



TVU networks®

TVUPack® TM8100

The Choice for Leading Broadcasters Worldwide



"The TVUPack lets us broadcast from isolated locations around the country that we wouldn't normally be able to reach or afford with a live truck. With TVU's cellular redundancy and user friendly design, we were able to cover the record breaking snow storms in Connecticut unlike anyone else. We were able to stream live mobile video for hours at a time both on-air and on the Web. The TVU system never let me down. It's extremely cost effective and worked like a champ!" - Keith Porter, Chief Photographer/ News Operations Manager - WTNH News 8 & WCTX MyTV9, USA

TVUPack® is winning over broadcasters around the world with its portable lightweight design, support for multiple 3G/4G/LTE wireless uplink connections, ease-of-use, and low latency transmission. With TVUPack, you can capture and transmit a broadcast quality picture from locations your ENG or OB van cannot reach.

Multiple 3G/4G/LTE Connections

TVUPack supports up to eleven 3G/4G/LTE, microwave, satellite, WiFi and Ethernet data connections. The TVUPack system aggregates all available transmission connections to broadcast live in SD or HD up to 1080i.

Simple One Button Set Up

TVU pioneered the single button start on a backpack style transmitter. No manual in-field configuration is required. Just plug in your camera and push the green button to go live.

Fast Start Up

TVUPack starts up in less than 20 seconds from a cold start. The pack automatically establishes all available wireless connections, giving you the ability to broadcast live in no time.

Resilient Video Quality

TVUPack features TVU's proprietary IS+ technology, advanced Forward Error Correction and enhanced H.264 encoding for stable, reliable and resilient live transmission - even at low and rapidly changing bandwidths. The result is a superior quality picture.

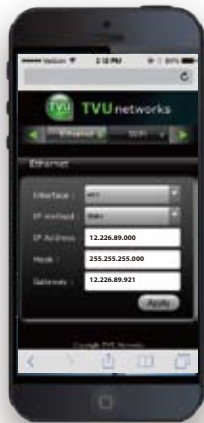
Low Latency & Smart VBR

TVUPack can transmit with as low as sub-second delay. TVU also makes managing the TVUPack live transmission easy with Smart VBR. Just set your desired latency, and TVU automatically determines the optimal bit-rate based on the current bandwidth.

Store and Forward Functionality

TVUPack offers store and forward functionality for on-demand video retrieval. TVUPack is capable of capturing 14 hours of continuous video footage in HD, ensuring that a full quality recording is available when you need it.

Features You Need



External Hot Swap Battery Mounts

TVUPack features dual external battery mounts with a standard Gold Mount or optional V-Mount configuration. TVUPack operates on one or two batteries and supports hot swap for continuous running time. You can charge one battery while the other powers the pack.

Encrypted Transmission

All transmission between the TVUPack and the TVUPack Receiver is securely encrypted using TVU's proprietary protocol. Each TVUPack is configured to communicate only with a specific TVUPack Receiver.

Wireless Hotspot

Take advantage of the optional hotspot feature to wirelessly access the Internet using a PC or smart mobile device. With multiple wireless connections at your disposal, your camera crew will have ample bandwidth to work remotely. Additionally, the TVUPack TM8100 supports multiple WiFi connections, which allows the Pack to connect to numerous HotSpots while out in the field.

IFB (Interruptible Feedback)

TM8100 has IFB capabilities, enabling news operations centers to speak directly to a headphone equipped cameraman or talent in the field and avoid the disruption of using a cell phone.

Field Monitoring and Control

With a PC or mobile smart device and Web access, TVUPack provides an option for the wireless monitoring of the transmission, line quality, battery level and other statuses in the field. Operators in the field can use TVUPack's Auto Sync feature which aggregates multiple connections to quickly and easily transfer files to and from the studio. Broadcasters can also download recorded content directly to a USB drive connected to the Pack.

Supports TVU Social

In conjunction with TVU Anywhere, broadcasters in the field can post captured still images from TVUPack's live video stream automatically to their Twitter or Facebook account with just the push of a button.

Broadcast Quality Picture You Want

Propriety IS+ Technology

With IS+, a single source is reverse multiplexed across multiple channels for transmission. The transmission is then re-aggregated at the receiving end. Most importantly, IS+ uses an advanced FEC algorithm that produces superior transmission performance. IS+ is able to use minimal data overhead without latency introduced by packet retransmission. The result of transmitting over multiple channels simultaneously and better FEC is a dependable and stable HD quality transmission at sub-second latency.

Dual Transmission Encoding

TVUPack is the original mobile backpack to offer unique dual transmission encoding. With this feature, users can take advantage of simultaneous live streaming transmission over IP and also HD SSD video recording for future retrieval and transmission.

Enhanced H.264 Encoding Engine

TVUPack features TVU264, an advanced proprietary video encoding engine to ensure that the best picture quality is delivered in the 3G/4G/LTE environment. With TVU264, TVUPack is capable of delivering a vivid broadcast-quality video with low latency, even in conditions with limited bandwidth.

Smart Variable Bit-Rate Encoding Technology

TVUPack offers proprietary Smart VBR technology for managing encoding. With Smart VBR, you select the latency, and TVUPack dynamically manages the bit-rate. Smart VBR adapts quickly and efficiently to extreme fluctuations in bandwidth during live transmissions.

FCC and CE Compliance

TVUPack has completed testing outlined for ENG mobile systems and holds a certificate of compliance. Additionally, the data modems used in TVUPack are commercially available brands that have been FCC and carrier certified.



TVUPack TM8100 Technical Specifications*

Video Input Resolution	HD/SD-SDI HDMI, component or composite 1080i 59.94/50, 720p 59.94/50, 576i 50, 480i 59.94
Audio Input	Embedded 2 channel, AES/EBU digital audio or analog audio HD/SD-SDI Loop Out
Audio/Video Encoding	Enhanced H.264 encoder
Video Output Resolution	HD/SD-SDI loop thru 1080i 59.94/50, 720p 59.94/50, 576i 50, 480i 59.94
Return Video Feed	Pack feed; SDI input at TX; Requires hotspot
Start-up Time	Less than 20 seconds
Supported Data Connections	Simultaneously aggregates up to 11 data connections including WiFi and Ethernet. System supports cellular 3G/4G/LTE, Wi-Fi, 802.11ac Wi-Fi, WiMax, Microwave and KaBand, KuBand, BGAN Satellite connections.
Glass-to-Glass Latency	As low as sub-one second
Video Recording	14 hours of continuous recording
External Interface Connectors	SDI, HDMI, Analog, Ethernet, IFB
Power Source	Dual hot swappable Gold Mount Anton Bauer batteries or optional V Mount batteries External Power Adapter: 100V to 240V AC
Battery Run Time	Can run up to four hours in two battery configuration
Transmitter Controls	One button start On-pack monitoring and management Remote monitoring and management using mobile smart device or laptop
Backpack Dimensions	14" (D) x 8" (W) x 19" (H) 35 cm (D) x 20 cm (W) x 48 cm (H)
Weight	16.0 lb/7.25 kg without batteries
Operating Temperatures	0°C to 40°C (32°F to 104°F)

*Specifications and features are subject to change.

3/11/15