Specialised Imaging

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

High Resolution Multi-Channel / Multi-Specral Framing Cameras

SIM

SIM02

SIMX

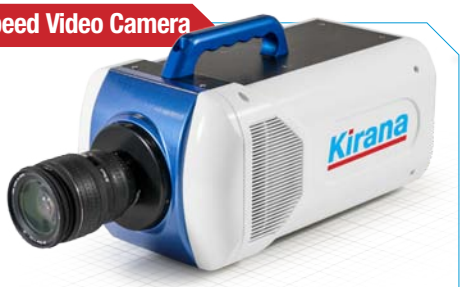
SIMD

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

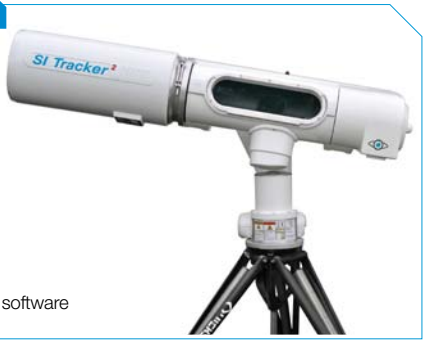
924 x 768
180 frames
5 Million fps



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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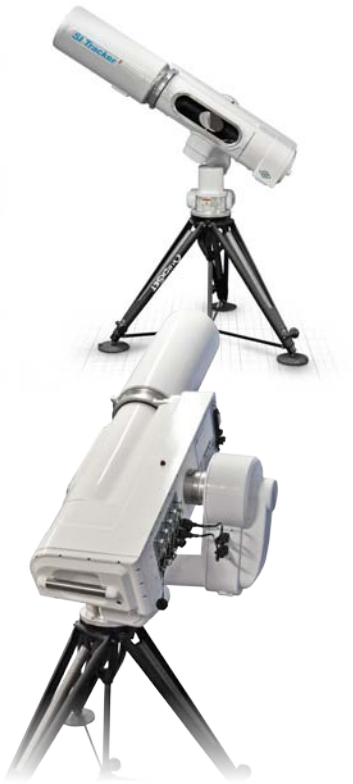
THE QUEEN'S AWARDS FOR ENTERPRISE: INNOVATION 2011

BS EN ISO 9001:2008 FM 87429

Detailed Specifications

Tracker²



MIRROR

Type	Optical flat elliptical Silicon Carbide Mirror
Size (HxW) mm	135x85x2

TRACKING

Scan Ratio (SR)	0.1 to 100 (defined as the ratio of projectile velocity/stand-off distance)
Scanning range (Max.)	-50º to +50 º /-60º to +60 º
Scanning Distance	>=2x standoff distance (distance from the line of flight to Tracker2)
Scanning Accuracy	±0.2º (-45° to +50°)
Positional Accuracy	±0.02º
Calibration	Not required
Projectile Velocity	SR x Standoff distance
Projectile Drag	0 to 100 m/s/m
Acceleration Angle	1° - 5° depending on scan rate (defined as the angle required to accelerate the mirror from rest to full scanning speed)

OPERATING MODES

Fixed Velocity	Single trigger using known velocity
Velocity	The scan is corrected using the measured velocity from at least 2 of the 8 available detector inputs.
Position	The scan position is corrected from the detector inputs. Known velocity is assumed.
Drag	The scan is corrected using the measured velocity and drag from at least 3 of the 8 available detector inputs.
Pre-defined profile	Programmable Velocity Vs Time curve. Triggered using single trigger. Used for non-linear projectile trajectories.
Advanced User Functions	Specialised Imaging is prepared to customise modes of operation to user requirements.
Skewed Geometry	Allows non perpendicular operation

CONTROL UNIT

System Clock	10MHz quartz crystal controlled
Trigger Jitter	<1us

INPUT/OUTPUT SIGNALS

Detector In	BNC
Trigger In	Rising or Falling Edge pulse Make/break
Camera Trigger	TTL positive pulse
Communication Interface	Data and Command transfer via 1Gbps Ethernet Cable length 100m (standard). Other lengths available 1000FX fibre optic Ethernet link (up to 2Km) - optional
Software	Custom software compatible with Microsoft Windows Operating Systems for control and data archiving in various file formats

ENVIRONMENTAL

Storage temperature	-10°C to +74°C
Operating temperature	-5°C to +50°C
Warmup Period	Not Required
Humidity	10 - 90% RH non-condensing
Vibration shock	10 - 40Hz Max. 10g in any direction
EMC	Meets all EC harmonized standards

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Specifications subject to change without notice

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