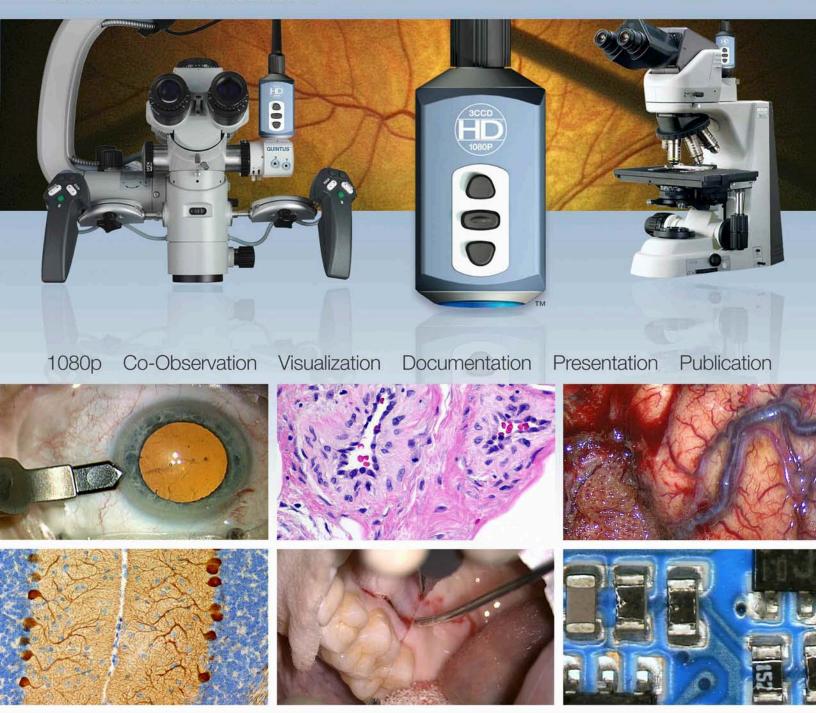
OPTRONICS

Welcome to the World of

High Definition Cinemicrography



Optronics develops premium high definition microscope cameras for clinical and research applications. Our Microcast HD camera platform provides the Microscopist with an unparalled imaging experience that no other HD camera can deliver.



Microcast® **HD** Pro-Lite™



Simple Integration to HD Displays, Projectors, Recorders, HD Frame Grabber Cards, & Streamers

System Features	Pro-Lite	Print Pro	Studio	Studio Pro
 Dual 1920x1080p Outputs Low Profile C-Mount HD Camera Head Dual Trigger Activation Ports Hot Swappable Camera Interface 8 Programmable User Presets User Programmable Remote Control Keypad 2Megapixel Still Image Capture Direct Connect USB Printing Progressive Scan MPEG4 Video Recording Firewire DV Interface 	X X X X X	× × × × × ×	× × × × × × ×	X X X X X X X

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Pro-Lite Print Pro Studio

X X

X X X X

X

X

X

Studio Pro

HD Applications

- Co-Observation
- Visualization
- System Integration
- HD Image Capture
- MPEG4 Enhanced Definition Video Recording

Microcast® **HD** Print Pro™



Onboard HD Image Capture & HD Printing. Simple Integration to HD Displays & Projectors

- No Computer Required

System	Features	Pro-Lite	Print Pro	Studio	Studio Pro
Low PIDual TrHot Sv8 ProgUser PI2MegaDirectProgress	920x1080p Outputs rofile C-Mount HD Camera Head rigger Activation Ports vappable Camera Interface rammable User Presets rogrammable Remote Control Keypad upixel Still Image Capture Connect USB Printing ssive Scan MPEG4 Video Recording e DV Interface	X X X X	X X X X X X	× × × × × ×	X X X X X X X
HD App	lications				

HD Applications

- Co-Observation
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Microcast® **HD** Studio™



Onboard HD Image Capture, HD Printing, MPEG 4 Video Recording. Simple Integration to HD Displays & Projectors

- No Computer Required

System Features	Pro-Lite	Print Pro	Studio	Studio Pro
 Dual 1920x1080p Outputs 	X	X	X	X
 Low Profile C-Mount HD Camera Head 	X	X	X	X
 Dual Trigger Activation Ports 	X	X	X	X
 Hot Swappable Camera Interface 	X	X	X	X
8 Programmable User Presets	X	X	X	X
User Programmable Remote Control Keypad	X	X	X	X
 2Megapixel Still Image Capture 		X	X	X
Direct Connect USB Printing		X	X	X
 Progressive Scan MPEG4 Video Recording 			X	X
Firewire DV Interface				X

- User Programmable Remote Control Keypad
- 2Megapixel Still Image Capture
- Direct Connect USB Printing
- Progressive Scan MPEG4 Video Recording
- Firewire DV Interface

HD Applications

- Co-Observation Visualization
- System Integration
- HD Image Capture
- MPEG4 Enhanced Definition Video Recording

Microcast® **HD** Studio Pro™



Onboard HD Image Capture, HD Printing, MPEG 4 Video Recording. Simple Integration to Computers, HD Displays & Projectors. Rincon™ HD Image Measurement & Annotation Software Included.

System Features

• Dual 1920x1080p Outputs • Low Profile C-Mount HD Camera Head Dual Trigger Activation Ports

- MPEG4 Enhanced Definition Video Recording
- Hot Swappable Camera Interface 8 Programmable User Presets • User Programmable Remote Control Keypad 2Megapixel Still Image Capture Direct Connect USB Printing Progressive Scan MPEG4 Video Recording • Firewire DV Interface **HD** Applications X X Co-Observation Visualization System Integration X HD Image Capture Χ

Microcast® HD Camera Head

Supplied with every Microcast HD camera system, the small low-profile Microcast HD head houses highly sensitive 16:9 3CCD HD RGB image sensors. The elegant camera head is forged from lightweight anodized aluminum and pro-grade stainless steel designed to withstand the rigors of the operating room and laboratory environment. This revolutionary camera head contains sophisticated FPGA programming developed specifically for microscope imaging applications and creates an unaparalled HD imaging and user experience. The Camera head can be controlled directly from a tactile rubberized membrane touch panel embedded within the camera head. A ruggedized camera connector facilitates the removal of the camera head cable for customized and discrete installations on most microscopes and optical systems.



User Interface Experience

Microcast HD cameras are designed foremost with the human operator in mind. Easy to navigate user control, user presets and accessory control is handled through our unique custom touchpad with easily identifiable touch keys. Stunning HD video and images are acquired automatically with the press of 1 button. Other features including white balance and exposure control access are 1 touch away. It's this marvel of simplicity which makes Optronics the easiest microscope cameras in the world to operate. With Optronics HD cameras, you're one-click away from a perfect high definition image.



Optional Accessories

QUINTUS™ **HD** Video Adapter

The Full Featured Optical Gateway to HD Imaging on Surgical Microscopes.

Unleash the full performance of your surgical microscope with QUINTUS. Assistants, nurses and students can now have the same view as the surgeon in Full HD video. The innovative features of the QUINTUS are easy to control and make it the most flexible HD Video Adapter available on the market.

5 Unique Features of Quintus:

- Rotating C-Mount clutch: The C-mount interface has a rotatable clutch that permits immediate correction of the camera for precise image orientation
- Focus control: Allows easy adjustment of the camera focus for razor sharp parfocal images
- Iris control: enhance the depth of field of the HD video image.
- Pan (X) control: Provides full control over the horizontal position of the video image.
- Tilt (Y) control: Provides full control of the vertical position of the video image.

With Pan and Tilt, the camera view can be adapted to the preference of the surgeon.



Rincon™ HD

Rincon HD is fully compatible with Microcast HD camera images. The software features the latest in image acquisition, live digital measurement, HD image capture, and quick, easy reporting of measurement data and statistics. Also included are simple image editing and annotation features. Rincon is directly compatible with Microcast HD Studio Pro DV.

Live Measurement and Overlay Settings

Users can perform measurements on the live preview image, using the crosshair or grid masks to center and count. The grid masks include calibration data. Calibration marker (scale bar) can be placed on the live preview image. The marker (scale bar) can also be burned on each captured image automatically.

Image Processing

Manual Brightness, Contrast, Gamma, Background Subtraction, Shading Correction, Histogram, Clone, Crop, AOI, Resize, Rotate, Split, Merge Monochrome series into RGB Color, Combine different exposure Images for highlight reduction, Image Mode Change, Grayscale, RGB, HSB, YUV Pseudo Color view, Full range of enhancement and morphology filters 8bit and 16bit per channel.

Annotation

Line, arrow, polyline, spline, rectangle, ellipse, text

Supported Image File Formats

jpg, jpeg, tif, tiff, bmp, gif, pcx, tga, mpg, mpeg, avi, mov, img, rpt, txt and etc.

Export Into Excel® - A single mouse click exports the original image with measurement, calibration, annotation overlay, measurement data, statistics, and chart.

The software is intended to edit non-medical images used for teaching, patient consultation and presentation purposes.



Technical Specifications

Microcast® **HD** Camera System:

HD Camera Type: Full High-Definition Progressive Scan (Non-Interlaced)

Image Sensors: HD 3CCD RGB (16:9 Format)

HD Resolution: 1920 x 1080p

Frame Rate: 59.94 fps Full-Resolution (50Hz/60Hz)

SNR: 60dB Optical Mount: C-Mount

Exposure: Automatic / Manual

Shutter: Automatic 1/27000 - 1/60 seconds Manual 1/17000 - 1/60 seconds

Gain: +2, +4, +8, Max White Balance: Automatic / Manual

Scene Files: (8) User Programmable Specialty Settings (Keypad or Menu Accessible)

Digital Processing: 14bir

Brightness: Level 1-15, Max
Digital Enhancement: Off, Low, 1-5, High
Camera Head Cable: 3m or 10m, Removable

Language Settings: English, Deutsch, Espanol, Francais, Italiano, Portugese, Russian, Polish

Digital Image Files:

HD Image Files: JPEG H.264 Enhanced Definition Video: MPEG4









HD Display & Projector Resolution Requirements:

1920 X 1080 (Native PC Resolution), WUXGA 1920 X 1200

HD Capture & Printer Requirements:

Compatible USB Mass Storage Device Compatible HP®, Sony® USB Printers

Dimensions/Weights:

Camera Head: 3"(L) x 1.72"(H) x 1.25"(W)

8.95 oz

Camera Control Unit: 12"(W) x 12.5"(D) x 3.5"(H)

7.4 lb (3.35 kg)

Certifications:

This equipment is certified and manufactured in accordance with UL 60601-1 and CSA 22.2 No. 601. CE marked equipment has been tested and found to comply with the EMC limits for Medical Devices for the Medical Device Directive 93/42/EEC (EN 60601-1-2: 1993 Class A).

Warranty:

2 Years

GSA

GSA Contract Holder







Microcast® HD Pro-Lite™, Print Pro™, Studio™, and Studio Pro™ are designed and manufactured by Optronics, an ISO 9001:2000 registered company