

## Chapter 1

# Which Microsoft Surface Do You Need?

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### *In This Chapter*

- ▶ Choosing between a Microsoft Surface and other tablets
  - ▶ Selecting the right Microsoft Surface
  - ▶ Understanding the difference between the regular and pro Surface models
  - ▶ Identifying the different Surface models
  - ▶ Understanding your Surface's storage space
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**M**any people stay tied to a desktop PC at work. They sit in front of a deskbound workhorse that lets them create documents, spreadsheets, and whatever other humdrum files their boss requires that day.

When it's time to relax, however, many of those same people reach for a tablet. Lightweight and portable, tablets make it easy to watch videos, listen to music, browse the web, and check e-mail.

But what if you had a tablet that did it *all*? You could *create* files when work called but *consume* files during your leisure.

That's the promise of a Microsoft Surface tablet. Its finger-friendly Start screen lets you switch between videos, music, e-books, e-mail, and the web. And, come Monday morning, you can switch to the Windows desktop, fire up Outlook, Word, Excel, or PowerPoint, and get to work.

This chapter explains Microsoft's four models of Surface tablets: The two older models, Surface RT and Surface Pro, and the two new models, Surface 2 and Surface Pro 2. I describe them each in detail, highlighting their features, their strengths, and their weaknesses.

## Why Buy a Microsoft Surface?

Most computer manufacturers create computers, including Windows tablets, as cheaply as possible. By coming up with the lowest price tag, they hope to undercut their competitors. Instead of taking the same road to the bottom, Microsoft created its line of Surface tablets as a showpiece, designed to show off Windows tablets at their finest.

To do that, Microsoft designed the Surface in-house with a large budget and engineering team, a luxury not available to most computer manufacturers.

Competitors cut costs by wrapping their tablets in cheap plastic. Microsoft Surface models, by contrast, come sheathed in a magnesium alloy. The rugged but lightweight casing gives the tablet a solid feel.

The Surface includes a built-in kickstand, shown in Figure 1-1. An optional attachable keyboard doubles as a cover when not in use.

**Figure 1-1:**  
Every Surface model includes a kickstand to prop it up at a comfortable viewing angle.



*Photo image provided by Microsoft*

Why not just buy an iPad? Well, they're attractive tablets that excel at what they do, but they're limited. Without a built-in USB port, iPads don't let you transfer files easily between your tablet and desktop PC. Every Surface tablet, by contrast, includes a full-sized USB port, making it easy to swap files through flash drives or even portable hard drives.

When iPad owners need to work, they usually reach for their laptop. Surface owners simply flip their keyboard into place, load the familiar Windows desktop, and head for the mainstays of Microsoft Office: Word, PowerPoint, Excel, and OneNote.

When you're ready to hit the road again, flip back the keyboard and run, taking all of your files with you.

Your Surface strips computing down to its essentials, creating a lightweight and mobile workstation that lets you add on accessories when necessary:

- ✓ **Fingers:** Your fingertips may be the only accessory you need. Touchscreens simplify many mobile computing tasks. It's easy to scroll through large documents with a flick of your finger, for example. Plus, touchscreens often seem more natural, especially when paging through digital books, maneuvering through maps, or resizing digital photos.
- ✓ **Keyboard:** A pop-up touchscreen keyboard works well for light typing. For heavier work, the optional keyboards add about a half-pound of weight and double as screen covers.
- ✓ **Monitor:** When you plug a monitor into your tablet's video port, you've created a two-monitor workstation. You can view your notes on your tablet but compose your document on the second, larger monitor. (I explain how to manage two monitors in Chapter 6.) Or, you can extend your Windows desktop across both monitors, doubling its size.

## *Understanding the Unique Features of a Surface*

Microsoft Surface tablets introduce several features not found in other tablets:

- ✓ **Kickstand:** Place a tablet on the desk, and its screen faces the ceiling, not you. To solve the problem, each Surface includes a built-in kickstand that lets your tablet sit upright like a laptop's screen. The kickstand on the newest models, the Surface 2 and Surface Pro 2, adjusts to provide two viewing angles, handy for typing in different situations.
- ✓ **Keyboard cover:** Most tablets don't include a case or a keyboard. You can buy them as accessories, but they're two more items to carry around. The Surface, by contrast, offers a keyboard that doubles as a cover. When you're done working, flip up the keyboard, and it becomes a cover to protect the screen.



- ✓ **USB port/memory card slot:** These items come built into every Surface tablet, but you won't find them on any iPad. Ask any iPad owners how they move information to and from their iPad. Most of them get an uncomfortable expression on their faces while explaining their workarounds.
- ✓ **Windows desktop:** Nearly everybody has grown fairly used to the Windows desktop, a staple around offices for two decades. All Surfaces include the Windows desktop, but with one caveat: You can't install traditional desktop programs on the Surface RT or Surface 2.
- ✓ **Microsoft Office:** The Surface RT and Surface 2 include a copy of Office Home and Student 2013 RT. That gives you Outlook, Word, Excel, PowerPoint, and OneNote, ready to create your own documents or touch up those that arrive in e-mail. (Microsoft Office isn't included on a Surface Pro or Surface Pro 2, but you can purchase and install it yourself if you want.)

## *Deciding between the Microsoft Surface Tablets*

Microsoft has sold four types of Surface tablets that look and behave very similarly. (A fifth Surface, available sometime in 2014, will have cellular Internet access.) All of them share many features:

- ✓ The tile-filled Start screen introduced in Windows 8
- ✓ The Windows desktop
- ✓ Downloadable apps from the Windows Store
- ✓ A USB port and memory card slot for adding storage
- ✓ The ability to create different accounts for different users

Yet the tablets differ in subtle ways that let them each serve different niches.

The following sections explain how the models differ so that you can figure out which Surface meets your needs.



Not sure which Surface you're looking at? Look for this chapter's "Identifying a Surface Model" section. It explains how to tell each model apart simply by flipping it over and reading the wording hidden on the back cover.

*Note:* I describe the first two Surface models, the Surface RT and Surface Pro, in the adjacent sidebar, "Upgrading first-generation Surfaces to Windows 8.1."

## Upgrading first-generation Surfaces to Windows 8.1

Microsoft's first two Surface models, the Surface RT and the Surface Pro, didn't fare well in the market. The Surface RT boasted a long battery life but ran at a fairly sluggish pace. The Surface Pro was speedy and powerful but lacked a long battery life. And Windows 8 was too new to gather much enthusiasm.

Microsoft replaced the two older Surface models with the much more capable Surface 2 and Surface Pro 2.

If you own the Surface RT or Surface Pro, by all means, take advantage of Microsoft's free upgrade to Windows 8.1. To upgrade, visit the Store app with your Surface (as explained in Chapter 7), search for *Windows 8.1*, and choose to download and install the upgrade.

After you upgrade your Surface RT or Surface Pro to Windows 8.1, nearly *all* of the instructions in this book will also apply to your older Surface. (The older tablets just run more slowly or with less battery life.) If you own a Surface RT, look throughout this book for the Windows RT icon. That icon points out where the Surface RT and Surface 2 work differently than the Surface Pro and Surface Pro 2.

Microsoft no longer sells the Surface Pro, and Microsoft's website now refers to the original Surface RT as simply "Surface." You might find the "Surface" still available on Microsoft's website or at some stores for an exceptionally low price.

## Surface 2

The Surface 2 works best during your leisure time, letting you watch movies, listen to music, browse the web, and connect with your friends.

Should you need to work, open the Desktop app. There, the built-in Microsoft Outlook, Word, Excel, PowerPoint, and OneNote apps should carry you through until you can get back to the office.



The minimalist Surface 2 doesn't run Windows 8.1 but an operating system called *Windows RT 8.1*. In plain English, that means that the Surface 2 can't run traditional Windows desktop programs. Like the iPad, it's limited to *apps*, small programs downloaded from the Windows Store.

Although it can't run traditional Windows programs, the Surface 2 offers these perks:

- ✓ **Low price:** The Surface 2 comes in a 32GB version that costs \$429; adding a Touch Cover keyboard adds another \$79. (The newer Surface keyboards cost more, and I describe the differences between all of the Surface keyboards in Chapter 5.)
- ✓ **Long battery life:** Depending on its use, the Surface 2 averages between eight and ten hours of battery life.



- ✓ **Thin and light:** The Surface 2 weighs less than 1.5 pounds and is 8.9mm thin. That makes it easy to toss into a backpack or keep by the bedside table.
- ✓ **Better camera:** The Surface 2 sports a 3.5-megapixel camera in front and a 5-megapixel camera in back. (The Surface RT also includes that camera, but the Surface Pro and Surface Pro 2 include only 1.2-megapixel cameras for the front and back.)
- ✓ **USB 3.0 support:** The Surface 2 works well with natively recognized USB gadgets. That means you can plug in storage devices (flash drives, portable drives), USB hubs with more USB ports, mice, keyboards, cameras, some headsets, and some USB printers. Because it uses the new USB 3.0 standard, your information transfers much more quickly with USB 3.0 gadgets.
- ✓ **Bluetooth support:** Nearly anything that connects wirelessly through Bluetooth works well with the Surface RT and Surface 2. Your wireless headsets, mice, keyboards, and other Bluetooth gadgets should work without a hitch.
- ✓ **Memory card slot:** To add storage, slide a memory card into the built-in microSDXC slot. That slot works with microSD, microSDHC, or microSDXC cards, which let you add up to 128GB storage space.
- ✓ **Microsoft Office RT:** The Surface RT and Surface 2 include Microsoft Office RT, a suite of programs including Outlook, Word, PowerPoint, Excel, and OneNote. That's one less thing to buy to stay productive.
- ✓ **OneDrive:** Your Microsoft account gives you 7GB of free storage on OneDrive, an online cubby hole for files. (OneDrive was called *SkyDrive* until early 2014, when Microsoft changed its name.) The Surface 2 contains a certificate to increase your OneDrive storage to a whopping 200GB, free for two years.
- ✓ **Apps:** The Surface 2 can run only apps downloaded from the Windows Store. The Store doesn't have as many apps as Apple and Google offer, but the stock grows larger every day.



The Surface 2 differs from the Surface Pro 2 version in many subtle ways too numerous to mention here. If you own a Surface 2 or Surface RT, keep an eye open for this Windows RT icon, like the one in the margin. Paragraphs with this icon explain other ways Windows RT differs from traditional Windows.

## Surface Pro 2

Whereas the Surface 2 aims to meet the consumer's needs, the Surface Pro 2 gives you the power of a desktop PC in a rugged tablet. You could say that it's two computers in one. On one hand, you have the Start screen apps for casual, on-the-go computing and staying connected while traveling.



## What *can't* the Surface 2 handle?

Because the Surface 2 runs Windows 8.1 RT instead of Windows 8.1, it brings some unique compromises. Those compromises will be deal breakers for some people. Other people will say, “Who needs that, anyway?”

Here they are, in no particular order:

- ✓ **No desktop programs:** Surface 2 can run only apps downloaded from the Windows Store. You can't install desktop programs like you can on a desktop PC.
- ✓ **No Windows Media Center:** Unlike Windows 8 computers, Surface 2 won't let you install Windows Media Center for viewing DVDs and watching or recording TV shows.
- ✓ **No Windows Media Player:** The Surface 2 desktop doesn't include Windows Media Player. To watch movies and listen to music, you must use the built-in Music and Video apps or download replacement music and video apps from the Windows Store.
- ✓ **Can't start a homegroup:** When connected to a network, the Surface 2 can join homegroups and access files from other
- networked computers. However, those computers can't access *your* files. To share your files, you can upload them to OneDrive, copy them to a portable flash drive (or hard drive), or send them through e-mail.
- ✓ **No driver support:** Windows RT relies on its own set of built-in *drivers* — special software that lets it communicate with plugged-in accessories. Because you can't install drivers, the Surface 2 won't work with some USB gadgets such as TV tuners, barcode readers, GPS units, and other devices that require you to install a program.
- ✓ **No GPS:** Lacking a GPS chip, the Surface 2 relies on Wi-Fi to estimate your location. That narrows down your location to within a few hundred feet. (Surface 2 with a built-in 4G LTE cellular data plan also lacks a GPS.)
- ✓ **No NFC (Near Field Communication):** Too new of a technology to disappoint many, NFC lets two devices exchange bursts of information when they bump into each other, a feature much-welcomed by business-card swappers.

And, when work calls, you can load the full-powered Windows 8.1 Desktop app to run the same Windows programs you run on your desktop PC.

Windows 8.1 Pro also lets you pony up an extra \$15 for the Windows Media Center Pack. This pack lets you play DVDs if you plug in a USB DVD drive. Plug in a TV tuner, connect a TV signal from cable or an antenna, and you've turned the Surface into a complete digital video recorder, ready to record TV shows for watching later.

The Surface Pro 2 comes with all the perks given to Surface 2 owners, including the 200GB of free OneDrive storage for a year.

I won't list all the advantages here because the Surface Pro 2 is basically a powerful desktop PC flattened into a tablet. *Any* software that runs on a Windows 8.1 desktop PC runs on a Surface Pro 2.

The same holds true for gadgets you plug into the Surface Pro 2's USB port: network ports, bar code readers, scanners, MIDI gadgets, and other specialty items.

But all that power brings a few compromises:

- ✓ **Battery life:** You can expect six or eight hours of battery life, perhaps more, depending on your use. But the battery probably won't last as long as it does on the Surface 2.
- ✓ **Higher cost:** Surface 2 pricing begins at \$449 for a model with 2GB of memory and 32GB of storage. The Surface Pro 2 begins at \$899 for 4GB of memory and 64GB of storage.
- ✓ **No Microsoft Office:** Unlike the Surface 2, the Surface Pro 2 doesn't include Microsoft Office. If you need that program, you must buy and install it separately.
- ✓ **No connected standby:** When the tablet's asleep, it's *really* asleep. It won't collect your e-mail in the background.

## Summing Up the Differences between the Versions

Sometimes numbers mean more than words. To satisfy the other side of your brain, the specifications in Table 1-1 show exactly how the Surface 2 and Surface Pro 2 differ from each other.

**Table 1-1** Differences between the Surface 2 and Surface Pro 2

<i>Item</i>	<i>Surface 2</i>	<i>Surface Pro 2</i>
Operating System	Windows RT 8.1	Windows 8.1 Pro
Processor	NVIDIA Tegra 4 (T40) 1.7 GHz Quad Core	Fourth generation Intel Core i5-4200U Processor with Intel HD Graphics 4400
Memory	2GB	4GB or 8GB
Weight	1.5 pounds	2 pounds



<i><b>Item</b></i>	<i><b>Surface 2</b></i>	<i><b>Surface Pro 2</b></i>
Thickness	0.35 inches (8.9mm)	0.53 inches (13.5mm)
Display	10.6 inches, 16:9 ratio, 1920 x 1080 pixels, 5-point multitouch, 1080p resolution	10.6 inches, 16:9 ratio, 1920 x 1080 pixels, 10-point multitouch, 1080p resolution
Battery	31.5 watt hours	42 watt hours
Ports	USB 3.0 slot, micro-HDMI port, microSD slot, 1/8-inch headphone jack, microphone, stereo speakers	USB 3.0 slot, Mini DisplayPort version 1.2, microSD slot, 1/8-inch headphone jack, microphone, stereo speakers
Wireless	Wi-Fi (802.11a/b/g/n), Bluetooth 4.0	Wi-Fi (802.11a/b/g/n), Bluetooth 4.0
Storage capacity	32GB or 64GB	64GB/128GB with 4GB of memory model; 256GB/512GB with 8GB memory model
Cameras and microphones	Two 720p cameras and two microphones (one each in front and back). The front camera is 3.5 megapixels; the back is 5 megapixels.	Two 720p cameras (one in front and one in back), and one microphone on top. Both cameras are 1.2 megapixels.
Price	\$449 for 32GB, \$549 for 64GB. Touch and Type Covers sold separately.	\$899 for 64GB, \$999 for 128GB, \$1,299 for 256GB, and \$1,799 for the 512GB model; Touch and Type Covers sold separately
Start screen	Yes	Yes
Office RT	Includes RT versions of Word, Excel, PowerPoint, OneNote, and Outlook	No; Office must be purchased and installed separately
Stylus	Not included, but supports capacitive stylus	Digital stylus included, with built-in charger
OneDrive/Skype	Includes 200GB of free OneDrive storage for two years, one year of Skype Unlimited World calling to landlines in over 60 countries, and unlimited Skype WiFi at over 2 million hotspots	Includes 200GB of free OneDrive storage for two years, one year of Skype Unlimited World calling to landlines in over 60 countries, and unlimited Skype WiFi at over 2 million hotspots

(continued)

**Table 1-1 (continued)**

<i>Item</i>	<i>Surface 2</i>	<i>Surface Pro 2</i>
Sensors	Ambient light sensor, accelerometer, gyro-scope, compass	Ambient light sensor, accelerometer, gyro-scope, compass
Power supply	24 watts (included)	48 watts, with 5-watt USB port for charging accessories

Table 1-2 shows differences between the two original Surfaces, the Surface RT and the Surface Pro.

**Table 1-2** Differences between the Surface RT and Surface Pro

<i>Item</i>	<i>Surface RT</i>	<i>Surface Pro</i>
Operating System	Windows RT, with free upgrade to Windows 8.1 RT	Windows 8, with free upgrade to Windows 8.1
Processor	Quad-core NVIDIA Tegra 3	Third-generation Intel Core i5 Processor with Intel HD Graphics 4000
Memory	2GB	4GB
Weight	1.5 pounds	2 pounds
Thickness	0.37 inches (9.3mm)	0.53 inches (13.5mm)
Display	10.6 inches, 16:9 ratio, 1366 x 763 pixels, 5-point multitouch	10.6 inches, 16:9 ratio, 1920 x 1080 pixels, 10-point multitouch
Battery	31.5 watt hours	42 watt hours
Ports	USB 2.0 slot, micro-HDMI port, microSDXC slot, 1/8-inch headphone jack, stereo speakers	USB 3.0 slot, Mini DisplayPort version 1.1, microSDXC slot, 1/8-inch headphone jack, stereo speakers
Wireless	Wi-Fi (802.11a/b/g/n), Bluetooth 4.0	Wi-Fi (802.11a/b/g/n), Bluetooth 4.0

<i>Item</i>	<i>Surface RT</i>	<i>Surface Pro</i>
Storage capacity	32GB or 64GB	64GB or 128GB
Cameras	Two 720p cameras, front and rear	Two 720p cameras, front and rear
Price	\$349 for 32GB, \$449 for 64GB and Touch Cover	No longer sold
Start screen	Yes	Yes
Office (Word, Excel, PowerPoint, OneNote)	Yes, includes Home and Student version	No, Office must be purchased and installed separately
Stylus	Not included but supports capacitive stylus	Digital stylus included, with built-in charger
OneDrive/Skype	Includes 7GB of free OneDrive storage space with your Microsoft account, but no Skype credits	Includes 7GB of free OneDrive storage space with your Microsoft account, but no Skype credits
Sensors	Ambient light sensor, accelerometer, gyroscope, compass	Ambient light sensor, accelerometer, gyroscope, compass
Power supply	24 watts (included)	48 watts, with 5-watt USB port for charging accessories

## Identifying a Surface Model

Not sure which Surface model you're viewing? You can find out by lifting the kickstand on the back of the tablet and peeking underneath. There, you see the word *Surface*, as well as this identifying information:

- ✓ **Surface RT:** These all-black, first-generation models list the term *Windows RT* beneath a Windows logo. You'll also see the amount of storage listed as either 32GB or 64GB. The kickstand's visible side shows a Windows logo.
- ✓ **Surface Pro:** These first-generation models list the term *Windows 8* beneath the Windows logo. You'll also see the amount of storage, 64GB or 128GB.

- ✓ **Surface 2:** These look much like the Surface RT tablets, down to the term *Windows RT* listed beneath the Windows logo. However, these second-generation tablets have a black front with a *silver* back. Beneath the kickstand, the amount of storage is listed as either 32GB or 64GB. Models with a 4G LTE data plan have a SIM card slot on the left edge below the volume rocker.
- ✓ **Surface Pro 2:** These second-generation models list the term *Windows 8.1* beneath the Windows logo. You also see the amount of storage, 64GB, 128GB, 256GB, or 512GB.

The serial number of your Surface, needed for warranty and service information, is printed directly beneath the word *Surface* under the kickstand.

The serial number of a Surface keyboard is printed on the right edge of its spine — that raised edge that clicks onto the Surface when attaching the keyboard.



Before buying a used Surface on eBay, make sure the seller posts a clear photo of the information printed beneath the kickstand. That way you know exactly what's being sold.

## Understanding Your Surface's Storage Space

Microsoft sells its various Surface tablets with up to 512GB of storage space. However, Microsoft tosses some of its own software onto the tablet, which reduces storage space for your own files. Windows consumes some of that space, for example, as do the bundled apps and troubleshooting tools.

That means you can't copy 32GB of music onto a 32GB Surface. So, how much information *can* you store? Table 1-3 explains exactly how much storage space you'll have on each Surface model.

If you need more storage, you can always slip a microSDXC memory card into the microSD memory slot of any Surface.

The Surface 2 and Surface Pro 2 come with 200GB of free OneDrive storage for one year. I describe how to activate it in Chapter 3.

<b>Table 1-3</b>	<b>Surface Storage Space</b>
<i><b>This Surface Model . . .</b></i>	<i><b>. . . Contains This Much Storage Space</b></i>
Surface RT, 32GB	15GB
Surface RT, 64GB	45GB
Surface Pro, 64GB	30GB
Surface Pro, 128GB	89GB
Surface 2, 32GB	18GB
Surface 2, 64GB	47GB
Surface Pro 2, 64GB	37GB
Surface Pro 2, 128GB	97GB
Surface Pro 2, 256GB	212GB
Surface Pro 2, 512GB	451GB

