



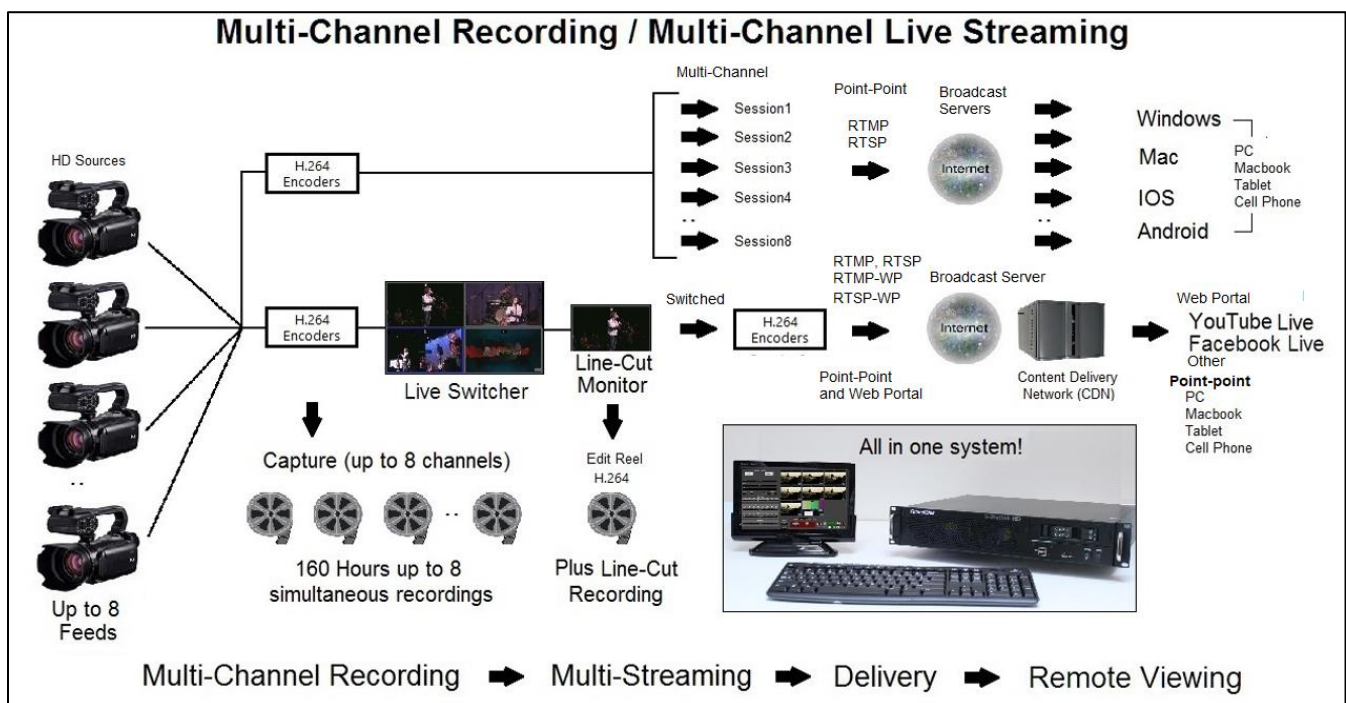
Live Multi-channel & Multi-cam Streaming With V-Station® HD

V-Station HD Studio4 and Studio8 Multi-Channel DVR Systems can *simultaneously* broadcast multiple live streams of video and audio over a connected LAN or through the internet—while also recording all channels for local backup in the event of network failure. Third-party streaming boxes are *not* necessary for multiple live streaming since it is integrated within V-Station HD Studio4 and Studio8’s hardware encoders. Typical applications include off-campus distant learning, off-site house of worship services, monitoring surgical procedures, monitoring an assembly line for process control, or simply monitoring each video source in a confidence recording system from a remote location.

Starting with V-Station HD version 1.1.0.61, “Multi-Channel Streaming” point-to-point via RTMP and RTSP protocols are supported. Users can select up to 8 video channels to stream live (with Studio8). In addition, when AutoProducer® is enabled, the V-Station HD live “line-cut” can also be streamed, as an additional switched stream (“Multi-cam stream”), to a variety of content delivery networks (CDN). Using these 3rd party server providers with RTMP web portals, such as Boxcast, Wowza, and popular social networks—YouTube Live or Facebook Live—can extend the reach of high-quality video to viewers through-out the internet.

Multi-channel Live Streaming (Streaming Each Channel Simultaneously) – Made Easy

Multi-channel streaming provides the ability to stream each channel “point-to-point” to a connected internet device capable of receiving a RTSP or a RTMP stream. For example, a PC connected to a remotely-located LAN or connected to the internet can receive each of the individual streams and allow live monitoring of any of the channels. FutureVideo’s Network Streaming Player, VLAN’s VLC Media Player (Windows or Mac), Apple’s QuickTime Player for Windows, and other 3rd party players may be used as a receiving client.



Multi-streaming for the selected channel is enabled on the V-Station HD Record screen's "Stream Enables" panel, as shown below (4 channels shown):



Streaming commences for the enabled channels when the "Multi-Stream" button (below) is clicked:



Streaming ceases for any individual channel when the Stream Enable button is clicked off. All channel streams can be stopped when the Multi-Stream button is clicked again. Setting up the Multi-Stream ports, frame size, frame rate, bit rate, and protocol are covered in the applicable V-Station HD Studio User Guide.

Social Network Streaming to YouTube Live/Facebook Live - Made Easy

With the built-in pre-configured streamers for YouTube and Facebook, users can start multi-cam live streaming of V-Station HD's line-cut (switched output) using the Live Stream controls, as shown below:



Simply click on the YouTube or Facebook label in the above panel to select which service will be used (highlighted green). Streaming begins when the button **Live Stream** is clicked. The stream broadcast ends when either the **Live Stream** button is clicked again, or **AutoProducer** is stopped, or "**All Stop**" is clicked in the main record panel. The URL, account name, password, streaming key, as well as the frame size, frame rate, and bitrate, are setup in V-Station HD's Admin panel to allow the administrator to keep these confidential.

Third Party Content Delivery Networks (CDNs) Live Streaming Support

In addition to social network streaming, V-Station HD now supports third-party RTMP or RTSP streaming to a web portal (such as Wowza or Boxcast, and others).



As in the prior section, select the protocol for the web portal in the above panel (e.g., "RTMP-WP"), and click on **Live Stream** to start the streaming broadcast. Again, the administrator can set the account name, password, URL, as well as the frame size, frame rate, and bit rate and store the stream key in the V-Station HD Admin panel.

For more information about setting up the streaming parameters, request the FutureVideo Application Note, "How to Setup a Multi-cam Live RTSP or RTMP Stream". To setup third-party CDNs, please request from the CDN provider the information about how to open an account and obtain the credentials to start streaming. To view the streams at the destination using network streaming players (such as VLC and QuickTime Player), please request the FutureVideo Application Notes "Instructions on how to use VLC Player (Windows) to play RTSP or RTMP streams" and "Instructions on how to use VLC Player (MacOS) to play RTSP or RTMP streams".