

Integrated Channel Payout

SOLUTION BRIEF



Launching new channels or upgrading existing services is often expensive, time-consuming and adds complexity to your network. It can take weeks – or months – of staff time to integrate a variety of components from different vendors, and ongoing maintenance to keep everything running smoothly cuts into ROI. Deploying a channel-in-a-box (CiaB) solution can help, but often requires that you transition away from hardened workflows and toss out equipment that is not yet at the end of its depreciation cycle.

An integrated channel payout (ICP) solution from Harmonic offers a better way.

Available via the Spectrum™ X advanced media server system, Spectrum XE playout system, or Spectrum MediaDeck 7000, MediaCenter or MediaDirector server outfitted with Spectrum ChannelPort branded channel payout, a Harmonic ICP solution addresses your toughest channel payout challenges by uniting multiple capabilities in the broadcast chain. Advanced graphics and branding, master control switching, and playout automation of live sources and clips are pre-integrated on the industry’s most trusted media server platform, Spectrum. By reducing the number of individual components required to air fully branded channels, a Harmonic ICP solution lowers the cost of equipment investment and maintenance and reduces power and space requirements, enabling users to achieve dramatic CAPEX and OPEX savings. It also provides the ability to integrate and collapse functions at your own pace, so that you get all of the benefits of a CiaB while continuing to leverage your existing investment in infrastructure.

A Spectrum-based ICP solution works hand in hand with our Polaris™ family of media orchestration systems to let you deploy a workflow that’s right for your organization, whether you’re a small local station or a nationally recognized broadcaster. The result is an uncompromising, exceedingly flexible and scalable solution that speeds the cost-effective deployment of UHD, HD and SD television channels. Featuring baseband SDI and compressed IP I/O, it also enables the migration to all-IP production and playout, ensuring that your investment pays dividends well into the future.

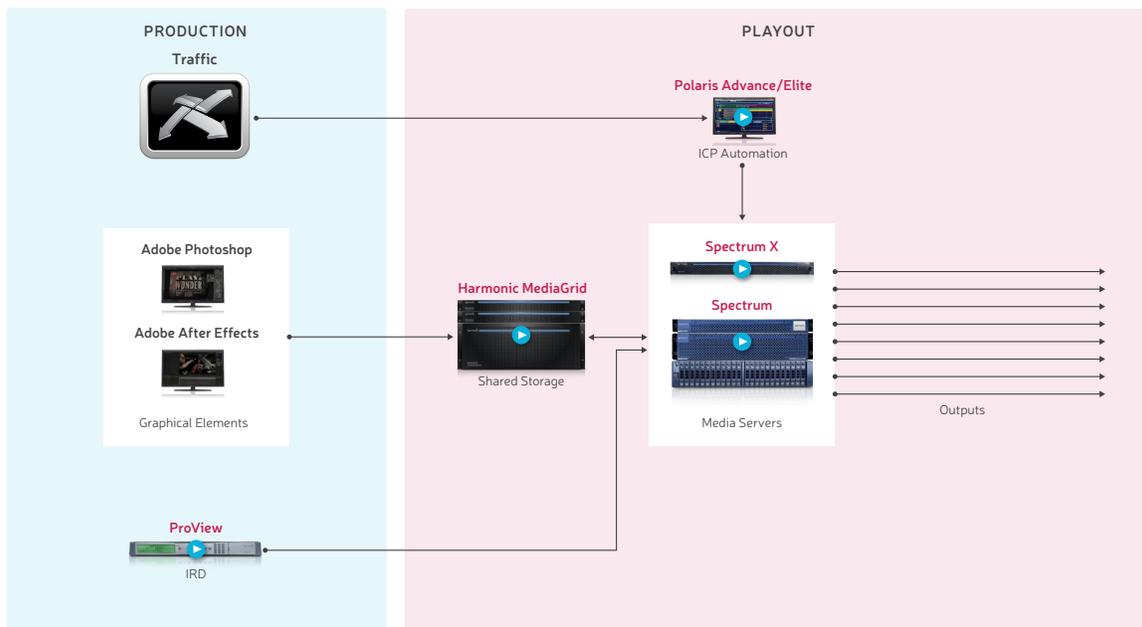
HIGHLIGHTS

- Uncompromising quality: Spectrum performance and reliability
- Automated playout: Tight integration with Polaris playout management systems
- Future-proof: Enabled for UHD and all-IP infrastructures
- Flexible input: Up to six switchable live inputs per channel
- High density: Up to four HD channels plus four simulcast channels per RU
- Advanced graphics: Dual DVE key-and-fill pairs and live inputs
- Familiar tools: Adobe® Creative Suite® for graphics and animation
- Scalability: Grow from a single CiaB to dozens of playout channels
- Codec flexibility: Support all common transmission and production codecs
- Workflow efficiency: Independent branding of simulcast UHD, HD & SD channels
- Cost-efficiency: Integrate new functionality at your own pace
- Drive revenue: “Double-box” simultaneous advertising and programming; regionalized branding and ad insertion



Simplified, Sophisticated Playout

ICP solutions touch many parts of the play-to-air workflow. Spectrum X, XE and ChannelPort all offer a complete set of advanced capabilities that allow you to create sophisticated, uniquely branded on-air looks; add voice-over tracks directly to a playout channel; appeal to diverse markets with file-based, multi-language subtitle insertion; and accommodate regulatory and Emergency Alert System (EAS) requirements. You can simulcast your primary UHD outputs to secondary HD channels, or your HD channels to SD. Independent branding of simulcast channels allows operators to create unique looks for a channel that airs in multiple formats. If your SD distribution requires an audio down-mix or shuffle that differs from the HD version, for instance, Spectrum ICP systems manage this process, substituting the correct video and audio templates for both outputs.



Harmonic's ICP solution, featuring Spectrum media servers and Polaris Advance or Polaris Elite automation

Branding capabilities on Spectrum systems include the keying of multilayer motion graphics, dual key-and-fill pairs and dynamic text over recorded or live video. In a standard Spectrum ICP workflow, on-air looks are built using templates authored in Adobe Flash® Professional and previewed with Harmonic's Preview Tool application. Up to eight graphics and audio layers are supported for each channel and can be rendered as SD, HD, 3GHD or UHD.

Spectrum's dual DVE functionality elevates the design process with the ability to simultaneously play out two live feeds or two clips (or one of each) with graphics overlaid. Use this capability to reinforce your channel's identity by squeezing back a program's end credits while previewing an upcoming show, or to generate new revenue streams with "double-box" and "graphic avail" advertising opportunities, in which a live feed is squeezed back into a small box while a national or regional advertisement runs in a larger box. Additional advertiser information, such as a logo and tag line, can even be "skinned" onto the graphic background.

By adding Spectrum XE to the primary distribution workflow, broadcasters and pay-TV operators also gain the ability to cost-effectively regionalize downstream programs with targeted ad replacement and branding — an attractive option for generating new revenue streams.

All Spectrum X, XE and ChannelPort functions are tightly integrated on an open, IT-based platform that adapts to virtually any broadcast environment. Spectrum X and XE servers can function as essential links in the migration to all-IP workflows, both systems possessing SDI and IP I/O. With Spectrum XE, users can output MPEG-2, MPEG-4 AVC and HEVC transport streams directly from the server, eliminating the need for downstream encoding and providing flexible channel origination for both broadcast and multiscreen delivery.

Powerful, cost-efficient orchestration of ICP and CiaB workflows with Spectrum X and ChannelPort is provided by Harmonic's Polaris automation systems. With the ability to monitor and control up to six playlists with primary and secondary events – plus a host of other server channels, VTRs, graphics and routing devices – from a single operator position, Polaris Advance streamlines ICP operations and simplifies the user experience. Full 1:1 redundancy delivers the highest levels of resilience, making Polaris Advance a common-sense option for mission-critical playout operations. Polaris Elite elevates these capabilities with the ability to scale up to hundreds of channels across geographically dispersed locations.

POLARIS MEDIA ORCHESTRATION FAMILY

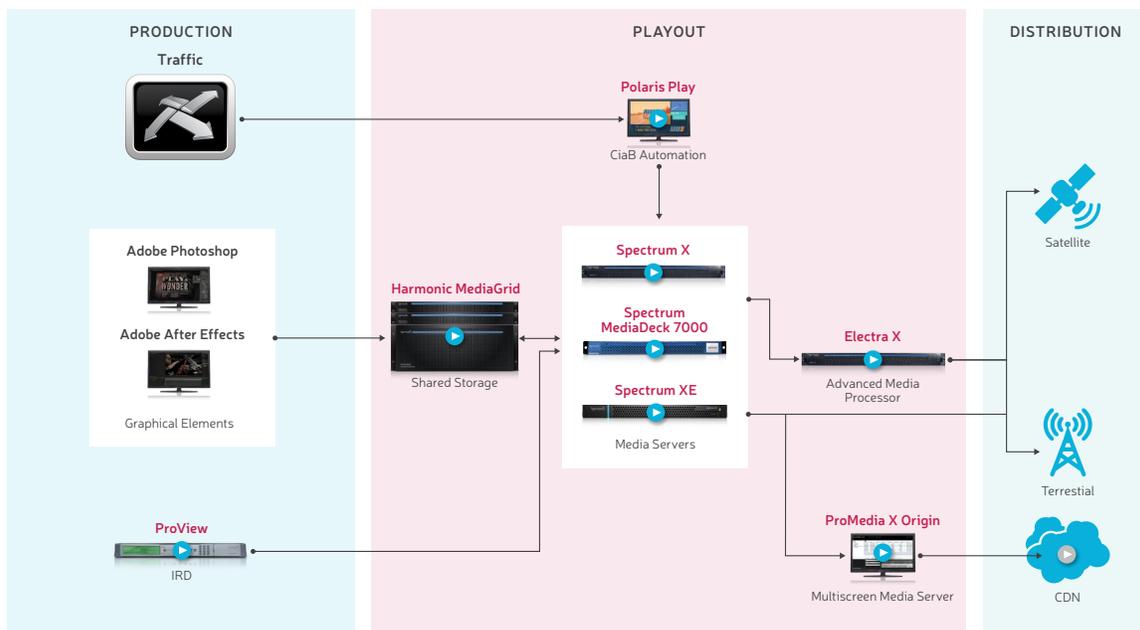


Channel-in-a-Box

Polaris Play is the automation solution of choice for Spectrum CiaB workflows. Available for both main and backup broadcast operations, Polaris Play offers a rich software toolbox for ingest, playlist control, media prep, traffic integration, and scheduled and live playout, simplifying multichannel workflows while reducing both CAPEX and OPEX.

With Spectrum X users gain access to the industry's first true UHD CiaB solution. Live UHD inputs, independent branding, DVE and dynamic data, combined with integrated Polaris Play automation, enable a complete UHD solution in a single 1-RU chassis. Support for leading HDR technologies and BT.2020 color space help deliver a truly differentiated viewing experience. UHD-HD simulcast output is also available.

Spectrum XE possesses a built-in automation system to manage all SD and HD channel schedules frame-accurately and provide powerful control and monitoring utilities. The internal automation drives each channel with one or more playlists that define live or file-based events, and can overlay graphics as either primary or secondary events.

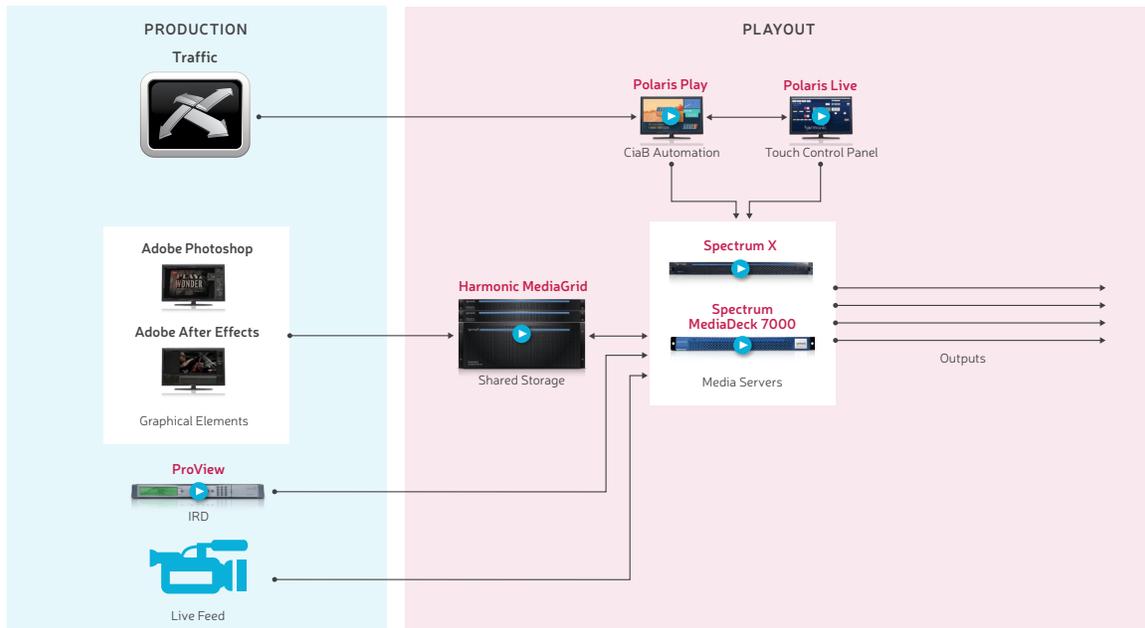


Harmonic's CiaB solution, featuring Spectrum media servers and Polaris Play automation

Integrated Master Control Room (iMCR)

The increasing functionality of ICP solutions brings more production-like workflows into the master control room, blurring the lines of where production control ends and live playout begins. As a result, the MCR of yesterday is rapidly evolving into the integrated master control room (iMCR) of tomorrow.

A Harmonic iMCR environment is built around a Spectrum X system with internal storage or Spectrum MediaDeck 7000 integrated media server outfitted with one or two ChannelPort modules, Polaris Play and the Polaris Live touch control panel. Polaris Live delivers fully customizable touchscreen control of video, graphics, DVE and routing into master control and studio environments via an interface that can be as simple or sophisticated as an operator requires, providing effortless control of the on-air playout chain. The resulting solution delivers uncompromised flexibility and simplicity, increased efficiency and low total cost of ownership.



Harmonic's iMCR solution, featuring Spectrum media servers, Polaris Play automation and the Polaris Live touch control panel

Disaster Recovery

Spectrum has long been known for its rock-solid reliability, a key reason why there are more Spectrum units in daily operation around the world than any other media server. That dependability makes Spectrum an especially good choice for disaster recovery applications. Running in sync with the primary playout system, typically located in another geographic location, Spectrum X and ChannelPort both provide reliable, full-featured playout should the primary site be knocked off the air.

All-IP Infrastructures

As a founding member of AIMS, the Alliance for IP Media Solutions, Harmonic is committed to easing the transition to all-IP workflows. Spectrum X and XE are key parts of that initiative, and can help pave the way to the deployment of cloud-based media processing architectures.





Independent branding of simulcast UHD, HD and SD channels is available.

Global Reach

Spectrum combines with Polaris automation to deliver reliable and functional ICP solutions that facilitate the addition of rich branding elements, ranging from simple logos to complex effects and dynamic text. By offering industry-leading density, low power consumption and deployment flexibility, it's no wonder Spectrum is in use by many of the world's leading commercial and public broadcasters. Outsource playout facilities and teleports also benefit from Spectrum's ability to accelerate the launch of new channels and services, reduce capital and operating costs, and serve as a foundation that adapts easily to evolving business models and technologies.

The collapse of key functions into Harmonic's ICP solutions makes a new transmission system easier to launch and maintain than a traditional playout environment, and the learning curve is often negligible for the master control operator. Best of all, you can integrate new functionality at a pace that assures you get the most out of previous investments.

With Spectrum and Polaris, deployment of new channels has never been faster, simpler or delivered lower total cost of ownership.