Detailed Specifications

SIMX

MODELS

	SIMX4	SIMX8	SIMX16
Number of Channels	4	8	16

OPTICAL

Optics	Single input beam splitting optics
	Channels can be fitted with individual filters
Lenses	Nikon F-Mount
System Aperture	f2.8
Shutter	Electro-mechanical
Distortion	Nominally zero
Channel Registration	Within one pixel after software correction
Intensity Variation	Better than 5% across the image
Auxiliary Optical Channel Interface	Nikon F-mount bayonet (Optional)

INTENSIFIER/CCD

Image Sensor	ICX285AL
Active CCD Pixel	1360 (H) x 1024 (V)
Pixel Size	6.45 µm (H) x 6.45 µm (V)
Dynamic Range	12 bits
Intensifier	18mm High resolution MCP
	Input window Fused Silica
	Output window Fibre Optic
	Photocathode S25, others on request
	Phosphor screen P43
Gain	Variable up to 10,000
Dynamic resolution	>50 lp/mm

TIMING PARAMETERS

System Clock	1GHz quartz crystal controlled
Inherent Delay	50ns
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	50ns - 10ms in 1ns steps independently variable
Flash Outputs	3ns - 1ms in 1ns steps independently variable
Framing rates	up to 1 Billion fps
Separation Time	30ns - 20ms in 1ns steps independently variable
(Multiple exposures on same channel)	

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. 5ns) and position user programmable
	TTL into 50Ω
Flash Trigger Outputs	Pulse width (min. 5ns) and position user programmable
	TTL into 50Ω
Camera Interface	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.

ENVIRONMENTAL

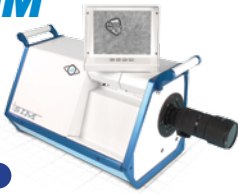|	
Storage temperature	-10°C to +50°C
Operating temperature	-5°C to +40°C
Humidity	10 - 90% RH non condensing
Vibration shock	10 - 40 Hz Max. 10g in any direction
EMC	Meets all EC harmonized standards

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Specifications subject to change without notice

High Resolution Multi-Channel / Multi-Specral Framing Cameras
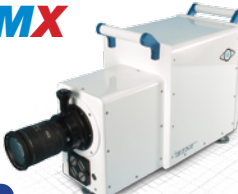
SIM

SIM02

SIMX

SIMD

Capable of up to 1 Billion Frames Per Second.

Using ultra high-resolution image intensifiers and no-compromise optical design, takes image quality to the next level.

The ULTIMATE High-Speed Video Camera

Kirana

924 x 768

180 frames

5 Million fps

The ultimate High-Speed video camera that combines the flexibility of video technology with the resolution of the ultra high speed framing camera.

Flight Follower System

Tracker²

- Large lightweight SiC mirror
- Sturdy 3-axis mount
- Ultra High Precision controls
- Multiple operation modes
- Custom control and analysis software

HR Still Camera / 11mp

SIR3

SIR cameras are designed to withstand the harsh outdoor environment and to provide high reliability and superior image quality.

Scientific CCD Camera

T-Cam

- Up to 4008(H) x 2688(V) 12 bit images
- Shuttering speed down to 1μs
- Comprehensive triggering controls
- Ethernet control

Image Intensifier System

SIL2

- High gain & high resolution image intensifier
- Up to 1,000,000 fps / shuttering down to 50ns
- Suitable for most type of high speed video camera.

Camera Trigger

SI-OT3

- Detection of projectiles >0.7mm diameter
- Interchangeable objective lens to ensure at least 1/20 obscuration of the field of view.

Velocity Trigger System

SI-VT-SYS

- Store 15,000 time intervals
- Capable of capturing 200,000 rounds per minute
- 4 Independent output channels

Laser Illumination System

SI-LUX 640

- Variable Pulse width
- Suitable for Shadowgraph & Schlieren imaging
- Minimises speckle & fringe effects

Multi Head Framing Camera

Cerberus

WORLD FIRST

- 1360 × 1040px
- upto 128 frames
- upto 64 camera heads
- upto 200 Million fps
- 3D Stereo Imaging

High Power Flashes

SI-IF 300

SI-AD 500