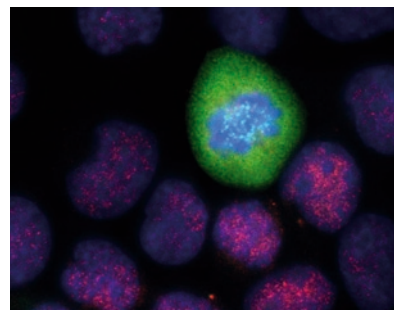
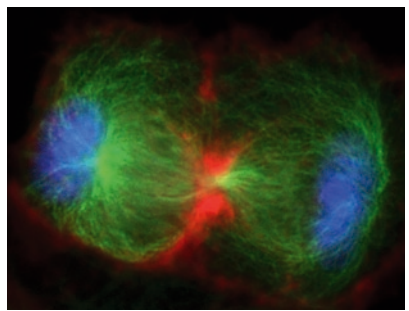
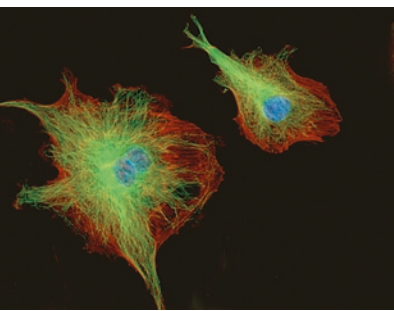


# ProgRes<sup>®</sup> MF Series

Monochrome Cameras for Demanding Imaging Applications



## High Quality Imaging with Low Light

Especially when working with low-light specimens the high sensitivity of ProgRes<sup>®</sup> MF models warrants brilliant images. Configured with a sensitive 1.4 megapixel CCD sensor and analog gain, MF series cameras feature high frame rates and a broad dynamic range.

Especially the cooled models MF<sup>cool</sup> and MF<sup>scan</sup> are adapted to handle mainly low-noise longtime exposures – not only in fluorescence microscopy.

## Fine Details Exactly Rendered

For detailed image analysis and informative image documentation, the ProgRes<sup>®</sup> MF<sup>scan</sup> generates image resolutions up to 12.5 megapixel. Microscanning allows for capturing overview images and high-resolution details with identical setting of the microscope's optics .

## Fits Easily into Any Laboratory

With IEEE1394 Firewire™ and C-Mount each camera easily connects to any computer and microscope.

The delivery includes ProgRes<sup>®</sup> CapturePro image acquisition software providing comprehensive functionality that has been designed for intuitive handling. The fluorescence mode supports up to five filters, corrects auto fluorescence and automatically merges the individual images.

## Benefits

- Outstanding sensitivity
- Fast frame rates
- Broad dynamic range
- Easy operation with comprehensive functionality
- Excellent price-performance ratio
- Safe investment

# ProgRes® MF Series

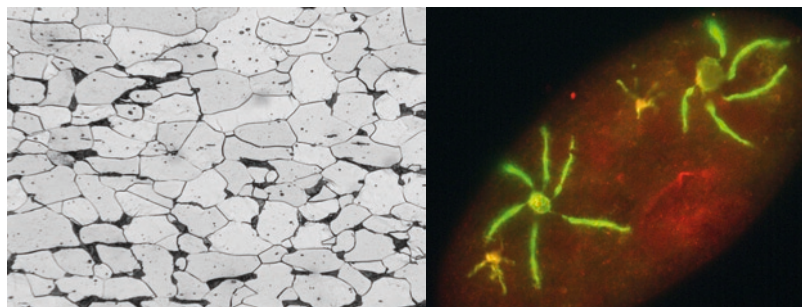
## Monochrome Cameras for Demanding Imaging Applications

### Specifications

	ProgRes® MF	ProgRes® MF <sup>cool</sup>	ProgRes® MF <sup>scan</sup>
CCD Sensor	2/3" 1.4 Megapixel Progressive Scan Monochrome 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	12 Bit	14 Bit	14 Bit
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	1x ... 8x	1x ... 8x	1x ... 8x
Frame rate (image size)	33 fps (680 × 512)	33 fps (680 × 512)	33 fps (680 × 512)
Image resolution	Standard: 1360 × 1024 HFRM: 680 × 512 and 340 × 256 Binning: 2x, 3x, 4x, 5x Microscanning: - -	1360 × 1024 680 × 512 and 340 × 256 2x, 3x, 4x, 5x -	1360 × 1024 680 × 512 and 340 × 256 2x, 3x, 4x, 5x 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 × W × H)	145 mm × 93 mm × 123 mm		
Weight	800 g		
Capture software	ProgRes® CapturePro (TWAIN & Stand-Alone)		
Computer requirements	PC: Microsoft Windows® 2000/XP/Vista   Mac: Apple Macintosh® OS X 10.4 or higher 3 GHz CPU, 1 GB RAM, 64 MB graphics recommended, IEEE1394 Firewire™ (OHCI compliant)		

### Fields of Application

- Life science
- Genetics
- Microbiology
- Fluorescence microscopy
- Cell biology
- Pharmacy
- Material science
- Metallography
- Mineralogy
- Chemistry
- Phase contrast microscopy
- Forensics



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



JENOPTIK Laser, Optik, Systeme GmbH  
Business Unit Sensors  
Goeschwitzer Strasse 25, 07745 Jena, Germany  
Phone +49 3641 65-3963 Fax +49 3641 65-2144  
E-mail: [progres@jenoptik.com](mailto:progres@jenoptik.com)  
Internet: [www.progres-camera.com](http://www.progres-camera.com)