

High Resolution Dual 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

- Fully adjustable interframe time to 100µs
- Fully adjustable exposure down to 10ns
- Gain adjustment up to 10,000X
- Adjustable output triggers
- Nikon lens mount fitting
- Gigabit ethernet communications

OPTICAL

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

INTENSIFIER / SENSOR

	SIR3-18D	SIR3-25D	SIR3-40D
Image Sensor	ICX285AL	KAI4021M	KAI11002M
Active CCD Pixel	1360 (H) x 1024 (V)	2048 (H) x 2048 (V)	4008 (H) x 2688 (V)
Pixel Size	6.45 µm (H) x 6.45 µm (V)	7.4 µm (H) x 7.4 µm (V)	9 µm (H) x 9 µm (V)
Dynamic Range	12 bits	12 bits	12 bits
Intensifier diameter	18mm MCP	25mm MCP	40mm MCP
Photocathode	All models: S25		
Phosphor / decay	P46/300ns	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)
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 EC harmonised standards

TIMING PARAMETERS

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

INPUT / OUTPUT SIGNALS

Trigger 1	Electrical signal (BNC connector) Threshold variable from ± 25V Positive or Negative polarity, Make/Break 50Ω or 1KΩ termination
Trigger 2	Electrical signal (BNC connector) Threshold variable from ± 25V Positive or Negative polarity, Make/Break 50Ω or 1KΩ termination
Flash Trigger Output	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.
Power Requirements	100-240V AC 2A, 50-60Hz

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