

## Highly customizable modular film scanning system

### preliminary product sheet

#### Technical Specification for MWA Nova spinner S<sup>2</sup>

Film Formats 8mm – 9.5mm – 16mm – 17,5 mm - 22mm – 28mm – 35mm 2/3/4-perf

Film Transport sprocketless & capstanless  
automatic stop on sticky reels, adjustable end stop on core size  
stepwise or continuous transport

Tension variable tension from 0.2N (20 grams) up to 6N (600 grams)

Sensor Options 6.4K / 12 Bit Bayer color filter array (6464 x 4852, recommended)  
9.5K / 16 Bit Monochrome color-sequential (9568 x 6380, recommended)  
11.6K / 16 Bit Monochrome color-sequential (11648 x 8742)  
14.2K / 16 Bit Monochrome color-sequential (14192 x 106409)

Dynamic Range (Dmax minus Dmin)  
Single exposure 16 Bit – 4.1 (82 dB)  
Double exposure HDR 16 Bit – 4.8 (96 dB)

Speeds Scanning speed with continuous transport:  
6.4K Bayer filter sensor: Color and B/W 12 Bit - 25 fps

Scanning speed with stepwise transport:  
9.5K monochrome sensor: B/W 16 Bit - 4.0 fps  
Color RGB 12 Bit - 3.0 fps  
Color RGB 14 Bit - 2.0 fps  
Color RGB 16 Bit - 1.33 fps  
HDR B/W 16 Bit - 2.0 fps  
HDR Color RGB 12 Bit - 2.0 fps  
HDR Color RGB 14 Bit - 1.25 fps  
HDR Color RGB 16 Bit - 0.67 fps

Lens Options Standard lens: 72 LP/mm @ 30% MTF  
Ultra resolution lens: 108 LP/mm @ 30% MTF

Optical Zoom Range 16 to 35mm edge to edge

Light Source cold LED – RGB flashlight technology

Vertical Stabilization optical pin registered pat. MWA Laser Registration 2.0  
optical image stabilization (software stabilization with 9,5K sensor)

Horizontal Stabilization edge guided

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|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Winding Speed        | with live preview<br>8-16 mm - 700 fps<br>35 mm - 300 fps                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Software Features    | MWA flashsuite/flashcapture software for picture and sound recording<br>film transport control, playback, shuttle, stepping<br>live preview image<br>image stabilisation with reference to perforation holes<br>cut out the image on the sensor area and up/downscale to the output file<br>white point control of the light source with color picker<br>focussing assistant (sharpness distribution display)<br>sound recording with or without picture<br>audio channel matrix with sepmag sources and external sources |
| File Output Formats  | TIFF, DPX, JPEG2000 lossy/lossless, 8 Bit or 16 Bit<br>Strictly linear, linear with video gamma, logarithmic<br>True B/W and color file output<br>DNxHD, ProRes 422, 422HQ, 422LT, 422 Proxy<br>Uncompressed YUV 422 8/10 bit, Motion JPEG                                                                                                                                                                                                                                                                                |
| Metadata output      | JSON and XML file with recording settings, film metadata and per-frame image analysis data.                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Sound Heads          | COMMAG 8+S8, 9.5, 16, 35<br>SEPMAG 16, 17.5, 35/3, 35/4, 35/6<br>OPTICAL 8, 9.5, 16, 17.5, 35, 16+35 combi                                                                                                                                                                                                                                                                                                                                                                                                                |
| Output Sound Format  | WAV 24 Bit, 48 or 96 kHz, up to 8 tracks                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Connectors           | Biphase In + Out, master and slave operation possible<br>MWA-422 for inter-machine control<br>3x AES In + Out<br>Stereo Analog XLR In + Out<br>S/PDIF In + Out<br>USB for machine control and audio<br>CoaXPRESS (25 Gbit/s) imaging sensor interface                                                                                                                                                                                                                                                                     |
| Optional Accessories | Automatic Wet Gate<br>acrylic glass hood, height adjustable rack<br>PTRs, foot pedals, headphone jack, split reels                                                                                                                                                                                                                                                                                                                                                                                                        |
| Power Consumption    | 50W ... 100W average, play forward 25fps (scanner hardware only)<br>800W rated supply, only exhausted for short time when accelerating heavy reels                                                                                                                                                                                                                                                                                                                                                                        |