How do I set up my SlingStudio?

Here's how to set up your SlingStudio, step-by-step.

Here's what you need to set up your SlingStudio equipment:

- SlingStudio device, with all included cables
- SlingStudio Battery Pack (optional)—For more information, click the link at the bottom of this page to see *All about the SlingStudio Battery Pack.*
- iPad Air 2, iPad Mini 4 or above
- Additional equipment of your choosing:
  - Apple iPhone 6 (or newer) or Apple iPod touch 6 (or newer)
  - SlingStudio CameraLink (enables HDMI cameras to connect to SlingStudio via Wi-Fi)
  - HDMI camera (SDI cameras with no HDMI-out ports require an SDI-to-HDMI adapter)
  - SlingStudio USB-C Adapter (see below)
  - Internet connection (either via Wi-Fi or via Ethernet cable and USB-C adapter) for live broadcasting to Facebook or YouTube
  - Microphone (requires microphone pre-amp or audio mixer)
  - Audio mixer (optional)

To get started, first download and install the necessary mobile apps, and then hook up the equipment:

1. Download the SlingStudio **Console** app for your supported iPad from the Apple App Store.
2. To record video with smartphones, download the SlingStudio Capture app to each smartphone from either the Apple App Store for supported iOS devices, or from Google Play for supported Android phones.
3. Prepare any HDMI cameras that you'd like to use as video sources.
4. If you are going to be uploading your project to YouTube or another online site, or if you are going to be broadcasting live video, and you have Internet access via an Ethernet network cable, use a SlingStudio USB-C Adapter to connect the Ethernet cable to the SlingStudio USB-C input.
   (If you are going to be using Wi-Fi for broadcasting or streaming, that's covered in an upcoming step.)
5. If you'd like to use external audio input equipment (instead of, or in addition to, any audio that comes from your video sources), connect a pre-amplified microphone or an audio mixer to the SlingStudio 3.5mm unbalanced audio line input.
6. If you want to watch a larger display of the program output or a quad view of your inputs, you can also connect a video output monitor to SlingStudio device's Mini-HDMI (Type C) output.

7. Once the hardware is connected, plug in the SlingStudio to AC power.
   If you want to use the optional SlingStudio Battery, attach it to the bottom of the SlingStudio to begin charging it.
   The SlingStudio power adapter both charges the Battery Pack and powers the SlingStudio itself.
8. The SlingStudio device's blue LED band blinks while it is starting up. Wait until it stops blinking and glows steadily before proceeding.
9. Go to the iPad **Settings** app, and then tap **Wi-Fi**.
10. Select the Wi-Fi network that looks like **SlingStudio XX_XX_XX,** where the X characters are 0-9 or A-F (the actual numbers are different for every SlingStudio device).
11. Open the SlingStudio **Console** app on the iPad. If the Console app tells you that the SlingStudio requires a firmware update, follow the onscreen instructions to install it.
12. If desired, provide a unique name and password for the SlingStudio device hotspot, as well as a password for the SlingStudio hotspot. (Unique names are optional, but these can be helpful for identifying and protecting the SlingStudio hotspot.) The SlingStudio device restarts after changes are made to these settings.
13. After SlingStudio restarts, you'll need to set your iPad to connect to the SlingStudio hotspot again.
    Go back to the iPad **Settings** app and select **Wi-Fi**. Re-select the SlingStudio hotspot.
14. If you're using the SlingStudio Capture app on smartphones, then you'll set them up to connect the the SlingStudio Wi-Fi hotspot the same way as your iPad.
15. Place your smartphones in their desired locations (for better connectivity, higher is better). Adjust the Capture app settings to your liking (positioning, zoom settings, focus, exposure, etc.).

You're now ready to proceed with the rest of your project.

Follow these steps to set up a SlingStudio CameraLink:

1. First, be sure to charge your CameraLink as much as possible by connecting it to a USB charger using the included micro-USB cable. You'll know it's fully charged when the four battery LEDs are green.
2. Switch on your CameraLink by pressing the power button for 3 seconds.
3. Connect your HDMI camera (or other video source that you're using) to the CameraLink by using an HDMI cable that includes a micro-HDMI plug to go into the CameraLink micro-HDMI input connector.
4. Press and hold the CameraLink power button for 10 seconds, until the power button LED blinks red. This puts the CameraLink into WPS (joining) mode.
5. Go to the SlingStudio Console app on your iPad or other device.
6. In the Console app, tap the Settings icon (it looks like a gear), and then tap **My CameraLinks**.
7. Tap **Pair CameraLink (WPS)** to turn on the WPS function temporarily.
8. The Console app finds the CameraLink and connects to it.
9. From here on in, any time that you switch the CameraLink on, it should connect to your SlingStudio automatically.

You can now use your CameraLink as you would any other SlingStudio video source.

Here's some guidance for your first SlingStudio project!

Getting started with SlingStudio is a matter of know where things are. Here's a step-by-step guide to help you create your first project.

Before you get started: Make sure that you have hooked up your SlingStudio properly and set up the cameras or smartphones that you want to use as video sources. For more information, click the link at the bottom of this page to see *How do I set up my SlingStudio?*

Also be sure that you've set up any other equipment that you want to use (audio equipment, external monitor, and so on) as well as any Wi-Fi or network cable needed for streaming video.

1. On your Apple iPad, launch the SlingStudio **Console** app.
   Make sure that your iPad is connected to the SlingStudio hotspot (the Console app walks you through that process if it isn't).
2. When the Console app appears, you are given the option to either create a new SlingStudio project, or to open an existing one.
   a. Tap **NEW PROJECT**.
   b. Enter the project name in the **PROJECT NAME** field. (As this example shows, create a project name only out of letters, numbers, hyphens, underscores, and spaces—don't use any other characters):
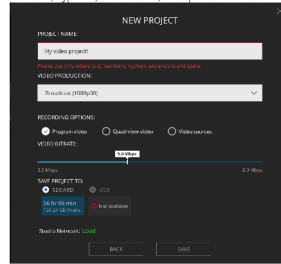
   c. From the **VIDEO PRODUCTION** menu, choose a resolution/frame rate setting. Think of this as a choice of the number of dots that make up the picture (resolution) and the number of frames per second (frame rate) that are recorded.
   Remember: The higher the resolution and/or frame rate that you choose, the better the video quality ... but also the more disk space the production can take per minute of runtime.
   SlingStudio calculates the recording time available on your storage media based on your choice. (Not enough storage space? Consider reducing the resolution and/or frame rate.)
   d. Choose the **RECORDING OPTIONS** that you want. These are the video streams that are included in the production's video folder on your storage media.
      i. **Program video** is your production's finished video.
      ii. **Quad-view video** is an encoded multi-view stream that includes all sources, with synchronized audio, encoded into one stream for later decoding in post-production. It can be a useful source for post-production or video assist.
      iii. **Video sources** tells SlingStudio to record separate streams for all of your video sources. There is also a stream for audio line-in (audio only) recording if you select video source recording and you have audio coming through the SlingStudio audio line input.

   e. **VIDEO BIT RATE** allows you to choose a video bit rate (the amount of data per second that SlingStudio uses to store your video/audio).
   Again, as with resolution/frame rate, higher quality means more disk space is required. Check to see how much run time SlingStudio has calculated that you have available based on your quality choices.
   f. Select the storage media where you want to save your project.
   g. Click **SAVE** when you're ready.
   Your new project opens.

3. Spend a moment reviewing the various buttons and controls that are in the Console app:
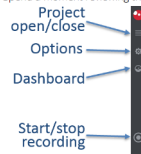
   a. Along the leftmost margin of the Console app, you see several buttons/indicators:
      1. Open/close project and set video bit rate
      2. Options
      3. Dashboard
      4. Start/stop recording and Recording Options
   b. You also have these indicators in the lower-left margin:
      1. SlingStudio Battery charge indicator:

   2. SlingStudio hotspot signal strength indicator:

      3. HDMI Out control:

   c. Along the left portion of the Console app, under **VIDEO SOURCES**, you see the cameras, smartphones, and/or other devices that you can use to record your production.
   d. The center and right portions of the Console app screen display the **Preview/Audio Mixer** view in the upper half of the screen. You see the control just above it:
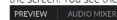
      1. Tap **PREVIEW** to see the Preview screen (video that's next to go "live"). Use the Preview screen to prepare video to go live by adding lower thirds, on-screen text, multiple camera view, picture-in-picture, etc.
      2. Tap **AUDIO MIXER** to see sliding volume controls for the audio portion for each of your video sources.

   e. The **PROGRAM** view is in the lower half of the screen.
   This is the actual display of your program, whether streaming live (such as to YouTube) or being recorded.

4. Choose video sources for Preview by tapping them, or by dragging them to the **PREVIEW** screen.
   You can also drag your chosen video source directly to the **PROGRAM** window, where that video becomes live immediately.
5. Use the controls within the **PREVIEW** window to add lower-thirds, on-screen text, and so on. If you don't see these controls, tap the three dots icon ••• in the upper-right corner of the screen and select **SHOW TOOLBAR**. (The Toolbar is shown here, its buttons annotated with red text.)

6. When you're ready to promote preview video to your program, tap **Preview -> Program**.
   Next to that, you can choose the transition that you want between shots.
7. Repeat the preview/program process to create your program.

IMPORTANT: ALWAYS CLOSE YOUR PROJECT before switching off the SlingStudio, or before ejecting the SD card on which you've stored your project.

Live-streaming SlingStudio projects to YouTube

Broadcasting to YouTube, step-by-step

What you'll need:

- A SlingStudio unit
- An network connection for the SlingStudio, either via Wi-Fi or Ethernet cable, that can access the Internet
- One or more video sources
- iPad with the latest Console app installed
- Sign-on credentials for YouTube/Gmail

To enable a Gmail account for live streaming (one-time task):

These steps are only needed to enable a Gmail account for live streaming if it has not been done before. After this is done for this particular Gmail account, you don't need to do it again:

1. Create a Gmail account (or use an existing one) to sign in to YouTube.
2. Once you log in to YouTube, tap the **Creator Studio** option.
3. Tap **Create a Channel**, and then select **LIVE STREAMING** from the left-side panel.
4. Select **Events**, and then tap **Enable Live Streaming**.
5. If requested, verify the account by providing either your email address or your telephone number.

Procedure:

1. Power up the SlingStudio.
2. On your iPad, launch the **Console** app and connect it to the SlingStudio hotspot.
3. Connect your SlingStudio unit to Internet:
   a. **Ethernet cable:** Connect a live Ethernet cable to the SlingStudio using the SlingStudio USB-C Expander product.
   b. **Wi-Fi:** In the Console app, go to **Settings** (on the left edge of the Console app) and tap **Internet Settings.**
   c. Choose a Wi-Fi network to connect to.
      Note: You can also confirm the operation of the Ethernet connection here.
4. Prepare the video sources that you want to use and connect them to the SlingStudio hotspot.
5. Open a new Project, and give the project a name.
6. Set your new project with these settings (remember that you can scroll up/down in the dialog box):
   a. **Video production (resolution)**: For YouTube streaming, this can be your choice.
   b. **Video Sources Bit rate**: Choose a video source bit rate setting. For now, choose a setting that's about halfway.
   c. **Program Output Bit rate**: Choose a setting for the **Program Output** bit rate. If you're not sure, choose a setting that is about halfway. We'll refine it shortly.
7. At the bottom of the dialog box, tap the **Live Broadcasting** switch.
   A dialog box may appear with a helpful reminder about the program output bit rate.
8. At the bottom of the **Live Broadcasting** section, go to the **Upload Speed** line. Tap the circular arrow to test your current upload speed. After several seconds, the Console app determines what the current upload speed is.
9. Divide this **Upload Speed** figure approximately in half, and use that figure to refine the **Program Output** bit rate setting (from **Step 6c** above). Half the Upload Speed is a good number to start with. Lower settings can offer lower video quality ... but also broadcasting with fewer skips. Higher settings offer the reverse.
   Note: You can't change this setting once the project has been created.
10. Down in the **LIVE BROADCASTING** section, tap **BROADCAST DESTINATION**.
11. Select **YouTube**.
12. You see the Google **Login** screen. Provide your account credentials to log in.
13. If you are asked for various permissions, be sure to allow them.
14. Choose an option:
    a. Tap **Stream Now**. In the screen that follows, fill out the fields, then tap **SET DESTINATION**. Or ...
    b. Tap **Create New Event**. In the screen that follows, fill out the fields, then tap **CREATE**.
       See **About YouTube privacy settings**, below, for more information about privacy options.
15. You return to the **PROJECT SETTINGS** screen.
16. Review your project settings, and then tap **SAVE**.
17. For now, skip past any dialog boxes that you see about media storage and setting up your audio.
18. Set up your video: choose a video source for the Preview pane, then tap **Preview -> Program** to promote the video source's image to the Program pane.
19. On the left edge of the Console app, tap **GO LIVE**. In the dialog box that appears, tap **LIVE** to confirm.
    You can also tap **PREVIEW** to see a preview stream in the YouTube Live Control Room before you make your video live for the public. (You can sign up for the YouTube Live Control Room via the YouTube website from a computer web browser.)
20. The **GO LIVE** button on the left side of the Console app turns red to indicate that you're currently broadcasting.
    You also see a timer displayed in the bottom of the **PROGRAM** window.
21. To stop the broadcast, tap the **GO LIVE** button. Confirm in the dialog boxes that appear.

About YouTube privacy settings

When creating an event, be sure to choose the best the Privacy option to suit the needs of your project:

- **Public**—Your video can be watched by anyone.
- **Unlisted**—Your video can be watched only by those with whom you have shared the video link. (This is the default setting.)
- **Private**—You're the only one who can watch your video.

Broadcasting live video with Facebook Live

Here's how you can use SlingStudio to broadcast your projects via Facebook Live.

What you'll need:

- A SlingStudio unit
- An network connection for the SlingStudio, either via Wi-Fi or Ethernet cable, that can access the Internet
- One or more video sources
- iPad with the latest Console app installed
- Sign-on credentials for Facebook

Note: The following instructions help you produce a live video that is broadcast to your Facebook page. Your Facebook friends see this post in their feeds if you have set your Facebook timeline page privacy level to "public" or "friends." For other pages, groups, or events, this live video is broadcast to all users signed up for those pages, groups or events.

Procedure:

1. Power up the SlingStudio.
2. On your iPad, launch the **Console** app and connect it to the SlingStudio hotspot.
3. Connect your SlingStudio unit to Internet:
    1. **Ethernet cable:** Connect a live Ethernet cable to the SlingStudio using the SlingStudio USB-C Expander product.
    2. **Wi-Fi:** In the Console app, go to **Settings** (on the left edge of the Console app) and tap **Internet Settings.**
    3. Choose a Wi-Fi network to connect to.
        Note: You can also confirm the operation of the Ethernet connection here.
4. Prepare the video sources that you want to use and connect them to the SlingStudio hotspot.
5. Open a new Project, and give the project a name.
6. Set your new project with these settings (remember that you can scroll up/down in the dialog box):
    a. **Video production (resolution)**: Internet (720p30)
    b. **Video Sources Bit rate**: Choose a video source bit rate setting.
    c. **Program Output Bit rate**: Choose a setting for the **Program Output** bit rate. Again, if you're not sure, choose a setting that is about halfway. We'll refine it shortly.
7. At the bottom of the dialog box, tap the **Live Broadcasting** switch to turn on live broadcasting.
    A dialog box may appear with a helpful reminder about the program output bit rate.
8. At the bottom of the **Live Broadcasting** section, go to the **Upload Speed** line. Tap the circular arrow to test your current upload speed. After several seconds, the Console app determines what the current upload speed is.
9. Divide this **Upload Speed** figure approximately in half, and use that figure to refine the **Program Output** bit rate setting (from **Step 6c** above). Half the Upload Speed is a good number to start with. Lower settings can offer lower video quality … but also broadcasting with fewer skips. Higher settings offer the reverse.
    Note: You can't change this setting once the project has been created.
10. Down in the **LIVE BROADCASTING** section, tap **Select a Destination**.
11. Tap **Facebook**.
12. Log into Facebook, using the **Email address** option, with your Facebook login/password.
    Note: If you don't see the Facebook login/password screen, but instead go directly to the **Permissions** page, it's because the SlingStudio Console app is using the login information that the iPad's Safari browser is using for Facebook.
    To change to another Facebook account, use Safari on the iPad to log out from the current Facebook account. After doing that, you should then see the Facebook login/password page in the Console app. You can then log in to the correct Facebook account.
13. Allow Facebook to process the sign-on. When you are asked for various permissions, be sure to allow them.
14. Set **BROADCAST TO** as **Pages**, **Groups**, or **Events**, as you prefer.
15. Tap your timeline.
16. Tap **Publish Now** to for an event that you want to start now; if you chose **Pages**, tap **Schedule a New Post** to schedule a future broadcast at a set time.
    NOTE: The **Schedule a New Post** option is not available for Groups or Events.
17. Fill in the information fields. Be sure to select the **PRIVACY** option that you want.
18. Tap **SET DESTINATION** at the bottom of the screen.
    You return to the **PROJECT SETTINGS** screen.
19. Review your project settings, and then tap **SAVE**.
20. If you see dialog boxes about media storage and setting up your audio, handle those as you wish.
21. Back at the Console app main screen, choose a video source for **PREVIEW**, and then when you're ready, promote it to **PROGRAM**.
22. Tap **GO LIVE** on the left-side edge.
23. In the dialog box that appears, tap **GO LIVE** to confirm.
    The **GO LIVE** button on the left side of the Console app turns red to indicate that you're currently broadcasting.
    If you want to monitor your Facebook broadcast, using a computer, open a web browser and go to the Facebook website.
    Or, on a device *other than the iPad that's running the Console app,* open the Facebook app.

    IMPORTANT: Do not use the iPad that is running the Console app as a Facebook monitor! This could seriously impair its network bandwidth, causing streaming problems.
24. If you choose to monitor your Facebook broadcast, be sure to sign on to Facebook using the credentials that you used with the Console app a few moments ago.
    You should be able to see your SlingStudio broadcast on your Facebook feed.
25. To stop broadcasting, tap **GO LIVE** from the left side of the Console app. In the dialog box that appears, tap **STOP LIVE** to confirm. Tap **STOP** in the next dialog box to confirm a second time.
    NOTE: You are asked twice to confirm stopping your broadcast event because, after you do that, you have to set up an entirely new broadcast event to continue live-streaming. By Facebook design, you cannot use a previous post to resume a broadcast.
26. To broadcast more video, you can either:
    1. Tap the Project open/close icon on the left side of the Console app, and then tap **Project Settings**;
    2. Tap **GO LIVE** as before, and then tap **PROJECT SETTINGS** in the dialog box that appears.

What wireless microphone setups work with SlingStudio?

You can use a number of microphone setups with SlingStudio.

Here are your choices:

- Built-in microphone on a smartphone or camera.
- Microphone mounted to and connected to the camera. Audio is then transmitted from the camera over HDMI. This camera can be connected to SlingStudio using CameraLink or an HDMI cable connected directly from the camera to SlingStudio. The most popular type of microphone in this example is a shotgun microphone:

- Wireless lavalier microphone – a small microphone used for television, theatre, and public speaking applications in order to allow for hands-free operation. A lavalier microphone is most commonly provided with small clips for attaching to collars, ties, or other clothing. The cord may be hidden by clothes and either run to a radio frequency transmitter kept in a pocket or clipped to a belt, or routed directly to the mixer or a recording device.

These microphones have both a transmitter and a receiver. The receiver has wired output that can be connected to an audio mixer (sound console). The audio mixer output can then be connected to the SlingStudio audio line-in input.

Please be aware that you cannot connect the microphone directly to the SlingStudio audio line in. This is because the microphone signal is a "mic level" signal, whereas the SlingStudio audio line in is "line level" input, and mic level is not same as line level.

There are two ways to convert mic level to line level:

- You can connect the microphone to the camera, which then transmits audio and video using HDMI or CameraLink to SlingStudio.
- You can connect the microphone to an audio mixer or mic preamp, and then connect the output of the mixer or mic preamp to the SlingStudio line in.