HYPERCONVERGED PRODUCTION

By necessity, traditional system design has focused on separate, standalone core components such as routing, production switchers, audio processors, frame syncs, and multiviewers. Within this traditional system, each component required its own rack space, inputs, outputs, control, communications cabling, primary and redundant power, as well as independent monitoring. Even simple system designs often required multiple equipment racks to house the different component frames, while larger designs could span entire rooms. Ultrix Acuity shatters that convention by merging all those components into a single, hyperconverged 5RU electronics frame with 2RU rack-mounted power supplies. In just 7RU, Ultrix Acuity can replace multiple systems while still providing hardware-based, mission-critical reliability.

THEN

NOW

Ultrix

A·C·U·I·T·Y

SOFTWARE DEFINED
PRODUCTION ENGINE (SDPE)

Hyperconvergence is more than simply combining separate products in one frame. Its a completely new way to conceptualize workflows and hardware allocation that is based on the concept of a "Software Defined Production Engine", or SDPE. Instead of expensive "forklift" replacements, flexible SDPE devices, such as the Mix/Effects boards in Ultrix Acuity, can be easily upgraded as live production demands change.

SIZE MATTERS

The compact SDPE blades allow Ultrix Acuity to provide massive audio and video routing and processing power along with true big switcher effects capability in a mere 7RU footprint, including redundant power. This makes Ultrix Acuity an ideal choice for space-constrained facilities and mobile units.
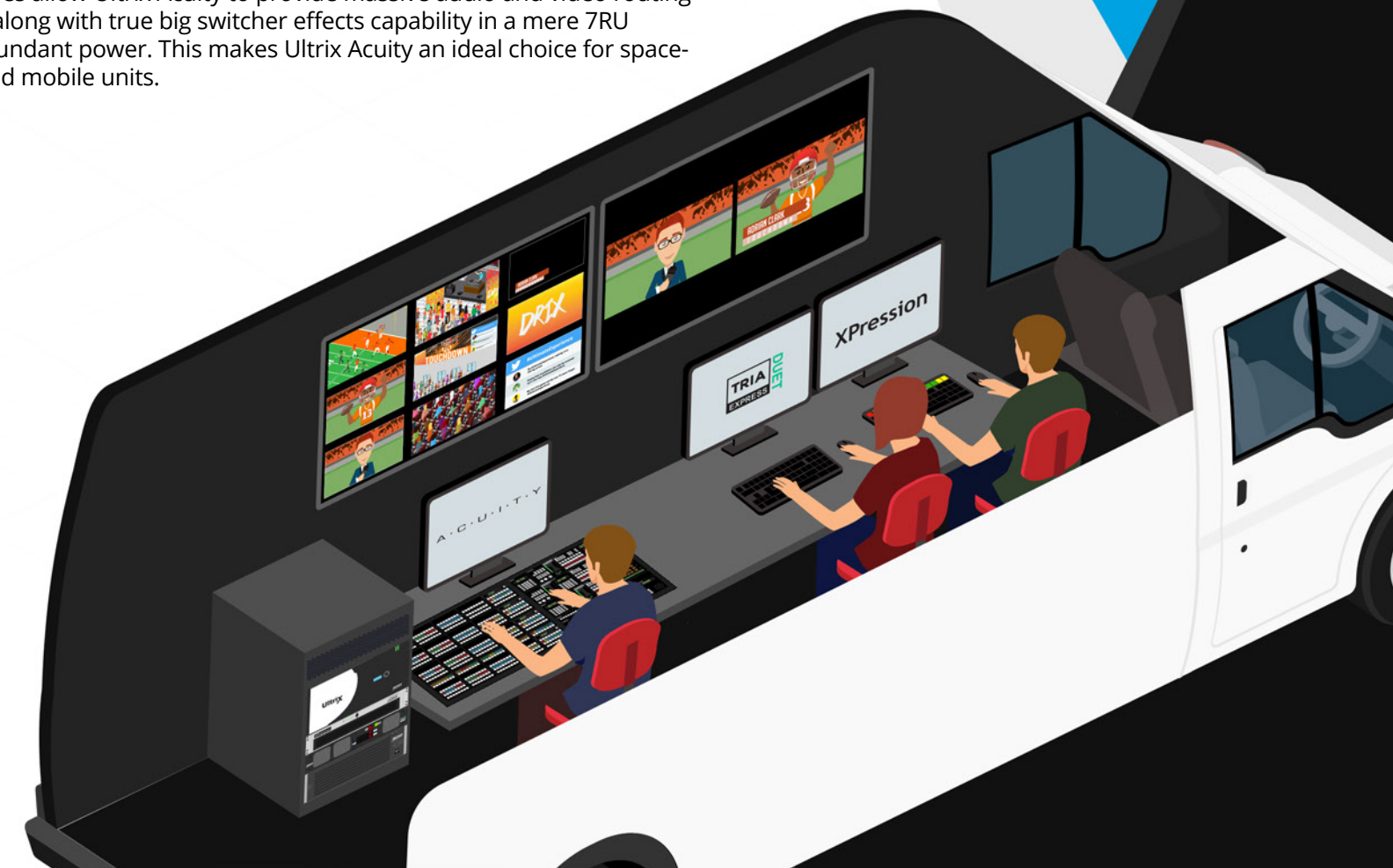
MIX & MATCH FEARLESSLY

With Ultrix Acuity, signal format and connectivity are no longer roadblocks to productivity. SDI and IP sources can be seamlessly and transparently mixed in the same frame. In a UHD environment, Ultrix Acuity can easily accommodate HD sources thanks to automatic, bus-based upconversion of 1080p signals. De-embedding and re-embedding audio channels on every input and output means that embedded and MADI audio sources can be easily routed anywhere within the matrix, including MultiViewer PIPs.

DOWNLOAD
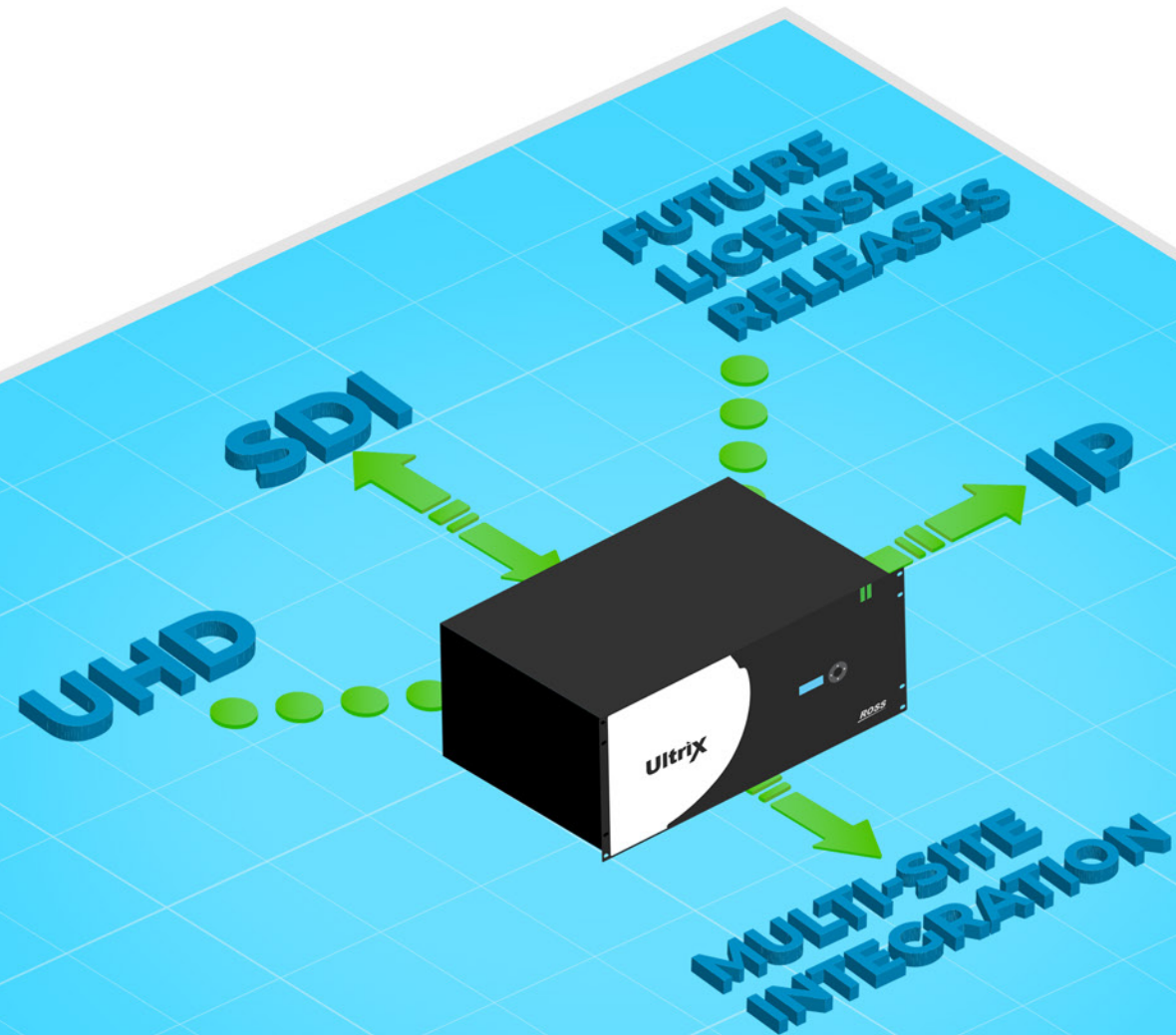
FUTURE CONFIDENT

When we say software-defined we really mean it – Ultrix Acuity hardware is complete right out of the box. However, as needs and demands grow, optional features can be enabled using cost-effective software licenses.

ACUITY OPTIONS	
12G UHD License	Floating 3D DVE
Audio Mixer Control	CG Control
Robotic Camera Control	Router Control
Redundant Power Module	

ULTRIX OPTIONS	
12G UHD License	MultiViewers
Audio Mixer	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 Acuity is not only a sound technical choice, it's a smart business decision as well. By merging the Ultrix routing platform and Acuity production switcher into one compact chassis, total cost of ownership is reduced because expensive power, cooling, maintenance and support costs are significantly reduced.

PEACE OF MIND INCLUDED

Ultrix Acuity's robust hardware is designed and engineered for 24/7 mission-critical applications. But if assistance is needed, Ross Video Technical support is second to none. A range of support options means that technical services can be tailored to the specific needs of the facility and available 24/7/365.

COMFORTABLY FAMILIAR

As game-changing as Ultrix Acuity is, operators might not even notice because they'll continue to work as they always have, using the same control surfaces they've become accustomed to. All standard Acuity Control and Aux Panels are supported, as are SideShot and SideSlide modules, Ultritouch configuration and monitoring panels, RCP Remote Control Panels and SoftPanel or Acuity Rack Panel. Using DashBoard, custom task-specific user interfaces can extend control even further. And since its an Acuity, device integration and OverDrive production automation options are also available.

ROSS PRODUCT SOLUTIONS

ACUITY 4 CONTROL PANEL
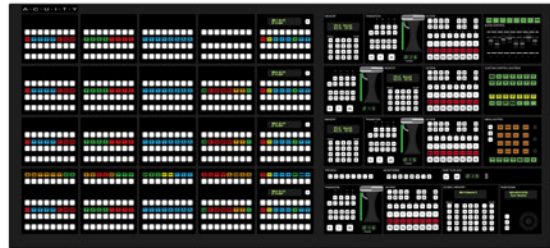
SIDESHOT / SIDE SLIDE

ACUITY AUX CONTROL PANEL

ULTRITOUCH 2RU PANEL

RCP-QE-18 SYSTEM CONTROL PANEL

RCP-ME SYSTEM CONTROL PANEL

ULTRITOUCH 4RU PANEL

RCP-QE-36 SYSTEM CONTROL PANEL

GREATER THAN THE SUM OF ITS PARTS

Ultrix Acuity merges the power of two flagship Ross Video products into a complete, scalable, future-proof solution for mission-critical production operations.

*Certain features optional

ULTRIX FR-5

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

SDPE ACUITY ME

- 4 Definable Program Outputs per ME
- 2 Definable Preview Outputs per ME
- 6 Keyers per ME
- 14 HD 2D DVE per ME
- 6 UHD 2D DVE per ME
- 4 Video/Key MediaStores per ME
- 2 Audio MediaStores per ME
- Bus-based switching and automatic 1080p UHD upconversion within an ME
- 3D DVEs
- Virtual Aux Buses

FLEXIBLE ARCHITECTURE

The nine available Ultrix FR-5 slots can be populated with a mix of I/O boards (SDI, IP, or SFP) and up to four SDPE ME blades to create a "right-sized" hybrid routing and switching environment.

# OF ME BLADES	# OF I/O BOARDS	HB BNC I/O COUNT
1	8	142 x 142 (including 14 Aux ports)
2	7	124 x 124 (including 12 Aux ports)
3	6	106 x 106 (including 10 Aux ports)
4	5	88 x 88 (including 8 Aux ports)

2HD / UHD ME — SDI I/O

3HD / UHD ME — IP I/O

4HD / UHD ME — SFP I/O

4HD / UHD ME — HYBRID I/O
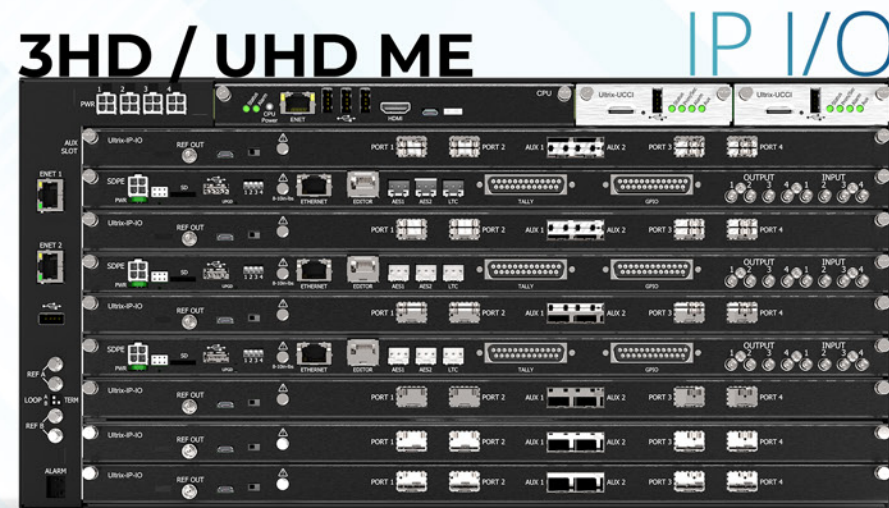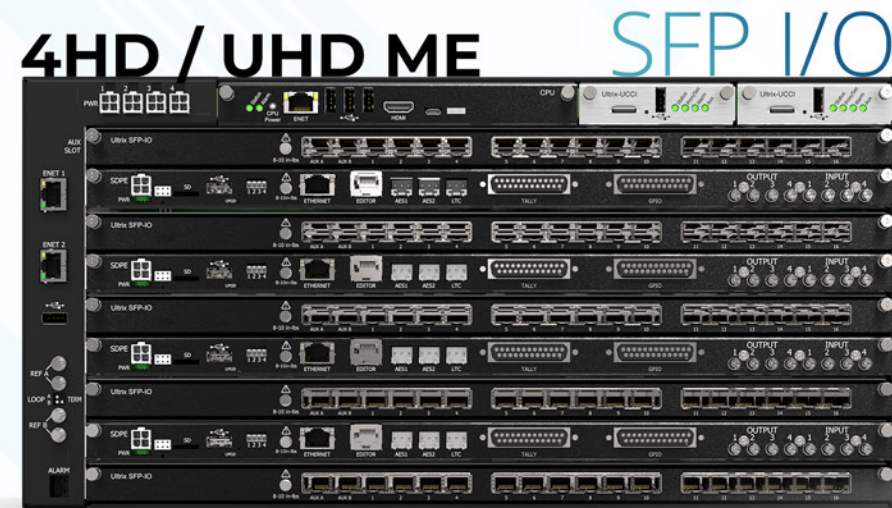
ULTRIX ACUITY SPECIFICATIONS

ACUITY SDPE BLADE

Supported Video Formats	• 720p /50 /59.94 • 1080i /50 /59.94 • 1080p /24 /29.97 /50 /59.94 • 2160p /50 /59.94
Number of ME per Blade	1
Number of Keyers per ME	6
Number of Proc Amp/Color Correctors	18
UltraChrome Chroma-Key Engines per ME	2
Split ME / MultiFeed per ME	• 4 Definable Program Outputs • 2 Definable Preview Outputs
Number of 2D DVE per ME	• 14, including 2 for DVE Transition (HD/3G) • 6 (UHD)
Internal SSD Drive for Media Files, Show & Configuration Storage	256GB
Number of Media Stores per ME	4 Channels (with Alpha)
Media Store RAM Capacity per ME	8GB
Event Memory System & Custom Control Macros	1,000 Memories & 2,304 Custom Controls per setup file
Tally, GPIO per Blade	24 Tally, 24 GPIO
N+2 Redundant Power Supplies	2x Ultripower (Each with 2x PSU)

ULTRIX FR5 CHASSIS

Number of Slots (for SDPE Blades & I/O Boards)	8 Standard Slots 1 Flex Slot (I/O Boards only)
Maximum SDPE Blades per Chassis	4
Maximum UHD Gearboxes per Slot	3 in/3 out
Maximum Ultriscape MV Head Licenses per Slot	3 SDI or 2 IP
Maximum 3Gb/s Input Frame Syncs per Chassis	160
Maximum 12Gb/s Input Frame Syncs per Chassis	27
Maximum 12Gb/s Clean/Quiet Outputs per Chassis	160
Audio Matrix Size (with Optional MADI SFPs)	3456×3456
Maximum Size of Ultrimix-MXR Audio Mixer	128×64
Width	17.5" (445mm)
Depth	7.9" (201mm)
Height	8.7" (221mm)
Frame Weight (approximate)	14 lbs (6.35 kg)
I/O Card Weight (approximate per board)	3 lbs (1.36 kg)

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 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

*SFP sold separately

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

ULTRIX IP I/O 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 VSF TR-03 AES67
System Timing & Reference	PTP Slave (SMPTE 2059, AES67 & IEEE-1588 default profiles)
Control & 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

ACUITY CONTROL PANELS

Multi-Panel Operation	✓ (1 Master, 8 Satellites)
Fully Modular Control Panels	✓
Number of Panel Models Available	12
DualDisplay Menu System	✓
On Panel Menu Control Module	✓
16:9 Touch Screen Menu Display	✓
Themeable Panel Glow RGB Buttons	✓
Full RGB Color Mnemonic Displays	✓
Maximum Assignable Tallies	108
Automation Control via OverDrive	✓
Serial Ports	8
Redundant Power Supplies	✓ optional

Ultrix ACUITY

Ross Video has a complete range of technical services available to ensure that your Ultrix Acuity 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 Acuity 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

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Technical Support
Emergency: +1 613 349-0006
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Mobile Production
House of Worship
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Motion Graphics & Clip Servers
Replay & Production Servers
Robotic & Camera Systems
Control Systems
Routing Infrastructure
Signal Processing Infrastructure
News, Live & Social Production Management
Asset Management & Storage

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