

**The Specialised Imaging SIR2 camera retains the rigid, all-metal construction of it's predecessor, making it ideally suited to withstand the harsh environment of the proofing ground and industrial use.**



*Courtesy of QinetiQ - Shoeburyness*

*Ballistics*

*Detonics*

*Plasma*

*Impact Studies*

*Elasticity, Crack Propagation and shock resistance*

*Spray Particle Analysis*

The imaging engine has been designed to offer the ultimate in resolution and versatility. The 11-million pixel images provide more detail than any previous camera of this type, and to extend the capability further we have added the ability to acquire two separate fullresolution images. An integral TFT monitor allows users to “see what the camera sees” in real-time, thus allowing researchers to easily optimise focus and lighting to give spectacular results. All imaging functions can be controlled from the intuitive local keypad for setup, while full remote operation is achieved over standard Ethernet network cabling making this one of the easiest systems to integrate into any imaging environment. Comprehensive operational software provides simple control of imaging parameters and extensive measurement tools to accurately analyse results. Image archiving in a wide range of industry standard file formats is supported. For situations with more complex instrumentation requirements, several cameras can be operated from a single control computer with timings for all cameras linked to the same control screen.

## Features

- 11 megapixel images with superior quality, improved detail and better measurement accuracy
- Single image mode when ultimate dynamic range is required
- Double image mode (two full frames) when displacement and velocity information is required
- Comprehensive triggering facilities
- Multiple flash triggers
- Multiple exposures for trajectory analysis
- Compact, fully ruggedised design, ingress protection to IP54
- Intuitive operation
- Computer controlled via standard ethernet link





BS EN ISO9001:2000 FM 87429



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<b>OPTICAL</b>	
Number of channels	1
Lenses	Nikon F-mount
System Aperture	f2
Shutter	Electro-mechanical
Distortion	Nominally zero
Coupling	MCP to CCD via relay optic
Vignetting	<3%
Intensity variation	Better than 5% across the image
<b>INTENSIFIER/CCD</b>	
Image Sensor	KAI11000M
Active CCD Pixel	4008 (H) x 2688 (V)
Pixel Size	9µm (H) x9µm(V)
Dynamic Range	12 bits
Intensifier	40mm High resolution MCP Input window Fused Silica Output Window Glass Photocathode S25, others on request Phosphor screen Fast
Dynamic resolution	>36 lp/mm
<b>TIMING PARAMETERS</b>	
System Clock	100MHz, quartz crystal controlled.
Inherent Delay	<130ns
Imaging Mode	Single or Double
Exposure Mode (each image)	Single exposure or multiple exposures (Max. 16) per channel
Exposure Time	20ns - 10ms in 10ns steps independently variable
Delay to 1 <sup>st</sup> exposure	130ns - 10ms in 10ns steps independently variable
Flash outputs	20ns - 1ms in 10ns steps independently variable
Separation Time (Multiple exposures on same channel)	30ns - 20ms in 10ns steps independently variable
<b>INPUT/OUTPUT SIGNALS</b>	
Trigger 1	Electrical signal (BNC connector) Threshold variable from 2-50V Positive or Negative polarity, Make/Break 50Ω or 1KΩ termination
Trigger 2	Electrical signal (BNC connector) Threshold variable from 2-50V Positive or Negative polarity, Make/Break 50Ω or 1KΩ termination
Timing Monitor Pulses	Pulse width(min. 10ns) and position user programmable TTL into 50Ω
Flash Trigger Outputs	Pulse width(min. 10ns) and position user programmable TTL into 50Ω
Focus Monitor	Integral 6.5" TFT display monitor with keypad control
Local Control	Intuitive membrane keypad
Local Status Display	16 x 2 character LCD Backlit
Camera Interface	Data and command transfer via 100Mbps ethernet Cable length 100m (standard), other lengths available 100FX fibre optic ethernet link (upto 2Km) - optional
Software	Bespoke software compatible with windows 2000 and XP for camera control, image data archiving in various file format.
<b>ENVIRONMENTAL</b>	
Storage temperature	-10°C to +50°C
Operating temperature	-5°C to +40°C
Humidity	10 - 90% RH non condensing
Vibration shock	10 - 40Hz Max. 10g in any direction
EMC	Meets all EC harmonized standards