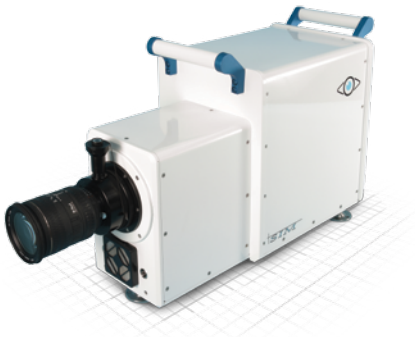
## Detailed Specifications

# SIMD



## MODELS

| | SIMD4 | SIMD8 | SIMD12 | SIMD16 | SIMD32 |
|---|---|---|---|---|---|
| Number of Channels | 2 | 4 | 6 | 8 | 16 |
| Number of images | 4 | 8 | 12 | 16 | 32 |

## OPTICAL

| | |
|---|---|
| Optics | Single input beam splitting optics<br>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<br>Input window Fused Silica<br>Output window Fibre Optic<br>Photocathode S25, others on request<br>Phosphor screen P46 |
| Gain | Variable up to 10,000 |
| Dynamic resolution | >36 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 |

## INPUT/OUTPUT SIGNALS

| | |
|---|---|
| Trigger 1 | Electrical signal (BNC connector)<br>Threshold variable from ± 25V<br>Positive or Negative polarity, Make/Break<br>50Ω or 1KΩ termination |
| Trigger 2 | Electrical signal (BNC connector)<br>Threshold variable from ± 25V<br>Positive or Negative polarity, Make/Break<br>50Ω or 1KΩ termination |
| Timing Monitor Pulses | Pulse width (min. 5ns) and position user programmable<br>TTL into 50Ω |
| Flash Trigger Outputs | Pulse width (min. 5ns) and position user programmable<br>TTL into 50Ω |
| Camera Interface | Data and command transfer via 100Mbps ethernet<br>cable length 10m (standard), other lengths up to 100m available<br>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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specialised imaging

Specifications subject to change without notice

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# Specialised Imaging

www.specialised-imaging.com
email info@specialised-imaging.com

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

### SIM

### SIM02

### SIMX

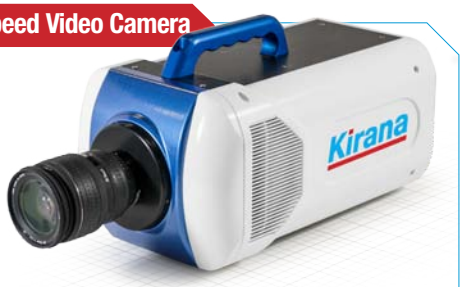
### SIMD

**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

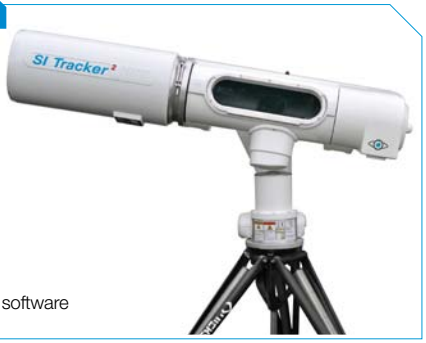
**924 x 768**
**180 frames**
**5 Million fps**




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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