CHIRPVISION SDK

Mobile App Development Studio
with Multicast Video Streaming

CHIRPVISION

DELIVERING LIVE, INTERACTIVE
EVENT CASTING TO SMART PHONES

JUNE 2014

Table of Contents

Revisions

1.0	6/20/14	Initial release.
1.01	6/23/14	Updated to clarify several sections. Various format updates.

ChirpVision Development

Use ChirpVision to monetize wifi and mobile connectivity at events. Create unique live experiences that entertain, engage and extend reach using social media.

Deliver live video streaming to stadiums, festivals and big events with ChirpVision apps and tools.

Get Started Today.

Free apps for Apple and Android mobiles.
- **Up to 4 live video streams with DVR**
- **No-code customizable interface**
- **Integrated social media**
- **Interactive highlights channel**
- **Live analytics**

Broadcast Tools
- **CV Streamer**
- **Ad Manager**
- **Highlights Publisher**
- **Transcoding**
- **Social Stream Curating**
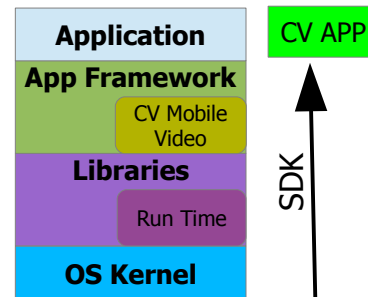- **Video-on-Demand (VOD)**
- **Hotspot and payment system**

Build your own.

Add multicast streaming video to any app using ChirpVision SDK. The SDK includes all the libraries, sample code, and documentation to get you started.

Mobile Software Development
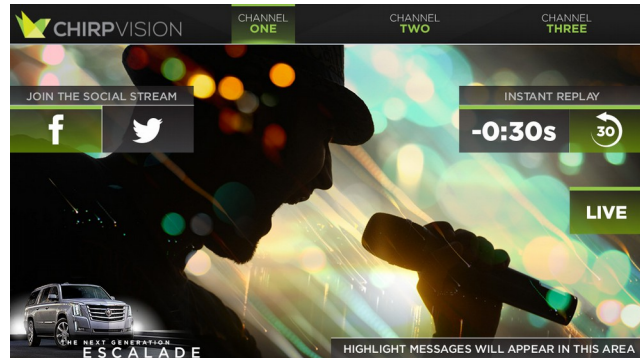
Mobile Software Development

- Optimized libraries for ChirpVision multicast video streaming
- Optional libraries for analytics, ads, highlights, social media and VOD
- Apple and Android support

CV Studio

CHIRPVISION
INTERACTIVE EVENT CASTING

A complete toolset for creating apps with multicast video streaming, producing live broadcasts, and managing advertising and sponsorships.
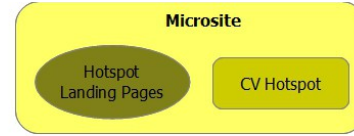
Create mobile apps
with ChirpVision multicast streaming

Produce ChirpVision broadcasts with
multiple channels, advertising, instant replays, social media and internet streaming with Video-on-Demand.

Manage client access
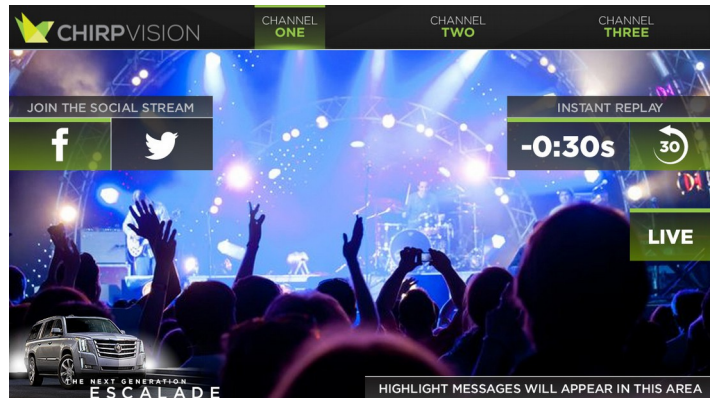with CV Hotspot for Microsite with hotspot logins, registrations and pay-per-use.

SDK for Mobile Developers
- Integrate multicast video streaming into any app
- Software modules for ads, social and highlights
- Android and Apple support

Apps for Download
- Create custom looks for your event with no-code event styler
- Full featured multichannel video with DVR, advertising and integrated social media
- Available for Apple and Android devices

Microsite
Hotspot Landing Pages
CV Hotspot

Broadcast Studio
CV Streamer
CV Ads
CV Highlights
CV Social
CV VOD
CV Analytics
CV Transcode

Mobile Device
CV Mobile SDK
CV Mobile Video
CV Ad Module
CV Social
CV Highlights
ChirpVision App

ChirpVision App implemented with SDK

Mobile Software Development

Application	CV APP
App Framework CV Mobile Video	
Libraries Run Time	SDK
OS Kernel	
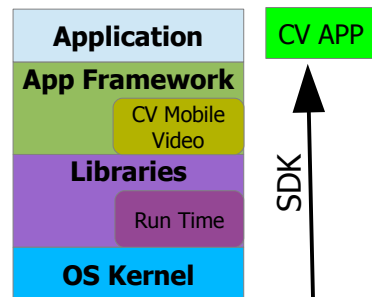
Broadcast Studio Applications
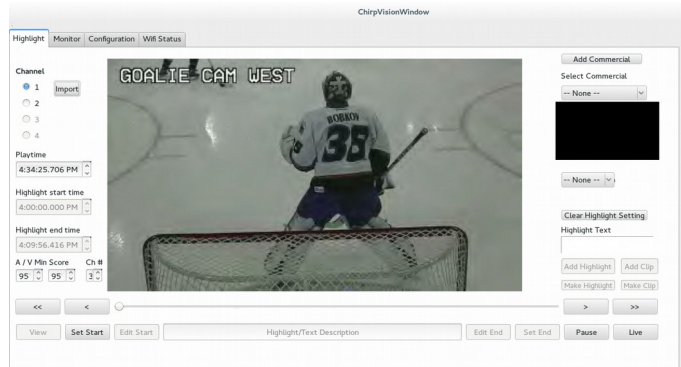
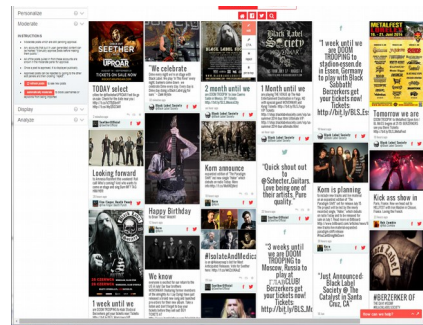Create live ChirpVision broadcasts with multiple channels, instant replays, social media and advertising.
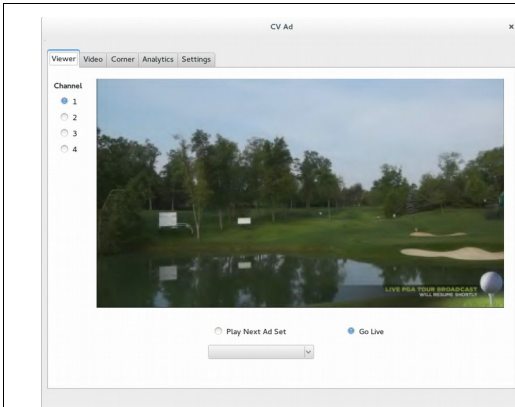
Live Ad Insertion and Monitor

CV Highlights for Instant Replays

Live Analytics

Curate Social Media Stream

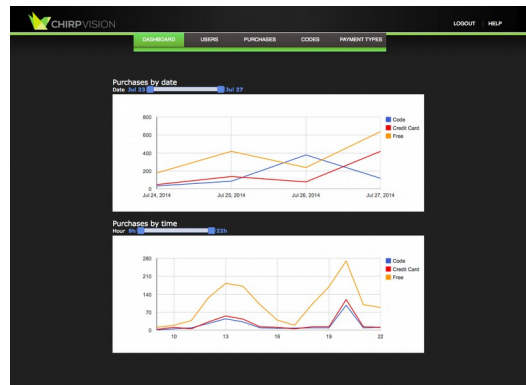|	
CV Streamer	Realtime video encoding and formatting in ChirpVision stream format. Available as hardware appliance or software application.
CV Ads	Integrate advertising and branding into ChirpVision broadcasts and apps. Corner and video ad display with integrated analytics support. CV Ad Studio provides operators a complete system for ad insertion and monitoring.
CV Highlights	CV Highlights Studio integrates highlight creation, queuing and messaging for real-time video stream allowing operators to rapidly create and manage highlights for broadcast.
CV Social	Social media integration for ChirpVision apps and social video stream creation and broadcasting. Support for Facebook and Twitter within the app.
CV Analytics	Live analytics for uptake, usage, quality of service and system performance using live feedback from mobile devices.
CV Transcode	Transcode common video formats (MPEG, MOV, MP4 and more) into ChirpVision format for broadcast.
CV VOD	Video-on-Demand and live internet streaming for ChirpVision. Scalable to large numbers of concurrent viewers as a cloud service.

Microsite with Hotspot Registrations and Payments

- Website with Hotspot landing pages, login registrations and secure payment processing
- Fully customizable website hosted onsite at the event
- Access and payment monitoring and controls application
- Flexible Ruby-on-Rails code is readily modified to customize the login process and add content

Microsite features a flexible architecture with customizable web pages and login process built with Ruby-on-Rails.
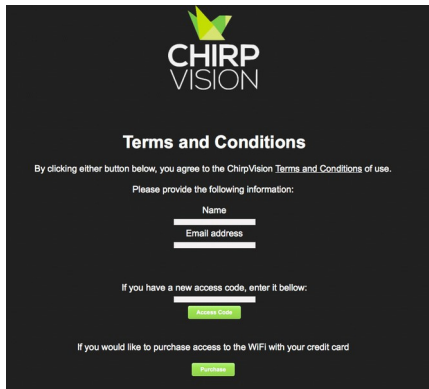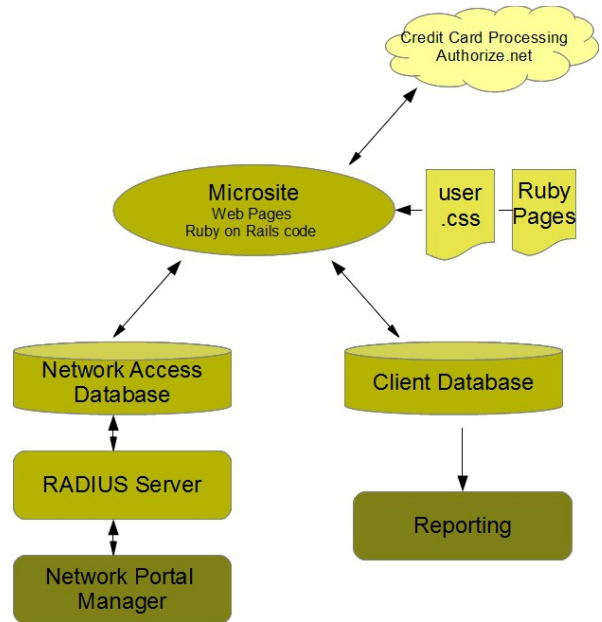
Custom Hotspot Login Pages with Registrations

Monitor Hotspot Logins and Payments

Ordering Information

| P/N	Product	Description
C53002	CV Highlights Module	Highlight creation, queueing, messaging from real-time video stream. Linux Fedora OS.
C53003	CV Analytics	Real-time monitoring for system including number of users, viewing time per channel, stream bitrates and cumulative viewing time. Control for status reporting modes and logging status information. Post-event analysis tools included for parsing status logs. Linux Fedora OS.
C53004	CV Transcode	Transcode common video formats into CV format for video clips and commercials. Linux Fedora OS.
C53005	CV Ad Module	Software libraries, example app and documentation for advertising and branding on ChirpVision. Corner and video ad display with integrated analytics support. Dynamic style loading for interface. CV Ad Control application included for Linux Fedora OS.
C53007	CV Hotspot	Network access control with registration and payment processing system, customer information database and authentication procedures. Integration with Ruckus WISPr provides real-time user access control for WiFi system. Access code generation and tracking provided for customer promotions, VIP access and cash sales.
C53008	CV Social Stream	Create real-time streams for social media at any event and broadcast to CV patrons. Monitor event hashtags, keywords and social media pages and create a social stream for broadcast. Live moderator mode allows real-time review of all social media posts at the event or remotely. Requires Facebook and Twitter SDK.
C53009	CV Apps	Apps for iOS and Android available for download from iTunes and Google Play.
C53010	CV SDK for iOS	Software Development Kit to integrate ChirpVision video streaming and features into iOS apps. Includes 3 months tech support.
C53011	CV SDK for Android	Software Development Kit to integrate ChirpVision video streaming and features into Android apps. Includes 3 months tech support.
C53012	CV Streamer Application	Realtime video encoding and formating in ChirpVision stream format. Software license required.
C53013	CV VOD	Video-on-Demand server for ChirpVision streamer with scalable performance.

CV Mobile SDK

Deliver live video streaming to dense crowds with ChirpVision multicast video streaming.

- Multicast supports up to 10x more viewers than conventional video streaming
- Live, multi-channel video with < 1 second latency
- Compatible with standard networks
- Video player with DVR features
- iOS and Android support
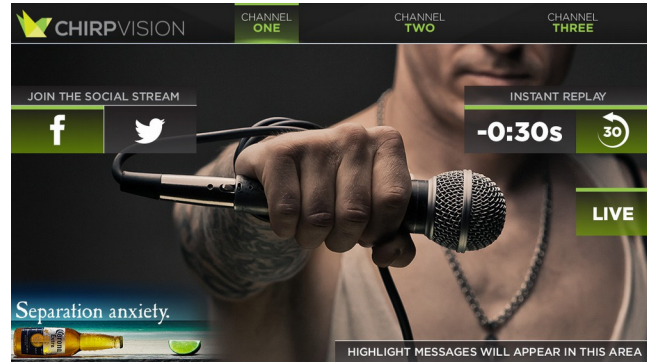
ChirpVision App implemented with SDK

Video Streaming	Up to 30 frames/sec (iPhone5 and Galaxy4)
Latency	<1 second
Resolution	Up to 1024x768
Typical bit rate	2 Mbps (768x432, Qmin = 4, 24 fps)
Audio	Stereo, 48ksps, AAC encoding
Error Recovery Rate	Video: up to 30% / Audio: up to 50%
DVR	Multi-channel buffer with programmable size
Real-time monitoring	Mobile device feedback for Quality of Service and use monitoring
Stream Protocol	Multicast RTP video/audio streams in ChirpVision format
OS Support	Android 3+, Apple iOS 6+
Device Support	ARM with NEON coprocessor Apple, Samsung, HTC, LG, Google and more

CV Mobile SDK includes complete libraries, sample app and documentation to integrate multi-channel ChirpVision multicast video streaming into your custom app.

Mobile Software Development
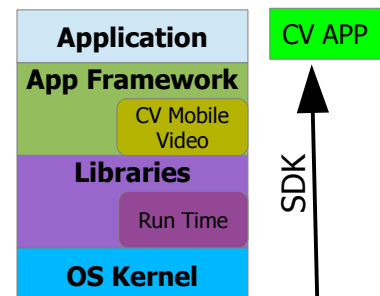
| Part Number	Product	Description
C53010	CV Mobile SDK for iOS	Software Development Kit to integrate ChirpVision video streaming and features into iOS apps.
C53011	CV Mobile SDK for Android	Software Development Kit to integrate ChirpVision video streaming and features into Android apps.

CV Streamer

Real-time encoding for ChirpVision multicast video streams.
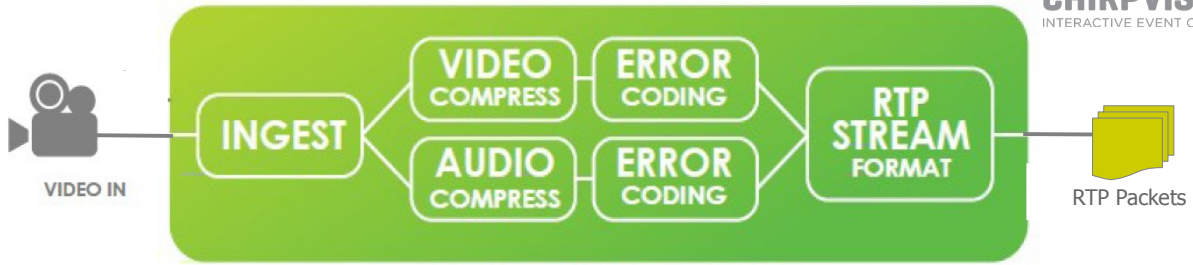
- Live encoding for video streams into ChirpVision format
- Encoding and multicast streamer in one integrated application
- Performs compression, error coding and formatting for video and audio
- Programmable resolution, sizing and bit rates
- Encode up to HD-SDI (1080i, 30 fps)
- Hardware appliance or licensed virtual machine application

Video Streaming	Programmable rates from 1 to 30 fps
Latency	<0.5 second
Resolution	Input: 1280x720 or 1920x1080 Output: 768x432, 4:2:0
Bit rate controls	Image quality (Qmin); compression ratios from 2 to 50 Frame rate and decimation Maximum bit rate limit
Typical bit rate	2 Mbps (768x432, Qmin = 4, 24 fps)
Audio	SDI input, stereo, 48ksps, AAC encoding
Error Coding	Forward Error Correction coding for video and audio
Sources	Live: video in HD-SDI, SDI or NTSC format Ingest card: Blackmagic Design Decklink Duo
	Prerecorded: transcoded by CV Transcode from MPEG, MP4 and MOV
Format	RTP, multicast streams for audio and video
Recording	Records video/audio streams in ChirpVision broadcast format
Real-time monitoring	Bit rate and health monitoring
OS Support	Recommended: Linux Fedora 20, 64-bit
Hardware Requirements	Intel Xeon, Gen 4 (Haswell), 2.5GHz, 4 GB min

Part Number	Product	Description
C53012	CV Streamer Application	Realtime video encoding and formating in ChirpVision stream format. Software license required.
C90008	CV Streamer Appliance	Video stream encoding and formatting system for two streams (768x432, 24 fps, 4:2:0). Includes 1U rackmount computer, 16 GB, 256GB boot SSD, Linux Fedora operating system, dual 1G ethernet. Stream controls included input type, frame rate, video quality and aspect ratio controls. Stream recording is included. Video ad insertion features include queueing and playout control.

CV Analytics

v1.1 6/12/14

**Realtime analytics using mobile feedback for ChirpVision viewing, advertising, and system performance.**

- Measure uptake: number of clients, viewing time, and content viewed
- Verify advertising: total impressions, ads displayed, and ad click-throughs
- Monitor Quality of Service: video and audio frames displayed, repaired and discarded
- Display system performance: stream bitrates and server loading
- View as a web page on any device

Uptake Metrics	Number of total clients Number of clients viewing any stream Total viewing time per stream
Advertising Verification	Impressions per ad for each mobile viewer Total number of impressions Number of ad click-throughs
QoS Monitoring	Measure audio and video quality for the system Frames received, repaired and discarded Drill down to QoS for individual clients Consecutive packet loss analysis
System Monitoring	Bitrates for each stream Aggregate bitrate
Mobile Device Reporting	Each device reports every 1 to 1000 seconds (programmable) Reports are UDP best effort delivery "lite" or "heavy" report modes, enabled for individual or all devices
System Control	Live system control for packet reporting mode and update rate Access individual devices or issue system-wide commands
Viewing	Web page viewable in standard browser on any device Updates every 1-300 seconds (programmable)
Log File	Log file records all packets CSV export for post-event analysis
OS Support	Recommended: Linux Fedora 20, 64 bit

Feedback from Mobile

The ChirpVision Analytics provide real-time feedback from the mobile devices to measure uptake, Quality-of-Service, and system performance. The feedback packets are small packets sent by the mobile devices to the server usually every 30 seconds.
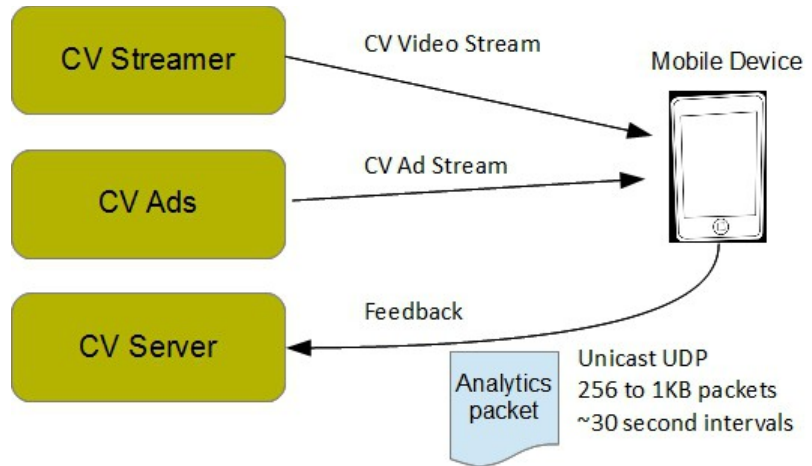
Feedback from the mobile devices lets the ChirpVision system accurately measure the real-time system use. Each packet has information about the stream quality, such as dropped video and audio, and ad impressions. The packets are logged into a file for post-event analysis.

Live Display

A real-time web page for analytics:

- uptake
- what is being viewed
- cumulative viewing
- bitrate for the streams.

This can be viewed by any browser, anywhere, for easy monitoring of the event.

| Part Number	Product	Description
C53003	CV Analytics	Real-time analytics for ChirpVision systems including number of users, viewing time per channel, stream bitrates and cumulative viewing time. Verification for ad display and viewing. Control for status reporting modes and logging status information. Post-event analysis tools included for parsing status logs. Linux Fedora OS.

CV Ad Studio

Integrate branding and advertising into ChirpVision multicast video streaming apps.

- CV Ad Module for CV Mobile SDK
- CV Ad Studio manages and inserts video and corner ads into live ChirpVision broadcasts
- Add branding and advertising to any ChirpVision broadcast
- Live analytics for impressions and click-throughs

CUSTOM BRANDED INTERAFCE

CORNER DISPLAY AD
400x150 transparent png

VIDEO AD
Pre-roll / Mid Roll
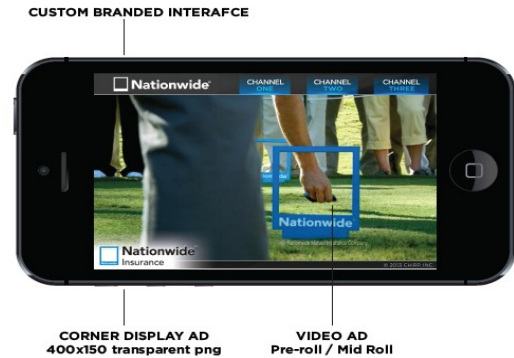
| Video Ads	Dynamic insertion into ChirpVision stream CV Transcode converts common video formats to ChirpVision format Ad queuing, rotation and playback control Controls lockout option during ads
Corner Ads	Lower left corner of the display 400x150 pixels, PNG format Programmable display frequency and duration Embedded URL and text field support
Analytics	Mobile device feedback for ad delivery and viewing
Mobile Delivery	Multicast using ChirpVision format
Mobile OS Support	Android 3+, Apple iOS 6+
Mobile Device Support	ARM with NEON coprocessor Apple, Samsung, HTC, LG, Google and more Requires CV Mobile SDK
CV Ad Studio	Application for live ad insertion, queuing, rotation and viewing Recommended: Linux Fedora 20, 64-bit

Mobile Software Development

The SDK is a framework for ad insertion and branding and includes libraries, an example app and documentation. The libraries support live ad insertion into ChirpVision streams and efficient multicast corner ad delivery.
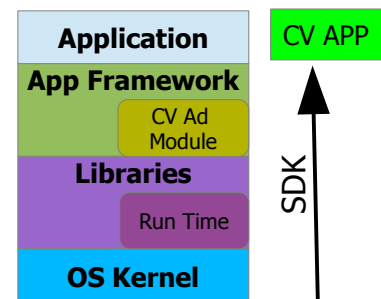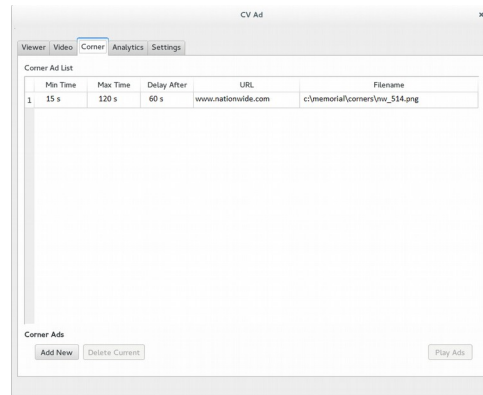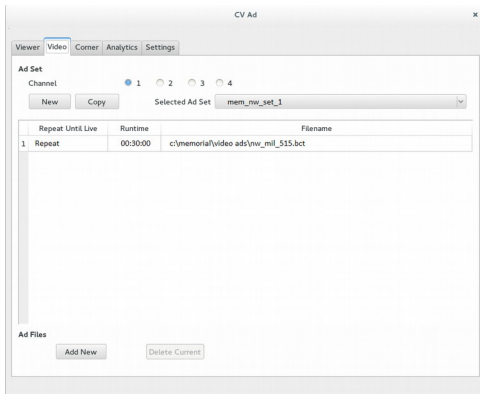
Live Advertising Insertion and Analytics

CV Ad Studio inserts video and corner ads into up to 4 live streams. Setup commercial breaks and roll commercials at live action break with a single button. With just a few clicks, operators can run corner ads with embedded URLs on a rotating schedule.
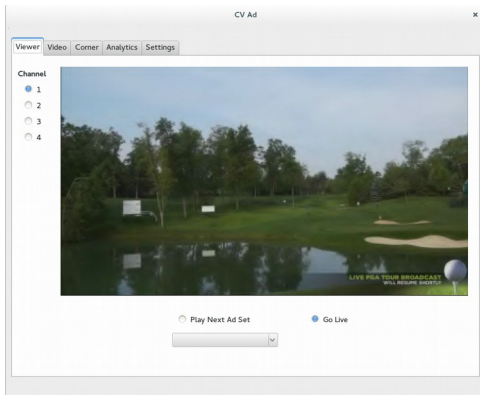
Insert and monitor live streams

Corner ad setup and scheduling

Video ad setup and scheduling
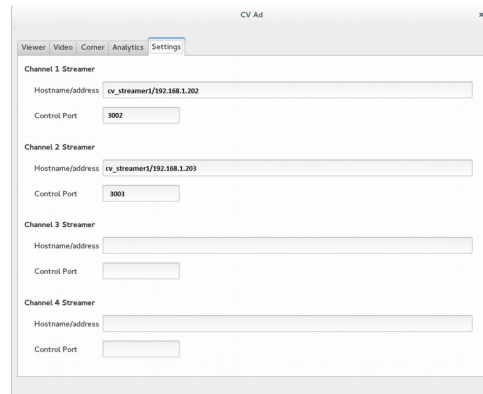
Configure connections to video streams
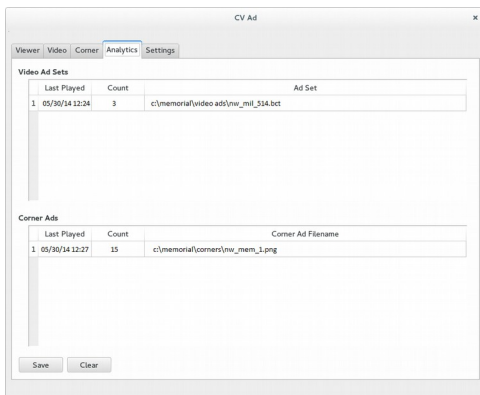
Live analytics for video and corner ads
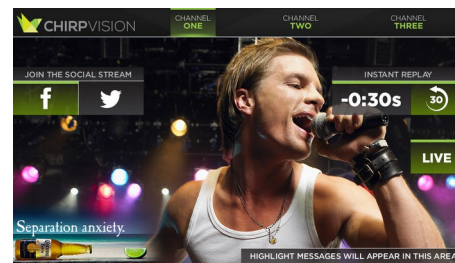
Controls for corner ads and analytics are built in the free apps for download

Part Number	Product	Description
C53005	CV Ad Studio	Software libraries, example app and documentation for advertising and branding on ChirpVision. Corner and video ad display with integrated analytics support. CV Ad Studio application included.

CV Social

Integrate social media into ChirpVision broadcasts. Connect fans and sponsors with each other and the world.

- Engage fans using social media and expand the reach of any event up to 1000x
- Facebook and Twitter integration into ChirpVision mobile apps
- Create and moderate social media streams for broadcast and display
- Pre-populate hashtags and key phrases for events and sponsors
- Easy online setup for social feeds, style and appearance
- On-line analytics and reporting

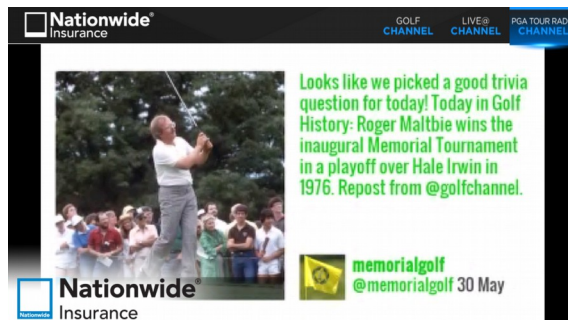|	
Social Stream	Create social stream from social media feeds Connect to Facebook, Twitter, Instagram, Google+, Pinterest, LinkedIn and more Get live social feeds for hashtags, pages, handles, and key phrases Change feeds on-the-fly and monitor up to 50 feeds at once Option for real-time social feeds with low <1 minute latency
Mobile Integration	Post directly to Facebook and Twitter from within the app Pre-populate hashtags, key phrases and posts that are loaded for each event Attach screenshots of the live streams and photos in the app
In-Venue Display	Efficiently stream to mobiles using ChirpVision video Display on monitors, big screens and web enabled devices
Out-of-Venue Display	Access social stream anywhere Embed stream in websites for events and sponsors Compatible with any browser
Live Moderating	Moderate content live before display Choose what content appears in the stream Automatic content moderation option
Analytics	Track viewer and contributor participation See who is contributing and what feeds are most active Graphs for contributions and reach over time Measure total visitors, reach, shares, and click-throughs Live updates available online
Mobile OS Support	Android 3+, Apple iOS 6+ Requires CV Mobile SDK, Facebook SDK and Twitter software
Mobile Device Support	Apple, Samsung, HTC, LG, Google and more
CV Web Streamer	Live streaming for the social stream 1-30 frames/sec Recommended: Linux Fedora 20, 64 bit

What is a Social Stream?

The social stream collects all the posts, tweets, and content marked with special hashtags, into a live stream of everything happening with and around the fans. A social stream engages fans at the event by connecting them together through social media.

Every post, tweet, share, retweet and link by fans at the venue reach thousands more out in the world through friends, family and followers.

It's typical to get **100 to 1000 times the reach** out in the world, giving the event and the sponsor BIG exposure beyond the event site and after the event has ended.

How It Works

- Connect to social media to create feeds.
- Customize the appearance. Pick fonts, styles and update rate.
- Curate content live. Choose the best and keep the conversation going.
- Multicast to mobile devices at the venue. CV Web Streamer turns the social stream into a ChirpVision video stream, ready to reach the entire crowd at the event.
- Display to websites, monitors, or big screens anywhere.
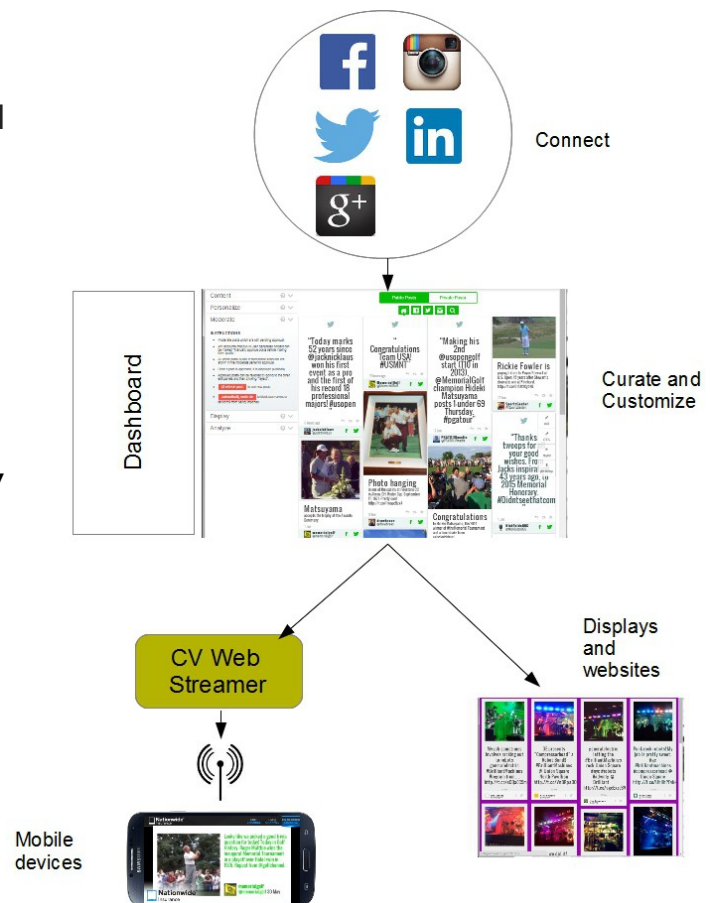
Analytics

Get live insight into social media effectiveness

- Reach – the number of people touched by social media from the event
- Contributors – who is posting and tweeting content in the feed
- Timeline – find out when the feeds are most active
- Total visitors, shares and click-throughs for the social stream
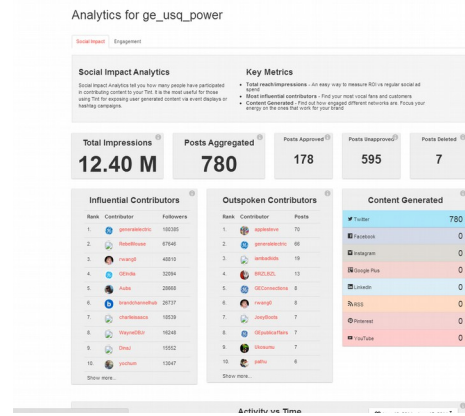
Integrate Social Media into Apps

The CV Mobile SDK with CV Social adds social media connection inside the app.

Users can post right to their Facebook pages and Twitter accounts, using event-specific pre-populated hashtags and phrases without leaving the app.
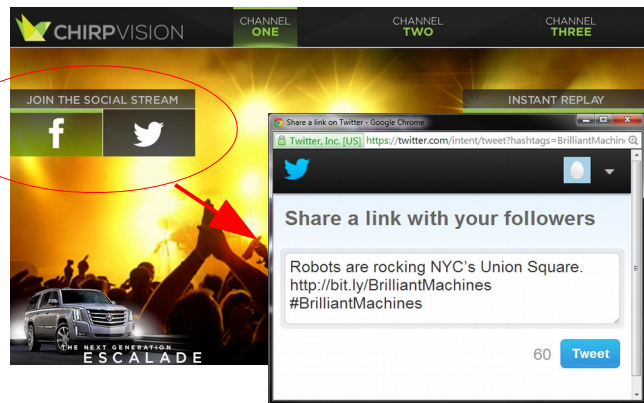
Social feeds from these hashtags and phrases are then used to create the social stream – and get your event and sponsors noticed.

SDK

The CV Social SDK add-on is a framework for adding social media connections to ChirpVision apps. SDK provides core features for Facebook and Twitter connections, tweet/post popups, and pre-populating posts from event information. The SDK provides core libraries, an example app and documentation.

Part Number	Product	Description
C53008	CV Social	Create real-time streams for social media at any event and broadcast to CV clients. Monitor event hashtags, keywords and social media pages and create a social stream for broadcast. Live moderator mode allows real-time review of all social media posts at the event or remotely. CV Web Streamer app included for live social stream (Fedora Linux 20, 64-bit). SDK requires Facebook and Twitter SDKs.

CV Highlights

Create, manage, and broadcast instant replays and highlights for ChirpVision multicast video streaming apps.

- Mobile software SDK and CV Highlight Studio application
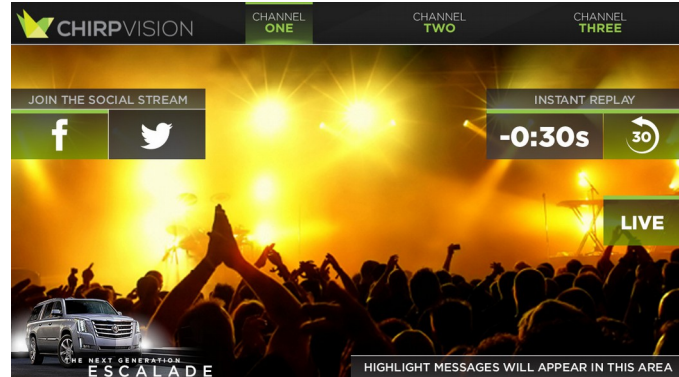- Rapidly create instant replays from live action within seconds
- Add commercials, intro and stinger clips
- Produce an instant replay and highlight channel using CV Highlight Studio
- Mobile SDK adds DVR controls and on-screen messages to video player

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Editing Instant Replays	Rapidly create instant replays and highlights from live stream High speed scrubbing and review Frame-by-frame editing precision
Production	Automatically add intro, commercial and stinger to highlight Instantly publish highlight package to broadcast stream
Archiving	Archive clips with descriptor for ready access Clips are ready for replay
Replay Scheduling	Play any clip instantly to a broadcast stream Create a running highlight channel with rotating clip playlist Update playlist at any time to change highlights
On-screen Message	Create on-screen message when the highlight is available for viewing Touching message takes viewer directly to the highlight start Recommended for clips from 30 to 60 seconds long
Quality of Service Control	Prevents on-screen message for incomplete highlights QoS requirement for both audio and video
Mobile Delivery	Multicast using ChirpVision format
Mobile OS Support	Android 3+, Apple iOS 6+
Mobile Device Support	ARM with NEON coprocessor Apple, Samsung, HTC, LG, Google and more Requires CV Mobile SDK
CV Highlight Studio	Application for highlight creation, scheduling, and playback Recommended: Linux Fedora 20, 64-bit

CV Highlight Studio

Make clips from any video stream and create highlight packages with introduction, commercial and trailer, all within seconds. Add a highlight message for on-screen display and viewers know just when highlights are ready.

Isolate highlights with fast controls for video scrubbing that give you frame-by-frame precision. Set start and stop time, then review, all in one simple interface. You never miss anything because the highlight system has access to any stream for the entire event in ChirpVision format. No transcoding is required before broadcast, eliminating a time-consuming step.

The Quality of Service (QoS) setting allows the mobile device to display the highlight message only when the highlight is in good condition for viewing. If the highlight audio or video is corrupted or incomplete, the QoS setting will prevent viewing.
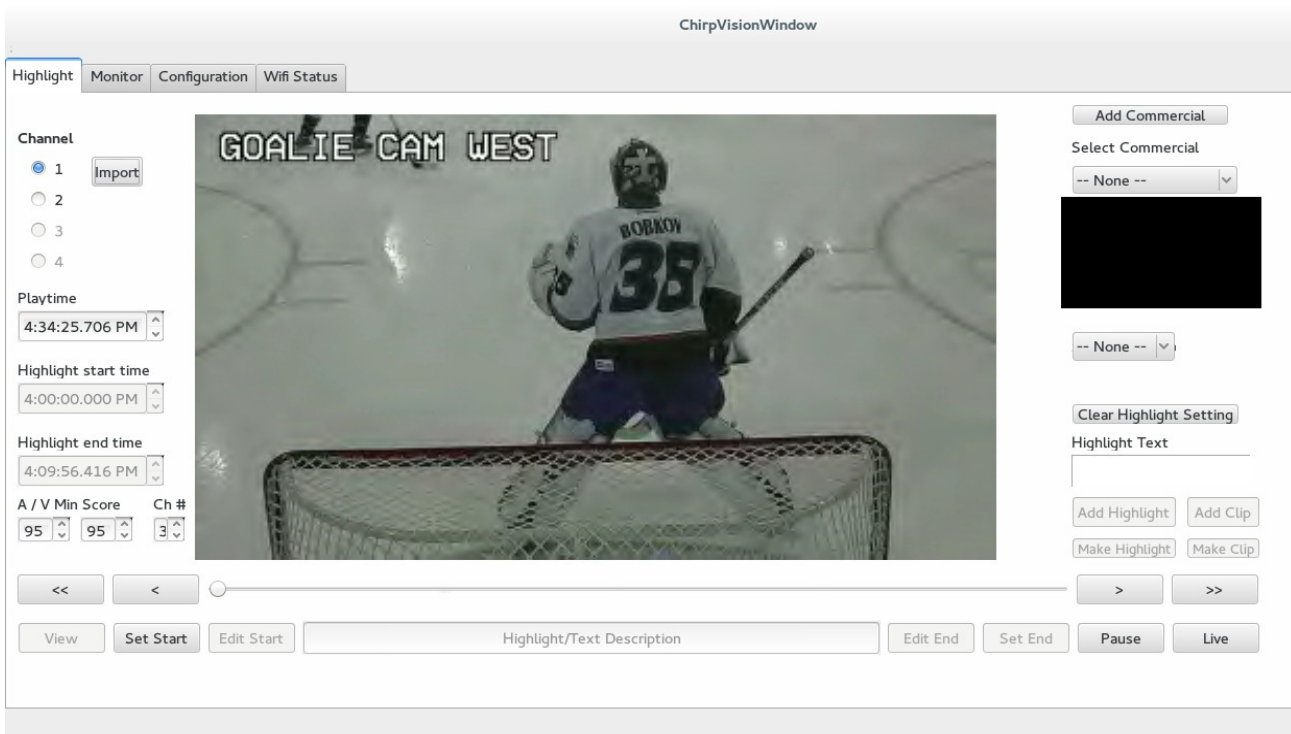
SDK

The SDK is a framework for adding messages and QoS controls to highlights. The SDK includes libraries, an example app and documentation.
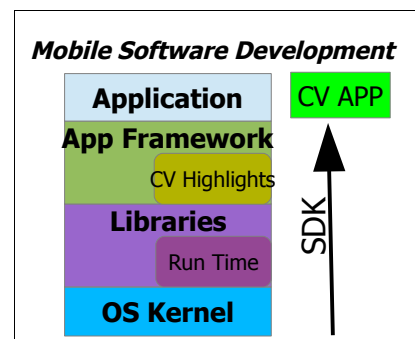
Part Number	Product	Description
C53002	CV Highlights Module	Highlight creation, queueing, messaging from real-time video stream. SDK support for highlight access, messages and controls. Linux Fedora OS.

CV Video-On-Demand

Add Video-On-Demand services to ChirpVision applications and monetize content.

- Mobile software SDK and CV VOD Publisher
- Deliver a consistent user experience using the same app both in-venue and outside of venue
- Built-in content protection only plays inside ChirpVision apps
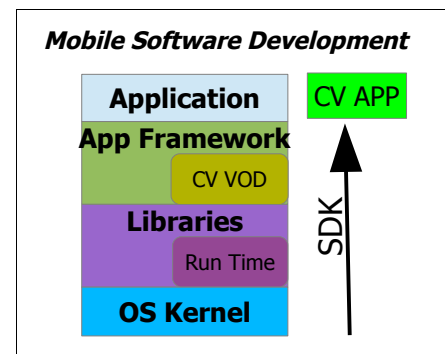- VOD system architecture efficiently scales to huge audiences worldwide using Amazon Web Services
- Integrate advertising and sponsor content
- Instantly publish content to VOD using CV Highlights
- Charge for VOD with pay-per-use services
- Plug-ins for Chrome, Internet Explorer, Firefox and Safari

|	
VOD SDK	Add VOD services to ChirpVision mobile apps Viewer with buffering and DVR features Content selection, viewing and payment
Content Protection	Content is never permanently stored on the device Proprietary format for video and audio resists unauthorized viewing Access controls are encrypted using secure keys Content is encrypted at rest with a private key
VOD Content Servers	Local or cloud content storage Amazon CloudFront for distribution Automatically push content to VOD from CV Highlights as it is created
Advertising	Add video and corner ads to VOD services Optionally start every VOD with an ad that cannot be skipped Corner ads with embedded URL
Pay-per-view	Pay-per-view access control Pricing and access controls ranging from one-time views to season passes Automated credit card processing for VOD purchasing
Browser Plug-in Support	Microsoft IE, Google Chrome, Apple Safari, Mozilla Firefox
Mobile OS Support	Android 3+, Apple iOS 6+ Requires CV Mobile SDK
CV VOD Publisher	Organize and publish content for VOD. Recommended: Linux Fedora 20, 64-bit

The SDK is a framework for adding VOD services to ChirpVision apps. SDK provides core features for video playback, selection, and access authorization. The SDK includes libraries, an example app and documentation.

Mobile Software Development

Application	CV APP
App Framework	
CV VOD	
Libraries	
Run Time	
OS Kernel	

SDK

Scalable Architecture

The VOD system scales from a simple, low cost cloud storage up to millions of viewers with worldwide coverage using Amazon Web Services (AWS) CloudFront.

CloudFront positions content wherever it is needed, using AWS data centers and automatically scaling to meet demand. This dramatically improves service to customers when demand is high, while saving money during other times.
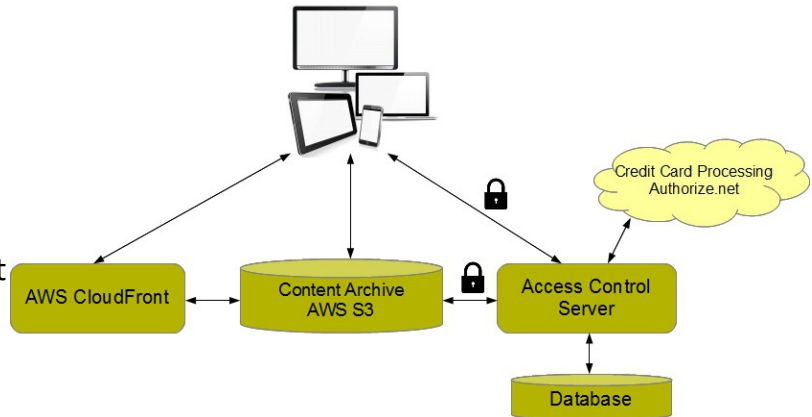
Access Control

Access control server performs all client authorization for the VOD and supports
- single pay-per-view
- plans allowing year-long access
- VIP and complimentary viewing
- online credit card processing
- cash or special sales

Convenient database setup for client access control and content availability is provided in CV VOD Publisher. Secure, encrypted links are used for all access control transactions using private keys.

Deliver a Consistent Fan Experience

CV VOD services integrate directly into ChirpVision apps to work with cloud or in-house storage. Fans have one app to follow their teams both inside and outside the venue. Deliver a consistent experience and message to fans and a means to monetize every view.

VOD content is delivered using the best resolution and quality for any aspect ratio and type of device. ChirpVision video streaming provides scalable resolution and quality to optimize viewing on each device and and network connection, delivering HD 1080 quality for high end viewers.

Plug-ins for Google Chrome, MS Internet Explorer, Mozilla Firefox and Apple Safari are provided for desktops and laptops.

VOD Content Creation and Management

Content can be automatically pushed to the VOD Archive within CV Highlights Studio. So when the video tech creates clips live at the game, they are pushed automatically to the archive and are instantly available online.

TRANSFER	WHEN	WHERE
Scheduled	Transfers at a scheduled time, once or hourly, daily, monthly.	Local and cloud storage.
Hot Folder	Transfers when new files or folders are detected in the hot folder.	Hot Folder destination including local and cloud storage.

Video clips are uploaded to VOD using CV VOD Publisher or a Hot Folder. The Hot Folder provides a simple way to drag and drop files to a folder that the system transfers immediately to the archive.
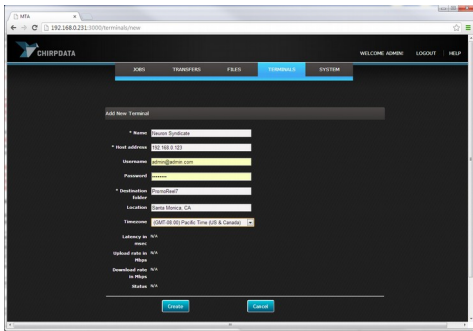
SETUP

Set up VOD transfers with a few simple steps to define **what** files, **how** to compress/encrypt, and **where** to send data.
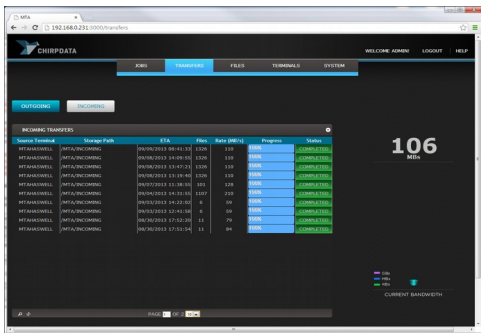
MONITOR

Job **status** and **bandwidth** use.
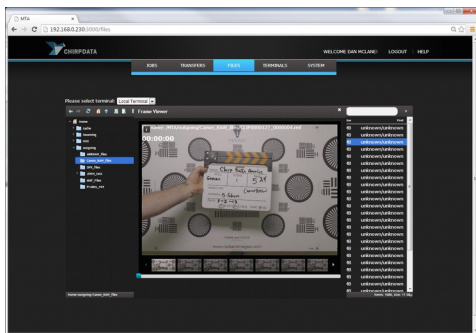
ARCHIVE

Organize and **review** files.

Part Number	Product	Description
C53013	CV VOD	Video-on-Demand system for ChirpVision apps with scalable performance. Interfaces to local or cloud storage, with AWS CloudFront for content distribution. CV VOD Publisher provided for content management and access controls. VOD Access Server administers payment policies, access control and content availability.

CV Transcode

CHIRPVISION
INTERACTIVE EVENT CASTING

Transcode videos to ChirpVision format for broadcast.

- Prep commercials and videos for ChirpVision broadcasts
- MOV and MP4 input file formats
- ChirpVision output format
- Scale video size
- Audio transcode and synchronization
- Transcode video faster than frame rate
- CV Transcode app with output file preview

Input File: .mp4 .mov → decoding → scaling → CV encode → .cap → Output File
.cap → CV player →

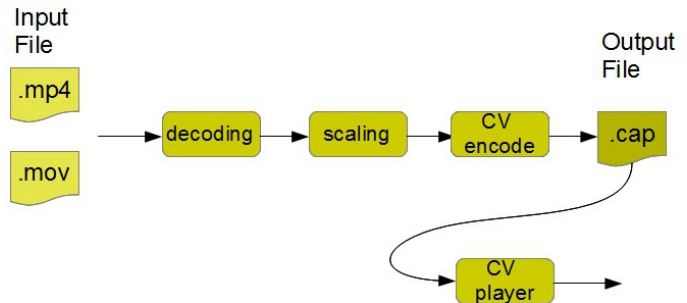| Input Formats	.MOV and .MP4 file formats
Output Format	ChirpVision compressed video file .CAP file format
Scaling	Scale video 1:1 to 10:1
Encode Quality	Set Quailty level (Qmin) from 1 to 5
Transcode Rate	Frame rate transcode: 60 seconds of video transcodes in ~40 seconds
CV Transcode App	Application for file transcode
OS	Recommended: Linux Fedora 20, 64-bit

The video file can be encoded at different quality levels to trade off image quality with compression ratio.

Quality Level	Typical PSNR (dB)	Typical Compression Ratio
1 (highest)	53	3-5
2	47	5-10
3	41	10-16
4	35	16-30
5 (lowest)	29	30-50

Part Number	Product	Description
C53004	CV Transcode	Transcode common video formats into CV format for video clips and commercials. Linux Fedora OS.

CV Hotspot

Microsite with integrated Hotspot registration and payment system.

- Build custom microsites for events
- Add pay-per-use services and hotspots
- Build database of registered clients for sales and marketing
- Secure online payment processing via Authorize.net
- Online or printed access codes support credit, offline, cash and VIP access
- Flexible Ruby-on-Rails code to customize the login process and add Microsite content

Hotspot Services	Landing pages and authentications using Hotspot WISPr through RADIUS Server
Registrations	Hotspot landing pages integrate login registrations Customizable registration form with required and optional fields Client database for registrations
Client Database	Flexible PostgreSQL database architecture Fast and lightweight for local hosting Secure and encrypted
Network Controller Support	Support for Ruckus network controllers (ZD1100, ZD3000, ZD5000) Inquire about drivers for other network controllers
Secure Payments	Secure credit card payments through Authorize.net Route to any bank account worldwide Authorize.net account required; transaction fees vary
Customizable website	Customize and add web pages with user CSS and Ruby pages Ruby-on-Rails code provided for customizable login process
Access Controls	Setup access controls via web app: prices, allowed time, access codes Access codes for giveaways, cash sales or VIP service Web interface for access policy configuration and monitoring
OS Support	Linux Fedora 20 recommended

Hotspot Login, Registration and Payment Process

A Hotspot with WISPr service using a FreeRADIUS or compatible RADIUS server to implement the client login and authentication process. The landing page automatically pops up on the mobile browser when the device joins the network.

After selecting the wifi, the client is ushered through the landing and registration pages. The Microsite makes entries in the registration database and performs authentication with the network server.
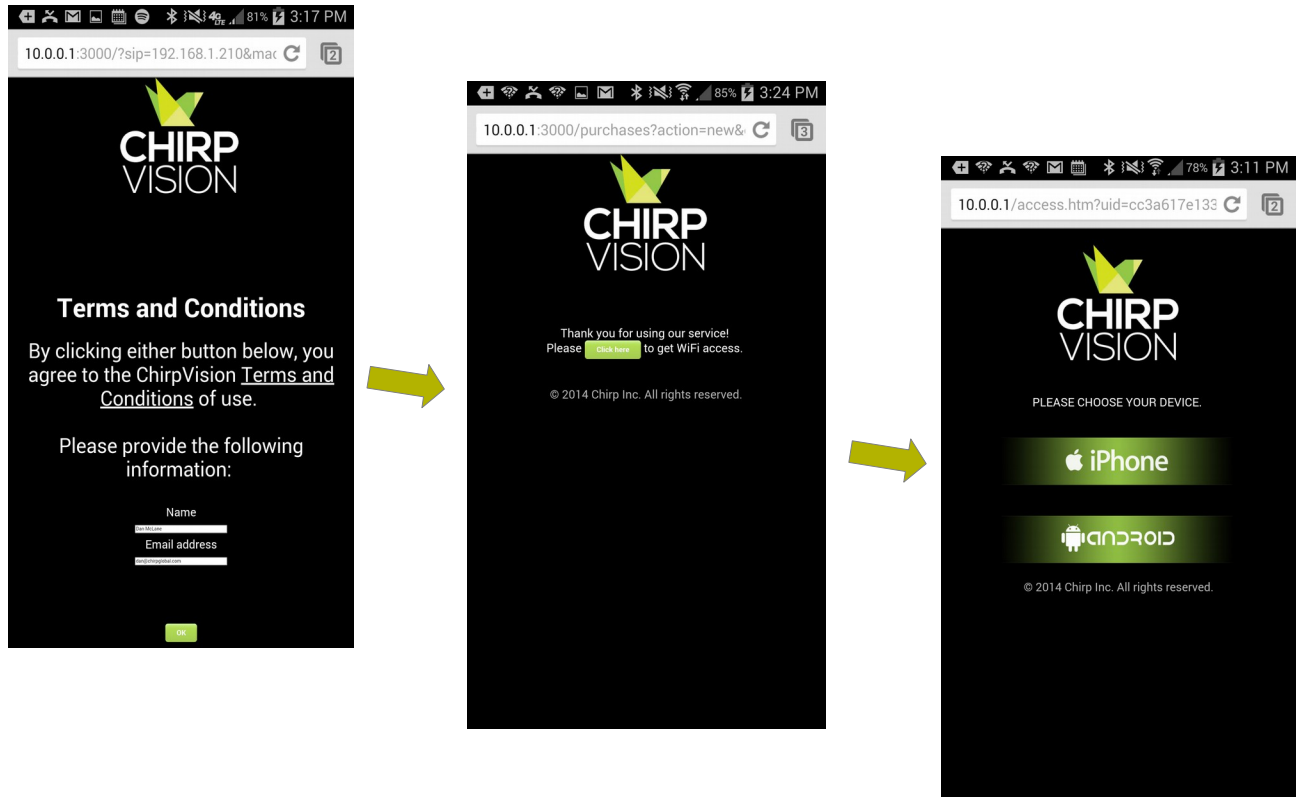
Automated payment processing is optionally added to landing page and performs a secure transaction on Authorize.net before access is granted. The payment can be routed to any bank. An account with Authorize.net is required.

Access Management and Reporting

Access policies, prices, and access codes are setup and monitored through a web app.

The DASHBOARD shows sales and access activity.

*DASHBOARD for
users and purchases*

The system supports access control using
- credit card payment – clients buy time on the system
- access codes – clients are either provided access codes or purchase them offline

*Setup, monitor and
print access codes*

Setup pricing

| Part Number	Product	Description
C53007	CV Hotspot	Microsite with integrated Hotspot access control, registration and payment system. Includes secure credit card processing, customer registration database and authentication procedures. Ruby-on-Rails source provided for Microsite customization and integration with network controllers. Access code generation and tracking provided for customer promotions, VIP access and cash sales.

Support

We wrote the code. We use it. We support it.

Get expert support.

Our team is ready to support your development and integration efforts. Not only did we develop this product, we have used it at many live events.

We give you direct and open access to our software team because you get the right answers, right when you need them.

Telephone : 855.552.4477, 8-5 PM PST
Email: support@chirpvision.com
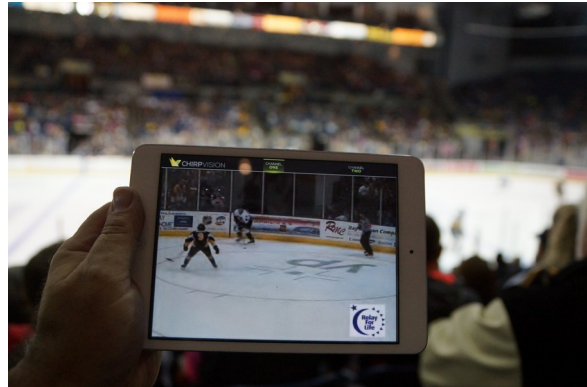
Need Training?

We offer onsite and webinar training. Within a few hours, your team will be ready jump into mobile app development with ChirpVision tools.

Give us a call and we will tailor some training specifically to the needs of your team.

Custom Software and Engineering

Our software team has expertise you can call on to get your project done:

- mobile apps
- video processing
- video compression
- video ingest
- audio processing
- wifi and hotspots
- secure payment processing
- content distribution

Contact us for a complete quote on custom applications. We will provide a detailed quote and proposal for your project.

Full Service for Events

We also provide full services and planning for ChirpVision at events, wifi, internet streaming. Call us!