

TVU Grid

Powerful and Scalable Live IP-Based Video Switching,
Routing and Distribution

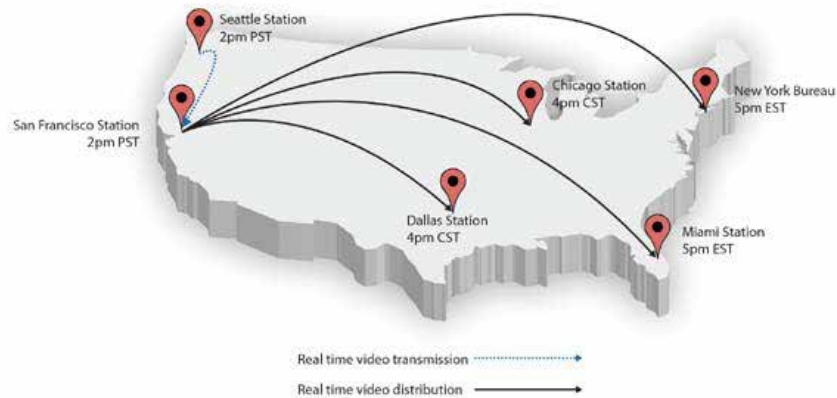


- Seamlessly share live video between multiple locations in real-time with sub-second latency
- Frame accurate switching to switch between live feeds with virtually no delay
- Scalable solution ideal for network affiliates and station groups
- Utilized existing TVU transmitter and network infrastructure
- Accelerate the move to IP-based infrastructure

As the demand for live news coverage continues to grow, broadcasters face a tremendous challenge sharing live news coverage cost effectively and in real-time. Because of a complex network infrastructure and myriad input video sources, broadcast stations have been forced to implement a siloed operational approach. Until now, sharing live video in real time between stations has required additional encoding equipment and expensive satellite time, and has contributed to broadcasters' inability to fully leverage existing IP infrastructures.

TVU Grid is an award-winning, powerful and scalable IP-based video switching, routing and distribution solution that enables broadcasters to acquire live video from different source types and seamlessly distribute to other news stations. With TVU Grid, broadcasters have the ability to route live, professional-quality video streams with as low as sub-second latency over IP networks to one or more Grid-enabled news stations anywhere in the world, as it's happening.

Key Features



Point-to-point and point-to-multiple-point functionality - TVU Grid gives stations the ability to take any video source, whether it be SDI feed, IP video camera, internet video or a TVU transmitter and distribute the live video stream to any number of other Grid-enabled locations with sub-second latency. TVU's Transceiver powers TVU Grid.

Frame accurate switching - It allows the switching between different IP-based video streams with no disruption of the video. TVU's unique and proprietary technology makes it possible to transition between live video feeds from different locations without any interruption.

Unlimited switching - TVU Grid enables broadcasters to input an unlimited number of video streams and switch between them on the fly. As a result, broadcast stations can switch to any content from anywhere on the Grid network without the use of a converter, dramatically increasing the number of accessible video feeds.

Simple operation - It features an optimized user-friendly interface that simplifies video distribution to other Grid-enabled locations, allowing broadcasters to distribute video streams with just the click of a button.

Utilize existing infrastructure - With TVU Grid, broadcasters can utilize their existing network infrastructure. Also, Grid can easily scale and grow when additional locations are added.

Low-cost scalability - Grid offers an easily scalable transmission solution that enables organizations to rapidly expand distribution capabilities to multiple locations. Ideal for large networks and station groups.

Return video feed for field crews - TVU Grid can be used in conjunction with TVU transmitters to deliver a return video feed directly to video crews in the field. When accessed via the TVU transmitter HotSpot, field crews are able to monitor studio feeds while on location.

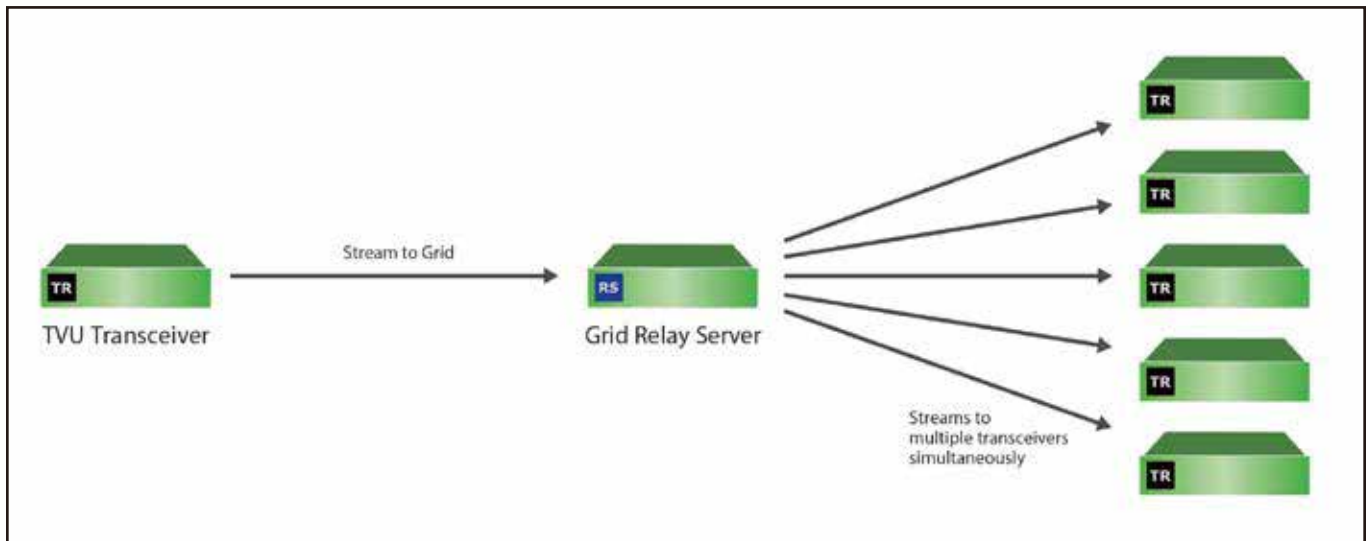
Supports external video sources - It supports external video sources such as YouTube, giving broadcasters access to a wider variety of video streams.

Encode content for easy web distribution - It can encode video streams to multiple formats and directly push them to a content delivery network (CDN) for direct-to-web content distribution. With TVU Grid, broadcasters are able to extend their reach to viewers beyond television, enabling easier content distribution for online and mobile platform viewers.

Inter-group content exchange - Share content between TVU Grid groups through temporary pairing. This is the first roll-out of user-based pairing.

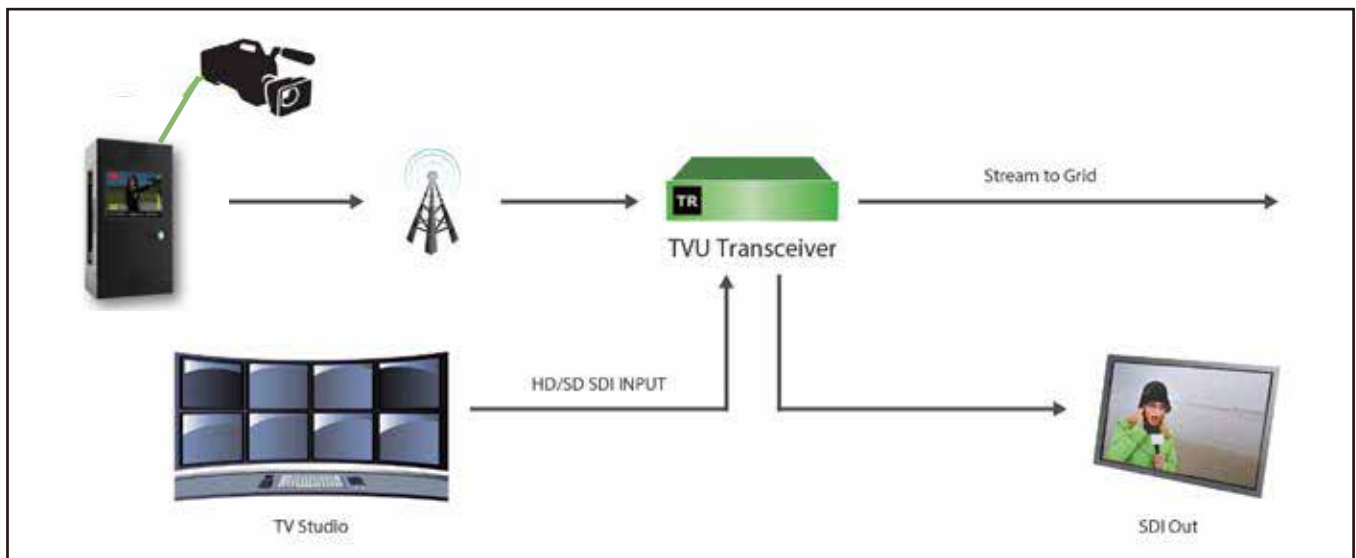
Unlimited Scalability for Video Distribution

TVU Grid delivers unlimited scalability for broadcasters looking to distribute video to multiple locations. It is designed to dramatically expand the scalability of the Grid network without increasing bandwidth requirements at each individual station connected to the Grid.



TVU Transceiver

TVU transmitters are the primary hardware component of TVU Grid, enabling stations to share video in real-time. The TVU Transceiver is a custom-built appliance that sits in each station and connects to Grid via a standard broadband internet connection. Stations can input video from any source to the Transceiver, whether it be from other stations connected to the Grid, from a TVU transmitter, from any online video feed or from another SDI source in the station.





TVU Grid features a simple-to-use, web-based GUI that acts as the central control interface for Grid. Users can easily manage all available streams from the Grid network and switch between live streams with just the click of a mouse. From the grid switch, users can also access a remote TVU Transceiver control center where users can monitor and control their transceivers from anywhere. Grid switch is accessible from any internet-connected device with a web browser, including tablets and smart phones, allowing for total management and control of video streams from practically any location.

TVU Grid Technical Specifications*

Electrical	Line Voltage: 10-240V AC, 50/60 Hz 5.2-2.6A
Configuration	1RU standard rack mount
Audio/Video Output	BNC - SD/HD - SDI (1080-50i/59.94i, 720-50p/59.94p, NTSC/PAL) w/ embedded audio. (Optional analog output)
Genlock	BNC - Tri - Level or BB
Display	Display port or HDMI
IFB Input (Optional)	External USB audio input with level control (mix/line), 1/4" & XLR
Network I/O	1 independent 10/100/1000 BASE-T RJ45 Ethernet interfaces, 2 x USB 2.0, 2USB 3.0
Dimensions	1.7" x 17.2 x 9.8" 43mm x 437mm x 249mm (HxWxD)
Operating Environment	10-35° C (50-95° F), humidity 20%

*Specifications and features are subject to change.

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