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Smart TV

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LG Electronics smart TV from 2011

A **smart TV**, also known as a **connected TV (CTV)**, is a traditional [television set](#) with integrated [Internet](#) and interactive [Web 2.0](#) features that allow users to stream music and videos, browse the internet, and view photos. Smart TVs are a [technological convergence](#) of [computers](#), [televisions](#), and [digital media players](#). Besides the traditional functions of television sets provided through traditional [broadcasting](#) media, these devices can provide access to [over-the-top media services](#) such as [streaming television](#) and [internet radio](#), along with [home networking](#) access.^{[1][2][3]}

Smart TV should not be confused with Internet TV, [IPTV](#), or [streaming television](#). *Internet TV* refers to receiving television content over the Internet instead of traditional systems such as terrestrial, cable, and satellite, regardless of how the Internet is delivered. IPTV is one of the Internet television technology standards for use by television broadcasters. *Streaming television* is a term used for programs created by many producers for showing on Internet TV.

In smart TVs, the [operating system](#) is preloaded into the television set's [firmware](#), which provides access to apps and other [digital content](#). In contrast, traditional televisions primarily act as [displays](#) and are limited to vendor-specific customization. The [software applications](#) can be preloaded into the device or updated or installed on demand via an [application store or marketplace](#), in a manner similar to how applications are integrated into modern [smartphones](#).^{[4][5][6][7][8]}

The technology that enables smart TVs is also incorporated into external devices such as [set-top boxes](#) and some [Blu-ray](#) players, [game consoles](#), [digital media players](#), [hotel television systems](#), smartphones, and other network-connected interactive devices that utilize television-type display outputs.^{[9][10]} These devices allow viewers to find and play videos, movies, TV shows, photos, and other content from the Web, [cable](#) or [satellite TV](#) channels, or a local storage device.

Definition



Smart TVs on display

A *Smart TV* device is either a television set with integrated Internet capabilities or a set-top box for television that offers more advanced computing ability and connectivity than a contemporary basic television set. A Smart TV is an [information appliance](#) and may be thought of as the [computer system](#) of a [mobile device](#) integrated with a television set unit. A Smart TV runs a complete [operating system](#) or [mobile operating system](#) that may provide a platform for application developers. Thus, a Smart TV often allows the user to install and run more advanced applications or [plugins/addons](#) based on its specific platform.^{[1][11][12]}

A Smart TV platform has a public [software development kit](#) (SDK) or [native development kit](#) (NDK) with which third-party developers can develop applications for it, and an [app store](#) so end-users can install and uninstall apps. The public SDK enables third-party application developers to write applications once and see them [run successfully on any device](#) that supports the Smart TV platform architecture it was written for, regardless of the hardware manufacturer.

Smart TVs deliver content (such as photos, movies and music) from other computers or network attached storage devices on a network using either a [Digital Living Network Alliance \(DLNA\)](#) / [Universal Plug and Play \(UPnP\)](#) media server or similar service program like [Windows Media Player](#) or [Network-attached storage](#) (NAS), or via [iTunes](#). It also provides access to Internet-based services including traditional broadcast TV channels, [catch-up services](#), [video-on-demand](#) (VOD), [electronic program guide](#), interactive advertising, personalisation, voting, games, [social networking](#), and other multimedia applications.^[13] Smart TV enables access to movies, shows, video games, apps and more. Some of those apps include [Netflix](#), [Hulu](#), [Spotify](#), [YouTube](#), and [Amazon](#).^[14]

History

In the early 1980s, "intelligent" television receivers were introduced in Japan. The addition of an [LSI](#) chip with memory and a character generator to a television receiver enabled Japanese viewers to receive a mix of programming and information transmitted over spare lines of the broadcast television signal.^[15] A patent was filed in

1994^[16] (and extended the following year)^[17] for an "intelligent" television system, linked with data processing systems, by means of a digital or analog network. Apart from being linked to data networks, one key point is its ability to automatically download necessary software routines, according to a user's demand, and process their needs.

However, descriptions of the elements of a smart television can be found in public discourse from the beginning of the 1980s, if not earlier, with the introduction of [videotex](#) services, particularly [teletext](#) information for reception by television sets, leading commentators to consider that televisions and accessories would evolve to encompass a range of related activities. In the words of one commentator: "In the long run, this machine is likely to develop into a multi-purpose receiver, for electronic mail, dealing with the bank, calculations, remote information - and '[Not the nine o'clock news](#)' or '[Casablanca](#)' on video."^[18]

The mass acceptance of digital television in the mid-late 2000s and early 2010s greatly improved Smart TVs. Major TV manufacturers have announced production of Smart TVs only for their middle-end to high-end TVs in 2015.^{[19][20][21]} Smart TVs became the dominant form of television during the late 2010s. At the beginning of 2016, [Nielsen](#) reported that 29 percent of those with incomes over \$75,000 a year had a Smart TV.^[22]

Typical features



LG Smart TV using the Web browser

Smart TV devices also provide access to [user-generated content](#) (either stored on an external [hard drive](#) or in [cloud storage](#)) and to interactive services and Internet applications, such as [YouTube](#), many using [HTTP Live Streaming](#) (also known as HLS) adaptive streaming.^[23] Smart TV devices facilitate the curation of traditional content by combining information from the Internet with content from TV providers. Services offer users a means to track and receive reminders about shows^[24] or sporting events,^[25] as well as the ability to change channels for immediate viewing. Some devices feature additional interactive [organic user interface](#) / [natural user interface](#) technologies for [navigation controls](#) and other [human interaction](#) with a Smart TV, with such as [second screen](#) companion devices,^{[26][27]} spatial [gestures](#) input like with [Xbox Kinect](#),^{[28][29]} and even for [speech recognition](#) for [natural language user interface](#).^[30] Smart TV develops new features to satisfy consumers and companies,

such as new payment processes. LG and [PaymentWall](#) have collaborated to allow consumers to access purchased apps, movies, games, and more using a remote control, laptop, tablet, or smartphone. This is intended for an easier and more convenient way for checkout.

Platforms

See also: [List of smart TV platforms](#)



Samsung's discontinued Orsay platform

Smart TV technology and software is still evolving, with both [proprietary](#) and [open source software frameworks](#) already available. These can run applications (sometimes available via an 'app store' [digital distribution platform](#)), play [over-the-top media services](#) and interactive on-demand media, personalized communications, and have social networking features.^{[31][32][33][34]}

[Android TV](#), [Boxee](#), [Google TV](#), [Horizon TV](#), [Inview](#), [Kodi Entertainment Center](#), [Mediaroom](#), [MeeGo](#), [OpenTV](#), [Plex](#), RDK (Reference Development Kit), [Roku](#), Smart TV Alliance, ToFu Media Platform, [Ubuntu TV](#), Vewd, and [Yahoo! Smart TV](#) are framework platforms managed by individual companies. HbbTV, provided by the Hybrid Broadcast Broadband TV association, CE-HTML, part of Web4CE, OIPF, part of HbbTV, and Tru2way are framework platforms managed by technology businesses. Current Smart TV platforms used by vendors are [Amazon](#), [Apple](#), [Google](#), [Haier](#), [Hisense](#), [Hitachi](#), [Insignia](#), [LG](#), [Microsoft](#), [Netgear](#), [Panasonic](#), [Philips](#), [Samsung](#), [Sharp](#), [Sony](#), [TCL](#), [TiVO](#), [Toshiba](#), [Sling Media](#), and [Western Digital](#). Sony, Panasonic, Samsung, LG, and [Roku TV](#) are some platforms ranked under the best Smart TV platforms.^[35]

Sales

According to a report from research group NPD In-Stat, in 2012 only about 12 million U.S. households had their Web-capable TVs connected to the Internet, although an estimated 25 million households owned a set with the built-in network capability. In-Stat predicted that by 2016, 100 million homes in North America and western Europe would be using television sets blending traditional programming with internet content.^[36] By the end of 2019, the number of installed Connect TVs reached 1.26 billion worldwide.^[37]

The number of households using [over-the-top](#) television services has rapidly increased over the years. In 2015, 52% of U.S. households subscribed to [Netflix](#), [Amazon Prime](#), or [Hulu Plus](#); 43% of pay-TV subscribers also used Netflix, and 43% of adults used some streaming [video on demand](#) service at least monthly. Additionally, 19% of Netflix subscribers shared their subscription with people outside of their households. Ten percent of adults at the time showed interest in [HBO Now](#).^[38]

Use and issues

Social networking

See also: [Social media and television](#)

Some Smart TV platforms come prepackaged or can be optionally extended, with social networking technology capabilities. The addition of social networking synchronization to Smart TV and HTPC platforms may provide an interaction both with on-screen content and with other viewers than is currently available to most televisions, while simultaneously providing a much more cinematic experience of the content than is currently available with most computers.^[39]

Advertising

Some Smart TV platforms also support [interactive advertising](#) ([companion ads](#)), [addressable advertising](#) with local advertising insertion and targeted advertising,^[40] and other advanced advertising features such as ad telescoping^[41] using [VOD](#) and [DVR](#), enhanced TV for consumer [call-to-action](#), and [audience measurement](#) solutions for ad campaign effectiveness.^{[42][43]} The marketing and trading possibilities offered by Smart TVs are sometimes summarized by the term [t-commerce](#). Taken together, this [bidirectional](#) data flow means Smart TVs can be and are used for [clandestine observation](#) of the owners. Even in sets that are not configured off-the-shelf to do so, default security measures are often weak and will allow hackers to easily break into the TV.^[44]

2019 research, "Watching You Watch: The Tracking Ecosystem of Over-the-Top TV Streaming Devices", conducted at [Princeton](#) and [University of Chicago](#), demonstrated that a majority of streaming devices will covertly collect and transmit personal user data, including captured screen images, to a wide network of advertising and analytics companies, raising privacy concerns.^[45]

[Digital marketing research](#) firm [eMarketer](#) reported a 38 percent surge – to close to \$7 billion, a 10 percent [television advertising](#) market share – in advertising on connected TV like [Hulu](#) and [Roku](#), to be underway in 2019, with market indicators that the figure would surpass \$10 billion in 2021.^{[46][47]}

Security

There is evidence that a Smart TV is vulnerable to attacks. Some serious [security](#) bugs have been discovered, and some successful attempts to run [malicious code](#) to get unauthorized access were documented on video. There is evidence that it is possible to gain [root access](#) to the device, install malicious software, access and modify configuration information for a [remote control](#), remotely access and modify files on TV and attached USB drives, access camera and microphone.^[48]

There have also been concerns that [hackers](#) may be able to remotely turn on the microphone or webcam on a smart TV, being able to eavesdrop on private conversations. A common [loop antenna](#) may be set for a *bidirectional* transmission channel, capable of uploading data rather than only receiving. Since 2012, security researchers discovered a similar vulnerability present in more [series](#) of Smart TVs, which allows hackers to get an external [root access](#) on the device.^[49]

Anticipating growing demand for an [antivirus](#) for a Smart TV, some [security software](#) companies are already working with partners in the digital TV field on the solution. It seems like there is only one antivirus for Smart TVs available: "Neptune", a cloud-based antimalware system developed by Ocean Blue Software in partnership with [Sophos](#). However, antivirus company [Avira](#) has joined forces with digital TV testing company Labwise to work on software to protect against potential attacks.^[50] The privacy policy for [Samsung's](#) Smart TVs has been called [Orwellian](#) (a reference to [George Orwell](#) and the dystopian world of constant surveillance he depicted in [1984](#)), and compared to [Telescreens](#) because of eavesdropping concerns.^{[51][52]}

Hackers have misused Smart TV's abilities such as operating source codes for applications and its unsecured connection to the Internet. Passwords, IP address data, and credit card information can be accessed by hackers and even companies for advertisement. A company caught in the act is [Vizio](#).^[citation needed] The confidential documents, codenamed [Vault 7](#) and dated from 2013 to 2016, include details on [CIA's](#) software capabilities, such as the ability to compromise Smart TVs.^[53]

Restriction of access

Internet websites can block Smart TV access to content at will or tailor the content that will be received by each platform.^[54] [Google TV](#)-enabled devices were blocked by [NBC](#), [ABC](#), [CBS](#), and [Hulu](#) from accessing their Web content since the launch of Google TV in October 2010. Google TV devices were also blocked from accessing any programs offered by [Viacom's](#) subsidiaries.^[55]

Reliability

In 2017, high-end [Samsung](#) Smart TVs stopped working for at least seven days after a software update.^[56] Application providers are rarely upgrading Smart TV apps to the latest version; for example, Netflix does not support older TV versions with new Netflix upgrades.^[57]

See also

-  [Television portal](#)
-  [Linux portal](#)

- [10-foot user interface](#)
- [Automatic content recognition](#)
- [Digital Living Network Alliance](#) (DLNA)
- [Digital media player](#)
- [Home automation](#)

- [Home theater PC](#)
- [Hotel television systems](#)
- [Hybrid Broadcast Broadband TV](#)
- [Interactive television](#)
- [Internet of things](#)
- [List of mobile app distribution platforms](#)
- [List of smart TV platforms](#)
- [Over-the-top media service \(OTT\)](#)
- [PC-on-a-stick](#)
- [Second screen](#)
- [Smartphone](#)
- [Space shifting](#)
- [Smart speaker](#)
- [Telescreen](#)
- [Tivoization](#)
- [TV Genius](#)
- [Video on demand](#)

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The Basics of Using a Smart TV

March 29, 2023 March 29, 2023 by Erik Fullmer

Smart TVs have become increasingly popular in recent years as people look for more convenient and streamlined ways to access their favorite shows and movies. These internet-connected devices allow users to access various streaming services, apps, and online content, all from the comfort of their own living room. However, with so many features and options available, operating a Smart TV can seem daunting, especially for those who are not tech-savvy.

That's where this article comes in. This post will cover the basics of operating a [Smart TV](#), including setting it up, downloading and using specific apps, and troubleshooting common issues. Whether you're a first-time Smart TV owner or simply looking to [improve your skills](#), this article will provide you with everything you need to know to get the most out of your device.

But we also know technical issues can arise occasionally. If you encounter any persistent issues while operating your Smart TV, HelpCloud is here to assist you. With our team of experienced technicians, you can rest assured that your

technical issues will be resolved quickly and efficiently. So, let's dive in and learn everything there is to know about operating a Smart TV.

Basic Setup

Setting up a [Smart TV](#) can be daunting, especially if you're new to streaming devices. However, in this section, we will walk you through the process in a way that's easy to understand.

Before you can start enjoying your Smart TV, you must set it up. The [setup process](#) may vary slightly depending on the brand and model of your TV, but generally, it involves connecting your TV to the internet and creating an account. You can use an Ethernet cable or a Wi-Fi network to connect your TV to the internet. Once your TV is connected, you must create an account with the manufacturer's app store, such as Google Play or the Apple App Store.

Once your Smart TV is connected to the internet, you must create an account with the manufacturer's app store to download and use apps on your TV. We'll provide step-by-step instructions for creating an account to make the process as easy as possible.

There are generally two ways to connect a Smart TV to the internet:

1. Wired
2. Wireless



A Wired Connection

A wired connection is connecting your TV to your home network using an Ethernet cable. This method is typically more reliable and faster than a wireless connection. You'll need an Ethernet port on your TV and a nearby Ethernet port on your router or modem to use a wired connection.

A Wireless Connection

On the other hand, a wireless connection uses Wi-Fi to connect your TV to your home network. This method is more convenient and requires no physical cables, but it can be less reliable and slower than a wired connection. You'll need to set up Wi-Fi in your home and know your Wi-Fi network name and password to use a wireless connection.

When choosing between a wired or wireless connection, consider the location of your TV and the distance from your router. A wired connection is likely best if your TV is near your router. A wireless connection may be more convenient if your TV is further away or in a different room. Ultimately, the decision depends on your specific situation and preferences.

Pros and Cons of Both Wired and Wireless Connections

Pros of a Wired Connection

A wired connection connects your TV directly to your home internet router using an Ethernet cable. The main advantage of a wired connection is stability. Since the connection is physical, there's less risk of interference or connection drops, which can lead to buffering or poor video quality. This makes it a good option if you plan on streaming high-quality video content or playing online games.

Cons of a Wired Connection

However, the downside of a wired connection is the hassle of having cables running between your TV and your router. Depending on the layout of your home, this can be inconvenient or unsightly. Additionally, if your router is far from your TV, you may need to use long cables, which can be expensive.

Pros of a Wireless Connection

Conversely, a wireless connection offers more convenience since you don't have to deal with cables. It's also a good option if your TV is far from your router since it doesn't require a physical connection.



Cons of a Wireless Connection

However, the downside of a wireless connection is that it's more prone to interference or connection drops, which can lead to buffering or poor video quality. This is especially true if multiple devices are on your Wi-Fi network or your TV is far from your router.

A wired connection may be the best choice if you're looking for stability and high-quality video streaming. However, a wireless connection may be the better option if convenience and flexibility are more critical.

Downloading and Using Specific Apps

Smart TVs have pre-installed apps like Netflix, Hulu, and Amazon Prime Video.



However, you may want to download additional apps to access other streaming services or games. To download an app, simply navigate to the manufacturer's app store, search for the app you want, and install it. Once the app is installed, you can launch it from your TV's home screen

and start using it.

Step-by-Step Instructions

First, locate the app store icon on your Smart TV's home screen. This icon is usually labelled "[App Store](#)," "[Google Play Store](#)," or something similar. Once you've found the app store, click on it to open it up.

Next, you'll be prompted to create an account. If you already have an account with the manufacturer, you can log in using your existing credentials. If not, you'll need to create a new account.

Click the "Create Account" or "Sign Up" button to create a new account. You'll be asked to provide basic information, such as your name, email address, and password. Follow the prompts to complete the account creation process.

Once you've created your account, you can browse and download apps from the app store. You may be prompted to enter your account information again when you try to download an app for the first time, but after that, you'll be able to download apps with just a few clicks.

By following these step-by-step instructions, you can create an account with the manufacturer's app store quickly and easily. This will allow you to access various apps and streaming services on your Smart TV, enhancing your viewing experience.



[Common Troubleshooting Issues](#)

When it comes to using a Smart TV, people may run into a few common issues. One of the most frustrating problems is connectivity. This can happen if the TV has trouble connecting to your home Wi-Fi network or if the signal is weak. Another issue people may face is frozen screens, where the TV may stop responding to remote commands or be stuck on a particular screen.

People may encounter sound or video quality issues, trouble with apps, and difficulties navigating the TV's menus. While these issues may be frustrating, they are also quite common, and there are steps you can take to resolve them.

Connectivity Issues

1. Ensure your Wi-Fi is turned on and your TV is within range of your home network.
2. Check that your Wi-Fi network works correctly and your area has no outages.
3. Reset your Wi-Fi network by turning off your router and modem for 30 seconds, then turning them back on.
4. Try reconnecting your TV to the Wi-Fi network by going to the network settings in your TV's menu and selecting your home network.
5. If none of these steps work, contact your internet service provider or manufacturer for further assistance.

Frozen Screen

1. Press the power button on your TV remote to turn off the TV.
2. Unplug the TV from the wall for 30 seconds, then plug it back in.
3. Wait a few minutes for the TV to reset, and try turning it back on.
4. If the screen is frozen, try pressing the home button on your remote to access the TV's menu and navigate to the settings option.
5. Select "Reset TV" or "Factory Reset" and follow the on-screen instructions.
6. If the issue persists, contact the manufacturer or a technician for further assistance.

Sound and Video Quality Issues

1. Check the TV's audio settings to ensure that the volume is turned up and the speakers are correctly configured.
2. Adjust the TV's picture settings to improve the video quality, such as brightness and contrast.
3. Check your HDMI connections to ensure that they are secure and not damaged.
4. If the issue persists, contact the manufacturer or a technician for further assistance.

These steps should help you address some common issues with your Smart TV. If you're still experiencing persistent issues, we encourage you to contact HelpCloud for further assistance.

Unlock the Full Potential of Your Smart TV

In conclusion, Smart TVs are becoming increasingly popular as technology advances. Setting up and using a Smart TV can be a fun and convenient experience, but it's not without its challenges. By following the step-by-step instructions provided in this article, you can get the most out of your Smart TV and avoid some common issues that may arise.

However, if you're still struggling with technical issues or need further assistance, don't hesitate to contact [HelpCloud](#) for third-party technical support. Our team of experts can assist you with any at-home tech issues you may be experiencing.

In summary, we hope this guide has helped provide you with the information you need to set up and operate your Smart TV successfully. Enjoy your new entertainment experience!



How to set up your smart TV

Bagged yourself a new smart TV? Here's how to get it all set up

By Charlotte Francis 13 Mar 2023



Smart TVs are pretty much the standard these days. After all, we've got so many great streaming services that it only makes sense to have them on our home's biggest screens. And it's not just streaming that smart TVs are great at – some of them even let you [control your smart home](#). Woah.

So if you've just picked up a new TV and want to show off its smarts, we've got you covered with this quick guide to getting it all set up.

How to set up a smart TV

First things first: unbox your TV and plug it into a power source. Your new TV might be smart, but it's not *work-without-power* smart. Turn it on and go through the on-screen setup. You'll probably be asked to choose a language, tweak your picture settings and connect to the internet.

There are two ways to connect your TV to the internet: a wired or wireless connection. Wired connections are typically more reliable, but you'll need a good Ethernet cable. Plug one end into the correct port on your TV, and the other into your broadband router.

If you're going wireless, head to the next section to find out how to connect your smart TV to WiFi. Or check out our in-depth [guide to connecting your TV to the internet](#).



How to connect your smart TV to WiFi

Smart TVs get their smarts from the 'net. To enjoy all those super-cool smart features like streaming, you'll want to connect to WiFi. You'll probably be asked to do this in the initial setup process, but if you skipped it or want to change your WiFi settings, follow these simple steps:

1. Turn on your TV and head to the 'Network' or 'WiFi' section of the settings menu.
2. Select your WiFi network from the list of available networks.
3. Enter your WiFi password and click connect.
4. Wait for your TV to connect to your WiFi network.

Having trouble connecting to your WiFi network? Try resetting your router.

How to set up streaming services on a smart TV

Now that your TV is connected to the internet, you're free to set up alllll your favourite streaming services. We're talking Netflix, Prime Video, BBC iPlayer, YouTube and more. Most modern smart TVs come with these apps pre-installed, so your only job will be popping the popcorn.

Noticed one of your favourite streaming apps is AWOL? Don't panic! Just like your smartphone or tablet, most smart TVs have app stores where you can find loads of top streaming apps. For example, if you're a Disney fan who's wondering how to get Disney+ on your smart TV, follow these steps:

1. Turn on your TV and head to the app store.
2. Search for the Disney+ app and download it.
3. Open the Disney+ app and sign in with your Disney+ account and credentials.
4. Follow the on-screen instructions to set up your account and customise your preferences.

Repeat the steps above for [whatever app you're looking to download](#). And if you still can't find what you're after, remember you can always use an [external streaming device](#) to access more streaming services.



How to set up a smart TV without internet

Internet isn't *everything*. If you're missing an internet connection, you can still use your smart TV for watching digital TV, DVDs or connecting your gaming console. Here's how to get your smart TV up and running without an internet connection:

1. Plug your TV into a power source.
2. Connect your TV to your preferred video source, like a Blue-ray player, Freeview box or gaming console using the correct cables.
3. Turn on your TV and select the input for your chosen video source. There's probably a handy button on your TV remote for this labelled 'Input' or 'Source'.
4. Follow the on-screen instructions to complete the initial setup, including selecting your language and screen resolution.

How to get Freeview on a smart TV

Good old Freeview. If you just want a simple live telly watching experience that includes popular stations like BBC, ITV, Channel 4 and more, Freeview has your back. You won't have to pay for a monthly subscription to a streaming service and if you've got an aerial, you won't need to connect to the internet either. Here's how to get Freeview on your smart TV:

1. Make sure that your smart TV has a Freeview tuner. Most smart TVs come with a built-in Freeview tuner, but if yours doesn't, you can buy a separate [Freeview box](#) and connect it to your TV.
2. Connect your TV aerial to your TV or Freeview box.
3. Use your TV remote to tune in to Freeview channels.
4. If your TV doesn't automatically detect the channels you're after, you might need to do a channel scan or tune to get more channels.

If you're using an indoor [TV aerial](#) for Freeview, make sure you position it correctly for the best signal. You might need to move your indoor aerial around a few times to find the best positioning. Still struggling to get a good signal? You can use a [signal booster](#) to improve the quality.

How to get Freeview on a smart TV without an aerial

Don't have an aerial? Some smart TVs come pre-installed with the Freeview app, allowing you to watch live TV and catch-up TV without an aerial. If it's not already installed, here's how to download it:

1. Make sure your smart TV is connected to the internet.
2. Look for the Freeview app in your smart TV's app store and download it.
3. Instead of selecting 'Aerial' during the setup process, choose 'Broadband'.
4. Open the Freeview app and enjoy your free channels!

If you can't get the Freeview app, pick up a Freeview Play box like [this one](#) by Humax. You'll get twelve free channels, up to 250 hours of TV recording plus the ability to pause and rewind live TV.

If you're streaming live TV, you'll need a good internet connection. Make sure your internet speed is fast enough to avoid any buffering issues.



Found what you need?

If you have – great. If not – don't worry. You can always chat to an expert in-store or via video call on [ShopLive](#). They'll be able to give you the lowdown on loads of great [smart TVs](#) and accessories.

Smart TVs: Everything you need to know

By [Brian Westover](#), [John R. Quain](#)

last updated 22 March 2023

A smart TV makes it easy to stream movies and shows, and newer models offer voice control and smart home integration

When you purchase through links on our site, we may earn an affiliate commission. [Here's how it works.](#)



Smart TVs have been around for years, but these days they're a lot smarter than could have seemed possible when they first appeared.

As streaming services have changed the way we watch movies and shows, TVs have changed as well, adding features such as streaming services and voice control. But while most TVs today can be called smart TVs, they're not all the same. Not only will smart TVs run different smart platforms if they're made by different manufacturers, but some of those smart platforms run faster, experience fewer bugs and have access to more streaming services than others.

- [Save big with the very best Prime Day Deals now](#)
So, can a smart TV really be better than the [best streaming device](#)? What about privacy concerns? And which is smartest? The specifics will also vary from one brand or model to the next, which is why we've put together this handy guide.
Read on and we'll answer all your most frequently asked questions about smart TVs.
- The [best TVs](#) we've reviewed
- TV shopping questions answered: Our [TV buying guide](#)
- The [best smart TVs for streaming](#)

1. What is a smart TV?

The old "dumb TVs" — which can only display content from an HDTV antenna, cable or another A/V source — are pretty much extinct. Today's connected world expects something a

little smarter. With powerful processors, internet connectivity and easy-to-navigate software, the modern TV is more like a smartphone or tablet than the tube TV of yesteryear.

Smart TVs, much like smartphones and smart home devices, offer internet connectivity and support for a range of apps. This opens up a world of new entertainment options, from streaming video on Netflix and [Hulu](#) to playing games, checking social media, and controlling a whole house full of connected gadgets, including the [best Alexa compatible devices](#) and [best Google Home compatible devices](#).

A growing number of models now include voice recognition tools, like Amazon [Alexa](#) and Google Assistant, for switching channels and searching for programs. Most smart TVs will work with one of the [best smart speakers](#) you already own, and plenty will offer some or all of that same functionality built right into the TV.

Smart TVs are also gaining more integrated smart home features and some are even among the [best smart home devices](#). Many TVs are compatible with other connected devices in the home, including [best smart lights](#), [best smart locks](#) and other sensors, and some TVs even include a dedicated dashboard for controlling all of the devices in your connected home.

The functions don't stop there, however. Check out [11 things you didn't know your smart TV could do](#) to find some unexpected uses for your smart TV.

Here are some that are on sale now:

2. Which companies make smart TVs?

Every major TV manufacturer has shifted away from dumb TVs, with the trend toward making every set "smart." A partial list of the biggest smart TV makers includes Hisense, LG, Panasonic, Philips, Samsung, Sharp, [Sony](#), [TCL](#), Toshiba and [Vizio](#). (Check out the [best TV brands](#) to see some of our favorites from all of the major TV makers.)

While most of these companies tout their smart platforms as the latest and greatest, watch out for budget-priced TVs that only vaguely mention smart TV capability. These off-brand smart TV platforms may leave you stuck with limited app selection, sub-par performance and worrisome security holes.

3. How do smart TVs connect to the internet?

A smart TV uses your home network to provide streaming video and services on your TV, and will use either wired Ethernet or built-in Wi-Fi to stay connected. Most current TVs support 802.11ac Wi-Fi, but watch for older models, which may still use the older 802.11n standard. Some of the latest models will also support the new Wi-Fi 6 standard (see our article about [Wi-Fi 6: What it is and why it's better](#)), but it's still pretty rare.

We have a guide to [optimizing your home Wi-Fi for streaming](#), whether it's adjusting your router placement, tweaking settings or just opting for a wired connection.



(Image credit: Tom's Guide/Shutterstock)

If your smart TV isn't getting a strong enough wireless signal, there are a few ways to remedy the problem. If you're due for an upgrade, any model on our [best Wi-Fi routers](#) list will do the trick, even the budget-friendly models.

[Mesh routers](#) that extend coverage throughout a home provide another option, and are a great choice for homes where there are multiple TVs, and not all of them near your main router.

The [Nest WiFi](#) and [Netgear Orbi WiFi 6](#) are two such models that, in our tests, have proved to be excellent solutions for people trying to cover a large home with Wi-Fi.

[Wi-Fi range extenders](#) are also available from companies such as [Netgear](#), but these devices require some time and patience to set up and install.

4. What services do smart TVs offer, and how do they differ from one another?

Regardless of which TV brand you choose, today's smart TVs will offer a variety of streaming services and content choices, including services like [Netflix](#), [Amazon Prime Video](#), [Disney Plus](#) or [HBO Max](#). But it's not all paid subscription services, with a growing number of ad supported free streaming services like [PlutoTV](#), [Tubi](#) and Crackle.

Check out our guides to the best streaming content available:

- The 63 [best shows on Netflix](#)
- Our picks for the [best Netflix movies](#)
- The [best Amazon movies and shows](#)
- The [best Hulu movies](#) and shows

Popular video sharing sites, like [YouTube](#), also have their own smart TV apps for easy browsing that's tailored to viewing on a TV and navigating with a remote control. Smart TVs also offer a great way to enjoy streaming music, with internet radio services like [Spotify](#) and Pandora.

Most smart TVs have apps for social media, like Twitter and Facebook, but without adding a keyboard it may be harder to enjoy these sites the way you are used to.



Samsung's Smart TV interface (Image credit: Samsung)

The biggest trends in smart TVs is the inclusion of voice assistants, like [Amazon Alexa](#) and [Google Assistant](#). These interactive tools provide the same functionality as most smart speakers, and can be used with either a microphone built into the remote or (in some cases) microphones built into the TV that listen to the room.

Finally, the smart TV has become a central hub in our connected homes, providing compatibility and control for a household full of connected devices, ranging from smart doorbells to smart thermostats. With many TVs offering smart home controlled dashboards, you can control a huge variety of devices from the comfort of your couch.

But not all smart TVs are created equal, and not every smart TV platform or operating system will support the same apps and features. Some manufacturers rely on proprietary operating systems for their smart TVs, such as Samsung's Tizen smart TV software and Vizio's SmartCast. Others use third-party software, such as Roku TV or Amazon Fire TV, which are popular on budget friendly sets, as well as Google's Android TV which appears on sets from Sony, Hisense and other manufacturers. Certain sets offer Apple TV built-in, too.

MORE: [How to AirPlay to a Samsung TV](#)

These operating systems will all offer some or even most of the features mentioned above, but each will have their own selection of apps, features and compatibility with other devices.

Each smart TV operating system will also have a different user interface, and these can vary widely. Many use a scrolling ribbon of app icons along the bottom of the screen, while others offer a full screen menu that lets you see several options at once. Navigating these menus will also vary by brand as each TV manufacturer uses its own unique remote control design.

For specifics on the apps, services and distinct features of each smart TV platform, check out our latest reviews of the [best TVs](#).



(Image credit: Future)

The upshot: Spend a little time at the store flipping through the set's smart offerings to make sure you and your family will be comfortable with that model, and read our detailed [comparison of the major smart TV platforms](#) to help you make a decision.

5. Will my smart TV maker regularly update the software with new features?

The general answer is yes. All of the major TV manufacturers routinely put out updates for their smart TV software, adding new features, refining old ones and patching bugs and security issues, just like any other operating system. Some of these updates add entirely new features, such as expanded support for high dynamic range (HDR) formats like Dolby Vision, or merely making refinements to the TV's internal firmware (often downloaded automatically late at night).

But it also depends on some other factors. Smaller TV brands and older models may not be as quick to push out updates as larger companies, like LG, Samsung and Sony. TCL does quite well in its partnership with Roku, but many other value-priced brands will be slower to issue updates or add new apps. Nevertheless, most major manufacturers perform software updates periodically.

- [Best streaming services](#) - Netflix, Hulu, Amazon and More

And don't worry about getting left behind; if one company adds a popular service, such as Netflix, the rest of the manufacturers generally follow suit. Even when there is a delay, it usually works itself out.

6. Can a smart TV crash or hang like a PC?

The simple answer is yes. As smart TVs take on more of the roles once exclusive to computers and smartphones, there is a risk of hanging or even crashing. Just as phones have become computers, so, too, have smart TVs. We now expect our TVs to pull in content from the web, run sophisticated apps, manage other connected devices and even include voice interaction. Despite this, smart TV problems often catch us off guard because we aren't used to thinking of them as anything other than basic displays.

The good news is that, while crashes and laggy performance have been a problem in years past, these sorts of hiccups are much less common now. That said, problems may still occur, especially in low-end smart TVs that may not have the latest hardware and polished software. If you do run into a frozen screen or hanging process, powering the TV off and on will usually resolve the problem.

7. Aside from apps, do smart TVs have other benefits?

Smart TVs do offer other potential advantages. The newest sets have added popular voice assistants to the mix. Voice search now lets you find content from live TV as well as streaming services, and adds search for everything from weather and stock prices to looking up the latest celebrity gossip. The voice integration lets you access other services from your couch, letting you order a pizza or summon an Uber in comfort. And if you don't like the TV's built-in voice assistant, you can usually pair it with the [smart speaker](#) of your choice. These new features also let you control smart home devices like connected lights and thermostats, view feeds from your [Nest camera](#) or [Ring doorbell](#), or control your [robot vacuum](#). As voice assistants continue to evolve, you can expect to see the same improvements come to current smart TVs via software and firmware updates. Because these TVs tend to have beefier processors than regular sets, as well as online connections, manufacturers can add other features, such as casual games, which are now quite common on smart sets. The games are nowhere near as sophisticated or as compelling as those available on a [PlayStation](#) or [Xbox](#) console, but they can be a bit of fun all the same.



(Image credit: YouTube TV)

Many sets also let you mirror or share pictures and video from a connected smartphone on their big screens. Most manufacturers rely on proprietary apps to offer a more curated experience when sharing media, while others rely on third-party solutions like [Google Chromecast](#). In either case, sharing the videos and photos from your phone or tablet has never been easier.

A new trend in smart TVs is vastly improved built-in sound systems. LG and Sony are making particular advances in this area, offering [Dolby Atmos](#) sound on several models and hoping that the smart TV will also do duty as the home stereo system to stream music and online radio stations.

8. Can I use my smart TV with Amazon Alexa or Google Home?

The biggest trend in smart home technology is the [smart speaker](#), a speaker with built-in microphone and hardware to run a voice-enabled assistant. Amazon made the first big splash here with the [Amazon Echo](#) and other [Alexa-enabled devices](#), but Google's own Google Assistant has made strides in products like the [Google Nest Mini](#) and [Google Nest Audio](#). And [Apple's HomePod](#) puts [Siri](#) into a similar form factor.

The great news is that these devices will usually work with most smart TVs, and compatibility is improving all the time as new software updates add capability to existing smart TVs. As it stands, all of the major TV manufacturers have smart speaker compatibility with at least one of the three main smart assistant platforms (Amazon, Apple and Google). These options often require using an [additional device](#), such as a smart speaker or mobile device, but it will give you a way to control your TV and smart devices with the convenience of simple speech.

Many of the smart TVs on the market now have these voice assistants built in. Google Assistant can be found in Android TVs from Sony and Hisense. Amazon Alexa is now offered Amazon Fire Edition TVs as well, and Sony has announced compatibility with a new Amazon Alexa app for Android TV. Even better, smart TVs from LG and Samsung now have both Google Assistant and Amazon Alexa built in.

These models generally offer remote controls that feature built in microphones, letting you press a button to activate voice interaction. But some new models, like the [Sony Bravia A8H OLED TV](#), also have far-field microphones built in. When enabled, they let you simply speak to the room, and the TV will listen for your commands (but you can switch it off too if you prefer).

9. How does a smart TV compare to set-top boxes such as Roku, Apple TV, Google Chromecast or Amazon Fire TV?

You do not need a smart TV to get streaming Netflix movies or YouTube videos on your screen. The [best streaming devices](#) can stream those services and more to an older HDTV, or even a newer [4K TV](#). The leading models are from Amazon, Apple, Google and Roku. But, it's worth noting that these streaming devices rarely offer more functionality than current smart TVs will provide. In fact, all of the device manufacturers we just mentioned have the same interface and app selections available in their respective smart TVs.

For example, the [Roku Streaming Stick+](#), which currently costs just \$39 in some online retailers, delivers thousands of channels and apps. Those include nearly every major service, as well as hundreds of more obscure channels, ranging from Kung-Fu Theater to Victory Westerns. In fact, Roku offers more options than any other set-top box or any smart TV on the market. So if you don't need to buy a new TV but do want smart-TV services, a separate, inexpensive streaming-media player is the prudent choice.

In addition, set top-boxes, such as the [Roku Ultra](#), offer [4K](#) content.

If you live in an Apple household and want your iTunes collection on the big screen, you'll need an [Apple TV](#), which is the only device that can deliver that iTunes connection. No smart TVs have apps for iTunes.

The latest iteration of Apple TV starts from \$179 and offers 4K Ultra HD support, a choice of 32GB or 64GB storage and includes Siri support for finding programs.



Apple TV and Siri Remote (Photo: Jeremy Lips/Tom's Guide) (Image credit: Tom's Guide)

Google's \$29 [Chromecast](#) and 4K-capable \$50 [Chromecast with Google TV](#) let you stream - or "cast" - content from your computer's web browser or compatible smartphone apps wherever you see the Chromecast icon.

However, Chromecast with Google TV has built-in apps and a browsable interface where Chromecast does not. This includes streaming services such as HBO Max and Peacock, plus all the standards lie Netflix, Disney Plus, YouTube, YouTube TV, Netflix, Amazon Prime Video, Spotify, Sling, CBS All Access, Tubi and PBS. It also comes with a separate remote.

Amazon also has a selection of devices, including the [Fire TV Stick 4K](#), which is our pick of the bunch. Offering 4K streaming for \$50, but often on sale at \$35 or under, it makes much more sense to futureproof your purchase when the 1080p only [Fire Stick](#) only costs \$10 less.

10. Is it better to buy a smart TV or get a cheaper TV and a set-top box?

A smart TV costs more than a comparable set that lacks smart services. However, that price difference is quickly evaporating, and soon most sets will have smart services built in. In 2022, it's hard to even find a 4K TV that doesn't have smart capabilities and internet connectivity.

The price difference can also be deceiving, because higher-end TVs often offer more than just connected services. Usually, smart TVs also include better video processing — in other words, better picture quality — and expanded features, such as more HDMI ports on the back. That means you get more for your money than just an internet connection and apps.

11. Can my smart TV be hacked or contract a virus?

In theory, the answer is yes. So-called white-hat hackers have brought attention to the issue by demonstrating ways to break into a smart TV connected to the internet and do things like steal passwords and change channels. [WikiLeaks documents purporting to reveal CIA techniques for surveilling smartphones and smart TVs](#) confirm what many cybersecurity experts have said privately for years: Government agencies can and do break into such devices.

MORE: [Bitdefender Box Review: Smart Home Security](#)

Although smart TVs have a variety of interfaces, most run some version of Linux underneath, a popular operating system that hackers know how to manipulate well. The application programming interface (API) that lets your TV interact with apps and mobile devices is also a

point of concern, and it was reported in 2018 that vulnerabilities might let hackers make mischief [on Samsung and Roku sets](#).

To be safe, avoid doing anything sensitive on a smart TV, such as online banking or shopping with a credit card. Smart TVs are simply not as safe as computers.

12. Can a smart TV watch you?

Yes, it can. Information you share on a Facebook app on a TV or when ordering on Amazon or Netflix on the big screen is shared in the same way as when you conduct such business on a PC or a smartphone.

Companies can collect private information about you and your viewing habits from a smart TV. In late 2013, for example, [LG admitted that it had received information about what channels owners were watching](#), even after those users turned on the privacy setting. (LG said this was due to a software bug that has since been corrected.)

In early 2017, [Vizio agreed to pay \\$2.2 million to settle claims](#) alleging that the company had collected viewing data from 11 million TVs without getting the owners' approval. The claims accused Vizio of secret monitoring that included information about not just app use but also what owners watched on their disc players, cable systems and even over-the-air broadcasts. And tracking isn't limited to any one brand or manufacturer. In fact, you're safe to assume that [any smart TV is sending viewing data back](#) to be sold to marketers and advertisers, regardless of who makes the hardware.

Most of this data is limited to viewing information, telling advertisers what you watch and what apps you use to do so. While that's fairly innocuous, the bigger concern may be the fact that (like most smart home devices) your TV's security isn't that great at keeping other snoops out. To get a better idea of how to protect yourself, check out the [5 essential smart TV security tips](#).

And if you're worried about a TV that actually watches you, or listens in on your conversations... well, it's not an unfounded fear. Many smart TVs come with far-field microphones to allow the same conversational interaction you get with a smart speaker. But that means that, when enabled, those mics are always on, and always listening. We haven't heard any reports of these mics being misused, but it's still a valid concern. If your TV has a built-in mic, you should be able to turn it off when not in use.

And any TV that has a built-in camera (they are very rare these days) should also, at minimum, include a physical shutter or lens cover to keep prying eyes out of your living room.

13. Can you surf the web on a smart TV?

Most smart TVs let you go online, and will include a web browser among the preinstalled apps that come with the TV. These browsers may not be exactly like the desktop web browsers you're familiar with, but they are both compatible with all the HTML standards that websites use and able to convert and display those sites properly on a big screen.



Some smart TVs allow you to surf the internet. (Photo: Samsung)

Browsing the web on your TV can be a bit of a challenge, though. Unless you can add on a wireless keyboard (and they are rarely included with TVs), you'll be using your remote control buttons or voice-interaction to navigate to websites, and neither is a particularly comfortable or intuitive way to surf the web.

Web browsers are also getting harder to find on smart TVs, as the ecosystem of connected apps grows to provide an experience better tailored to the TV.

14. Can a smart TV get local channels?

Smart TV services and features don't affect a TV's ability to get local stations. If you have cable or satellite service, you will continue to receive the same stations. If you don't have either of those services, you'll still need some sort of internet connection (DSL or cable) for the smart services, and then one of our [best TV antennas](#) to pull in local, over-the-air broadcasts for free. At least for now, most television stations have not followed the lead of radio stations, which stream their live broadcasts online.

15. Does a smart TV need a cable box or broadband?

If you want to continue receiving the same channels you have, then the answer is yes: You still need a cable or satellite box, because no other option will deliver the same channels and stations in the same way.

However, whether or not you need to stick with a paid subscription in order to keep getting the shows you want to watch is another question. Many channels offer their own streaming apps, and popular shows can often also be found on services like Netflix, Hulu and Amazon Prime.

As for the question of broadband, then the answer is unequivocally yes. If you want to take advantage of any connected apps and services – anything that makes the smart TV smart – you'll need an internet connection. As for what speeds you need, it will vary according to your intended use, but the following guidelines will help.

To stream video in DVD quality, at less than 1080p resolution, you'll need a minimum speed of 3 Mbps. For Full HD, at 1080p, you'll need 5 Mbps ([according to Netflix](#)) or 6 Mbps ([according to Hulu](#)).

But if you want to stream in 4K, the demands are much steeper: Hulu suggests a minimum bandwidth of 16 Mbps, while [Netflix recommends](#) "A steady internet connection speed of 25 megabits per second or higher."

16. Can a smart TV replace cable?

More and more people are trying [cord cutting](#), which refers to the termination of cable or satellite TV service in favor of paid online services such as [Amazon Video](#), [Hulu](#), [Netflix](#) and [YouTube TV](#). These services offer a cable-like experience with several channels for a subscription fee that's probably less expensive than your current cable or satellite bill. You can use your smart TV to take advantage of these services and cut the cord, with certain limitations.

There are also several free, ad-supported services that provide hours of shows, movies, and even live news and sports without a subscription. Crackle, [Pluto.tv](#) and [Xumo](#) are available on most smart TV platforms and offer something for just about everyone. More specialized services, like the anime-focused Crunchyroll and the music video-only Vevo deliver niche content on most smart TVs, and others, like [The Roku Channel](#), may be specific to one platform.

The biggest reason to maintain a cable or satellite TV subscription is to watch live sporting events. (Some apps, such as MLB.com, stream live sports, but these services cost extra and don't include all games.)

However, there are several cable replacement services that now offer both local broadcast networks and live sports, such as Dish Network's [Sling TV](#). Sling was once limited to TVs using Roku or Android TV software, but is now available on many more TVs. [DirecTV Now](#) and [YouTube TV](#) are two other options.

The other option, particularly in urban environments, is to add one of the [best TV antennas](#) to pull in free local broadcasts to supplement online streaming services.

17. Does a smart TV have a better picture or sound?

Not necessarily. Built-in Wi-Fi and a processor for decompressing video do not directly affect picture quality. However, since manufacturers initially added smart TV features to more expensive, higher-end (and better-performing) HDTVs, shoppers will find that the picture quality on some smart TVs beats that of lower-priced models that lack the smarts.

They also are more likely to have the latest audio features, such as [Dolby Atmos](#) sound and [HDMI ARC support](#). Dolby Atmos offers a richer sound experience with vertical surround capability as well as horizontal, and it uses a higher bit-rate to deliver fuller, more nuanced audio. Another feature, Audio Return Channel (ARC) lets you use a single HDMI cable to send audio data too and from your soundbar, so all of your connected devices get the best sound, no extra cable required. These features aren't restricted to smart TVs, but manufacturers are far more likely to include them on their more premium products, which leaves TVs without smart functionality unlikely to get them.

But it is worth noting that streaming apps, like Netflix and Amazon Prime Video, offer one of the easiest options for enjoying 4K and HDR-enabled content. While 4K Blu-rays are available to buy and rent, streaming offers the easiest way to get a wealth of content for your TV that truly takes advantage of your high-resolution, high-brightness display. You can get some of this same functionality with a streaming stick — provided you get a model that supports 4K and HDR — but smart TVs offer the best combination of convenience and content, often without costing any more than what you're already paying for your streaming subscriptions.

- **Read more:** [It's time to upgrade my LG TV — and not for the reason you'd expect](#)

How to AirPlay to a Samsung TV

By [Kate Kozuch](#) - last updated 6 December 2022

Here's how to mirror content from your iPhone, iPad or Mac to your Samsung TV



(Image credit: Shutterstock)

Knowing how to use AirPlay and/or AirPlay 2 to connect a Samsung TV will let you mirror videos and other content from your Apple device to a bigger screen.

Like many of the [best TVs](#), Samsung's latest sets have AirPlay capabilities built in, meaning you can mirror your iPhone or [iPad](#) to your Samsung TV without needing an Apple streaming device like the [Apple TV 4K \(2021\)](#) or [Apple TV 4K \(2022\)](#) as an intermediary. As long as the proper settings are in place, you can AirPlay to a Samsung TV directly from your iPhone, iPad or Mac.

AirPlay lets users with an Apple device mirror their device's screen onto another AirPlay-supported device. Whether you're mirroring music, videos or photos, an exact replica of what you see on your primary device should be seen on the secondary one. It's a pretty neat party trick, especially when the secondary device is a brand-name smart TV (or in this case, any of the [best Samsung TVs](#)).

While our guide on [how to use your Samsung TV](#) covers basics like which are the [best Samsung smart TV apps](#) and [how to install and remove apps on a Samsung TV](#), it doesn't teach Apple users how to AirPlay to a Samsung TV. So, here are the steps you'll want to follow.

How to AirPlay to a Samsung TV

1. Turn on your TV and make sure it's connected to the internet. See our guide on [how to set up your set up your Samsung TV](#) if you need help getting your set online.

2. Review your Samsung's TV's AirPlay settings. Go to Settings > General > Apple AirPlay Settings.



(Image credit: Future)

3. Turn AirPlay 'On' if it's not already. Decide whether to require a pairing code every time you want to AirPlay from an Apple device, or just the first time you AirPlay from a given device.



(Image credit: Future)

Your Samsung TV is now ready for AirPlay. Make sure the TV is turned on when you're ready to AirPlay. And keep in mind that AirPlay will disrupt whatever you're currently watching.

How to AirPlay to a Samsung TV from iPhone or iPad

- 1. Make sure your iPhone or iPad is currently **connected to the same Wi-Fi network as your TV**.** AirPlay to a Samsung TV won't work if both your TV and device aren't on the same Wi-Fi network.
- 2. Choose and open the content to AirPlay to a Samsung TV.** Any photos or videos in your camera roll will work. You can also **AirPlay audio from [Spotify](#) and [Apple Music](#).**
- 3. Tap the AirPlay button, if there's one available.** It's a curved rectangle with an arrow pointing up at the bottom. If there's no AirPlay button, **tap the sharing or casting button.** In the Photos app, it looks like a square with an arrow pointing up at the top.



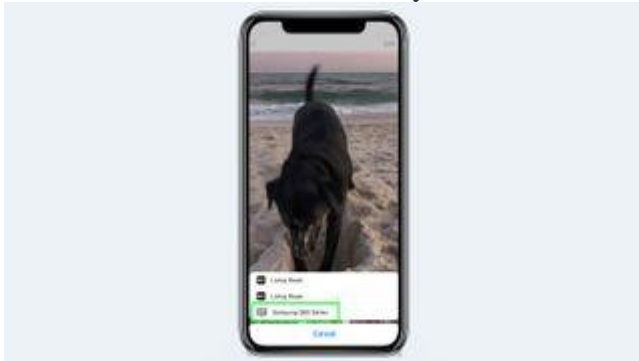
(Image credit: Future)

4. Select AirPlay from the sharing options. In a third-party app like Spotify, the AirPlay options might be found alongside Bluetooth options.



(Image credit: Future)

5. Select your Samsung TV from the list. You might see other AirPlay-compatible devices on the list, so be sure to choose your TV.



(Image credit: Future)

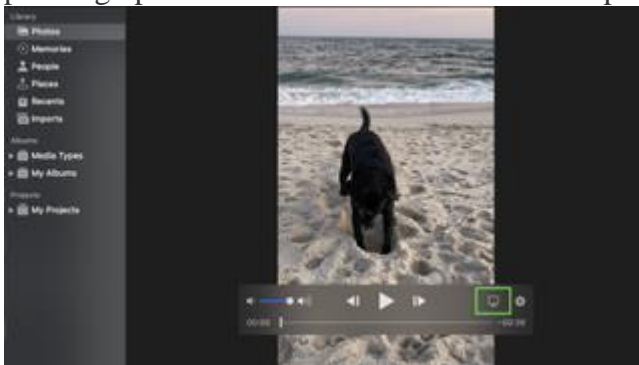
6. Enter the 4-digit AirPlay Passcode displayed on your TV, if prompted. If you've used this device to AirPlay to your Samsung TV before, you might not need to enter a passcode depending on your set's AirPlay settings.

You should now be able to AirPlay to a Samsung TV from your iPhone or iPad.

How to AirPlay to a Samsung TV from Mac

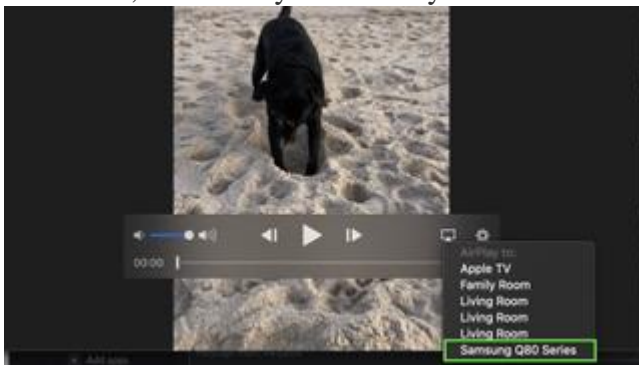
1. Make sure your Mac computer is currently connected to the same Wi-Fi network as your TV. AirPlay to a Samsung TV won't work if both your TV and your Mac aren't on the same Wi-Fi network.

- 2. Choose and open the content to AirPlay to a Samsung TV.** Any photos or videos saved to your Mac will work. You can also AirPlay audio from the Apple Music desktop app.
- 3. Tap the AirPlay button,** if there's one available. It's a curved rectangle with an arrow pointing up at the bottom. In the Photos desktop app, it's next to the settings wheel.



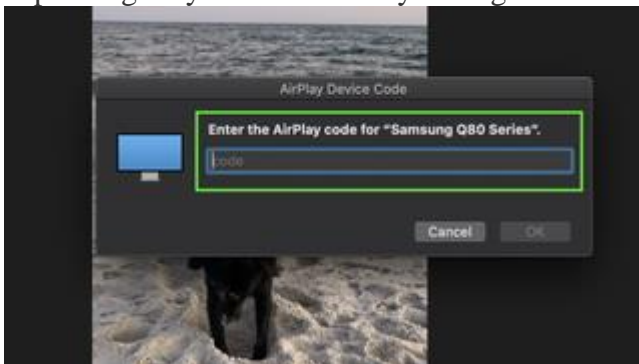
(Image credit: Future)

- 5. Select your Samsung TV from the list.** You might see other AirPlay-compatible devices on the list, so ensure you choose your TV.



(Image credit: Future)

- 6. If prompted, enter the 4-digit AirPlay Passcode displayed on your TV.** If you've used this device to AirPlay to your Samsung TV before, you might not need to enter a passcode depending on your set's AirPlay settings.



(Image credit: Future)

Now you know how to AirPlay to a Samsung TV, you might want to see our guides on [how to connect Nintendo Switch to a TV](#) and [how to set up Google Chromecast](#).

SAMSUNG

TV Buying Guide

What is a Smart TV?

The latest Samsung Smart TVs are bursting with innovative and clever features designed to make your life easier, but what exactly is a Smart TV? In this TV buying guide, we seek to answer all your FAQs, from the basics of how a Smart TV works, right through to our top recommendations for the best Samsung Smart TV. Get ready to discover exactly what a Smart TV can do for you and your family.



What is a smart TV?

In short, a smart TV is an internet enabled TV which connects to your favourite streaming platforms for endless enjoyment of your favourite content. If your TV has internet connectivity, runs on an operating system, and comes with its own app service, it's smart!

Smart TVs are very much like [smartphones](#); they stream entertainment straight to your TV via an internet connection. This means that you can watch all the latest films, box sets and play games on your smart TV without the need for an aerial, cable or separate streaming device.

TV + internet + apps = Smart TV



How does a smart TV work?

[Smart TVs](#) come with built-in Wi-Fi connectivity. This allows them to provide you with a variety of streaming services and content. You can choose to connect your smart TV to the internet either wirelessly or using an ethernet cable. An ethernet cable will provide you with a stronger, more stable internet connection. Whilst connecting wirelessly gives you more freedom to choose where you position your TV in your home as you are not restricted to where the ethernet cable can reach. Your new smart TV will guide you through [how to set up your TV](#) when you initially turn it on.



Are all Samsung TV's Smart TVs?

Samsung's first smart TV, the Pavn Bordeaux 750, was released in 2008 but it wasn't until 2015 that Smart TVs became mainstream. Today, [all Samsung TVs](#) are smart TVs with Wi-Fi connectivity and easy access to your favourite entertainment apps.



What can you access on a smart TV?

With Samsung Smart TVs, you will be able to access the largest collection of 4K content from the [most popular TV apps](#) including:

- Netflix
- Disney+
- Apple TV
- NOW TV
- BT Sports
- Amazon Prime Video
- Brit Box
- BBC iPlayer
- All 4
- ITV Hub
- My5

With Samsung being the No.1 Smart TV brand, you can rest assured that [Samsung's best smart TVs](#) come with all the catch up apps you expect and love. You can get access to all the latest entertainment at the touch of a button with [Smart Hub](#). There's no need to plug in additional boxes or streaming sticks because you have everything you need straight out of the box.



Can you use a smart TV without internet?

Yes, if you find yourself without the internet you can still enjoy watching your [smart TV](#). You'll be able to watch cable TV channels, [connect to Bluetooth](#) and use your TV just like a traditional TV without any issue at all. However, smart TV features such as streaming content on demand from online applications will not be available.



What is the difference between a smart TV and regular TV?

The main difference is that a Smart TV can access the internet via WiFi connection using various built in smart TV apps, while a regular TV cannot. Sounds great so far, right? If you're still not convinced, we've compiled a handy comparison table so you can quickly see all the benefits of a Samsung Smart TV compared to a regular TV:

	<u>Samsung Smart TV</u>	Regular TV
Wi-Fi Connection	✓	x
Download Apps	✓	x
Stream TV and Videos	✓	x
<u>Gaming Hub</u> ³	✓	x
Music Streaming	✓	x
Browse Social Media	✓	x
Internet connectivity	✓	x
<u>4K and 8K options</u>	✓	x
Smartphone connection	✓	x
<u>Smart Home Integration</u>	✓	x

Smart TV Connections



Can I screen mirror to a Smart TV?

Yes! You can now [connect your phone to your smart TV](#) to stream what you're watching straight to the big screen. You can even use your smartphone as a TV remote for effortless control at the tap of a button. [Multi View mode](#) takes your viewing to another whole level and with split screen mode you can cheer together, get fit together and even party together. It's an amazing way to share time together even when apart.



Can I connect my smart TV to other smart devices?

With [Samsung smart TVs](#), you can enjoy a true smart home experience in combination with the [Samsung Ecosystem](#) and [SmartThings TV Dashboard](#). Whether it's setting the mood by controlling smart lights, [connecting your video doorbell with your Samsung TV](#) or starting your washing machine cycle from the comfort of your sofa. The Samsung Ecosystem is designed to make your life that little bit easier.

You can find out more about the [innovative features and various functions Samsung Smart TV offers](#) and [Connected Living with Samsung Smartthings](#) at Samsung UK.



Top tips when choosing the best smart TV for your home

When purchasing your Smart TV there are a number of key decisions that you need to make, from deciding the [best TV screen resolution](#) to [finding the most appropriate size TV for your room](#). Check out our top tips on what to consider when choosing the best smart TV for you:

1. What TV size do I need? - make sure you measure the space where your TV will go. Learn [how to measure your TV](#) here.
 2. What [TV picture quality](#) do I need?- think about what you will use your TV for and then decide which TV resolution you will need. Learn more about the [differences between 4K and 8K](#) here.
 3. What kind of TV content do I watch?- think about the kind of entertainment and content you like to get from your TV.
- Do I need a high TV refresh rate? - particularly if you are a gamer, you want a TV with a high refresh rate. Read about [how to choose the best TV for gaming](#) here.



What are the best features of a smart TV?

1. Exceptional range of content

The biggest value of a smart TV is the ability to enjoy content beyond regular TV channels. A smart TV provides your favourite VOD (video on demand) services such as Netflix, Amazon Prime Video, Disney+, and YouTube. Plus, you can get access to music streaming services like Spotify and even various games and sports content to enjoy as you please. Even paid cable and satellite broadcasting are available to watch on Smart TVs - you just need to install the app that the cable or satellite broadcasting company provides.

Even better with [Samsung TV Plus](#) which gives you instant access to over 100 live and on demand TV channels for free. You'll find a huge collection of sports, news, music and entertainment programmes right at your fingertips.

2. Effortless searching

No matter how much content there is, the important thing is being able to find it right away. With the endless amount of content available online, choosing what to watch is no easy task. That's why having a convenient search function like [Samsung's Smart Hub](#) is important.

3. Personalised Recommendations

Powered by Artificial Intelligence (AI), your [Samsung Smart TV](#) will give you personalised recommendations based on what you have been watching. No need to waste time deciding what to watch, [TV Plus](#) will find your new favourite shows for you and take the indecision out of film nights.

Another important point is whether a smart TV suggests the content you like before you even start searching. Wouldn't it be nice if a TV used your

viewing and search patterns to find just the right content or let you know when a new season has started for the shows you like? The ideal smart TV is one that knows you better than you know yourself and can provide services that match you based on your viewing data.

4. Convenient Usability

A great smart TV should automatically detect any device you connect via HDMI and eliminate the need to use several remote controls. Gone are the days of frantically searching for your remote controls. With the [Samsung One Remote Control](#), you can access your favourite apps with the simple press of a single button. There's no need to spend time searching for entertainment by typing, as the [built-in voice assistants](#) ensure you can search for content quickly and easily, all from the comfort of your sofa.

You can also connect your smartphone to your smart TV to view content on the big screen with [Samsung Smart View](#). Watch a film on your phone on the way home from work and continue watching it on your TV screen as soon as you walk through the door. With the Smart View function, you can also use your smartphone to control your Samsung TV without the need for a remote.

5. Easy Connectivity

Checking to see if a smart TV can easily connect to other devices is another important requirement when choosing a new smart TV. Connecting your smartphone to your TV to view content on a bigger screen is something you will definitely want to experience. Pictures and videos from your phone feel totally different when you see them on a big screen.

IoT is gaining widespread popularity, so naturally, easy connectivity with various internet-enabled devices around the home is becoming a requirement. You can watch a movie on your phone on the way home from work and effortlessly continue watching it on your TV screen as soon as you get home.

You can also connect your Smart TV to your gaming console to take your gaming to the next level. Learn [how to choose the best gaming TV for you](#) in this helpful article.

Which smart TV is best?

[Samsung Smart TVs](#) are equipped with award-winning, innovative TV display and sound technology, so you can experience crystal clear images, perfect 3D sound, and world-class design. But that's not all!

If you're looking for the best smart TV for flawless picture quality, brilliant sound experience and ultra smooth gaming, look no further than the [Neo QLED 4K HDR Smart TV](#) which comes equipped with market-leading innovations. Quantum HDR 2000 provides you with true-to-life quality and rich colours. Enjoy Super Surround Sound powered by Dolby Atmos® with 8 dedicated speakers built into the four sides of the TV, so you can track every terrifying gasp or hear the roar from the crowd travelling across the pitch. What's more with Anti Reflection Screen, you will be able to see the perfect picture from any angle, day or night.



Smart TV FAQs

How do I know if my Samsung TV is a smart TV?

To check if your Samsung TV has smart functions, we recommend the following:

1. Check your remote for the **Home**, **Menu** or **Smart Hub** button
2. Press the **Home** or **Menu** button on your TV remote. If you see a range of different applications such as YouTube and Netflix appear on your TV screen you've got a Smart TV.
3. If you can only see options to change TV settings then you probably don't have a Smart TV.
4. If your TV remote control doesn't have a Menu or Home button, it's very unlikely to be a Smart TV.

Please note: If you think you have a Smart TV but are having problems accessing your favourite apps you should check that your TV is connected to the internet since TV applications are only able to run with a Wi-Fi connection. You can troubleshoot TV internet issues with our handy guide [here](#).

Does Samsung make non-smart TVs?

No, Samsung no longer produces non-smart TVs. All [Samsung TVs](#) for both domestic and commercial use have smart functionality included as standard.

Do I need a smart TV?

If you are prepared to use a separate streaming stick you don't necessarily need a smart TV to watch Netflix box sets or YouTube videos. However, these 3rd party streaming devices rarely offer more functionality than the latest Samsung TVs. Smart TVs are also more than just the apps it comes with, they benefit from voice activation technology, integrated gaming software and extended features such as intuitive control of your smart home devices. If you're looking for a new TV you can't go wrong with the latest [Samsung Smart TVs](#). Ready to find out more? Explore our [Why Samsung Smart TV?](#) guide for our top recommendations.

What is screen mirroring?

Screen mirroring is a technology that allows the screen of a mobile device to be transmitted to the TV screen as it is and viewed on a large screen of the TV. The SmartThings and Smart View apps allow you to quickly and easily connect to your Samsung Smart TV, but you can also connect via a Wi-Fi or HDMI connection.



What is a smart TV and how does it work?

by [Jennifer Fossenbell](#) | Sep 30, 2020

What makes a smart TV smart? Integrated internet, of course! A smart TV, also called a connected TV or CTV, is a television with interactive, web-enabled features. A smart TV combines the powerful computer system of a mobile device with the large-format screen of a modern television.

This powerful information appliance allows you to browse the internet, view photos, stream music, and of course watch your favorite entertainment media, either through traditional broadcast or by [streaming over-the-top](#) and on-demand video. There are many smart TV platforms to choose from, with the highest rated ones including Sony, Panasonic, Samsung, LG, and Roku TV.

Smart TVs come with their own preloaded operating system along with a selection of built-in programs or apps, usually including popular favorites such as Netflix, Hulu, Spotify, YouTube, Amazon, and more. From there, you can also add or remove apps via a built-in app store, just as you do on a smartphone.

The possibilities are endless, so you can customize your own collection of sources for viewing sports and news, movies and TV series, kids programming, weather, listening to music, video chatting with loved ones and checking social media channels.



Much of the same functionality is often found in separate video streaming devices, as well as some Blu-ray players and game consoles. The smart TV differs because it provides all the web-connected features in one standalone unit.

With a smart TV, you can also access your own photos, music, and movies. A popular way to do this is through a cloud-based web platform like Windows Media Player or iTunes, but you can also hook up directly to a computer or removable storage device, such as an external hard drive or USB stick drive.

Add-on services can even notify you when your favorite show or sports team is playing. Innovative payment platforms on some smart TVs are also providing easier checkout options, so you can easily purchase and access apps, movies, games, and more, using your remote control or a smartphone, laptop, or tablet.

[How does a smart TV work?](#)

Smart TVs connect to your home internet service, either through a wired Ethernet connection (for the most consistent speeds) or through your personal [WiFi network](#). When you first set it up, you will be prompted to enter network login information, as provided by your internet service provider.

Once you're connected, you'll be able to access a huge number of "channels" (apps) to view different media. Many of these are subscription-based, however, so you will need to explore various [streaming services](#) and pick the ones you want to sign up for, some for free and most for a monthly cost.

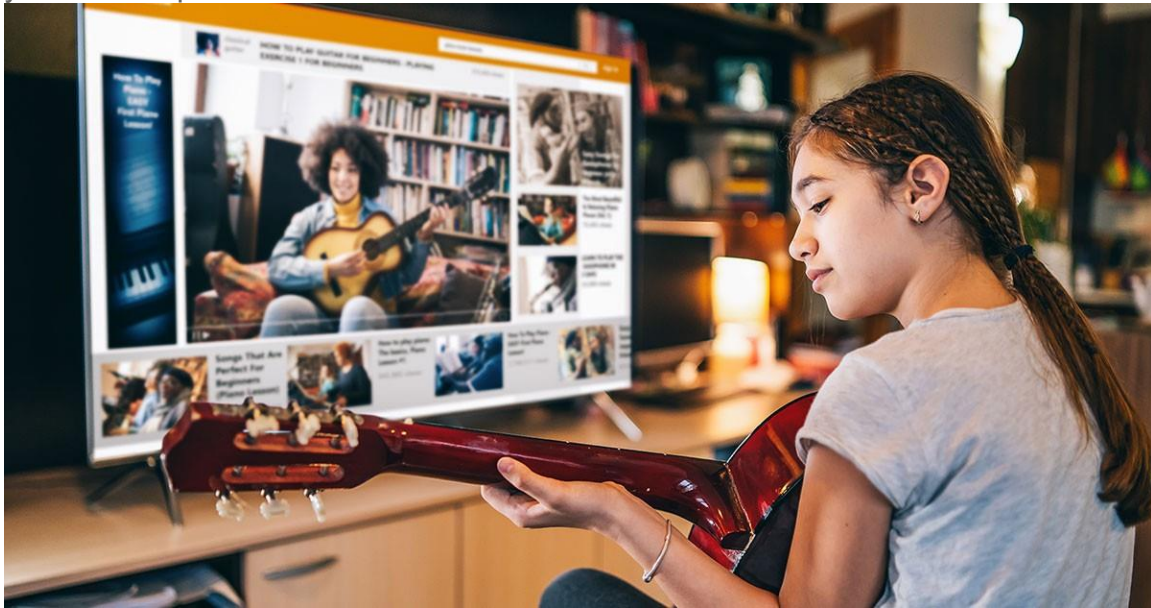
In some cases, your WiFi signal may not be strong enough to adequately power a smart TV. In that case, you may need to consider some options for upgrading your home wireless network. If you have an older modem/router, it's worth looking into getting a newer one made in the last three years to get optimal performance and [compatibility](#) with the latest wireless technology.

If that doesn't do the trick, you may consider adding a [WiFi extender](#) to get expanded coverage in your home. Your TV may simply be located too far away from your wireless router.

The standard remote control for a smart TV will be familiar for those who have operated a streaming video device. In many cases, you can use arrow keys and an Enter or Select key, along with a Home or Menu button, to accomplish much of the required navigation.

Some smart TVs now feature additional navigation options that make it easier to interact with content through more natural means. These can include a second screen companion device that allow you to use a touchscreen, or motion-sensitive controls that allow [gestural input](#) like pointing at the screen, or voice commands. These innovative methods allow you to avoid the somewhat cumbersome text input of using an on-screen keyboard and remote to enter search queries. For instance,

some remotes (like Roku, among others) have built-in voice capability, which allow you to use spoken commands like “Show local weather” or “Mute TV volume.”



What are the benefits of a smart TV?

A lot of people opt for the smart TV because it removes the step of having to connect a separate connected [streaming device](#), such as a Roku or Amazon Fire. You get a huge selection of “channels” to view without having to hook up a TV antenna or pay for a costly cable or satellite plan.

However, most smart TVs are also compatible with a broadcast antenna or satellite/cable, so you can get the best of all worlds. If you watch a lot of local sports over an antenna, for instance, you can still do so with most models, as well as getting the high-tech internet TV and [over-the-top options](#).

Another growing trend is that smart TVs are compatible with [smart home](#) devices such as Google Assistant or Amazon Alexa. So not only can you use them to change channels by voice command, but you can even link your smart TV to your connected home system to view smart lights, doorbells, locks, thermostats and more.

Is there anything a smart TV can't do?

Yes, there are always some limitations to any technology. Firstly, while most smart TVs include many of the same popular apps/channels, there may be some niche offerings that only come with particular brands. So it's worth [doing some research](#) if there's a specific viewing option you want. You can do a web search to easily find consumer reviews on any model of smart TV.

You should also know that some websites choose to block access by various devices or customize the way content appears on different platforms, including smart TVs.



What about security?

It is important to be aware that many smart TVs come equipped with their own webcams and microphones, which could increase the chances of outside parties [hacking](#) these components to eavesdrop, or for companies to use always-on monitoring for marketing purposes.

Meanwhile, [malware attacks](#), such as viruses or worms, are also possible. This can allow hackers to access private information or financial details if you use your smart TV for online shopping.

For these reasons, it's important to [secure your home WiFi](#) and [use parental controls](#) if you have children at home. There is also a growing market for smart TV-specific security and antivirus software, so you can check with the TV manufacturer to find out which program would be compatible with the platform.

If you are extremely worried about security risks, you can opt for a [streaming media device](#) instead, as these typically carry most of the same features and functionality as a smart TV, but without a built-in microphone or webcam.

The big picture

There are endless ways to enjoy online media these days — and smart TVs are just one of the many great options you can choose from. If you're not quite ready to get a new TV, go for a set-top streaming device or a media stick instead. And if you *are* ready to upgrade to a smarter TV, take your time, do some research, [read](#)

[reviews](#), and check the details to get one that has the features you want. For a smart shopper, there's an ideal smart TV out there waiting.

Find a streaming service for your Smart TV with the CenturyLink TV Recommendation Tool.