The Cordin Model 580 high-speed rotating mirror framing camera achieves the highest combination of speed, resolution, and frame count of any imaging technology available. The system uses a rotating mirror optical system, which does not require reading out sub-arrays of the image to achieve higher framing rates. Newly redesigned for 2020, the Model 580 has been updated with the latest CMOS sensor devices available, and features a new front-end optical system with a larger aperture which together bring an overall improvement in light sensitivity, dynamic range, and reduced vignetting.

The ADC dynamic range for this camera system is a 12 bits and images are captured at the full frame size of 3.2K x 2.2K at all speed ranges. The camera is available in a 20, 40, 78, or 80 frame configuration. Systems purchased with fewer frames can be upgraded to more frames at a later date.

The Model 580 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 host PC and camera 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
- Color vs. Monochrome

- Cordin 20X and 50X Microscopic Lenses
- Illumination Sources: Models 605, 606, 607
- Mobile camera stand
## SPECIFICATIONS

### Number of Frames
- 20, 40, 78, or 80

### Maximum Framing Rate
- 4 million fps (78 frames)

### Front Optics
- Single objective lens system (no parallax)

### Objective Lens
- Nikon F-mount

### Resolution
- 3,216 x 2,208 pixels,
- 1.6K x 1.1K pix with binning

### Gas Turbine Drive Configuration
- **Maximum Framing Rate (fps)**
  - 20: 1,000,000
  - 40: 2,000,000
  - 78*: 4,000,000
  - 80**: 2,500,000
- **Minimum Interframe time**
  - 220 ns
- **Minimum Exposure Time**
  - 220 ns

### Electric Drive Configuration
- **Maximum Framing Rate (fps)**
  - 20: 150,000
  - 40: 300,000
  - 78: 600,000
  - 80**: 600,000
- **Minimum Interframe time**
  - 6.6 μsec
- **Minimum Exposure Time**
  - 1.46 μs

### Pixel size
- 4.5 x 4.5 μm
- 9.0 x 9.0 μm (2x2 binning)

### ADC Dynamic Range
- 12 Bit

### Device Type
- Full resolution progressive scan
- Black and white standard
- Color optional

### Interface
- Gigabit Ethernet for camera

---

* 78-frame version has two missing frames in record
** 80-frame version has an off-axis optical system with larger rotating mirror and vertically mounted objective lens