



## Cloud Video Processing

PIXFIX Skycode effortlessly blends its software video processing solution as a cloud instance to deliver, on cloud video encoding and transcoding solutions. Implementable across industry standard cloud and with the engineering team and support to back up – RiverSilica is ever ready for any customizable work flow.

### APPLICATIONS

PIXFIX-SKYCODE can be virtualized and instantiated on multiple choices of CDN to act as a catalyst for cloud based video processing. With BROADCASTERS, OVPs and CONTENT PROVIDERS looking for a cloud based video processing and delivery with gigantic scalable proportions PIXFIX-SKYCODE is the right product to be part of the cloud work flow needs.

### FEATURES AND BENEFITS

- Highly versatile, Ultra flexible and configurable throughstate of the art software defined video processing and acceleration using RAFT™, SAND™ and HELM™
- Multi CODEC, Multi format, Multi bit rate and Multi frame rate available for any kind of LIVE and FILE input.
- Multibit rate and dynamic bitrate management through PIXABIT™
- Watch folder for file to file transcoding work flow management
- Video quality management through PIXIT™
- Supported on multiple CDNs
- Available as virtual instance
- Dynamic parameter management without any stoppage



### PRODUCT AT A GLANCE

Cloud video delivery is so easy with Skycode with its VM capability and very high customizability.



# General Specifications for

# PIXFIX Skycode

## INPUT INTERFACE ON CLOUD VM

- o Multiple Gigabit IP interface

## INPUT STREAM

- o TS/UDP (Unicast and multicast SPTS and MPTS)
- o TS/RTP (Unicast and multicast SPTS and MPTS)
- o TS/HTTP-SPTS and MPTS
- o RTMP, RTSP, HLS
- o Signal generator
- o H.264 elementary-Annex B MPEG2 PS, MPEG TS
- o MOV, MP4, MXF, FLV, MKV

## INPUT VIDEO CODECS

- o MPEG2-ML/HL 4:2:2,
- o MPEG4 SP/ASP,
- o H264 - BP/MP/HP - 4:2:2 10Bit
- o Apple Prores
- o HEVC
- o VC1, MJPEG
- o Fixed and variable frame rate
- o Standard and non-standard resolution
- o 1080p@60 up to 25Mbps for live delivery
- o Error resilience and concealment for erroneous input
- o Input video frame skip detection
- o Video pass through

## INPUT AUDIO CODECS

- o MPEG1 Layer2 Y& Layer3
- o Dolby™-AC3
- o AAC-MPEG2
- o MPEG4 (LC, HEAAC, HEAACv2),
- o MPEG4 ALS
- o LPCM
- o WMA
- o Up to 8 channels 24 bit, 96KHz audio
- o Up to 96KHz sampling frequency
- o Audio pass through

## METADATA

- o CEA608/708 Closed captioning
- o SCTE 35/104 Cuetones

## STREAMING SERVER PROTOCOL

- o Apple HLS
- o Adobe HDS
- o Microsoft Smooth Streaming
- o Mpeg DASH
- o Adobe RTMP
- o RTSP
- o HLS with SCTE Cuetones
- o Deferred live streaming
- o nDVR simultaneous storage for VOD

## CONTROL & MONITORING

- o Auto sensing of incoming media, media info
- o Input file ROI selection
- o Input archiving with slicing
- o Input stream view on web console
- o Input stream capture
- o Web based UI
- o Thumbnails preview on web console
- o Tile based preview for monitoring
- o Express Job Settings
- o Pre and post job scripts
- o Jobs scheduling and Prioritization
- o Dynamic parameter changing while job is running
- o System configuration backup and restore
- o Fans and temperature monitoring

## PLATFORM SPECS

- o Runs on COTS Intel™ Platform
- o CentOS
- o Based on Mini, 1RU, 2RU chassis
- o Optional RPS and RAID
- o Upto 6 Gigabit ports & 6 TB local storage

## OUTPUT INTERFACES ON CLOUD VM

- o Multiple Gigabit IP interface with redundancy

## OUTPUT STREAM

- o TS/UDP & TS/RTP Unicast and multicast – SPTS
- o TS/UDP & TS/RTP Unicast and multicast – MPTS
- o RTMP uplink to popular CDNs
- o MPEG2, H.264 elementary Annex B TS, MP4, MOV, FLV, MKV

## OUTPUT VIDEO CODECS

- o H.264
- o HEVC

## OUTPUT AUDIO CODECS

- o MPEG 1 Layer2/3
- o AC3 (pass through), EAC3 (pass through), Dolby™-E (pass through)
- o AAC-MPEG2
- o AAC-MPEG4 (LC, HEAAC, HEAACv2)
- o MPEG4 ALS
- o Up to 8 channel, 24 bit audio
- o Up to 96 KHz sampling frequency
- o Loudness Control
- o Multi-channel audio coding in single channel

## PRE-PROCESSING

- o Hue, contrast, brightness, saturation and gamma correction
- o De interlacing through BOB, Motion adaptive, IVTC modes
- o Perceptual quality based video scaler
- o Standard and non-standard resolution
- o Multiple alpha blended logo overlay
- o Static/scrolling text overlay
- o Clock/Time code overlay
- o Cropping/Letter boxing
- o Audio equalizer and volume control
- o Audio channel, sample rate and bit conversion

## ENCODING FEATURES

- o Look ahead based encoding
- o Low latency encoding & sub-second Glass to Glass delay
- o Deblocking filter
- o CBR, VBR and constrained VB streams
- o Scene change detection & characteristics based encoding
- o Encode, Transcode acceleration through RAFT™, HELM™, SAND™ algorithms
- o Configurable display aspect ratio and preserving DAR during scaling
- o Multi language/track audio coding in a single program
- o Upto 8 channel, 24 bit audio encoding

## METADATA

- o CEA 608/708 pass through
- o SCTE Cuetones for TS and RTMP output (YouTube™)

## MISC FEATURES

- o Lip Sync correction
- o Cross stream multiplexing - Video from one source and audio from another
- o Output file push to remote FTP/HTTP servers
- o Delayed stream push to CDN
- o Stream specific processing for different application(Ex: Different logo for each profile)
- o Multiple user management and role based access
- o REST APIs

## SYSTEMS

- o Remote Filestorage mount – NFS, CIFS
- o Active/Passive Redudancy
- o Input/Output stream redundancy
- o Auto restart of jobs in unrecoverable errors
- o Log and Notification alerts
- o Real time health statistics
- o Input stream available indicator
- o SNMP
- o System dashboard with realtime statistics of CPU, Network, Jobs, Memory etc
- o Fans and temperature monitoring
- o Device manager for autodetecting PnP devices
- o Complete network diagnostic involving DNS test, Speed test, Tracer etc