



Adaptive Keyboard Deployment Guide

Note: Before using this information and the product it supports, read the general information in Appendix A “Notices” on page 17.

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Preface

This deployment guide is intended for IT administrators, or those who are responsible for deploying the Adaptive Keyboard to computers in their organization. The purpose of this guide is to provide the information required for installing and configuring the Adaptive Keyboard on one or more computers.

This deployment guide also provides instructions and solutions for working with the Adaptive Keyboard. If you have suggestions or comments, communicate with your Lenovo® authorized representative.

Chapter 1. Overview

The Adaptive Keyboard provides a touch-sensitive area that automatically displays a subset of icons of Adaptive keys. The Adaptive keys change dynamically based on the application you are using. If you launch an application that the Adaptive Keyboard recognizes, the Adaptive keys change automatically to the appropriate modes for using that application.

The Adaptive Keyboard provides the following modes to function in different situations:

- Home mode
- Web-browser mode
- Web-conference mode
- Function mode
- Lay-flat mode

Notes:

- Some Adaptive keys are available only in a specific mode.
- Lay-flat mode is available only when you open your computer display to 180 degrees from the relative position of the keyboard.

The Adaptive Keyboard enables you to cycle through the available modes by tapping the Fn key. Depending on your needs, you can customize the order in which the modes are displayed and which modes are available when you cycle through the modes with the Fn key. Home mode and Function mode are always available. You also can customize the Adaptive keys by removing Web-browser mode and Web-conference mode from the cycle list when you tap the Fn key.

Modes of the Adaptive Keyboard

This topic provides information on the modes of the Adaptive Keyboard:

Home mode

By default, Home mode is displayed and active when your computer enters the Microsoft® Windows® operating system.

Web-browser mode

When you launch a Web browser that the Adaptive Keyboard recognizes (for example, the Internet Explorer® Web browser, the Chrome™ browser, or the Firefox Web browser), the Adaptive keys automatically change to Web-browser mode, providing functions specifically for using a Web browser.

Web-conference mode

When you launch a Voice-over-Internet-Protocol (VoIP) application that the Adaptive Keyboard recognizes, the Adaptive keys automatically change to Web-conference mode, providing functions specifically for using a VoIP application.

Function mode

When you turn on the computer, Function mode is displayed and active before the computer enters the Windows operating system. F1 through F12 provide the same functions as the F1 through F12 keys on a traditional keyboard. If you are using an application that supports the F1 through F12 functions, you can use the Fn key to cycle to Function mode whenever you need it.

Lay-flat mode

By default, Lay-flat mode is enabled. If Lay-flat mode is enabled, the Adaptive keys automatically change to Lay-flat mode when you put your computer display to 180 degrees from the relative position of the keyboard. Lay-flat mode provides a special set of Adaptive keys that are designed to help you share information on the screen with a person sitting across from you or 90 degrees to your left or right.

For more information about how to use each mode, refer to the help information system of the Adaptive Keyboard.

Features

The Adaptive Keyboard provides the following features:

Dynamic mode

The Adaptive Keyboard mode changes dynamically depending on certain computer states and when you make certain applications active. For more information, refer to the help information system of the Adaptive Keyboard.

Quick-access mode

Pressing and holding the Fn key initiates a quick-access feature that temporarily overrides the current Adaptive Keyboard mode with Function mode. After you release the Fn key, the mode returns to the previous mode.

Setting a Quick-access mode enables you to quickly display your desired mode of the Adaptive keys with no need to switch among various modes. By default, Quick-access mode is set to display Function mode; however, you can change the default setting of Quick-access mode.

Camera gestures

Camera gestures enable you to initiate certain functions through the use of gestures instead of using a keyboard or mouse. Tap the Camera-gestures icon to turn on and turn off the camera-gestures function. If the Camera-gestures icon is not visible, tap the Fn key to cycle to a mode that contains this icon.

Voice recognition

The voice-recognition feature enables you to initiate certain functions through the use of voice commands instead of using a keyboard or mouse. Tap the Voice-recognition icon to turn on or turn off the voice-recognition feature. If the Voice-recognition icon is not visible, tap the Fn key to cycle to a mode that contains this icon.

Cloud

Tap the Cloud icon to open the predefined cloud application in the cloud settings.

Chapter 2. Installation

This chapter provides the following items:

- “System and software requirements” on page 3
- “Installing Hotkey Features Integration” on page 3
- “Installing EyeSight Gesture Control” on page 3
- “Installing Dragon Assistant” on page 4

System and software requirements

To install the Adaptive Keyboard on Lenovo computers, your system must meet the following requirements:

- ThinkPad® X1 Carbon computer (20A7 or 20A8)
- Drivers for ThinkPad X1 Carbon computer (20A7 or 20A8)
- Windows 7 operating system or Windows 8.1 operating system
- Microsoft .NET Framework 4.0 or later (Windows 7 only)

To use the Adaptive keys on your computer, get the following items installed on your computer:

- Latest BIOS version for ThinkPad X1 Carbon computer (20A7 or 20A8)
- Graphics card driver
- Audio card driver
- Power Manager driver
- Microsoft .NET Framework 4.0 or later (Windows 7 only)
- Hotkey Features Integration package
- Dragon Assistant
- EyeSight Gesture Control
- Communication Utility (Windows 7 only)
- Lenovo Settings (Windows 8.1 only)

Installing Hotkey Features Integration

To use the Adaptive Keyboard and configure the Adaptive Keyboard settings, you must install the Hotkey Features Integration package.

To install the Hotkey Features Integration package, do the following:

1. Ensure that you log on to the computer with an administrator account.
2. Download the latest Hotkey Features Integration package from the Lenovo Support Web site at:
http://support.lenovo.com/en_US/downloads/detail.page?DocID=DS029026
3. Run the following silent install command with the /S /B /H option:
`setup.exe /S /B /H`

Installing EyeSight Gesture Control

To use the camera-gestures function and enable the camera-gesture key, you must install the EyeSight Gesture Control program.

Note: For Windows 8.1 users, you must install the Lenovo Settings program if you want to use the Camera-gestures icon to enable or disable the camera.

To install EyeSight Gesture Control, do the following:

1. Obtain the installation package of EyeSight Gesture Control by doing one of the following:
 - Go to \SWT00LS\GestureControl to locate the EXE file, for example, GestureControl.exe.
 - Get the installation package of EyeSight Gesture Control from the recovery disc set that you purchased.
 - Contact the Customer Support Center to get the latest version of EyeSight Gesture Control.
2. Run the silent install command to install EyeSight Gesture Control:
 - If the installation package is an MSI file, run the following silent install command:
`msiexec.exe /i GestureControl.msi /qn /norestart INSTALLDESKTOPSHORTCUT=0 ADD_TO_STARTUP=0 INSTALLSTARTMSHORTCUT=1`
 - If the installation package is an EXE file, for example, GestureControl.exe, run the following command to extract it into an MSI file installation package:
`GestureControl.exe /C /T:<temp_path>`

Note: In the command, <temp_path> is the location where the installation package is extracted to. For example, c:\temp.

Then run the following silent install command:

```
msiexec.exe /i GestureControl.msi /qn /norestart INSTALLDESKTOPSHORTCUT=0 ADD_TO_STARTUP=0 INSTALLSTARTMSHORTCUT=1
```

Installing Dragon Assistant

To use the voice-recognition function and enable the voice-recognition key, you must install the Dragon Assistant program.

To install Dragon Assistant, do the following:

1. Contact Nuance Communications, Inc. (the software provider) or the Customer Support Center to get the latest version of Dragon Assistant.
2. Run the following silent install command:
`DragonAssistantInstaller.exe /VERYSILENT /SP- /SUPPRESSMSGBOXES`

Note: Dragon Assistant only supports certain countries and languages.

Installing Communication Utility and Lenovo Settings

In Web-conference mode, certain applications are required to be installed on your computer if you want to change the microphone noise-cancellation sensitivity and camera mode by tapping the corresponding Adaptive keys. For more information about how to use the microphone noise-cancellation key and the camera mode key, refer to the help information system of the Adaptive Keyboard.

To change the microphone noise-cancellation sensitivity and camera mode by tapping the corresponding Adaptive keys on the Windows 7 operating system, you must install the Communication Utility program.

To install Communication Utility, do the following:

1. Download Communication Utility from the Lenovo Support Web site at:
http://support.lenovo.com/en_US/downloads/detail.page?DocID=DS028673
2. Save the installation package to a desired location and extract the package.
3. Run the following silent install command:
`Setup.exe /SP- /VERYSILENT /NORESTART /SUPPRESSMSGBOXES`

To change the microphone noise-cancellation sensitivity and camera mode by tapping the corresponding Adaptive keys on the Windows 8.1 operating system, you must install the Lenovo Settings program.

To install Lenovo Settings, do the following:

1. Download Lenovo Settings and the Lenovo Settings Dependency package from the Lenovo Support Web site at:
http://support.lenovo.com/en_US/product-and-parts/detail.page?&DocID=HF003321
2. Install the Lenovo Settings Dependency package first.
3. Install Lenovo Settings by referring to one of the following:
 - The Lenovo settings deployment guide that is available from the Lenovo Support Web site at:
http://support.lenovo.com/en_US/product-and-parts/detail.page?&DocID=HF003321.
 - The information on the Microsoft Web site at:
<http://technet.microsoft.com/en-us/library/hh852134.aspx>.

Note: Lenovo Settings is a Windows Store application.

Chapter 3. Configuration

This chapter provides information on the following topics:

- “Configuring the Adaptive Keyboard” on page 7
- “Configuring cloud applications” on page 11

Configuring the Adaptive Keyboard

The Adaptive Keyboard creates the registry key at `HKEY_CURRENT_USER/Software/Lenovo/SmartKey/Row` during the installation. The following table lists the Adaptive Keyboard registry settings that control the Adaptive Keyboard behavior.

Table 1. Registry settings of the Adaptive Keyboard

Settings	Type	Description
LayFlat Mode	REG_DWORD	Enable or disable Lay-flat mode. Value: 0=Disable 1=Enable
Dynamic Mode	REG_DWORD	Enable or disable Dynamic mode. Value: 0=Disable 1=Enable
QuickAccess	REG_SZ	Set the row for Quick-access mode. Value: Function=Set Function mode as the quick access row Home=Set Home mode as the quick access row WebBrowser=Set Web-browser mode as the quick access row WebConference=Set Web-conference mode as the quick access row
Default	REG_SZ	Set the default mode. Value: Function=Set Function mode as the default mode Home=Set Home mode as the default mode WebBrowser=Set Web-browser mode as the default mode WebConference=Set Web-conference mode as the default mode

Registry settings for individual mode

The section provides information about the registry settings for the following individual mode:

Registry settings for Function mode

The location of the registry settings for Function mode is:
HKEY_CURRENT_USER/Software/Lenovo/SmartKey/Row/Function

Table 2. Registry settings for Function mode

Settings	Type	Description
Show	REG_DWORD	Show or hide Function mode. Value: 0=Hide 1=Show
Order	REG_DWORD	The display order of Function mode when you cycle through the modes with the Fn key. Value: 0=First 1=Second 2=Third 3=Fourth

Registry settings for Home mode

The location of the registry settings for Home mode is:
HKEY_CURRENT_USER/Software/Lenovo/SmartKey/Row/Home

Table 3. Registry settings for Home mode

Settings	Type	Description
Show	REG_DWORD	Show or hide Home mode. Value: 0=Hide 1=Show
Order	REG_DWORD	The display order of Home mode when you cycle through the modes with the Fn key. Value: 0=First 1=Second 2=Third 3=Fourth

Registry settings for Web-browser mode

The location of the registry settings for Web-browser mode is:
HKEY_CURRENT_USER/Software/Lenovo/SmartKey/Row/WebBrowser

Table 4. Registry settings for Web-browser mode

Settings	Type	Description
Show	REG_DWORD	Show or hide Web-browser mode. Value: 0=Hide 1=Show
Order	REG_DWORD	The display order of Web-browser mode when you cycle through the modes with the Fn key. Value: 0=First 1=Second 2=Third 3=Fourth

Registry settings for Web-conference mode

The location of the registry settings for Web-conference mode is:

HKEY_CURRENT_USER/Software/Lenovo/SmartKey/Row/Webconference

Table 5. Registry settings for Web-conference mode

Settings	Type	Description
Show	REG_DWORD	Show or hide Web-conference mode. Value: 0=Hide 1=Show
Order	REG_DWORD	The display order of Web-conference mode when you cycle through the modes with the Fn key. Value: 0=First 1=Second 2=Third 3=Fourth

Configuring messages displayed in Adaptive Keyboard settings

The following table lists the registry settings for configuring messages displayed in the Adaptive Keyboard Settings window.

Table 6. Registry settings for configuring messages

Settings	Type	Location	Description
MessageCount	REG_DWORD	HKEY_CURRENT_USER/ Software/Lenovo/SmartKey/ Advanced	Number of times that the message is displayed Value: 0x00000000 0x00000001 0x00000002 0x00000003
ShowMessage	REG_DWORD	HKEY_CURRENT_USER/ Software/Lenovo/SmartKey/ Cloud	Whether to display the cloud key message. Value: 0x00000000=Not display 0x00000001=Display
ShowMessage	REG_DWORD	HKEY_CURRENT_USER/ Software/Lenovo/SmartKey/ Voice	Whether to display the voice key message. Value: 0x00000000=Not display 0x00000001=Display
ShowMessage	REG_DWORD	HKEY_CURRENT_USER/ Software/Lenovo/SmartKey/ Camera	Whether to display the camera key message. Value: 0x00000000=Not display 0x00000001=Display
ShowMessage	REG_DWORD	HKEY_CURRENT_USER/ Software/Lenovo/SmartKey/ CameraSettings	Whether to display the camera settings key message. Value: 0x00000000=Not display 0x00000001=Display

Configuring applications to support dynamic mode

The Adaptive Keyboard supports dynamic mode. The Adaptive Keyboard mode changes dynamically depending on certain computer states and when you make certain applications active. For some applications, the Adaptive Keyboard recognizes the application when the application is installed and changes the mode accordingly when the application is launched.

For applications that cannot be recognized by the Adaptive Keyboard, you can customize dynamic mode for the specific application by adding the registry key at:

HKEY_CURRENT_USER\Software\Lenovo\SmartKey\Application\Row

To create a registry entry for an application to use a specified Adaptive Keyboard mode, create a sub-key and name it with the mode name:

```
HKEY_CURRENT_USER\Software\Lenovo\SmartKey\Application\Row\<ModeName>
```

Note: In the registry entry, <ModeName> is the name of the mode that you want to use.

For example:

```
HKEY_CURRENT_USER\Software\Lenovo\SmartKey\Application\Row\Home
```

To create a registry entry for a specify application to use a certain Adaptive Keyboard mode, do the following:

1. Create a sub-key and name it with the application name. For example:

```
HKEY_CURRENT_USER\Software\Lenovo\SmartKey\Application\Row\Home\<AppName>
```
2. Modify the following registry settings of this application to allow the Adaptive Keyboard to recognize the application.

Table 7. Registry settings

Settings	Type	Description
AppPath	REG_SZ	The installation path of the application including the execution file name Value=Full path name of the application Note: For Window Store application in the Windows 8.1 operating system, you can check the process detail in Task Manager to get the information about the EXE file name.
WindowTitle	REG_SZ	Title of the application window (optional) Value=Text of the title displayed in the application window Note: Configure this setting only when some Windows Store applications, like Video, Music, and Calendar, share the same installation path c:\windows\System32\wwahost.exe with different window titles like “Video”, “Music”, and “Calendar”. The Adaptive Keyboard uses this setting to distinguish these applications.

The following are examples of configuring registry settings for a specified application to use a certain Adaptive Keyboard mode:

To create a registry entry for Google Chrome to use Home mode:

```
[HKEY_CURRENT_USER\Software\Lenovo\SmartKey\Application\Row\WebBrowser\Chrome]
“AppPath”=“c:\Program Files (X86)\Google\Chrome\Application\chrome.exe”
```

To create a registry entry for Video to use Home mode:

```
[HKEY_CURRENT_USER\Software\Lenovo\SmartKey\Application\Row\Home\Video]
“AppPath”=“c:\windows\System32\wwahost.exe”
“WindowTitle”=“Video”
```

Configuring cloud applications

When a cloud application is installed, the Adaptive Keyboard will create a registry key for this application under the following registry entry:

```
HKEY_CURRENT_USER\Software\Lenovo\SmartKey\Application\Cloud
```

The following table lists the registry setting for cloud applications.

Table 8. Registry setting for cloud applications

Settings	Type	Description
Default	REG_SZ	Default application selected by the user Value=LenovoReach

To create a cloud application that can be recognized by the Adaptive Keyboard, create a sub-key under the following registry entry:

HKEY_CURRENT_USER\Software\Lenovo\SmartKey\Application\Cloud\<AppName>\

Note: In the registry entry, <AppName> is the name of this cloud application.

The following table lists the registry setting for cloud applications.

Table 9. Registry setting for application type

Settings	Type	Description
AppType	REG_DWORD	Application type Value: 0x00000001=Desktop application 0x00000002=Window Store application 0x00000003=UI-access application 0x00010001=Desktop application without Graphical User Interface (GUI) 0x00010002=Window Store application without Uniform Resource Identifier (URI) defined

Configuring desktop cloud applications

To create a desktop cloud application that can be recognized by the Adaptive Keyboard, create a sub-key under the following registry entry:

HKEY_CURRENT_USER\Software\Lenovo\SmartKey\Application\Cloud\<AppName>\Desktop

Note: In the registry entry, <AppName> is the name of this cloud application.

Table 10. Registry settings for desktop cloud applications

Settings	Type	Description
File	REG_SZ	Application installation path
Parameters	REG_SZ	Parameters to launch the application

The following is an example of the registry settings for the desktop cloud application named Lenovo Reach:

```
[HKEY_CURRENT_USER\Software\Lenovo\SmartKey\Application\Cloud\Lenovo Reach]
"AppType"=dword:00000001
[HKEY_CURRENT_USER\Software\Lenovo\SmartKey\Application\Cloud\Lenovo Reach\Desktop]
"File"="C:\Program Files (x86)\Lenovo\Lenovo Reach\Lenovoreach.exe"
"Parameters"=""
```

Configuring Window Store cloud applications

To create a Window Store cloud application that can be recognized by the Adaptive Keyboard, create a sub-key under the following registry entry:

```
HKEY_CURRENT_USER\Software\Lenovo\SmartKey\Application\Cloud\\Metro
```

Note: In the registry entry, <AppName> is the name of this cloud application.

Table 11. Registry settings for Window Store cloud applications

Settings	Type	Description
PackageName	REG_SZ	<p>Package name of the Window Store application</p> <p>Value=Package name of the Window Store application</p> <p>Note: If the cloud application is a Window Store application without URI defined (AppType=0x00010002), the PackageName value is the title of the application window instead of the package name.</p>
URI	REG_SZ	<p>URI that is used to launch the Window Store application</p> <p>Value=URI that is used to launch the Window Store application</p> <p>Note: If the cloud application is a Window Store application without URI defined (AppType=0x00010002), the URI value is AppUserModelID instead of URI.</p>

The following is an example of the registry settings of the Window Store cloud application named Dropbox:

```
[HKEY_CURRENT_USER\Software\Lenovo\SmartKey\Application\Cloud\Dropbox]
"AppType"=dword:00010002
[HKEY_CURRENT_USER\Software\Lenovo\SmartKey\Application\Cloud\Dropbox\Metro]
"Parameters"=""
"URI"="C27EB4BA.Dropbox_xbfy0k16fey96!App"
```

Configuring UI-access cloud applications

UI-access application is a desktop application that can be launched from the Start screen without going back to the desktop.

To create a UI-access cloud application that can be recognized by the Adaptive Keyboard, create a sub-key under the following registry entry:

```
HKEY_CURRENT_USER\Software\Lenovo\SmartKey\Application\Cloud\\UiAccess
```

Note: In the registry entry, <AppName> is the name of this cloud application.

Table 12. Registry settings for UI-access cloud applications

Settings	Type	Description
File	REG_SZ	Application installation path
Parameters	REG_SZ	Parameters to launch the application

Chapter 4. Best practices

This chapter provides the following best practice scenario to help you install and configure the Adaptive Keyboard.

1. Download all driver packages for the ThinkPad X1 Carbon computer (20A7 or 20A8) and install all drivers.
2. Ensure that the BIOS is upgraded to the latest version.
3. For the Windows 7 operating system, install Microsoft .NET Framework 4.0 or later.
4. Install the Hotkey Features Integration package and restart your computer.
5. Install Dragon Assistant on your computer.
6. Install EyeSight Gesture Control and restart your computer.
7. Install Communication Utility (for Windows 7) or Lenovo Settings (for Windows 8.1).
8. Launch Adaptive Keyboard by tapping the settings icon, and configure the Adaptive Keyboard settings. Then apply your configuration.
9. Install the cloud applications.
10. Install other applications that you use to customize the Adaptive Keyboard behavior and restart your computer.
11. Add the registry entries for unrecognized applications that you want to customize in the following location:
HKEY_CURRENT_USER\Software\Lenovo\Smartkey\Application
12. Export the registry entries in the following location to a REG file.
HKEY_CURRENT_USER\Software\Lenovo\Smartkey\
13. Import the REG file you saved to the new computer or user account.

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