



## **New Features**

- New features for Zixi Streaming:
  - Dynamic Bitrate – Encoder will adapt to the network conditions by adjusting the bitrate
  - Improved performance – Capable of streaming up to 7 Mbps
- New licensing scheme for Zixi:
  - Full version universal license to enable Zixi on both the encoder and decoder.
  - Decoder dependent paid license to enable the “Decoder Accept Mode”. Used for point to point, encoder to decoder only

## **Changes/Improvements**

- Quickview audio is now enabled by default

## **Bug Fixes**

- Fixed WiFi detection of WPA – Enterprise networks for Clip
- Improved webpage of Clip
- Fixed an error where PES PCR timestamp in MPEG – TS would be malformed after PTS reaches certain value (after ~ 20 hours). Third party decoders were experiencing audio issues. Cube decoders and VLC were not affected
- Fixed issue with encoder not starting up when Deinterlacer is enabled and Quickview is disabled for SD inputs
- Fixed bonding settings not being applied in Sputnik Direct mode.



### **New Features – 7.1.9**

- New font for the burn-in text
- Added audio enable/disable option to Quickview stream

### **Changes/Improvements – 7.1.9**

- Maximum transmission rate can be set as low as 100 kbps

### **Bug Fixes**

- Some USB modems would not connect to Cube
- Embedded audio was not present on Cube xx5 headphone output
- Sputnik remote control did not work after encoder settings were changed
- HDMI audio sample rate is now ignored when using Analog input
- AP icon hidden, was displayed on Cubes without WiFi capability
- Cube decoder headphone output was present on line input jack
- Bond 2 and Bond Pro would report 5 modem ports
- Intra Refresh was not enabled at the decoder when switching from Automatic to Manual mode
- Decoder can now connect to a TDS stream in Automatic mode



### **New Features – 7.1.8**

- Add iPhone/iPod default qualities for Clip

### **Changes/Improvements – 7.1.8**

- User must be logged in to download recordings from Cube Pro
- Recordings are displayed in a separate overlaid window

### **Bug Fixes – 7.1.8**

- Analog audio did not work on older model Cubes
- Fix some usability/display issues with Clip network UI
- Cube decoder front panel did not start successfully
- SD-SDI input detection did not work with recording enabled
- Burn-in text would disappear if changed without restarting the codec



### **New Features – 7.1.7**

- Initial Cube Pro release
  - Adds recording and media control interface
  - Adds WiFi Streaming server
  - Supports Cube Pro hardware

### **Changes/Improvements – 7.1.7**

- None

### **Bug Fixes – 7.1.7**

- Analog audio did not work on older model Cubes
- 480i/576i did not work with deinterlacer and Quickview stream disabled



### **New Features – 7.1.6**

- None

### **Changes/Improvements – 7.1.6**

- None

### **Bug Fixes – 7.1.6**

- Fixed audio dropout during RTMP start/stop broadcast
- Bond now auto-detects Pantech UML295 modem
- Bonding Network Interface Settings available for Link & Edge
- Fixed Web interface bug when switching Bond Modes
- Fixed analog audio issue when switching from embedded audio
- Front panel now displays WiFi channel correctly
- Fixed aspect ratio on the Quickview stream



### **New Features – 7.1.5**

- Added Cube – 306 model as the BASE decoder

### **Changes/Improvements – 7.1.5**

- Improved audio sample rate detection

### **Bug Fixes – 7.1.5**

- Fixed \$N filename macro to work with Manual Recording
- Fixed issue with SDI video detection when transitioning from vidloss
- Removed warning when enabling closed captioning without the recording license



### **New Features – 7.1.4**

- Support for Edge platform
- Added Bonding Dashboard for Link and Edge
- Support for 480i and 576i HDMI input only on Cube 205, Cube 255, and Bond II - HDMI
- Bonding Mode
  - Support for QoS in Transport Stream
  - Support for USB WiFi
  - Added Auto-Start option
- New TDS streaming (Teradek Streaming Protocol)
- Support for Closed Captioning (SDI only)
- Added an option to allow UDP packets to be shorter than others while using MPEG TS UDP
- Added advanced settings for Sputnik Direct (constant bitrate, TS info)
- Proxy recording media prioritization (SD Card > USB > Network)
- Added audio preview on headphones when using embedded audio input
- Added “\$N” counter macro for proxy recording filenames (SDI only)
- Cube Decoder now supports Clip
- Cube Decoder will automatically decode the stream if there is only one Cube Encoder on the network.

### **Changes/Improvements – 7.1.4**

- Added Adaptive Bitrate support for RTMP
- Improved Front Panel Menu System
- Added feedback for proxy recording on Front Panel
  - Icon indicates current media selected for recording
  - Message when Cube fails to write to the SD card



- Updated Modem support for Bond, Bond II, and Bond Pro
- Cube Decoder displays output resolution on front panel if set to 'Auto'

### **Bug Fixes – 7.1.4**

- Bond Pro does not show battery indicator on boot up
- Embedded audio fixed for proxy recording
- Fixed issue decoding RTP stream from Wowza when audio is present
- Fixed SD Card indicator on Bond Pro
- Fixed issue with 1080i video input while deinterlacer is disabled
- Ustream now handles additional characters (ie. "!") in username and password
- Fixed issue when RTMP URL was not all lower case
- Fixed issue with audio and video packet ordering, which caused issues when RTMP is recorded on the video platform (ie. Livestream)
- Key frame interval is based on input resolution instead of hardcoded to 60
- Fixed an issue with Quickview cropping the output
- Fixed 1080p25 support
- IFB now functional with 576i video input
- Fixed issue when streaming 1 channel of audio to a Decoder
- Fixed framerate display on Encoder information page for interlaced resolutions
- Fixed issue with WiFi scanning on Cube 120 and Cube 220 series



### **New Features – 7.0.4**

- None

### **Changes/Improvements – 7.0.4**

- None

### **Bug Fixes – 7.0.4**

- Video bitrate and framerate could increase if video was reconnected after a long period without sync
- Pressing 'Go Live' did not start a broadcast when using Bond
- Battery indicator was incorrectly shown at boot up for Bond II
- Recovery mode could not be activated on Brik
- Record start/stop flags were sometimes missed when using proxy recording in RED camera mode



### **New Features – 7.0.3**

- Added AT&T Beam USB modem support for Bond, Bond II, Bond Pro\*  
\*Requires modem firmware update, available at [www.teradek.com/pages/downloads](http://www.teradek.com/pages/downloads)

### **Changes/Improvements – 7.0.3**

- Manual decoder modes cannot use “Auto” output option

### **Bug Fixes – 7.0.3**

- SD-SDI did not work with Bond Pro
- Bond Settings menu on the front panel did not work



### **New Features – 7.0.1**

- Added Auto-Record option for Ustream

### **Changes/Improvements – 7.0.1**

- Added more options to front panel
- Higher bitrates are now selectable from the front panel
- Removed Bonding protocol version option

### **Bug Fixes – 7.0.1**

- Jitter Buffer caused frequent decoder restarts
- Fixed a memory leak at the encoder caused by Sputnik remote control
- RTMP auto start was not working
- RTSP authentication was not working
- SD-SDI resolutions were not detected by Bond II
- Cloud LED did not blink when live for RTMP-based streams
- Cube x20 series were not correctly defaulting to Ad Hoc wireless
- Cubelet and Case defaults were incorrect
- TeraCentral desktop app discovered but could not open Cube's main stream
- User settings files could not be imported



## **New Features – 7.0.0**

- Added support for new platforms – Bond II, Bond Pro, Slice, Edge
- Added support for Bonding protocol version 2
  - Improved bonded streaming robustness
  - Improved adaptive bitrate algorithm, adapts more quickly to bandwidth fluctuations
  - Intelligent packet retransmissions
  - Optional data redundancy
  - Selectable UDP/TCP transmission
  - Supports remote control from Sputnik 2.0
- Added Sputnik Direct streaming and ‘Sputnik Direct Fallback’ option
- Added IFB support for MPEG Transport Stream
- Added Auto Record to Ustream options
- Added support for backup RTMP publishing point
- Added support for PC resolutions over HDMI – (1024x768, 800x600, 640x480)
- Added audio channel selection for embedded SDI audio input
- Added audio sample rate option to encoder settings
- Added quick action menu to the front panel, press the ‘stream’ button to access
- Added dual stream API option for Bond/Sputnik streaming
- Added support for Wirecast Stream Reader plugin

## **Changes/Improvements – 7.0.0**

- Transport Stream Improvements – reconnection robustness, constant bitrate mode stability, jitter buffer delay tracking
- Improved video aspect ratio handling
- Moved Bonding options to a separate page



- WiFi icon no longer appears on OLED display if wireless is disabled, added bonding icon when streaming via Bond or Link
- Audio is automatically disabled when DVI input is detected
- Removed primary interface option

### **Bug Fixes – 7.0.0**

- Fixed noise in proxy recordings when audio was set to disabled
- Fixed compatibility issues with multicast RTSP streams
- Aspect ratio was not properly detected by some software-based decoders
- Various modem connection fixes
- Fixed Low bitrate mode not starting in 'auto' mode when the deinterlacer is disabled
- Some settings were not properly saved over a firmware upgrade



### **New Features – 6.2.3**

- None

### **Changes – 6.2.3**

- None

### **Bug Fixes – 6.2.3**

- De-interlacer was not being enabled for SD resolutions
- Fixed audio issues and video bitrate spikes while streaming static content
- HLS was not working on newer Cube models
- Fixed an audio clicking issue with BRIK. Requires FPGA version 3
- Proxy recording file durations were shorter than original clips



### **New Features – 6.2.1**

- None

### **Changes – 6.2.1**

- The Original Livestream option can now be found under Live Internet Streaming settings
- Moved less commonly used encoder and decoder controls to advanced settings
- Encoder now restarts when resolution is changed in Live Internet Streaming mode to prevent issues with web-based players
- Various Transport Stream changes/improvements

### **Bug Fixes – 6.2.1**

- Proxy recording did not work when audio was disabled
- Stream Settings page did not load under IE8
- Cubes paired with Case used the wrong button mode by default
- RTMP auto-start failed in some cases
- RTMP status would sometimes be displayed incorrectly on OLED display
- Network Configuration page incorrectly handled blank password fields
- iOS6 users could not log into web UI through TeraCentral app



## **New Features – 6.2.0**

- Added native support for Ustream
- Added native support for the New Livestream
- Added additional encoder resolutions (480x270, 640x360, 854x480, 1024x576)
- Expanded front panel menus to include Stream Settings, Device Settings, Bonding, and additional Network Configuration options
- Added support for Link
- Added Bonding page for Link/Bond configuration
- Port-Based bitrate limits added for Link/Bond (requires Bond 6.2 firmware)
- Port-Based primary/backup settings added for Link/Bond (requires Bond 6.2 firmware)

## **Changes – 6.2.0**

- Allow scanning for wireless networks from the front panel while in Master Mode
- Assorted minor changes to web UI labels/options for consistency
- Increased maximum string length for RTMP URLs
- Added auto mode for Adaptive frame rate and removed minimum frame rate and priority options from web UI
- USB or SD media is mounted sooner on boot up

## **Bug Fixes – 6.2.0**

- RTMP status was sometimes incorrect on Broadcast LED
- No front panel indication when a factory reset is initialized by the reset button
- Network Configuration page incorrectly handled blank password fields