

# CORDIN

## SCIENTIFIC IMAGING

### HIGH SPEED ROTATING MIRROR CMOS CAMERA

## Model 560

- **High resolution:** 2.8 megapixel (1944 x 1472) at all capture speeds
- **High sensitivity:** Latest-generation CMOS sensor
- **Very high framing rate:** 4 million fps
- **Software control:** easy control of exposure and timing parameters for each channel through user-friendly software
- **Image alignment software:** post processing software for precise alignment of images for animation and analysis
- **Laser and pulsed flash illumination synchronization**
- **Built-in time delay functions**



The **Cordin Model 560** high-speed rotating mirror framing camera offers high resolution at extremely high framing rates, and at a moderate cost. The Cordin 560 captures images in a burst mode at frame rates of 4 million frames per second and at 2.8 mega-pixel resolution. The system uses a rotating mirror optical system, which does not require reading out sub-arrays of the image to achieve higher framing rates. It also allows for much higher frame counts and no image degradation relative to MCP based high speed camera systems, and enables color imaging. The ADC dynamic range for this camera system is 12 bits and images are captured at the full frame size of 1944 x 1472 at all speed ranges. The camera is available in a 20, 40 or 78 frame configuration. Frames can be either black and white or color. Systems purchased with fewer frames can be upgraded to more frames at a later date.

The Model 560 camera can be triggered by the event being photographed, and can accept triggers in advance or for some time after the event of interest. It can also provide the trigger to initiate the event.

The standard high speed mirror-drive is driven by compressed air or nitrogen at lower to medium speeds, and with helium at higher speeds. The camera can also be configured with a brushless electric driven mirror operating at slower speeds, for more convenient operation when high framing rates are not required.

The system comes complete with a computer and control software. Post processing image alignment software that provides precise alignment of images for animation and analysis is also included. Data may be saved in a wide variety of 8 bit file formats. Full 12 bit images are saved in 16 bit tiff file format.

#### OPTIONS

**Customized front optics**

**Micro or Macro lens options**

**C- Mount Adapter**

**Cordin Enlarging ~5X lens**

**Illumination Sources Models 605, 607**

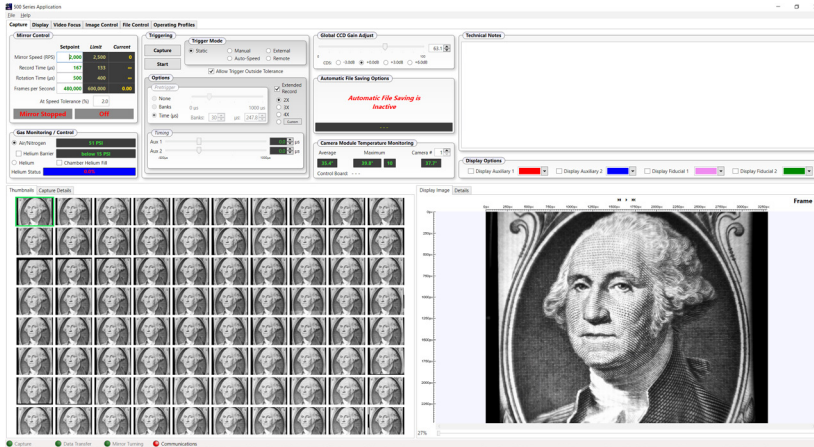
**Mobile camera stand**

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Screen shot of the Model 560 user interface

### SPECIFICATIONS

<b>Number of Frames</b>	20, 40 or 78	<b>Pixel size</b>	4.5 x 4.5 $\mu$ m
<b>Maximum Framing Rate</b>	4 million fps (78 frames)	<b>ADC Dynamic Range</b>	12 Bit
<b>Front Optics</b>	Single objective lens system (no parallax)	<b>Device Type</b>	Full resolution progressive scan Monochrome standard Color optional
<b>Objective Lens</b>	Nikon F-mount	<b>Interface</b>	Gigabit Ethernet for camera control and image transfer
<b>Resolution</b>	1944 x 1472 pixels		

### CONFIGURATIONS

	Number of Frames	20	40	78
<b>Gas Turbine Drive Configuration</b>				
Maximum Framing Rate (fps)		1,000,000	2,000,000	4,000,000
Minimum Interframe time		1 $\mu$ s	500 ns	250 ns
Minimum Exposure Time		220 ns	220 ns	220 ns
<b>Electric Drive Configuration</b>				
Maximum Framing Rate (fps)		500,000	1,000,000	2,000,000
Minimum Interframe time		2 $\mu$ s	1 $\mu$ s	500 ns
Minimum Exposure Time		400 ns	400 ns	400 ns

