High-speed rotating mirror streak camera **Model** 131-HD

The Cordin model 131-HD camera is the ideal analytical tool for continuously measuring one dimension over time for a given event. The rotating mirror architecture provides long record length and recording rate flexibility. Combining rotating mirror and CCD technology provides users with access to digital streak image information in seconds. This allows the researcher to record data ready for subject adjustment, analysis, or presentation. A unique opto-mechanical design provides a continuous digital streak record, without gaps, blemishes, and with negligible distortion.

The model 131-HD streak image is 6400 pixels in the spatial axis, and 17,000 pixels along the temporal axis. Optional extended record configurations offer up to 46,000 pixels on the temporal axis. The model 131-HD is offered with two alternative rotating mirror turbines: the standard 1209 turbine operates to 5,000 rps and the optional 1231 turbine operates to 7,500 rps. The turbines can reach 50% of full speed using compressed air or nitrogen. Helium is required to reach full speed. The writing rate is determined by the speed of the rotating mirror, which is software controlled. At top speed, using the 1209 turbine the recording rate is 4,460 pixels per microsecond. The 1231 turbine at top speed yields a recording rate of 6,700 pixels per microsecond.

Two fiducial inputs are provided for precise image synchronization. Two programmable delayed outputs are also provided. An intuitive PC-based user interface allows for easy setup, acquisition, alignment, analysis and saving of data.

- Very high spatial resolution, 6400 pixels
- Fast temporal resolution, down to 650 ps
- Software control of exposure and timing parameters
- Laser and pulsed flash illumination synchronization
- Long record length, up to 46,000 pixels
- Re-triggerable within seconds
- 14 bit image depth
- Programmable time delay functions
- Captures external electronic fiducial inputs on common time base
- Electronic shuttering prevents image overwrite

Options

- Extended record length to 46,000 pixels
- High speed turbine (Model 1231)
- Optical fiducial mark generator
- Custom objective optics
- Custom slit configurations
- Laser field of view alignment tool

Screen shot of the model 131-HD user interface

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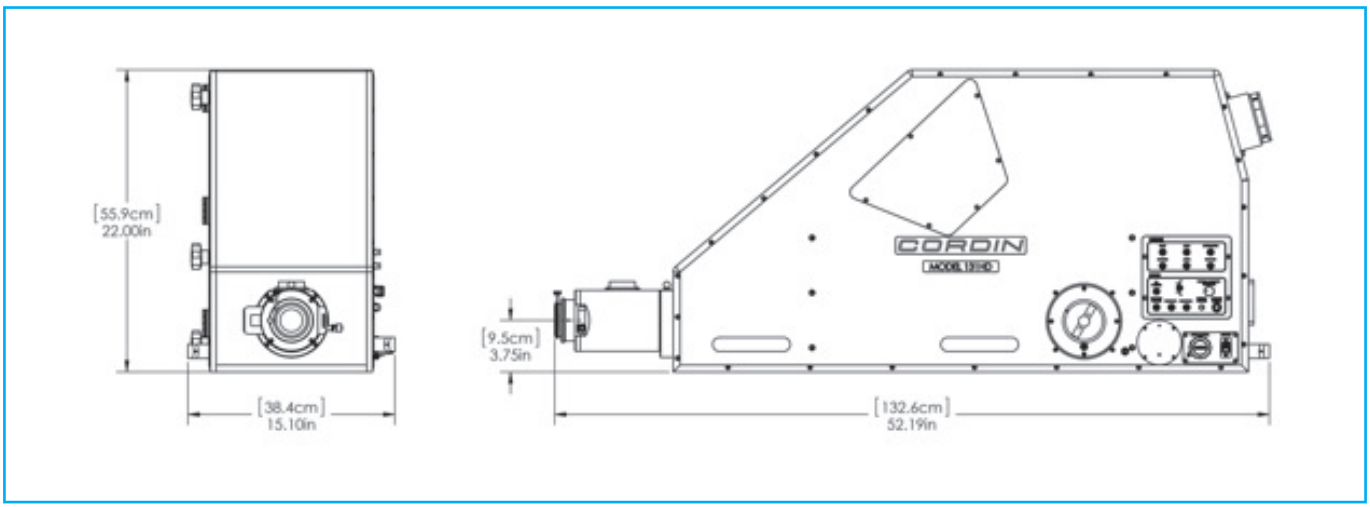
Specifications		
Record width	6400 pixels	
Record length	17,000 pixels standard	
Extended track length	21,000, 34,000	46,000 pixels optional
ADC dynamic Rrange	14 bit	
Radius of image arc	400 mm	
Subtended angle of arc	13 degrees standard	37 degrees maximum
Objective lens	Nikon F-mount standard	Other objective optics available
Pixel size	5.5 x 5.5 microns	

Specifications		
Device type	29 M Pixel full resolution progressive scan	Black and white standard
Interface	Gigabit Ethernet	
Trigger inputs	+5V, +5V isolated, analog and optical with threshold	
Fiducial inputs	Two independent channels on common time base	
Delay outputs	Two programmable delay channels on common time base	
Size	132,6 cm L x 56 cm H x 38,4 cm W	
Weight	85 kg	

Turbine	Model 1209	Model 1231
Max. mirror rotation	5000 rps	7500 rps
Temporal resolution	1.0 ns	0.65 ns
Record length		
17,000 pixel configuration	3.8 µsec	2.6 µsec
46,000 pixel configuration	10.2 µsec	7.0 µsec



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