A Heightened Visual Experience

with ROSS

with ultrachrome HR
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.
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.

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

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.

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

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

Simplify your control infrastructure with built-in Ethernet connectivity. Perform set-up and paint control from a centralized Dashboard and/or hardware RCP control.

Make the best use of your production space with a wide range of mounting options. ACID is easily mounted on a pedestal or robotic systems.

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

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 the cutting edge 3/2” UAIT MOS sensors that result in extraordinary 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 (1.5/3Gb) 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 LNT MOS Sensors
• 800 TV Line Resolution
• Signal to Noise – 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
The basis of a clean virtual production is a high-resolution chroma key signal to create quality content. 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 – 4:4:4**
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 offer 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.
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.

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.

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

**Vivid Imagery**

- **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 accurate and precise color adjustments.
Further Control Options

ACID Cameras are designed to seamlessly integrate with the Ross Lightning Control System and OverDrive Automated Production Control. For assembly meetings and 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 production, ensuring consistent results, and reducing costs.

Ross Robotics

The combination of Ross Robotics and ACID Cameras is truly something to behold. By leveraging 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’s 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 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. Focus and adjust the entire suite of ACID’s general, detail, and masking functionalities with this easy-to-operate remote control panel.

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 operations, setup, viewing, and the transition 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.

Keep it Simple
### ACID Camera Specs

#### ACID Camera Models

<table>
<thead>
<tr>
<th>Feature</th>
<th>AC Z500/UCHR</th>
<th>AC H200/UCHR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outputs</strong></td>
<td></td>
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<tr>
<td>UltrachromeHR 0:4:4 Full Resolution Chroma Output</td>
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<tr>
<td>Standard Outputs</td>
<td>SMPTE 292 (1.5Gb) 4:2:2 video output</td>
<td>SMPTE 292/424 (1.5/3Gb) 4:2:2 video output</td>
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<tr>
<td>Viewfinder / tally Output</td>
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<tr>
<td>Switchable UCHR / Monitor Output (Menu Operation)</td>
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<tr>
<td><strong>Build</strong></td>
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<tr>
<td>Lightweight &lt;1.5 kg (w/o lens)</td>
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<tr>
<td>Low Power Consumption (&lt;17w)</td>
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<tr>
<td>Network Ready w/ RI45 &amp; IP Control</td>
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<tr>
<td>Bi-directional Data Transfer</td>
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<td>Remotely Controlled Optical Filter Wheel &amp; 5-Value ECC Filters</td>
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<tr>
<td>Gen-lock Input</td>
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<tr>
<td><strong>Features</strong></td>
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<td>LDAP / Active Directory</td>
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<td>Users Rights and Management</td>
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<td>Support for SSL Encryption</td>
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<tr>
<td>HTTP Proxy Support</td>
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<tr>
<td><strong>Specifications</strong></td>
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<td>Sensor</td>
<td>3-2/3” x 1.1 Megapixel IT-CCD Sensors</td>
<td>3-2/3” x 2.6 Megapixel UAIT MOS Sensors</td>
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<tr>
<td>TV line Resolution</td>
<td>1100</td>
<td>1100</td>
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<tr>
<td>Signal to Noise Ratio</td>
<td>Better than 46dB (with DNR and 46dB Gain)</td>
<td>Better than 46dB (with DNR and 46dB Gain)</td>
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<tr>
<td>Sensitivity (at 2000 Lux)</td>
<td>F11 (1080i/50)</td>
<td>F11 (1080i/50)</td>
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<td>Gain Range</td>
<td>-6 to +36dB</td>
<td>-6 to +36dB</td>
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<td>TV image color correction / saturation Color Adj.</td>
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<td>Form factor</td>
<td>1080i, 480i/576i, 59.94 or 59.94</td>
<td>720p, 1080i, 1080p, 50 or 59.94</td>
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<td>Linear // Saturation</td>
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<tr>
<td>Master and Auto Skin Tone Detail &amp; Masking</td>
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<tr>
<td>Ultra gamma</td>
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<td>Knee Saturation &amp; Auto knee</td>
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<tr>
<td>Auto Color</td>
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<td>Variable // Boost Frequency</td>
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<tr>
<td>Programmable Video Gain</td>
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<td>Gray scale / Automatic Setup</td>
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<td>Auto Setup lens // Boosting</td>
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<td>Six preset Electronic Shutter Speeds</td>
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<tr>
<td>Lock icon / mode - filter free-pickup of Screen Display</td>
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<tr>
<td>AES - Automatic Electronic Shutter with fixed F-stop</td>
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<tr>
<td>Gray scale automatic setup</td>
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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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