

# Kula™

## The most powerful production switcher in its class



Snell  
Advanced  
Media

HD, SD and 4K production power - all in one low cost package

4K  
Capable



1ME / 2ME /  
3ME

[www.s-a-m.com](http://www.s-a-m.com)

Kula is the new production switcher range from SAM and complements the world beating Kahuna family. Its revolutionary design is the big game changer in the live production market.

Available as either 3 M/E HD, 2 M/E or 1 M/E HD/SD and 1 M/E 4K versions, Kula offers market leading features and functions. The 2 M/E version can be switched to 1 M/E 4K mode bringing you a new path forward to higher production values.

Whatever the application - Broadcast Production, Sports, House of Worship, Entertainment and Conference/ Live Events – Kula meets all your production needs.

The new Kula production switcher range offers a powerful feature set in a compact system for easy installation and powerful operations.

Great  
Production  
Value



## Contents

The Kula Production Switcher	2
Creative Power	4
Keyer Options	5
Multiple Formats and Operations	6
Scalable Architecture and ClipStore	7
Kula Functionality	9
4K Now	10
Training and Support	11



For further information on award-winning SAM products visit:  
[www.s-a-m.com](http://www.s-a-m.com)

### Creativity

Kula enables you to build impressive effects and stunning productions using the feature rich keyers and DVEs available on each M/E.

Kula also offers additional sub M/E\* functionality taking your creations further than any other production switcher in its class.

Simple to use, operators can build creative effects for any production quickly and with ease.

All this and still within a 2U mainframe!

### Productivity

Kula frees operators to focus on creative aspects of a job. Simple operation and easy set up enables operators to work quickly and efficiently, making more time to work on other elements within the live production environment and reducing costly set up times.

### Flexibility

Kula is an extremely versatile production switcher, offering the user far more flexibility than any other switcher in its class.

Whether it's working with the M/Es and sub M/Es, using the assignable DSKs, working in multiple standards or needing to increase inputs or outputs using the bi-directional ports, Kula promises great functionality and flexibility from production to production.

### Robust & Resilient

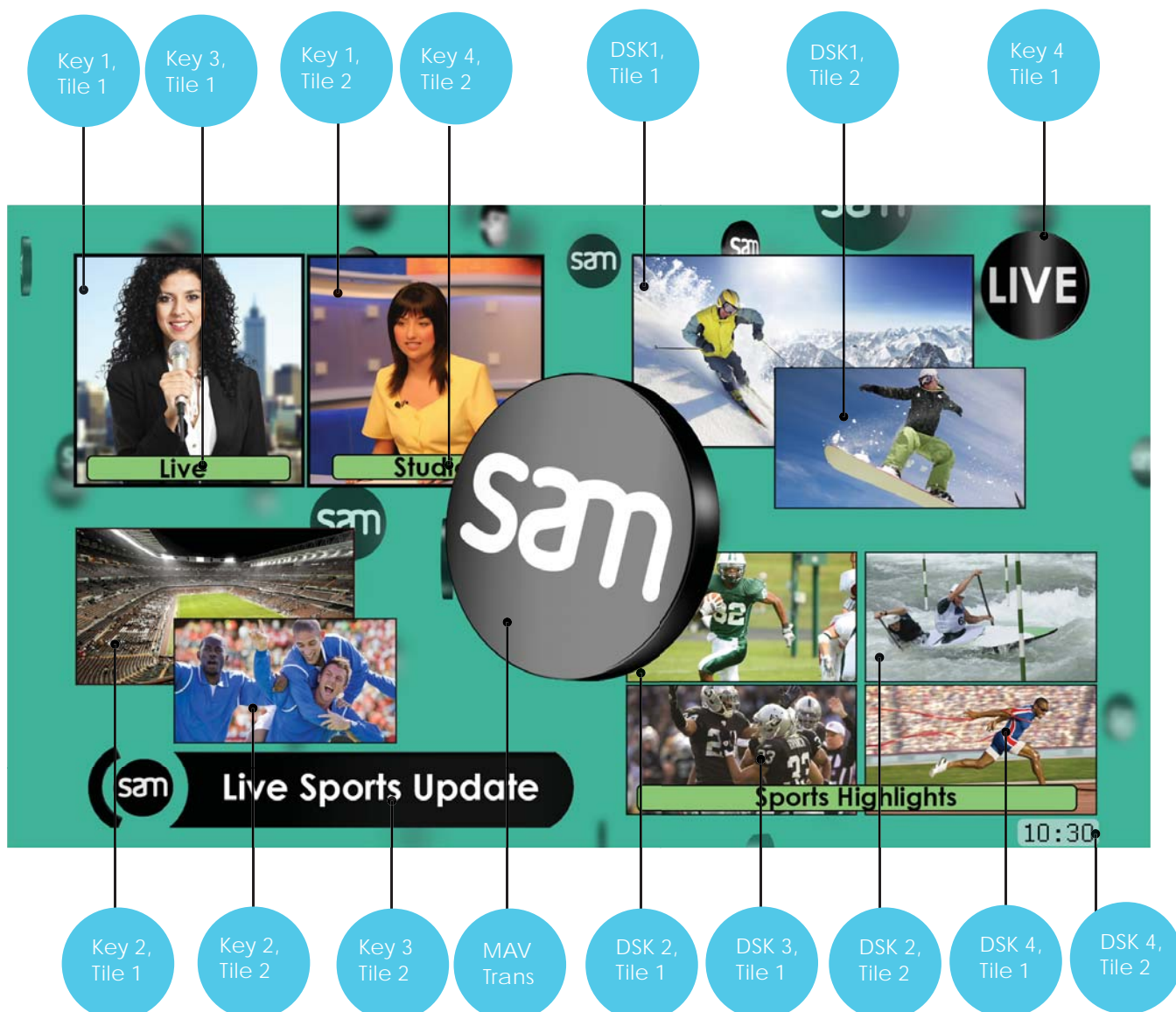
Kula is built on SAM's Kahuna heritage and World renowned switcher technology. Dual power redundancy as standard provides peace of mind and on-air confidence.

With its 2U mainframe and choice of panel sizes, Kula is the ideal choice for flyaway packs, OB vehicles and events/conferences. To stand the rigors of transportation with constant tear down and set up cycles, Kula is built strong in both chassis and panel mechanics.



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Kula mainframe

\* available on 1 & 2 M/E





## A world's first, Kula establishes new standards in compact switcher design.

The Kula range offers:

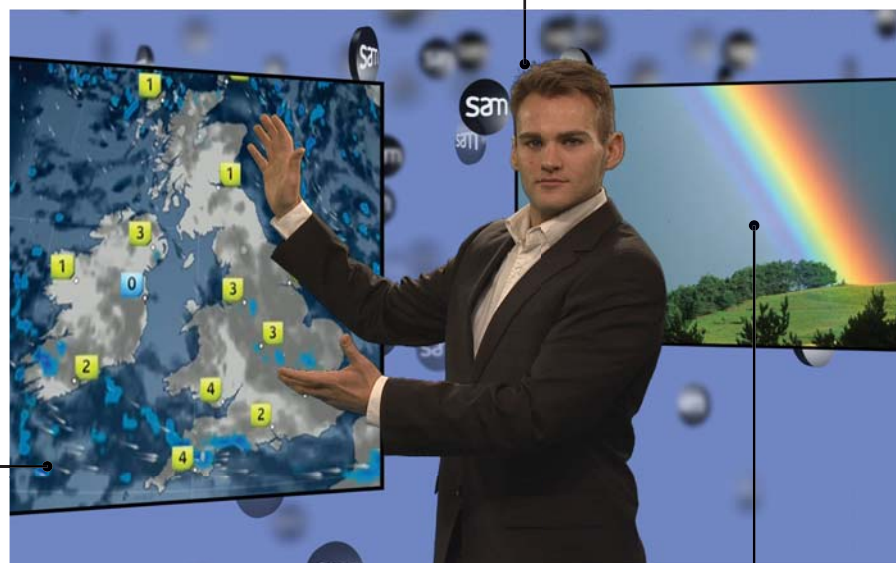
- 1 or 2 or 3 M/Es with 5 keys per M/E
- 1 and 2 M/E systems offer 2 Sub M/Es consisting of A/B mix with 2 keys and one assignable 2.5D DVE resize engine
- Up to 32 key layers
- Linear and Luma key functionality on each M/E as standard
- High quality chroma keys on each keyer per M/E and Sub M/E where applicable
- A dedicated animated clip transition on each M/E called a MAV Trans
- Powerful Effects Dissolve operation for quick and simple creation of high end effects
- 2D and 2.5D DVE for creative effects
- Four floating DSKs with resize engines and split dual tile mode to create eight PIPs to be allocated to any M/E or aux output
- Extensive internal clip and still store – 10 output channels from 16GB of storage capacity
- Multi-format production capability as standard including SD/HD/1080p and 4K using FormatFusion3™ technology\*
- Large I/O with bi-directional ports for flexibility
- Internal multiviewer with up to 8 heads and 28 tiles to view feeds and outputs
- Wide range of control panels, expandable with modules from the Kahuna modular control range

\* The 2 M/E Kula will support 4K, however at the same feature specification as the 1 M/E 4K Kula. Not available on 3 M/E systems

### Unbeatable Operations

#### Sub M/Es

A 2 M/E Kula provides two Sub M/Es giving more creative options never possible before on a production switcher of this class. The Sub M/Es enable a background mix and additional two keyers with one assignable resize engine over and above the core M/E functionality. Cascading Sub M/Es into the standard M/Es brings a new level in production values.



Key 1,  
Tile 1

Key 2  
Chroma  
Key

Key 1,  
Tile 2

## Keyer Options

Each resize engine has 2D DVE capability so X - Y positioning, squeeze, zoom and cropping is possible.



Kula offers a comprehensive choice of panels with easy to operate functions

### Split Key Dual Tile Mode

The split key dual tile mode enables two live video tiles per key to be layered onto the background. Each independent key layer has X - Y positioning, squeeze and zoom functionality.

### 2.5D DVE Key

Kula offers a 2.5D DVE resizer capability on the Sub M/E keyer, so X - Y positioning, squeeze, zoom and cropping in addition to perspective, (z positioning) are all possible, allowing even more creative effects.

### DSKs

Kula offers four floating DSKs assignable to any output. The DSKs can offer up to 8 key layers with the resize engine's split dual tile mode. Users can output DSKs downstream of the M/Es or assign each independent DSK to an aux output, which empowers more dynamic productions.\*

\* Not available on 3 M/E systems



1 M/E 19" rack mount control panel



2 M/E control panel



3 M/E control panel



2 M/E 24 crosspoint control panel



1 M/E 16 crosspoint control panel

A true multi-format video standard system able to meet today's extensive requirements in this segment of the switcher market. Kula is designed with 3Gbps at its core so all operations are fully accessible.

Kula 1 M/E and 2 M/E systems come as an HD, SD and 1080p switcher as well as 4K. SAM's unique FormatFusion3™ simultaneously processes and manipulates HD, SD together with 1080p sources in the same mainframe, and even the same Mix Effect bank, all in real time.

Quite simply, Kula is truly future proof!

- Future proof workflow in HD, SD 1080p and 4K
- Multiple outputs for different shows
- Flexible productions
- FormatFusion3™ available on inputs and outputs

Kula packs a big punch - in a low cost package



2 M/E control panel



### Scalable Input & Output Architecture

Kula offers bi-directional ports to give you the flexibility to add extra inputs or outputs when necessary.

All BNC's on the 1 and 2 M/E systems accept HD/SD or 1080p sources. By routing these sources through FormatFusion3™, these inputs can be converted to the production output standard for mixing in any M/E. Alternatively, sources, M/E outputs or Sub M/E outputs can be routed to FormatFusion3™ engines for conversion to an alternative output standard. The 3 M/E Kula is a pure 1080p system for fast and transparent operations. Both inputs and outputs are fed with 1080p sources for high quality production output.

Each of the aux outputs can be configured to route any of the internal sources available to Kula. This includes any outputs supplied by each M/E -PGM, clean, PVW or a selection of outputs and keys. Up to four aux outputs can have their own separate key signal, which is great for multiple outputs to different customers wanting their own branding.

### ClipStore

Kula's clipstore enables playing sequences of key and fill, or video and stills. It provides over 16GB of uncompressed HD content available across 10 channels. The clipstore can play out and record video and key channels. Importing and exporting animations and video is performed via a LAN/WAN, USB device and K-Watch.

The clipstore has a sophisticated editor for both audio and video (fill and key).

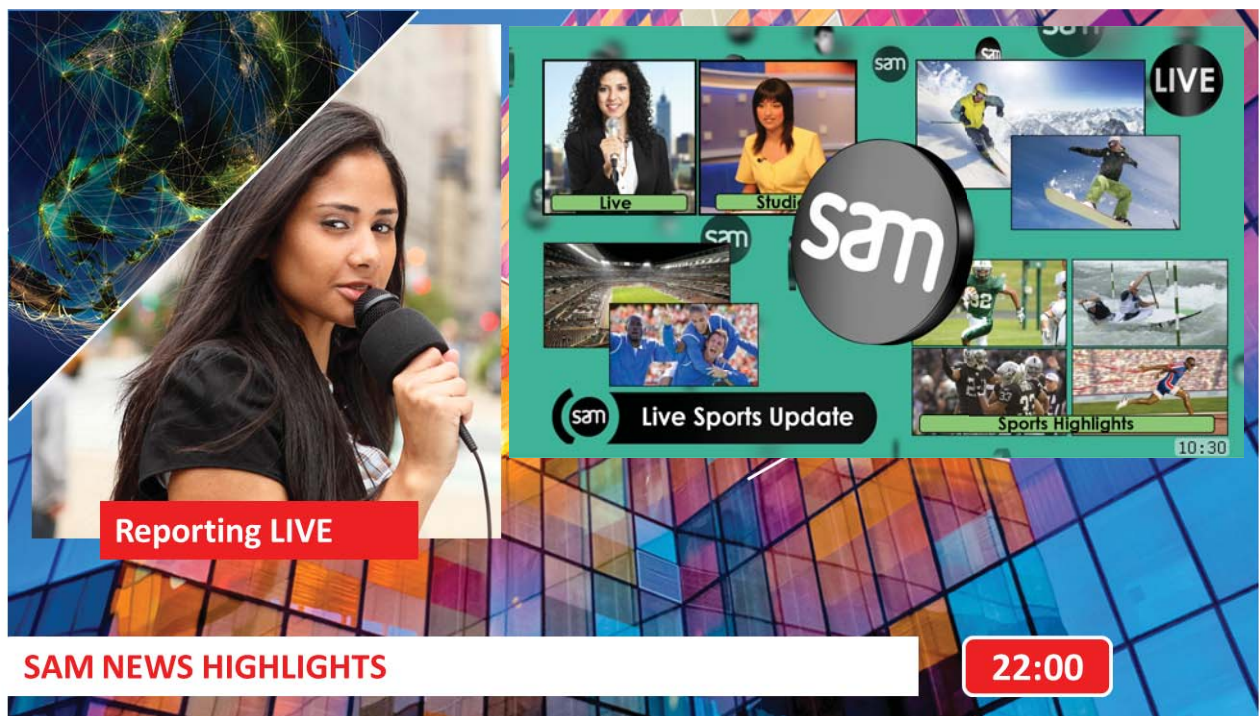
- Instant access to any content and selected on any bus
- Holds both audio and video
- Used for animated clip transitions
- On board clip editor
- Use in any memory or macro recall
- Easy management and export with K-Watch
- Grab live incoming video or file via USB or network

In 4K, the clipstore operates as a core component of your production offering key and fill, video and still outputs with full 4K resolution.

### K-Watch

K-Watch software runs on a PC that is networked to a Kula mainframe, the file conversion process is automatic, and converts from one format into the native Kula .SWS file format.

The converted file is then transferred directly into the relevant project on the Kula mainframe ready for the operator.



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Cascading M/Es - M/E1 feeding key layer, outputting on M/E2

## Applications

Kula is perfect for a broad range of applications:

- **Regional News/Magazine Programs / Internet feeds**
- **Outside / Remote Broadcast**
- **Flyaway / De-rigs for pop-up productions**
- **House of Worship, Presentations & Events**
- **Corporate, Government & Educational**

### **Regional News / Magazine Programs / Internet Feeds**

Ideal for applications that need a high level of production capability, within a limited budget (both in TX and in-vision monitors). With Kula, productions become much more creative. With the flexibility in sub M/Es and aux outputs main program and in-vision outputs productions have never been so easy to broadcast.

### **Outside / Remote Broadcast**

With 4-12 camera feeds, up to 4 replays, graphics engines and servers, Kula can take any feed ready for operations.

### **Flyaway / De-rigs for Pop Up Productions**

Kula has been designed to be robust and resilient, ideal for the road. With its 2U mainframe and 19" (1M/E) panel, it is perfect for shipping to challenging sites and working in space constrained production environments.

### **House of Worship, Presentations & Events**

Kula is ideal for events such as live music, stage productions and Houses of Worship. It offers a comprehensive choice of panels with easy to operate functions that are simple to use for any operator or volunteer. The Kula panel has intuitive macro functionality and graphical OLED buttons for fast and simple actions. Whether your production is intricate or modest, Kula can make any operator confident in their work. Kula enables multiple feeds for events while outputting for production / post show edit.

### **Corporate, Government & Educational**

Kula is simple to install, easy to transport and intuitive to operate. With its huge feature set, no other switcher comes close to Kula.



**Kula is perfect  
for a broad  
range of  
applications**





Choose a compact control panel for tight spaces

## Kula panels have impressive operational functionality as well as the ability to expand with additional control modules.

For more functionality the Kula panel can be expanded with control modules from the Kahuna modular control panel. Up to eight control modules can be attached to a Kula panel from a range of 15 different types.

### Comprehensive Integration and control capabilities.

Kula features an extensive protocol list enabling the control of a large number of third party external devices for single person gallery/control room operation as well as full support for SAM devices. Third party devices include:

- Production Servers
- Audio Mixers
- Robotic Camera Control
- Graphics Engines
- Tally Systems
- Multi-Viewers
- News Automation Systems

### SAM innovation: EPP™ (Enhanced Progressive Processing)

The product of Kahuna's expert development team, EPP provides unparalleled video processing quality. Kula does not simply support 1080p High Definition – it ensures that this super high quality remains uncompromised at every stage of the production process and is reflected in every output form, irrespective of delivery mechanism to the end viewer.

### Built-in Multiviewer

A format independent multiviewer provides great flexibility with preselected, user-defined layouts and is ideal for smaller productions. Also, it's an excellent choice to supplement larger scale production monitoring requirements.

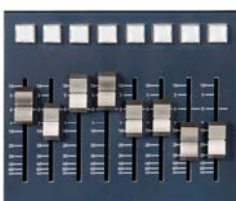
The format independent multiviewer is a standard feature in the Kula production switcher.

### Multiviewer Features

- Up to 8 flexible output heads
- Up to 28 windows
- All external and internal sources selectable to all heads and all windows
- Instant preselect layouts
- Clear and follow-through labelling
- Red and green tallies
- Assign to any output
- Format independent
- Memorize and recall layouts as part of a show set up

### K-Manager

K-Manager allows users to resize and change the still/clip standard whenever they need 525/59.94 or 1080i/59.94 or even 720p/60. K-Manager also enables offline crosspoint mapping for easy configuration.



Example additional control modules



19" rack mount control panel

Stunning events every time

## The SAM Kula family – perfect for sports, regional news, events /music or house of worship application.

### 4K Capable

As industry professionals explore the practicalities of 4K production, the production switcher element is already solved by SAM.

The Kula 1 M/E 4K system is dedicated 4K for those ready to broadcast exclusively in 4K.

If your production requirements need to be flexible and switch from SD/HD to 4K, then the Kula 2 M/E production switcher is the perfect solution, giving you the flexibility to work in any standard for different productions.

Kula is 4K now.

- 6 x 4K Keyers
- 10 x 4K inputs and 3 x 4K outputs
- Supports full screen wipes in 4K
- Native internal clipstore for 4K animations
- Transparent operation for TD / Operator



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Kula mainframe rear

Leading  
the field



Features	Kula 3 ME HD	Kula 2 ME HD/SD 4K*	Kula 1ME 4K 2Si	Kula 1ME
Inputs	36	36	10	18
Outputs	18 assignable	18 assignable	3	12
Bi-directional inputs/outputs	6	6	0	6
Total M/E key layers	40	32	6 x 4K	20
DSKs	4 floating	4 floating (8 key layers)	1 x 4K DSK	4 floating (8 key layers)
2D DVE	32 x 2D	24 x 2D	6	16 x 2D
2.5D DVE	0	4 x 2.5 DVE on sub M/E keys	0	2 x 2.5 DVE on sub M/E keys
Sub M/E capability	0	2 x sub M/Es** with 2 keys each	0	1 x sub M/E ** with 2 keys
FormatFusion3™ & frame synchronizer	0	8	2	4
Clipstore output	10 channels 16GB	10 channels 16GB	4 channels 16GB	10 channels 16GB
Multiviewer	Up to 8 heads / 28 tiles	Up to 4 heads / 16 tiles	N/A	Up to 4 heads / 16 tiles
4K Quad link	N/A	Yes	Yes	N/A
4K 2Si	N/A	Yes	Yes	N/A

\* Kula 2 ME SD/HD version also operates as a 1 ME 4K specification production switcher

\*\* Sub M/Es available if FormatFusion 3 is not being utilized

## Extensive training and support services ensure you get the very best out of your SAM live production switcher.

### Live Production That Won't Let You Down

Built to SAM's exacting engineering standards and backed up by 24 by 7 customer support, SAM live production switchers can be relied upon in even the most demanding live TV environments.

- Redundant power supplies as standard
- Hot-swappable boards

Completely integrated hardware solution incorporating all DVEs, clipstores and interfaces for third party control within the mainframe

### Kula Care Service

SAM's customer service offers first class solutions for optimizing your operations, through world leading technical support and fast responsiveness.

Kula Care comes as standard for the first year of your purchase to give you absolute confidence in your investment.

SAM has expert support engineers, available to you 24 hours a day, 7 days a week, 365 days a year via telephone, email or 'Live Chat'. Engineers in SAM's Support Center have fully functioning Kula systems at hand so they can quickly provide operational advice or replicate any reported issues. When replacement parts are needed, we offer an advanced parts exchange, sending you either a new mainframe or panel in return for the faulty part as a one time swap.

Replacements are dispatched immediately from one of more than twenty UPS, 24 by 7 Hubs worldwide. Our investment ensures speedy resolution of issues that might affect your operations.

### Online Support Increases Access, Enhances Transparency

Through our online support portal you can monitor and track any support issue and even engage one-to-one with support engineers for fast answers to any question via our interactive 'Live Chat'.

SAM's customer services are there to help and support you. For further information about Kula Care contact [support@s-a-m.com](mailto:support@s-a-m.com)

### Training

To ensure that customers experience the full benefits of their switcher, SAM is committed to providing the highest levels of training for Kula owners, operators and engineers.

Training before and after a system purchase is available worldwide at customer premises, SAM offices or an alternative third party location. The duration of these training sessions will depend on user requirements.





