



acid<sup>cam</sup>

A Heightened Visual Experience

with  
**ultrachrome**HR

**ROSS**<sup>®</sup>  
LIVING LIVE!

# A Heightened Visual Experience

ACID Cameras are precise imaging systems designed to meet the needs of a wide variety of applications including studio productions, legislatures, live event venues and more. In a compact form factor, these cameras excel when used with robotic systems. ACID Cameras make use of the latest camera technology to offer best-in-class resolution, sensitivity and signal to noise ratio. Aside from generating great imagery in traditional studio production, ACID Cameras possess the unique UltrachromeHR feature that offers unprecedented performance when used for chroma key capture in virtual productions.



## Own Every Pixel

- Captures great imagery from three 2/3" chip cameras with UAIT MOS sensors supporting 720p/1080i/1080p formats in the ACID H200 and CCD sensors supporting SD and 1080i formats in the ACID Z50.
- Superior performance in low light conditions - the H200 features ultra-low noise through a carefully crafted noise management system.
- When used with the UltrachromeHR Chroma Keying System, ACID allows the creation of beautiful, clean, true high-resolution keys. The patented 0:4:4 UltrachromeHR output signal contains full bandwidth color information for superior 4:4:4 keying.

## Get Creative

- Utilizes the latest developments in High Dynamic Range (HDR) technology to capture the full breadth of contrast in any scene enabling more creativity in lighting your scene.
- Twelve Vector Color Correction, standard on ACID and missing from many competitive cameras in its class, provides the creative handles to give your production a distinct look.
- Compact, light-weight, and rugged construction for use with tripods, jibs and robotics, in a variety of locations such as studio floors, ceilings, walls, and corners where placing an operator is difficult.

## Keep It Simple

- ACID control is fully integrated into the DashBoard ecosystem, offering many advantages. One of those is the ability to create your own custom panel interfaces - simplifying day-to-day operations.
- Multiple cameras can be controlled by a single user interface, either DashBoard or physical remote control panel.
- Saves valuable rack space, as there is no need for physical camera control unit rack frames and their associated components.
- Modern IP-based control system simplifies cabling and reduces cost.





# Key Benefits



QUALITY IMAGES

Great pictures start with a great camera. ACID uses the latest in sensor technology to provide an amazing level of sensitivity, signal to noise, and overall picture quality making your productions the best they can be.



LIGHTING VERSATILITY

Production in uncontrolled lighting environments is a challenge. ACID meets this challenge with low noise and high sensitivity, resulting in amazing performance in a wide variety of lighting conditions. From stadiums to roof-top traffic cameras, you'll get better results with ACID.



HIGH DYNAMIC RANGE

Deliver the perfect image - ACID includes HDR modes that are totally compatible with your current HD production system. Unlock the best images in any lighting situation.  
  
It's great to get advanced features like this when you buy a new product.



VIRTUAL PRODUCTIONS

Better edge quality for a more natural composited image. Performance in a virtual environment is optimized when paired with an UltrachromeHR chroma keying system.



COLOR ARTISTRY

Create a distinctive mood for your production. ACID's comprehensive painting tools include twelve vector color correction for total color control.



NETWORK CONTROL

Simplify your control infrastructure with built-in Ethernet connectivity. Perform set-up and paint across multiple cameras via centralized DashBoard and / or hardware RCP control.



DUAL SKIN DETAIL

Present your talent at their best with two individual Skin Masking and Detail channels with zoom dependency.



VERSATILE MOUNTING

Make the best use of your production space with a wide range of mounting options. ACID is easily mounted on manual pedestals, PTZ heads and other robotic systems.



REDUCE COST

ACID provides the best image quality and feature set for a remarkable price. Additional money can be saved by eliminating physical control units and using the free DashBoard soft panel interface instead.



ROSS ECOSYSTEM

Recall and load camera settings from production switchers, automation control, and a host of other products.  
  
ACID is fully integrated within the DashBoard environment, which includes all Ross products and a multitude of third party devices.

# Maximum Performance

## ACID H200-UCHR

The ACID H200-UCHR is a fully progressive top of the line performer. This camera makes use of three cutting edge 2/3 UAIT MOS sensors that result in astounding quality and flexibility. Most notably, it offers ultra-low noise, ultra-high sensitivity, and an ultra-gain range. These three features combine for noiseless images in nearly any environment. The ACID H200-UCHR also features Dynamic Noise Reduction capability, to further enhance your final image.

### KEY SPECS

- 3-2/3" x 2.6 Megapixel UAIT MOS Sensors
- 1100 TV Line Resolution
- Ultra-Low Noise – Better than 64 dB (with DNR and -6dB Gain)
- Ultra-Sensitive – F13, 1080P/50. F12, 1080P/59.94 (@ 2000 Lux)
- Ultra-Gain Range -6 to +36 dB
- Dynamic Noise Reduction
- 12 Vector Color Correction
- Real Time Lens Chromatic Aberration Correction
- Skin Masking and Detail Adjustment
- UltrachromeHR 0:4:4 full resolution chroma output
- Standard SMPTE 292/424 (1.5Gb) 4:2:2 video output
- Formats: 720p, 1080i, 1080p, 50 or 59.94

## ACID Z50-UCHR

The ACID Z50-UCHR is a stalwart 1080i performer that is available at a modest price. This camera offers industry-standard performance, along with all the additional features that make ACIDCam so unique. This camera can greatly enhance productions that make use of Ross Robotics, Ross OverDrive, or Ross Lightning Control System solutions.

### KEY SPECS

- 3 x 2/3" 1.1 Megapixel IT-CCD sensors
- 800 TV Line Resolution
- 58dB Signal to Noise
- Sensitivity – F11, 1080i/50. F10, 1080i/59.94 (@ 2000 Lux)
- -3 to +36dB Gain Range
- 12 Vector Color Correction
- Skin Masking and Detail Adjustment
- UltrachromeHR 0:4:4 full resolution chroma output
- Standard SMPTE 292 (1.5Gb) 4:2:2 video output
- Formats: SD/HD (interlaced formats only) 1080i, 50 or 59.94







# Enhanced Virtual Productions

The basis of a clean virtual production is a high-resolution chroma key signal to create quality content from. Historically, chroma keying is an exercise in the art of compromise. An operator can spend a lot of time tweaking set-ups, camera calibration and lighting – all for a generally disappointing result. There are fundamental technical reasons for this:

#### **Limited Color Information Signal – 4:2:2**

SMPTE standard 4:2:2 signals contain only half the available color resolution, which means only half the detail in chroma key edges can be resolved.

#### **High Chroma Noise Levels**

Chroma noise is amplified when chroma keying. Most broadcast cameras specify noise in the luma channel, but chroma levels are always lower in amplitude and therefore inherently noisier. As a result, chroma key edges typically contain undesirable noise. The common way of dealing with this is to “filter out” the noise, but this can significantly lower edge resolution.

ACIDCam specifically addresses these issues:

#### **Full Color Information Signal – 0:4:4**

In addition to the SMPTE standard 4:2:2 signal, ACID Cameras possess a unique output called UltrachromeHR. This output contains full bandwidth color information in a patent-pending 0:4:4 coding format from the camera image sensors.

#### **Powerful Chroma Key Signal – 4:4:4**

Naturally, a chroma keying system is required to combine both of these signals. The UltrachromeHR chroma keyer is a stand-alone multi-channel chroma keying system based on the Carbonite Black processing engine. UltrachromeHR is able to take both 4:2:2 and 0:4:4 signals to internally combine them into a 4:4:4 signal. This unlocks beautifully composited keys with full bandwidth key edges.

#### **Reduced Noise Levels**

ACID Cameras use sensor gain management to lower the chroma-noise floor. This combined with the unique UltrachromeHR signal greatly diminishes the noise typically found in chroma key edges.

ACID Cameras offer unprecedented performance in virtual productions, especially when paired with the UltrachromeHR chroma key system.





# Own Every Pixel



4:2:2

SDI OUT is a standard SMPTE 4:2:2 signal, which works perfectly well for all production applications, but lacks the information for high resolution chroma keying.

0:4:4

UC OUT contains an UltrachromeHR 0:4:4 video output. This patent pending coding format can replace the limited color information of traditional 4:2:2 signals.

4:4:4

The standard 4:2:2 and 0:4:4 UltrachromeHR outputs are received by the Carbonite UltrachromeHR chroma keying system and internally combined to create a 4:4:4 signal. This signal format is then used to develop beautiful high resolution key edges.



0:4:4

4:2:2



4:4:4

**ultrachromeHR**

To combine the outputs into the powerful resultant 4:4:4 signal, Ross has built the Carbonite UltrachromeHR chroma keyer, which is a standalone multi-channel chroma keying system based on the Carbonite Black Processing Engine.

Carbonite UltrachromeHR unlocks ACID's ability to send 4:4:4 signals, while also producing amazing results from solo 4:2:2 signals. Carbonite UltrachromeHR and ACID Cameras are an unbeatable pairing in the virtual environment.



# Vivid Imagery

Both ACIDCam models are host to additional features that make it simple to bring out the best of an image.

## Real-time Lens Aberration Correction

Lens chromatic aberration is reduced with certain lens models that provide correction data directly to the ACID Camera.

## Skin Tone Detail Circuits and Masking

Skin tone detail smoothens and softens facial lines and blemishes without sacrificing overall scene detail. ACID provides two separate settings that can be used either individually or simultaneously.

## Adjustable Gamma Table

Create high quality pictures by choosing a fixed gamma curve from the table. The Black Stretch function allows for better reproduction of dark or under-exposed areas by evenly raising the luminance response without changing the pedestal or white clip / knee settings.

## Twelve Adjustable Linear Masking Vectors

The Twelve Vector Color Corrector provides independent control of hue and saturation for six primary and six secondary combinations of colors. A six axis matrix provides overall color control for excellent and precise color adjustments.





# Keep it Simple



## Standard DashBoard Control

ACID Cameras include fully integrated DashBoard controls for a multitude of functions. Through an intuitive software-based control system, users can perform operation, setup, shading, and the transfer/recall of scenes amongst multiple ACID Cameras. These controls are DashBoard native and can be combined with other DashBoard connected products to create unique control interfaces tailored to your application.

## ACID Remote Control Panel

For users that prefer a traditional tactile control panel, there is the AC-RU1500JY. This panel provides a complete interface to fine tune your ACID Cameras in the midst of a show. The hard button panel allows quick access to your desired camera, while the soft panel provides complete visibility to the changes you've made. Access and adjust the entire host of ACID's general, detail, and masking functionalities with this easy-to-operate remote control panel.



## Further Control Options

ACID Cameras are a smooth fit with the Ross Lightning Control System and OverDrive Automated Production Control. For assembly meeting productions with a large space and numerous subjects to cover, the Lightning Control System offers a tailored touch screen interface to easily execute productions. Meanwhile, OverDrive offers complete automation of all the devices in your broadcast productions, which greatly simplifies processes, ensures consistent results, and reduces cost.

## Ross Robotics

The combination of Ross Robotics and ACID Cameras is truly something to behold. Providing the ultimate in smoothness and control, the precise and highly repeatable movements of Ross Furio and CamBot systems come together perfectly with the crisp imagery provided by ACIDCam on track based dollies and free roaming pedestals. Lend a distinct visual appeal to your productions with these two Ross Robotic Camera Systems.

## Virtual Systems

Whether it is the streamlined XPression Trackless Studio or a fully Tracked Virtual system with UX and XPression, ACID is an ideal camera for integration into these virtual solutions with pristine results.







# ACID Camera Specs

ACID CAMERA MODELS		
	AC Z50-UCHR	AC H200-UCHR
Specifications		
Sensor	3-2/3" x 1.1 Megapixel IT-CCD Sensors	3-2/3" x 2.6 Megapixel UAIT MOS Sensors
TV Line Resolution	800	1100
Signal to Noise Ratio	58dB	Better than 64dB (with DNR and -6dB Gain)
Sensitivity (@ 2000 Lux)	F11 (1080i/50) \ F10 (1080i/59.94)	F13 (1080P/50) \ F12 (1080P/59.94)
Gain Range	-3 to +36 dB	-6 to +36 dB
12 Vector Color Correction / Saturation Color Adjust	•	•
Formats	1080i, 480i/576i, 50 or 59.94	720p, 1080i, 1080p, 50 or 59.94
Linear Masking	•	•
Manual and Auto Skin Tone Detail & Masking	•	•
Ultra-gamma	•	•
Knee Saturation & Auto-knee	•	•
Auto Color	•	•
Variable Detail Boost Frequency	•	•
Programmable Video Gain	•	•
Gray Scale Automatic Setup	•	•
Auto Setup Lens White Shading	•	•
Six Preset Electronic Shutter Speeds	•	•
Lock Scan Mode – Flicker Free-pickup of Screen Display	•	•
AES – Automatic Electronic Shutter with Fixed F-stop	•	•
Gray scale automatic setup	•	•

ACID CAMERA MODELS		
	AC Z50-UCHR	AC H200-UCHR
Outputs		
UltrachromeHR 0:4:4 Full Resolution Chroma Output	•	•
Standard Outputs	SMPTE 292 (1.5Gb) 4:2:2 video output	SMPTE 292/424 (1.5/3Gb) 4:2:2 video output
Viewfinder / Tally Output	•	•
Switchable UCHR / Monitor Output (Menu Operation)	•	•
Build		
Lightweight <1.5 kg (w/o lens)	•	•
Low Power Consumption (<17w)	•	•
Network Ready w/ RI45 & IP Control	•	•
Remotely Controlled Optical Filter Wheel & 5-Value ECC Filters	•	•
Gen-lock Input	•	•
Bi-directional Data Transfer	•	•
Features		
LDAP / Active Directory	•	•
Users Rights and Management	•	•
Support for SSL Encryption	•	•
HTTP Proxy Support	•	•







Ross Video has a complete range of technical services available to ensure that your ACID Cam 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.

Your ACID Cam 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.

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