

Channel ONE™

Graphics Playout Server



The television landscape is changing, and traditional broadcasters have new options for reaching out to specialized audiences. DTV opens a door that allows stations to multicast secondary channels and tap new sources of revenue. Content created for a main channel can be repurposed and broadcast over these subchannels, which can include a wealth of additional material. In addition, specialty channels with focused programming can be targeted to specific demographics.

The Channel ONE™ system is your one-stop solution for creating, scheduling and airing complete television channels in HD or SD. Integrating a play-out server, graphics, animation, video, audio and real-time external data feeds, the innovative Channel ONE system supplies everything a broadcaster needs to produce and air DTV subchannels or graphics-intensive, 24-hour automated information channels — featuring national, regional and local content that can leverage and increase the value of your existing primary content.

Channel ONE™ delivers all of these capabilities in a single turnkey system, which means you don't have to purchase large amounts of equipment to get started. And the revenue generated by these specialty channels will pay for your Channel ONE investment in no time!

Features

Design Essentials

Channel ONE™ provides unparalleled graphics creativity, composition and playback capabilities. With the easiest and fastest user interface available — along with award-winning Inscribe® graphics — Channel ONE™ allows the creation of stunning professional graphics, video titles, custom animations, motion effects and 3D text. Create a compelling on-air brand by quickly arranging or overlapping multiple layers of design elements, including graphics, analog and digital clocks, video clips, live video, animations, rolls and crawls. You can even control an unlimited number of layers independently.

Flexible Content Creation

Channel ONE™ offers the ability to design sophisticated layouts with multiple overlapping zones, integrating information from completely different sources for each zone — all at the same time. From video to live streaming data to stylish graphics, create a mix that best suits your channel's needs. Cater broadcasts to specific audiences by creating custom content such as local news, community events, transit delays and advertising.

Advanced Functionality

Conditional playback permits both hardware and user-defined parameters to trigger changes to your on-screen content. Use Channel ONE's Squeeze-Back feature to make the most effective use of your screen. When triggered, Squeeze-Back reduces full-screen content to a smaller region of the screen; when triggered again, it returns the content to its original size. You can also use Channel ONE™ to create fully automated channels that deploy the latest content at specified times.

Real-time Information Updates

Sophisticated data integration lets you keep viewers informed of breaking news, the latest sports scores, real-time stock information and weather updates. Channel ONE™ can broadcast live data feeds directly from various sources, including ODBC databases, RSS feeds, SMS messages, XML files and text files. Time-sensitive data is updated directly on-screen. And you'll feel secure running in an automated environment with the Channel ONE system's triple-redundanttriple-redundant power supplies, video and audio bypass during power failures and hot-swappable drives.

Options

Schedule Manager

Schedule Manager is an application that works with Channel ONE™ to provide a visually intuitive interface for viewing, editing and disabling playback sequences. Snapshot views by week, day and second provide increasing detail of upcoming events, and each view displays a preview of the

scheduled playback sequence, allowing you to edit all settings, including dates, duration, days played, timing and transitions. Schedule Manager also provides the ability to trigger playback of an item or region of the screen based on date, time, GPI or another item or region. Full "As Run" logging for every item displayed in a region, with export to select business systems, is also supported.

Network Manager

Employ Channel ONE's Network Manager application to administer the deployment of your channel. Supporting multiple network architectures — including LAN, TCP/IP and satellite — Network Manager provides a flexible distribution method and a cost-effective way to expand your audience. Use it to direct the content, schedule and play out of hundreds of Channel ONE players — and monitor the health of each and every one. You can also control completely unmanned regional and cable head stations with it.

RTXports™

RTXports™ provide a simple and convenient interface to dynamic data streams using the fully supported Inscribe® RTX™ API. This option makes it easy to integrate regularly updated information like sports scores, election returns, stock tickers and weather bulletins in layouts created with Channel ONE™.

Clip Playback

Clip Playback applies motion video to any surface, including backgrounds, text and objects. Clip Playback codecs support a complete range of video formats including Quicktime®, Flash®, AVI, MPEG-1, MPEG-2, MPEG-4, WMV® and more.

Channel ONE Offline

With Channel ONE Offline, a standalone software package, operators can compose layouts on any computer running Windows® XP and transfer their designs to an online graphics system for playout to air.

Popback DVE (Channel ONE SD only)

The Popback DVE feature allows you to take full-frame video or graphics and scale them to a corner of the screen.

AES Audio Expansion

Expansion from two AES in/out to four AES in/out.

Specifications

HARDWARE

Chassis

- 3RU rackmount
- Front-mounted, hot-swappable drive bays (8)
- 2+1 redundant hot-swappable power supply - 760 W
- High CFM cooling for 24/7 operation
- HxWxD: 5.25"x19"x25.5" (13.35 cm x 48.26 cm x 59.69 cm)
- Weight: 45 lbs (20.41 kg)

CPU

- 2x AMD Opteron 270 for Channel ONE SD
- 2x AMD Opteron 280 for Channel ONE HD/SD

GPU

- Dual-Head PNY NVIDIA® FX1500/256 for Channel ONE SD
- Dual-Head NVIDIA® FX4600/512 for Channel ONE HD/SD

RAM

- 2 GB DDR400 RAM for Channel ONE SD
- 4 GB DDR400 RAM for Channel ONE HD/SD

Disk Sub System

- 1 x 160 GB SATA system drive
- 2 x 160 GB SATA media drives for Channel ONE SD
- 3 x 160 GB SATA media drives for Channel ONE HD/SD
- Add'l 2 x 160 GB SATA drives for Channel ONE SD clip option
- Add'l 4 x 160 GB SATA drives for Channel ONE HD/SD clip option (clip option includes SATA controller with 8 SATA ports)

Removable Drives

- Recordable CD/DVD-RW drive for backup or system restore
- 1.44 MB floppy drive

External Ports

- Two Gigabit Ethernet ports via RJ45
- Two RS232 serial port via DB-9 connector
- Four USB 2.0 ports

VIDEO

Supported Video Resolutions

Serial digital component 4:2:2 video @

- 1920 x 1080: /60i/59.94i/50i (SMPTE 274M)
- 1920 x 1080: /30p/29.97p/25p/24p/23.98p (SMPTE 274M)
- 1920 x 1080: /30psF/29.97psF/25psF/24psF/23.98psF (SMPTE 274M, RP211)
- 1280 x 720: /60p/59.94p/50p (SMPTE 296M)
- 720 x 486 (525): /59.94i (ITU-R BT601)
- 720 x 576 (625): /50i (ITU-R BT601)

Video Inputs

- One serial digital (SD/HD) Program/Frame Grab input: 4:2:2 SMPTE 259M and SMPTE 292M, 8/10 bit SDI (270 Mb/s @ 525/625 and 1.485 Gb/s for HD)
- One serial digital (SD/HD) Key Input: 4:2:2 SMPTE 259M and SMPTE 292M, 8/10 bit SDI (270 Mb/s @ 525/625 and 1.485 Gb/s for HD)
- One analog reference input: tri-level sync (HD) or blackburst (SD) (terminated/non-terminated under jumper control)

Genlock

- HD/SD input or black burst (SD)/tri-level sync (HD) auto-timing of HD/SD inputs within +/- 1/2 line window

Input Levels SDI

- 800 mv P-P Analog Ref: 1V P-P blackburst or 0.6 V P-P for tri-level sync

Input Impedance

- 75 ohms

Video Output

- One serial digital (SD/HD) Program/Fill output: 4:2:2 SMPTE 259M and SMPTE 292M, 8/10 bit SDI (270 Mb/s @ 525/625 and 1.485 Gb/s for HD)
- One serial digital (SD/HD) Key output: 4:2:2 SMPTE 259M and SMPTE 292M, 8/10 bit SDI (270 Mb/s @ 525/625 and 1.485 Gb/s for HD)

DVI (Stills)

- Preview

Output Levels

- SDI: 800 mv P-P

Output Impedance

- 75 ohms

Audio Specifications

- Two input / two output discrete AES/EBU audio channels through the unbalanced BNC connectors on the separate PC I/O paddle board (upgradeable to four AES/EBU channels)
- On-board audio mixer (mixes up to eight discrete (four AES/EBU) channels and/or eight embedded (four AES/EBU) audio channels for HD or four embedded (two AES/EBU) audio channels for SD)
- 3.5 mm stereo jack on faceplate for analog audio monitoring

Additional Features

- All internal video processing at 12-bits component 4:2:2:4
- Video and audio bypass on HD/SDI program input-to-output in the event of a power fail or application reset
- Shaped or unshaped fill signal processing
- Internal watchdog timer to ensure hardware stability
- Monitoring and signal status LEDs

Timecode

- SMPTE timecode reader
- BNC connector on the audio paddle board

For more information please visit www.broadcast.harris.com

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