

A Mighty, Mini Mixer for Quality Live Streaming

The key to smooth, professional-looking live streaming is to employ at least two cameras connected to a video mixer. The Blackmagic (not a spiritual statement) ATEM Mini Pro is a cost effective miniature video mixer that will allow you to stream your worship service when it is matched with two HDMI cameras of your choice. You can even do this without having to connect the mixer to a computer. As of this writing, five congregations in our presbytery have employed this mixer in their streaming system with success.



Here's how it works. Most consumer camcorders and many PTZ (Pan, Tilt, Zoom) cameras, and quite a few prosumer DSLR cameras have HDMI out jacks. They can be connected to the mini pro with the proper HDMI cables by plugging them into one of its four HDMI inputs. In addition, a Presentation computer can be connected to one of the inputs allowing the operator to input the various worship slides into the live mix. You can even choose to run graphic software in order to superimpose the words over the top of the main video while streaming live. There is an ethernet jack on the back of the Mini Pro which will allow a wired connection to the internet. You can either choose to record to a USB hard drive (or thumb drive) or live stream to a streaming service simply by pushing either the "record" or "on air" buttons. You will need to set the Mini Pro up with a computer in order to tell it where to stream, but after the setup is complete, you don't even need a computer to stream. The operator or operators simply need to push the on air button, point the cameras to the scene they want to capture and push the buttons to select camera 1, camera 2 or the computer. For more advanced mixing you can connect a laptop to the internet, connect to the Mini Pro through your network, discover the advanced features through the free software, and stream while recording at the same time. By having at least two cameras, your viewers will not need to see the movements of the camera as you focus on a new scene, because all movement of the camera is done while the other camera is the source being recorded or live streamed.

On the next two pages we have a summary of the equipment you will need for this system from the Lowest price to the more advanced.

P.S. First Presbyterian, Medford was the first to install a system with the Blackmagic ATEM Mini Pro. If you want to talk with someone who has set up a rather elaborate system and has some experience with it, you may want to contact them.

Black Magic ATEM Mini pro/Recording System



Canon VIXIA HF R800 Camcorder

[\\$249](#) You will need two of these or two similar ones (PTZ options further down in this document)

Blackmagic Design ATEM Mini Pro HDMI Live Stream Switcher

[\\$595](#)



TV for Monitoring \$69.95 [Walmart](#) any TV with an HDMI input will work. Also many computer monitors with and HDMI input will work.

Cables and adapters you may need

Cmple - High-Speed Mini HDMI to HDMI Cable (HDMI to Mini HDMI) 4K Ready - 10 Feet, Black [\\$8.99 x2](#)

Cat6 cable to connect unit to internet 10' [\\$4.09](#)

HDMI cable [\\$9.95](#) For TV or monitor to the Mini Pro program out



Netgear Gigabit Ethernet Switch [\\$18.99](#) (You may need this if you only have one ethernet cable coming into your sanctuary and you want to connect up a computer and the ATEM Mini Pro)

Audio Cable [\\$14.99](#) (the type of cable you will need depends on the type of output jacks you have on your sound mixer) or [3.5mm to 1/4"](#) or [3.5mm to RCA](#)

USB type-c adapter [\\$19](#) (needed for connecting USB Hard drive or Thumbdrive to the Mini Pro for recording)

USB Male to Male CABLE [\\$5.49](#) (for connecting Mini Pro to computer for editing settings or for connecting to a computer to allow the Mini Pro to be used as a webcam)

These two items will only be needed if your presentation computer uses VGA display outs.

VGA splitter [\\$14.61](#)

VGA to HDMI converter [\\$49.99](#)

In some cases this adapter will not work and you may need a more expensive converter with scaling capabilities such as this one made by Genfen [\\$219](#)





If your computer uses HDMI outs, you will most likely need an **HDMI splitter**. This **Kanex Pro** is the best one we've come across. [\\$59.95](#)

(last 2 items not needed if you place camcorders side by side)
J-Tech Digital HDMI Extender [\\$54.69](#) *(If your second camera is farther away than 30 feet, you may need this extender along with ethernet cable that will allow you to place the camera as far as 150 feet away. If you are under 30 ft. away you can find a cable of the appropriate length.)*



HDMI cable [\\$9.95](#) *For connecting the extender to the Mini Pro*

Cat6 Ethernet Cable 50 ft White [\\$17.99](#) 100 ft. [\\$20.99](#) 150 ft. [\\$33.95](#)

This system contains a two cameras for streaming/Recording. The heart of the system is the Blackmagic Design switcher which allows the mixing of the various sources and streams to a live steaming service like YouTube or records to a USB hard drive. It also allows a connection to an optional computer for recording or streaming. The mixer can also be connected to the church's current computer for controlling the settings for the mixer. The sound for the recordings is captured directly from the sound mixer in the sanctuary and the Presentation software can be fed into the mix from the presentation computer. Later, if you so desired, you could add a separate computer to connect to the Mini pro mixer for many more mixer/recording and streaming controls available through a software interface (a free download form Black Magic).

Optional for a later time if desired

A laptop for enhanced control of the ATEM Mini Pro or for connecting to the Mini Pro for use as a webcam. At least

WD USB Hard Drive [\\$62.99](#) *(For recording)*

Pinnacle Studio Plus [\\$89.95](#) *(for editing videos)*

AViPAS AV-1081 HDMI PTZ Camera *(for smaller sanctuaries)*
[\\$620](#)



PTZOptics 20x-SDI *(For Larger sanctuaries)* [\\$1699](#)

PTZOptics 30X-SDI Gen 2 *(for very large sanctuaries)* [\\$1799](#)

Most of the items are available through [B&H Photo](#)