Polaris™ Elite

MULTICHANNEL PLAYOUT AUTOMATION SYSTEM

Polaris™ Elite from Harmonic delivers powerful, scalable playout automation for one to hundreds of Spectrum™ ingest and playout channels, combining architectural flexibility, exceptional system resiliency and extensibility to meet the evolving needs of today's rapidly changing media environments.

Part of the Harmonic Polaris family of playout management tools, Polaris Elite optimizes control of Spectrum MediaPort™ real-time I/O and ChannelPort™ integrated channel playout systems, and associated third-party devices, within IT and hybrid broadcast infrastructures. Based on a 64-bit client-server architecture, the highly scalable Polaris Elite enables control of many channels from a single operator position, providing a direct desktop view of ingest, media interchange and playout monitoring, and clear visibility of all operations.

Polaris Elite employs the latest development tools and methodologies to provide a feature-rich automation solution that scales economically from a single channel to hundreds of services across geographically dispersed locations. The system can be architected to fit complex and rapidly evolving master control environments, and its modular applications and standard IT hardware implementation combine to offer a rich, highly adaptable platform.

Polaris Elite's flexible and rich user interface can be optimized for individual and group accessibility, exception handling and resource access, a capability that improves service loading and workflow efficiency by simplifying the operator experience. Each operator can control a large number of channels, and desktop layouts can be fixed to streamline operational practices and minimize errors. Operators can specify the look and feel of their screen layout, and save their preferences for quick reloading in future sessions.

Available as part of a packaged solution that includes Spectrum media servers, Polaris Elite can be quickly adapted to new workflows and specific customer requirements using web services and software plug-ins. Feature-rich connectivity tools allow Polaris Elite to integrate into a wide variety of workflows via advanced protocols for digital asset management, traffic, news and scheduling, including BXF, MOS and vendor-specific APIs. Whether in Business Process Management (BPM), Hierarchical Storage Management (HSM) or an integrated channel playout environment, Polaris Elite fits into a variety of broadcast ecosystems.

HIGHLIGHTS

- Automation control for hundreds of Spectrum ingest and playout channels
- Redundant configurations offer fully automatic changeover
- Central SQL database for media tracking and status
- Traffic system integration, including BXF and Microsoft® Excel® interfaces
- Support for automatic media caching from near-line storage to playout servers, including main and backup in redundant systems
- Offline prep list for the creation of on-air schedules, providing a view of all available clips in transmission and near-line storage
- Unicode compliance enables operation in multiple languages, including Arabic, Chinese and Japanese

Business Benefits

Solution Flexibility
An extensive third-party product integration portfolio and Polaris Elite's highly evolved control features combine to offer market-leading performance and minimize cost and operational impact when launching new channels or workflows. The system delivers flawless control of a wide variety of channel types in any combination, whether live with unpredictable content, regional opt-outs and simulcast requirements, or simple clip-based channels.

Branding Versatility
Media providers strive to differentiate their services with unique and increasingly complex on-screen branding, promotions and graphics, a task simplified with Spectrum's integrated graphics and DVE capabilities. Polaris Elite provides added value by automating the creation of complex elements driven by single- or cross-channel program schedules, metadata and contextual variables to deliver run-time promotions.

IT Economics
Polaris Elite employs the latest software development technologies, using standard hardware platforms to benefit from ongoing generic advances in IT processing. Clients, channels and devices can be scaled independently of each other, and the necessary processing power can be added as required to help accelerate the launch of new services.

Low Power Consumption
The system delivers highly efficient use of the underlying hardware to optimize the load in every server and ensure a compact system design for reduced CAPEX. For example, a typical 16-channel, fully redundant system can be accommodated in five servers occupying just 9 RU, consuming 3,500 watts and including a mirrored SQL database. A 50-channel control system would fit into 16 RU.

Investment Protection
Polaris Elite's architectural flexibility allows system designs that balance resource and operational requirements. The system's suite of capabilities is built using modular services blocks, providing users the freedom to design and modify systems based on their logistics, operations, personnel, technological resources and future business models.

World-Class Service and Support
Harmonic stands behind Polaris Elite with comprehensive service and support programs, including system design, service deployment, technical support and network maintenance. World-class service plans and a global network of flexible and responsive support professionals help ensure your ability to deliver outstanding "anytime, anywhere, any-device" customer experiences.

Technical Benefits

Simplified Event Control
Groups of commonly used events — for example, end-of-program sequences — can be grouped into a single object, simplifying the playout of multiple levels of secondary and even tertiary events. Tools for safeguarding the smooth playout of all channel types include:

· **Summary Cell —** a concise at-a-glance display of device and media status

· **Key Frame Display —** instant confirmation that the correct media is cued

· **Media Validation —** visibility of upstream media information, ensuring that all elements are ready to play

· **Conditional Playout —** linking of playlists to a database of context-based playout rules, with the ability to immediately apply changes if media is embargoed

· **Embedded Media Viewer —** ability to view high-resolution content directly in the UI so that the content can be QCed, or to allow timecode points to be allocated for segmentation

· **Join in Progress —** enables the schedule to be rejoined after an overrunning live event

Unicode Compliance
Polaris Elite offers operation in multiple languages, including Chinese, Japanese and Arabic, right down to the metadata and database level. Multiple languages can be handled concurrently, and the entire system can be toggled instantly and completely back to English, as required.

Full Audio Track and Multilingual Management
Multiple audio tracks are managed in association with a single stream of video. Dynamically selecting the appropriate audio tracks on a per-event basis to deliver multilingual services, for example, allows descriptive video or secondary stereo according to target audience requirements.

Media Aware
Database-driven media management functionality offers automatic caching and conditional file movement, and allows the system to be contextually aligned with QC workflows and playout services.

Resource Utilization Tracking
Actual resource usage across the system is tracked so that the Polaris Elite configuration and its underlying resources can be adapted as required. Metrics on device usage are also provided so that the system administrator can establish whether the system has sufficient or excessive resources. This capability helps to control the cost of ownership by reducing unnecessary expense and complexity.

Comprehensive User Rights Management
A complete set of user rights management tools provides full control over access and privileges to different areas of the system. Engineering, operator and view-only privileges are simple to reconfigure, and include the ability to control encoders and decoders, access and transfer media to and from near-line storage, control and edit playlist privileges, and customize the user interface. User privileges and access to specific functionality can be set on a per-channel basis.
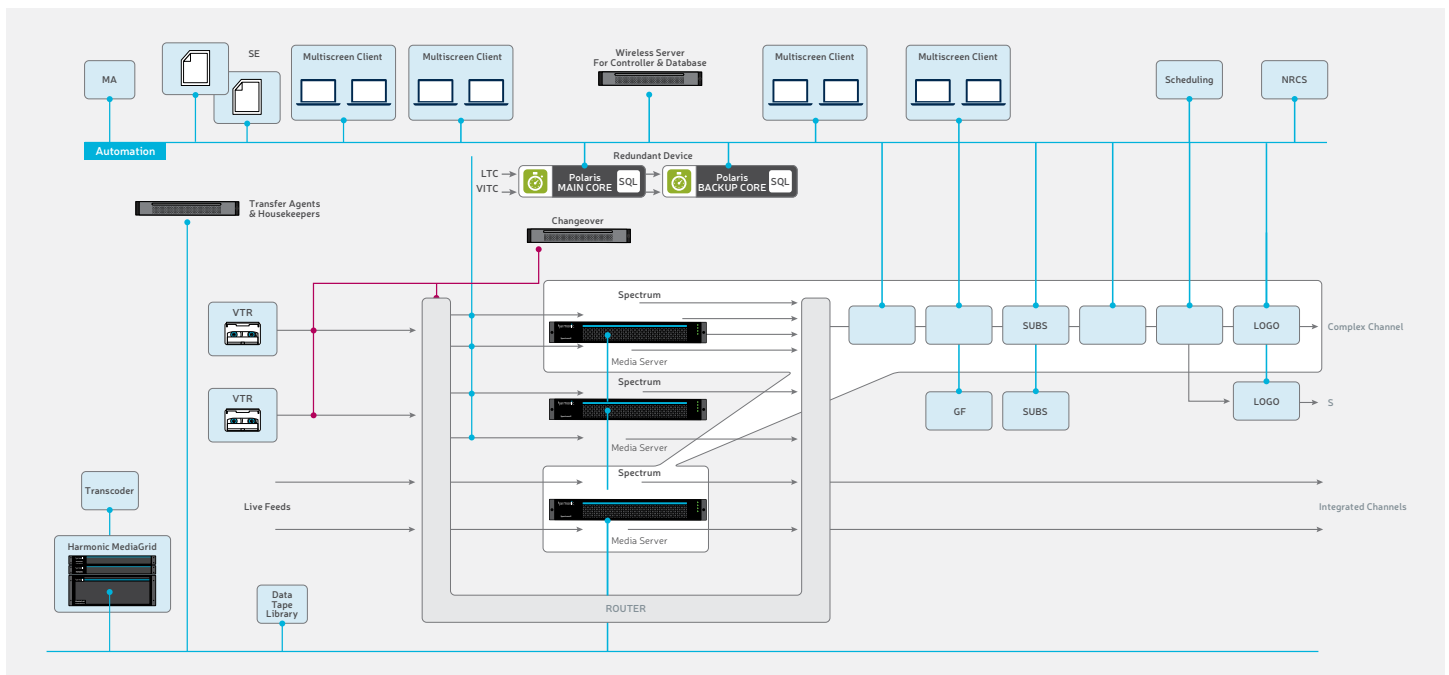
Easy Configuration and Maintenance
Engineering user interfaces allow for simple system configuration by system administrators. With comprehensive error logging built into Polaris Elite to enable the swift diagnosis of malfunctions across the system, technical staff can be alerted by SMS and email of any alarm warnings. Alerts can also be sent to SNMP-based systems. Remote login and support enables problems to be investigated and configuration changes to be made from any location with a network connection.

System Resilience
Polaris Elite's hardware and software are designed to deliver high reliability, using software mirroring and network teaming to ensure robust on-air operations. The system supports a wide range of features to overcome underlying device failure, including Air Protect, playlist mirroring, N+N redundancy, SQL mirroring and automatic controller failover. Playout automation requires 99.999% availability, and Polaris Elite is built around auto-recovery, system adaptation, and operational contexts to provide maximum system resiliency, availability and serviceability.

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Multiple language support via Unicode compliance

Typical master control architecture with Polaris Elite

PHYSICAL

Processor	Intel® i7 multi-core processor
Memory (RAM)	8 GB DDR3 or greater
Network	Gb Ethernet
HDD	250 GB or greater
OS	Windows® 7, 64-bit
Expansion Slots	Must use a graphics card with dedicated memory Graphics card should be dual headed when possible

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