

Production Switchers

Feature Comparison

A · C · U · I · T · Y

Ultrix A · C · U · I · T · Y

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ROSS

PHYSICAL				
ROSS	A · C · U · I · T · Y		Ultrix A · C · U · I · T · Y	
	ACU4	ACU8	FR5	FR12
Rack Frame Height (RU)	2	5	5	12
Rack Frame Width	17.50" (444.5 mm)	17.50" (444.5 mm)	17.50" (444.5 mm)	17.50" (444.5 mm)
Rack Frame Depth	7.90" (200.66 mm)	7.90" (200.66 mm)	7.90" (200.66 mm)	7.90" (200.66 mm)
Rack Frame Weight	59.00 lbs. (26.8 kg.)	92.00 lbs. (41.7 kg.)	Frame: 14.00 lbs. (6.35 kg.) Blade (approx.) 3 lbs. (1.36 kg.) Ultrapower: 10.6 lbs. (4.83 kg.)	Frame: 76.00 lbs. (34.47 kg.) Blade (approx.) 3 lbs. (1.36 kg.) Ultrapower: 10.6 lbs. (4.83 kg.)
Maximum SDPE Blades per Chassis	N/A	N/A	4	8
Power Consumption	1022W 8.52A 120VAC	1412W 11.76A 120VAC	See Note	
Input Power	100 - 120 V, 220 - 240V, 47 - 63 Hz. 9.0A 650W		See Note	
NOTE: Power requirements and consumption dependent on I/O and SDPE blade complement.				
LEGEND:	✔ = Supported ✘ = Unsupported	Specifications subject to change without notice		

PORTS				
ROSS	A · C · U · I · T · Y		Ultrix A · C · U · I · T · Y	
	ACU4	ACU8	FR5	FR12
Ethernet Port (Frame)	2	2	Blades & Chassis	Blades & Chassis
Tally	36 (maximum)	72 (maximum)	24 per SDPE blade (Up to 96)	24 per SDPE blade (Up to 96)
GPI/O	44 (maximum) 10 in / 10 out + 13 configurable	44 (maximum) 10 in / 10 out + 13 configurable	24 per SDPE blade (Up to 96) (I/O Configurable)	24 per SDPE blade (Up to 96) (I/O Configurable)
Serial Ports (Panel)	8	8	8	8
Serial Ports (Frame)	4	4	1	1
LTC Input	1	1	1	1
AES Input	✗	✗	✗	✗
AES Output	✗	✗	2 per SDPE blade	2 per SDPE blade
Reference Input	1	Up to 2	2 ¹	2 ¹
Reference Loop	1	Up to 2	2 ¹	2 ¹
			¹ On Ultrix frame.	
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SUPPORTED VIDEO STANDARDS						
ROSS		A · C · U · I · T · Y		Ultrix A · C · U · I · T · Y		
		ACU4	ACU8	FR5	FR12	
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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SDI/HDMI/MADI INPUTS & OUTPUTS						
ROSS		A · C · U · I · T · Y			Ultrix A · C · U · I · T · Y	
	ACU4		ACU8		FR5	FR12
	HD	UHD	HD	UHD	HD/UHD	HD/UHD
SDI Inputs	Up to 60	Up to 15	Up to 120	Up to 30		
SDI Outputs	Up to 40	Up to 10	Up to 60	Up to 15	NOTE: Figures below represent Ultrix Acuity SDI Inputs <i>and</i> Outputs	
SDI Inputs/Outputs					1 SDPE + 8 HDX-IO	1 SDPE + 15 HDX-IO
					142 ¹	270 ¹
					2 SDPE + 7 HDX-IO	2 SDPE + 14 HDX-IO
					124 ¹	252 ¹
					3 SDPE + 6 HDX-IO	3 SDPE + 13 HDX-IO
					106 ¹	234 ¹
					4 SDPE + 5 HDX-IO	4 SDPE + 12 HDX-IO
					88 ¹	216 ¹
						5 SDPE + 11 HDX-IO
						198 ¹
						6 SDPE + 10 HDX-IO
						180 ¹
HDMI Inputs/Outputs	✗	✗	✗	✗	✓	✓
MADI Audio Inputs/Outputs	✗	✗	✗	✗	Ultrix	Ultrix
					¹ Assumes available slots are fully populated with HDX-IO boards, Aux Ports are populated with SDI SFP modules, and dedicated SDPE inputs are fully populated. Note: Each SDPE blade = one (1) Acuity ME. Acuity MEs can access the router I/O matrix on a bus-by-bus basis. Mixed I/O board complement will result in different matrix sizes. Contact Ross Video for more details.	
					² Via optional SFP HDMI Aux ports. HDMI input/output count dependent on number of populated SFP cages. Contact Ross Video for more details.	
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IP INPUTS & OUTPUTS													
ROSS		A · C · U · I · T · Y		Ultrix A · C · U · I · T · Y									
		ACU4	ACU8	FR5			FR12						
		HD/UHD	HD/UHD	HD	UHD		UHD	HD	UHD		UHD		
				NOTE: Figures below represent Ultrix Acuity IP Inputs and Outputs									
ST-2110 Inputs/Outputs	✗	✗	1 SDPE	1 SDPE		1 SDPE		1 SDPE	1 SDPE		1 SDPE		
			8 IP-IO/IPX-IO	8 IP-IO		8 IPX-IO		15 IP-IO/IPX-IO		15 IP-IO		15 IPX-IO	
			2022-6	2022-6	2022-7	2022-6	2022-7	2022-6	2022-6	2022-7	2022-6	2022-7	
			127 + 127 ¹	32 + 32 ¹	64 ¹	64 ¹		240 + 240 ¹		60 + 60 ¹	120 ¹	120 ¹	
			2 SDPE	2 SDPE		2 SDPE		2 SDPE	2 SDPE		2 SDPE		
			7 IP-IO/IPX-IO	7 IP-IO		7 IPX-IO		14 IP-IO/IPX-IO		14 IP-IO		14 IPX-IO	
			2022-6	2022-6	2022-7	2022-6	2022-7	2022-6	2022-6	2022-7	2022-6	2022-7	
			111 + 111 ¹	28 + 28 ¹	56 ¹	56 ¹		224 + 224 ¹		56 + 56 ¹	112 ¹	112 ¹	
			3 SDPE	3 SDPE		3 SDPE		3 SDPE	3 SDPE		3 SDPE		
			6 IP-IO/IPX-IO	6 IP-IO		6 IPX-IO		13 IP-IO/IPX-IO		13 IP-IO		13 IPX-IO	
			2022-6	2022-6	2022-7	2022-6	2022-7	2022-6	2022-6	2022-7	2022-6	2022-7	
			95 + 95 ¹	24 + 24 ¹	48 ¹	48 ¹		208 + 208 ¹		52 + 52 ¹	104 ¹	104 ¹	
			4 SDPE	4 SDPE		4 SDPE		4 SDPE	4 SDPE		4 SDPE		
			5 IP-IO/IPX-IO	5 IP-IO		5 IPX-IO		12 IP-IO/IPX-IO		12 IP-IO		12 IPX-IO	
			2022-6	2022-6	2022-7	2022-6	2022-7	2022-6	2022-6	2022-7	2022-6	2022-7	
			79 + 79 ¹	20 + 20 ¹	40 ¹	40 ¹		192 + 192 ¹		48 + 48 ¹	96 ¹	96 ¹	
									5 SDPE	5 SDPE		5 SDPE	
									11 IP-IO/IPX-IO	11 IP-IO		11 IPX-IO	
									2022-6	2022-6	2022-7	2022-6	2022-7
									176 + 176 ¹	44 + 44 ¹	88 ¹	88 ¹	
									6 SDPE	6 SDPE		6 SDPE	
									10 IP-IO/IPX-IO	10 IP-IO		10 IPX-IO	
									2022-6	2022-6	2022-7	2022-6	2022-7
									160 + 160 ¹	40 + 40 ¹	80 ¹	80 ¹	
									7 SDPE	7 SDPE		7 SDPE	
									9 IP-IO/IPX-IO	9 IP-IO		9 IPX-IO	
									2022-6	2022-6	2022-7	2022-6	2022-7
									144 + 144 ¹	36 + 36 ¹	72 ¹	72 ¹	
									8 SDPE	8 SDPE		8 SDPE	
									8 IP-IO/IPX-IO	8 IP-IO		8 IPX-IO	
									2022-6	2022-6	2022-7	2022-6	2022-7
									128 + 128 ¹	32 + 32 ¹	64 ¹	64 ¹	
LEGEND:	✔ = Supported ✗ = Unsupported	¹ Assumes available slots are fully populated with IP-IO or IPX-IO boards. Note: Each SDPE blade = one (1) Acuity ME. Acuity MEs can access the router I/O matrix on a bus-by-bus basis. Mixed I/O board complement will result in different matrix sizes. Contact Ross Video for more details.											

FRAME FEATURES (SD/HD)				
ROSS		A · C · U · I · T · Y		Ultrix A · C · U · I · T · Y
	ACU4	ACU8	FR5	FR12
ME Banks	Up to 6.5	Up to 8	Up to 4	Up to 8
Multifeed PGM	6 PGM, 2 PVW	6 PGM, 2 PVW	4 PGM, 2 PVW	4 PGM, 2 PVW
Keyers per ME	8	8	7 (6 Full Keyers + 1 Transition Keyer)	7 (6 Full Keyers + 1 Transition Keyer)
Aux Transition/Keyers	✓	✓	✗	✗
2D DVEs	16 per ME	16 per ME	14 per ME	14 per ME
3D DVEs	2 per ME (4 Tiles)	2 per ME (4 Tiles)	4 per ME	4 per ME
3D Preprocessor Effects	✓	✓	✓	✓
3D Warp/Curvilinear Effects	1 per ME	1 per ME	✗	✗
UltraChrome Chroma Keyers	2 per ME	2 per ME	2 per ME	2 per ME
Custom Control Logic with Visualization View	✓	✓	✓	✓
Input Frame Syncs	8 per board ¹	8 per board ¹	All inputs (via Ultrisync Frame Syncs)	All inputs (via Ultrisync Frame Syncs)
Input Format Conversion	8 per board ¹	8 per board ¹	Bus-based 3G --> 12G autoconversion	Bus-based 3G --> 12G autoconversion
Input Colour Correctors/ Proc Amps	Input-based ME Input-based ME Bus-based Aux Bus-based	Input-based ME Input-based ME Bus-based Aux Bus-based	16 per ME	16 per ME
Input SDR <=> HDR Conversion	✗	✗	✗	✗
Input Rec 709 <=> Rec 2020 Conversion	✗	✗	✗	✗
Output FC	✗	✗	✗	✗
Output SDR <=> HDR Conversion	✗	✗	✗	✗
Output Rec 709 <=> Rec 2020 Conversion	✗	✗	✗	✗
I/O MultiViewers	Up to 3 ¹	Up to 6 ¹	Ultriscap (Up to 3 per HDB/SFP or 2 per IP blade)	Ultriscap (Up to 3 per HDB/SFP or 2 per IP blade)
Production MultiViewers	Up to 5 x four-head MV	Up to 7 x four-head MV	Ultriscap (Up to 3 per HDB/SFP or 2 per IP blade)	Ultriscap (Up to 3 per HDB/SFP or 2 per IP blade)
Global MediaStore	4	4	ME Stores (video & key) available system wide	ME Stores (video & key) available system wide
ME MediaStore	4 x video or 2 x video/key	4 x video or 2 x video/key	4 x video or video/key	4 x video or video/key
Audio MediaStore	4	4	2 per ME	2 per ME
MediaStore RAM Capacity	8GB per ME MediaStore 4GB GlobalStore	8GB per ME MediaStore 4GB GlobalStore	8GB per ME	8GB per ME
Internal SSD Capacity	240GB	240GB	256GB	256GB
Frame Simulator (DashBoard)	✓	✓	✓	✓
Ross Platform Manager (RPM) Support	✗	✗	✓	✓
Audio Mixer	✗	✗	Ultrimix	Ultrimix
		¹ Requires 12G Multi-Processing boards. One (1) I/O MultiViewer per board		
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FRAME FEATURES (UHD)				
ROSS		A · C · U · I · T · Y		Ultrix A · C · U · I · T · Y
	ACU4	ACU8	FR5	FR12
ME Banks	Up to 3	Up to 4	Up to 4	Up to 8
Multifeed PGM	3 PGM, 1 PVW	3 PGM, 1 PVW	4 PGM, 2 PVW	4 PGM, 2 PVW
Keyers per ME	4	4	7 (6 Full Keyers + 1 Transition Keyer)	7 (6 Full Keyers + 1 Transition Keyer)
Aux Transition/Keyers	✗	✗	✗	✗
2D DVEs	8 per ME	8 per ME	6 per ME	6 per ME
3D DVEs	1 per ME (2 Tiles)	1 per ME (2 Tiles)	1 per ME (2 Tiles)	1 per ME (2 Tiles)
3D Preprocessor Effects	✗	✗	✗	✗
3D Warp/Curvilinear Effects	✗	✗	✗	✗
UltraChrome Chroma Keyers	1 per ME	1 per ME	2 per ME	2 per ME
Custom Control Logic with Visualization View	✓	✓	✓	✓
Input Frame Syncs	2 per board ¹	2 per board ¹	All inputs (via Ultrisync Frame Syncs)	All inputs (via Ultrisync Frame Syncs)
Input Format Conversion	2 per board ¹	2 per board ¹	Bus-based 3G --> 12G autoconversion	Bus-based 3G --> 12G autoconversion
Input Colour Correctors/ Proc Amps	Input-based ME Input-based ME Bus-based Aux Bus-based	Input-based ME Input-based ME Bus-based Aux Bus-based	16 per ME	16 per ME
Input SDR <=> HDR Conversion	✗	✗	✗	✗
Input Rec 709 <=> Rec 2020 Conversion	✗	✗	✗	✗
Output FC	✗	✗	✗	✗
Output SDR <=> HDR Conversion	✗	✗	✗	✗
Output Rec 709 <=> Rec 2020 Conversion	✗	✗	✗	✗
I/O MultiViewers	Up to 3 ¹	Up to 6 ¹	Ultriscap (Up to 3 per HDB/SFP or 2 per IP blade)	Ultriscap (Up to 3 per HDB/SFP or 2 per IP blade)
Production MultiViewers	Up to 5 x four-head MV	Up to 7 x four-head MV	Ultriscap (Up to 3 per HDB/SFP or 2 per IP blade)	Ultriscap (Up to 3 per HDB/SFP or 2 per IP blade)
Global MediaStore	1	1	ME Stores (video & key) available system wide	ME Stores (video & key) available system wide
ME MediaStore	2 x video or 1 x video/key	2 x video or 1 x video/key	4 x video or video/key	4 x video or video/key
Audio MediaStore	1 (Global MediaStore)	1 (Global MediaStore)	2 per ME	2 per ME
MediaStore RAM Capacity	8GB per ME MediaStore 4GB GlobalStore	8GB per ME MediaStore 4GB GlobalStore	8GB per ME	8GB per ME
Internal SSD Capacity	240GB	240GB	256GB	256GB
Frame Simulator (DashBoard)	✓	✓	✓	✓
Ross Platform Manager (RPM) Support	✗	✗	✓	✓
Audio Mixer	✗	✗	Ultrimix	Ultrimix
		¹ Requires 12G Multi-Processing boards. One (1) I/O MultiViewer per board		
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SUPPORTED PROTOCOLS				
ROSS		A · C · U · I · T · Y		Ultrix A · C · U · I · T · Y
	ACU4	ACU8	FR5	FR12
INBOUND				
RossTalk	✓	✓	✓	✓
OverDrive / Caprica	✓	✓	✓	✓
TSL 3.1	✓	✓	✓	✓
TSL 5.0	✓	✓	✓	✓
GVG 100/110, 200, 4000	✓	✓	✓	✓
OUTBOUND				
Ross Audio Protocol (RAP)	✓	✓	✓	✓
Lawo Ember+ (Audio Consoles)	✓	✓	✓	✓
Lawo___A (Audio Engines)	✓	✓	✓	✓
VDCP	✓	✓	✓	✓
AMP	✓	✓	✓	✓
Betacam / BVW-75	✓	✓	✓	✓
CII	✓	✓	✓	✓
RossTalk	✓	✓	✓	✓
TSL 3.1	✓	✓	✓	✓
TSL 5.0	✓	✓	✓	✓
Contribution Serial Tally	✓	✓	✓	✓
Ross CamBot	✓	✓	✓	✓
Ross Furio	✓	✓	✓	✓
Telemetrys	✓	✓	✓	✓
Visca (Serial)	✓	✓	✓	✓
Visca (Ethernet)	✓	✓	✓	✓
Shotoku	✓	✓	✓	✓
Panasonic	✓	✓	✓	✓
Eagle	✓	✓	✓	✓
Canon BU series	✓	✓	✓	✓
PBUS II	✓	✓	✓	✓
ProBel (SWP-P-08)	✓	✓	✓	✓
GVG NP / 7000	✓	✓	✓	✓
NVISION (NVSP) / NV9000	✓	✓	✓	✓
Quartz / Evertz	✓	✓	✓	✓
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PANEL COMPATIBILITY						
ROSS		DIMENSIONS		A · C · U · I · T · Y		Ultrix A · C · U · I · T · Y
		WIDTH x HEIGHT	ACU4	ACU8	FR5	FR12
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)	✓	✓	✓	✓
TD1C		17.50 x 12.91 (in.) 444.50 x 327.91 (mm)	✗	✗	✓	✓
TD1		28.29 x 9.86 (in.) 718.57 x 250.44 (mm)	✗	✗	✓	✓
TD2		28.29 x 15.73 (in.) 718.57 x 399.54 (mm)	✗	✗	✓	✓
TD2S		41.00 x 15.73 (in.) 1041.40 x 399.54 (mm)	✗	✗	✓	✓
TD3S		41.00 x 21.23 (in.) 1041.40 x 539.24 (mm)	✗	✗	✓	✓
TD3		58.36 x 20.22 (in.) 1482.40 x 513.60 (mm)	✗	✗	✓	✓
TD4		58.36 x 25.37 (in.) 1482.40 x 644.40 (mm)	✗	✗	✓	✓
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