

# ProgRes<sup>®</sup> CF Series

Fast Research Grade Cameras with High Resolution







### Highest Image Quality in Color

All cameras of the ProgRes® CF series have been

optimized for applications in exacting routine and research tasks. Expeditious and smooth operation is provided by a sensitive 1.4 megapixel CCD sensor with high frame rates and a broad dynamic range.

Low-light contrast methods involve stringent requirements which are met by the two camera models CF<sup>cool</sup> and CF<sup>scan</sup> through analog gain and active sensor cooling.

#### Precision to the Detail

Where smallest structures have to be reproduced in full detail, the CF<sup>scan</sup> model with 12.5 megapixel capability provides excellent resolution for informative image documentation and image analysis. In addition, the Microscanning technology of CF<sup>scan</sup> allows capturing overview images and high-resolution detail images with identical setting of the microscope's optics.

#### Fits Easily into Any Laboratory

With IEEE1394 Firewire<sup>™</sup> and C-Mount each camera easily connects to any computer and microscope. Delivery includes ProgRes<sup>®</sup> CapturePro image acquisition software with comprehensive functionality designed for intuitive handling. The ProgRes<sup>®</sup> camera control has already been directly integrated into many image analysis software packages.

Of course, ProgRes<sup>®</sup> CF models are suitable for all contrast methods in light microscopy.

#### Benefits

- Fast frame rates
- Excellent color reproduction
- · Very high image resolution and sensitivity
- Easy operation with comprehensive functionality
- Safe investment

## Excellence through light: Sensors

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## Specifications

		ProgRes <sup>®</sup> CF	ProgRes <sup>®</sup> CF <sup>cool</sup>	ProgRes <sup>®</sup> CF <sup>scan</sup>
CCD sensor 2/3" 1.4 Megapixel Progressive Scan Color CCD, 8.8 mm × 6.6 mm active area				
Sensor resolution		1360 × 1024 pixel	1360 × 1024 pixel	1360 × 1024 pixel
Pixel size		6.45 μm × 6.45 μm	6.45 μm × 6.45 μm	6.45 μm × 6.45 μm
A/D conversion		$3 \times 12$ Bit RGB	$3 \times 14$ Bit RGB	3 × 14 Bit RGB
Pixel clock		12 MHz   24.5 MHz	12 MHz   24.5 MHz	12 MHz   24.5 MHz
Dynamic range (at 10 ms exposure)		67 dB   65 dB	69 dB   67 dB	69 dB   67 dB
Max. exposure		180 s	300 s	300 s
Analog gain		1×8×	1×8×	1×8×
Frame rate (image size)		31 fps (680 × 512)	31 fps (680 × 512)	31 fps (680 × 512)
Image resolution	Standard: HFRM: Binning: Microscanning:	1360 × 1024 680 × 512 and 340 × 256 453 × 340 and 272 × 204 -	1360 × 1024 680 × 512 and 340 × 256 453 × 340 and 272 × 204 -	1360 × 1024 680 × 512 and 340 × 256 453 × 340 and 272 × 204 4080 × 3072 2720 × 2048
Cooling		-	Peltier, fan, hermetically sealed sensor	
Digital interface		IEEE1394a Firewire™		
Optical connection		C-Mount (0.63× TV adapter recommended)		
Trigger		Trigger-In and Trigger-Out for synchronization with external devices		
Tripod thread		Dual thread 3/8" and 1/4"		
Voltage supply		8 33 VDC (via IEEE1394 connector)		
Power consumption		5 W	8 W	8 W
Ambient conditions		Temperature: +5 °C +35 °C Humidity: 5 % 80 %, not condensing		
Dimensions (L $\times$ W $\times$ H)		145 mm × 93 mm × 123 mm		
Weight		800 g		
Capture software		ProgRes® CapturePro (TWAIN & Stand-Alone)		
Computer requirements		PC: Microsoft Windows <sup>®</sup> 2000/XP/Vista   Mac: Apple Macintosh <sup>®</sup> OS X 10.4 or higher 3 GHz CPU, 1 GB RAM, 64 MB graphics recommended, IEEE1394 Firewire <sup>™</sup> (OHCI compliant)		

### Fields of Application

- Genetics
- Microbiology
- Pathology
- Cell biology
- Pharmacy
- Life Science
- Material science
- Metallography
- Mineralogy
- Chemistry
- Macrophotography
- Forensics



It is our policy to constantly improve the design and specifications. Accordingly, the details represented herein cannot be regarded as final and binding.



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