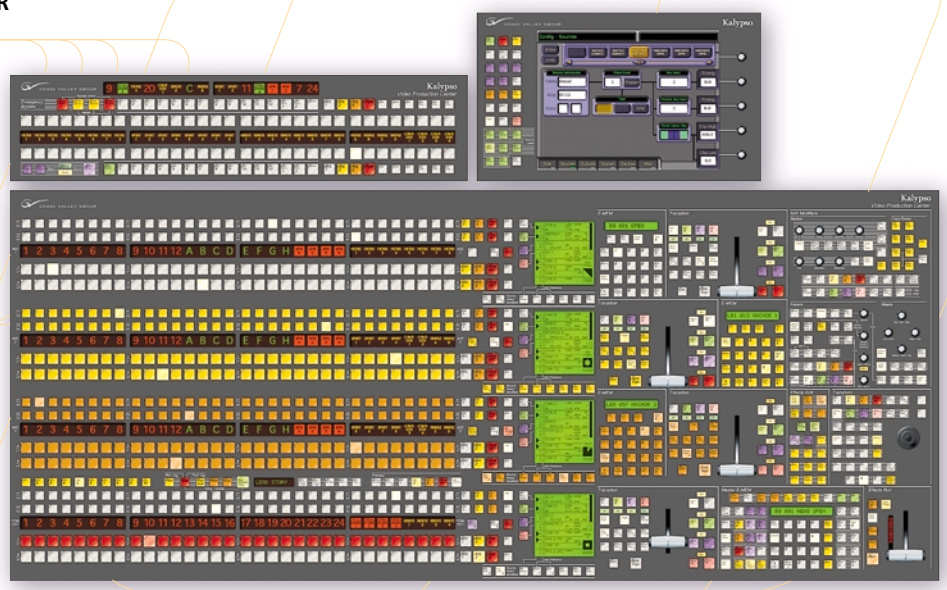
GRASS VALLEY GROUP

KALYPSO™

VIDEO PRODUCTION CENTER

PRODUCT DATA SHEET



KALYPSO 4 M/E PANEL

FEATURES

- Powerful New Mix/Effects Architecture
  - 4 Keyers per M/E for even more flexible layering
  - 2 Utility Buses per M/E allow a separate program mix, video in borders, video wipe patterns, or masking
  - Split M/E Technology – 2 M/Es in One
  - Programmable Clean Feed for Multi-Client Productions
- Built-In Device Control for Profile®, SMS-7000 routers, DVEs, VTRs and more
- Built-In DVE with 6 channels of effects plus external DVE support
- The Grass Valley interface that set the industry standard
  - Now with advanced source name displays, intuitive menu system, exclusive M/E status displays and touch screen control
- Up to 80 Inputs and 48 Outputs (40 outputs on Kalypso-2)
  - 46 outputs assignable to any combination of program, preview, clean-feed or auxiliary bus outputs (38 on Kalypso-2)
- 100 Frame Still Store with Animation Capability
- Multi-Panel and Multi-Frame Capability
- Six Wipe Pattern Generators per M/E
  - 2 for transitions and keyer functions with extensive patterns
  - 4 with basic patterns for masks, key fill and border wash, and preset patterns
- Available in Two Powerful Models: 2 M/E and 4 M/E Serial Digital

Setting a New Standard for Live Production

The Kalypso™ video production center puts everything you need for live video production right at your fingertips. Kalypso builds on the legendary Grass Valley™ switcher technology with an advanced Mix/Effects architecture that gives you unprecedented levels of keying and compositing with two powerful new features. With DoubleTake™ Split M/E technology you can divide the 4 keyers in each M/E between two separate background transitions in a single M/E bank. FlexiKey™ programmable clean-feed technology lets you create multi-client live programs using any combination of backgrounds and keys.

Kalypso gives you the run-time control you need without having to divert your attention from the switcher panel during production. Dynamic router source selection can be performed intuitively right from the panel. Groups of router destinations can be changed using Kalypso's R-MEM™ technology. Profile and VTR rolls can be done on a machine-by-machine basis or via a clip stack. Source memory allows assigned key sources to appear automatically based on what type of background source is selected.

Kalypso further integrates the production process with three or six channels of built-in digital effects and up to four channels of external effects control. In addition, a 100-frame still store with animation capability makes playout of animated logos quick and easy.

The Industry Standard Grass Valley Interface

The classic layout and quality craftsmanship of Grass Valley switchers has been advanced with a new level of control and integration. You can switch with confidence with the reliable switches and lever arms, and the intuitive, familiar panel layout. A rich set of new features add a significant level of control for building complex, multi-client productions. User-programmable Source Name Displays make it easy to identify sources on the fly. Build your own 32x32 bit-map source name icons and recall them in the display. The all new M/E Status Displays tell you at a glance what sources, keys and transitions are occurring in each M/E. Add to this an intuitive touch-screen menu system, and you have a production center built for the demands of live production.



KALYPSO 2 M/E PANEL

Enhanced Effects and Transitions

With up to six channels of built-in digital effects, you can perform 2D transforms in 3D space along with traditional 2D effects such as blurs and mosaics. The expanded effects send system can feed all six internal effects engines plus up to four external effects devices simultaneously, for a total of 10 effects channels of video and key. Any M/E bus can use the effects send system including all keyers, both background buses and both utility buses.

Built-In Device Control

Kalypso features an elegant user interface for changing SMS-7000 router sources. You also have run-time control for Profile clips, VTRs, character generators, external digital effects and many other source devices. The control you need in the fast-paced production environment is available right from the Kalypso control panel.

Powerful M/E Architecture

With four keyers per M/E, Kalypso offers outstanding capabilities for compositing keys such as logos and graphics. In addition, each keyer in every M/E can perform chroma keys using Grass Valley's Chromatte™ Advanced Dual Chroma Keyer. Borderline® Generators are included on every keyer for drop shadows, outlines and extrudes on keyed sources. All of these powerful features can be used in two new M/E modes – Split M/E and Programmable Clean Feed, truly advancing the state of live production.

DoubleTake™ Secondary Compositing

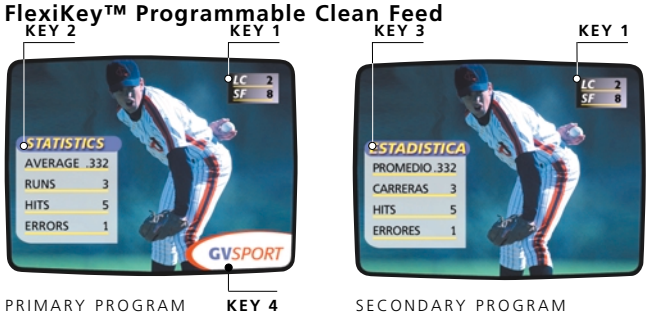


SPLIT M/E. In the example above, Key 1 and Key 2 are composited over the main background transition (A/B buses) and sent out on the primary program output. At the same time, Key 3 and Key 4 are composited over a totally independent background transition using the Utility 1 and Utility 2 buses. Each of these two composites have their own clean feed and preview outputs, effectively creating two complete M/E outputs from a single mix/effects bank. This can be done on any or all M/Es effectively giving you the power of 8 M/Es in a 4 M/E switcher.

You can share the 4 keyers between 2 separate background transitions in DoubleTake mode. For example, 2 keyers can be placed over the primary background transition at the same time that the other 2 keyers are placed over a second background transition (using the 2 utility buses). This effectively creates 2 complete M/E outputs from a single M/E bank! These two outputs are available at the same time and can have their own preview and clean feed outputs as well. Thus a 4 M/E Kalypso effectively becomes an 8 M/E production system.

In addition, the secondary output can composite specific keys over a transparent background and provides a separate key output for downstream compositing. This is helpful for expanding the keying power in certain applications. Thus the secondary output is like layering mode on the Model 4000, but the primary output is still a full Mix/Effects bank. Again, this is like getting the power of 8 M/E's in a 4 M/E Kalypso!

FlexiKey™ Programmable Clean Feed



PROGRAMMABLE CLEAN FEED. In the example above, which uses a single M/E, Key 1 is programmed to appear on both the Primary and Secondary output. Key 3 replaces Key 2 on the secondary output and Key 4 is programmed to appear only on the Primary output. By utilizing additional M/Es even more complex and customized outputs can be built.

Kalypso features the most flexible clean feed system in the industry. The programmable clean feed mode makes it possible to create two completely independent, simultaneous teleproductions with the ultimate in flexibility. FlexiKey is invaluable for productions where there are two clients for the same program or in productions where an event is broadcast live while a slightly different version is simultaneously

recorded on videotape. With FlexiKey, any set of keys can be removed from the clean feed output (so only the primary client sees logos and identification, for example). In addition, you can automatically substitute keys so that a graphic for the primary client can automatically be replaced with a different graphic for the secondary client.

Kalypso has absolutely the most flexible downstream key (DSK) system – period! The program/preset bank in Kalypso offers up to four completely separate program outputs each of which can have any subset of the four DSKs. Now you can customize which DSKs go to which program output for up to four different feeds

SuperStill™ Animation Capable Still Store

Kalypso's still store system has up to eight simultaneous outputs which may be video, key or mask in any combination. The still store system has a memory buffer for storing 100 stills of video and key. An internal hard drive provides additional storage for thousands of frames. Video or graphics frames may be grabbed from any input or may be downloaded from a 10/100Base-T Ethernet connection. All eight outputs may be animated for short graphics or video animations.

Emmy-award winning E-MEM® Technology Now with the SuperShot™ Advanced Shotbox

Recall E-MEMs fast with the new SuperShot advanced shot box panel. This option gives you instant access to five pages, each with twenty effects, at the touch of a button. You can retrieve your regular setups and store them in SuperShot for instant recall. Each setup is named so you can tell at a glance which M/Es and other resources will be used.

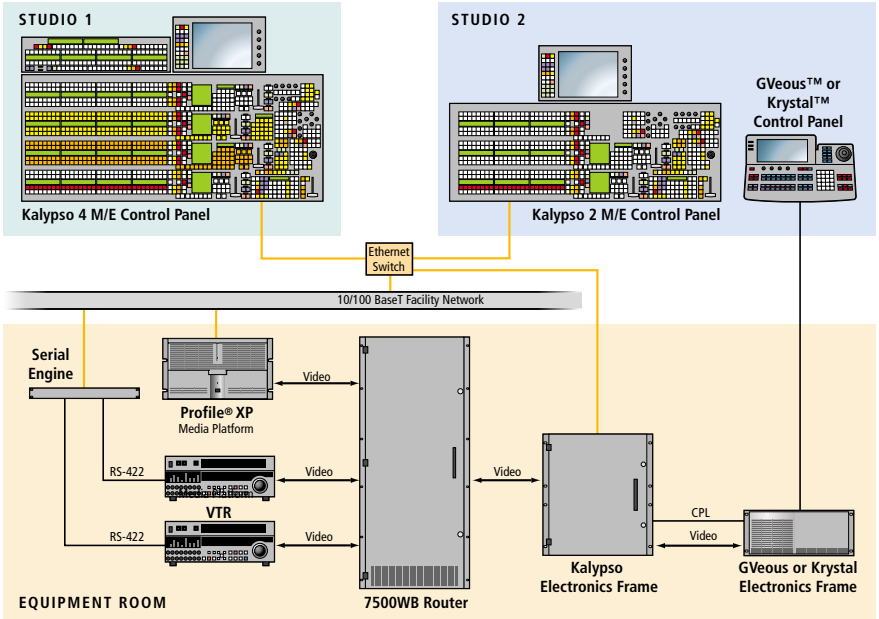
Designed for the Demands of Live Production in the Studio or On the Road

With up to 80 inputs, Kalypso is an excellent platform for productions requiring a large number of video sources (such as car races or golf tournaments). You have direct access to all 80 inputs (each input may be video or key) without the need for external routing or sub-switching. Our robust output system has up to 46 outputs on the 4 M/E model and 38 outputs on the 2 M/E model that can easily be reconfigured from their default mapping. This provides the ultimate flexibility in matching the number of M/E and auxiliary bus outputs needed for a particular installation.

The modular control panel design makes it easy to integrate a Kalypso Video Production Center into mobile trucks and vans. Best of all, you only need 15 RUs of rack space for a fully-configured Kalypso, regardless of the number of options selected. To keep those mission-critical productions on-air, Kalypso's electronics frame features hot-swappable modules and power supplies for quick serviceability during live productions.

Kalypso – A Networkable, Shared Resource

Kalypso is designed for today's integrated production facility. The smooth, on-board interface to Routers, Profiles, VTRs and external DVEs simplifies building an integrated production suite. Kalypso goes beyond merely controlling devices, however. You can have multiple Kalypso control panels simultaneously interfacing to a single frame, or to multiple frames. The built-in dual 10/100Base-T Ethernet interface makes it easy to acquire content from computer based systems and to manage your Kalypso resources. Furthermore, Kalypso's chroma keyers, still-store outputs and internal effects are floating resources which are available on demand to be used by any M/E on the system. This means you no longer need to purchase extra options just to avoid an "on-air trap." Kalypso truly provides one of the most cost-effective production solutions on the market today.



RESOURCE SHARING

Multiple Kalypso panels can simultaneously use the same frame. The 10/100Base-T Ethernet is used for real-time panel control and for facility management and acquiring content.

SPECIFICATIONS

Video Inputs – Up to 80 CCIR-601 non-looping, component serial digital video or key in groups of 16.

Video Outputs – Up to 48 (40 on 2 M/E model) CCIR-601 serial digital video in groups of eight dual-BNCs outputs for reduced Distribution Amplifier requirements. Two outputs are dedicated for test signal and digital black. All other outputs are user-configurable for program video, preview video, clean feed or auxiliary bus.

Kalypso 4 M/E Control Panel

DIMENSIONS	CM	IN
Depth	61.7	24.4
Width	141.0	55.5
Height	19.3	7.6

Kalypso 4 M/E Auxiliary Panel

DIMENSIONS	CM	IN
Depth	9.9	3.9
Width	66.8	26.3
Height	18.3	7.2

Kalypso 2 M/E Control Panel

DIMENSIONS	CM	IN
Depth	45.7	18.0
Width	125.2	49.3
Height	19.1	7.5

Kalypso Menu Control Panel

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

DIMENSIONS	CM	IN
Depth	9.9	3.9
Width	43.4	17.1
Height	25.6	10.1

Kalypso 4 M/E Control Panel Power

(includes menu and auxiliary panels)

- Power: 800 Watts (max)
- Voltage: 100-240 VAC
- Frequency: 50-60 Hz

Kalypso 2 M/E Control Panel Power

(includes menu panel)

- Power: 600 Watts (max)
- Voltage: 100-240 VAC
- Frequency: 50-60 Hz

Kalypso Frame

DIMENSIONS	CM	IN
Height 13RU	57.8	22.75
Width	48.3	19.0
Depth	56.2	22.1

Kalypso Frame Power Supply

DIMENSIONS	CM	IN
Height 2RU	8.9	3.5
Width	48.3	19.0
Depth	40.6	16.0

Kalypso Frame Power

- Power: 1200 Watts (max)
- Voltage: 100-240 VAC
- Frequency: 50-60 Hz

Initial Warranty Coverage

Grass Valley Group products are built to exact standards and are backed by an excellent hardware and software warranty – one year or 15 months from date of shipment. Under warranty services you will receive these critical services:

- Technical phone support (regular business hours)
- On-line frequently asked question database
- Emergency "down" service support
- Advance exchange on product modules

Support Packages Available

We have built our support packages around critical product life cycles with a focus on helping reduce the cost of maintenance.

First Time Product Purchaser Discount

Support services that ensure your product gets off on the right foot are offered to first-time product purchasers at reduced package prices.

- Extended Support Contract
- Impak™ Training
- SmoothStart™/Mini SmoothStart

Ongoing Support for All Products

Service Packages designed to make your job easier, and excellent for non-technical staffed sites, or reduced staff facilities. Packages that provide long-term support and more on-site assistance, at reduced package prices.

- SureStep complete on-site package
- NextStep personalized phone training
- Quarterly preventative maintenance
- Remote diagnostic setup services

Other Services Available

- 1-5 year comprehensive contracts
- Advanced exchange contracts
- Customer product training
- Technical support service contracts
- On-site professional services
- Spares kits and repair services
- Software update services
- Customized service contracts
- System network consulting

*Some country and product restrictions apply

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