

A · C · U · I · T · Y



**ROSS**  
Production Technology Experts



The most-watched productions on earth.



Ross products have been the backbone of the most anticipated and viewed productions on the planet. With over 40 years of focused experience in live production - Ross has driven the technology that has captivated and electrified audiences around the globe since 1974. **Ross > We're live!**

**ROSS**  
Production Technology Experts

# A · C · U · I · T · Y [a-kyōō'ī-tē]

**1.** Keeness or acuteness, especially in vision or thought. **2.** Sharpness, clearness, and distinctness of perception or vision. **3.** The capacity of the eye to see fine detail, measured by determining the finest detail that can just be detected.

The culmination of 40-years production switcher design experience, Acuity provides the powerful core for a wide range of live production environments as an innovative large production switcher platform designed to meet future needs. It delivers fast, efficient and error-free production, in an ergonomically perfect and stunningly beautiful package. What sets an Acuity solution apart is an unprecedented level of connectivity combined with a range of operational flexibility that makes it the perfect fit for various production requirements. When coupled with Ross Video's DashBoard control system manager, the custom PanelBuilder, or the industry leading OverDrive APC system - **Acuity delivers production-control speed and efficiency as well as flawless program creation, every time, all the time.**

## Why Buy Acuity?

### DO MORE

- The biggest creative feature set for the biggest productions.
- Beautiful, ergonomic design faster and easier to use than competitive models.
- More inside the box – less outboard gear is required.
- Handles 1080P and 4K productions without requiring expensive upgrades.

### SAVE MONEY

- Ross is well known as one of the best value brands in the industry.\*
- Free lifetime technical advice by telephone and email - free forever!
- A platform approach with a growth path that adds new features via free software updates.

### CHOOSE WISELY

- Acuity is backed by Ross, a solid company committed to production switcher development with a 40+ year history.
- Ross ships the most production switchers in 2ME and up sizes – this popularity makes it easier to hire and retain operations staff.
- Choose great support - Ross annually receives among the highest ratings for customer support.\*

\*Source: Devoncroft Big Broadcast Survey



## Creativity Unleashed.

Acuity is our top of the line, large production switcher designed to handle the world's most challenging live events.

Operational Signal Formats	<b>8</b> FULL MEs	<b>0.5 ME</b> with 4 Keys	<b>9</b> Keys per ME	<b>144</b> Channels of DVE	Programmable Outputs per ME   <b>6</b>	<b>36</b> Channels of MediaStore™	DASHBOARD CONTROL	<b>20</b> Source Dual Head Multiviewers	<b>15</b> AUX Keys
<b>SD/HD/3G/UHD</b>									

## Rich Feature Set.

### **POWERFUL MEs**

> Acuity packs major effects and keying power into every ME.

### **EACH ME PACKS**

- 8 powerful keyers with luma, linear, chroma and preset pattern keys
- 1 additional keyer for DVE transitions
- 16 channels of 2D DVE / Resizers with Key Combiners
- 2 channels of Advanced 3D DVE with Key / Fill & Warps (optional)
- 2 advanced UltraChrome™ chroma keyers
- 2 utility buses for video-in-border and garbage mask applications
- MultiFeed™\* provides 6 definable PGM outputs
- 12 pattern generators, 2 advanced pattern generators for wipes, 8 preset pattern keys and 2 pattern generators for color washes.

\*MultiFeed™ provides 6 configurable PGM outputs with any combination of keyers per ME

- 6 configurable Program outputs
- 2 configurable Preview outputs

### **UltraChrome™ ADVANCED CHROMA KEYING**

• The UltraChrome™ chroma keyer uses Ross patented technology to perform perfect keying in the most demanding applications.

### **UP TO 36 CHANNELS OF MediaStore™ WITH MediaCache™**

- 4 Channels of GlobalStore™
- 4 Channels of ME-Store for every ME – available system wide
- Playback stills and animations with Key & Fill
- Link multiple channels for synchronous playback
- Playback UHD (4K) animated transitions with Key & Fill
- Capture stills, clips and animations with Key & Fill
- Internal SSD hard drive storage
- FTP and USB file management

### **AuxKeys™**

A Ross patented design that adds 'Mini-ME' mixing and keying capability to Auxiliary Bus outputs

- Brand any output, overlay titles, or cut/mix sources
- Control on-set display content independently
- AuxKey re-entry for additional effects
- Gang AuxKeys to provide simple UHD (4K)
- Completely independent, uses no ME resources

### **MixDSK™**

An additional Half ME in all Acuity systems (not available with 8MEs)

- 4 Downstream Linear / Luma Keyers
- Cut and Dissolve transitions
- All sources available to DSKs
- Does not utilize any ME resources

### **PROC AMPS & RGB COLOR CORRECTION**

- Adjust remote camera inputs
- Fix problems in incoming feeds
- Correct color for on set displays

# Applications.

Tens of thousands of users push Ross switchers hard in a wide variety of applications on a daily basis. Over the years, our engineers have incorporated feedback from our diverse group of users, resulting in a capable, comprehensive and reliable feature set. Whatever your creation, you know Acuity will give you the tools to execute a beautiful, crisp, clean production.



## BROADCAST NEWS

Ross Production Switchers are widely deployed in broadcast news environments. Covering the range from small, to mid and top market newscasts and 24 hour news channels, the Acuity Series is designed to have the scalability, flexibility and production power to meet the needs of getting a clean, great looking, newscast on the air.

## BROADCAST SPORTS

Acuity offers the advanced feature set required to produce high definition sportscasts with fast-paced highlight packages, an intensive graphics look and stunning HD transition effects that will make your sports programming come alive and rivet viewers to their seats.

## BROADCAST PRODUCTION

Acuity has a great feature set to support a wide range of television productions. A choice of tools like RGB color correctors, built-in media stores and high quality HD DVE effects offer creative possibilities to give your production that extra edge. Acuity's AuxKey™ "Mini-MEs" make it easy to put content into on-screen monitors while keeping your MEs free for production use.

## BROADCAST MOBILE

Acuity makes a great mobile truck / OB van production switcher. The combination of production power and compact rack frame are ideal for mobile applications.

## SPORTS STADIUMS

Ross is the top supplier of production switchers for sports stadiums. Hey, our CEO has been known to switch a Buffalo Bills game now and then. We know this application well and have a number of exclusive options in Acuity such as AuxKeys™, Daktronics interfacing, and Christie Vista Spyder control. Our ME architecture lends itself well to managing a multi-screen production and on-the-fly board changes from single to dual to triple screen visuals.

## HOUSES OF WORSHIP

Houses of Worship have special requirements for their video production equipment. Switchers must be powerful, easy-to-use and handle multi-screen and multi-feed productions.

## EDUCATION

Ross production switchers have always been popular with educators. Their ease-of-use enable students to quickly grasp basic switcher concepts while the industry standard next transition style control means that training on a Ross switcher makes an easy transition to competitive industry models. Ross offers a unique program, "*Ross University*", allowing educators to provide training and certification to their students on Ross production equipment. This certification is a great asset on a student's resume, and helps secure that important first industry job out of school.

## MULTI-PLATFORM PRODUCTION

Media organizations need serious tools to pull their productions together quickly with a high quality look and feel across all types of platforms. Being able to produce live hits from a studio complete with graphics and effects can save hours of precious time in editing for content being pushed out on Internet and mobile platforms. No matter what the final destination, you'll appreciate the added value that Acuity can provide.

## LIVE EVENTS / MULTI-SCREEN PRODUCTION

Top name acts take Ross production switchers on the road with them. Acuity gives their shows extra punch and has the unique ability to drive effects and fly images across multiple screens. Acuity's powerful device control capability allows you to run a wide range of gear, like servers and graphics devices, creating a compelling show in which you never miss a beat. The Acuity 4RU chassis with 60 inputs and 6.5 MEs offers extreme production power, while taking up less space wherever you go.

When you need to simultaneously manage multiple display outputs for on-stage events or on-set monitors in studios, Acuity is a breath of fresh air. You get superb production values combined with minimal video delay for a tight match to the live performance. With the adoption of AuxKeys™, you

can produce up to 15 displays without tying up any of Acuity's floating ME resources. All of this is controlled from Acuity's industry-standard production switcher control panel.

## DIGITAL CINEMACASTING

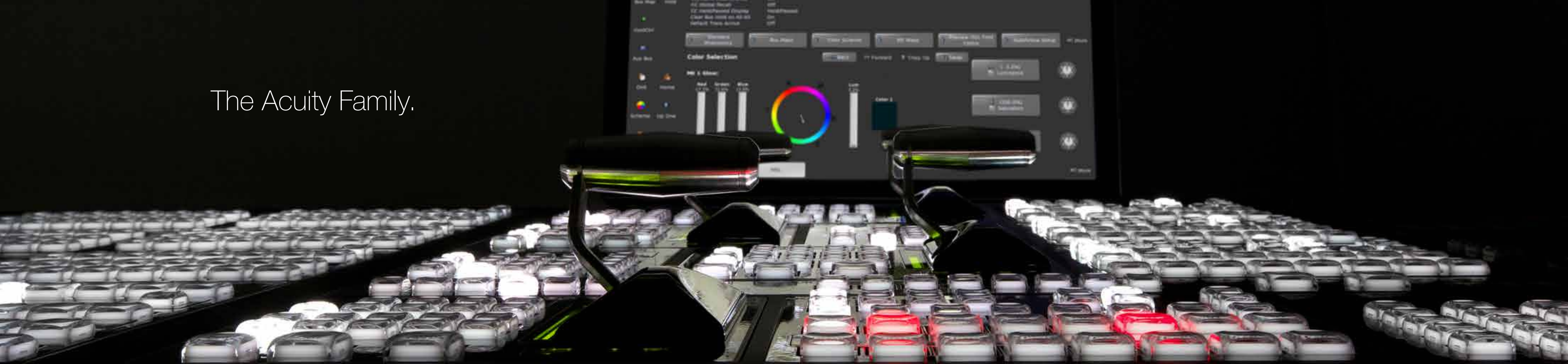
As film and video continue to converge, live production comes to the big screen with Digital Cinema. With 24 frame support, Acuity makes a great solution for this type of production.

## AUTOMATED PRODUCTION

Acuity offers a complete range of device interfaces to put more control in the hands of the technical director. Our ground breaking OverDrive Automated Production Control System puts all of your production devices into a simple and intuitive touch screen interface. Running the production is as simple as stepping through a series of predefined looks including camera shots, graphics, video clips, video effects and audio.

A · C · U · I · T · Y

The Acuity Family.





## Control Panel Technology.

### **CREATIVE PEOPLE NEED CREATIVE TOOLS**

Acuity makes it personal, allowing you to arrange things the way you want them. Independently map inputs to any button in any order on any ME. Set up individual source mnemonic names, font sizes and colors. Use the Acuity RGB buttons to design your own color scheme, background panel glow and on-air indicators to fit the way you work. Choose from a selection of system control display themes. Get Acuity in your zone and make things happen.

### **NEW TECHNOLOGY THAT MAKES SENSE**

Elegant and easy-to-use, Acuity's control panel, which is fully modular and can be custom configured to suit operators needs, was designed after considerable consultation with customers, partners and prospective users to determine the ideal ergonomics and perfect feature set. Innovative manufacturing techniques were used to construct control surfaces that considerably enhance overall operation and ease-of-use—and take production switchers to a whole new level.

Acuity's panel layout, with every button falling within perfect reach and all functions directly accessible at the press of a single button, is an operator's dream come true. Ross Video's legendary guaranteed-for-life fader has been completely redesigned for Acuity, providing the perfect 'feel' and a fantastic look that compliments a stunning panel design that is **fit for the future**.



#### ACUITY 1s CONTROL PANEL SPECIFICATIONS

- > 24 Crosspoint Buttons on Panel with Mnemonics
- > 1 Mix Effects Control Row (Stripe)
- > 24 Custom Control Macro Buttons with 48 Banks

- Auto-Follow, Industrial Grade, Dual Display System Control Touch Screen (included)
- USB Ports for Keyboard, Mouse, and Media Drives
- On-Panel Aux Bus Control (Bus Delegation) and Optional Aux Bus Control Surface
- Source Awareness™ Automatic Features
- Unique Ross "Roll Clip" Button in Every ME
- 1000 Event Memory System and 2304 Custom Control Macros per Setup File
- Local Event Memory System and Global Event Memory System Modules
- Preview Overlay™ Safe Area/Title and Operator Heads-Up Information Display
- 36 Fully Assignable Parallel Tally Outputs - Expandable to up to 72
- Panel Glow User-Definable Button Color Themes
- Full 1 Year Transferable Warranty, Lifetime Fader Handle Warranty
- Lifetime Software Updated via Ross Website, Lifetime Telephone Support

# A1s







#### ACUITY 2m CONTROL PANEL SPECIFICATIONS

- > 24 Crosspoint Buttons on Panel with Mnemonics
- > 2 Mix Effects Control Rows (Stripes)
- > 24 Custom Control Macro Buttons with 48 Banks

- Auto-Follow, Industrial Grade, Dual Display System Control Touch Screen (included)
- USB Ports for Keyboard, Mouse, and Media Drives
- On-Panel Aux Bus Control (Bus Delegation) and Optional Aux Bus Control Surface
- Source Awareness™ Automatic Features
- Unique Ross "Roll Clip" Button in Every ME
- 1000 Event Memory System and 2304 Custom Control Macros per Setup File
- Preview Overlay™ Safe Area/Title and Operator Heads-Up Information Display
- 36 Fully Assignable Parallel Tally Outputs - Expandable to up to 108
- Panel Glow User-Definable Button Color Themes
- Full 1 Year Transferable Warranty, Lifetime Fader Handle Warranty
- Lifetime Software Updated via Ross Website, Lifetime Telephone Support

A2m



#### ACUITY 2x CONTROL PANEL SPECIFICATIONS

- > 32 Crosspoint Buttons on Panel with Mnemonics
- > 2 Mix Effects Control Rows (Stripes)
- > 32 Custom Control Macro Buttons with 48 Banks

- Auto-Follow, Industrial Grade, Dual Display System Control Touch Screen (included)
- USB Ports for Keyboard, Mouse, and Media Drives
- On-Panel Aux Bus Control (Bus Delegation) and Optional Aux Bus Control Surface
- Source Awareness™ Automatic Features
- Unique Ross "Roll Clip" Button in Every ME
- 1000 Event Memory System and 2304 Custom Control Macros per Setup File
- Preview Overlay™ Safe Area/Title and Operator Heads-Up Information Display
- 36 Fully Assignable Parallel Tally Outputs - Expandable to up to 108
- Panel Glow User-Definable Button Color Themes
- Full 1 Year Transferable Warranty, Lifetime Fader Handle Warranty
- Lifetime Software Updated via Ross Website, Lifetime Telephone Support

# A2x





#### ACUITY 3m CONTROL PANEL SPECIFICATIONS

- > 24 Crosspoint Buttons on Panel with Mnemonics
- > 3 Mix Effects Control Rows (Stripes)
- > 24 Custom Control Macro Buttons with 48 Banks
- Auto-Follow, Industrial Grade, Dual Display System Control Touch Screen (included)
- USB Ports for Keyboard, Mouse, and Media Drives
- On-Panel Aux Bus Control (Bus Delegation) and Optional Aux Bus Control Surface
- Source Awareness™ Automatic Features
- Unique Ross "Roll Clip" Button in Every ME
- 1000 Event Memory System and 2304 Custom Control Macros per Setup File
- Preview Overlay™ Safe Area/Title and Operator Heads-Up Information Display
- 36 Fully Assignable Parallel Tally Outputs - Expandable to up to 108
- Panel Glow User-Definable Button Color Themes
- Full 1 Year Transferable Warranty, Lifetime Fader Handle Warranty
- Lifetime Software Updated via Ross Website, Lifetime Telephone Support

A3m



#### ACUITY 3 CONTROL PANEL SPECIFICATIONS

> 32 Crosspoint Buttons on Panel with Mnemonics

> 3 Mix Effects Control Rows (Stripes)

> 32 Custom Control Macro Buttons with 48 Banks

- Auto-Follow, Industrial Grade, Dual Display System Control Touch Screen (included)
- USB Ports for Keyboard, Mouse, and Media Drives
- On-Panel Aux Bus Control (Bus Delegation) and Optional Aux Bus Control Surface
- Source Awareness™ Automatic Features
- Unique Ross "Roll Clip" Button in Every ME
- 1000 Event Memory System and 2304 Custom Control Macros per Setup File
- Preview Overlay™ Safe Area/Title and Operator Heads-Up Information Display
- 36 Fully Assignable Parallel Tally Outputs - Expandable to up to 108
- Panel Glow User-Definable Button Color Themes
- Full 1 Year Transferable Warranty, Lifetime Fader Handle Warranty
- Lifetime Software Updated via Ross Website, Lifetime Telephone Support

# A3

# A · C · U · I · T · Y



## ACUITY 4 CONTROL PANEL SPECIFICATIONS

- > 40 Crosspoint Buttons on Panel with Mnemonics
- > 4 Mix Effects Control Rows (Stripes)
- > 40 Custom Control Macro Buttons with 48 Banks

- Auto-Follow, Industrial Grade, Dual Display System Control Touch Screen (included)
- USB Ports for Keyboard, Mouse, and Media Drives
- On-Panel Aux Bus Control (Bus Delegation) and Optional Aux Bus Control Surface
- Source Awareness™ Automatic Features
- Unique Ross "Roll Clip" Button in Every ME
- 1000 Event Memory System and 2304 Custom Control Macros per Setup File
- Preview Overlay™ Safe Area/Title and Operator Heads-Up Information Display
- 36 Fully Assignable Parallel Tally Outputs - Expandable to up to 144
- Panel Glow User-Definable Button Color Themes
- Full 1 Year Transferable Warranty, Lifetime Fader Handle Warranty
- Lifetime Software Updated via Ross Website, Lifetime Telephone Support

# A4

# Ergonomic.

## ME AND KEY BUS CONTROL

Quickly change ME, Key Bus, Aux Bus and AuxKey assignments.

## ADJUSTABLE PANEL GLOW

30 bit color - all buttons are fully visible regardless of room lighting conditions. 20 user-defineable colors per theme.

## FULL COLOR, 12-CHARACTER MNEMONIC DISPLAYS

User-configurable for font size, color and reverse video. With the router or TSL UMD interface, router mnemonics show up on these displays.

## COLOR CORRECTORS AND PROC AMPS

Double press any source to access CC or Proc, great for quick fixes or creative effects.

## SD / HD SmartConversion™

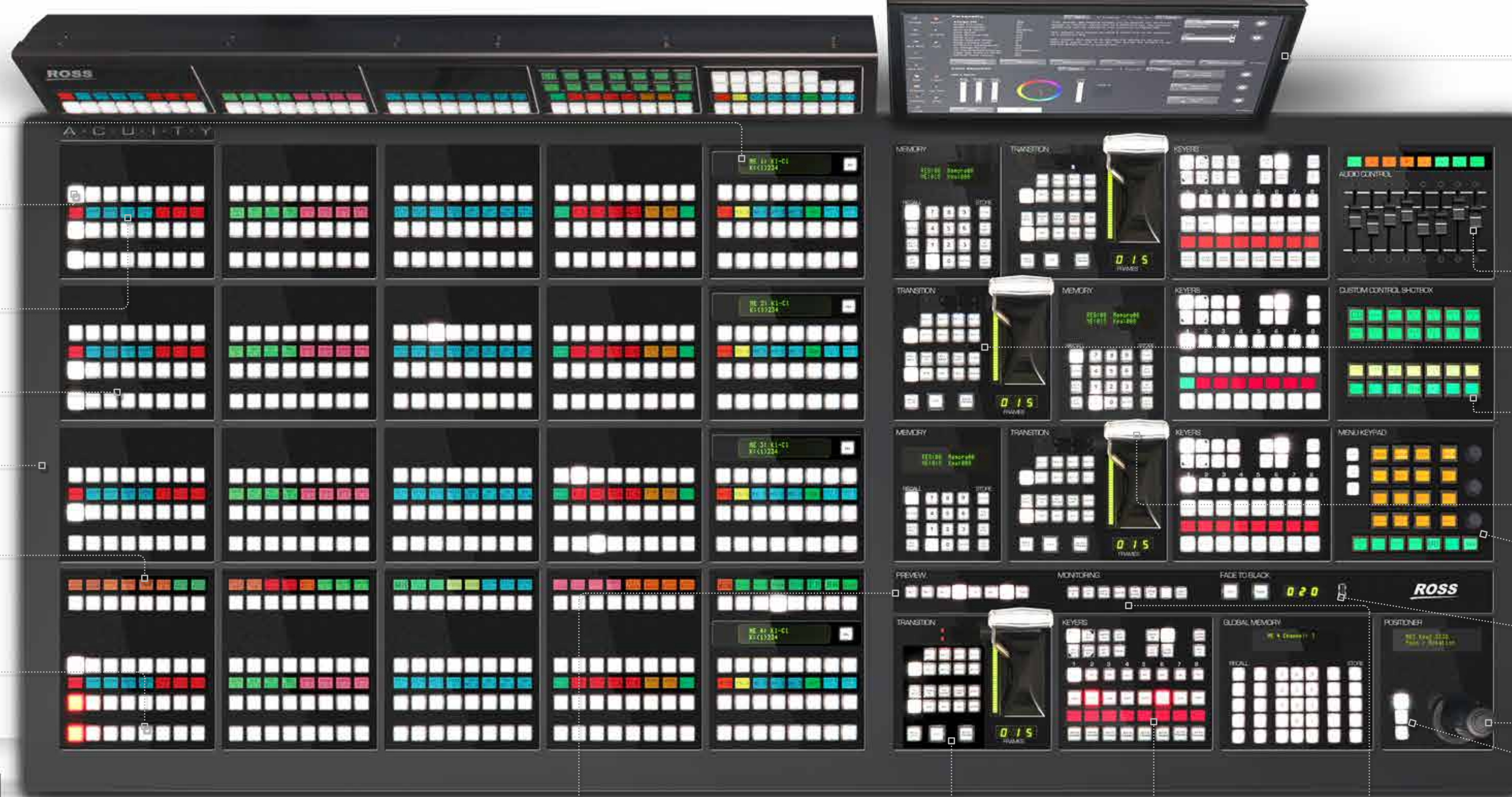
Automatically up and down convert on-the-fly. This feature is ideal for mixed format productions.

## CUSTOM CONTROL MACROS

Up to 48 banks of editable macros that can do anything. Record events, recalls, pauses, holds, and control devices. Create complex events that can be frame accurately repeated at the press of a button!

## ME-STORES AND GLOBAL-STORES

Up to 36 channels of quickly accessible stills and animations directly from online ram loaded from an internal non-volatile SSD Drive.



## SYSTEM DISPLAY AREA

### 15-INCH COLOR TOUCH SCREEN

Access to graphical controls anywhere on the screen.

### PANEL STATUS INDICATORS

Press for full diagnostic status.

### LCD CONTROLS

Easy access for optimal LCD display setup.

### QUICK MENU BAR

Direct access to favorite menus.

### REVOLUTIONARY DUAL DISPLAY MENUS

Two simultaneous menus are better than one.

## AUDIO CONTROL (optional)

Motorized fader module for remote control of Audio Consoles. Ideal for OverDrive Automated Production Control systems or live production.

## NEXT TRANSITION AREA

With 8 direct access key select buttons, and transition controls.

## CUSTOM CONTROL SHOTBOX (optional)

28 fully programmable soft buttons. Access to any of the 2304 Custom Controls via a configurable number of "pages". Great for grouping effects into a users preferred layout.

## NEXT GENERATION ROSS FADER

Robust, auto-calibrated and great to use. Simply the best and guaranteed for life.

## MENU KEYPAD

Used in conjunction with the Acuity system control display - tactile control at your fingertips.

## USB PORT

Accepts USB Drives for loading or saving system settings and user files. Also great for transfer of graphics, stills and animations to the system hard drive.

## 3-AXIS JOYSTICK WITH CLICK BUTTON

Quickly toggle between similar functions like DVE position and rotation.

## POSITIONER LINK

Simultaneously control any number of parameters.

## 24, 32 and 40 CROSSPOINT AUX PANELS (optional)

Expand your reach!

See page 48

## PREVIEW MATRIX

Preview anything. Select any ME's program or preview output, or any switcher input on your big preview monitor.

## EXTRA LARGE CUT AND AUTO BUTTONS

Feel what you're doing, great for fast-paced live production.

## KEY SOURCE MNEMONICS

See source and key type at-a-glance with key type indication in the corners.

## PREVIEW OVERLAY

A unique "Heads-Up Display" for TDs with important source information, time code, timer and safe area graphically overlaid on the preview monitor.

The Acuity family is built on a modular concept offering unmatched serviceability, flexibility and future growth path. Modules can be swapped out in minutes and all Acuity models draw from a common set of standard modules, thus making support an engineer's dream. As times change, new modules developed by Ross will offer new functionality and are easily added to Acuity in the future.

# Modular Design.



**CONTROL PANEL MODULES**  
The Acuity top panel consists of a series of drop-in modules, connected through high-speed interface links. This modular platform is easy to build, operate and service.



**SQUEEZED FOR BUDGET?**  
Acuity modularity allows you to option out an entire ME on the control panel. These modules can be easily added in later.

## PANEL CONNECTIONS

- VGA connector for secondary / backup system control display
- PS2/USB keyboard and mouse ports
- Gigabit Ethernet
- DVI connector for Acuity system control display
- Outboard panel module and AUX panel ports
- USB Device ports
- Connection points for auxiliary control "backslash" module
- Serial ports for serial control based devices local to the panel
- Parallel tally ports
- Redundant power



**SERIAL DEVICE CONTROL OVER YOUR NETWORK**  
Extend your reach with an Ethernet to Serial converter. Place your devices anywhere your network allows.

**INSIDE THE PANEL**  
The modularity of the Acuity control panel continues below the surface.

**EASY SWAP CPU, UPGRADEABLE**  
The *lightning-fast* Intel Processor runs a robust Linux operating system and is sled mounted for easy change or upgrade.

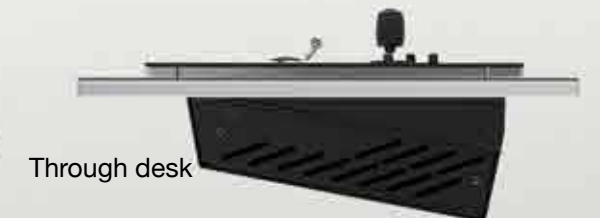
**QUICK SWAP POWER SUPPLY**  
Acuity power supply modules are quick-swap and load-sharing.

**SideShot**  
Remote your Custom Control Macros. Run any function at up to 220 meters away.



**SideSlide**  
Take direct control of you Audio Console with our remote Motorized Audio Fader Module. The perfect companion for Overdrive Automated Production Systems or live production.

**MOUNTING OPTIONS**  
You name it, Acuity does it.



# Acuity System Control Display.

**LESS THAN 2" THICK (5cm)**  
Fits in the tightest spaces.

**GET THE DUAL DISPLAY ADVANTAGE**  
Acuity's dual display works the way you do. Two independent menus are displayed simultaneously, enabling quick control of the parameters you need. No more multiple keystrokes to move between menus when building key frames. Adjusting video parameters while controlling an external device like a server or robotic camera is easy with Dual Display. A real productivity enhancer.

**ONLINE HELP**  
Acuity is here to help. Full Acuity manuals are built right in to assist you. They are always up-to-date with the software you are running.

**DRIVE WITH TOUCH, FUNCTION KEYS OR MOUSE**  
Acuity's menus can be driven any way you want, by using the touch screen, on panel Menu Module buttons, or your choice of mouse or trackball.

**VESA MOUNTS**  
Choose from a large selection of industry standard mounts.



Acuity's menu and touch screen system share the same stunning design and ease-of-operation. The touch screen boasts an all-new 16:9 15" display, has touch and on-panel menu module controls that deliver greatly enhanced ease-of-use and operational speed.





# Live Production Engines.

## **POWERFUL COMPACT 4RU CHASSIS**

The Acuity 4RU Live Production Engine sets a new standard for compact chassis capability. It has 6.5 MEs or Combination of MEs and Dual Head MultiViewers, 60 Multi-Definition Inputs, 40 Multi-Definition Configurable Outputs, 96 2D DVE Channels, 12 3D DVE Channels, 59 Internal Keyers, 6 WARP Generators, 28 Internal Ethernet Connected MediaStores, and 19 Classes of External Interfaces. Add AuxKeys™, Proc Amps, RGB Color Correctors, Utility Buses, MultiFeed™, Preview Overlay, Linux OS, and a whole lot more. The result is revolutionary. Amazingly, all this fits into an ultra-compact 4RU including all PSUs.

## **CLASS LEADING 8RU CHASSIS**

The Acuity 8RU Live Production Engine, is by far, the most powerful production switcher we build. It has 8 MEs or Combination of MEs and Dual Head MultiViewers, It has 120 Multi-Definition Inputs, 60 Multi-Definition Configurable Outputs, 128 2D DVE Channels, 16 3D DVE Channels, 80 Internal Keyers, 8 WARP Generators, 36 Internal Ethernet Connected MediaStores, and 19 Classes of External Interfaces. Add AuxKeys™, Proc Amps, RGB Color Correctors, Utility Buses, MultiFeed™, Preview Overlay, Linux OS, and a whole lot more. The result is revolutionary once again. Amazingly, it fits into a rack saving 8RU including all PSUs.

Acuity Live Production Engines pack the latest technology - offering a powerful set of features, multi-definition support, long service life and the ability to deliver these services to up to 9 control panels simultaneously.

## **MULTI-DEFINITION**

Acuity allows you to work in your choice of SD or HD format, including: 480i (SD 525), 576i (SD 625), 720p, 1080i, 1080p24, 1080psF24/23.98, 1080p 3G and 4K UHD TV QuadLink 3G.

## **HUGE INPUT MATRIX**

The Acuity chassis can accept more of your sources directly with up to 120 Multi-Definition Video Inputs, available in groups of 20. The compact Acuity chassis supports up to 60 Inputs.

## **HUGE OUTPUT MATRIX**

The Acuity chassis provides up to 60 fully configurable Multi-Definition Video Outputs, available in groups of 20. The compact Acuity chassis provides 40 configurable outputs.

## **INTERNAL STORAGE DRIVE**

Acuity engines include a Solid State Drive in the rackframe used to store switcher show files, stills, animations, video clips, and more.

## **GROWTH PATH**

The Acuity 8RU chassis can be equipped with up to 8 MEs while the 4RU chassis can support up to 6.5 MEs. Both engines include the "half ME" program / preset at no additional cost (not available in 8ME systems). ME hardware can also be utilized as MultiViewer Heads which reduces system cost and complexity of design. Buy a smaller system now and add another ME/MV and a larger control panel as your needs grow.

## **PREVIEW OVERLAY**

This unique option allows the technical directors to keep their eyes on the action by presenting critical information over the preview monitor output. Included are VTR and video server time code, an up/down timer, source ID, safe title, and more - each individually selectable via handy control panel buttons.

## **SmartConversion™ ON-THE-FLY FORMAT CONVERSION**

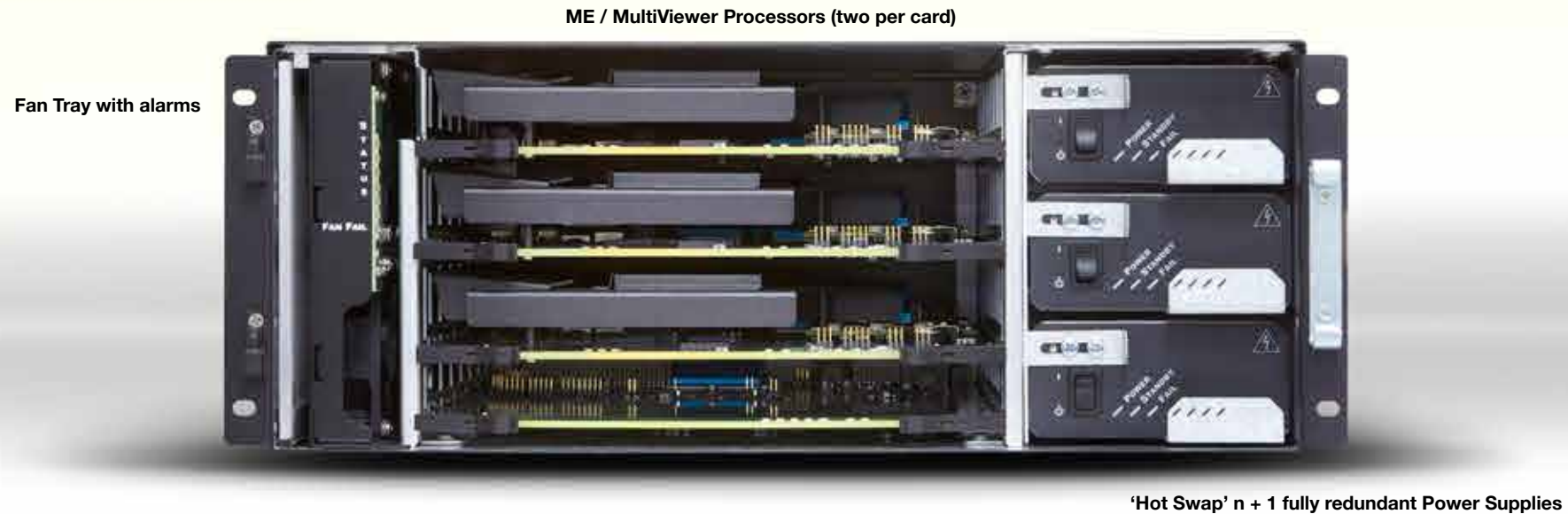
SmartConversion™ frees you from format issues by translating sources automatically as you work. This powerful option seamlessly integrates alternate format sources into your production such as standard definition sources into a high definition production.

## **MULTI-PANEL OPERATION**

Acuity Engines support Multi-Panel operation, the ability to connect and operate more than one control panel from a single engine. Acuity has an impressive 8 MEs of production power which can be shared with up to 9 Acuity control panels of different types. This capability is ideal for assisted productions, split feed home / away productions, multi-screen productions as well as separate productions sharing the same frame and resources.



# Under the Hood.



**ACUITY 4RU CHASSIS (inside)**  
The Acuity compact 4RU chassis provides the highest I/O density available, it's the ideal solution for mobile production vehicles and other space limited applications. No other external PSU or Control interface frames are required - it is fully self contained.



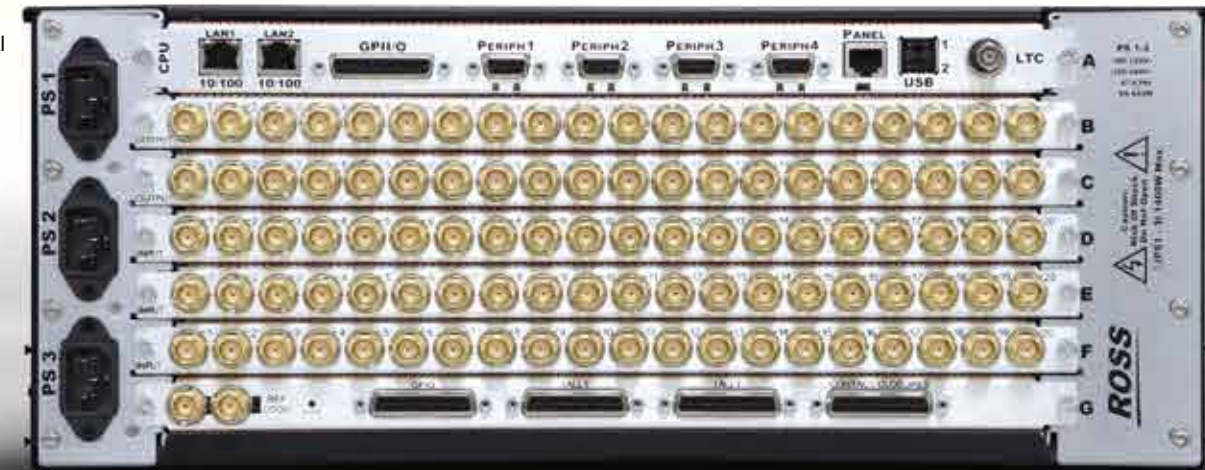
**ACUITY 8RU CHASSIS (inside)**  
The Acuity 8RU chassis provides enterprise class I/O and processing power. It's the perfect workhorse for state-of-the-art production in any large system environment. It is ruggedly constructed to meet the rigorous demands of large production vehicles.

# Accelerate. Connectivity.

## DUAL ETHERNET PORTS

- Acuity control panel connection
- Software upgrades
- Transfer stills, clips, and animations to and from the switcher
- Remote diagnostics and log access

## RS422/232 SERIAL PORTS



## REDUNDANT POWER SUPPLY

- 2 power supply required for normal operation
- 1 optional additional power supply for redundancy

## REMOVABLE MODULES

- Enables quick swap replacement
- Hot swappable modules

## LOOPING REFERENCE INPUT

- System references supported for Multi-Definition operation
- Connect black burst or tri-level sync regardless of system format

## GPI/TALLY PORTS

- 10 GPI and 10 GPO on CPU
- 24 GPI/O on Reference Board
- 12 Contact Closure Relays
- 36 Open Collector Tallies

## UP TO 40 MULTI-DEF OUTPUTS

- SD, HD and 3G capable
- All outputs individually auto-timed
- All outputs fully assignable to program, preview, clean, aux bus, AuxKeys™ and more

## UP TO 60 MULTI-DEF INPUTS

- SD, HD and 3G capable
- 20, 40, or 60 inputs

## N+1 POWER SUPPLIES

- 3 power supplies required for normal operation
- Optional additional power supply for redundancy

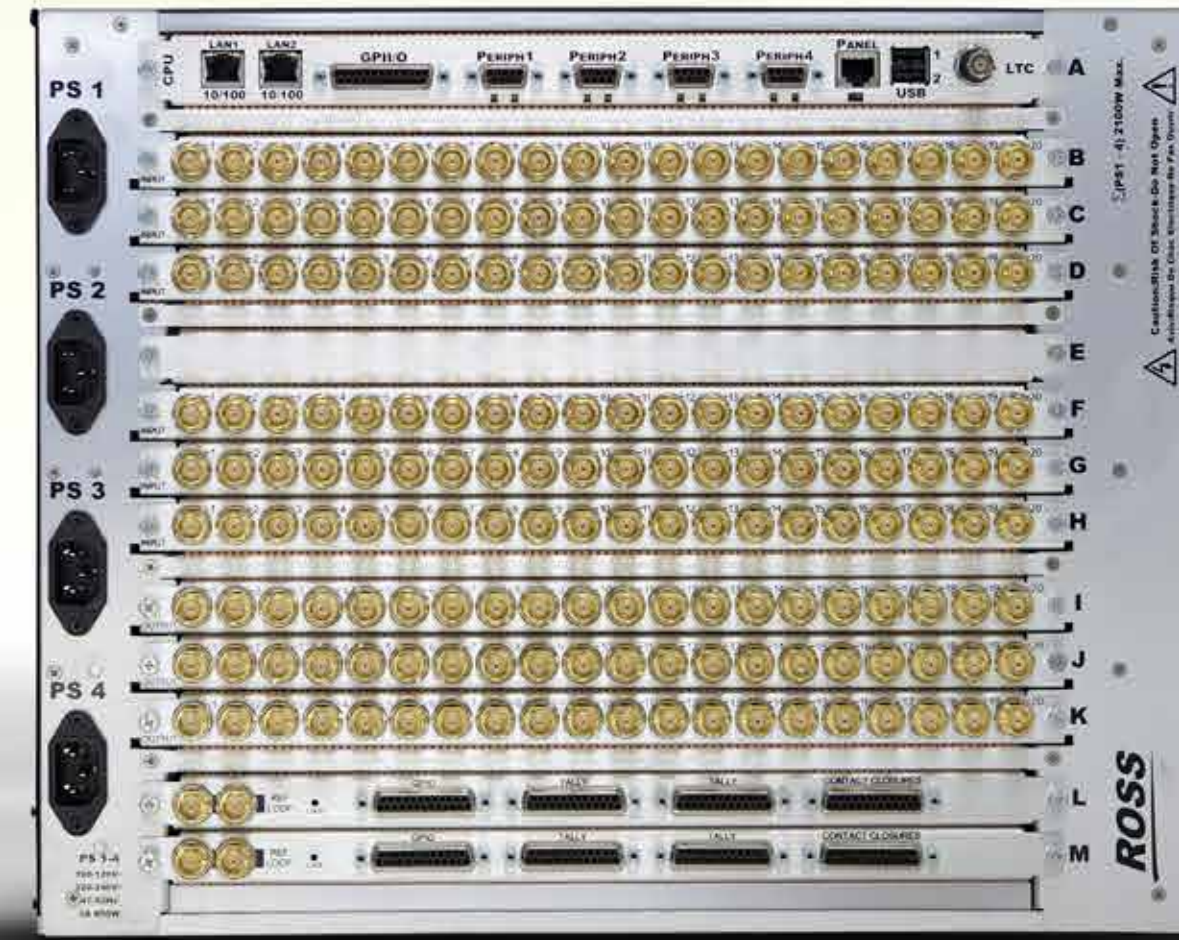
## REMOVABLE MODULES

- Enables quick swap replacement
- Hot swappable modules

## DUAL ETHERNET PORTS

- Acuity control panel connection
- Software upgrades
- Transfer stills, clips, and animations to and from the switcher
- Remote diagnostics and log access

## RS422/232 SERIAL PORTS



## LOOPING REFERENCE INPUT

- Up to 2 system references supported for Multi-Definition operation and reference redundancy
- Connect black burst or tri-level sync regardless of system format

## GPI/TALLY PORTS

- 10 GPI and 10 GPO on CPU
- 24 or 48 GPI/O on Reference Boards
- 12 or 24 Contact Closure Relays
- 36 or 72 Open Collector Tallies

## UP TO 120 MULTI-DEF INPUTS

- SD, HD and 3G capable
- Sold in sets of 20

## UP TO 60 MULTI-DEF OUTPUTS

- Sold in sets of 20, SD, HD and 3G capable
- All outputs individually auto-timed
- All outputs fully assignable to program, preview, clean, aux bus, AuxKeys™ and more

Live 4K Production.



**SQUARE DIVISION QUAD SPLIT** - Each link contains one quarter of the original image.

**QUAD LINK 2 SAMPLE INTERLEAVE** - Each link contains a full image at 1/4 resolution.

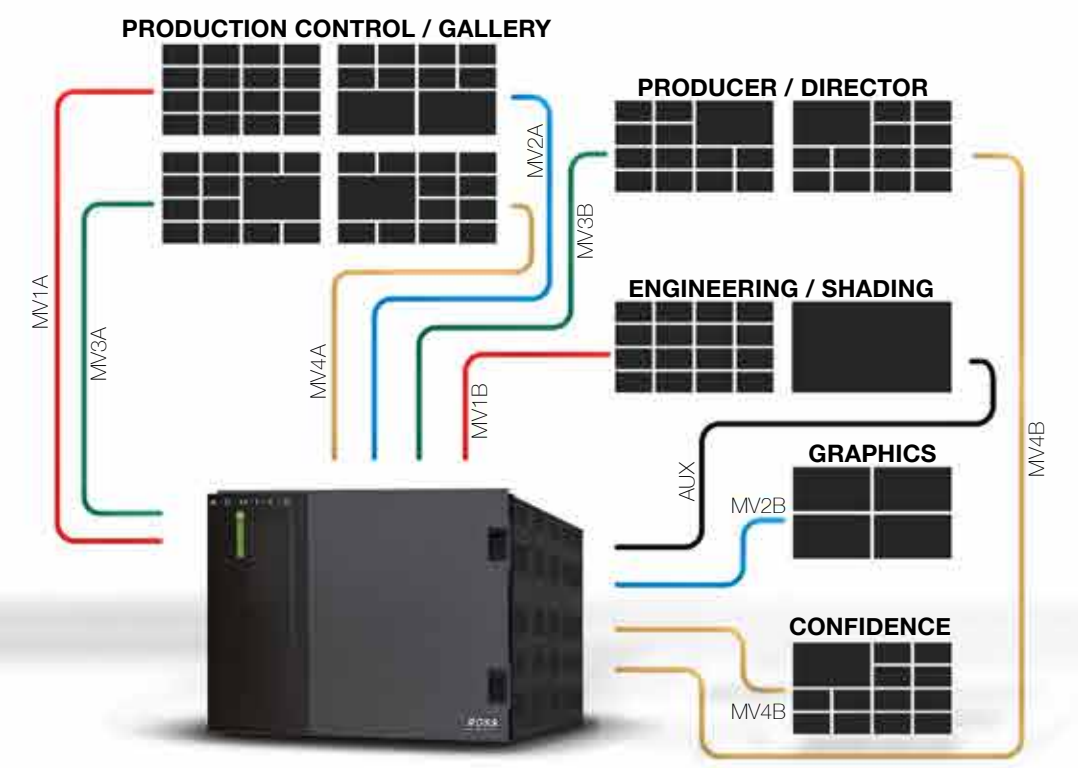
**UNDERSTANDING QUAD LINKS**  
Using the square division quad split method - it is necessary to reassemble the quad split in a 4K display for monitoring purposes, whereas the 2 Sample Interleave method allows picture monitoring on standard 1080P displays as each link carries the whole image at 1/4 of its original resolution.

**UHD PRODUCTION WITH ACUITY**  
4K MEs are created by linking or combining the resources of 4 individual 1080P MEs. The 4RU frame offers 1 x full 4K ME and 2 x 1080P MEs, the 8RU frame provides a maximum of 2 x full 4K MEs or a split of 1 x full 4K ME and 4 x 1080P MEs. Whichever configuration is chosen there are no reductions in production resources regardless of the operating standard selected - each 4K configured ME will have the same number of keys and DVEs as if it were in SD or HD modes.





Best Seat in the House.



\*PRODUCTION MONITORING EXAMPLE WITH 4 ACUITY MULTIVIEWERS

**POWERFUL MULTIVIEWER MONITORING FOR ACUITY PRODUCTION SWITCHERS**  
 Ross Video is proud to advance the state-of-the-art in production systems by integrating what was once an external series of boxes into a fully integrated component of Acuity production switchers.  
 Acuity's unique, fully integrated MultiViewer brings you effective and powerful monitoring - simply and economically.

- USER-SELECTABLE LAYOUTS**
- 39 window layouts for each MultiViewer head
  - Maximize monitoring efficiency
  - Up to 20 internal and external sources per head
  - Each window can be customized individually
  - Selectable Red / Green tally borders
  - High-visibility source tracking labels
  - All window sources fully routable
  - Selectable single or dual head configuration per MultiViewer
  - Install dual head MultiViewers in unused ME slots

- COST-EFFECTIVE**
- No need for external routing systems or signal distribution systems
  - Reduced wiring and system complexity
  - Reduced switcher auxiliary outputs

- HIGH PERFORMANCE**
- Efficient filter designs ensure best display quality
  - Very low latency

- HIGHLY CONFIGURABLE**
- 39 layouts per head
  - 1 to 20 sources displayed per head
  - Customize names, safe areas and tallies

- SIMPLE & FLEXIBLE**
- No need for separate computers and configuration apps
  - Store and recall layouts for each production or operator preference
  - Instantly select window sources from Acuity menu

- AUTOMATIC PROGRAM / PREVIEW TALLIES**
- No need for external wiring, Red / Green tally borders are automatically assigned when a source is routed to a window.

- AUTOMATIC SOURCE NAMING**
- Switcher and router mnemonics are automatically assigned to the window names without user intervention and track with updates.

# Comprehensive Machine Control.

Ross has set the pace for device control from production switchers. Acuity offers a more integrated production environment than any other production switcher on the planet. Whether you are looking to get a more consistent production on the air, or to get a new show on the air with a modest staff, Acuity has the control power to make it happen.

## VTR CONTROL

Select a VTR on the PST bus, display its current timecode on the preview monitor, roll it from the transition area, and take it to air. Fast forward, rewind, slo-mo playback and cue to timecode are also available at the touch of a button on the control panel.

## VIDEO SERVER CONTROL

Select, play, and monitor server clips by name right from the Acuity control panel. The clip menu keeps track of clips and allows instant cue.

## AUDIO SERVER CONTROL

Dial up the desired clip and see the name and duration. Use a Custom Control macro button to link audio clips to a switcher effect or DVE transition.

## ROUTER CONTROL

Easily select your studio router sources directly from the Acuity menu system. Any number of Acuity's inputs may be fed from a router output. Router mnemonics are supported, with the router's 8 character source name being displayed on the Acuity MultiViewers, menu system, mnemonic displays and Preview Overlay source ID text.

## AUDIO MIXER INTERFACE

Acuity goes far beyond simple audio follow video. It allows for easy audio over, easy attachment of several audio sources to one video source, and quick level control of master and individual audio levels. Even audio voice-over control directly from the Acuity control panel is possible. Addition of the Audio Panel Module gives tactile control from the control panel surface.

## ROBOTIC CAMERA SYSTEM INTERFACE

Pan, tilt, zoom, focus, shot recall, and more are directly controllable from your Acuity control panel. Joystick Auto delegates to Camera source selections.

## CHARACTER GENERATORS

CGs are controlled to allow recall of templates, loading of text into templates, page forward or reverse and more. When combined with Ross' XPression this gives the user direct access to the powerful Sequencer and MultiLayer effects engine.

## P-BUS PROTOCOL INTERFACE

Support for external device integration using the industry standard P-Bus Protocol. Coordinate the store and recall of the settings of some still stores, CGs, and device controllers with the store and recall of your Acuity settings.

## MONITOR WALL INTERFACE

Acuity makes it easy to select a monitor wall layout from certain monitor wall systems like the Grass Valley Kaleido-X. Switching back and forth between layouts is easy and can even be tied to custom control macro buttons. Combining the Monitor Wall Interface with the Serial Tally Interface provides tally information and full mnemonic updates to the monitor wall.

## SCREEN PROCESSING SYSTEMS INTERFACE

Direct control protocols for Christie Vista Spyder allows complex screen processor effects to be operated directly from Acuity Custom Controls.



# OverDrive<sup>®</sup> Automated Production Control.

## THE WORLD LEADER IN AUTOMATED PRODUCTION CONTROL

OverDrive can be easily added to Acuity to automate news productions. OverDrive has enabled hundreds of news organizations around the world to get more efficient while improving the quality and sophistication of their productions. Automating your broadcast news will free up in-demand resources for needs like expanded news gathering, and content generation for the web and social media.

As you'd expect, OverDrive and Acuity are tightly integrated and designed to work well together. OverDrive takes advantage of Acuity's device control interfaces to interface to audio mixers, video servers, robotic cameras and other production devices. This Acuity production switcher has direct control over these devices at all times, giving the operator "on-the-fly" manual control, even during fully automated OverDrive productions.

OverDrive integrates with the majority of newsroom computer systems on the market, including Ross' own Inception system. Adding OverDrive means the vision of your news editorial staff is directly connected to what is produced for air – consistently getting the desired result with less hassle.

OverDrive is more than capable of handling your news production. Having deployed more systems globally than any of our competitors, we have been able to respond to customer needs with the product features and operational expertise to master a wide range of production styles. Our experts deliver a comprehensive training program that will elevate your staff and help raise the level of your production.

## BENEFITS:

### RETURN ON INVESTMENT

- Capital cost covered through operational savings in as little as 18 months.

### QUALITY

- Produce more sophisticated and consistent productions.

### EFFICIENCY

- Get more done with fewer resources. Produce more.



## Compositing Power.

### DO MORE

Acuity is a true layering engine. It can accomplish complex scenes on a single ME that are simply impossible on any other production switcher. Every ME has 16 DVE / Resizers with dual channel key combiners, as a result its easy to create a 10 box shot with just 5 keys, leaving 3 more keys to add graphic elements.

Each ME is equipped with MultiFeed™ which provides 8 programmable outputs - 6 Program and 2 Preview. Select any combination of keys on any of the 6 program outputs for multiple feeds with different branding / captioning requirements or to drive on-set or on-stage displays – all from a single ME.

Combine Acuity's massive production power with the superb XPression 3D motion graphics systems and create the most compelling show scenes. Or use XPression to create outstanding Virtual Sets and Augmented Reality elements in conjunction with Ross Robotics, all composited and produced with Acuity.

Single ME output. 10 boxes (5 keys) plus 2 channels of XPression Graphics and keyed bug from an Acuity MediaStore.

UltraChrome chroma keyed presenter

XPression virtual background – with robotic camera tracking

Foreground Graphics and Captions from XPression

Entire output created with just 2 Acuity MEs >



NSBC

ROUND TABLE ROUND-UP - THE ECONOMY

News

decision, and the budget allocated, the hard work of preparing gets underway in the

NSBC

ROUND TABLE ROUND-UP - THE ECONOMY

## Options & Accessories



### > AUXILIARY 'BACKSPASH' PANELS

- 24, 32, or 40 source select buttons
- Full access to all Aux buses
- Custom Control Macros
- Configurable for instant access to any ME or Key Bus

### > REMOTE AUXILIARY PANELS

- Network Based Access to all Aux Buses
- Configure as Full X-Y all the way down to Single Bus Control
- Configure for access to any ME Bus, Key Bus or even Custom Control Macros as well
- Access Acuity Production Switcher and/or NK Routing Switchers

### > 3D DVE WITH WARP MODULE

- 2 Channels with Key and Fill
- Add to any or all MEs
- 2 Channel Key Combiner – 2 DVEs per ME key

### > REDUNDANT POWER SUPPLIES

- n +1 Redundancy for Chassis

### > SIDESHOT & SIDESLIDE EXTERNAL CONTROL BOXES

- Remote ShotBox for Custom Control Macros
- Remote Control of Audio Mixer with motorized faders

### > ADDITIONAL TALLY, GPIO & CONTACT CLOSURES FOR 8 RU FRAME, ADDS:

- 24 GPIO (48 total)
- 12 Contact Closure Relays (24 total)
- 36 Open Collector Tallies (72 total)

## Specifications

KEY FEATURES	ACUITY 4RU	ACUITY 8RU
Maximum number of Multi-Definition Inputs	60	120
Maximum number of Multi-Definition Outputs	40	60
Maximum number of MEs	6.5	8
Maximum Keys Including AuxKeys and MixDSKs	65	87
Keys per ME	9 (8+1)	9 (8+1)
UltraChrome Keyers per ME	2	2
Maximum number of AuxKeys (Mini MEs)	10	15
MixDSK (additional Downstream Keyers)	2 or 4	2 or 4
MultiFeed™ Programmable ME Outputs	8 (6 PGM, 2 PVW)	8 (6 PGM, 2 PVW)
Maximum number of DVEs	96 x 2D / 12 x 3D	128 x 2D / 16 x 3D
Warps and Curvilinear Effects	With 3D DVE option	With 3D DVE option
Maximum number of MediaStores	28	36
MediaCache Animated Logo Players (video and alpha)	14 (max)	18 (max)
Maximum number of 20 input dual head MultiViewers	5 (10 Heads)	7 (14 Heads)
Internal Hard Drive Storage	240 GB SSD	240 GB SSD
Preview Overlay	Yes	Yes
Multi-Panel Operation	Yes 9 (1 Master, 8 Satellites)	Yes 9 (1 Master, 8 Satellites)
SmartConversion - On-The-Fly Format Conversion	Yes	Yes
Internal Proc Amps & Color Correction	Yes	Yes
Fully Modular Control Panels	Yes	Yes
Number of Panel Models available	6	6
DualDisplay Menu System	Yes	Yes
Touch Screen Menu Display	Yes	Yes
Theme-able Panel Glow RGB Buttons	Yes	Yes
12 Character Input and Key Source Color Mnemonics	Yes	Yes
Maximum Direct Access Crosspoint buttons	40	40
Maximum assignable Tallies	180	216
Automation Control via OverDrive	Yes	Yes
N+1 Redundant Power Supplies	Yes	Yes

Acuity 4 and 8RU Live Production Engines provide an unprecedented level of configurability and flexibility. You can choose any of the 6 Acuity panels available for your new 4 or 8RU chassis. **With Acuity you have plenty of choices and plenty of room to grow later.**



Control Everything. Your Way.



**DashBoard**

DashBoard is Ross Video's open platform for facility control and monitoring that enables users to quickly build unique, tailored Custom Panels that make complex operations simple. DashBoard provides control and monitoring to hundreds of products from within the openGear and DashBoard Connect ecosystem and of course, Ross Video products including Acuity. Its ability to craft application specific solutions across this breadth of products is what makes DashBoard so special.

Regardless of the complexity of the production task, DashBoard provides a simple and efficient way of giving each operator exactly

the controls they need. Even the most complex of operations can be simplified within a DashBoard user interface to ensure operators are presented with only the controls necessary.

DashBoard is available at no charge and can be downloaded from the Ross Video website. We encourage you have fun building your own CustomPanels to simplify operations and create time saving user screens that are tailored to the requirement at hand. Ross also offers a service for a fee, in which a Ross DashBoard expert will create a CustomPanel for you.





Ross Mobile Productions / openTruck

# The Full Solution.

Ross offers a comprehensive set of system components and accompanying services that will provide the facilities you need to achieve your production goals. We deliver the world's widest range of products and services, including: **augmented reality and virtual sets, mobile live-event solutions, real-time motion graphics, robotic camera systems, social media management, production switchers, routers, infrastructure products, video servers, newsroom systems** and more. Ross products and services are designed to offer tight integration and unmatched customer choice by both working together seamlessly while also integrating nicely with third-party solutions.



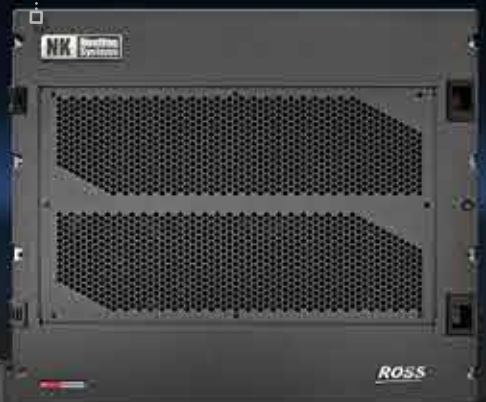
OverDrive Production Control System



XPression 3D Motion Graphics



openGear Signal Processing



NK Series Routers



Ross Production Switchers  
The control center / hub of award-winning productions around the globe.



MC1 Master Control System



Inception Media Management Tools for News, Sports, and Social



StreamLine Media Asset Management



BlackStorm Video Playback Server



Ross Robotic Camera Systems

# A · C · U · I · T · Y

Ross Video has a complete range of technical services available to ensure that your Acuity 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 Acuity 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. Signal flow, system configuration and routine maintenance procedures are some of the topics covered.

Acuity comes standard with a 1 year comprehensive warranty. **Extended Warranties** on the Acuity production switcher are available for an annual fee.

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

© 2015 Ross Video Limited

Released in Canada.

No part of this brochure may be reproduced in any form without prior written permission from Ross Video Limited.

This brochure is furnished for informational use only. It is subject to change without notice and should not be construed as commitment by Ross Video Limited. Ross Video Limited assumes no responsibility or liability for errors or inaccuracies that may appear in this brochure.

**Trademarks** | Ross, Ross Video, Acuity, Vision, Vision QMD, Vision Octane, Vision Tritium, Carbonite, CrossOver, Synergy, Furio, CamBot, OverDrive, Inception, BlackStorm, SoftMetal, XPression, StreamLine, NK Series, MC1, RossGear, openGear®, and GearLite are trademarks of Ross Video Limited.

Visit [www.rossvideo.com](http://www.rossvideo.com) for the latest information on the complete line of Ross products and services.



**Furio / CamBot**  
Robotic Camera  
Systems



**Acuity, Carbonite,  
and CrossOver**  
Production Switchers



**XPression**  
Motion Graphics



**openGear®**  
Terminal Equipment



**BlackStorm**  
Video Servers



**OverDrive /  
DashBoard**  
Control Systems



**NK Series**  
Routing Systems



**Inception**  
News and  
Social Media



**Ross Mobile  
Productions**  
Mobile Productions

## Ross Video Limited

8 John Street  
Iroquois, ON, Canada K0E 1K0

Telephone: +1 613 652-4886

Fax: +1 613 652-4425

Email: [solutions@rossvideo.com](mailto:solutions@rossvideo.com)

Website: [www.rossvideo.com](http://www.rossvideo.com)

Technical Support

Emergency: +1 613 349-0006

Email: [techsupport@rossvideo.com](mailto:techsupport@rossvideo.com)

## Ross Video Incorporated

P.O. Box 880

Ogdensburg, NY, USA 13669 0880

## Ross Robotics

Rue des Vétérinaires 42

1070 Brussels, Belgium

## Ross Singapore

22 Sin Ming Lane

05-83 MidView City

Singapore

## Ross Video EMEA HQ

Pinewood Studios

Pinewood Road, Iver Heath

Buckinghamshire, SL0 0NH

United Kingdom