

ATEM 4K Production Switchers

Blackmagicdesign





ATEM Production Studio 4K



ATEM 1 M/E Production Studio 4K



ATEM 2 M/E Production Studio 4K



ATEM 4 M/E Broadcast Studio 4K

ATEM Live Production Switchers

The professional production switchers for SD, HD and Ultra HD!

Create stunning multi camera live production with the world's most advanced production switchers! ATEM can instantly change between SD, HD or Ultra HD video standards so you can form exciting live production with a wide range of video sources such as cameras, disk recorders and slide shows or animation from computers. You get powerful features

such as chroma key, creative transitions, media pool, downstream keyers, audio mixer, multi view and more! The more advanced models include features such as up to 20 SDI inputs, SuperSource multi-layer engine, full motion DVE, stinger transitions, larger media pool with full motion clips and up to an incredible 6 auxiliary outputs!

Advanced Live Production

Creative features with advanced technology

Take your live production beyond broadcast quality! ATEM live production switchers have all the features you need for the most innovative live concerts, sporting events, theater productions, conferences and more! When you're doing live events with super large high resolution screens, then simply switch your ATEM live production switcher to Ultra HD for incredible quality. Many live events now use massive high resolution LED screens and projectors and now you can drive those screens in full resolution!

Innovative Design

Elegant machined metal design in a super compact size!

ATEM live production switchers feature an elegant machined aluminum front panel with dedicated buttons to let you switch auxiliary outputs. You can use the built in video screen to monitor auxiliary outputs or a technical monitor to help during set up! You get the highest quality video and audio connections that switch virtually all SD, 720p HD, 1080i HD, 1080p HD and Ultra HD formats, plus built in multi voltage power supplies so you can take your switcher anywhere in the world!

Professional Connections

Standard connections for quality and reliability!

ATEM uses industry standard BNC connections for SDI video and XLR connectors for balanced analog audio so you get robust broadcast quality connections that maintain signal quality and support years of reliable operation. For compatibility with consumer cameras and computers, HDMI connections are built in, eliminating the need for cumbersome external converters. Because the video connections support 6G-SDI and HDMI 4K you get a future proof design and the latest video technology.



ATEM 4 M/E Broadcast Studio 4K



ATEM 1 M/E Advanced Panel

- Preview Source Buttons**
Buttons illuminate green when source is selected on preview.
- Source Select Buttons**
Choose sources for keyers, as well as running macros.
- Transition Control and Upstream Keyers**
Select one of five types of transitions.
- Transition Fader**
Controls the transition manually for special effects.
- M/E Selection Buttons**
Select which M/E to control.
- Fade To Black Button**
Fade program output to black.

Powerful Software and Hardware Control

Get innovative software control or choose a hardware panel

ATEM live production switchers have the widest range of control options! You get full switcher control from any laptop or desktop computer with the included ATEM software control panel for both Mac and Windows. For demanding live production environments you can add a hardware based panel such as the new ATEM 1 M/E Advanced Panel or the ATEM 2 M/E Broadcast Panel, which feature the highest quality buttons, knobs and faders for even faster switching! You also get an SDK for custom control. Only ATEM gives you such a wide range of control options!

ATEM Software Control



FREE software control for Mac and PC

ATEM 1 M/E Advanced Panel



ATEM 2 M/E Broadcast Panel





Multi View Monitoring

Use a single screen for all your monitoring!

ATEM Production Studio 4K switchers let you connect loads of sources and monitor them all at the same time using the built in multi view. Multi view makes it easy to see your cameras, graphics, preview and program outputs on a single screen. That means you don't need lots of monitors to see all your individual cameras! You get HDMI and SDI multi view outputs so you can connect to professional broadcast SDI monitors or even low cost big screen televisions using the HDMI multi view output! The advanced ATEM 2 M/E Production Studio 4K model features 2 independent multi view outputs so you can see up to 16 cameras across 2 screens.

PREVIEW		PROGRAM		PREVIEW		PROGRAM	
1	2	3	4	9	10	11	12
5	6	7	8	13	14	15	16

16 Inputs on ATEM 2 M/E and 4 M/E models

The advanced ATEM 2 M/E Production Studio 4K model features 2 independent multi view outputs so that you can monitor up to 16 cameras simultaneously across 2 screens!

Highest Quality Connections

Connect to SDI and HDMI equipment in SD, HD and Ultra HD!

Inputs

ATEM switchers include advanced 6G-SDI and HDMI inputs that are SD, HD or Ultra HD switchable up to 2160p30 while the advanced ATEM Broadcast Studio 4K model features 20 12G-SDI inputs for working in HD and Ultra HD up to 2160p60. Every input supports embedded audio mixing and features a frame resynchronizer so you can use sources without genlock such as laptop computers for live PowerPoint™ presentations! You also get 2 balanced XLR audio inputs for connecting professional mixers and a HiFi audio input for consumer equipment like an iPod.®

Outputs

Get all the outputs you need to record your video master and to broadcast your program to the audience at the event! ATEM includes program and down converted program outputs plus auxiliary outputs allowing clean feeds, perfect for connecting to giant outdoor LED screens, projectors, disk recorders, monitors and broadcast decks! The multi view outputs are 1080i HD so you can use any TV or monitor. You also get a balanced XLR output of your audio mix, which is also embedded into all video outputs.



ATEM 4 M/E Broadcast Studio 4K

SDI

Features 20 12G-SDI inputs for working in HD and Ultra HD.

REFERENCE

Black Burst and Tri-Sync genlock input.

POWER

Two built in 110 – 240V power connections.

ETHERNET

For connecting to computers or hardware control panels.

AUDIO

Two balanced XLR audio inputs for connecting professional mixers.

PROGRAM

Main SDI program outputs plus separate down converted HD-SDI output.

AUX

Six AUX outputs for clean feeds or driving large screens and projectors.

MULTIVIEW

Two Ultra HD multi views to see program, preview and 16 sources.

6G-SDI Flexibility

The flexibility to work in SD, HD or Ultra HD!

All switchers support 6G-SDI so you can work in the highest quality Ultra HD, and because the SDI connections are regular BNC connectors, you can also select the switcher to any format and simply plug into your SD or HD equipment. 6G-SDI supports any SDI format from SD, HD, up to Ultra HD 2160p30. That means 6G-SDI gives you compatibility to work in any format, plus you can switch to Ultra HD for incredible quality that's 4 times the resolution of HD! Work in SD, 720p, 1080i or 1080p up to 60fps as well as Ultra HD up to 30 fps all on the one switcher!

12G-SDI Performance

When you need high frame rate, fast action production!

The incredibly advanced ATEM 4 M/E Broadcast Studio 4K model goes beyond the 6G-SDI of other ATEM switchers because it includes the latest 12G-SDI for twice the frame rate of the other models, up to an incredible 2160p60. That's frame rates of up to 60 fps in Ultra HD! 12G-SDI also supports all regular 720p, 1080i and 1080p HD video formats, which means you have the switcher you can use today for regular HD work, while being ready for Ultra HD when you need! Only 12G-SDI gives you high frame rate Ultra HD via a single BNC connection that also plugs into all your regular HD equipment!

Creative Transitions

Get dozens of exciting effects and transitions!

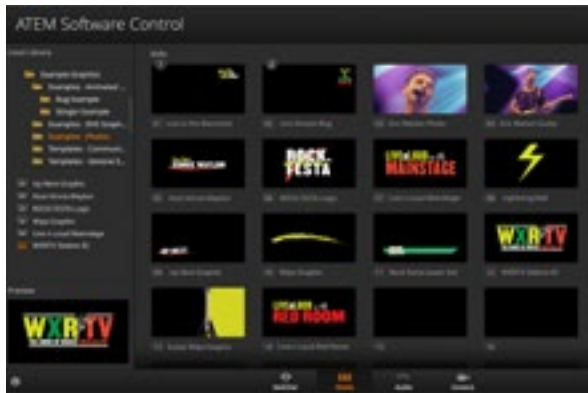
ATEM includes a huge range of real time high quality transitions that are available in all SD, HD or Ultra HD resolutions! Use mixes, dips, wipes and more for amazing broadcast quality live switching! Every transition is instantly available and you get full control of the transition type, pattern, length and other attributes. Create a customized 'on air' look using the large choice of wipe patterns. The ATEM 1 M/E and 2 M/E Production Studio 4K models also include animated stingers and DVE transitions!



Use the DVE in ATEM 1 M/E Production Studio 4K to position, resize, rotate and scale live video, creating professional picture-in-picture effects.

SuperSource

Add multi box compositions quickly and easily with ATEM SuperSource! Available on the ATEM 2 M/E Production Studio 4K and ATEM 4 M/E Broadcast Studio 4K, you get a completely separate 5 layer switcher with the power of 4 picture in picture DVEs and 4 keyers that you can assign to any ATEM video input! Imagine using SuperSource for multi camera interviews or picture in picture production while leaving all your M/Es, keyers and DVE completely free for other tasks. SuperSource compositions can also be quickly saved and recalled in an instant!



Choose from instantly available wipe, mix, dip, DVE and stinger transitions!

Digital Video Effects

Position, resize, rotate and scale in real time!

The advanced ATEM 1 M/E and 2 M/E Production Studio 4K, and 4 M/E Broadcast Studio 4K models include a powerful digital video effects processor. Use this amazing high quality DVE to position, resize, rotate and scale live video all in real time. Create professional picture-in-picture effects with customizable 3D borders, shadows and lighting. Add dynamic DVE transitions to your production with squeeze, push, swoosh and spin effects that displace your live video revealing the next source. You can even use the DVE for graphic wipe transitions!



Dual Media Players

Large graphics memory!

ATEM production switchers include media pool memory that lets you download still frames and graphics for keying using the two built in media players. All popular image formats are supported, or you can direct download from Photoshop CC with the included plug in. ATEM Production Studio 4K models support up to 32 Ultra HD RGBA still frame graphics, while ATEM 4 M/E Broadcast Studio 4K supports 64 Ultra HD RGBA still frame graphics and 180 frames of real time Ultra HD video or 720 frames of real time 1080 HD video.

Power Macros

The fastest way to set up and automatically trigger events!

To automate complex sequences of precisely timed actions on your ATEM switcher, you can now create powerful shortcuts called macros. Record a sequence of transitions between video sources, including key effects, audio mixer adjustments, camera control settings and more using the ATEM software or hardware control panel. Macros are saved as

XML files that can even be edited with a standard text editor so you can combine them together to build sophisticated sequences that would be impossible to execute manually during a live production! That means you can create unique looks for your programs that can be recalled instantly, copied between switchers and used over and over again!



Software Control Panel

Switcher control on Mac or PC!

Included free with every ATEM Production Studio 4K Switcher is the beautifully designed ATEM software control panel for both Mac and Windows. With a full visual switcher control panel and parameter palettes for quick switcher adjustments, you can load graphics into

the media pool, adjust the audio mixer, control and balance cameras, update switcher settings and more! For the ultimate in portability you can use the ATEM software on a laptop, so you can work easily in small spaces with full control of all the switcher’s features!



Switch
Switch between all of your sources, adjust transitions, add upstream and downstream keyers and more.



Audio
Use the built in mixer to adjust levels from all inputs, view meters, turn channels on or off, use AFV and more.



Media
Drag and drop up to 20 RGBA graphics into the media pool to automatically upload them to your switcher.



Camera
Remotely control the camera’s built in color corrector, lens settings and adjust camera parameters via the SDI connection from the switcher with compatible cameras.



Independent Aux Output

Feed big screens on stage!

ATEM switchers have independent auxiliary outputs that are perfect for feeding big video screens on stage or can also be used to send "clean feeds" without on air graphics to recorders for program mastering. The front panel buttons and screen make it easy to select sources that you want to send to the aux output. Auxiliary outputs can be selected to any video input, media players, the preview bus, test signals and more! Aux outputs are fantastic for tech monitoring with SmartScope Duo 4K.



Advanced Chroma Keyer

Introducing the new ATEM Advanced Chroma Keyer!

All ATEM switchers feature built in chroma, luminance, linear and pattern keyers, however the new advanced ATEM 4 M/E Broadcast Studio 4K model now features a new next generation advanced chroma keyer that lets you pull incredibly clean keys for truly professional, broadcast quality live composites. The advanced keyer features adjustable on-screen controls for selecting and sampling a region of color from the image. The new keyer also features foreground, background and edge

adjustment controls, along with chroma correction tools for spill and flare suppression so you can fine tune the key. Best of all, on the new ATEM 4 M/E Broadcast Studio 4K model you now get 4 advanced chroma keyers on each of the 4 mix effects rows so you can create massive multi layer effects! Plus all ATEM switcher models include an extra 2 independent downstream keyers for logos, titles and other ‘on air’ graphics. That’s a massive number of standard built in keyers!

Technical Specifications

	ATEM 4 M/E Broadcast Studio 4K	ATEM 2 M/E Production Studio 4K	ATEM 1 M/E Production Studio 4K	ATEM Production Studio 4K
Total Video Inputs	20	21 with 20 active.	11 with 10 active.	8
Total Video Outputs	13	16	10	6
Total Aux Outputs	6	6	3	1
SDI Rates	1.5G, 3G, 6G, 12G	270Mb, 1.5G, 3G, 6G	270Mb, 1.5G, 3G, 6G	270Mb, 1.5G, 3G, 6G
Total Audio Inputs	2 x XLR, 2 x RCA.	2 x XLR, 2 x RCA.	2 x XLR, 2 x RCA.	2 x XLR, 2 x RCA.
Total Audio Outputs	2 x XLR Program, 2 x XLR Monitor.	2 x XLR Program, 2 x XLR Monitor.	2 x XLR Program.	2 x XLR Program.
Timecode Connection	1 x XLR Timecode in. and 1 x XLR Timecode out.	1 x XLR Timecode in. and 1 x XLR Timecode out.	None	None
Reference Input	Tri-Sync or Black Burst.	Tri-Sync or Black Burst.	Tri-Sync or Black Burst.	Tri-Sync or Black Burst.
Video Input Re-Sync	On all 20 inputs.	On all 20 inputs.	On all 10 inputs.	On all 8 inputs.
SD Video Standards	None	525i59.94 NTSC, 625i50 PAL	525i59.94 NTSC, 625i50 PAL	525i59.94 NTSC, 625i50 PAL
HD Video Standards	720p50, 720p59.94, 1080p23.98, 1080p24, 1080p25, 1080p29.97, 1080p50, 1080p59.94, 1080i50, 1080i59.94	720p50, 720p59.94, 1080p23.98, 1080p24, 1080p25, 1080p29.97, 1080p50, 1080p59.94, 1080i50, 1080i59.94	720p50, 720p59.94, 1080p23.98, 1080p24, 1080p25, 1080p29.97, 1080p50, 1080p59.94, 1080i50, 1080i59.94	720p50, 720p59.94, 1080p23.98, 1080p24, 1080p25, 1080p29.97, 1080p50, 1080p59.94, 1080i50, 1080i59.94
Ultra HD Video Standards	2160p23.98, 2160p24, 2160p25, 2160p29.97, 2160p50, 2160p59.94	2160p23.98, 2160p24, 2160p25, 2160p29.97	2160p23.98, 2160p24, 2160p25, 2160p29.97	2160p23.98, 2160p24, 2160p25, 2160p29.97
Upstream Keyers	16 with Chroma/ Linear/Luma key.	4 with Chroma/ Linear/Luma key.	4 with Chroma/ Linear/Luma key.	1 with Chroma/ Linear/Luma key.
Downstream Keyers	2	2	2	2
Talkback Support	None	None	None	None
Mix Minus Support	None	None	None	None
Transition Keyer (Stinger/DVE)	1 Stinger, 1 DVE.	1 Stinger, 1 DVE.	1 Stinger, 1 DVE.	None
Total Number of Layers	26	13	8	4
Pattern Generators	19	8	7	3
Color Generators	2	2	2	2
DVE with 3D Borders and Drop Shadow	1	1	1	None
Multi View Monitoring	2 x 10 Views for 20 total views.	2 x 10 Views for 20 total views.	1 x 10 views.	1 x 10 views.
Multi View Video Standard	Select HD or Ultra HD.	HD	HD	HD
Media Players	4	2	2	2
Media Pool Still Image Capacity	64 with fill and key.	32 with fill and key.	32 with fill and key.	20 with fill and key.
Media Pool Clip Capacity	2 with fill and key.	2 with fill and key.	2 with fill and key.	None
Media Player Clip Length 720 HD	3200 frames	1600 frames	1600 frames	None
Media Player Clip Length 1080 HD	1440 frames	720 frames	720 frames	None
Media Player Clip Length Ultra HD	360 frames	180 frames	180 frames	None
Media Pool Still Image Format	PNG, TGA, BMP, GIF, JPEG and TIFF.	PNG, TGA, BMP, GIF, JPEG and TIFF.	PNG, TGA, BMP, GIF, JPEG and TIFF.	PNG, TGA, BMP, GIF, JPEG and TIFF.
Media Pool Audio Format	WAV, MP3 and AIFF.	WAV, MP3 and AIFF.	WAV, MP3 and AIFF.	None
Control Panel	Software or optional hardware panel.	Software or optional hardware panel.	Software or optional hardware panel.	Software or optional hardware panel.
Power Supply	2 x Internal 110 - 240V AC.	2 x Internal 110 - 240V AC.	1 x Internal 110 - 240V AC.	1 x Internal 110 - 240V AC.

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