

## Zodiak Digital Production Switcher

*Unmatched Performance in a Mid-Market Switcher*



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Grass Valley products from Thomson Broadcast & Media Solutions offer the most comprehensive, multi-format solutions for acquisition, production, storage and playback—and a strong foundation for centralized, proactive status and activity monitoring. These solutions include an Emmy® award-winning line of switchers that are the industry pacesetters for reliability, quality, and intuitive user-interfaces.

The Zodiak™ switcher is an intuitive, full-featured system that lets users in sports arena, mobile, post production, and broadcast facilities cost-effectively expand their production capabilities or replace their aging analog switchers. Compact, powerful, and affordable, it offers more production power than any other switcher in its class.

Available in two models—2.5 M/E and 3 M/E—and sized for a seven rack-unit (RU) frame, the Zodiak switcher features powerful mix/effects (M/E) and flexible program/preset architectures, internal and external digital video effects support, an expandable still store, RGB color correction, and a powerful, intuitive interface.

Designed for rapid integration into your production environment, the Zodiak switcher also features easy installation, high serviceability and availability, and a smooth upgrade path between its 2.5 and 3 M/E models.

### Powerful M/E Architecture

With four keyers per full M/E, the Zodiak switcher offers plenty of power for compositing keys such as logos and graphics. In addition, each edkeyer in every M/E can perform chroma keys using the Grass Valley Chromatte™ advanced dual chroma keyer.

Each full Zodiak M/E features a utility bus for enhancing a teleproduction's look by inserting a video signal as a wipe border, mask source, or wipe signal. Each effects keyer has its own wipe pattern generator for preset patterns and masking applications while still leaving the two main pattern generators for wipe transitions.

### key features

- **Powerful mix/effects (M/E) architecture**
  - Four keyers per full M/E for extensive, flexible layering
  - One utility bus per full M/E for video in borders, video wipe patterns, or masking
  - Built-in digital effects on every keyer plus external digital effects support
- **Available in two powerful models: 2.5 M/E and 3 M/E serial digital**
  - 2.5 M/E model: 64 inputs, simple mix/cut program/preset row, three linear downstream keyers
  - 3 M/E model: 64 inputs and an additional full-featured M/E that augments the three linear keyers on the program/preset row
- **Integrated still store with animation**
- **Optional RGB color correction**
- **Robust machine control capabilities**
- **Familiar Grass Valley interface and easy-to-use, touch-screen menu display**
- **Easy upgrade path from 2.5 to 3 M/E system**

### Flexible Program/Preset Architecture

The Zodiac switcher offers as much production power in the program/preset row as you need.

The 2.5 M/E model has a basic program/preset row with cuts, mixes, and three linear downstream keyers (DSKs) for linear and luminance keying. This model features 64 inputs and nine auxiliary buses (including up to two effects/send pairs).

The 3 M/E model has a program/preset deck that exceeds the capabilities of M/E 1 and M/E 2. As a result, you have four full-function keyers, each with a dedicated digital effects engine, and three linear DSKs for a total of seven keyers on the program/preset row. This model features 64 inputs and 13 auxiliary buses (including up to four effects/send pairs).

### Enhanced Effects and Transitions

With up to 12 channels of built-in digital effects, the Zodiac switcher lets you perform a variety of digital effects, including cubes, slabs, page turns, splits, mirrors, modulation effects, and more. Each full keyer has a dedicated digital effects channel.

### Powerful Internal Effects Add Punch to Your Productions



Slab



Slits



Modulation



Page Turn

### More Power in Every M/E

With four keyers, two backgrounds, a utility bus, and up to four chroma keyers, the Zodiac switcher gives you more power in one M/E than any other switcher in its class.



### Animation-Capable Still Store

The Zodiac still-store system can generate video, key, or mask signals in any combination on up to four simultaneous outputs. You can also generate animation on all four outputs simultaneously.

The still-store system has a memory buffer for storing up to 100 stills of video and key information, and is expandable to approximately 900 frames using the Grass Valley KlipCache™ memory expansion option. An internal hard drive provides offline storage for thousands of frames. Partial frame capture and playback of less than full raster frames can increase the number of stored frames by four, nine, or 25 times. You can also grab video or graphics frames from any input or download them from a 10/100Base-T Ethernet connection and load them in the still store.

### RGB Color Correction

Each keyer, background bus, and utility bus on each full Zodiac M/E comes standard with solarization, posterization, pseudocolor, and YUV color correction. For more creative control, you can add optional RGB color correction to all keyer, background, and utility buses on each full M/E.

### Powerful Machine Control

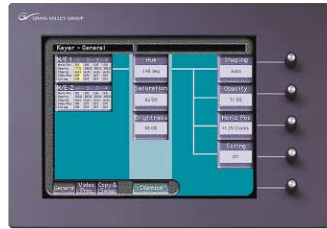
Machine control is available on the Zodiac switcher for interfacing to a wide range of VTRs; disk recorders; servers, including the Grass Valley Profile® line; and other production devices. It also supports the Grass Valley M-Series iVDR line of intelligent video digital recorders.

For example, using the Zodiac switcher's machine control capabilities, you can play, stop, rewind, and fast forward devices; mark in/out points; and perform cue (GoTo) operations.

### Familiar Interface, Smooth Installation

With its familiar interface, operators will feel right at home with the Zodiac switcher. Its simple, straightforward design makes it easy to integrate into existing production facilities.

In fact, the Zodiac control panel drops right into the existing console cutout for the popular Grass Valley Model 250, Model 3000-2, and Model 4000-2B switchers. And its compact, 7 RU frame frees up space for other equipment, such as the Grass Valley Gecko™ 8900 Signal Processing System and the Kameleon™ Media Processing System which provide multi-format support for an environment that uses analog and digital signals.



## Zodiak Control Panel

*Designed to be familiar to operators of analog switchers, the Zodiac control panel minimizes training time for facilities transitioning to digital.*



### High Serviceability and Availability

For high serviceability, you can hot swap the boards and power supplies in the Zodiac frame, minimizing down time during repair operations.

In addition, the switcher's backplane contains no active components, other than two socketed configuration PROM chips. This passive-backplane architecture minimizes the risk of a component failure and helps maximize the switcher's availability.

The Zodiac switcher also supports the Grass Valley NetCentral™ application for Simple Network Management Protocol (SNMP)-based monitoring.

### Easy to Upgrade

The Zodiac switcher's architecture makes upgrading easy. The 2.5 and 3 M/E models share the same electronics frame and control panel. Upgrading takes only the addition of an M/E card and power supply to the frame and the changing of a handful of keycaps on the control panel. No refitting or recabling is required.

### Specifications

**Video Inputs:** 64 CCIR-601 non-looping, component serial digital video or key

**Video Outputs:** CCIR-601 serial digital video dual-BNC outputs for reduced distribution amplifier requirements, including M/E program video, M/E preview video, up to 13 auxiliary bus outputs, two main program outputs, two main preview outputs, and switched preview

**Control:** Four RS-422 or RS-485 ports, two ports for CPL interface, eight GPI inputs, eight GPI outputs, 32 tally closures

**Network:** RJ-45 10/100Base-T Ethernet connection to frame, menu, and main panel and networked remote auxiliary panels. Switcher may be connected to facility LAN.

#### Zodiak Main Control Panel

Dimensions	cm	in.
Depth	47.6	18.75
Width	104.1	41.0
Height	14.8	5.8
Weight	39 kg	86 lbs.

#### Zodiak Menu Control Panel

800x600 24-bit color touch screen display. Adjustable brackets included for tilt control.

Dimensions	cm	in.
Depth	10.9	4.3
Width	37.5	14.8
Height	25.7	10.1
Weight	7.7 kg	17 lbs.

#### Zodiak Control Panel Power (includes menu panel)

- Power: 150W
- Voltage: 100-125, 200-250V, auto range
- Frequency: 50-60 Hz, power-factor corrected

#### Zodiak Frame

Dimensions	cm	in.
Height 7 RU	31.1	12.25
Width	48.3	19.0
Depth	51.5	20.3
Weight	36 kg	79 lbs.

#### Zodiak Frame Power

- Power: 400W (max)
- Voltage: 100-125, 200-250V, auto range
- Frequency: 50-60 Hz, power-factor corrected

**Ordering Information**

**ZODIAK-25**

2.5 M/E Zodiak switcher including control panel with redundant power supply, 2.5 M/E frame with redundant power supply, still store, eight keyers, three DSKs, one dual chroma keyer, 64 SDI Inputs

**ZODIAK-30**

3 M/E Zodiak switcher including control panel with redundant power supply, 3 M/E frame with redundant power supply, still store, 12 keyers, three DSKs, one dual chroma keyer, 64 SDI inputs

**ZODIAK-25TE**

2.5 M/E Zodiak switcher including control panel with redundant power supply, 2.5 M/E frame with redundant power supply, still store, eight keyers, three DSKs, one dual chroma keyer, eight video/key transform engines on the four effects keyers on M/E 1 and M/E 2, 64 SDI inputs

**ZODIAK-30TE**

3 M/E Zodiak switcher including control panel with redundant power supply, 3 M/E frame with redundant power supply, still store, 12 keyers, three DSKs, one dual chroma keyer, 12 video/key transform engines on the four effects keyers on M/E 1, M/E 2, and M/E 3, 64 SDI inputs

**ZOD-UPG-3ME**

Zodiak upgrade from 2.5 M/E to 3 M/E includes M/E module, key caps, and frame power supply

**ZOD-TEME-S**

Transform engine field upgrade for M/E 1 and M/E 2 keyers

**ZOD-TEPP-S**

Transform engine field upgrade on M/E 3 (program/preset) keyers (for ZODIAK-30 and ZODIAK-30TE)

**ZOD-RGB (initial order)**

**ZOD-RGB-S (field upgradeable/later order)**

Primary RGB color correction on all full M/E background, keyer, and utility buses

**ZOD-CHROMA (initial order)**

**ZOD-CHROMA-S (field upgradeable/later order)**

One pair floating chroma keyers with dynamic allocation to any full keyer

**ZOD-STILL-UPG (initial order)**

**ZOD-STILL-UPG-S (field upgradeable/later order)**

Expands still store capability to approx. 900 frames of full raster video

**ZOD-FRAMEPS**

Spare power supply for electronics frame

**ZOD-PANELPS**

Spare power supply for control panel

**ZOD-NETCEN (initial order)**

**ZOD-NETCEN-S (field upgradeable/later order)**

SNMP remote monitoring agent for NetCentral application

**ZOD-BRKT-MEN**

Optional fixed mount bracket for Zodiak menu display

**ZOD-BRKT-MEN-FS**

Optional free-standing bracket for Zodiak menu display

**Kalypso Options**

(can be ordered for Zodiak systems)

**KAL-TOUCHDIS2**

Auxiliary touch-screen display for second operator

**KAL-24AUX1**

Compact 24-Button, single destination remote auxiliary panel

**KAL-24AUX2**

24-Button, single destination remote auxiliary panel

**KAL-24AUX3**

24-Button, delegated remote auxiliary panel

**KAL-32AUX1**

32-Button, single destination, networked remote auxiliary panel

**KAL-32AUX2**

32-Button, delegated, networked remote auxiliary panel

**Customer Service Commitment**

The Thomson Broadcast & Media Solutions Service Team delivers complete service solutions that enhance our line of Grass Valley products. Let our experienced professional staff help you build a state-of-the-art network and deliver the best content possible for your advertisers and viewers.

Our suite of SupportPRO Services provides support throughout the product life cycles:

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- Training and educational programs
- Technical support services and centers
- Parts, kits and repair services
- Support agreement
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  - ServicePRO semi-inclusive with software and part coverage
  - PartsPRO with advance exchange of parts only
- Software and documentation

For more information contact Service Sales in your region or visit us online at [www.thomsongrassvalley.com/support](http://www.thomsongrassvalley.com/support).

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