

# Jupiter



Jupiter addresses control and tie-line management requirement for medium- to large-scale routing switchers such as Apex, Trinix NXT and third-party products as well as multiple Maestro master control channels

Featuring tight integration with automation systems, Grass Valley and third-party routing switchers, as well as other equipment, the Jupiter control solution makes it easy to consolidate media operations under a single, unified control solution.

## Jupiter Routing Control

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With a variety of control panels including small button, large button, LCD button and software-based GUI panels, users are free to choose the best interface and specific functionality needed to get the job done. The hardware control panels feature full color LCD displays with Ethernet or serial connectivity, and include a shallow, modular design for enhanced mounting capabilities. The latest version of Jupiter AccuSwitch runs on the JUP-CM-4400 hardware controller. This features a fast processor and frame accurate deterministic switching that is fully compatible with any of Grass Valley's existing JupiterPlus (JUP-VM-3000 controllers) or Jupiter Express (JUP-CM-4000 controllers), making migration to the newest features and panels simple and efficient. Jupiter AccuSwitch is the preferred control solution for large- and medium-sized routing switcher infrastructures.

### A Scalable Control Solution that Grows with Expanding Needs

The Jupiter system is an open, scalable platform for full facility switching control. The modular design of Jupiter lets broadcasters and other high-quality content creators select just the level of control they need. At its most basic level, the Jupiter solution can configure the crosspoints of a single routing matrix — and easily expand that control up to multiple matrices as large as 8192x8192. Users can also add tally and machine control via Ethernet or serial interfaces.

A selection of hardware- and software-based control panels that work across the room or across the country via IP LAN/WAN connections offers centralized or distributed management of all devices under the Jupiter control solution.

### Robust Feature Set

The Jupiter solution offers complete configuration and robust control capabilities. Up to 96 routing switcher levels can be configured. It can also set up tie-lines for transparent intermatrix operations, and support multiple users with unique access privileges and restrictions.

With software control panels, users can control sources and destinations right from their Windows-based computers. Jupiter controls a wide range of Grass Valley routing switchers by means of its proprietary crosspoint bus connection, including Trinix, Apex, Concerto, Acappella and Venus routing switchers. A wide range of third-party routing switchers can also be controlled through a number of supported serial and LAN interfaces.

Jupiter interfaces to various Grass Valley master control and production switcher products, including Maestro, Kayenne, Karrera and Kayak with legacy M2100, Saturn, Kalypso and XtenDD systems. This permits these systems to control routing switchers as well as access routing source and destination names for source selection and name display.

In addition, Jupiter supports audio attribute processing on Grass Valley Apex and Concerto Series digital audio matrices — users can swap two audio channels, invert either channel, sum the channels or duplicate a channel to feed a mono input to both channels.

### Scale up to 8192x8192 with Jupiter Controllers

Using dedicated and compact 1 RU controller chassis, users can scale a Jupiter solution to support large, multimatrix, multilocation configurations. Users can combine multiple Jupiter controllers on an Ethernet facility network to increase throughput by dividing workloads. For mission-critical applications, users can add redundant JUP-CM-4400 controllers to increase system reliability. Each Jupiter controller chassis can support two groups of eight serial I/O ports for applications such as automation interfaces.

### Multifacility Control Solution

Because the Jupiter system uses standard RJ-45 Ethernet connections, users can expand control across multiple locations using standard IP networking techniques. From providing a journalist on the Jupiter system's network with a software control panel for selecting sources, to complete control of remote facilities with extensive routing matrices, the Jupiter solution uses standard Ethernet routers, switches and WAN/LAN equipment.

## KEY FEATURES

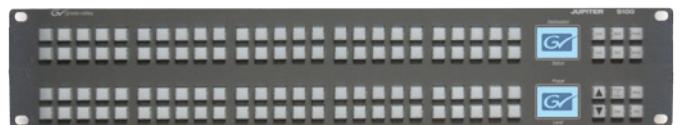
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- Supports maximum 8192x8192 sizes, 96 levels, 64+ panels
- Offers 10 hardware and 2 software panel choices
- Ethernet based LAN/WAN support enables inter and intra facility control
- Ethernet based control of Apex, Trinix, Concerto and third-party routing switchers
- Interface with Maestro master control
- Interface with Kayenne and Karrera production switchers
- Interfaces with external tally and automation system solutions
- Upgrade and expand systems without replacing all existing hardware
- Tie-line management for remote matrices control
- Matrix mapping for multisignal switching
- Optional joystick override function
- Wide range of external protocol support

### JUPITER ROUTING CONTROL



JUP-CP-S25



JUP-CP-S100



JUP-CP-L32



JUP-CP-LD16



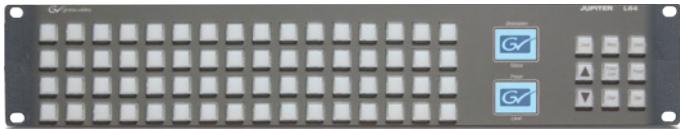
JUP-CP-LCD16



JUP-CP-S50



JUP-CP-SXY



JUP-CP-L64



JUP-CP-LD4



JUP-CP-LCD48

### Automation and Tally Control

The Jupiter system supports both ES-LAN and the Grass Valley native protocol. Since virtually every major automation system supplier offers native protocol interfaces, system interactions work seamlessly with Jupiter. The use of tally management solutions is supported by offering TSL as well as Image Video protocols as a standard feature.

### Global Tie-line Management

Jupiter supports tie-line operations which permits the transparent routing of signals between levels. Tie-lines make all the sources on a remote routing switcher available to users on a local matrix through software-controlled interconnections. When a user requests a source that is not found on the local matrix, the request is automatically assigned to a tie-line and acquired from the remote matrix. Placing conversion equipment on tie-lines between matrices with dissimilar signal types eliminates the need for a dedicated converter for each source. Jupiter adds to this proven technology the ability to configure tie-lines globally from a central location for all matrices in the system, including those located remotely.

### Logical Matrix Mapping

Logical matrix mapping maximizes crosspoint utilization by subdividing a physical crosspoint matrix into multiple logical matrices, eliminating the need for dedicated crosspoint modules for different types of signals. In addition, crosspoints can be selectively assigned to ensure that input signals are only routed to appropriate output destinations. These logical matrices can be tied to a single control level for simultaneous switching (such as audio/video, video/key or R/G/B).

Logical matrix mapping also makes it possible to group device connections, simplifying system cabling. The Jupiter system's matrix remapping feature minimizes system rewiring associated with equipment upgrades. When changing the type or format of equipment on an input or output, the Jupiter remapping feature requires only a modification of the logical matrix table to reassign signals to the correct inputs or outputs.



Multilevel Control Panel

## JUPITER CONTROL SURFACE OPTIONS

### Software Control Panels Offer Desktop Convenience

Grass Valley offers two GUI software control panels that can be displayed on any Windows-based computer connected to the Jupiter system LAN/WAN. Jupiter lets administrators set a user's level of access and control to prevent unwanted operations and to grant new levels of functionality.

### LAN or Serial-based Control Panels

Grass Valley offers numerous Jupiter control panels for the ultimate in design flexibility.

These LAN or serial-based panels are very versatile and offer multiple benefits to the broadcaster, mobile truck operator and the production/post house. The 10 LAN or serial-based panels all have the same mechanical form factor to allow for:

- Ethernet or serial interconnection
- AC or DC power options
- GPIO options
- Color display
- Thin profile (32 mm / 1.25 in.) for tough installation requirements
- Re-legending buttons
- Easy-to-view colored back-lit buttons

The 10 LAN- or serial-based panels are grouped by button type — small, large or LCD. The small buttons are used in applications that need a lot of buttons on one panel. The large buttons are available to allow for easy finger press and larger labels if desired. The LCD buttons panels can dynamically display the status of 16 or 48 destinations and sources per button. The scroll wheel enables simple changing of pages to permit many destination and sources to be displayed on the LCD buttons.

Panels feature a shallow, modular design for enhanced mounting capabilities. They are only 32 mm (1.25 in.) deep with DC power supply, and 108 mm (4.26 in.) deep with add-on AC power supply.

Panels use a full color LCD display for enhanced monitoring of the routing switcher with yellow for destinations, green for sources, amber for levels, magenta for protected status and red for locked status.

When using Jupiter AccuSwitch added features include zero downtime on control panel configuration changes and data router pathfinding.

## ORDERING

Small Button Panels	Large Button Panels	LCD Panels	Control Hardware
JUP-CP-S25	JUP-CP-LD4	JUP-CP-LCD16	JUP-CM-4400
1 RU – 25-button panel	1 RU – XY panel with category entry	1 RU – 16-button LCD button panel	Jupiter controller frame – 1 RU, self-contained control board, power supply
JUP-CP-S50	JUP-CP-LD16	JUP-CP-LCD48	
1 RU – 50-button panel	2 RU – Multibus panel	2 RU – 48-button LCD button panel	
JUP-CP-S100	JUP-CP-L32		
2 RU – 100-button panel	1 RU – 32-button panel		
JUP-CP-SXY	JUP-CP-L64		
1 RU – Basic XY panel	2 RU – 64-button panel		
GUI Software Panels			
		JUP-SP-Basic XY	Control Software
		Basic XY Softpanel	JUP-SW-4000
		JUP-SP-MI-XY	Jupiter AccuSwitch
		Multilevel XY Softpanel	

## Global Services

In the complex world of broadcast infrastructure, media enterprises need control system vendors with both a highly skilled technical support team and the supporting logistics structure to deploy and support rock-solid solutions. Grass Valley Global Services has the depth of knowledge, industry experience, and technical expertise to exceed expectations. The Global Services portfolio provides everything necessary to insure maximum uptime and high velocity problem resolution.

Grass Valley Global Services delivers a comprehensive array of tangible value:

A global network of field engineers with the knowledge, understanding and talent to keep complex routing and control systems up to date, operational and optimized.

A worldwide distribution system that ensures rapid access to replacement parts.

A team of instructors skilled in the many nuances of routing, infrastructure management and facility control, able to provide technical and operational training that maximizes productivity through tailored learning paths.

Solution architecture and integration services to tune each implementation to the unique characteristics of each facility and operational workflow.

Project management services that save staff time, improve efficiency and control budgets.

Comprehensive support agreements to guarantee that every Grass Valley infrastructure control solution remains in top condition — while supporting the enterprise's need for financial predictability.

Grass Valley Global Services deliver solid returns-on-investment, providing the resources to insure maximum value from an investment in Grass Valley infrastructure products — from design through commissioning through the entire operating lifespan. Global Services empowers customers to meet tactical day-to-day objectives while giving staff more time to focus on strategic business initiatives. A global presence, logistics expertise and world-renown team of infrastructure specialists from Grass Valley is here to help achieve organizational financial performance objectives by reducing risk while boosting operational efficiencies.

### GLOBAL SERVICES PROVIDES:

- GLOBAL SERVICES PROVIDES:
- Unequalled depth of industry knowledge and technical expertise
- Over 50 years of worldwide experience
- Complete set of services:
- Strategic advice
- System architecture
- Workflow analysis and design
- Project management
- Integration and implementation
- Performance optimization
- Technical and operational training
- Educational services
- Address today's challenges and prepare for tomorrow's opportunities

