TVU Transceiver

Monitor, Control and Distribute
TVU, SDI and Video Transmissions
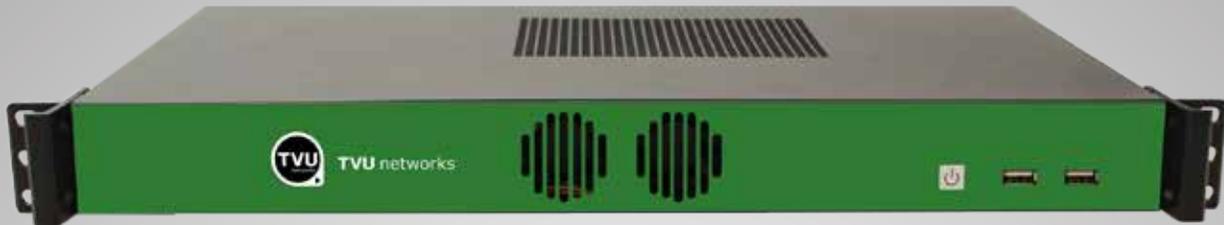
- Powers TVU Grid - TVU's award-winning IP-based video switching, routing and distribution solution
- Decodes multiple types of feed: TVU, SDI and web streams
- Monitor all aspects of a live transmission, including bit-rate and latency
- Provides complete control over TVU transmitters and modem cards
- Delivers the best picture quality - even in extreme environments with bandwidth fluctuation

TVU Transceivers are powerful professional broadcast-quality servers that can accept multiple video feeds. TVU Transceivers can take a live TVU transmitter feed onto the TVU Grid IP video distribution, routing and switching solution. TVU Transceivers are capable of receiving in-field transmission from TVU transmitters. In addition, TVU Transceivers can ingest any SDI input to seamlessly feed the video to other locations via TVU Grid. Grid enabled Transceivers can output an IP stream for a variety of codecs and wrappers. All TVU Transceivers allow for easy control over every transmission.

TVU Grid Compatible - TVU Grid is a simple IP-video distribution, routing and switching solution with the ability to seamlessly switch live IP video content and share live video

IP Streaming Output - This optional feature allows users to take a live TVU transmission and easily output it to a third party website or decoder such as YouTube. The live video is encoded into an IP format and can be sent to up to six different remote locations. streams between multiple remote locations. TVU Grid enables the efficient switching and routing of video content from any location and to distribute it to any other location that has a TVU Transceiver.

Complete Control Over Every Transmission

User-friendly layout – Watch the live video transmission while also monitoring the bite-rate and latency throughout the entirety of the transmission. The transceiver interface allows the operations center to manage and monitor the end picture, in turn permitting the TVU transmitter operator in the field to focus on capturing the video. Easily view error rate, line quality and battery reserve in a simple but informative status bar. Survey the real-time status of multiple transmitters that are out in the field in order to easily switch between multiple live shots.

Web-based Receiver Interface – The Web-based receiver interface enables users to monitor and control the TVU Receiver interface from any Web-enabled browser. The Web-based receiver interface also enables users to control multiple transmissions from one single computer.

Control the Live Video Feed – Go live with just the click of a button or switch between transmissions on the fly during a live transmission. Easily change the bite-rate and latency for the optimal transmission quality. Quickly stop a live feed or replay a video segment. Add the optional IFB feature and speak directly to the TVU transmitter operators from the control center.

Smart VBR Technology – TVU's Smart VBR functionality enables TVU to adapt quickly and efficiently to extreme fluctuations in bandwidth during live transmissions. The operator only has to set the desired latency for the live shot, and Smart VBR will automatically adjust picture quality based on the available bandwidth.

Adjustable Mode Selection – Switch with ease between five pre-set modes for bite-rate and latency, enabling you to choose the setting for each individual broadcast depending on the conditions of the transmission. Choose from Interview, Normal, Fast Moving, SD, and Tape Feed to set the most optimal bite-rate and latency. Users can also create their own pre-set transmission mode for the locations where broadcasts are frequently transmitted.

Monitor Signal Strength for Each Connection – Monitor every connection in each of your TVU transmitters through an easy to read status panel. The transceiver interface provides all the necessary information about the current status of all connected 3G/4G/LTE modem cards, WiFi and Ethernet connections, or satellite or microwave links for each TVU transmitter including carrier name, connectivity strength and IP address. Once the live transmission is complete, users can recall a histogram of the entire transmission in order to review the overall performance of the live shot.
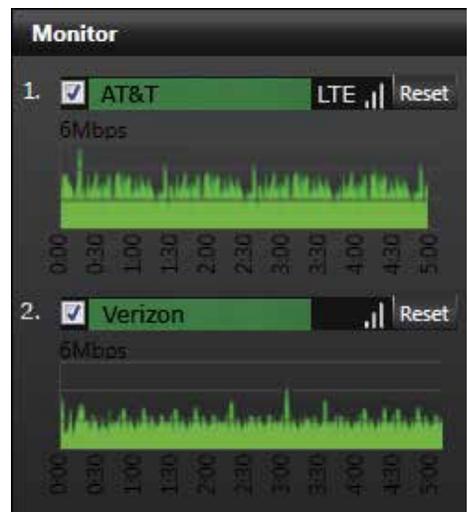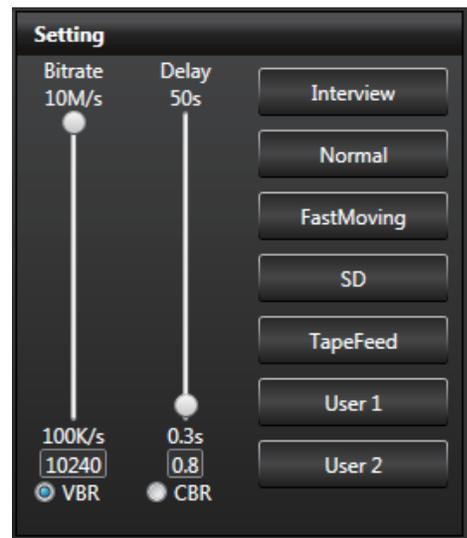
Communicate With Each TVU Transmitter

Easily Manage the Configuration of Every Modem – Users can enable or disable each connection, remotely configure the modem cards through a web based interface, and complete a full reboot reset of individual modem cards all from the transceiver interface. When roaming, users have the ability to select which carrier a particular modem will roam on in order to utilize all of the cellular providers available.

Go Live with External IP Video Sources – The TVU Transceiver supports the decoding of external IP video sources such as YouTube so that users can go live with these sources straight from the transceiver interface.

IFB – Add the optional IFB functionality to speak with a remote camera operator using the TVU transmitter in the field before, during, and after the live transmission. With one click of the mouse, switch between multiple IFB sources or talk to all of your in-field transmitter operators at once. The broadcaster in the field is notified when the IFB function is live by a status bar on the TVU transmitter screen.

GPS Tracking – Pinpoint exactly where one or all of your TVU transmitters are located when you have multiple transmitters in the field. With one click of a button, the TVU Transceiver connects to an online map and pinpoints precisely where a TVU transmitter is located anywhere in the world. This feature also tracks the path of the TVU Transmitter out in the field. Users have the ability to mouse over a particular part of the route on the map to reveal a thumbnail image of the transmission that was recorded at that exact location.

Retrieve, View & Archive From Any TVU Transmitter

Automatic Download of Recorded Content – With the TVU LiveSync feature, the recorded video from a TVU transmitter live shot is automatically uploaded to the TVU Transceiver, providing a pristine transfer of the captured video segment.

View and Retrieve Archived Footage Directly from the TVU Transmitter – TVU Transceivers provide extensive control for viewing, selecting and downloading video footage recorded on the TVU solid state hard drive. With the transceiver interface, users can preview any archived video footage from a live TVU, precisely clip the desired video frames, and download them directly to the receiver's hard drive for editing purposes.

Upload Archived Video Content – TVU Transceivers allow for video content to be uploaded to the user-interface for playback or distribution. By using a regular file transfer protocol (FTP), media content can be directly uploaded from virtually any device in any location to the transceiver through the transceiver's IP address.

The TX3200 and GX3300 are 1RU rack-mountable servers that are installed at the production facility and can be easily integrated into any station's workflow. They feature an optional Linux-based operating system for greater security, more efficient performance and a wel-based GUI. The TX3200 transceiver is compatible with TVU Grid, while the GX3300 comes with TVU Grid enabled. TVU Grid is TVU's award-winning IP video switching, routing and distribution solution, allowing broadcasters to not only receive transmissions from TVU transmitters in the field, but to also ingest any SDI input and seamlessly feed the video to other stations via TVU Grid.

TVU Transceiver Technical Specifications*

Model	TX3200/ GX3300
Electrical	Line Voltage: 10-240V AC, 50/60 Hz 5A
Configuration	1RU standard rack mount
Audio/Video Input/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	DVI 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%
Encoding and compression	H.264