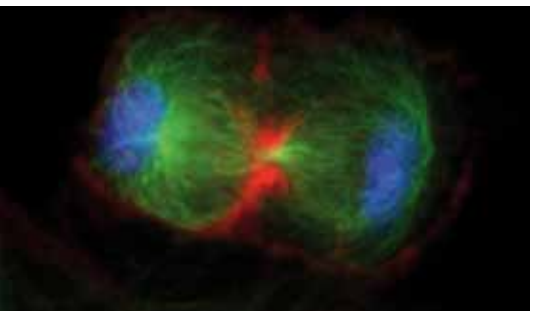
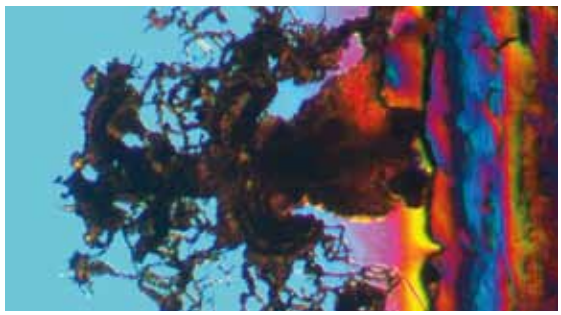
JENOPTIK

ProgRes® CCD Research Cameras

Discover highest image quality





Superior image quality and highest sensitivity

The color and monochrome ProgRes® CCD Research cameras meet challenging requirements in scientific applications, not only in fluorescence microscopy.
The high sensitivity warrants brilliant images at high resolutions, especially when working with low-light specimens.

Due to the large pixel size of 6.45 µm² provided by the sensitive 2/3" CCD sensor, a broad dynamic range and a large bit depth of up to 14 bit, these cameras are especially suitable for most light sensitive applications, where excellent and high-contrast images are required.
Expeditious and smooth operation is ensured by high frame rates. Especially the cooled camera models are adapted to handle mainly low-noise long-time exposures of up to 300 s or even 600 s for ProgRes® C14^{plus}.

The active peltier cooling consists of a nitrogen flushed sensor capsule, a peltier element and a fan.

For exact image analysis of finest details and informative image documentation, the Microscanning technology provided in the scanning ProgRes® CCD Research cameras allows for capturing images of first-class quality with a resolution of up to 12.5 megapixel.

The ProgRes® C14^{plus} offers genuine color reproduction in proper detail. Its patented Color-Co-Site-Sampling records the color information exactly in three color channels for an absolutely real color image, nearly identical to the original. Wherever the correct color information influences the expert's decision, the ProgRes® C14^{plus} is the most suitable microscope camera.

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Specifications

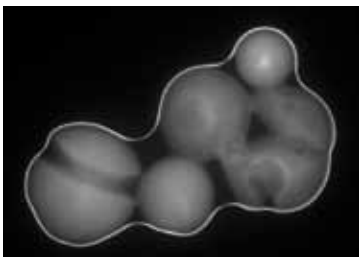
ProgRes® camera type	CF / MF	CF / MF USB	CF*cool* / MF*cool*	CF*scan* / MF*scan* / C14*plus*
Image sensor	2/3˝ CCD progress. scan	2/3˝ CCD progress. scan	2/3˝ CCD progress. scan	2/3˝ CCD progress. scan
Color / Monochrome	Color / Monochrome	Color / Monochrome	Color / Monochrome	Color / Monochrome
Sensor resolution [max]	1360 x 1024 pixel [1.4 Mpix]	1360 x 1024 pixel [1.4 Mpix]	1360 x 1024 pixel [1.4 Mpix]	1360 x 1024 pixel [1.4 ... 12.5 Mpix]
Active sensor size [H x V]	8.8 mm x 6.6 mm	8.8 mm x 6.6 mm	8.8 mm x 6.6 mm	8.8 mm x 6.6 mm
Pixel size [W x H]	6.45 µm x 6.45 µm	6.45 µm x 6.45 µm	6.45 µm x 6.45 µm	6.45 µm x 6.45 µm
A / D conversion	14 bit	12 bit	14 bit	14 bit
Pixel clock	12 MHz | 24.5 MHz	12 MHz | 24.5 MHz	12 MHz | 24.5 MHz	12 MHz | 24.5 MHz
Dynamic range	65 ... 67 dB	65 ... 67 dB	67 ... 69 dB	67 ... 69 dB
Exposure times	94 µs ... 180 s	20 µs ... 180 s	94 µs ... 300 s	94 µs ... 300 s I 600 s[1)]
Analog gain	1x ... 8x	1x ... 14x (SDK)	1x ... 8x	1x ... 8x
Max. frame rate [image size]	13 fps [1360 x 1024 pixel] 51 fps [680 x 512 pixel]	15 fps [1360 x 1024 pixel] 26.5 fps [680 x 512 pixel]	13 fps [1360 x 1024 pixel] 51 fps [680 x 512 pixel]	13 fps [1360 x 1024 pixel] 51 fps [680 x 512 pixel]
Image resolution Binning: Microscan.: True color:	2x ... 10x (SDK) no no	2x, 4x, 8x (SDK) no no	2x ... 10x (SDK) no no	2x ... 10x I 3x, 5x[1)] (SDK) 4080 x 3072 I 2720 x 2048 yes[1)]
Cooling	no	no	yes	yes
Digital interface	FireWire a	USB 2.0	FireWire a	FireWire a
Optical connection	C-Mount (0.63× TV pref.)			
Trigger In / Out	yes			
Voltage supply	FireWire powered	USB powered	FireWire powered	FireWire powered
Power consumption	approx. 5 W	approx. 2.5 W	approx. 8 W	approx. 8 W
Ambient conditions	Temperature: +5 °C ... +35 °C / Humidity: 5 % ... 80 %, non condensing			
Storage conditions	Temperature: -10 °C ... +50 °C			
Dimensions [L x W x H]	89 mm x 84 mm x 93 mm [USB]			
			145 mm x 93 mm x 123 mm [FireWire]	
Weight	approx. 800 g	approx. 700 g	approx. 800 g	approx. 800 g
Application software	ProgRes® CapturePro for PC (TWAIN only for PC) / MAC support only for Firewire cameras			
SDK	ProgRes® SDK for PC for all cameras / MAC & Linux support only for Firewire cameras			
External camera driver	available at: www.jenoptik.com/progres			
Requirements	Microsoft Windows XP / Vista / Windows 7 (32 & 64 bit for FireWire- and USB cameras) I Mac 10.4x, 10.5x or 10.6x (for FireWire cameras) CPU: 3 GHz or 2 GHz multicore I RAM: min. 1 GB I graphics: min. 256 MB I interface: IEEE1394 Firewire a (OHCI Standard), USB 2.0 or USB 3.0			

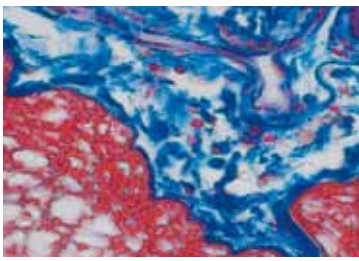
Specification only for [1)] C14*plus*

Fields of Application

Image analysis, documentation and archiving in micro- and macroscopy in the fields of:

- Fluorescence microscopy
- Phase contrast microscopy
- Macroscopy
- Material science, geology & mineralogy
- Life science, diagnostics
- Quality control
- Pathology & cell biology
- 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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