SIR3

SPECIALISED IMAGING

High Resolution Double Image Intensified camera

Single or Double image capture

Up to 10.7 MegaPixel 12-bit images

Lightweight and Rugged construction

The Specialised Imaging SIR3 Framing Camera offers up to 2 high resolution images, 100µs apart. Fully flexible intensified CCD sensor provides control over interframe time, gain and exposure.

Comprehensive triggering adjustment and a wide range of output signals are controlled using the custom software package which also includes measurement and image enhancement functions.

FEATURES

- ☐ 100µs minimum delay between 2 images
- ☐ Fully adjustable exposure down to 10ns
- ☐ Gain adjustment up to 10,000X
- ☐ Adjustable output triggers
- ☐ Nikon lens mount fitting
- ☐ Gigabit ethernet communications

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SIR3

Compact range camera

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OPTICAL

Lenses	Nikon F-mount (ruggedized mounting system)
System Aperture	f 2
Shutter	Electro-mechanical
Distortion	Nominally zero
Coupling	Optical
Vignetting	<3%
Intensity variation	Better than 5% across the image
Optical Viewfinder	Optional

INTENSIFIER / SENSOR

	SIR3-25D	SIR3-40D
Image Sensor	KAI4021M	KAI11002M
Active CCD Pixel	2048 (H) x 2048 (V)	4008 (H) x 2688 (V)
Pixel Size	7.4 µm (H) x 7.4 µm (V)	9 µm (H) x 9 µm (V)
Dynamic Range	12 bits	12 bits
Intensifier diameter	25mm MCP	40mm MCP
Photocathode	All models: S25	
Phosphor / decay	FS/10µs	FS/10µs
Input / Output windows	All models: Glass / Fibre	
Gain	Variable up to 10,000 all models	

MECHANICAL

Dimension mm (w/d/h)	17.0cm x 48.5cm x 19.3cm (without lens)
Tripod Mount	1/4 - 20 UNC and 3/8 - 16 UNC female
Weight	15Kg (33lbs) without lens

ENVIRONMENTAL

Storage temperature	-10°C to +50°C
Operating temperature	-5°C to +40°C
Humidity	10—90% RH non condensing
Vibration shock	10—40 Hz Max. 10g in any direction
EMC	Meets all UKCA/EU harmonised standards

TIMING PARAMETERS

System Clock	200MHz quartz crystal controlled
Inherent Delay	<130ns
Imaging Mode	Single or Double image
Exposure Modes	Single exposure Multiple exposures (Max. 16 - subject to imaging conditions).
Exposure Times	10ns – 10ms in 5ns steps independently variable
Separation (Multiple Exposure Mode)	30ns to 20ms in 5ns steps independently variable
Delay to 2nd Image	100µS – 10mS in 5ns steps.
Flash output	20ns to 1ms in 5ns steps independently variable

INPUT / OUTPUT SIGNALS

Trigger 1 (BNC)	Electrical signal Threshold variable from ± 25V Positive or Negative polarity, Make/Break 50Ω or 1KΩ termination Maximum Voltage +/- 50V
Trigger 2 (BNC)	Electrical signal Threshold variable from ± 25V Positive or Negative polarity, Make/Break 50Ω or 1KΩ termination Maximum Voltage +/- 50V
Flash Trigger Output (BNC)	Pulse width (min. 10ns) and position user programmable. TTL into 50Ω
Camera Control	Data and command transfer via Gigabit Ethernet Cable length 100m (standard) 1000FX fibre optic Ethernet link (up to 2Km) - optional
Software	Custom software compatible with Microsoft Windows Operating Systems for camera control, image data archiving in various file formats.
Electrical input	Mains 100-240V AC 50-60Hz

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As part of our on-going commitment to improvement we reserve the right to alter specifications, designs or figures, without prior notice. All dimensions and weights are approximate.