

# 1 M/E KULA Production Switcher



19 in. Rackmount 1 M/E 16 Crosspoint Panel, 2 RU Frame with 1 M/E  
1 M/E 16 & 24 Crosspoint Panels, 2 RU Frame with 1 M/E

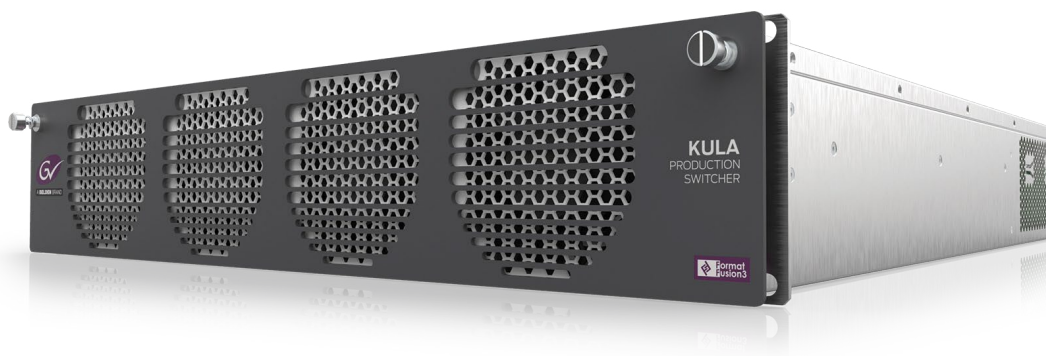
## KEY FEATURES

- 2 RU
- 6 assignable outputs and 6 bidirectional inputs or outputs
- M/E supports 4 full effects keyers with lin/luma, 4 assignable DVE engines (will give 8 independent boxes)
  - Chromakeys available on all keys
  - Transition keyer (Mav Trans) with dedicated ClipStores for key & fill
  - Mask generator per keyer
  - Separate wipe generator
  - Matte generator
- Sub M/E background with 2 keyers\* both lin/luma key
  - 1 assignable 2.5D DVE engine (will give 2 independent boxes)
  - Chromakeys on any output or use with the M/E for more keying power
  - RGB, YUV, and Bleed color correction
- Large internal ClipStore with 10 outputs holding 2 minutes of uncompressed HD video and audio content that is totally routable
- 4 floating resizable downstream keyers for main or aux outputs
- 4 channels of FormatFusion3 or FormatFusion4 assignable to any input/output or bus\*
- Fully flexible internal multiviewer with 4 heads and 16 tiles
- Control:
  - 66 GPI/Os, 2x RS-422 ports, 3 Ethernet ports for control panel and TCP/IP protocols
  - USB ports for user/clip/system files import, export and backup
- 1 M/E control panel with a choice of 16 or 24 crosspoint buttons. Designed with clear OLEDs, RGB push buttons and shaft encoders for quick and granular control
- Sophisticated macro recall and edit capability
- Clearly labeled control panel with separate mnemonics for source, key and macro names
- Instant delegation buttons for macros or key and aux bus control
- T-bar with direction strip indicators
- Can be expanded by connecting other Kahuna Maverik modules

1 M/E 19" rackmount control panel



1 M/E 16 crosspoint control panel



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## SPECIFICATIONS

### TV Standards

#### 2.97 Gb/s Video Standards (3G/1080p)

1080p60 SMPTE ST 424  
 1080p60 SMPTE ST 425/Level A  
 1080p60 SMPTE ST 425/Level B  
 1080p59.94 SMPTE ST 424  
 1080p59.94 SMPTE ST 425/Level A  
 1080p59.94 SMPTE ST 425/Level B  
 1080p50 SMPTE ST 424  
 1080p50 SMPTE ST 425/Level A  
 1080p50 SMPTE ST 425/Level B

#### 1.485 Gb/s Video Standards (HD)

1080i60 SMPTE ST 274(4), SMPTE ST 292(D)  
 1080i59.94 SMPTE ST 274(5), SMPTE ST 292(E)  
 1080i50 SMPTE ST 274(6), SMPTE ST 292(F)  
 1035i60 SMPTE ST 260, SMPTE ST 292(A)  
 1035i59.94 SMPTE ST 260, SMPTE ST 292(B)  
 1080PsF30  
 1080PsF29.97  
 1080PsF25  
 1080PsF24  
 1080PsF23.976  
 1080p30 SMPTE ST 274(7), SMPTE ST 292(G)  
 1080p29.97 SMPTE ST 274(8), SMPTE ST 292(H)  
 1080p25 SMPTE ST 274(9), SMPTE ST 292(I)  
 1080p24 SMPTE ST 274(10), SMPTE ST 292(J)  
 1080p23.976 SMPTE ST 274(11), SMPTE ST 292(K)  
 720p60 SMPTE ST 296(1), SMPTE ST 292(L)  
 720p59.94 SMPTE ST 296(2), SMPTE ST 292(M)  
 720p50 SMPTE ST 296(2), SMPTE ST 292(M)

#### 270 Mb/s Video Standards (SD)

576i 16:9  
 576i 4:3  
 480i 16:9  
 480i 4:3

### Reference

Analog genlock high-definition tri-level syncs signal or SD 1V blackburst

### Frame

#### Video Signal Inputs

18 SD/HD/3G-SDI HD/SD/3G (270 Mb/s / 1.485 Gb/s / 2.97 Gb/s)  
 Serial digital interface: As REC601/SMPTE ST 292/SMPTE ST 424 via BNC connectors

#### Video Signal Outputs

6 SD/HD/3G-SDI assignable via BNC connectors

#### Video Bidirectional Ports

HD/SD/3G (270 Mb/s / 1.485 Gb/s / 2.97 Gb/s)  
 Serial digital interface: As REC601/ SMPTE ST 292 / SMPTE ST 424 via BNC connectors  
 6 bidirectional ports

### Genlock

Genlock reference 2 off analog sync via BNC connectors

### Control Interfaces

66 GPI tally/GPO outputs: Assignable GPI/GPO isolated contact closures via 3x 25-way D-Type. Assignable as GPI or GPO  
 16 10/100/1000base-T 3x RJ45 Ethernet connectors fixings  
 2x RS-422 control ports  
 2x USB

### Power

**Kula frame:** Auto sensing 100-250 VAC power supply: 50/60 Hz nominal. Two fully independent hot-swappable PSU modules, with separate mains power feeds via 2x 13A IEC – 320-C14

**Power consumption:** <400W

**Temp range:** 5 to 40°C (41 to 104°F), noncondensing operating

### Mechanical

2 RU  
 Height: 87 mm (3.42 in.)  
 Depth: 604.8 mm (23.81 in.)  
 Weight: Approx. 14 kg (30.3 lbs.)

#### Kula Control 1 M/E 16 Crosspoint Panel

Width: 834 mm (32.83 in.)  
 Depth: 139.7 mm (5.5 in.)  
 Height: 64.7 mm (2.55 in.), 123.3 mm (4.86 in.) total height including T-Bar  
 Weight: Approx. 3.5 kg (7.72 lbs.)

#### Kula Control 1 M/E 24 Crosspoint Panel

Width: 994 mm (39.13 in.)  
 Depth: 139.7 mm (5.5 in.)  
 Height: 64.7 mm (2.55 in.), 123.3 mm (4.86 in.) total height including T-Bar  
 Weight: Approx. 5 kg (11.02 lbs.)

#### Kula Control 1 M/E Panel (Rackmount)

Width: 482.6 mm (19 in.)  
 Depth: 221.5 mm (8.72 in.)  
 Height: 87.9 mm (3.46 in.), 146.5 mm (5.79 in.) total height including T-Bar  
 Weight: Approx. 3.6 kg (7.14 lbs.)

### Connectors Kula 1 M/E and 1 M/E Rackmount

#### Frame Communications

2x 16 10/100/1000base-T 3x RJ45 Ethernet connectors fixings

#### Internal Panel Connection

6x RJ45 Ethernet connectors fixings. Connection to other MAV modules

NOT Ethernet connections, must be direct to MAV modules. Do not use network switches or hubs

CAT5 or above cables – crossover cables are NOT suitable

#### 2x USB 2 ports

#### 1x monitor connection to local touchscreen

**PSU:** 2x fully independent external PSU modules with separate mains power feeds via 2x 10A IEC leads

**Output from each PSU:** 12V DC 100W via Kycon KPPX 4-pin or compatible connectors to the KPP control surface

2 supplied as standard, one PSU provides dual redundancy