CUTTING-EDGE ANALYSIS FOR PROFESSIONAL SPORTS CLUBS

ADVANCED ANALYSIS
PIERO is built on a proprietary line and texture tracking algorithm that was co-developed with the BBC's Research and Development department. The technology creates a seamless blend of graphics and video which maintains perspective and keeps graphics tied to the game as the camera moves.

COACH-PLAYER COMMUNICATION
PIERO helps sports clubs maximize coach-player communication efficiency. The system allows coaches to easily identify key moments from previous games with their players. They can then use this information to educate players and pinpoint areas of play that can be improved.

REVIEW AND PREPARE STRATEGY
Using PIERO's 3D replay system and wide range of effects, clubs can more effectively review past games and plan for those that are upcoming. Data visualizations and the tactical overview feature help coaches develop new, more in-depth plays and strategies with their players.

VIRTUAL STADIUM
PIERO's virtual stadium feature allows clubs to create 3D replays and view plays from new angles. Moving into the virtual view is quick and easy, and provides a seamless transition between the real-world footage and the tactical overview.

WIDE FEATURE SET
With PIERO, you can mark players, track player runs, add speed or distance, and much more. The system makes it easy to show movement, formations, and groups. PIERO offers a broad palette of graphical effects that allow you to review everything that happens during the game.

EASY TO USE
PIERO has the fastest and easiest workflow in the industry. By working with professional sports broadcasters and clubs, PIERO's staff has streamlined the system so that you can get results without worrying about the technical details.

SIMPLE DEPLOYMENT
As PIERO runs on a single MacBook Pro laptop, all you need to do is provide video recordings of the game to get started. If you want to use league data, simply set up a subscription and you're a few clicks away from automatically creating easy-to-read data visualizations.

FAST CLIP CREATION
PIERO is fast – clip creation time varies between just seconds for simple clips up to 15 minutes for the most complex thanks to the system's rapid workflow. The learning process is fast as well, as it only takes new users a day or so to learn the system.

PIERO Club is a 3D graphics system designed for professional sports clubs. The system delivers TV-quality graphics and effects that allow for fast and informative game analysis. It maximizes coach-player communication efficiency and makes it easy to review and prepare game strategies.

TRUSTED PARTNER
PIERO is the world leader in sports graphics analysis, with an extensive global customer base. The system has been the first choice for clubs and broadcasters around the world for 12 years.

USED BY TOP SPORTS CLUBS
PIERO is compatible with most major team sports. Get in touch today to start learning about how it could benefit your team.

" PIERO has completely transformed the way that we educate and ultimately develop our entire playing roster. Coaching staff are able to draw the athletes' attention to the key points of any piece of vision from every angle. PIERO has become an integral part of our football department in a very short time and is a must-have for every professional team wanting to get an edge."

Jason Lappin
Performance Analyst Manager, North Melbourne Football Club.

FEATURE LIST

- MARK AND TRACK
- VISUALIZE DATA
- REVIEW GOALS
- SEE BREAKDOWNS
- STUDY FORMATIONS
- PLAN ATTACKS
- STUDY TACTICS

- MONITOR PLAYERS
- SHOW TOUCHES
- CHECK DEFENSE
- REVIEW FAULTS
- SQUAD LINE UP
- AUTO PLAYER TRACKING

POWERFUL WORKFLOW
PIERO runs on a single MacBook Pro laptop and has a simple, logical interface. The PIERO design team places particular emphasis on workflow usability. The interface is slick and uncluttered, with everything you need on the screen. You can quickly sketch out ideas or use the timeline feature to combine effects into impressive sequences that can be replayed and recorded.

CAPTURE
PIERO can read all popular video file formats and can access files from hard drives or file servers. You can switch between different clips instantly, and PIERO's timeline ensures that graphics are correctly synchronized with game footage as you swap between clips.

ANALYZE
PIERO has a wide range of graphics that help you analyze the game. They allow you to quickly spot where mistakes were made or show how successes were achieved. You can check the action using the game footage and then go overhead using PIERO's 3D technology to see the tactical view. For in-depth data analysis, a visual data module is included in the system.

SHARE
With PIERO's interactive timeline, you can easily refine your analysis. The system allows you to record the sequence to a movie file without a lengthy wait thanks to its fast rendering process. Once rendered, you can share the clips by email or portable drive. With PIERO's touchscreen technology, you can collaboratively analyze clips using iPads or other touchscreens.

CUSTOMIZE
To customize PIERO's graphics features, you simply click on an effect and adjust its properties. Textures can be added, removed and edited freely. Customized effects can be defined as presets and shared between PIERO stations.

OPTA DATA MODULE
PIERO's Opta module can fetch the latest Opta data available for a given game and visualize the information using PIERO graphics. The module provides access to years of global data which can be easily filtered by league, game, and player. The module currently supports soccer, but new sports are under development with the advent of Opta US.

STATS MODULE FOR BASEBALL
STATS is the industry-leading sports data feed for Major League Baseball. PIERO's data module has full access to the STATS feed which can be used to create graphics such as ball spray charts and pitching charts. The operator can place these graphics in either real or virtual settings. STATS data is easily filtered by date, game, and player using a simple control interface.

TOUCHSCREEN MODULE
PIERO's touch interface provides a simplified and customizable way of using the system by hand using an iPad or another touch screen. Multiple users can be in control at a given time, and multiple devices can be used simultaneously. The touch interface can be easily customized to fit your needs.

EFFECTS

With over ten years of experience in sports graphics, PIERO has crafted an unrivalled palette of effects to help you analyze the action. PIERO works closely with clients to develop new styles and customize existing effects. Effects can be used in both real and virtual settings and can blend seamlessly between the two.

- OFFSIDE LINE
- 3D OVERHEAD
- ARROWS
- TIME LAPSE
- VIRTUAL STADIUM
- SCORES & BADGES
- PLAYER GLOW
- LASER WALL
- VIRTUAL PLAYER RUN
- TACTICAL BOARD
- GOAL ARC OVERHEAD
- FREE KICK CIRCLE

- 3D VIRTUAL REPLAY
- REMOVEABLE PLAYERS
- PLAYER LINE-UP
- MAGNIFIER
- MARKERS
- PLAYER DRAG
- TIMER
- TRACKED FORMATION
- SPOTLIGHT
- VIEWPOINT
- CAPTION TRACKER
- SPEED & DISTANCE

SPECIFICATIONS

PIERO Club operates on a standalone MacOS device. Either iMac or MacBook Pro laptop (requires a dedicated GPU). The software is licensed annually and verified by the provided USB dongle. The touch interface can run on an external Windows PC for Touch Screen scenario (Intel NUC or similar, require dedicated GPU) and on any Apple iPad.

INCLUDED VIDEO CODECS: AVC/H264, h263, MPEG-1/2, MPEG-4

PREMIUM VIDEO CODECS: h265, Avid DNxHD, DVCPRO-HD, Apple ProRes (read only)

SPORTS

- FOOTBALL (SOCCER)
- AMERICAN FOOTBALL
- AUSSIE RULES FOOTBALL
- BASEBALL
- BASKETBALL
- HANDBALL
- ICE HOCKEY
- NETBALL
- RUGBY (UNION, LEAGUE & SEVEN)
- TENNIS

MOTION GRAPHICS

XPRESSION | Single, Triple, UHD Flex, Prime, Go!, Designer, Developer
XPRESSION CLIPS
XPRESSION TESSERA
XPRESSION MAPS
XPRESSION TELESTRATE
XPRESSION TOUCH FACTORY
XPRESSION BRAND IT
PIERO | Sports Analysis Graphics

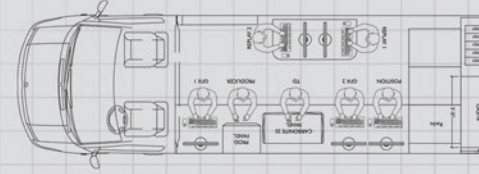## CREATIVE SERVICES

ROCKET SURGERY | Graphics Creation

R S V P
ROCKETSURGERY
VIRTUAL PRODUCTIONS
ROSS CREATIVE & PROFESSIONAL SERVICES

STUDIO IN A BOX

GRAPHITE | All-in-One Live Production Vehicle

GRAPHITE
2RU
4RU

OPENTRUCK

OPENTRUCK | Flight Case through 40-foot Truck

PRODUCTION SERVICES

ROSS MOBILE PRODUCTIONS

ASSET MANAGEMENT & STORAGE

STREAMLINE | Standard, Enterprise, Graphics
STREAMLINE.CLOUD
STREAMLINE NEWS VIDEO SUITE | MAM, Storage & Playout for News
EVO | Networked Storage

MULTI-SCREEN IMAGE PROCESSING

CARBONITE MOSAIC

CAMERAS

ACID CAMERA | H200-UCHR, Z50-UCHR
PIVOTCAM | PivotCam SE

CHROMA KEYING

ULTRACHROME HR

*Carbonite Black Chassis with UltraChrome HR Software

NEWS & SOCIAL MEDIA

INCEPTION NEWS | Academic, Express, Standard, Enterprise
INCEPTION LIVE
INCEPTION SOCIAL
INCEPTION.CLOUD
HORIZON

CONTROL SYSTEMS

OVERDRIVE | Express, Prime, Premium
DASHBOARD | Facility Control
LIGHTNING | Assembly Control
ULTRITOUCH | Touch Screen Control
POWERPLAY | Event Control System

INFRASTRUCTURE

SIGNAL PROCESSING

OPENGEAR | Modular Signal Processing, OGX Frame
MASTER CONTROL | MC1 openGear Card, MC1 Panel
NIELSEN | Watermarks Encoder
GATOR | 12G UHD Signal Processor
RAPTOR EDGE | IP Gateway & Processor
GEARLITE | Point of Use Signal Processing

NEWT | IP Point of Use Gateway
MASTER SYNC & REFERENCE | SRG-2200, SRG-4400, ACO-4400
AUDIO MONITORING | MB 651, MB-652

CONNECTIVITY

ULTRIX 12G & IP ROUTER | 16x - 144x
NK ROUTER | 16x4 -144x144
ULTRITOUCH | Touch Screen Control
ULTRICORE BCS | Advanced Connectivity System Controller

ULTRICORE IP | IP Controller License for Ultricore BCS
PRO-XI | Workstation Integrator

IP TECHNOLOGY

OEM PRODUCTS | Market Ready Modules & System-on-Chip
IGGY | Bidirectional AES67 & ST2110 to MADI converter
BACH | ST2110 AES67 Audio Networking Module

VIDEO SERVERS, REPLAY & DELAY

MIRA+ | Enhanced Replay System
TRIA+ | Enhanced Production Server
TRIA NEWS | News Clip Server
AIRCLEANER | Live Events Delay

MIRA EXPRESS | Replay System
TRIA EXPRESS | Video Clip Server – new 1080P version

ROBOTICS

FURIO SKYDOLLY | Ceiling-Mounted Furio Dolly
FURIO LIVE | Live Head, SE Dolly and SE Lift; PanBar and Joystick Controls
FURIO STUDIO | VR100, VR600 Heads; SE & S2 Lifts; SE BlackBird
CAMBOT | 520PT, 600PT, 700PT Heads; 600 BlackBird; 600XY & 700XY Free-Roaming Peds
VR0 | Manual Fluid Head with Tracking
SMARTSHELL | Robotic Camera Control System

VIRTUAL & AUGMENTED REALITY

TRACKLESS VIRTUAL
UX5 | Control System & Workflow
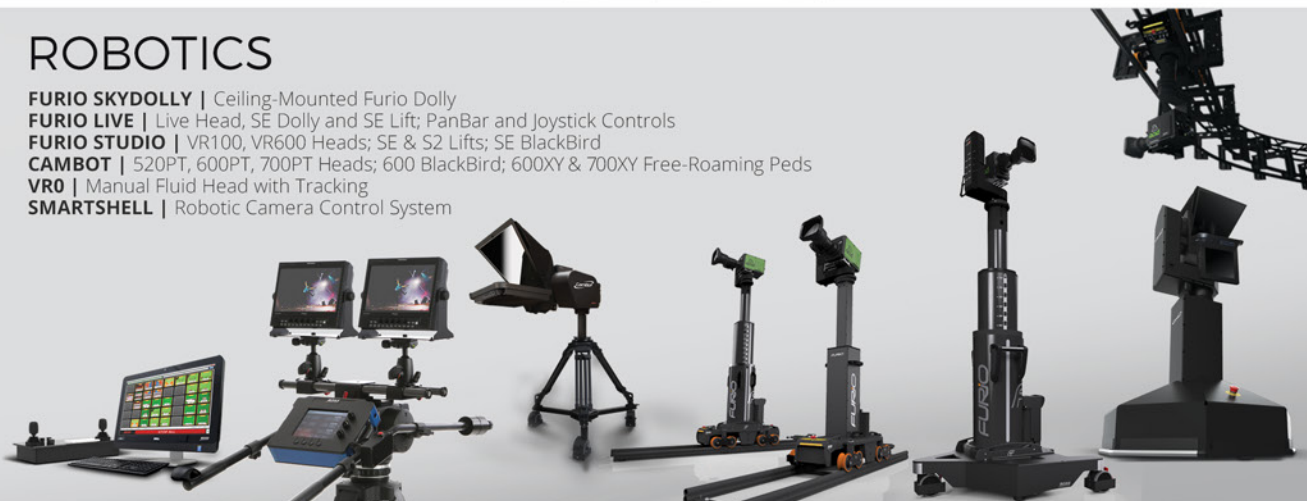**VOYAGER** | EPIC Unreal Engine 4 ARVS Renderer

PRODUCTION SWITCHERS

ACUITY | Panel: A1s, A2m, A2x, A3m, A3, A4 Frame: 4RU, 8RU
CARBONITE BLACK | Panel: C1, C1s, C2, C2s, C3s, C3x Frame: 2RU
CARBONITE BLACK PLUS
CARBONITE BLACK PLUS 12G
CARBONITE BLACK SOLO
CARBONITE BLACK SOLO 13
CARBONITE ULTRA
ACUITY & CARBONITE IP SOLUTION

PIERO™ CLUB

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

PIERO 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

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Technical Support
Emergency: +1 613 349-0006
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