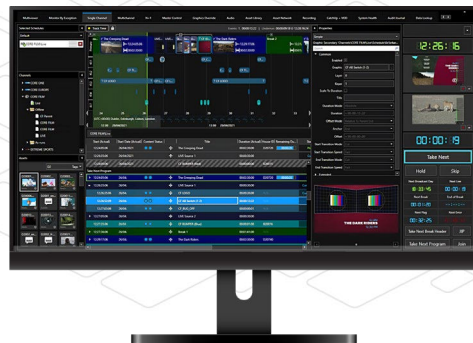


# Gallium® Workflow Orchestration

## Automated multi-platform content management

A 'deploy anywhere' platform that automates multi-platform live and file-based content delivery.



Gallium® Workflow Orchestration is the underlying technology platform upon which a variety of innovative solutions are based that enable broadcasters to manage and improve workflows when automating the delivery of content to air, to VOD/Catch-up or multi-platform services.

Gallium solutions are based on innovative workflow solutions already installed with broadcasters worldwide. Currently, broadcasters are saving significant costs by deploying intelligent, automated workflow and playout solutions based on the Gallium Workflow Orchestration technology platform.

Gallium Workflow Orchestration allows broadcasters to execute workflow tasks with media content. This enables a broadcaster to automate linear channel playout, automate addition/removal of graphics, branding or logos, package content or regionalize/localize content according to business demands.

### Gallium® Playout

Multi-Channel  
Automation

### Gallium® Factory

File Based Content  
Packaging

### Gallium® Promote

Intelligent Automated  
Branding

## BENEFITS

- Automate linear channel playout or automate addition/removal of graphics, branding or logos
- Package content or regionalize/localize content according to business demands
- Use Opex pricing models to acquire just the exact features you need and only pay for it when you use it
- Why pay for 100% of a hardware product when you only use 60% of the features 40% of the time
- Create VOD & Catch-up content for multi-platform services
- Flexible, bespoke and modular, the combination of StreamMaster and Gallium offer a Powerful suite of software tools to create the precise feature set needed for every individual broadcaster
- Software only playout means you get the advantage of COTS hardware and flexibility of future proofs
- Updates with new features and standards as they evolve

# Gallium Payout

## Multi-Channel Payout Automation

Gallium Payout is a highly integrated, sophisticated and scalable scheduling, asset management and automation system that provides the intelligence to build a variety of payout solutions. Ideal for payout facilities that need to implement automated control of transmission devices for graphics or complete channel payout.

Gallium Payout goes beyond the limitations of traditional established 'channel in a box' automation, providing enterprise standard scalable automated transmission. With the ability to deliver multi-format content (incl. web, mobile, IPTV) Gallium Payout creates an environment that maximizes sharing across multiple channels, reducing workload and resource requirements while enhancing delivery and consistency with a single operator.

## BENEFITS

- Scalable workflow, scheduling and automation for single or multi-channel installations
- Precise and sophisticated control of graphics payout built into the automation
- Multi-channel timeline playlist creation and execution
- Incorporates Gallium Promote technology for automated branding and promotion events
- Integrates with existing broadcast systems including archive storage, secondary storage, file-based QC, MAM, transcode, traffic, automation and subtitling
- Advanced redundancy and failover features

### Pay By Usage

A significant advantage of a software-defined solution is the ability to create new operational benefits such as on-demand usage and pricing models. Individual features can be purchased outright or bought on a pay-as-you-go basis by the quarter or hour.

### Simplicity Is The Key To Reduced Launch Time

Automation is central to any new channel launch. Unlike with conventional tools Gallium Payout enables new channels to take days rather than weeks to go on-air. Integration is already done "in the box". Broadcasters no longer need to struggle with traditional transmission chain problems of getting multiple items of equipment to operate reliably as a cohesive system. Gallium Payout combines multiple functional units into a single system supported by a single vendor.

### Significant Saving In Both Capital And Operating Expenditure

Combining Gallium Payout with StreamMaster Deliver reduces costs compared with a functionally equivalent system built on conventional equipment and automation. The savings become even greater when full-feature graphics are required.

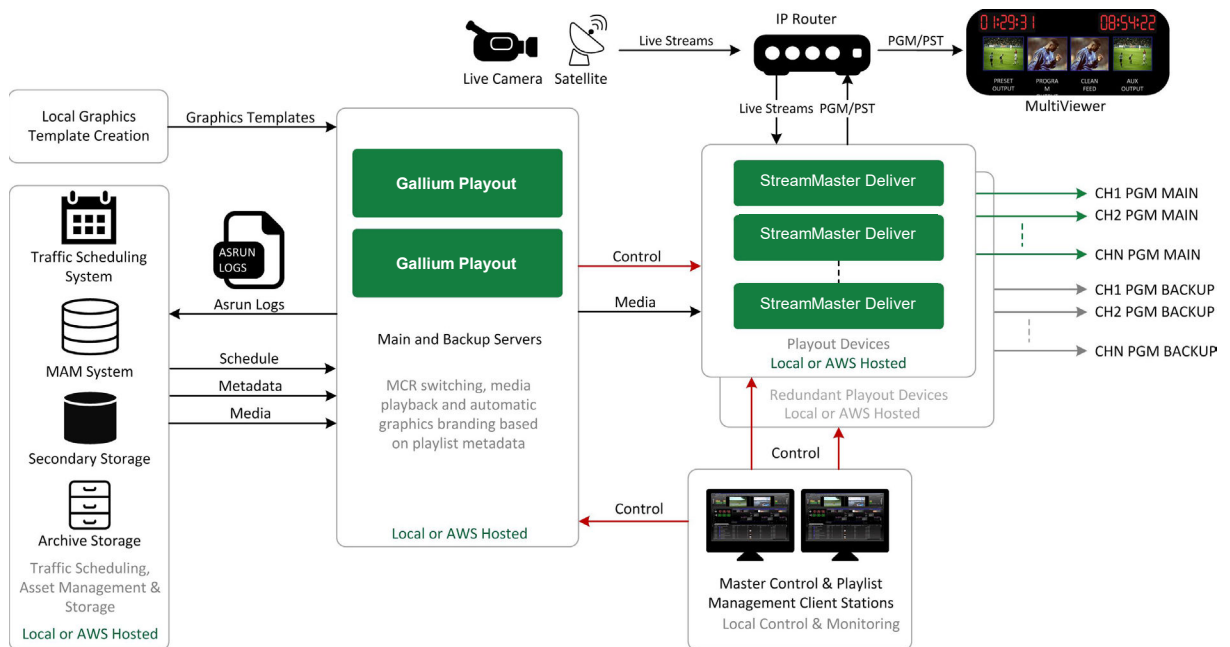
Operational costs are also reduced, with less equipment to maintain and support, lower power consumption, reduced rack space, and less training required. As a result, the cost of launching new channels is significantly decreased.

## Gallium Payout - Continued

### Superior Operational Efficiency

Gallium Payout goes beyond the limitations of traditional established 'channel in a box' automation, providing enterprise standard, scalable automated transmission. Add to that the ability to manage delivery of multi-format (web, mobile, IPTV) content, including SDI, HD-SDI, 4K and file-based outputs, creates an environment that maximizes sharing across multiple channels. It also reduces workload and resource requirements while enhancing delivery and consistency with a single operator.

Gallium Payout can be deployed to drive a range of payout products. Built around a fully resilient SQL database, the precise selection of functionality is driven by the specific application, resulting in a solution that can be built to precisely match needs, from a simple single channel to a complex, multi-channel installation. Gallium Payout offers precise control of graphical payout from the Pixel Power market leading graphics engine and delivers output that is difficult to achieve given the limitations of many automation systems.



# Gallium Factory

## File-Based Content Packaging

Gallium Factory automatically generates sophisticated clips, such as promos, trailers and marketing content, using intelligent graphics templates, information entered by the commissioning producer, and direct access to the asset management system. It automatically creates all versions of a promo or programme clip eliminating unproductive manual work, renders the finished sequences and delivers them to transmission or asset management.

Gallium Factory is a scalable, flexible and affordable solution which makes it easy to add high end graphics to non-live content.

## BENEFITS

- Automate promo versioning & eliminate tedious repetitive tasks
- Release creativity & save hundreds of hours of production costs
- Use simple work orders to direct automated packaging
- Add sophisticated branding to all your channels
- Increase brand consistency and visibility
- Eliminate graphics devices in the playout chain and improve on-air performance
- Share rendering across channels for increased efficiency
- Extend cross-promotion and deliver across multiple platforms
- Localize your content

### Pay By Usage

A significant advantage of a software-defined solution is the ability to create new operational benefits such as on-demand usage and pricing models. Individual features can be purchased outright or bought on a pay-as-you-go basis by the quarter or hour.

### Simplicity Is The Key To Reduced Launch Time

Gallium Factory is perfect for file based operations in broadcast workflows where output quality and process automation are highly valued, but the enhanced hardware demands of live production and playout are not required.

### Ideal Applications:

- Automating the process of making multiple versions of promos
- Producing graphics overlays for QC, web delivery or post production
- Creating graphics for program material and graphics overlays for thematic/static channels for playout by video or streaming file server
- "Burnt-in" branding, promotion and graphics watermarking for multi-screen or video on demand content

## Gallium Factory - Continued

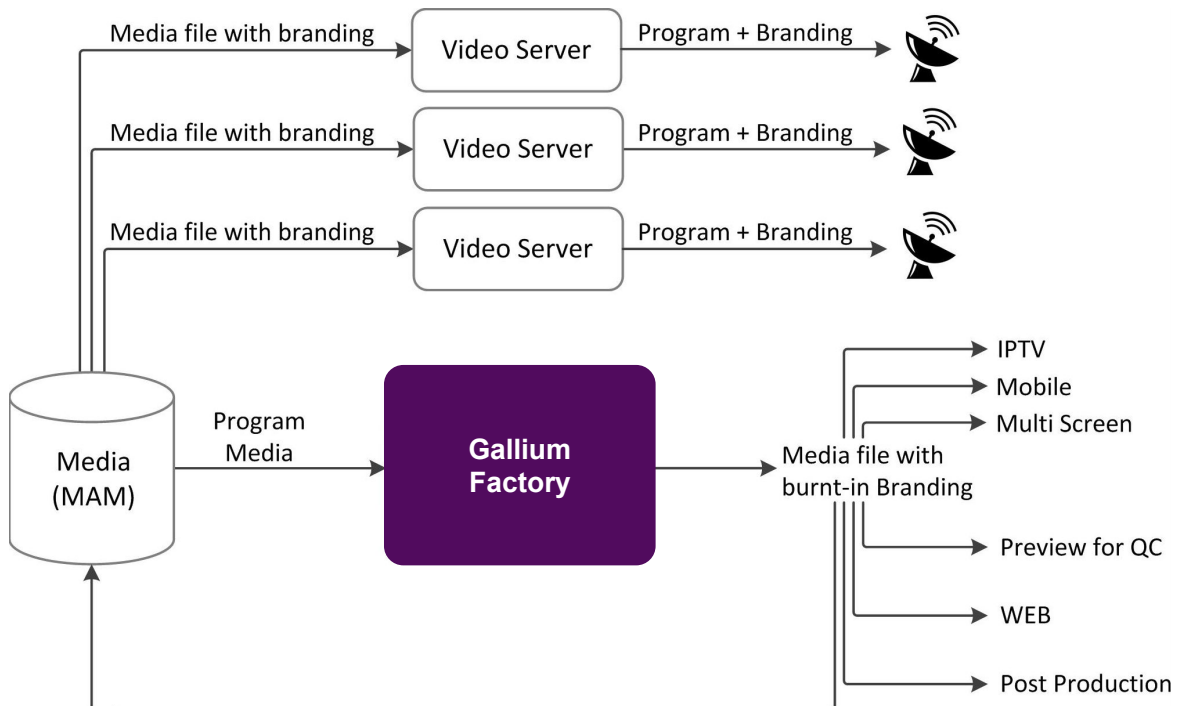
Gallium Factory also provides an efficient, template-based automated workflow for production, without taking on the capital expenditures required by live TV. Pixel for pixel, the rendered output from Gallium Factory is identical to the highest quality output from other hardware-based linear TV systems such as Clarity, LogoVision, BrandMaster and StreamMaster.

### Ease of Use

Gallium Factory runs on readily available, easily deployed standard IT servers, virtualized in a data center or in the public cloud.

Customers can deploy Gallium Factory graphics render farms at separate locations or distribute it across their organization, shared as needed between departments and facilities. Existing templates can be re-purposed for other delivery platforms using Gallium Factory without additional graphics production costs.

Support for automated population of prepared graphics templates ensures consistency, accuracy and replaces manual workflows, potentially reducing staffing requirements.



## Gallium Promote

### Intelligent Automated Branding

Gallium Promote automatically creates and delivers dynamic promos and branding for live or thematic channels. It reads the traffic system and real-time schedule, then populates graphics templates for slates, bugs, promos and line-ups. Gallium Promote removes the repetitive task of creating cross-promotion, sponsorship, squeeze-back and other in-programme graphics.

### BENEFITS

- Saves 100s of post-production hours per month
- Gallium Promote installations typically pay for themselves in under 12 months
- Improves viewer retention by delivering dynamic promo junctions
- Increases efficiency through enhanced automation and reduced data entry
- Saves money and increases branding at no additional cost
- Supports linear playout and file-based delivery
- Handles late changes in the schedule close to the time of transmission

### Pay By Usage

A significant advantage of a software-defined solution is the ability to create new operational benefits such as on-demand usage and pricing models. Individual features can be purchased outright or bought on a pay-as-you-go basis by the quarter or hour.

### **Gallium Promote is the most powerful automated branding and cross promotion solution available to broadcasters.**

Gallium Promote uses existing data from back-office, scheduling and automation systems to automate branding in a transmission environment. In-built intelligence, driven by user defined rules, allows Gallium Promote to create a wide variety of relevant promotions and other sequences, without operator intervention. Graphics are built within seconds of going on-air so they can accommodate last-minute changes, ensuring the displayed details are correct and appropriate as well as maintaining a consistent brand presentation.

The perfect choice for both thematic channels or those with live content requiring dynamic branding, Gallium Promote can create dynamic, vibrant channel branding across multiple channels operating in multiple time zones and languages.

## Gallium Promote - Continued

### Cost Effective

Gallium Promote enables the creation of additional sophisticated branding graphics without increasing the workload, while simultaneously releasing design staff to focus on more creative production work.

The automated branding is available either live in-stream or near-time rendered using Gallium Factory and is also offered with the choice of pay-as-you-go or perpetual license CAPEX pricing. Gallium Promote provides opportunities for new revenue streams through sponsorship and data or advertising overlays that create dynamic graphic insertions.

### Features:

- Integrates leading automation systems
- IPPs
- End credit DVE's
- Break bumpers
- Single and multi-programme menus

