Ultrix
CARBONITE

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RIGHT SIZED MID-SIZE PRODUCTION SWITCHER

The evolution of the Software-Defined Production Engine continues with Ultrix Carbonite, a powerful mid-size production solution that combines the routing and processing resources of Ultrix with the advanced effects capabilities of Carbonite. The result is a cost-effective, scalable platform that solves format and connectivity challenges while delivering a new level of performance, flexibility, and value.

best in market '21
AVTECHNOLOGY
WINNER

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SOUND&VIDEO CONTRACTOR
WINNER

SOFTWARE-DEFINED PRODUCTION ENGINE (SDPE)

The SDPE Carbonite blade is seamlessly integrated into the Ultrix routing and video/audio processing platform to provide small and mid-size facilities the benefits of a single-chassis solution that is flexible enough to easily grow as productions requirements change.
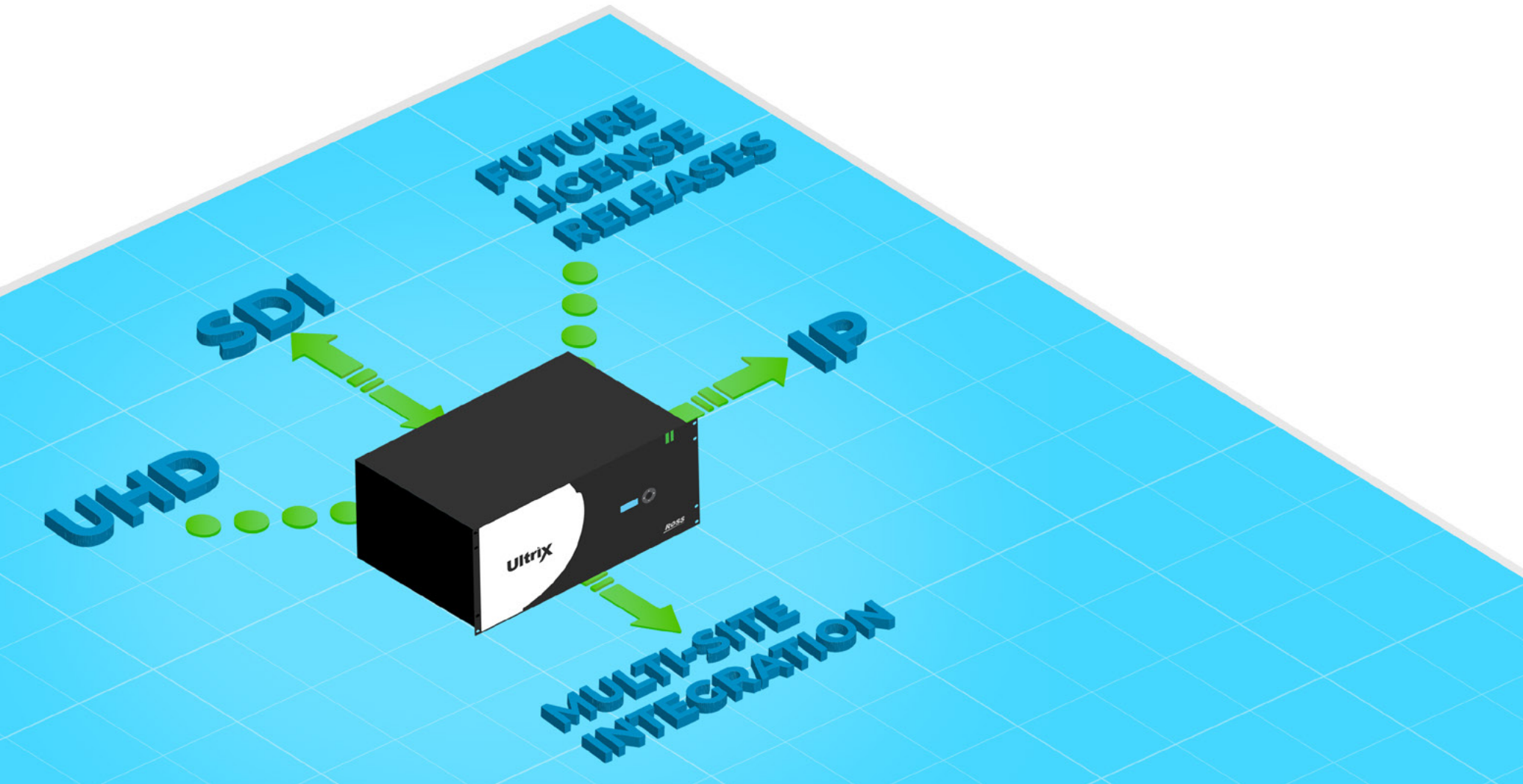
SIZE MATTERS

Available in either a 2RU, 5RU or 12RU chassis, the hyper converged Ultrix Carbonite delivers a flexible, multi-format routing and production solution in as little as 3RU including power supply.

MIX & MATCH FEARLESSLY

With Ultrix Carbonite, signal format and connectivity challenges simply disappear. Ultrix SDI, IP, and SFP I/O boards can be mixed in the same frame, allowing Ultrix Carbonite to access sources seamlessly and transparently. Frame Syncs, Format Converters, Proc Amps, and Color Correctors provide fine-line control of signal parameters. De-embedding and re-embedding audio channels on every input and output allows easy routing of embedded and MADI audio sources anywhere within the matrix, including to MultiViewer PIPs.

FUTURE CONFIDENT

The SDPE blade at the heart of Ultrix Carbonite is designed and engineered to be easily repurposed or updated.
As needs change, optional features can be enabled using cost-effective software licenses that can be added remotely.

CARBONITE OPTIONS	
Additional M/E Licenses	Frame Sync/Format Converter License
12G UHD License	Proc Amp/Color Corrector License
Redundant Power Module	

ULTRIX OPTIONS	
12G UHD License	MultiViewers
Audio Mixer Control	Frame Syncs
Centralized Router Control	Intelligent Tie-Line Management
Redundant Power Module	Additional Cooling Fans
Wide range of SFP options	

Please contact your local Ross Video Sales Representative or authorized reseller for more information.

ROI⬆ TCO⬇

Ultrix Carbonite is not only a sound technical choice, it's a smart business decision as well. By merging the Ultrix routing platform and Carbonite production switcher into one compact chassis, the total cost of ownership is reduced because expensive power, cooling, maintenance and support costs are significantly lowered.

PEACE OF MIND INCLUDED

Ultrix Carbonite's robust hardware is designed and engineered for 24/7 mission-critical applications. If assistance is needed, Ross Video technical support is second to none. Our range of support options allow technical services to be tailored to the specific needs of your facility and available 24/7/365.

COMFORTABLY FAMILIAR

Operational ease of use, flexible functionality, and integrated control have been hallmarks of Carbonite since its introduction, and Ultrix Carbonite carries on that tradition. It is fully compatible with the TouchDrive™ family of control surfaces and can also be controlled using DashBoard, Ross Video's powerful command and configuration software application, or ViewControl, Carbonite's innovative touchscreen controller. In addition, source, destination and aux bus routing can be accomplished using any of the physical or DashBoard-based Ultrix routing panels.

ROSS PRODUCT SOLUTIONS

TOUCHDRIVE™ TD3S

SIDESHOT / SIDE SLIDE

VIEWCONTROL

ULTRITOUCH 2RU PANEL

RCP-QE18 SYSTEM CONTROL PANEL

RCP-ME SYSTEM CONTROL PANEL
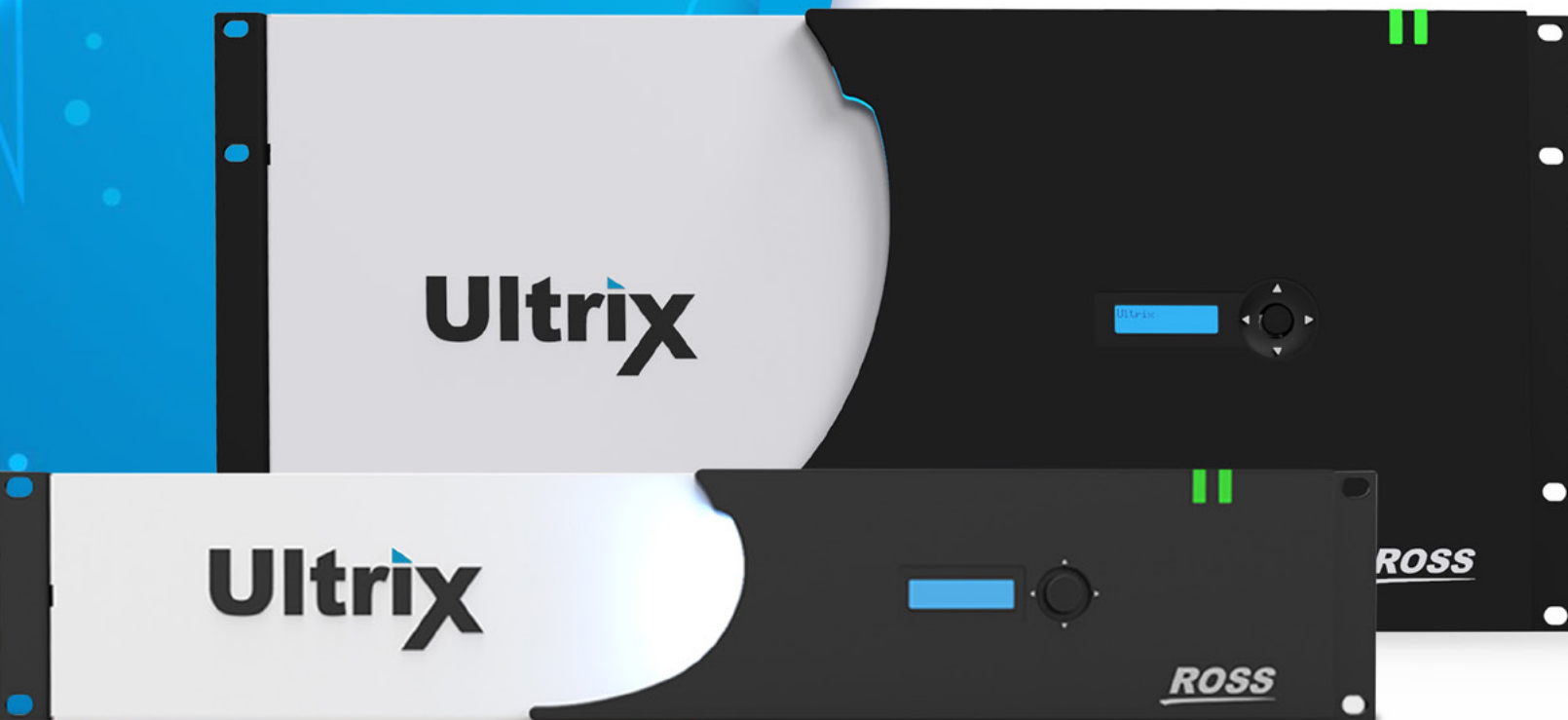
ULTRITOUCH 4RU PANEL

RCP-QE36 SYSTEM CONTROL PANEL

GREATER THAN THE SUM OF ITS PARTS

Multiple Ultrix Carbonite blades can be installed in either the FR5 (5RU) or FR2 (2RU) Ultrix frames. Each blade provides a complete multi-format, multi-ME production switcher solution.
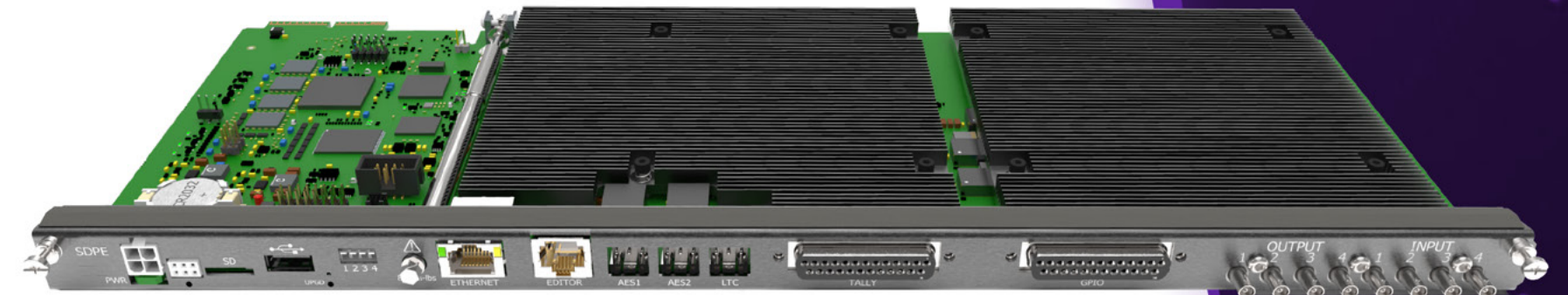
ULTRIX FR12/FR5/FR2*

- Software-Defined Feature Set
- Clean, Quiet Switching
- Powerful Audio Processing Fabric
- Multiple I/O Options – SDI, IP, SFP
- UHD Architecture throughout
- MultiViewers
- Frame Syncs
- Audio Mixer
- Central control and tie line management

SDPE CARBONITE ME*

- 22 x 22 I/O Matrix
- Up to 2 Full M/E Banks
- 4 MiniME Banks (2 in UHD)
- 7 Keyers per full M/E (6 Full Keyers + Transition Keyer)
- 12 Floating 2D DVEs (6 in UHD)
- 4 Floating Chroma-Keyers (2 in UHD)
- 4 Floating Video/Key MediaStores
- 2 Integrated MultiViewers (1 in UHD)
- TouchDrive™ and DashBoard compatible

* Certain features optional

FLEXIBLE ARCHITECTURE

Available Ultrix frame slots can be populated with a mix of I/O boards (SDI, IP, or SFP) and SDPE blades, each of which will be an independent Ultrix Carbonite switcher. By mixing I/O boards and SDPE blades, the right balance of signal routing capability and production power can be achieved.
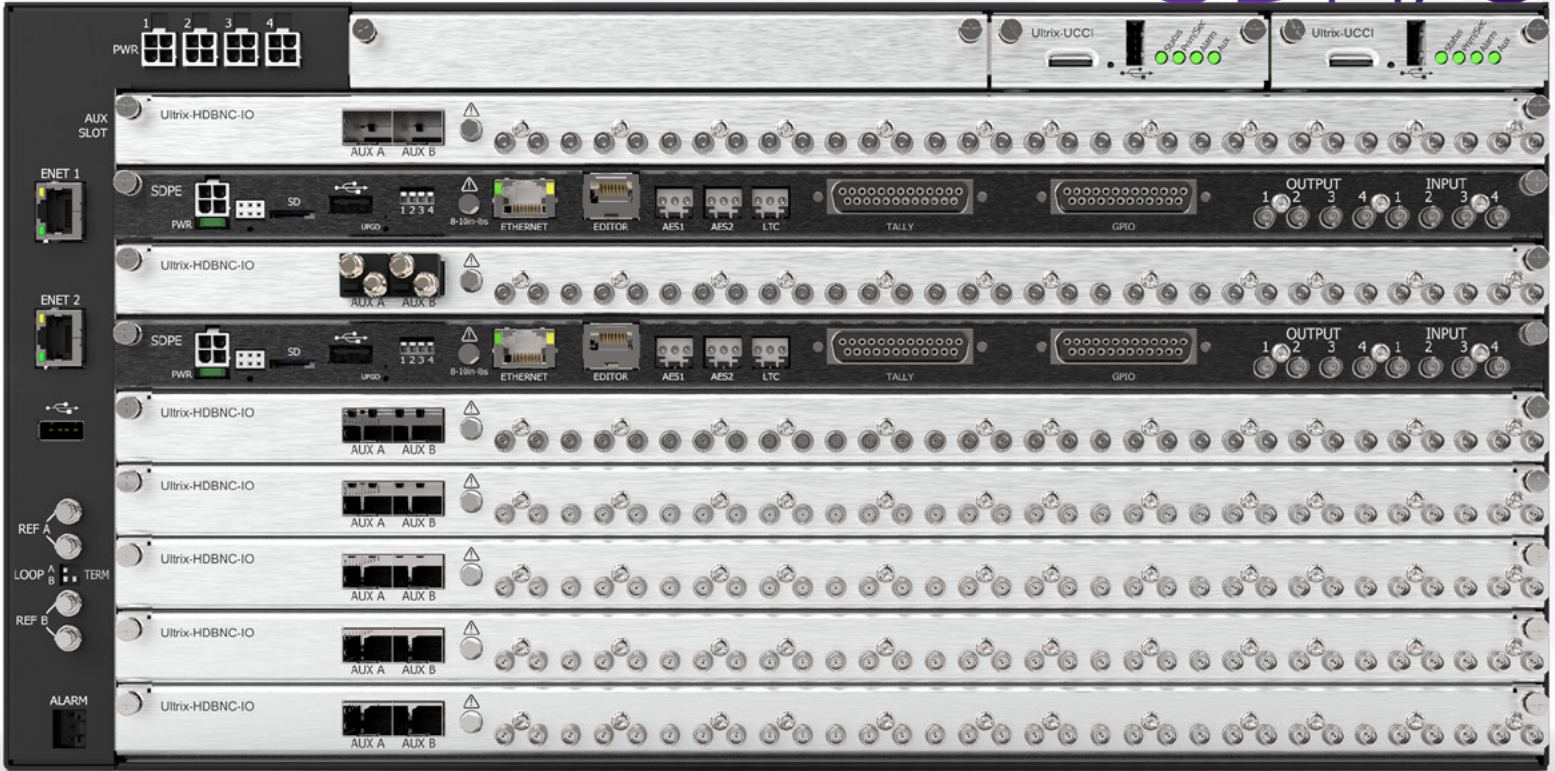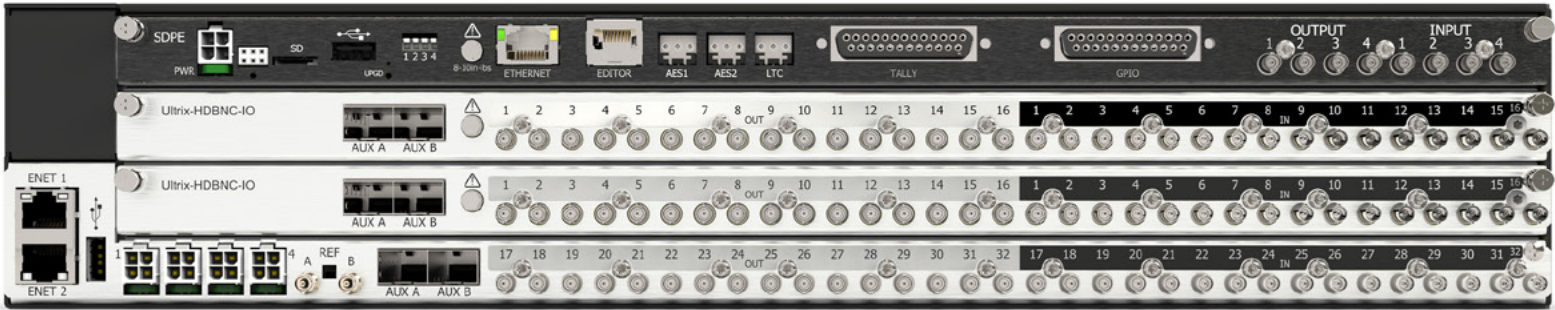

HYBRID I/O

SDI I/O

ULTRIX CARBONITE SPECIFICATIONS

CARBONITE SDPE BLADE

Supported Video Formats	• 720p /50 /59.94 • 1080i /50 /59.94 • 1080pSF /23.98 /24 /25 /29.97 /30 • 1080p 23.98 /24 /25 /29.97 /30 /50 /59.94 /60 • 2160p /23.98 /24 /25 /29.97 /30 /50 /59.94 /60
Number of ME per Blade	Up to 2
Number of MiniME per Blade	4 (HD) 2 (UHD)
Number of Keyers per ME	6
Number of Keyers per MiniME	2
Number of floating UltraChrome Chroma-Key Engines	4 (HD) 2 (UHD)
Number of floating 2D DVE per ME	12 (HD) 6 (UHD)
Number of Media Stores	4 Channels (with Alpha)
Media Store RAM Capacity per ME	8GB
USB Clip Player	1 (HD only)
Event Memory System & Custom Control Macros	100 Memories per ME and MiniME, and 256 Custom Controls per setup file
Tally, GPIO per Blade	24 Tally, 24 GPIO

ULTRIX HDB-IO BOARD#

Number of HD BNC Inputs	16
Number of HD BNC Outputs	16
Audio Channels per I/O	16
SFP Aux Ports*	2*

ULTRIX CHASSIS

	FR2	FR5	FR12
Number of Slots	• 3 Standard Slots • 1 Fixed Slot (HD-SDI)	• 8 Standard Slots • 1 Flex Slot (I/O Boards only)	• 16
Maximum SDPE Blades per Chassis	2	4	Configuration dependent
Maximum UHD Gearboxes per Slot	3 in/3 out	3 in/3 out	3 in / 3 out
Maximum Ultriscape MV Head Licenses per Slot	3 SDI or 2 IP	3 SDI or 2 IP	3 SDI or 2 IP
Maximum 3Gb/s Input Frame Syncs per Chassis	72	160	288
Maximum 12Gb/s Input Frame Syncs per Chassis	12	27	48
Maximum 12Gb/s Clean/ Quiet Outputs per Chassis	72	160	288
Audio Matrix Size (with Optional MADI SFPs)	1536 x 1536	3456×3456	6144 x 6144
Maxium Size of Ultrimix-MXR Audio Mixer	128 x 64	128×64	128 x 64
Width	2x Bricks PSU or 1x Ultripower (with 2x PSUs)	2x Bricks PSU or 1x Ultripower (with 2x PSUs)	17.5" (445mm)
Depth	17.5" (445mm)	17.5" (445mm)	7.9" (201mm)
Height	7.9" (201mm)	7.9" (201mm)	21" (534mm)
Frame Weight	3.48" (88mm)	8.7" (221mm)	76 lbs (34.47 Kg)
I/O Card Weight	12 lbs. (5.44 kg)	14 lbs (6.35 kg)	3 lbs (1.36 Kg)

ULTRIX SFP-IO BOARD#

Number of SFP cages	16 Bidirectional SFP Cages plus 2 Aux Ports*
I/O Specification	See SFP manufacturer spec sheet for I/O specification

ULTRIX ACUITY IP-IO BOARD#

Standard Input/Output	(4) 25GE SFP28 + 2 Aux Ports*
Video Streams per Card	• 3G/HD: 16+16 redundant, 16 non-redundant • 6G/UHD: 4+4 redundant, 8 non-redundant
IP Transport Standard Support	SMPTE ST 2110 suite, including: • -10, System Timing & Definitions • -20, Uncompressed Active Video • -30, PCM Digital Audio
System Timing & Reference	PTP Slave (SMPTE 2059, AES67 & IEEE-1588 default profiles)
Control and Setup	• NMOS IS-04 & IS-05 for AIMS-compliant discovery, registration & connection control • Ember+ discovery, registration & connection control from popular 3rd-party systems • Provisioning & monitoring via DashBoard &/or Ross published JSON API

TOUCHDRIVE™ CONTROL PANELS

Multi-Panel Operation	✔ (1 Master, 2 Satellites, 1 SoftPanel)
Number of Panel Models Available	6
Exclusive Touch Displays with Gesture Control	✔
Themeable Panel Glow RGB Buttons	✔
Preloaded DashBoard Control Application	✔
Available Touchscreen DashBoard Monitor	✔
Full RGB Color Mnemonic Displays	✔
Automation Control via OverDrive	✔
N+1 Redundant Power Supplies (optional)	Brick PSUs or Ultripower

*SFP sold separately

#Please refer to the Ultrix specification page for more information.

Ultrix CARBONITE

Ross Video has a complete range of technical services available to ensure that your Ultrix Carbonite deployment is a success.

Operational Training can be provided at Ross Video, on-site, or over the web. Experienced Ross operators will teach your staff to get the most out of your new system and enhance your productions.

Commissioning is a service to help get your production system properly configured, connected, and installed. This service is performed by factory-trained Ross technical staff.

Technical Training can be provided at Ross Video, on-site, or over the web. Technical training will teach your engineering staff the technical details of the system you have purchased. System configuration, interfaces, databases, and routine maintenance procedures are some of the topics covered.

Ultrix Carbonite comes standard with a 1 year comprehensive warranty. Extended Warranties on hardware and software maintenance are available for an annual fee and also include enhanced Service Level Agreements.

Technical advice is available on-line, by telephone, or email to Ross Video – Included for the life of your system.

Contact Us

Global: +800 1005 0100
North America: 1-844-652-0645

Email: solutions@rossvideo.com

Technical Support
Emergency: +1 613 349-0006
Email: techsupport@rossvideo.com

www.**rossvideo**.com

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