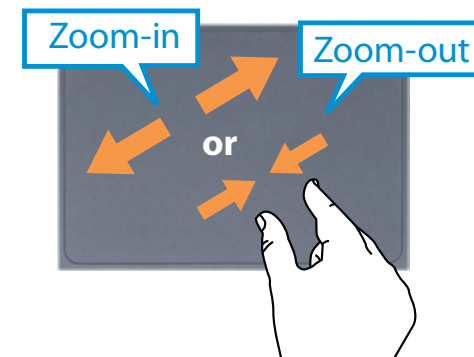
The Scroll Function

If you place two fingers over the Touchpad and move them up, down, left or right, the screen is scrolled up, down, left or right accordingly.



Zoom Functions

If you place two fingers over the Touchpad together or apart, the current image or text is zoomed in or out.







Touchpad

Touchpad On/Off Function

Locking with shortcut keys

If you want to use the mouse only without using the touchpad, you can turn the touchpad off.

To lock the touchpad function, press the  +  keys.

Alternatively, press the  key and then press the  key to turn the touchpad function off.

Using the multi-card slot, you can read and write data on various types of memory cards.

When you insert a memory card, make sure to insert the memory card in the correct direction. Pushing an incorrectly inserted memory card may damage the card itself or the slot.



- You can use memory cards as a removable disk and conveniently exchange data with digital devices such as a digital camera, etc.
- Separately purchase memory cards of your desired capacity.
- The color of the multi-card slot may differ from the picture in this manual.
- Before using the slot, remove the dummy card from inside the slot. (Only for models providing dummy cards.)
- Insert the memory card into the multi-card slot in the direction printed on the slot.
- For memory cards marked with '*', you must insert them into a specified adapter and then insert the adapter into the multi-card slot.
Inserting such memory cards directly into the multi-card slot without using a specified adapter may damage the computer.
- The computer may not recognize the device depending on the status of the specified adapter.
- The data transfer rate may differ depending on the specification of the memory card.



Memory Card Naming


The following table shows the full names of memory cards for each abbreviation.

Abbreviation	Memory Card's Name
SD	Secure Digital
*mini SD	mini Secure Digital
*micro SD	micro Secure Digital
SDHC	Secure Digital High Capacity
*mini SDHC	mini Secure Digital High Capacity
*micro SDHC	micro Secure Digital High Capacity
SDXC	Secure Digital eXtended Capacity
*micro SDXC	micro Secure Digital eXtended Capacity

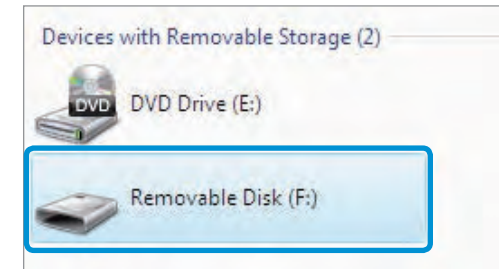
Multi Card Slot (Optional)


- 1 Insert a memory card into the multi-card slot in the correct direction.
- 2 The card drive appears. Click **Open folder and view files**.
If the window does not appear, click **Start > Computer**.



 If a window asking to scan and change appears, click **Continue Without Scanning**. This will proceed to Step 2 above.

- 3 You can save, move and delete data by double-clicking the corresponding drive.
You can only use the card after formatting it.



 The device name of the card drive may differ depending on your computer model.

To remove a memory card


Remove the card while holding the tip of the card.

Alternatively, push the tip of the card in and then remove it once it pops up.


Multi Card Slot (Optional)

To format a memory card

When using the memory card for the first time, you must format the card before using it.

 Formatting a card deletes all data saved on the card. If the card includes data, backup the data before formatting it.

- 1 Click **Start > Computer**.
- 2 Right-click over a card drive with the touchpad and select **Format**.
- 3 Click **Start** to the formatting.

-  To share a memory card with a digital device such as digital camera, it is recommended to format the memory card in the digital device before use. If you format a memory card on the computer and then insert the memory into the digital device, you may need to format the memory card again in the digital device.
- If there is a write-protection device in the memory card and the device is set to the lock position, you cannot format, write data, nor erase data from the card.
- Repeatedly inserting and removing a memory card may damage the memory card.
- **SDIO (Secure Digital Input Output)** is not supported.
- You cannot read or write copyright-protected data.

Connecting an External Display Device

If you connect an external display device such as a monitor, TV, projector, etc., you can view the picture on the wider screen of the external device when you give a presentation or watch a video or movie.

The computer supports two types of ports: D-SUB monitor port and HDMI port.

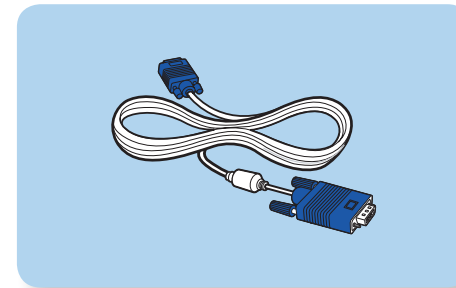
The visual quality is sharper when a display device is connected through the HDMI port rather than the analog monitor port (D-SUB) port. Therefore, when multiple ports are supported, connect a display device to a port that provides the better visual quality.



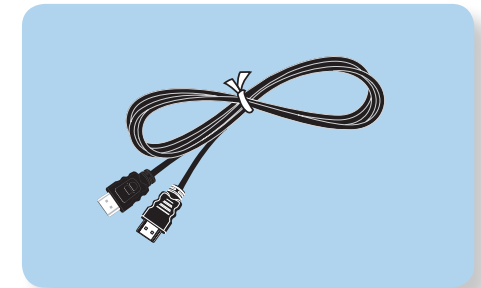
- Before you start, check the port and cable of the external display device and then connect the display device to the computer.
- Due to restrictions of the operating system the DualView function is not supported for Windows 7 Starter.

About the connection cable

Users should additionally purchase the necessary connection cables.



Analog Monitor (D-SUB) Cable



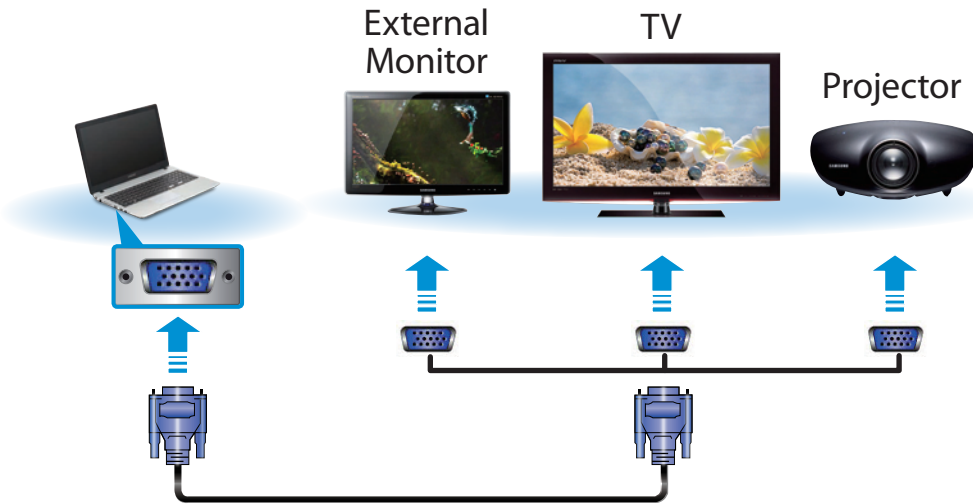
HDMI Cable

Connecting to the monitor port


Connect an external monitor, TV, or projector that supports the D-SUB interface to display the image on a wider screen.



You can give better presentations by connecting the computer to a projector.



- 1 Connect the D-SUB port of the computer and the port of the monitor, TV or projector with the monitor cable (15 pin).







- 2 Connect the power cord of the connected monitor, TV or projector and turn the power on.

 Change your TV to external device mode when connecting to the TV.

- 3 Press the  +  key combination once. Then the setting screen appears where you can select the monitor mode.

Since pressing the  key while holding down the  key changes the selection, select a display device.

Computer only	
Duplicate	
Extend	
Projector only	



Alternatively, to set up dual view:

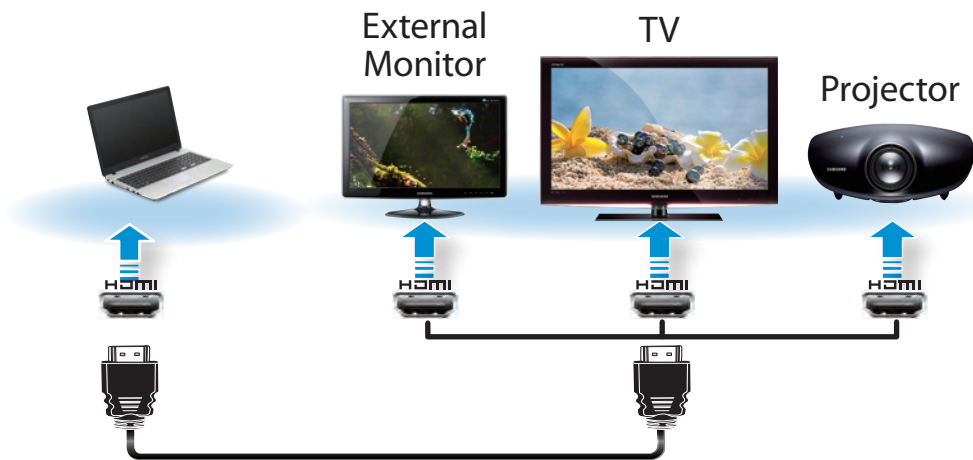
Open the **Display Settings** window in the Control Panel, select **Monitor 2** and select the **Expand to fit to this monitor** checkbox to set dual view. For more detailed information, refer to the Windows online help.

Connecting through the HDMI port (Optional)

By connecting the computer to an external display device with a HDMI port, you can enjoy both a high visual quality and a high sound quality.

After connecting a TV through HDMI, you have to configure the screen and sound.

- 1 Connect the HDMI cable to the HDMI port of the external display device.



- This is only supported for models that support an external display device output port (HDMI).
- When an external display device provides more than one HDMI port, connect the computer to the **DVI IN** port.
- When connecting the computer to a TV, switch the external input mode of the TV to **HDMI**.

- 2 Press the **Fn** + **F4** key combination once. Then the setting screen appears where you can select the monitor mode.

Since pressing the **F4** key while holding down the **Fn** key changes the selection, select a display device.

Computer only	
Duplicate	
Extend	
Projector only	

- External Monitor / TV is not supported in the DOS Command Prompt window.

Connecting an External Display Device

Using NVIDIA graphics more efficiently (optional)

NVIDIA Optimus is a function that enables automatic selection and usage of the internal or external graphics chipsets depending on the currently running software.

For example, the internal graphics chipset can be used for Internet surfing or word processing to minimize battery power consumption and the high-performance external graphics graphic chipset can be used for gaming or video processing to deliver a more realistic experience.



- The NVIDIA Optimus model supports Windows 7 only.
- This function is only available in models that support the NVIDIA Optimus technology.

Registering programs to be executed by the external graphics chipset

To run a program using the external graphics graphic chipset, you have to register the program in the NVIDIA Panel.

Some programs are pre-registered. To register more programs (e.g. 3D games, etc.), complete the following steps.

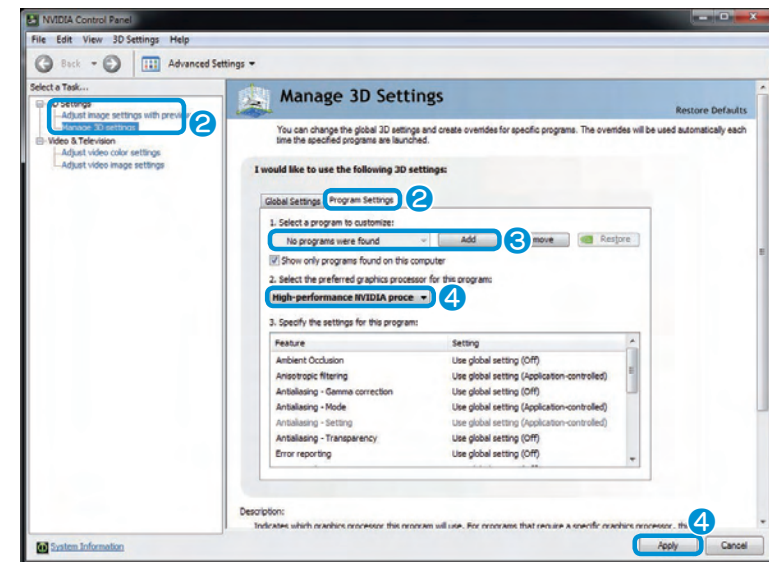
- 1 Right-click over the Desktop and select **NVIDIA Panel**.
- 2 Select **3D Settings > Manage 3D settings** in the left pane and select the **Program Settings** tab.

- 3 In the **Select a program to customize(S)** field, click the **Add** button to register the software.



You can register executable files (EXE) only.

- 4 In the **Select the preferred graphics processor for this program (O)** field, select **High-performance NVIDIA processor** and click the **Apply** button.



- 5 The program has been registered. When you run the registered program, the program is executed using the external graphics chipset without requiring additional configuration.

Connecting an External Digital Device

You can save a file stored on a device onto the computer by connecting a digital device such as a camera, camcorder or mobile phone to the computer and using the file management functions.

Connecting and using a camera or camcorder

If a digital device such as a camera or camcorder is connected with the computer, it is recognized as a removable disk so that you can copy or move the files on the device.

- 1 Connect the USB port of the notebook computer and the USB port of the digital device such as a camera using the USB cable.

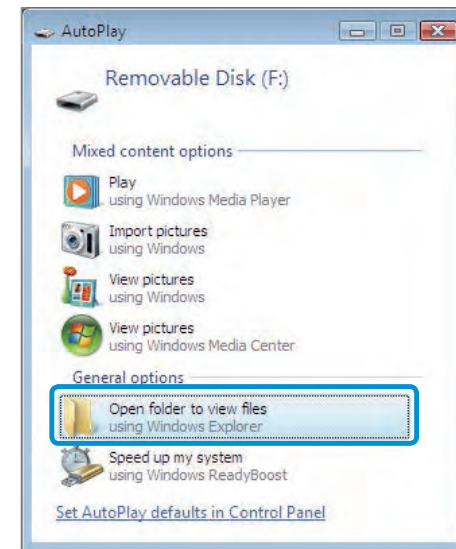


- Both the computer and the digital device must be turned on.
- You have to additionally purchase the USB cable necessary to connect the computer and the device.

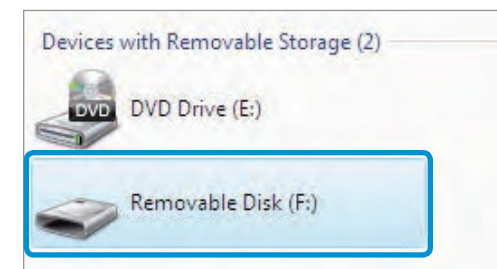


- 2 The **Auto run** window appears. Click **Open folder and view files**.

If the window does not appear, click **Start > Computer**.



- 3 Double-click the corresponding drive. You can then save, move or delete data.

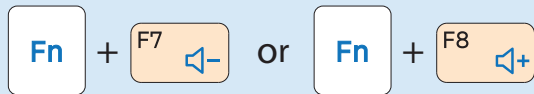


The device name of the card drive may differ depending on the model.

Adjusting the Volume


You can adjust the volume using the keyboard and the volume control program.

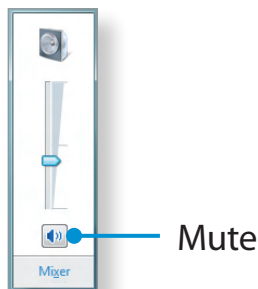
Adjusting the Volume using the Keyboard



Alternatively, press the **Fn** + **F6** key combination to turn the volume on or off.


Adjusting the Volume using the Volume Adjustment Program

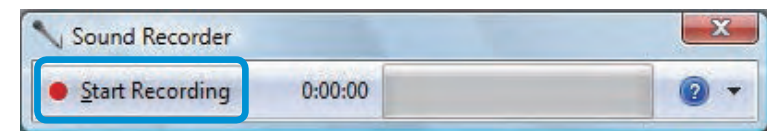
Click the Volume icon  on the taskbar and slide the volume control bar to adjust the volume.



Using the Sound Recorder

The procedures to record sound using the Windows Recorder are described below.

- 1 Connect a microphone to the Ear-set Jack or Headset Jack. You can also use the internal MIC.
- 2 Right-click over the **Volume** icon  on the taskbar and select **Recording Device**.
- 3 Check if the microphone is set as the default recording device.
If this is the case, it is already set as the default device. If not, right-click over the microphone and select **Set default**.
- 4 Click **Start > All Programs > Accessories > Sound Recorder** and click **Start recording** to start a recording.



A wired network is a network environment used for a company network or broadband internet connection at home.



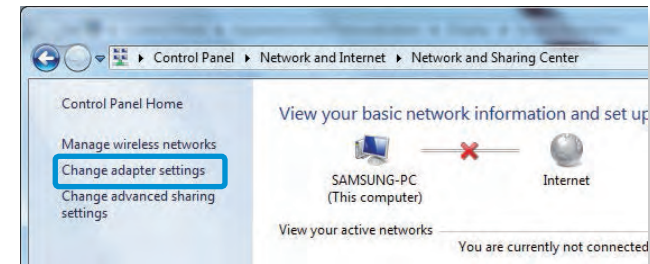
- You can use wired LAN by using the LAN adapter (Optional).
- The figures used for the description are of a representative model. Therefore the figures may differ from the real ones.

Connecting to a Wired LAN through Windows

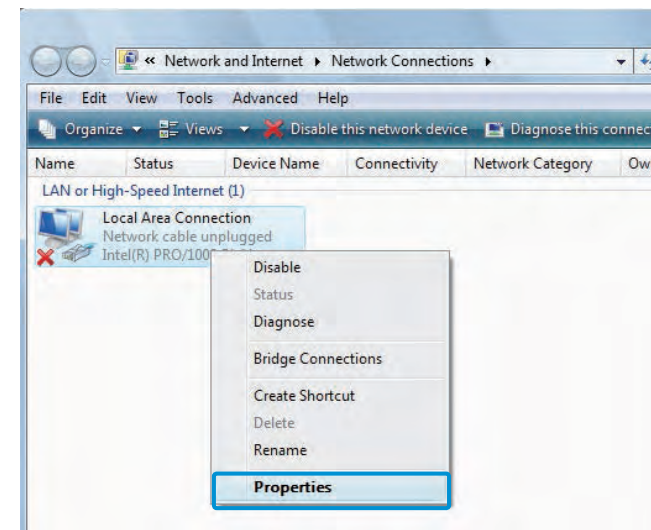
- 1 Connect the LAN cable to the wired LAN port.



- 2 Click **Start > Control Panel > Network and Internet > Network and Sharing Center** and click on **Change adapter settings** in the left menu pane.

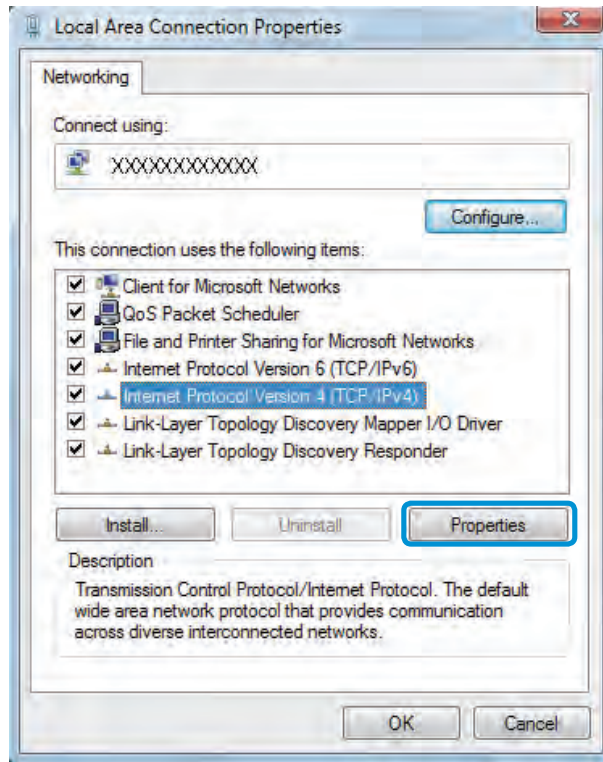


- 3 Select **Local Area Connection** and click the right button of the touch pad and select **Properties**.



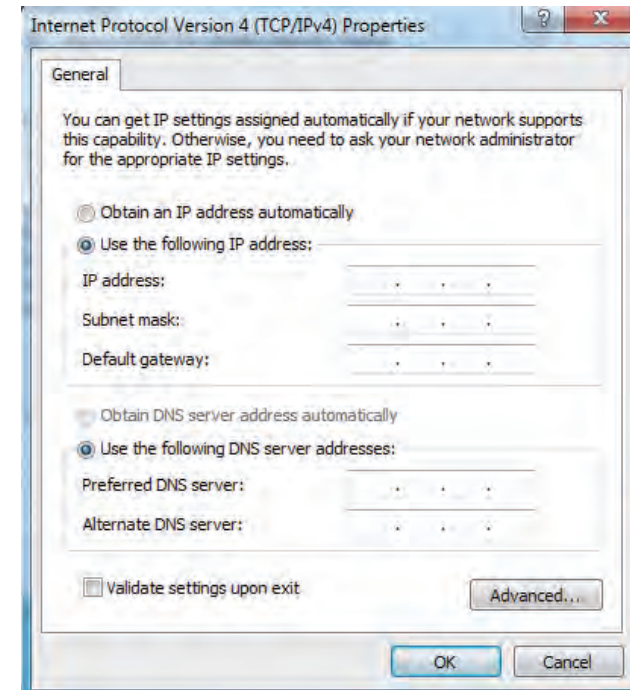
The LAN Device name may differ depending on your computer's Network Device.

- 4 Select **Internet Protocol Version 4(TCP/IPv4)** from the list of Network Components and click **Properties**.



- The Network Component name may differ depending on the Operating System Installed.
- To add a network component, click **Install** in the screen shown in the figure above. You can add clients, services, and protocols.

- 5 Configure the IP settings.
When using DHCP, select **Obtain an IP address automatically**. To use a static IP address, select **Use the following IP address**, and set the IP address manually.



- When not using DHCP, ask your network administrator for the IP address.

- 6 When you have completed the settings, click the **OK** button. The network settings have been completed.

Using the <Wake On LAN> Function

<Wake On LAN> is a function that activates the system from Sleep mode when a signal (such as a ping or magic packet command) arrives over the network (wired LAN).

1 Click **Start > Control Panel > Network and Internet > Network and Sharing Center** and click on **Change adapter settings** in the left menu pane.

2 Right-click on the Local Area Connection and select **Properties**.

3 Click **Configure > Power Management** tab. Select **Allow this device to bring the computer out of standby**, then click **OK**. Restart the system.

- If the system wake up from Sleep mode even though there is no received signal, use the system after disabling the <Wake On LAN> function.
- The LAN LED may not be turned off if System is shutdown without disabling the WOL <Wake on LAN> option.
- Connecting a wired LAN while using a wireless LAN may not activate the <Wake On LAN> function. Set the Wireless LAN to **Disable** to use the <Wake On LAN> function.
- <Wake On LAN> feature may not work while using Hybrid power saving feature.
The Hybrid power saving feature can be deactivated in **Control Panel > Power Options**.



For **Windows 7**, **Wake On LAN** is not supported **Ping**.



When connected to a 100Mbps/1Gbps wired LAN and the computer exits Sleep/hibernation mode, a message appears informing you of a connection to a 10Mbps/100Mbps wired LAN. This happens because when the computer exits standby/hibernate mode, restoring the network takes about 3 seconds. When the network is restored, it operates at 100Mbps/1Gbps.

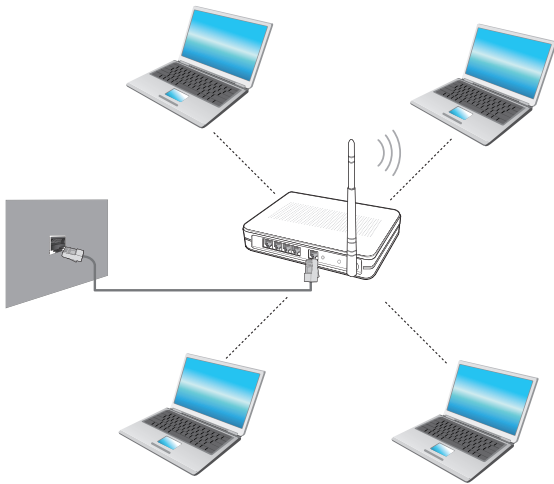



When system is running on battery, some time it takes about 20sec after inserting LAN cable to be able to connect to internet. This symptom happen as a result of power saving feature to reduce battery consumption.



When system is running on battery, the Wired LAN speed is decreased automatically to reduce battery consumption. In such case, a 1Gbps /100Mbps LAN would function at 100Mbps/10Mbps speed.

A wireless network (Wireless LAN) environment is a network environment that enables communicating between multiple computers at home or a small-size office through wireless LAN devices.



- The screen figures and terms may differ depending on the model.
- Depending on the program version, some functions may not be provided or different functions may be provided.
- The descriptions below are for computer models with a Wireless LAN card or device. A Wireless LAN device is optional.
The pictures in this manual may differ from the actual product depending on your wireless LAN device model.
- If the wireless LAN is turned off, press the **Fn** + **F12**  key combination to turn it **on**.



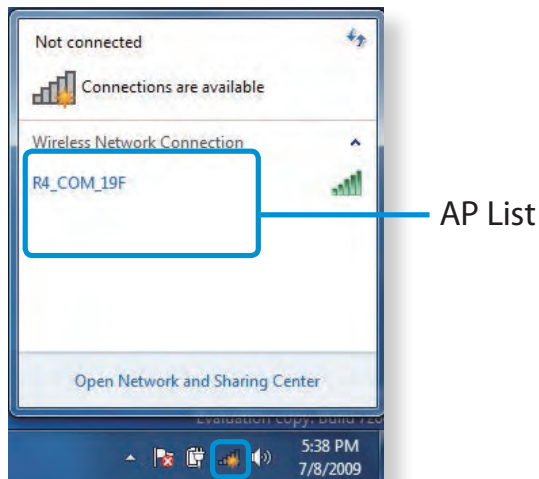
What is an Access Point (AP)?

An AP is a network device that bridges wired and wireless LANs, and corresponds to a wireless hub in a wired network. You can connect multiple wireless LAN installed computers to an AP.

Connecting to a Wireless LAN through Windows

If there is an AP, you can connect to the Internet via the AP using the Wireless LAN connection method provided by Windows.

- 1 If you click the **Network Connections**  icon in the system tray, a list of available APs appears. If you select an AP to connect to, the **Connect** button appears.

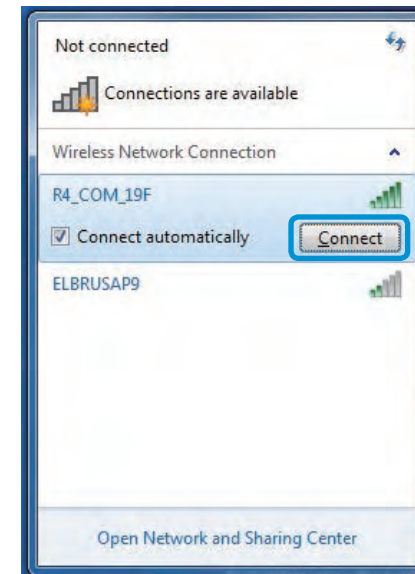


- 2 Click **Connect**.

If a network key is set for the AP, enter the network key and then click **Connect**.



For the network key, please ask your network administrator.



- 3 When **Connected** to the AP is displayed, click the **Close** button.

You can access the network.

Normal Wireless LAN Status

If the wireless LAN icon is displayed in the system tray of the Taskbar, it indicates that the computer is connected to the Internet properly (see below).



Abnormal Wireless LAN Status


When the wireless LAN is not connected

If the wireless LAN icon is displayed with an "X" in the system tray of the Taskbar, it indicates that the wireless LAN device is turned off or that there are no available APs. Or the wireless LAN is disconnected.



If the wireless LAN is turned off, press the **Fn** + **F12** key combination to turn it on.

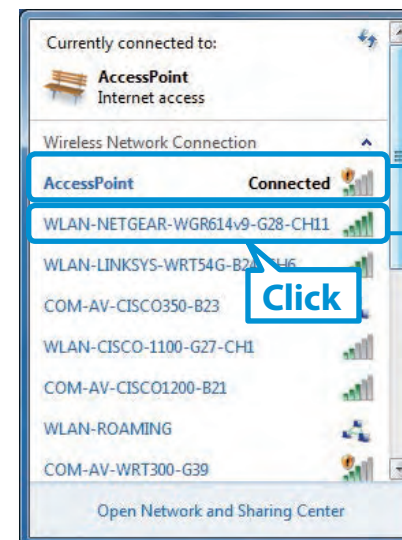
When you are not connected to the Internet

This is indicated by the wireless LAN icon  in the system tray of the Taskbar. In this case, you have to check the IP address settings. Please contact your network administrator and reconfigure the IP address.



When APs are found but your computer is not connected to the Internet

This is the case when an AP with a weak signal has been set to a high priority. Connect to an AP with a strong signal by clicking it.



The currently connected AP.

The signal strength is low.

An AP with a strong signal strength

A TPM (Trusted Platform Module) security device is a security solution that protects your personal information by saving the user authentication data on the TPM chip installed on the computer.

To use the TPM security device, you have to initialize the TPM chip in the BIOS Setup, initialize the TPM program, and then register the user.



- This function is only supported for models with TPM (security chip).
- For more information, refer to the online help for the program.
- The program version described in this manual is subject to change and the screenshots and terms used in this manual may differ from the actual product.

Setting Up the TPM



To use the TPM function, you have to complete the following steps.

- 1 Initializing the TPM chip**
Initializes the authentication information saved on the TPM chip.
- 2 Installing the TPM program**
Installs the TPM program.
- 3 Registering the TPM program**
Registers the TPM program.

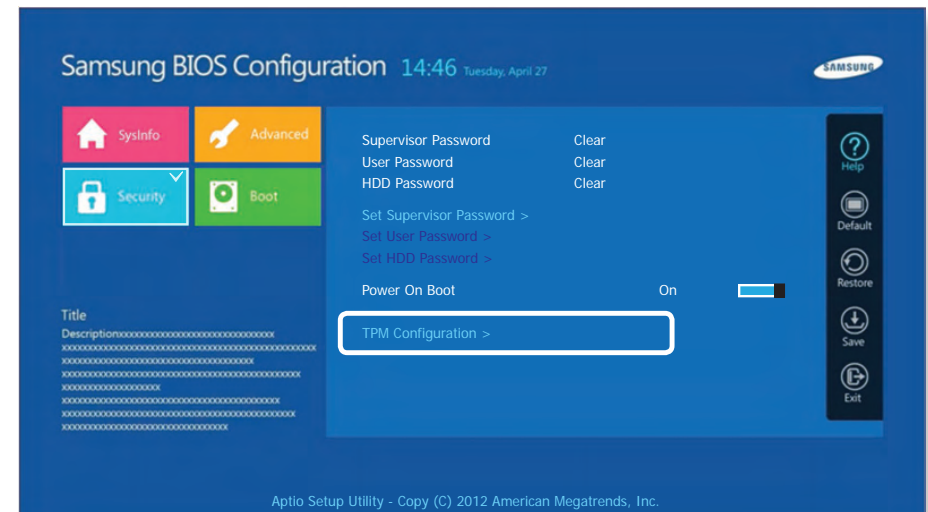
If you complete the steps above, you can use the TPM function.

Initializing the TPM chip

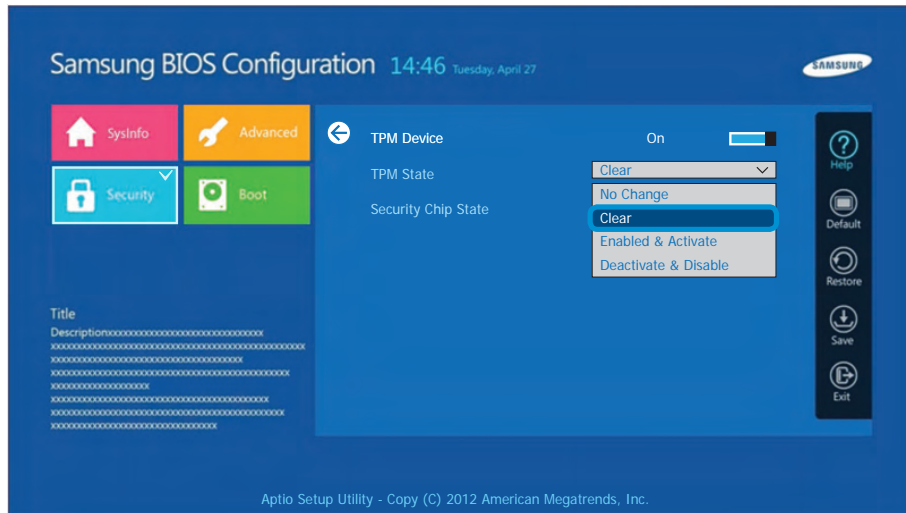
When you use the TPM function for the first time or you want to register the user again, you have to initialize the TPM chip.

- ! Initializing the TPM chip erases all authentication information saved on the TPM chip. Any decision to initialize must be taken carefully.
- To initialize the TPM chip again while the TPM function is in use, you have to decrypt any existing files and folders encrypted by the TPM function first. Otherwise, you will not be able to access the files and folders after re-initialization.

- 1 Restart the computer.
When the Samsung logo screen appears, press the **F2** key repeatedly.
- 2 If the BIOS appears, select the **Security > TPM Configuration**.



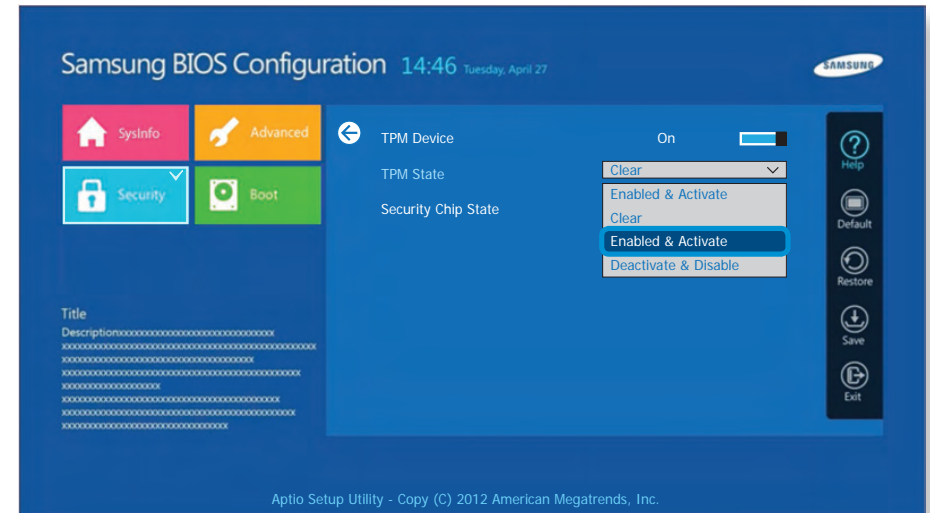
- 3 Set the **TPM Device** item to **On** and set the **TPM State** to **Clear**.



- 4 Select **Exit** to save the changes.

- 5 When the computer restarts automatically and the Samsung logo screen appears, press the **F2** key repeatedly.

- 6 Select the **Security > TPM Configuration > TPM State** item and set the item to **Enable & Activate**.




- 7 Select **Exit** to save the changes.

The computer automatically restarts. Initialization of the TPM chip has been completed.


Now, install the TPM program and register the TPM program.

Installing the TPM program

You can install the TPM program as follows. Install the program according to the procedures below.

 This program is only provided for models with Samsung Recovery Solution and the TPM function.

- 1 Launch the **Samsung Recovery Solution**.
- 2 Click the **System Software** icon.
- 3 Click the **System Software Installation** icon.
- 4 The **SW Update** program will be launched. Select **TPM Host SW** and click **Install Now**.

 If the system software media is supplied with the product, you can install the program by using the system software media (only when supplied.)

- 5 After the installation, if you click **OK**, the computer restarts.


Registering the TPM program

- 1 Click **Start > All Programs > Infineon Security Platform Solution > Manage Security Platform > User Settings**. (with administrator authority)

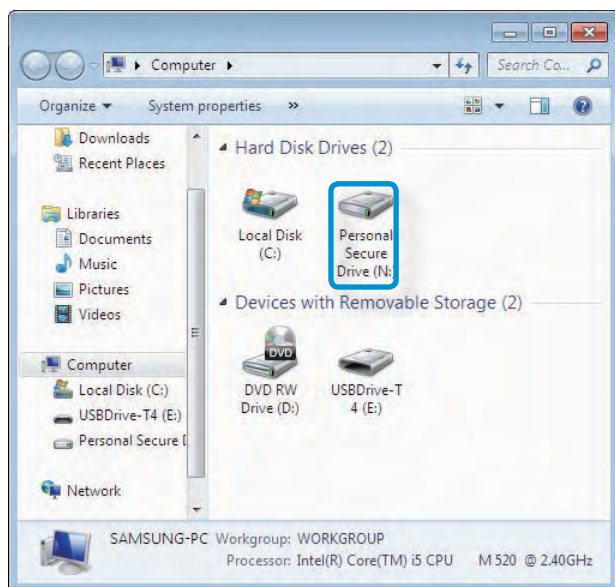
Alternatively, double-click the  icon on the Taskbar and run initialization with administrator authority.

- 2 The security authentication settings begin with the **Initialization Wizard**. When the Initialization Wizard appears, click **Next**.




 If the **status not initialized** message appears, click **Yes**. If you backup the emergency recovery file to an external storage device according to the instructions of the Initialization Wizard, you can use the TPM security device more safely.

- 3 Select a **Security Platform Feature** and set a **basic user password**.
- 4 Complete the registration according to the instructions.
- 5 The user registration for the TPM program has been completed. You can encrypt files and folders by using the encryption file system, and use files and folders to be encrypted by creating or copying them to the virtual drive. The virtual drive is created in the following location.




Using the TPM program

 For more information about using the TPM program, refer to the online help for the program.

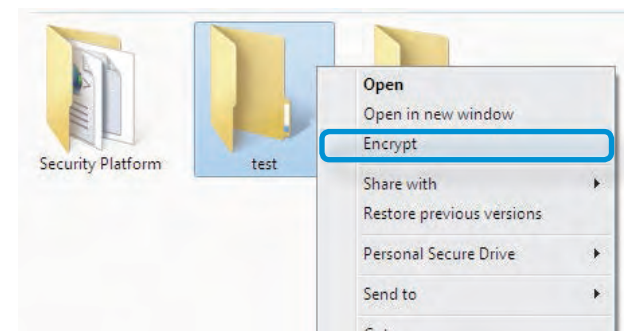
Encrypting a file (folder)

This function enables encrypting files and folders. You can safely protect documents through the Encrypt File System (EFS).

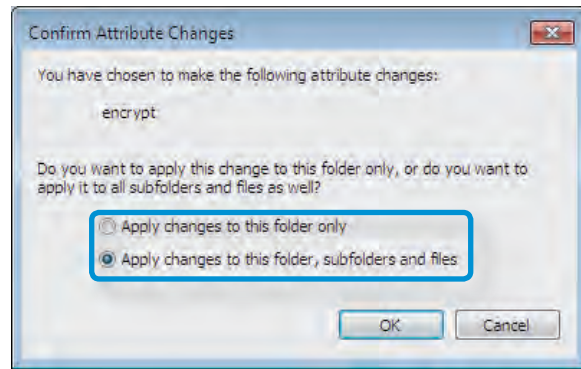
 The Encrypt File System(EFS) function is supported by the following operating systems.


- Windows 7 Professional / Enterprise / Ultimate
- Windows 8 Pro / Enterprise
- Windows 8.1 Pro / Enterprise

- 1 Right-click over the folder (or file) to be encrypted, and select **Encrypt** from the pop-up menu.



- 2 If the **Confirm Attribute Changes window** appears, select the range to apply the encryption to and click **OK**. (This dialog box only appears when the folder is encrypted.)

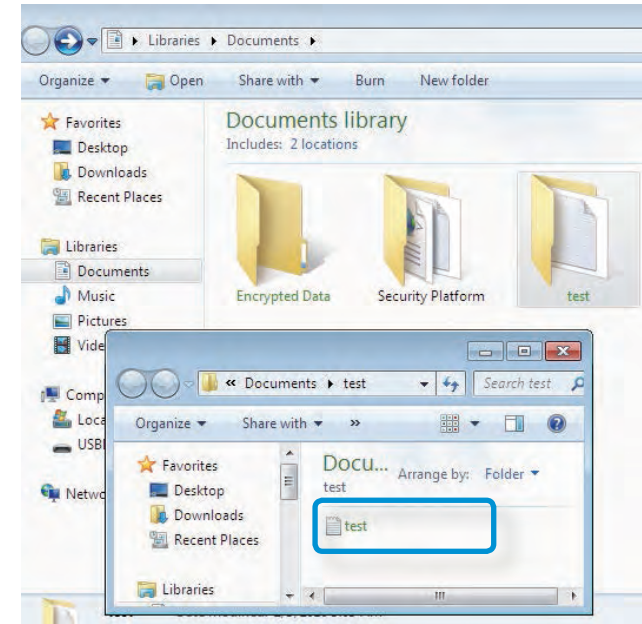


 If the current operating system is Windows 7, the user account control window appears. In this case, click **Continue**.

- 3 In the **user authentication window**, enter the **Basic user password** you entered when registering the user and click **OK**.



- 4 You will be able to confirm that the color of the folder (file) name in the encrypted folder has been changed to green.



Opening an encrypted folder (file)

- 1 Double-click an encrypted folder (file).
- 2 If the user authentication window appears, enter the **basic user password** you entered when registering the user and click **OK**.
- 3 The folder (file) opens.

Decrypting an encrypted folder (file)

- 1 Right-click over an encrypted folder (file) and select **Decrypt** from the pop-up window.
- 2 If the user authentication window appears, enter the **basic user password** you entered when registering the user and click **OK**.
- 3 The folder (file) is decrypted.

Using the virtual drive (Personal Secure Drive: PSD)

The virtual drive (PSD) is a virtual space to save and manage confidential data. In the created virtual drive (PSD), you can create files and folders as with a normal drive (e.g. drive C:) and you can use confidential data saved on another drive by copying the data to the virtual drive (PSD).

When the virtual drive (PSD) does not appear


You can only use the virtual drive (PSD) when you have selected the Personal Secure Drive (PSD) option during the program registration.

If you have not selected the option during the registration, complete the following steps.

- 1 Click **start > All Programs > Infineon Security Platform Solution > Manage Security Platform** and click the **User Settings** tab > **Security Platform Features** and then **Configure**.
- 2 When the **Initialization Wizard** appears, select **Personal Secure Drive (PSD)** and enter the user password.
- 3 Click **Next** several times according to the instructions of the **Initialization Wizard** to finish the wizard.


When the virtual drive (PSD) is not loaded

To use the virtual drive (PSD), the virtual drive (PSD) should be loaded first. If it is not loaded, you can load it according to the procedures below.

- 1 Right-click over the **Security Platform**  icon in the system tray of the Taskbar and select **Personal Secure Drive > Load** from the pop-up menu.

Using the TPM Security Device (Optional)

- 2 In the load window, enter the basic user password and click **OK**.
- 3 If you click **Start > Computer**, you will be able to confirm that the Personal Secure Drive is created.

 Note that when you have copied confidential data to the PSD, the original data files are not encrypted.

When you have to register again (to erase the authentication information on the TPM chip)



To register a user again, you need to delete the existing authentication information saved on the TPM chip and then clear the TPM chip.

Register the user in the following order.

- 1 Delete the virtual drive.
- 2 Delete the existing authentication information saved on the TPM chip.

Deleting the virtual drive

If a virtual drive has been created, you have to delete the virtual drive before deleting the existing authentication information saved on the TPM chip.

- 1 Right-click over  >  and click **Personal Secure Drive > Create/Manage**.
- 2 Click **Next**.
- 3 Enter the password that you entered when registering the TPM program and click **Next**.
- 4 Select Delete selected PSD and click **Next**.
- 5 Select **“I want to permanently delete my Personal Secure Drive without saving an unencrypted copy of its contents.”** and click **Next**.
- 6 Click **Next** and then **Finish**.
- 7 Now the virtual drive has been deleted.

Deleting the existing authentication information saved on the TPM chip.

- 1 Click the **Start > Control Panel > Programs > Uninstall Program > Infineon TPM Professional Package** and click **Uninstall**.
- 2 If the message window appears, click **Yes** to remove the program.
- 3 If the **Infineon Security Platform** message appears, click **No**.
- 4 Click the **Start > Computer > Organize > Folder and Search Options > View > Hidden files and folders** item, select **Show hidden files and folders** and click **OK**.
- 5 Click the **Start > Computer > Drive C: > ProgramData** folder and delete the **Infineon** folder.
- 6 Now the TPM Program has been deleted.
To use the TPM function, please repeat the procedures of the **TPM chip initialization** process.