

Production Switchers

Feature Comparison

MOSAIC

CARBONITE Ultra

Ultrix CARBONITE

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ROSS

ROSS		PHYSICAL			
		CARBONITEUltraMOSAIC		Ultrix CARBONITE MOSAIC	
				FR2	FR5
Rack Frame Height (RU)		1	2	5	12
Rack Frame Width		18.98" (482.10 mm)	17.50" (444.5 mm)	17.50" (444.5 mm)	17.50" (444.5 mm)
Rack Frame Depth		10.00" (254.00 mm)	7.90" (200.66 mm)	7.90" (200.66 mm)	15.91" (404.11 mm)
Rack Frame Weight		13.00 lbs. (5.90 kg.)	12.00 lbs.(frame only) (5.44 kg.) Blade (approx.) 3 lbs. (1.36 kg.) Ultripower: 10.6 lbs. (4.83 kg.)	14.00 lbs. (frame only) (6.35 kg.) Blade (approx.) 3 lbs. (1.36 kg.) Ultripower: 10.6 lbs. (4.83 kg.)	76.00 lbs. (frame only) (34.47 kg.) Blade (approx.) 3 lbs. (1.36 kg.) Ultripower: 10.6 lbs. (4.83 kg.)
Maximum SDPE Blades per Chassis		N/A	2	4	16
Power Consumption		114W 7.6A 15VDC	See Note		
Input Power		100 - 120 V, 220 - 240V, 47 - 63 Hz. 1.6 A	See Note		
			Note: Power requirements and consumption dependent on I/O and SDPE blade complement		
LEGEND:	✔ = Supported ✘ = Unsupported	Specifications subject to change without notice			

ROSS		PORTS			
		CARBONITE Ultra MOSAIC		Ultrix CARBONITE MOSAIC	
				FR2	FR5
Ethernet Port (Frame)		1	Blades & Chassis	Blades & Chassis	Blades & Chassis
Tally		24	24 per SDPE blade	24 per SDPE blade	24 per SDPE blade
GPI/O		24	24 per SDPE blade	24 per SDPE blade	24 per SDPE blade
Serial Ports (Frame)		1	1	1	1
LTC Input		1	1	1	1
AES Input		✗	✗	✗	✗
AES Output		2	2	2	2
Reference Input		1	1 ³	2 ³	2 ³
Reference Loop		1 ²	1 ³	2 ³	2 ³
Independent Reference Output		1	✗	✗	✗
		² Using Reference Output.		³ On Ultrix frame.	
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ROSS		SUPPORTED VIDEO STANDARDS	
		CARBONITEUltraMOSAIC	Ultrix CARBONITE MOSAIC
		CARBONITE ULTRA MOSAIC	ALL MODELS
SD	480i / 59.94	✗	✗
	576i / 50	✗	✗
HD 720p	720p / 50	✓	✓
	720p / 59.94	✓	✓
HD pSF	1080 pSF / 23.98	✓	✓
	1080 pSF / 24	✓	✓
	1080 pSF / 25	✓	✓
	1080 pSF / 29.97	✓	✓
	1080 pSF / 30	✓	✓
HD 1080i	1080i / 25	✓	✓
	1080i / 29.97	✓	✓
	1080i / 30	✓	✓
	1080i / 50	✓	✓
	1080i / 59.94	✓	✓
HD 1080p	1080p / 23.98	✓	✓
	1080p / 24	✓	✓
	1080p / 25	✓	✓
	1080p / 29.97	✓	✓
	1080p / 30	✓	✓
	1080p / 50 (Level A)	✓	✓
	1080p / 59.94 (Level A)	✓	✓
	1080p / 60	✓	✓
UHD 2160p	2160p / 23.98	✓	✓
	2160p / 24	✓	✓
	2160p / 25	✓	✓
	2160p / 29.97	✓	✓
	2160p / 30	✓	✓
	2160p / 50	✓	✓
	2160p / 59.94	✓	✓
	2160p / 60	✓	✓
	Single-Link 12G	✓	✓
	Quad-Link 2SI, 3G Level A	✓	✓
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ROSS	SDPE SDI / IP INPUTS & OUTPUTS					
	CARBONITEUltraMOSAIC			UltrixCARBONITEMOSAIC		
	CARBONITE ULTRA MOSAIC			ALL MODELS		
	SD / HD SDI	UHD SDI	HD SDI / IP	UHD SDI / IP		
Inputs	24	18	Up to 22 ¹	Up to 18 ²		
Outputs	10	10	Up to 22 ¹	Up to 18 ²		
			¹ Up to eighteen (18) SDI or IP Mosaic inputs/outputs from/to the Ultrix router + four (4) SDPE direct SDI inputs & outputs.	² Up to eighteen (18) SDI or IP Mosaic inputs/putputs from/to the Ultrix router		
			Note: Each SDPE blade = one (1) Mosaic Video Image Processor.			
ROSS	Ultrix					
	SDI INPUTS & OUTPUTS			IP INPUTS & OUTPUTS		
	FR2 ¹ HD / UHD	FR5 ¹ HD / UHD	FR12 ¹ HD / UHD	FR2 ² HD / UHD	FR5 HD / UHD	FR12 HD / UHD
Inputs / Outputs	1 SDPE + 3 HDX-IO	1 SDPE + 8 HDX-IO	1 SDPE + 15 HDX-IO	1 SDPE + 2 IPX-IO	1 SDPE + 8 IPX-IO	1 SDPE + 15 IPX-IO
	58 x 58	146 x 146	274 x 274	32 x 32	128 x 128	240 x 240
	2 SDPE + 2 HDX-IO	2 SDPE + 7 HDX-IO	2 SDPE + 14 HDX-IO	2 SDPE + 1 IPX-IO	2 SDPE + 7 IPX-IO	2 SDPE + 14 IPX-IO
	44 x 44	128 x 128	256 x 256	16 x 16	112 x 112	224 x 224
		3 SDPE + 6 HDX-IO	3 SDPE + 13 HDX-IO		3 SDPE + 6 IPX-IO	3 SDPE + 13 IPX-IO
		110 x 110	238 x 238		96 x 96	208 x 208
		4 SDPE + 5 HDX-IO	4 SDPE + 12 HDX-IO		4 SDPE + 5 IPX-IO	4 SDPE + 12 IPX-IO
		92 x 92	220 x 220		80 x 80	192 + 192
		5 SDPE + 11 HDX-IO	5 SDPE + 11 IPX-IO			
		202 x 202	176 x 176			
		6 SDPE + 10 HDX-IO	6 SDPE + 10 IPX-IO			
		184 x 184	160 x 160			
		7 SDPE + 9 HDX-IO	7 SDPE + 9 IPX-IO			
		166 x 166	144 x 144			
	8 SDPE + 8 HDX-IO	8 SDPE + 8 IPX-IO				
	148 x 148	128 x 128				
	9 SDPE + 7 HDX-IO	9 SDPE + 7 IPX-IO				
	130 x 130	112 x 112				
	10 SDPE + 6 HDX-IO	10 SDPE + 6 IPX-IO				
	112 x 112	96 x 96				
	11 SDPE + 5 HDX-IO	11 SDPE + 5 IPX-IO				
	94 x 94	80 x 80				
	12 SDPE + 4 HDX-IO	12 SDPE + 4 IPX-IO				
	76 x 76	64 x 64				
	13 SDPE + 3 HDX-IO	13 SDPE + 3 IPX-IO				
	58 x 58	48 x 48				
	14 SDPE + 2 HDX-IO	14 SDPE + 2 IPX-IO				
	40 x 40	32 x 32				
	15 SDPE + 1 HDX-IO	15 SDPE + 1 IPX-IO				
	22 x 22	16 x 16				
	¹ Assumes all available slots, Aux Ports, and dedicated SDPE inputs & outputs are populated			² FR2 frame includes one fixed SDI I/O board for up to eighteen (18) additonal inputs & outputs		
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Specifications subject to change without notice						

ROSS	FRAME FEATURES (HD)	
	CARBONITEUltraMOSAIC	UltrixCARBONITEMOSAIC
	CARBONITE ULTRA MOSAIC	ALL MODELS
ME Banks	✗	✗
Keyers oer ME	✗	✗
Canvases	5	5
Tiles (MiniME Banks)	10	10
Background layers per Tile	1	1
Layers (Keyers) per Tile	4	4
Splicers	10	10
2D DVEs	18	18
DVE Border Y-Perspective	✓	✓
UltraChrome Chroma Keyers	✗	✗
UltraScene Advanced Compositing Engine	✗	✗
Sequencer	5	5
Portrait Rotation Mode	✗	✗
Input FSFC	Up to 24	Up to 22
Input Proc Amp / Colour Correctors	Up to 24	Up to 22
Input SDR <> HDR Conversion	Up to 24	Up to 18
Input Rec 709 <> Rec 2020 Conversion	Up to 24	Up to 18
Output FC	Up to 10	UltrixProc
Output Proc Amp / Colour Correctors	Up to 10	UltrixProc
Output SDR <> HDR Conversion	Up to 10	UltrixProc
Output Rec 709 <> Rec 2020 Conversion	Up to 10	UltrixProc-3DLUT
I/O MultiViewers	Up to 2	Ultrixscape
Production MultiViewers	✗	✗
MultiViewer Timers	10	Ultrixscape
MediaStores	Up to 24 ¹	Up to 22 ²
Audio MediaStore	✗	✗
MediaStore RAM Capacity	8GB (Shared)	8GB (Shared)
USB Media Player	✗	✗
Audio Mixer	✗	Ultrixmix
Memory / Custom Control Export	✓	✓
Dual GPI Events	✓	✓
Frame Simulator (DashBoard)	✗	✗
Ross Platform Manager (RPM) Support	✓	✓
XPression LivcCG	✓	✓
¹ Inputs switchable between live video and MediaStore (still or animation)		² Inputs from Ultrix router switchable between live video and MediaStore (still or animation)
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ROSS	FRAME FEATURES (UHD)	
	CARBONITEUltraMOSAIC	UltrixCARBONITEMOSAIC
	CARBONITE ULTRA MOSAIC	ALL MODELS
ME Banks	✗	✗
Keyers oer ME	✗	✗
Canvases	2	2
Tiles (MiniME Banks)	6	6
Background layers per Tile	1	1
Layers (Keyers) per Tile	4	4
Splicers	6	6
2D DVEs	8	8
DVE Border Y-Perspective	✓	✓
UltraChrome Chroma Keyers	✗	✗
UltraScene Advanced Compositing Engine	✗	✗
Sequencer	5	5
Portrait Rotation Mode	✗	✗
Input FSFC	Up to 7	Up to 4
Input Proc Amp / Colour Correctors	Up to 7	Up to 4
Input SDR <> HDR Conversion	Up to 7	Up to 4
Input Rec 709 <> Rec 2020 Conversion	Up to 7	Up to 4
Output FC	Up to 4	UltrixProc
Output Proc Amp / Colour Correctors	Up to 4	UltrixProc
Output SDR <> HDR Conversion	Up to 4	UltrixProc
Output Rec 709 <> Rec 2020 Conversion	Up to 4	UltrixProc-3DLUT
I/O MultiViewers	Up to 1	Ultrixscape
Production MultiViewers	✗	✗
MultiViewer Timers	10	Ultrixscape
MediaStores	Up to 7 ¹	Up to 4 ²
Audio MediaStore	✗	✗
MediaStore RAM Capacity	8GB (Shared)	8GB (Shared)
USB Media Player	✗	✗
Audio Mixer	✗	Ultrixmix
Memory / Custom Control Export	✓	✓
Dual GPI Events	✓	✓
Frame Simulator (DashBoard)	✗	✗
Ross Platform Manager (RPM) Support	✓	✓
XPression LivcCG	✓	✓
¹ Inputs switchable between live video and MediaStore (still or animation)		² Inputs from Ultrix router switchable between live video and MediaStore (still or animation)
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ROSS	SUPPORTED PROTOCOLS	
	CARBONITEUltraMOSAIC	UltrixCARBONITEMOSAIC
	CARBONITE ULTRA MOSAIC	ALL MODELS
INBOUND		
RossTalk	✓	✓
OverDrive / Caprica	via RossTalk	Via RossTalk
TSL 3.1	✓	✓
TSL 5.0	✓	✓
GVG 100/110	✓	✓
GVG 200, 4000	✗	✗
OUTBOUND		
AMP	✓	✓
RossTalk	✓	✓
TSL 3.1	✓	✓
TSL 5.0	✓	✓
Ross CamBot	✓	✓
Visca (Serial)	✓	✓
Canon BU series	✓	✓
PBUS II	✓	✓
VDCP	✗	✗
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ROSS		FRAME / PANEL COMPATIBILITY (Current Panels)			
		DIMENSIONS*		CARBONITEUltraMOSAIC	Ultrix CARBONITE MOSAIC
CB9		16.20 x 10.06 (in.) 411.48 x 255.52 (mm)		✗	✗
		WIDTH x HEIGHT			
		Non-Modular ¹	Modular ²		
TD1C		17.50 x 12.91 (in.) 444.5 x 327.91 (mm)	17.94 x 12.78 (in.) 455.68 x 324.61 (mm)	✓	✓
TD1		28.29 x 9.86 (in.) 718.57 x 250.44 (mm)	27.94 x 9.92 (in.) 709.68 x 251.97 (mm)	✓	✓
TD2		28.33 x 15.77 (in.) 718.60 x 400.56 (mm)	27.94 x 15.76 (in.) 709.68 x 400.30 (mm)	✓	✓
TD2S		41.04 x 15.77 (in.) 1042.42 x 400.56 (mm)	41.04 x 15.76 (in.) 1042.42 x 400.30 (mm)	✓	✓
TD3S		41.00 x 21.23 (in.) 1041.40 x 539.42 (mm)	41.04 x 21.25 (in.) 1042.42 x 539.76 (mm)	✓	✓
TD3			58.36 x 20.22 (in.) 1482.34 x 513.59 (mm)	✓	✓
TDx3			58.36 x 20.22 (in.) 1482.34 x 513.59 (mm)	✗	✗
TD4			58.36 x 25.37 (in.) 1482.34 x 644.40 (mm)	✓	✓
TDx4			58.36 x 25.37 (in.) 1482.34 x 644.40 (mm)	✗	✗
		¹ Pre-Sept. 2023	² Post Sept. 2023		
		*Download dimension files (.pdf & .dxf) and Panel Cutouts at www.rossvideo.com			
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ROSS		FRAME / PANEL COMPATIBILITY (Legacy Panels)		
		DIMENSIONS*	CARBONITEUltraMOSAIC	Ultrix CARBONITE MOSAIC
A1S / A1SDD		41.00 x 16.00 (in.) 1041.40 x 406.40 (mm)	×	×
A2M / A2MDD		48.00 x 16.00 (in.) 1219.20 x 406.40 (mm)	×	×
A2X / A2XDD		54.50 x 16.00 (in.) 1384.30 x 406.40 (mm)	×	×
A3M / A3MDD		48.00 x 21.50 (in.) 1219.20 x 546.10 (mm)	×	×
A3 / A3DD		54.50 x 21.50 (in.) 1384.30 x 546.10 (mm)	×	×
A4 / A4DD		61.50 x 27.50 (in.) 1562.10 x 698.50 (mm)	×	×
C10 (CPS-1012)		15.85 x 10.77 (in.) 402.59 x 273.56 (mm)	×	×
C1 (CPS-1016)		21.70 x 10.76 (in.) 551.18 x 273.30 (mm)	×	×
C1A		24.70 x 12.49 (in.) 627.38 x 316.99 (mm)	×	×
C1M		29.77 x 12.48 (in.) 756.16 x 316.99 (mm)	×	×
C2		24.71 x 18.24 (in.) 627.63 x 463.30 (mm)	×	×
C2M		29.77 x 18.23 (in.) 756.16 x 463.04 (mm)	×	×
C2S		33.74 x 18.25 (in.) 857.00 x 463.55 (mm)	×	×
C2X		39.48 x 18.25 (in.) 1002.70 x 463.55 (mm)	×	×
C3S		33.74 x 24.13 (in.) 857.00 x 612.90 (mm)	×	×
C3X		39.48 x 24.13 (in.) 1002.79 x 612.90 (mm)	×	×
CB1		23.42 x 10.72 (in.) 594.87 x 272.29 (mm)	×	×
CB1S		32.51 x 10.72 (in.) 825.75 x 272.29 (mm)	×	×
CB2		23.42 x 16.24 (in.) 594.87 x 412.50 (mm)	×	×
CB2S		32.51 x 16.24 (in.) 825.75 x 412.50 (mm)	×	×
CB3S		32.51 x 21.76 (in.) 825.75 x 552.70 (mm)	×	×
CB3X		38.19 x 21.76 (in.) 970.02 x 552.70 (mm)	×	×
V1		28.50 x 16.50 (in.) 723.90 x 419.10 (mm)	×	×
V1M		35.00 x 16.50 (in.) 889.00 x 419.10 (mm)	×	×
V2		34.00 x 16.50 (in.) 863.60 x 419.10 (mm)	×	×
V2M		39.50 x 16.50 (in.) 1003.30 x 419.10 (mm)	×	×
V2X		51.00 x 16.50 (in.) 1295.40 x 419.10 (mm)	×	×
V3M		45.30 x 20.50 (in.) 1150.60 x 520.70 (mm)	×	×
V3		51.00 x 20.50 (in.) 1295.40 x 520.70 (mm)	×	×
V4		55.50 x 26.00 (in.) 1409.70 x 660.40 (mm)	×	×
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