Ultrix

The Ultimate Software Defined Routing Platform.

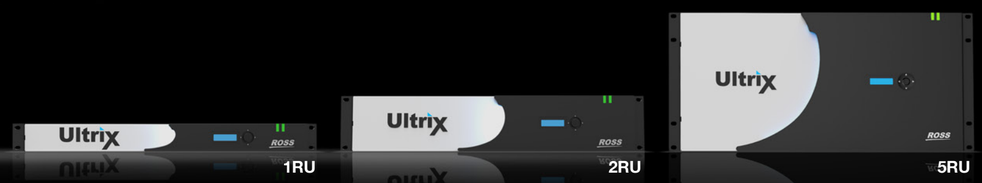
ROSS®
LIVING LIVE!

PERFECT WAVE.

What happens when you combine a passion for technology, decades of domain knowledge, and a focus on creating a high quality solution that solves your problems? In a word, you get Ultrix.

Ross Video, the company that has brought countless cutting edge innovations to production switcher solutions, is proud to present a similar kind of generational leap to the development of a video routing switcher platform.

The wildly popular, multi award winning Ultrix is a powerful, state-of -the-art software defined routing platform that lets you realize significant cost, space and power effeciently with unprecedented flexibility and agility. As well Ultrix provides you with the peace of mind that comes with an extremely reliable system designed for future requirements.



Ultrix

Ultritouch

ULTRIX • ULTRICORE • ULTRITOUCH

AWARD WINNING

CONNECTIVITY & CONTROL

Ultrix

Ultrix is so much more than a traditional routing platform, it's infrastructure in a box! Ranging in sizes from 16x16 to 160x160, the compact design of Ultrix provides big performance in little space. Its small footprint makes Ultrix a natural fit for space conscious applications like Mobile Production. Its integrated Ultricore control system provides users a great way to configure, monitor, and control Ultrix via both Software and Hardware panels that scale based on budget and size.

And software defined means users can enable the functionality they need - MultiViewer, framesyncs, clean/quiet switches, etc - when they need it without losing critical time occupying scarce I/O slots.

Like all good stories, there is so much more to Ultrix than simple video routing - Ultra-Powerful. Ultra-Fast. Ultra-Cool.

AGILE

- World's First Software Defined Hardware Platform
- Incrementally add UHD with software licenses only!
- License MultiViewer outputs as need arises (no special HW)
- Advanced audio processing and clean/quiet audio/video switching as standard
- Assign frame syncs to one or multiple inputs with software licensing and no additional hardware
- Easily expand base I/O as required due to the modular architecture that the frame provides

UNRIVALED CONNECTIVITY

- Route SD, HD, 3G,12G and IP video signals in the same system
- Use a combination of single link and multi-link interfaces for UHD with integrated gear-box capability
- Choose from embedded or discrete audio to fit a range of requirements
- Connect with various video interfaces such as HDMI, SDI, IP, and Fiber to maximize flexibility

EFFICIENT

- Smallest footprint in the market with high density, compact frames
- Leverage latest technology advancements in signal integrity & FPGA processing for exceptional performance and function consolidation
- Enjoy easy deployment and maintenance with an integrated control system that provides configuration, soft panels, discovery, and interoperability
- Software defined puts functionality on demand. No specialized hardware, crosspoints, or cabling and no throwaway or replacement boards. Plus no lost time or occupied I/O slots.

ALL IN.

ULTRA POWERFUL

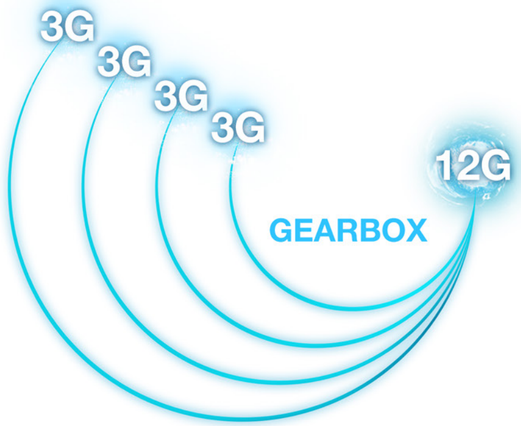
Ultrix is a compact, but incredibly powerful processing platform capable of fast and accurate video routing, clean/quiet switching of audio along with video signals from SD to 12G, with advanced audio routing and processing as standard functions. All of this processing power is available whether you are working in baseband, all IP, or hybrid environments ensuring Ultrix is ready for the rapidly evolving topologies that you may need to implement. The unique design permits users to software license additional capabilities such as adding integrated MultiViewers, frame synchronizers, and 12G I/O. No special hardware is required for any of these capabilities. Robust hardware, along with the implementation of Ross Video's Software Defined Production strategy means a platform that will grow with your needs.

ULTRISPEED

12G Performance Available Through Every Signal Path

Ultrix provides maximum performance and quality with standard configurations supporting data rates up to 3G. Users can purchase Ultrispeed software license that enable 12G performance throughout every signal path within the router. 12G is the standard for single link UHD (4K) SDI routing.

The patented technology that produced the Ultrispeed license enables Gearbox functionality which converts to/from quad link 3G 2 Sample Interleave (2SI) UHD (4K) signals for integration with some types of non-12G 4K equipment.

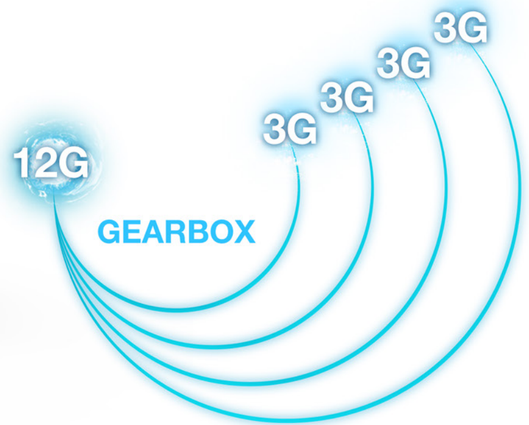


Software License That Enables High Speed Data Rates Within The Frame

- Supports the Next Generation of SDI Signals!
- From SD to Single-Link 12G
- 3G standard & up to 12G with Ultrispeed SW upgrade
- Improved pathological performance using advanced processing and signal integrity capabilities
- Gearbox capability
- 1 Terabit switching capacity per RU positions the platform perfectly for the hybrid facilities today and in the future
- License is purchased per frame

Gearbox Features

- Supports both multi-link and single-link SDI
  - 12G or Combination of multi-link and single-link
- Enabled with Ultrispeed SW license
- Converts between Quad-Link 3G 2 Sample Interleave (2SI) and 12G SDI
- Patented Ross Video Signal Medic features:
  - Auto Inter-channel skew correction
  - Self-healing channel replacement



Ultrispeed

ULTRISCAPE

Software Defined MultiViewer Integration

Ultriscape is the first software defined MultiViewer. No special output boards, crosspoints, or multichannel connection cables are needed. Simply enable the desired number of outputs to drive the monitors required, and route any input to whatever MultiViewer head is chosen.

- Up to 6 MultiViewer heads can be enabled in 1RU
- Up to 12 MultiViewer heads in a 2RU
- up to 27 MultiViewer heads in a 5RU chassis

This makes Ultriscape the most compact solution currently available. Because MultiViewer outputs can be assigned to both standard HD BNC or SFP outputs, users have the flexibility to choose the output type they need for each monitor, thus eliminating the hassle of matching traditional MultiViewer outputs to the monitors being driven. Low latency, metering, tally, and UMD support via standard protocols make for easy integration into existing facilities.

KEY FEATURES

- Up to 6 MultiViewer heads in 1RU, 12 MultiViewer heads in 2RU, or 27 MultiViewer heads in 5RU
- Can use standard HD-BNC I/O, SMPTE 2110 or AUX ports
- SFP output design permits users to choose output format (HDMI, SDI, FIBER...)
- Each Ultriscape license enables 1 MultiViewer head
- Fast (<1 frame latency)
- Video input support for signals from SD up to single link 12G in either baseband or SMPTE 2110 formats
- Flexible layout configurations to meet a wide range of applications
- Multiple output formats that are configurable by the user
- 2 System PiP's from an array of choices plus a single use 3rd scaler PiP per layout
- 100 non blocking PiP's per MultiViewer output
- Integrated audio metering with customizable look and feel
- Multiple tally indicators including borders, lamps, and label UMDs
- Tally support TSL 3.1, and 5.0 native
- Simple control and configuration
- Configure / update a single or multiple MultiViewers across many frames quickly using DashBoard
- Tight integration with router database
- Simultaneous access to all router inputs
- Customizable layouts
- Recall layouts from router hardware and software panels, and via third party automation systems
- Multiple modes of operation including direct PIP control and destination follow
- Industry leading image quality with award winning Ross scaling technology

Ultriscape

ULTRIMIX

Audio Integration And Processing

In another industry first, Ultrimix provides advanced audio integration and processing, including the ability to embed and de-embed audio on all of the inputs and outputs of the router, as well as route discrete audio, all standard in every frame. No special hardware, crosspoints, or I/O boards are required, as with other systems. Users have complete flexibility to process, swap, sum, mute, or route any discrete or embedded audio input to any output. This is an enormous amount of audio.

- Up to 768x768 in 1RU,
- Up to 1536x1536 in 2RU
- Up to 3456x3456 in 5RU

This means Ultrix has enough channels for even the most demanding audio operations. Ultrimix is perfect for applications where audio is constantly changing, and it can be added as needed without throwing away any initial investment in the system.

KEY FEATURES

- Complete non blocking audio support

- Route and process both embedded and discrete audio.
  - Up to 768x768 channels in 1RU
  - Up to 1536x1536 channels in 2RU
  - Up to 3456x3456 channels in 5RU

- Full audio processing and transitions
  - Level Adjust, Sum, Invert, Tone Insertion (on outputs)
  - Transitions such as Cut, Fade/Cut, Cut/Fade, V-Fade, and Quiet on a per channel basis

- Ease of operation
  - Standard and custom control panels available within Dashboard
  - Control and switching via standard SW and HW router control panels

- Discrete audio via MADI I/O
  - Support for up to 64 channels per MADI stream
  - AES and Analog audio support via external breakout box
  - Support for SMPTE 2110-30
  - Control just like any discrete audio signal with full processing

ULTRICORE

Full Featured Control System

Great hardware is only as good as the control system running it. Ultricore is a full featured control system that significantly reduces setup time, simplifies configuration, and enhances the user experience by providing powerful, yet intuitive workflows and interfaces that make operations run smoothly.

Ultricore is standard on all Ultrix frames. Integrated control is great for small systems as it does not require the use of a central controller. For larger or more sophisticated systems, the Ultricore BCS central controller is available to provide for greater client integration as well as enhanced control and connectivity capabilities.

When interoperability is required, reliable third party integration is assured by the ability to interface with industry standard protocols (GV Native / Probel SW-P-08), optional NV-9000 and others, and by providing redundant physical communications links over serial, Ethernet, and interfaces.

Ultricore can interface with existing Ross NK series routers. Organizations currently using Ross routing systems can integrate new Ultrix frames within their facilities easily, as well as reuse current NK control panels. Because the Ultricore UI is integrated with the Ross DashBoard control software, consistency and familiarity is easily achieved for a smooth user experience.

KEY FEATURES

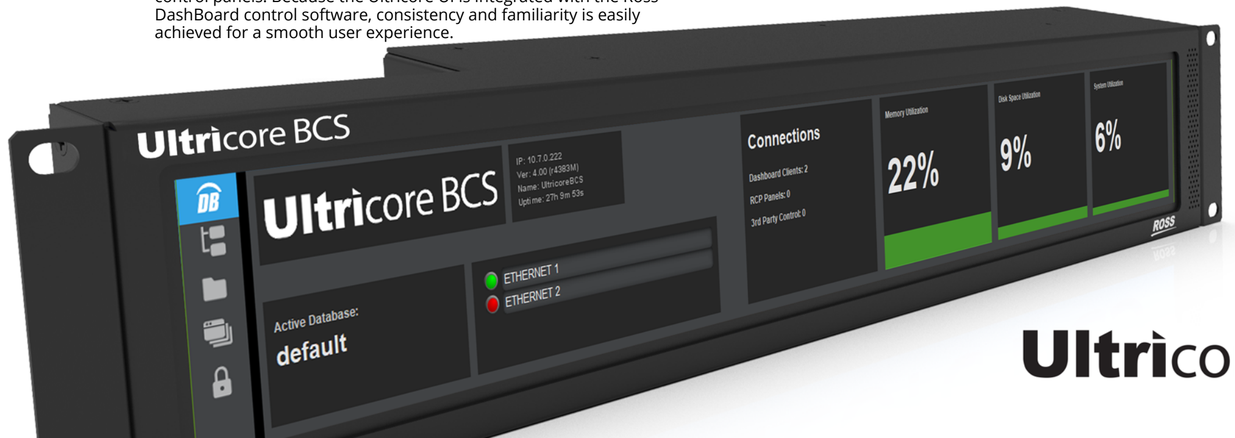
- **System Discovery and Setup**
  - Walkabout system discovery tool
  - Configure device communication settings
  - Establish server profiles
  - Perform identifications
  - Check network performance links and status and locate devices

- **Router and MultiViewer Database and Canvas Configuration**
  - Create router and Ultriscape MultiViewer configurations with the database editing tool
  - Create, change, and update sophisticated mappings, and source/destination groupings that are available to all control clients within the system

- **Enhanced operational tools**
  - Series of standard software panels
  - Ability to create custom panels
  - Monitoring, mapping matrices, and adjusting parameter adjustments are easy with a powerful, intuitive frame view

- **Hardware feature set**
  - 2 Ethernet ports, 2 Serial
  - Optional redundant power

Ultricore - rear



Ultricore

ULTRISYNC

Software Defined Frame syncs

Ultrisync is a software defined frame sync feature that can be assigned to any video input on the system. Ultrisync assures consistent timing for sources, and guarantees audio processing, including SRC up to 48Khz on all inputs perfect for taming wild input feeds to house reference within the facility or flypack. As an example of one of many uses, when used with Ultriclean enabled outputs, Ultrisync licensed inputs guarantee that signals fall within a timing window for clean switch applications. Licenses available for single or multiple inputs, and can act as floating licenses that affect whatever inputs are desired. The function can be applied to every input in the chassis, and with data rates of 3G and below- the entire frame can be populated. This software feature is much more cost effective than having to use an external frame sync.

KEY FEATURES:

- Software enable frame syncs
- Up to 36 Frame syncs in 1RU, up to 72 Frame syncs in 2RU, up to 160 Frame syncs in 5RU
- Audio SRC for all embedded channels
- Support for signals from SD to 3G on all ports. Up to 3 ports per slot can support framesyncs up to 12G.
- Simple enable/disable via checkbox
- Input timing status
- Up to 500 milliseconds of variable delay per mono channel
- Frame syncs are standard with Ultrix-IP-IO
  - No SRC
  - Support for data rates from 1.5G to 12G on all ports.

Ultrisync

ULTRICLEAN

Clean / Quiet Switching

Ultriclean is the world's first video clean switch to support switching of data rates up to 12G. Ultriclean offers completely clean video switching on a per output port basis that guarantees glitch free video, and quiet switch audio routing. Other routers cannot offer this and require dedicated, special hardware with complex systemization that must be planned in advance, which only makes Ultrix even more cost effective. Key applications for Ultriclean are master control bypass, as well as for situations where disruption of a source signal can cause downstream equipment to relock like monitors, downstream encoders, and others.

KEY FEATURES:

- Up to 36 Clean switches in 1RU
- Up to 72 Clean switches in 2RU
- Up to 160 Clean switches in 5RU
- Works in SD/HD/3G/12G
- Scales to offer as many outputs as needed – even up to 100% clean outputs
- Variable timing delay
- Easy setup and operation
- No manual timing steps required – automatically detects delay and adjusts appropriately to maintain clean switching
- When combined with Ultrimix, also provides 'Quiet' switching for embedded audio during a video switch

Ultriclean

ULTRIPOWER

External 1 RU power supply

Ultripower is a rack-mountable fully redundant power supply. In environments where equipment ruggedness, security, and maximum space savings are critical, Ultripower is a great fit. Rack-mountable, shallow, as well as easy to access and maintain, it is perfect for things like flypacks, OB Production, or equipment rooms where rack space is at a premium. Ultripower is also able to power multiple Ultrix chassis from a single system. One Ultripower chassis can provide redundant power for up to (4) 1RU Ultrix frames, or (2) 2RU Ultrix frames or (1) Ultrix 5RU frame.

DashBoard control and monitoring software can be used to configure, actively control, and monitor all key parameters of the device. In addition, Ultripower has three LED indicators on each power supply module to identity key alarm and power presence.

KEY FEATURES:

- 1RU external, rack-mountable power supply
- Front loading, hot swappable, redundant 1200W power supplies
- Power up to (4) 1RU Ultrix, and (2) 2RU Ultrix or (1) 5RU Ultrix with redundant power
- Adjustable rack ears
- Control/Monitoring over Ethernet via Dashboard
- LED indicators for Fan & Power

ULTRICOOL

External 1 RU cooling system

Smart, directional 1RU rack mount fully redundant cooling system to compliment equipment thermal performance when in extreme conditions or in confined spaces. Unit can be configured to provide directional airflow from front to back, front to right side, or front to left side depending on equipment requirements.

KEY FEATURES:

USER CHANGEABLE DIRECTIONAL AIRFLOW
Users can change airflow patterns from front to left or front to right or front to back to enable use with a wide range of equipment when in confined spaces or extreme thermal environments.

CONTROL FRIENDLY
Control via Dashboard, Rosstalk, as well as an integrated “smart” bonded mode with Ultrix provides many ways to control fan speed. In addition front panel control with lockout is available.

CONSISTENT OPERATING CONDITIONS
Ever needed to rack a bunch of high powered equipment in a tight case in scorching desert heat at high altitude during production? Well, some of our customers do, and we wanted to see if we could design something to help out. Ultricool manages airflow to provide a consistent operating condition in extreme environments. This gives means equipment stays at a constant operating temperature to ensure performance.

CONTROL PANELS

Ultricore offers highly flexible, yet simple and intuitive control panels, that can be configured to operate as an X-Y, cut-bus or multi-cutbus panel. Every control panel in the system can be independently configured to meet the needs of the particular operator position at which it is deployed.

ULTRITOUCH

Ultritouch is a family of powerful system control panels from Ross Video that is totally customizable and has been designed around you. The panels come in 2RU and 4RU rack-mountable touchscreen that builds on the functionality of traditional control products by adapting to your workflows, and it features a user interface that has more in common with a modern smartphone than a broadcast control panel. The magic of Ultritouch lies in its powerful Smart Touch capabilities. Ultritouch supports Ross Video's DashBoard platform natively, giving users unlimited flexibility to build panels that meet their working needs without any restrictions on numbers of buttons, button placement or display windows.

Smart Touch was developed to address the growing need for control surfaces that support traditional functionality but also offer greater levels of customization for the very precise and complex workflows of our most demanding customers. At its heart, Ultritouch features a full version of DashBoard – Ross Video's open control platform – which enables users to:

- Control a wide range of Ross products including production switchers, XPression graphics, Overdrive APC, openGear and Ross Routing systems, among others.
- Quickly change between panel styles and layouts, maximizing the usability of the panel and making your operations more efficient.
- Create and import custom panels
- NDI stream monitoring

In addition, Ultritouch combined with Ultrix routers gives users a tremendous amount of flexibility and advanced power including:

- Quick setup using the Ultricore soft panel wizard
- Custom panel layouts using flexible Windows and Drawers based on user preference
- Button per source, Cat/Idx, Grouping, Favorites, Advanced Statusing, Salvo operations and more
- Destination follow monitoring with video using NDI streaming direct on the panel
- A multiviewer control panel that allows for control of layouts, pips, and pip behavior. This graphics intensive panel simplifies use and makes it very easy to control large amounts of multiviewers from a single control surface.

KEY FEATURES:

- 2RU and 4RU Touch-enabled Dashboard based RCP
- Shallow depth(2.5") with sideways connector layout (to maximize leg room in desk applications)
- Redundant Power Supply (optional)
- Integrated Speakers for monitoring (future application)
- HDMI & USB ports
- System wide discovery via Walkabout
- Dashboard based for easy & fast configuration
- Full control of most Ross Products - Routers, Multi-viewers, Switchers, Graphics, APC, Processing Platforms, and more
- Dashboard tree & system management support
- Ability to store multiple panel types with intuitive navigation based on desired workflow
- Fast Reboot and control for mission critical operations
- Seamlessly fits into the current Ross control ecosystem
- Backed by famous Ross support

RCP-ME

The RCP-ME is an Ethernet-based panel, which means ease of configuration and flexible control architectures. When combined with the NK-NET, the NK-ME panel offers users the most redundant communications set up for small systems in the industry.

The RCP-ME has button programmability including source, destination, breakaway, level select, macro, protect, take and panel lock, as well as a backlit 16×2 LCD display for display of source and destination names, system warnings and errors.

KEY FEATURES:

- 40 fully illuminated LED backlit buttons
- Backlit 16×2 LCD display
- Ethernet connectivity
- Ability to connect to primary and backup IP addresses for control redun-dancy
- Slim design: 1RU, depth 4.4cm
- Full function, programmable control panel
- Configurable as cut-bus, multi-cutbus or menu driven source / destination switching control panel
- Control up to 32 levels
- Removable keycaps for labeling of button functions using transparent inserts
- Universal power supply included

RCP-QE

The RCP-QE Series offers unmatched flexibility and ease of use. They are ideal for use in OB vans or production houses where configurations change regularly, and are equally useful in studios where unlimited configurations enable fast and simple customized setups of each panel.

Ethernet-based connectivity means ease of configuration, and provides for flexible control architectures. The RCP-QE Series remote control panel offers 18 or 36 colored backlit graphic LCD keys with multiple menus, enabling users to easily navigate through the system with just a few key presses.

KEY FEATURES:

- 18 (RCP-QE18) or 36 (RCP-QE36) backlit graphic LCD keys
- 8 programmable function keys
- Slim design: 1RU, depth 4.4cm
- Ethernet based control
- Ability to connect to primary and backup IP addresses for control re-dun-dancy
- Full function, programmable control panel
- Menu driven and single key configurations
- Unique multi-level menu programming
- Configure with DashBoard Control System
- Universal power supply included
- 5-year transferable warranty

ULTRIX • ULTRICORE • ULTRITOUCH

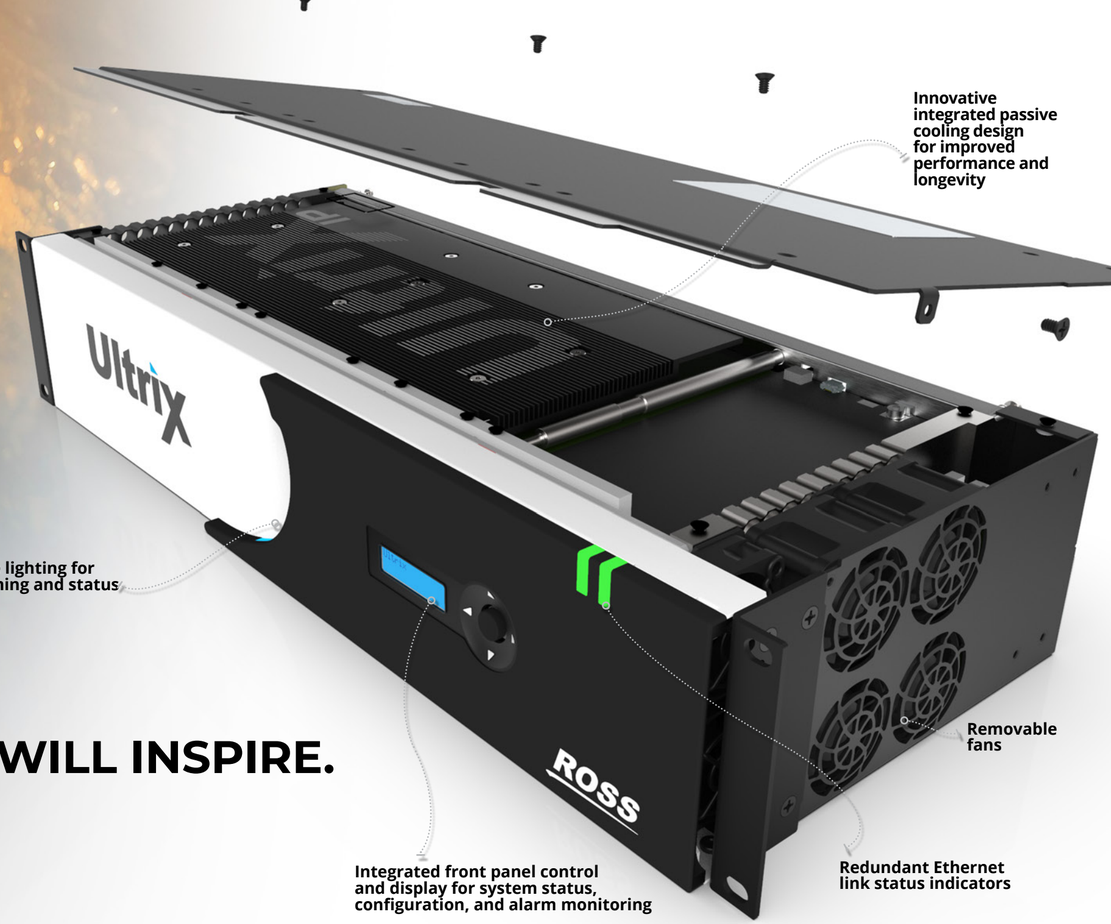
AWARD WINNING

CONNECTIVITY & CONTROL

AN EPIC FORCE THAT WILL IMPRESS

Every so often a system emerges that has been designed to redefine what is possible and changes how things are done. Ultrix was conceived to fill the gap of what has been available between smaller and larger routing systems. Sophisticated features and extensive function integration that improve performance and simplify system deployment should not be limited only to large and costly routers.

The Ultrix architecture is a true game changer. Every detail has been painstakingly thought out and reviewed. High speed design parameters have been pushed to the maximum, providing a system that offers a leading edge feature set at an incredible value. The Ultrix platform sets the bar for what should be expected in small to mid-size routers. Catch the new wave. Ultrix.



WHAT'S INSIDE WILL INSPIRE.

Ultrix has been singularly designed to optimize signal integrity and performance to set a new standard in reliability. It is also designed to lessen the stress of choosing advanced I/O capabilities when making such a significant capital expenditure. Software licensing provides users an easy path forward to add features as they need them, without having to scrap hardware that cannot be used anymore. With Ultrix, users move to advanced workflow requirements at their own pace and growth rate.

Ultrix Hardware Specifications	1RU	2RU	5RU
PHYSICAL DIMENSIONS			
Width	17.5"	17.5"	17.5”
Depth	7.9"	7.9"	7.9”
Height	1.74"	3.48"	8.7”
Frame Weight (approx)	4.06 kg (9 lbs)	5.44 kg (12lbs)	6.35 kg (14 lbs)
I/O Card Weight (approx per board)	1.36 kg (3 lbs)	1.36 kg (3 lbs)	1.36 kg (3 lbs)
INVENTORY			
Video Matrix Size (max)	36x36	72x72	160x160
Default I/O Slots	1 (16x16 HD BNC + 2 AUX I/O Ports)	1 (16x16 HD BNC + 2 AUX I/O Ports)	None
Optional I/O Slots using ULTRIX-HDB-IO	1 (16x16 HD BNC + 2 AUX I/O Ports)	3 (16x16 HD BNC + 2AUX I/O Ports)	9 (16x16 HD BNC + 2AUX I/O Ports) slots 1-8; FLEX slot 16x16 HD BNC only
Optional I/O Slots using ULTRIX-IP-IO	1 (x4 25G SFP28 + 2 SFP I/O Ports)	1 (x4 25G SFP28 + 2 SFP I/O Ports)	1 (x4 25G SFP28 + 2 SFP I/O Ports)
Optional I/O Slots using ULTRIX-SFP-IO	1 (16 SFP ports + 2AUX I/O Ports)	1 (16 SFP ports + 2AUX I/O Ports)	9 (16 SFP ports + 2AUX I/O Ports) slots 1-8; FLEX slot 16 SFP ports only
Audio Matrix Size (with Optional MADI SFP’s)	768x768	1536x1536	3456x3456
Ultriscape MV Head License per Slot	3 SDI or 2 IP	3 SDI or 2 IP	3 SDI or 2 IP
Maximum Ultriscape MV heads per System	6 SDI or 4 IP	12 SDI or 8 IP	27 SDI or 18 IP
UHD licenses per Frame	1	1	1
Maximum UHD Gearboxes per System	6 in/6 out	12 in/12 out	27 in/27 out
Maximum number of 3Gb/s input frame syncs per system	36	72	160
Maximum number of 12Gb/s clean/quiet outputs per system	36	72	160
OTHER			
PSU	1 External Brick	2 External Bricks	1RU external frame
Optional Redundant PSU (additional)	1 External Brick	2 External Bricks	1 External
Ultripower support	Optional	Optional	Standard
Fan Module	1	2	5

Ultrix Hardware Specifications	1RU	2RU	5RU
INPUT SPECIFICATIONS			
Standard Input	HD BNC	HD BNC	HD BNC
Signal Type	SDI Formats 270 Mb/s 1.5 Gb/s 3.0 Gb/s 12 Gb/s	SDI Formats 270 Mb/s 1.5 Gb/s 3.0 Gb/s 12 Gb/s	SDI Formats 270 Mb/s 1.5 Gb/s 3.0 Gb/s 12 Gb/s
Impedance	75 Ohm	75 Ohm	75 Ohm
Max Input Level	800 mV	800 mV	800mV
Return Loss	Per SMPTE 2082-1	Per SMPTE 2082-1	Per SMPTE 2082-1
Equalization (typical)	UHD 60M, 3G 180M, HD 200M, SD 400M	UHD 60M, 3G 180M, HD 200M, SD 400M	UHD 60M, 3G 180M, HD 200M, SD 400M
SFP Aux Connector	optional	optional	optional
OUTPUT SPECIFICATIONS			
Standard Output	HD-BNC	HD-BNC	HD BNC
Signal Type	SDI Formats: 270 Mb/s, 1.5 Gb/s, 3.0 Gb/s, 12 Gb/s	SDI Formats: 270 Mb/s, 1.5 Gb/s, 3.0 Gb/s, 12 Gb/s	SDI Formats: 270 Mb/s, 1.5 Gb/s, 3.0 Gb/s, 12 Gb/s
Impedance	75 Ohm	75 Ohm	75 Ohm
Amplitude	800mV +/- 10%	800mV +/- 10%	800mV +/- 10%
Rise & Fall Time	270 MB/s: 400-800ps 1.5 & 3GB/s: < 135ps 6 & 12GB/s: <45ps	270 MB/s: 400-800ps 1.5 & 3GB/s: < 135ps 12GB/s: <45ps	270 MB/s: 400-800ps 1.5 & 3GB/s: < 135ps 12GB/s: <45ps
DC Offset	0.0V +/- 10%	0.0V +/- 10%	0.0V +/- 10%
Overshoot	< 10%	< 10%	< 10%
Jitter	<0.2UI Alignment (up to 3G) <0.3 UI Alignment (12G) <.2UI Timing (up to 270M) <1UI Timing (1.5G) <2UI Timing (3G & 12G)	<0.2UI Alignment (up to 3G) <0.3 UI Alignment (12G) <.2UI Timing (up to 270M) <1UI Timing (1.5G) <2UI Timing (3G & 12G)	<0.2UI Alignment (up to 3G) <0.3 UI Alignment (12G) <.2UI Timing (up to 270M) <1UI Timing (1.5G) <2UI Timing (3G & 12G)
Return Loss	Per SMPTE 2082-1	Per SMPTE 2082-1	Per SMPTE 2082-1
SFP Aux Connector	optional	optional	optional
EMBEDDED AUDIO SPECIFICATIONS			
Audio channels per I/O	16	16	16

Ultrix Hardware Specifications	1RU	2RU	5RU
CARD SPECIFICATION-ULTRIX-IP-IO			
Standard Output	X4 25GE QSFP28	X4 25GE QSFP28	X4 25GE QSFP28
Video Streams per Card	UHD: 4+4 redundant, 8 non-redundant, 6G: 4+4 redundant, 8 non-redundant, 3G/HD: 16+16 redundant, 16 non-redundant	UHD: 4+4 redundant, 8 non-redundant, 6G: 4+4 redundant, 8 non-redundant, 3G/HD: 16+16 redundant, 16 non-redundant	UHD: 4+4 redundant, 8 non-redundant, 6G: 4+4 redundant, 8 non-redundant, 3G/HD: 16+16 redundant, 16 non-redundant
Video Format Support	• 720p 25/ 29.97/ 30/ 50 / 59.94 / 60 • 1080i 50 / 59.94 / 60 • 1080p 25/ 29.97/ 30/ 50 / 59.94 / 60 • 2160p 25/ 29.97/ 30/ 50 / 59.94 /60	• 720p 25/ 29.97/ 30/ 50 / 59.94 / 60 • 1080i 50 / 59.94 / 60 • 1080p 25/ 29.97/ 30/ 50 / 59.94 / 60 • 2160p 25/ 29.97/ 30/ 50 / 59.94 /60	• 720p 25/ 29.97/ 30/ 50 / 59.94 / 60 • 1080i 50 / 59.94 / 60 • 1080p 25/ 29.97/ 30/ 50 / 59.94 / 60 • 2160p 25/ 29.97/ 30/ 50 / 59.94 /60
IP Transport Standard Support	• SMPTE ST 2110 suite, including: - 10, System Timing and Definitions - 20, Uncompressed Active Video - 30, PCM Digital Audio • VSF TR-03 • AES67	• SMPTE ST 2110 suite, including: - 10, System Timing and Definitions - 20, Uncompressed Active Video - 30, PCM Digital Audio • VSF TR-03 • AES67	• SMPTE ST 2110 suite, including: - 10, System Timing and Definitions - 20, Uncompressed Active Video - 30, PCM Digital Audio • VSF TR-03 • AES67
System Timing and Reference	PTP Slave (SMPTE 2059, AES67 and IEEE-1588 default profiles)	PTP Slave (SMPTE 2059, AES67 and IEEE-1588 default profiles)	PTP Slave (SMPTE 2059, AES67 and IEEE-1588 default profiles)
Control and Setup	• NMOS IS-04 and IS-05 for AIMS-compliant discovery, registration and connection control • EmBER+ discovery, registration and connection control from popular 3rd-party control systems • Provisioning and monitoring via DashBoard and/or our published JSON API	• NMOS IS-04 and IS-05 for AIMS-compliant discovery, registration and connection control • EmBER+ discovery, registration and connection control from popular 3rd-party control systems • Provisioning and monitoring via DashBoard and/or our published JSON API	• NMOS IS-04 and IS-05 for AIMS-compliant discovery, registration and connection control • EmBER+ discovery, registration and connection control from popular 3rd-party control systems • Provisioning and monitoring via DashBoard and/or our published JSON API
INPUT/OUTPUT SPECIFICATION-ULTRIX-SFP-IO			
Number of SFP cages	16 Bidirectional SFP cages plus 2 AUX ports	16 Bidirectional SFP cages plus 2 AUX ports	16 Bidirectional SFP cages plus 2 AUX ports
Signal Type	SDI Formats: 270 Mb/s, 1.5 Gb/s, 3.0 Gb/s, 12 Gb/s	SDI Formats: 270 Mb/s, 1.5 Gb/s, 3.0 Gb/s, 12 Gb/s	SDI Formats: 270 Mb/s, 1.5 Gb/s, 3.0 Gb/s, 12 Gb/s
Compliance	MSA/Non MSA configurable	MSA/Non MSA configurable	MSA/Non MSA configurable
I/O specification	See SFP Manufacturer spec sheet for I/O specification	See SFP Manufacturer spec sheet for I/O specification	See SFP Manufacturer spec sheet for I/O specification
Frame Support	ULTRIX-NS and ULTRIX-5RU only	ULTRIX-NS and ULTRIX-5RU only	ULTRIX-NS and ULTRIX-5RU only

Redundant external power

Redundant Ethernet ports

Multi-use USB
USB to Serial for 3rd party interface

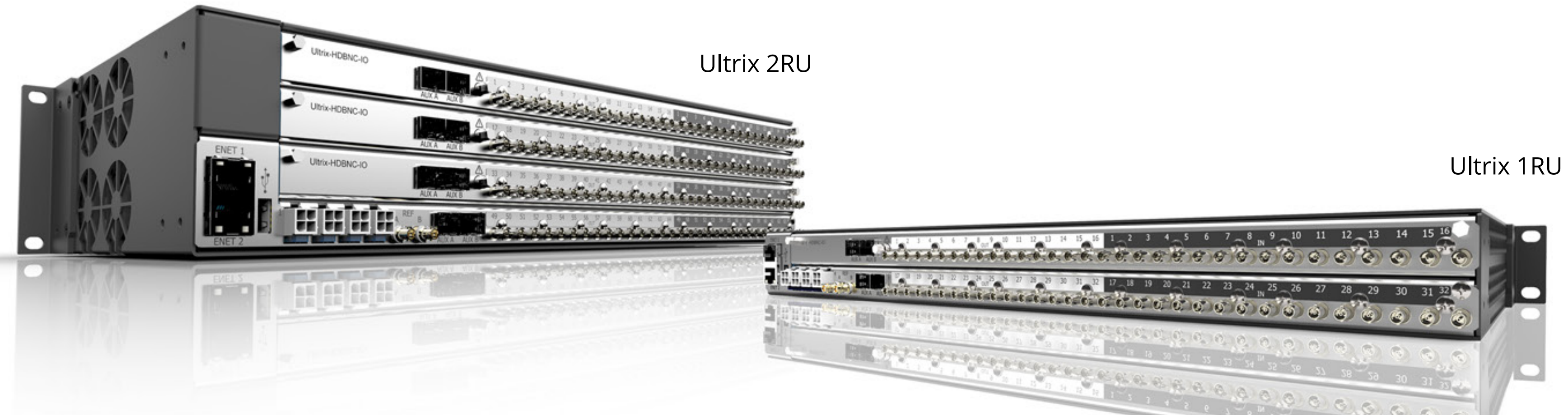
Dual or looping reference inputs

Ultrix 5RU

Wide array of I/O and Processing board options:
-HD-BNC
-IP
-SFP

Aux I/O
- For Video (BNC, Fiber, HDMI, IP)
  Discrete audio I/O MADI over Fiber or Coax

* Optional SFP MADI I/O available to support up to 384x384 per slot.
** Each license enables up to 12G support on all I/O per slot.



Ultrix 2RU

Ultrix 1RU

Ultrix

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

Operational Training can be provided at Ross Video, on-site, or on 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 comes standard with a 1 year comprehensive warranty. Extended Warranties on hardware and software maintenance are available for an annual fee.

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

ROSS VIDEO LIVING LIVE!

SOLUTIONS
Broadcast & Production
Augmented Reality & Virtual Sets
Sport & Live Events
Legislative
Mobile Production
House of Worship
Education
Corporate

PRODUCTS
Production Switchers
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

SERVICES
Creative Services
Mobile Production

Ultrix_Brochure_200327_a

ROSS® LIVING LIVE!