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 - switch between live feeds with virtually no delay
- Scalable solution ideal for network affiliates and station groups
- Utilizes existing TVUPack and network infrastructure
- Accelerate 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 in real time. Because of complex network infrastructure and myriad input video sources, broadcast stations have been forced to implement a siloed operational approach, which is especially problematic for stations affiliated with a larger station group or broadcast network. 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 a powerful, dynamic IP-based video switching, routing and distribution solution that enables broadcasters to acquire live video from different source types and seamlessly distribute it 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 is happening.

Key Features
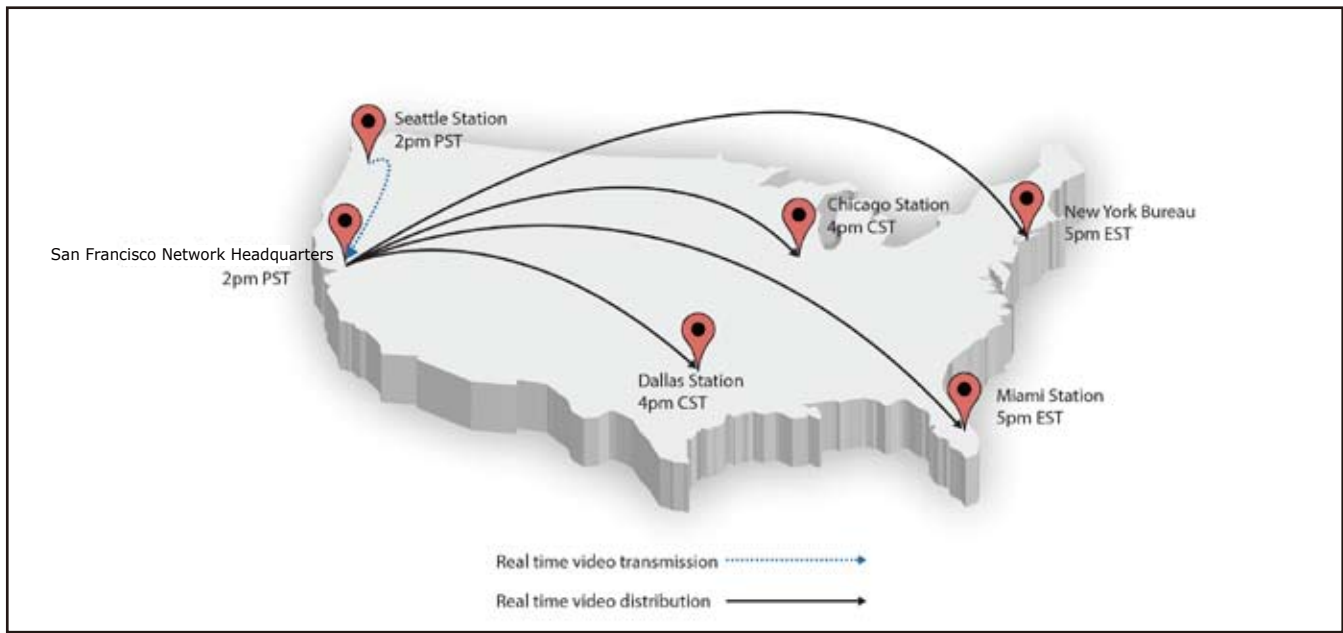
Point-to-Point and Point-to-Multiple-Point Functionality - TVU Grid gives stations the ability to ingest live video from the field via TVU transmitter or from local live studio feeds and simultaneously distribute the video stream to other stations connected to the Grid at sub-second latency.

Frame Accurate Switching - TVU Grid supports frame-accurate switching of IP content to enable broadcasters to seamlessly switch in real time between video streams without interruption.

Low-Cost Scalability - TVU Grid offers an easily scalable transmission solution that enables broadcast organizations to rapidly expand distribution capabilities to multiple geographical locations. Ideal for large broadcast networks and station groups, TVU Grid is a powerful tool for sharing live video content between stations on the fly while maintaining low operational costs.

Utilize Existing Infrastructure - TVU Grid works within the broadcast organization's existing network infrastructure. TVU's proprietary video transmission protocols optimize video transmission to ensure the highest possible quality based on available bandwidth.

Encode Content to Multiple Formats for Easy Web Distribution - TVU Grid can encode video streams to multiple formats and directly push them to a Content Delivery Network (CDN) for direct-to-Web content distribution. With Grid, broadcasters are able to extend their reach to viewers beyond the television, enabling easier content distribution for online and mobile platform viewers.

Return Video Feed for Field Crews - TVU Grid can be used in conjunction with the TVU transmitter 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 directly monitor studio feeds while on location.

Supports External Video Sources – TVU Grid supports external video sources such as YouTube, giving broadcasters access to a wider variety of video streams from which they can choose.

Unlimited Scalability for Video Distribution

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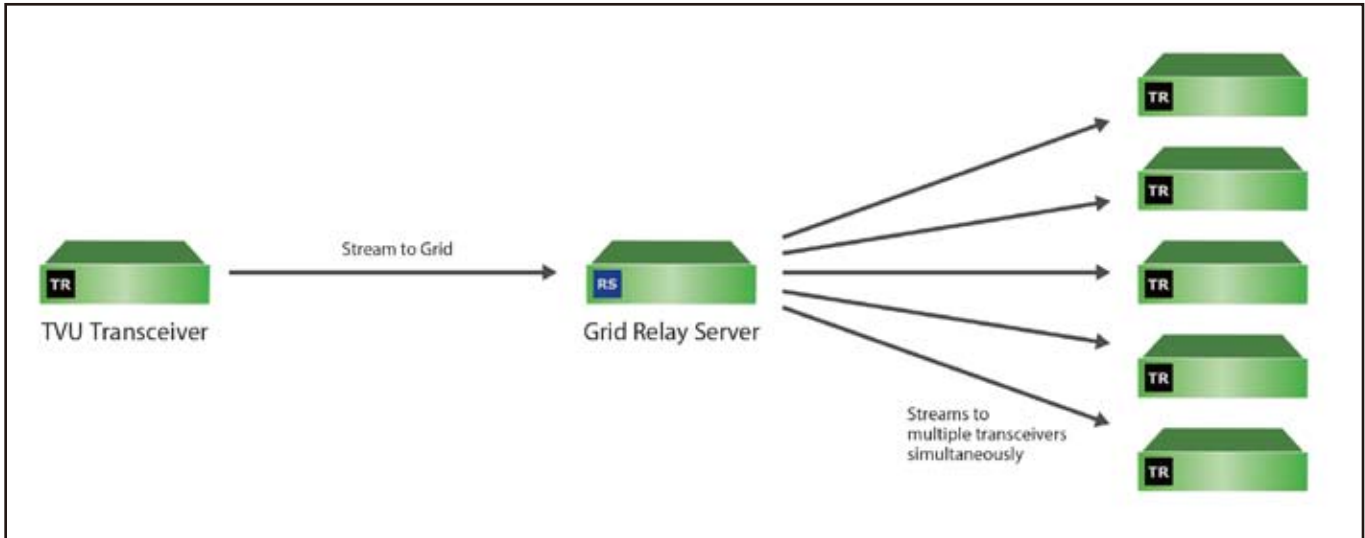
TVU Transceiver

The TVU Transceiver is 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 television station and connects it to the 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 cellular uplink transmitter, from any online video feed, or from another SDI source in the station.
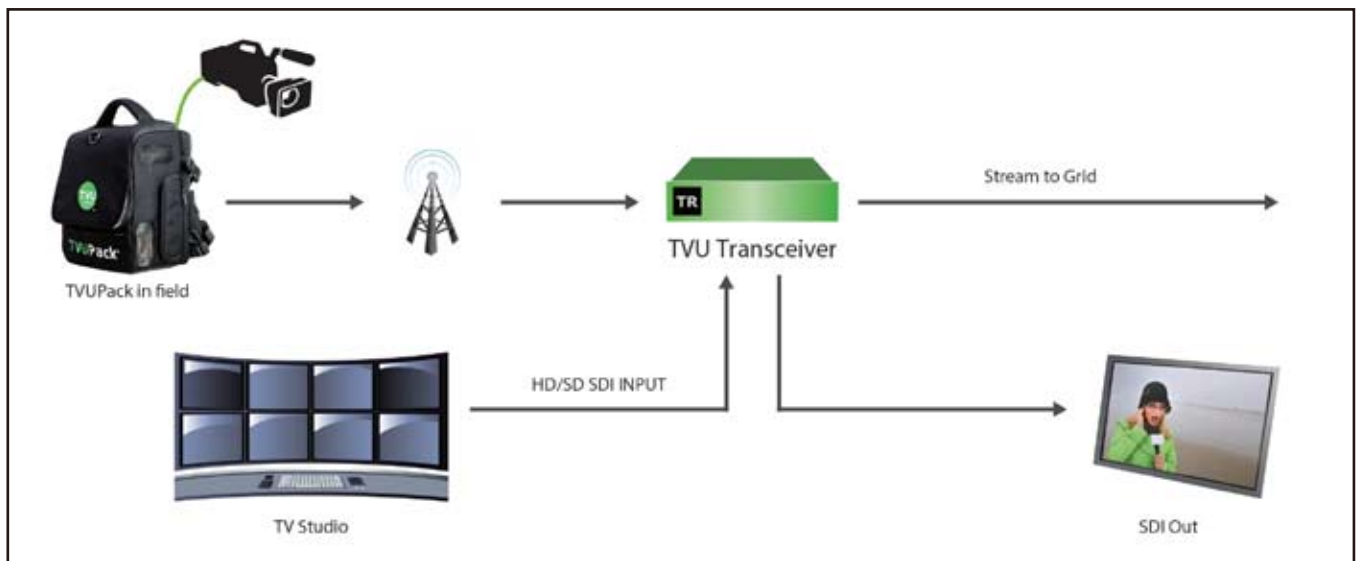
Grid Switch

TVU Grid features a simple-to-use Web-based GUI that acts as the central control interface for the Grid system. Users can easily manage all available streams on 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, such as an iPad, enabling users to manage and control video streams from practically any location.

	Specifications
Electrical	Line Voltage: 100-240V 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 (mic/line), ¼" & XLR
Network I/O	1 independent 10/100/1000 BASE-T RJ45 Ethernet Interfaces, 2 x USB 2.0, 2 USB 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%

3/24/15