

## Enhanced Sensitivity 4 channel framing camera



**Up to 1 Billion  
frames per second  
capture speed**

**50lp/mm and  
36lp/mm system  
resolution options**

**1360 x 1024 pixel,  
12-bit sensor  
resolution**

**4 discrete intensified  
optical channels**

The Specialised Imaging SIM-ES offers twice the light transmission compared with standard SIM cameras. Each of the 4 channels provides high resolution images through a standard filter holder making the SIM-ES ideal for multi-spectral or colour imaging.

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**

- Dedicated standard sized filter holders for each channel
- Fully adjustable interframe time to 1ns
- Fully adjustable exposure down to 3ns
- Gain adjustment up to 10,000X
- Adjustable output triggers
- Nikon lens mount fitting
- Ethernet communications

### MODELS

	<b>SIMX4-ES</b>	<b>SIMD8-ES</b>
Number of Channels	4	4
Number of Images	4	8
System resolution	50lp/mm	36lp/mm
Gain	10,000	10,000
Phosphor screen	P43	P46

### OPTICAL

Optics	Single input beam splitting optics channels can be easily fitted with standard 31mm dia 1.1mm thick filters
Lenses	Nikon F-Mount
Internal electro-mechanical iris	f2.8 - f22
Shutter	Electro-mechanical
Distortion	Nominally zero
Channel Registration	Within one pixel after software correction
Intensity Variation	Better than 5% across the image

### INTENSIFIER / SENSOR

Image Sensor	ICX285AL
Active CCD Pixel	1360 (H) x 1024 (V)
Pixel Size	6.45 µm (H) x 6.45 µm (V)
Digitisation	12 bits
Intensifier	Gen II 18mm High resolution MCP Input window Fused Silica Output window Fibre Optic Photocathode S25, others available on request Phosphor Screens: SIMX4-ES: P43 SIMD8-ES: P46 Gen III Intensifiers available on request

### MECHANICAL

Dimensions in cm (LxWxH)	53.3 x 37.6 x 25.5 (without lens, not including periscope +4cm)
Mount	3/8-16 UNC Female
Weight	16Kg approx. (without lens)

### TIMING PARAMETERS

System Clock	1GHz quartz crystal controlled
Exposure Mode (each image)	Single exposure or multiple exposures (Max. 8) per channel
Exposure Time	3ns - 10ms in 1ns steps independently variable
Interframe Time	0ns - 20ms in 1ns steps independently variable
Delay to 1st exposure	55ns to 10ms in 1ns steps, independently variable
Flash Outputs	5ns - 1ms in 1ns steps independently variable
Framing rates	up to 1 Billion fps

### 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
Timing Monitor Pulses	Pulse width (min. 3ns) and position user programmable TTL into 50Ω
Flash Trigger Outputs	Pulse width (min. 5ns) and position user programmable TTL into 50Ω
Camera control	Data and command transfer via 100Mbps ethernet cable length 10m (standard), other lengths up to 100m available 100FX 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

### 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

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