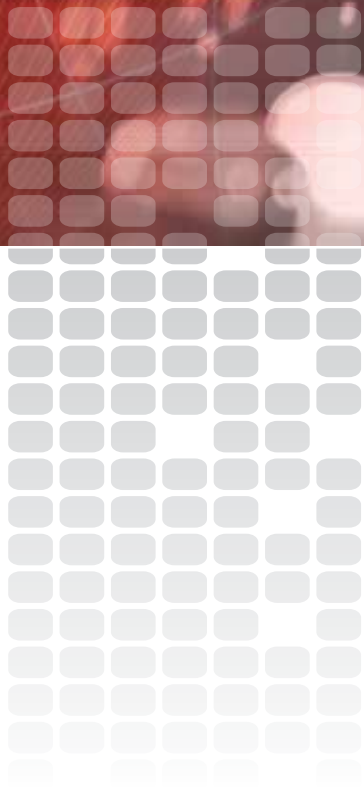



# Atem<sup>™</sup>

Production Switchers



	Products	Description and Features
10 Input, 1 M/E Switcher	 <p>The image shows the front view of the Atem 10 Input, 1 M/E Switcher control panel, which features a central LCD screen, various buttons, and a keyboard. Below it is the 3Gb/s chassis, a rack-mountable unit with a blue front panel and ventilation grilles.</p>	<p><b>Atem</b></p> <ul style="list-style-type: none"> <li>• 10 Inputs, eight Outputs</li> <li>• One M/E Control Panel</li> <li>• 10 Channel Multiviewer</li> <li>• Four Upstream Keys</li> <li>• Two Downstream Keys</li> <li>• Four ch Picture-in-Picture with SuperSource</li> <li>• One ch 2D DVE with 3D Borders and Drop Shadow</li> <li>• Two ch Media Player</li> <li>• MultiMix (floating mixers)</li> <li>• Mix any SD/HD Video Standard</li> <li>• Analog/Digital/Computer</li> </ul>
18 Input, 1 M/E Switcher	 <p>The image shows the front view of the AtemEX 18 Input, 1 M/E Switcher control panel, which is similar to the Atem model but with more inputs. Below it is the 3Gb/s chassis, a rack-mountable unit with a blue front panel and ventilation grilles.</p>	<p><b>AtemEX</b></p> <ul style="list-style-type: none"> <li>• 18 Inputs, 10 Outputs</li> <li>• One M/E Control Panel</li> <li>• Two x 10 Channel Multiviewers</li> <li>• Four Upstream Keyers with ChromaKey</li> <li>• Two Downstream Keyers</li> <li>• Four ch Picture-in-Picture with SuperSource</li> <li>• One ch 2D DVE with 3D Borders and Drop Shadow</li> <li>• Two ch Media Player</li> <li>• MultiMix (floating mixers)</li> <li>• Mix any SD/HD Video Standard</li> <li>• Analog/Digital/Computer</li> </ul>
18 Input, 2 M/E Switcher	 <p>The image shows the front view of the Atem2 18 Input, 2 M/E Switcher control panel, which is more complex than the previous models, featuring two M/E control panels. Below it is the 3Gb/s chassis, a rack-mountable unit with a blue front panel and ventilation grilles.</p>	<p><b>Atem2</b></p> <ul style="list-style-type: none"> <li>• 18 Inputs, 10 Outputs</li> <li>• Two M/E Control Panel</li> <li>• Two x 10 Channel Multiviewers</li> <li>• Two Upstream Keyers per M/E with ChromaKey</li> <li>• Two Downstream Keyers</li> <li>• Four ch Picture-in-Picture with SuperSource</li> <li>• Two ch 3D DVE with 3D Borders</li> <li>• Two ch Media Player</li> <li>• MultiMix (floating mixers)</li> <li>• Mix any SD/HD Video Standard</li> <li>• Analog/Digital/Computer</li> </ul>

## The Professional Choice for Live Video Productions

Harris is the ONE company that addresses the entire content delivery workflow for any digital signal application — from a small number of screens communicating broad messages, to a huge network of screens that display carefully scheduled, targeted content to a specific audience at a precise location, at an exact time. With the incorporation of the Atem™ family of versatile, compact and powerful switchers into the Harris Broadcast portfolio, we can now offer an easy-to-use, feature-rich, cost-effective production solution for even the most critical live productions.

### The Atem Family

The base Atem is a 1M/E system that not only fits into tight production environments, such as OB vans, but also thrives in environments that typically require a multi-M/E switcher. Atem has 10 inputs with internal conversion on every input, allowing any SD or HD signal on the digital input and any analog or computer resolution signal on the multiformat inputs. The input is scaled to match the native operating standard, which can be any SD or HD format. Atem also has eight outputs of which two are user definable and can provide any SD, HD or computer resolution regardless of original format.

AtemEX is an expanded version of the award winning Atem. AtemEX has 18 inputs and 10 outputs as standard and also includes 2 x 10 window multiviewers for production monitoring. Like the standard Atem, AtemEX has internal conversion on every input.

The new Atem2 is a 2 M/E switcher with multi-ME capabilities at a very affordable price. It has identical I/O size and performance as the AtemEX and utilizes a popular 2 M/E control panel.

Every Atem in the family provides unsurpassed format flexibility, key layering capacity, and award-winning features like SuperSource, MultiMix, Stinger transitions and versatile Media Players.

### High Quality 1M/E Control Panel

The Atem and AtemEX control panels feature the highest quality LED switches, fader bar and joystick that are usually only available on more expensive switchers. An intuitive universal system control displays context sensitive options that help with fast-paced production and minimize menu navigation.



### Intuitive 2 M/E Control Panel

The Atem2 control panel comes with easy to read high contrast RGB Mnemonic displays, user-definable graphical macro keys and easy to use system control. Alphanumeric characters or graphics with customizable background colors make it possible to noticeably group inputs. Imagine seeing all VTR inputs in yellow and all camera inputs in blue. Each M/E has five live event macro keys that give the operator one-button control over user definable events. The intuitive system control displays context sensitive options that help with fast paced production and minimize menu navigation.

### Built for Live Production

It is suitable for even the most critical live production. Atem is built on an FAA-certified operating system, providing 24x7 reliability and less than a 15 second boot time. The optional redundant power supply further enhances that reliability.

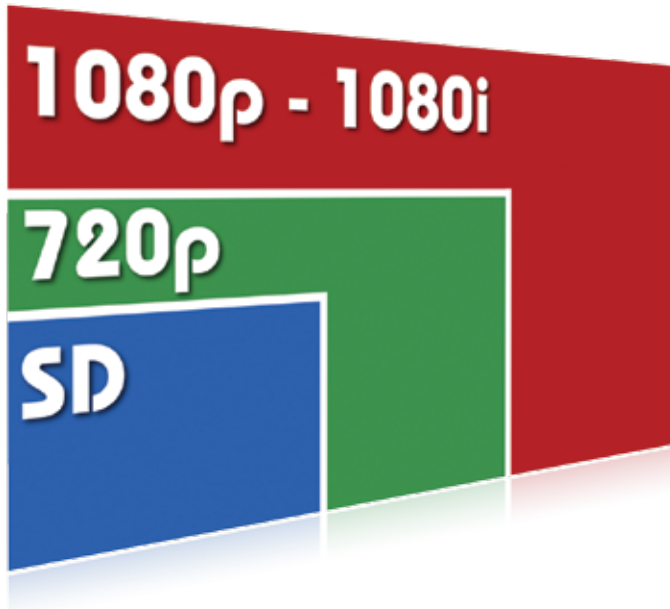
### Simple Management Tools

The software tools included allow easy graphics/clip management, multiviewer configuration, and macro creation. Atem's built-in Web server allows platform-independent system configuration, including source naming, panel mnemonics, and button mapping from any Mac, Windows, or Linux-based Web browser.

# Flexible I/O

## 3 Gb/s 1080p (50 / 59.94) Support

Atem is designed to support the 3 Gb/s HD standard. Operators can produce images in the highest resolution possible today, or be ready for it tomorrow. Atem is capable of processing the new 3 Gb/s 1080p (50 / 59.94) standard in addition to all other popular World TV Standards.



## Mix Any SD/HD Video Standard

Atem's internal processing can be set to operate in any SD or HD standard. Every input has built in up/cross conversion and synchronization, so that Atem can accept a mix of standard definition and high definition signals, timed and un-timed. DVD and Blu-ray players, inexpensive cameras, and existing SD equipment can be used without purchasing additional conversion gear. When operating in high definition, two of the Atem auxiliary outputs offer down/cross conversion making it easy to distribute an SD copy of the program. When converting, full aspect ratio control is provided.

## Analog/Digital/Computer

Atem can input and output any analog, digital or computer signal. Analog signals can be Composite (CVBS), S-Video (Y/C), RGsB, or Component (YPbPr). Digital signals can be SD-SDI or HD-SDI. A wide range of computer resolutions are also supported via HDMI.

## HDMI Inputs / Outputs

HDMI inputs and outputs make Atem the perfect switcher for on-stage presentations. The two HDMI inputs allow standard computer systems to be connected for graphic elements and PowerPoint presentations, without the need for external scan converters. The HDMI and analog outputs are perfect for any projector or large screen display, and Atem's short processing delay eliminates live action lag on the big screen. (HDMI not HDCP-compliant.)

## Built-in Multiviewer

Monitoring your production is simple and inexpensive. Simply connect the dedicated HDMI output to an inexpensive HDMI or DVI display to monitor your sources. Atem includes a 10-channel multiviewer that allows you to monitor up to 10 switcher sources, including inputs, outputs, and internal sources such as SuperSource and Media Players. AtemEX and Atem2 include an additional 10-channel multiviewer that can be used to monitor eight inputs and two switcher sources for a total of 20 sources on two multiviewer outputs. Both multiviewers offer customizable routing, multiple layout options, user definable labels and program/preview tally. When operating in standard definition mode, the multiviewer output remains high definition, displaying two pixel accurate representations of your standard definition source and eight scaled sources.



All switchers in the Atem family have internal conversion on every input. Mix and match SD, HD and computer resolution sources with ease!

# Powerful Production Tools

## SuperSource™ Crosspoint

Ideal for multi-box compositions, Atem includes Echolab's unique and invaluable SuperSource™. SuperSource™ allows the operator to pre-build sophisticated compositions that can be taken to air by pressing the SuperSource™ crosspoint and does not require the use of keys or DVEs. The SuperSource™ includes five of its own keyers and four picture-in-picture generators. Upstream and downstream keyers remain available for adding additional graphics and the DVE remains available for performing interesting DVE transitions.

## Stinger™ (Animated Transitions)

The unique Stinger™ transition makes it easy to perform animated transitions, traditionally only performed by the most experienced operators. With the push of a single button, you can trigger a media player clip and a perfectly timed mix transition. Stinger™ transitions use a unique keyer that has been designed into the transition block, leaving all of the upstream and downstream keyers available for compositing your output.

## MultiMix™ (Floating Mixers)

MultiMix is another groundbreaking innovation developed from user feedback. The system incorporates 'floating' mixers that provide transitions anywhere in the system. With MultiMix it is possible to perform simultaneous transitions on multiple outputs, inside DVE boxes, and between M/Es, letting producers easily manage multi-screen productions with a single M/E switcher. Operationally, MultiMix can be preset to occur whenever a new source is selected or built into recalls and macros so that operators can manage multiple transitions with single button operation.

## 2D DVE with 3D Borders and Drop Shadow

In addition to the unique multi-box SuperSource™, Atem also features an advanced 2D DVE, as standard. The 2D DVE is available in the upstream keyers and includes sophisticated 3D borders and drop shadows. It also can be used to animate or reposition keys on screen. In the transition block it provides compelling program transitions such as pushes, squeezes, and moves.

## 3D DVE with Warp and Lighting

Atem2 includes, as standard, an advanced 2-channel 3D DVE for 3D boxes and curvilinear transitions such as two channel page turns. Powerful lighting and border options can be used to create eye catching productions. The 2 channels are dynamically shared in the system with the Transition Block, and the upstream keyers.



## 12 Key Layers

In addition to the five keyers in SuperSource™ and one keyer in Stinger™ transitions, Atem and AtemEx feature four M/E keys with Chroma key and pattern generators, as well as two downstream keys; a total of 12 key layers. Atem2 has an additional Stinger key in M/E1, providing a total of 13 key layers. With Atem and AtemEX, it is possible to build a 13 layer composition.

## Two-Channel Media Player

Atem features a powerful two channel media player that can be pre-loaded with up to 32 still images and two clips. Each still and clip includes an alpha channel; clips also include audio. Internal stills allow you to include high quality graphics in your production without the need for an external still store. Clips can be used for playing short animations, including lower thirds, bugs, backgrounds, and animated transitions (Stinger™), adding impact to your overall production without the need for an external server.



# Intuitive Workflow

## Powerful Macros

Atem has a powerful macro engine that allows automation of actions for fast-paced production or simplifies production for inexperienced operators. This capability is very powerful in environments with non-professional operators as it allows them to safely and easily take advantage of the full capabilities of the switcher, without sacrificing the quality of the production. Macros are built simply by recording actions on the switcher control panel. Once built, these macros can be sent to a single button for execution. The macro engine incorporates control of external devices such as Inscriber CG systems, VDCP controlled servers and robotic cameras. Almost all switcher functions can be included in a macro. This feature truly allows a user to unleash the creative power of Atem.

## Switch with Confidence

Next transition and Preview transition are two important features that allow a user to harness the power of Atem with confidence. With next transition, the preview output displays all of the elements that will transition to program, giving the operator confidence in making quick layering decisions during production. Preview transition allows a user to inspect the transition prior to taking it to air. Quickly changing from a wipe or DVE transition can now be made with the assurance of how the transition will look when executed. These intuitive features provide confidence and improve the quality of your overall production.

## Harris® Inscriber® Integration

Tight integration between Inscriber and Atem allows you to produce stunning graphics and seamlessly incorporate them into your production. Load projects, cue pages & Strata layers, cue clips, and control playback from the switcher control panel.



## VDCP Server Control

Industry standard VDCP protocol allows Atem to control various servers, including the Harris® NEXIO®. Recall clips and control playback from the switcher control panel or build macros that integrate server recalls with switcher functions.

## Camera Control

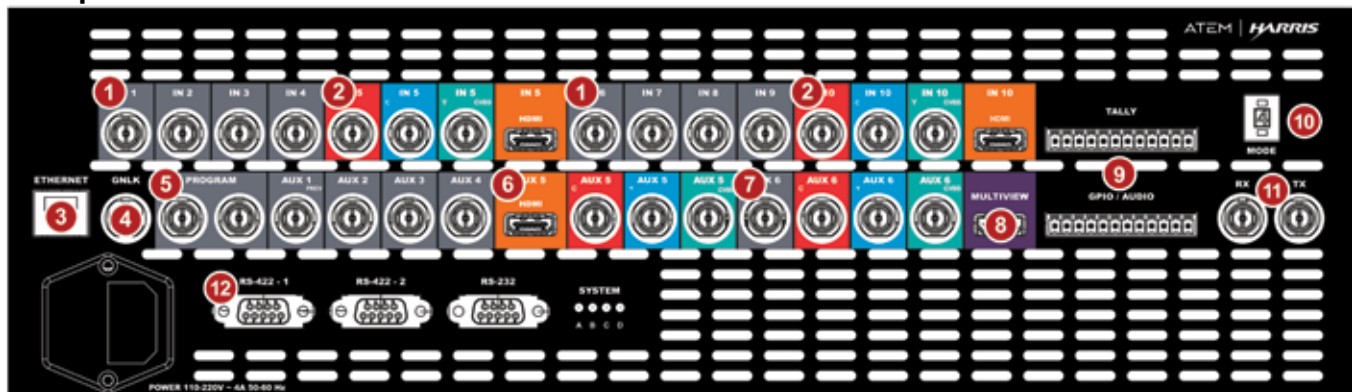
Atem includes camera control so that the TD can “nudge” a camera or recall its preset from the control panel. Pan, Tilt, and Zoom are controlled using the joystick while other functions are available in the system control panel.

## Intuitive Transition Block

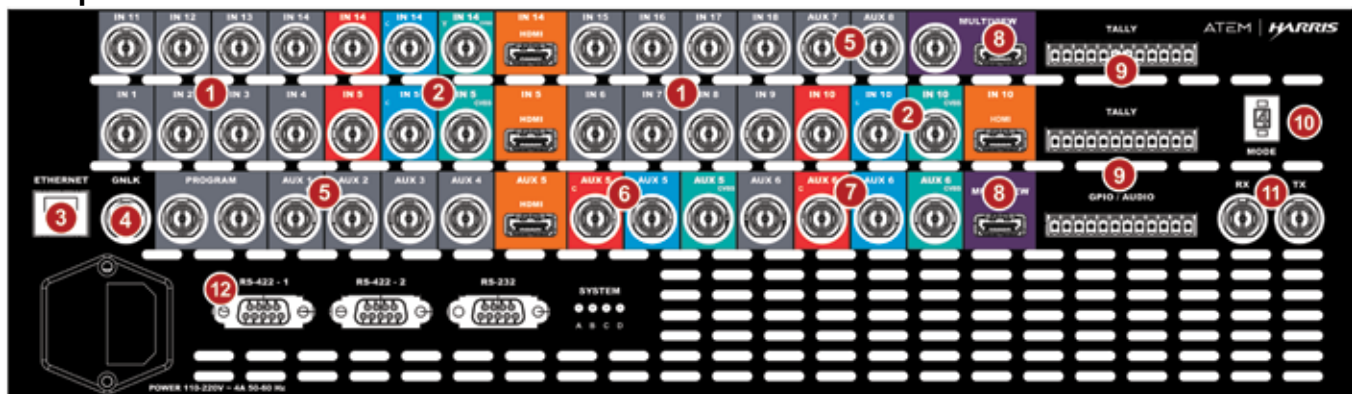
Atem features intuitive next-transition workflow with a variety of transition options. In addition to the standard Cut, Mix, and Wipe transitions found on traditional mixers, Atem features Dip, DVE, and the unique Stinger™ transition.



## 10 Input Chassis



## 18 Input Chassis



### 1 - SDI Inputs

8 or 15 SDI inputs that include built-in frame synchronizers and up/cross converters as standard features so that the inputs can accept any SD or HD signal.

### 2 - Universal Inputs

3 Universal inputs (Input #5, input #10, and Input #14) include A to D converters, frame synchronizers, up/cross converters, and scan converters as standard features. Therefore any SD, HD, or computer signal can be sent to these inputs.

### 3 - Ethernet

100 Base-T Ethernet used to send graphics, access the switchers' configuration web pages, and communicate with Inscribe CG systems.

### 4 - Genlock Input

Accepts analog blackburst but can also run on internal genlock.

### 5 - Program and up to 8 Aux Outputs

There are 6 to 8 outputs in the switchers' native processing format; 2 program and 4 to 6 fully routable auxiliary outputs. 2 additional fully routable auxiliary outputs also have down/cross conversion capability. The 10-input switcher has 6 routable outputs and the 18-input switcher has 8 routable outputs.

### 6 - Auxiliary Output #5

Aux 5 is a universal output with built-in down/cross conversion that can simultaneously output analog and HDMI.

### 7 - Auxiliary Output #6

Aux 6 is a universal output with built-in down/cross conversion that can simultaneously output analog and SDI.

### 8 - Multiviewer

The Multiviewer output displays a 10 channel multiviewer that can monitor any source in the switcher. The 18-input ATEM has another multiviewer output for monitoring the 8 additional inputs and two additional switcher sources.

### 9 - Tally/GPIO/Audio

Industry standard connectors for 8 user configurable tally, 3 GPI, and 2 GPO connections. S/PDIF or AES3 audio is supported for animated stinger transitions.

### 10 - Mode Switch

The Mode switch allows the switcher to be configured and operated in up to 8 different modes. The switcher can be switched from SD to HD operation by simply changing the mode switch.

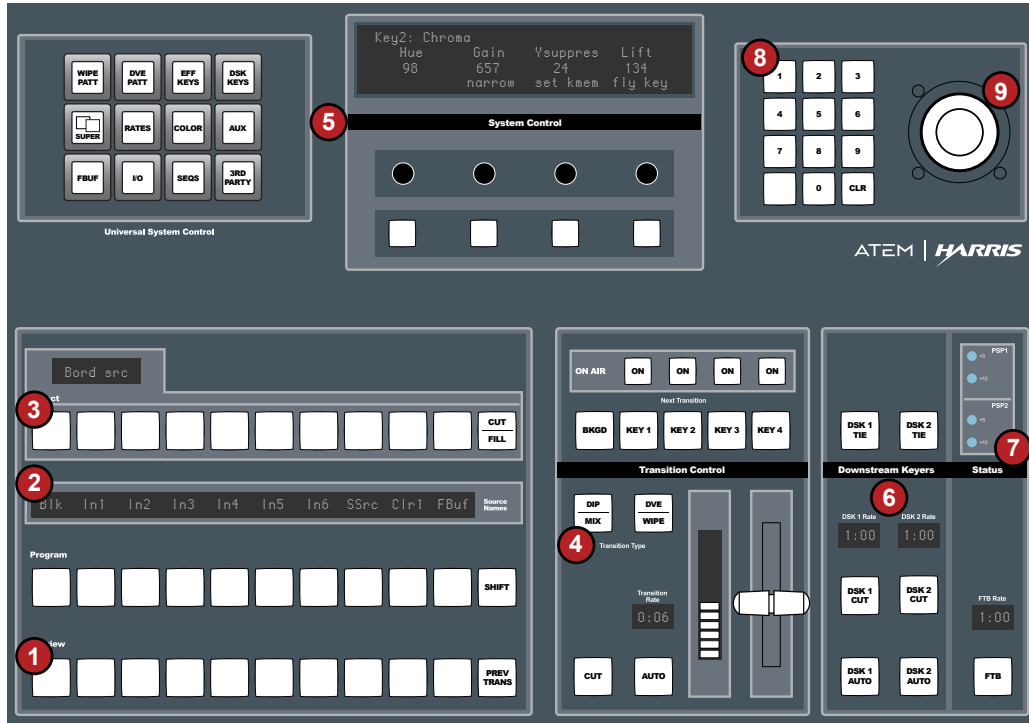
### 11 - Control Panel Connections

The Chassis and Control Panel are connected using two 75-Ohm coaxial cables. The maximum length of separation is 300 meters.

### 12 - System Status and RS-422 Connections

The System Status lights show genlock and operational status of the switcher. The master RS-422-1 port is used to control VDCP enabled servers. The slave RS-422-2 port allows the switcher to be controlled using the VVG100 protocol. The RS-232 port is reserved for diagnostics.

# 1M/E Panel



## 1 - 10 Direct Access Crosspoint Buttons

10 crosspoint buttons that provide access to 20 sources (shifted). Colored LED buttons show on-air status for confident live production.

## 2 - User Definable Crosspoint Mnemonics

High contrast 4 character crosspoint mnemonics are standard on every panel.

## 3 - Source/Destination Bus

Quickly assign sources to keyers and auxiliary outputs.

## 4 - Transition Block With Look Ahead Preview

Intuitive next transition workflow featuring Cut, Mix, Wipe, Dip, DVE and Stinger™ transitions.

## 5 - Context Sensitive Universal System Control

Select wipe patterns, build DVE moves, configure keyers and more. The knobs are used to adjust parameters such as clip gain, Hue, border width, and others. Additionally control external devices such as VTR's, CG's and Clip-Stores.

## 6 - Traditional DSK Block

Provides a dedicated location for the downstream keyers. Each DSK has independent control for CUT and AUTO transitions.

## 7 - System Status

Indicators show status of each power supply in the system. Dual auto switching power supplies are optional.

## 8 - Data Entry

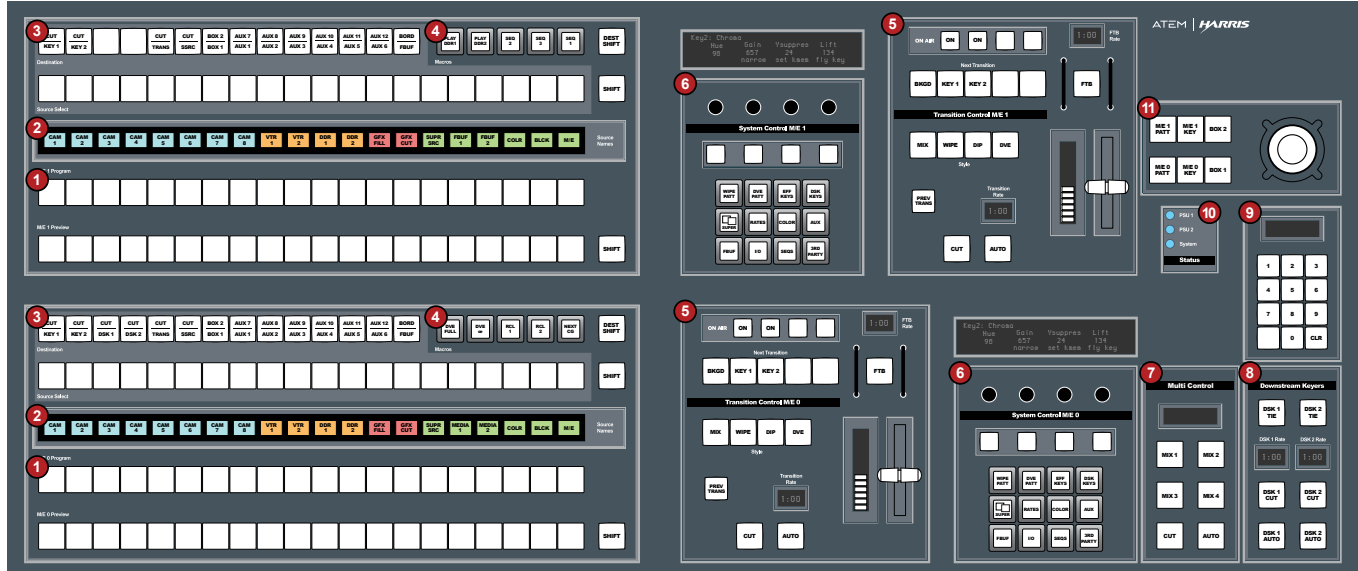
Enter numeric data for loading and saving stills, organic wipes, and M/E presets.

## 9 - Joystick Control

A high-quality 3-axis Joystick provides the ability to easily position, scale, or rotate elements such as DVE's, wipes, and SuperSource™ boxes. It is also used to control pan, tilt and zoom on remote camera systems.



# 2M/E Panel



## 1 - 20 Direct Access Crosspoint Buttons

20 crosspoint buttons that provide access to 40 sources (shifted).

## 2 - User Definable Crosspoint Mnemonics

High contrast RGB crosspoint mnemonics are standard on every panel.

## 3 - Source/Destination Bus

Quickly assign sources to keyers and auxiliary outputs.

## 4 - User Definable Macro Keys

One button control over user definable events.

## 5 - Transition Block With Look Ahead Preview

Intuitive next transition workflow featuring Cut, Mix, Wipe, Dip, DVE, Stinger™ and Fade To Black transitions on each of the 2 M/E's.

## 6 - Context Sensitive System Control Block

Select wipe patterns, build DVE moves, configure keyers and more. The knobs are used to adjust parameters such as clip gain, Hue, border width, and others. Additionally control external devices such as VTR's, CG's and Clip-Stores.

## 7 - Multi Control Block

User defined control block to conveniently manage MultiMix™ mixers.

## 8 - Traditional DSK Block

Provides a dedicated location for the downstream keyers.

## 9 - Data Entry

Enter numeric data for loading and saving stills, organic wipes, and M/E presets.

## 10 - System Status

Warns you of any failures in the system.

## 11 - Joystick Control Block

A high quality 3-axis Joystick provides the ability to easily position, scale, or rotate elements such as DVE's, wipes, and SuperSource™ boxes. It is also used to control pan, tilt and zoom on remote camera systems.

## Specifications

Specifications are subject to change without notice.

Atem Chassis	Atem	AtemEX	Atem2
Video Processing	10 bit 4:2:2	10 bit 4:2:2	10 bit 4:2:2
External Reference	Analog (NTSC/PAL)	Analog (NTSC/PAL)	Analog (NTSC/PAL)
Size in RU	3 RU	3 RU	3 RU
Width	19 Inches, 48.26 cm	19 Inches, 48.26 cm	19 Inches, 48.26 cm
Height	5.25 Inches, 13.33 cm	5.25 Inches, 13.33 cm	5.25 Inches, 13.33 cm
Depth	16 Inches, 40.64 cm	16 Inches, 40.64 cm	16 Inches, 40.64 cm
Weight	15.4 lb.	17 lb.	17 lb.
<b>Internal Processing Formats (User Selectable)</b>			
525/59.94i (NTSC)	Yes	Yes	Yes
625/50i (PAL)	Yes	Yes	Yes
720/59.94p	Yes	Yes	Yes
720/50p	Yes	Yes	Yes
1080/59.94i	Yes	Yes	Yes
1080/50i	Yes	Yes	Yes
1080/59.94p	Requires Firmware Upgrade	Requires Firmware Upgrade	Requires Firmware Upgrade
1080/50p	Requires Firmware Upgrade	Requires Firmware Upgrade	Requires Firmware Upgrade
<b>Input Configuration</b>			
SDI - (SMPTE 259M, 292M, 424M)	8	15	15
Analog / HDMI - (CVBS, Y/C, YPbPr, HDMI)	2	2	2
SDI / Analog / HDMI - (SMPTE 259M, 292M, 424M, CVBS, Y/C, YPbPr, HDMI)		1	1
Internal Frame Synchronizers	10	18	18
Internal Up/Cross Conversion	10	18	18
Processing Delay - (no conversion / no frame sync)	1 Line	1 Line	1 Line
Input "Self-Timing" Window	+/- 3/8 Line	+/- 3/8 Line	+/- 3/8 Line
Auto Equalization	250 Meters Max @ 270Mbps	250 Meters Max @ 270Mbps	250 Meters Max @ 270Mbps
Return Loss	15dB Minimum	15dB Minimum	15dB Minimum
<b>Output Configuration</b>			
Program Outputs	2 (SDI in Native Resolution)	2 (SDI in Native Resolution)	2 (SDI in Native Resolution)
Preview Output	1 (SDI in Native Resolution)	1 (SDI in Native Resolution)	1 (SDI in Native Resolution)
Aux 1	1 (SDI in Native Resolution)	1 (SDI in Native Resolution)	1 (SDI in Native Resolution)
Aux 2	1 (SDI in Native Resolution)	1 (SDI in Native Resolution)	1 (SDI in Native Resolution)
Aux 3	1 (SDI in Native Resolution)	1 (SDI in Native Resolution)	1 (SDI in Native Resolution)
Aux 4	HDMI & Analog (CVBS, Y/C, YPbPr, RGSB)	HDMI & Analog (CVBS, Y/C, YPbPr, RGSB)	HDMI & Analog (CVBS, Y/C, YPbPr, RGSB)
Aux 5	SDI & Analog (CVBS, Y/C, YPbPr, RGSB)	SDI & Analog (CVBS, Y/C, YPbPr, RGSB)	SDI & Analog (CVBS, Y/C, YPbPr, RGSB)
Aux 6		1 (SDI in Native Resolution)	1 (SDI in Native Resolution)
Aux 7		1 (SDI in Native Resolution)	1 (SDI in Native Resolution)
Internal Down/Cross Conversion	2	2	2
Output Signal Levels	Compliant with All World Standards	Compliant with All World Standards	Compliant with All World Standards
<b>Media Player</b>			
Channels	2 Fill + 2 Key	2 Fill + 2 Key	2 Fill + 2 Key
Stills	32 (Fill + Key)	32 (Fill + Key)	32 (Fill + Key)
Clips	2 (Fill + Key)	2 (Fill + Key)	2 (Fill + Key)
Clip Length in 1080i HD	Maximum 180 Frames	Maximum 180 Frames	Maximum 180 Frames
Clip Length in 720p HD	Maximum 360 Frames	Maximum 360 Frames	Maximum 360 Frames
Clip Length in SD	Maximum 900 Frames	Maximum 900 Frames	Maximum 900 Frames
Audio Interface	AES/EBU 110Ω Twisted Pair	AES/EBU 110Ω Twisted Pair	AES/EBU 110Ω Twisted Pair
Audio Format	8/16bits 48kHz (Stereo/Mono)	8/16bits 48kHz (Stereo/Mono)	8/16bits 48kHz (Stereo/Mono)
Clip/Still Format	TGA, BMP, JPEG, PNG, GIF	TGA, BMP, JPEG, PNG, GIF	TGA, BMP, JPEG, PNG, GIF
<b>Multi-Definition Multiviewer</b>			
Number of Windows	10	2 x 10	2 x 10
Connector	HDMI + SDI	HDMI + SDI	HDMI + SDI
Tally	Yes	Yes	Yes
Window Sources	User Routable	User Routable	User Routable
Window Names	8 Characters	8 Characters	8 Characters
<b>Features</b>			
Total Number of Keyers	12	12	13
M/E Keyers	4	4	4 (2 per M/E)
Downstream Keyers	2	2	2
SuperSource™ Keyers	5	5	5
SuperSource™ Box Generators	4 x 2D Picture-in-Picture	4 x 2D Picture-in-Picture	4 x 2D Picture-in-Picture
Transition Keyer (Stinger™/DVE)	1	1	2
Number of Visible Layers	13 (12 Keys Over Background)	13 (12 Keys Over Background)	14 (13 Keys Over Background)
2D DVE with 3D Borders & Drop Shadow	1 Channel	1 Channel	N/A
3D DVE with 3D Borders, warp & lighting	N/A	N/A	2 Channels

<b>Supported Computer Resolutions</b>			
VESA - 640 x 480 @ 60Hz	Input / Output	Input / Output	Input / Output
VESA - 800 x 600 @ 60Hz	Input / Output	Input / Output	Input / Output
VESA - 1024 x 768 @ 60Hz	Input / Output	Input / Output	Input / Output
VESA - 1280 x 1024 @ 60Hz	Input / Output	Input / Output	Input / Output
PCTV - 720 x 486p @ 60Hz	Input Only	Input Only	Input Only
PCTV - 720 x 576p @ 50Hz	Input Only	Input Only	Input Only
PCTV - 1280 x 720 @ 60Hz, 50Hz	Input Only	Input Only	Input Only
PCTV - 1920 x 1080i @ 60Hz, 50Hz	Input Only	Input Only	Input Only
PCTV - 1920 x 1080p @ 60Hz, 50Hz	Input Only	Input Only	Input Only
<b>Connectivity</b>			
Edit Port (RS 422)	2	2	2
Serial Port (RS 232)	1	1	1
Ethernet	100Mbps Full Duplex	100Mbps Full Duplex	100Mbps Full Duplex
Tally Relays	8 User Programmable	16 User Programmable	16 User Programmable
GPI	3 User Programmable	3 User Programmable	3 User Programmable
GPO	2 User Programmable	2 User Programmable	2 User Programmable
<b>Configuration Interface</b>			
Source Naming	Web-Based	Web-Based	Web-Based
Source Mapping	Web-Based	Web-Based	Web-Based
GPIO / Tally	Web-Based	Web-Based	Web-Based
Multiviewer Labels	Windows-Based	Windows-Based	Windows-Based
Graphics Management	Windows-Based	Windows-Based	Windows-Based
Macro Editor	Windows-Based	Windows-Based	Windows-Based
<b>Chassis Power</b>			
Redundant Power Supply	Factory Option	Factory Option	Factory Option
Input Voltage	120-220V~, 500VA, 50-60Hz	120-220V~, 500VA, 50-60Hz	120-220V~, 500VA, 50-60Hz
Power Usage	125W	175W	175W
<b>Atem Panel</b>			
Direct Cross Points	10	10	20
Shifted Cross Points	10	10	20
Crosspoint Button Type	NKK Soft Touch, Tri-Color LED	NKK Soft Touch, Tri-Color LED	NKK Soft Touch, Tri-Color LED
Crosspoint Display	4 Character LED	4 Character LED	High Contrast RGB Bitmap
Next Transition Selectors	BKG, Key1 - Key4	BKG, Key1 - Key4	BKG, Key1 - Key2
On-Air Indicator	Yes	Yes	Yes
DSK Transition Selectors	Auto, Cut, Tie/Pww	Auto, Cut, Tie/Pww	Auto, Cut, Tie/Pww
Preview Next Transition	Yes	Yes	Yes
Transition Rate Displays	Yes	Yes	Yes
Panel Display	4 Line Interactive	4 Line Interactive	4 Line Interactive
Menu System	Context-Sensitive LED Bitmap Buttons	Context-Sensitive LED Bitmap Buttons	Context-Sensitive LED Bitmap Buttons
Fader Bar	1	1	2
3 Axis Joystick	Yes	Yes	Yes
Rotary Encoders	Yes	Yes	Yes
Numeric Keypad	Yes	Yes	Yes
Remote Auxiliary Panel	Optional	Optional	Optional
<b>Panel Dimensions</b>			
Width	17.63" (44.78cm)	17.63" (44.78cm)	37.27" (94.67cm)
Height	6.92" (17.57cm)	6.92" (17.57cm)	5.12" (13cm)
Depth	15.08" (38.3cm)	15.08" (38.3cm)	14.14" (35.92cm)
Weight	13.2 lbs	13.2 lbs	33.6 lbs
Cutout Width			36.27" (92.13cm)
Cutout Depth			16.67" (42.34cm)
<b>Panel Power</b>			
Redundant Power Supply	Factory Option	Factory Option	Factory Option
Input Voltage	120-220V~, 110VA, 50-60Hz	120-220V~, 110VA, 50-60Hz	120-220V~, 110VA, 50-60Hz
Power Usage	40W	40W	75W

### **ONE Company for Workflow Solutions Throughout the Media Chain**

Harris is the ONE company delivering interoperable workflow solutions across the entire media delivery chain — providing today's broadcaster with a single, integrated approach to capitalize on the benefits of IT and mobile applications. By providing unparalleled interoperability across our product portfolio, Harris is able to offer customers integrated solutions that improve workflows, save money, enable new revenue streams and provide a migration path to emerging media business models. To meet the evolving needs of broadcast, distribution, government agencies and entertainment businesses, Harris is the ONE answer for change.

### **Service And Support**

At Harris, we are committed to customer service excellence. It is our goal to provide the highest level of support by applying a simple rule: We take ownership of helping our customers succeed. Our support teams consist of innovative technical experts who support all situations regarding product performance, integration and operational processing. We are adept at providing proven solutions, making workflows better and ensuring reliability of the product and system. At Harris, our experienced and dedicated teams stand ready to help you meet your goals for premium product performance, 100% up-time and reduced maintenance investment.

### **Warranty**

Because we want to assure you that Harris stands beside its products and system solutions, our products carry a standard set of warranty services, which are competitive with — and in some cases outperform — others in the industry.

### **Service Packages**

We offer value-add services that allow you to customize the level of services you need in meeting mission-critical performance levels. Our service package options offer many ways to upgrade your standard warranty by choosing the All-Inclusive OnePak, or by selecting individual services from our extensive portfolio. Our service and support advisors can assist in the selection of the individual services that best suit your requirements.

<b>North America</b>	+1 800 231 9673
<b>Caribbean and Latin America</b>	+1 786 437 1960
<b>Europe, Middle East and Africa</b>	+44 (0) 118 964 8200
<b>Asia, Pacific Rim</b>	+852 2776 0628

**For more information, please visit [www.broadcast.harris.com](http://www.broadcast.harris.com).**

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