

HIGH-SPEED CAMERA

PRODUCT CATALOG



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SinceVision's
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SinceVision's
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202604V1

SH8 | SH6 | SH3 | SH2 | SHS | AIR

SHENZHEN SINCEVISION TECHNOLOGY CO., LTD.

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About SinceVision

Founded in 2014, SinceVision is a manufacturer of sensor technology and scientific cameras.

Our comprehensive product portfolio includes 3D laser profilers, high-speed cameras, laser displacement sensors, spectral confocal sensors, full-spectrum sensors, through-beam edge sensors, and sCMOs cameras.

SinceVision serves across consumer electronics, automotive, lithium battery, photovoltaic, and other key sectors. Our solutions help companies improve product quality, reduce costs, and increase efficiency in applications ranging from semiconductor fabrication and automotive manufacturing to food processing and scientific research.

Backed by a decade of technological expertise, SinceVision has built a strong R&D platform across optics, mechanics, electronics, and software, supported by a mature production and quality control system. We remain committed to high-end innovation, delivering advanced technology and reliable quality to support the growth of machine vision and industrial automation worldwide.

■ **Multiple offices:** Provide our customers with fast and convenient services

International Offices Japan, South Korea, India

Global Service Centers Malaysia, Vietnam, Singapore, Thailand

China Shenzhen, Suzhou (Kunshan), Shanghai, Wuxi, Beijing, Chengdu, Ningde, Taiwan, Wuhan, Xi'an, Hefei, Dongguan

Member of the Following Organizations



Certifications



24/7 Customer Service: We have multiple offices in both China and overseas countries to provide sales, service, and technical support.

International Offices: Japan, South Korea, India

Service Centers: Vietnam, Singapore, Malaysia, and Thailand

CORPORATE CULTURE



Our Vision

To be the first choice for industrial sensing and imaging technology.



Our Mission

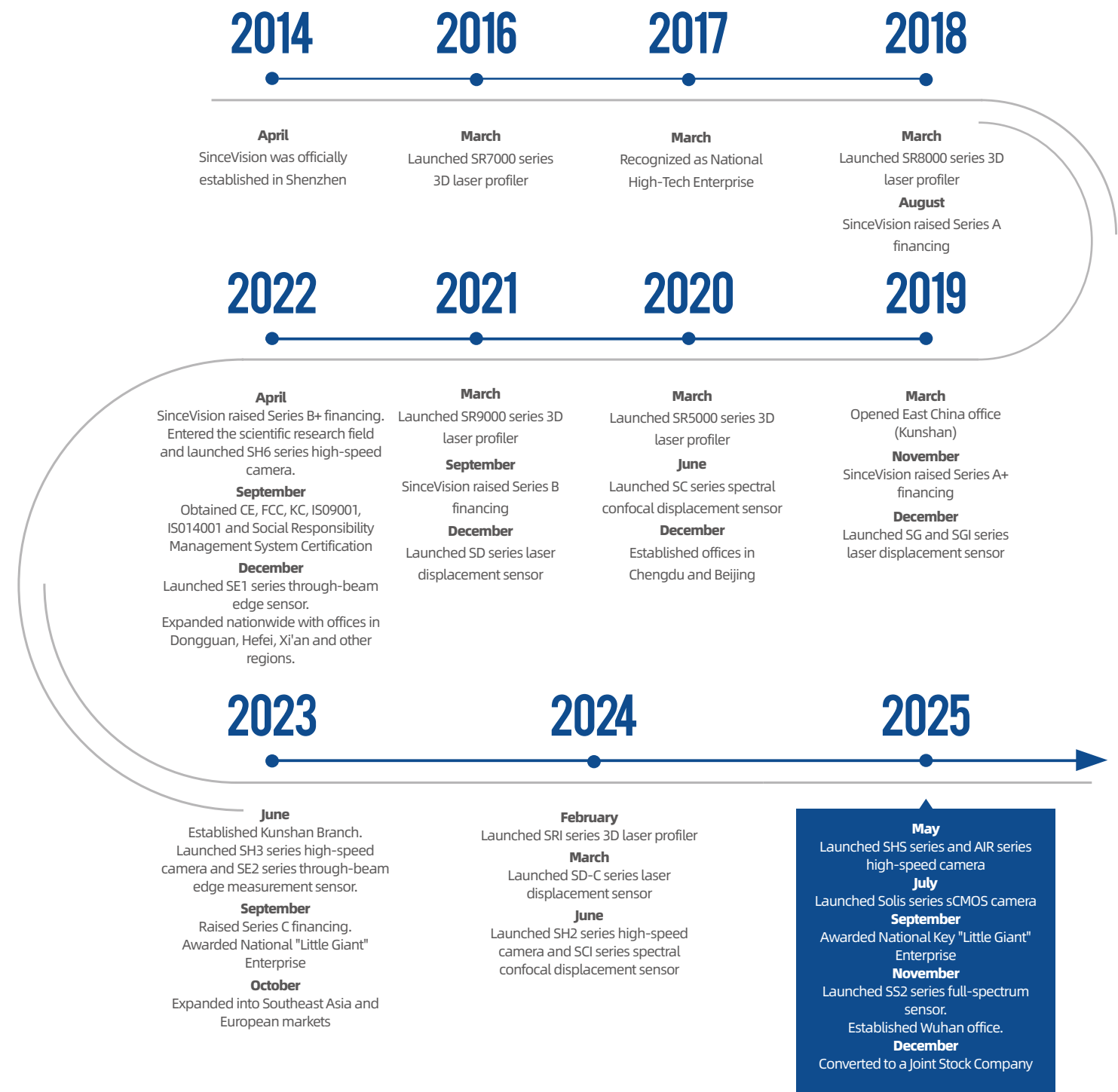
To give manufacturers the technology to build better products, reduce downtime, and lower inspection costs.



Customer First

Our engineers work directly with yours to solve problems quickly and keep your line running.

Development History



■ Product Matrix/Quick Selection Guide

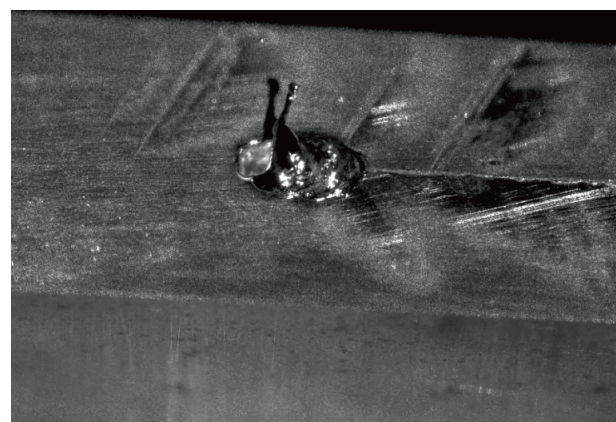
Frame Rate (fps) Resolution	1000 (*1100) (**1200) (***1800)	2000 (*2200) (**2250)	3000 (*3200)	3600	4000	4500	5000		6600	8000	9500	13800	20000	25000	30000
1280*808													• SH6-116		
1280*864	• SHS-101***			• SHS-103											
1280*1024	• SH3-101		• SH3-103				• SH3-105			• SH3-108	• SH6-109	• SH6-113	• SH8-120	• SH8-125	• SH8-130
1920*1080	• SH2-201** • SHS-201*	• SH2-202* • SHS-202**	• SH2-203*												
2048*1024					• SH6-204				• SH6-207						
2560*1920		• SH3-502 • SH6-502S	• SH6-503S												
2560*2016	• SH6-501	• SH6-502		• SH6-504		• SH6-505									
2560*2048	• AIR-501														
4096*2048		• SH6-802													
5120*4096	• SH6-2101														

Resolution: 1 megapixel to 2.1 megapixel / frame rate: 1000 fps to 115 million FPS(ROI)

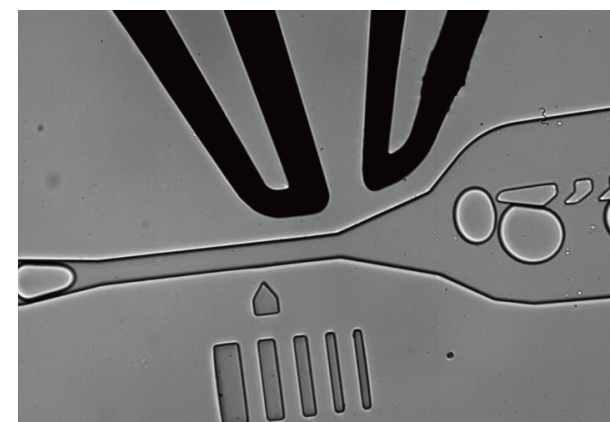
■ Application Cases



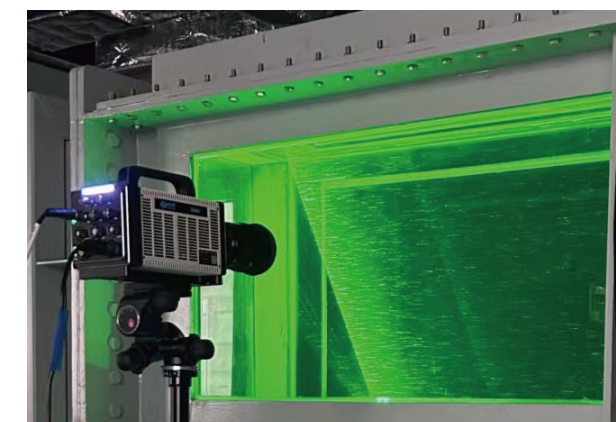
Ultrasonic welding



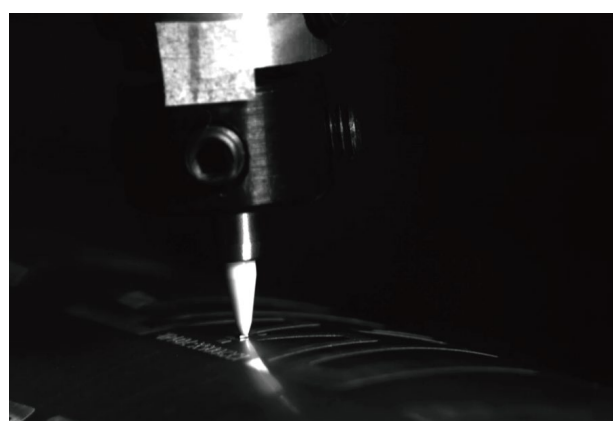
Laser melting pool



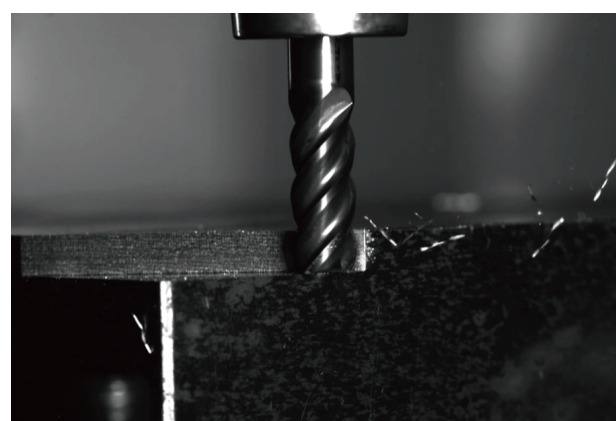
Microfluidics



PIV Flow field testing



SMT bonding



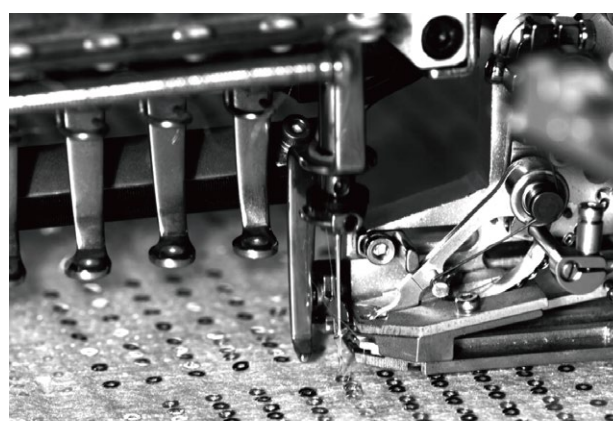
Drill bit cutting



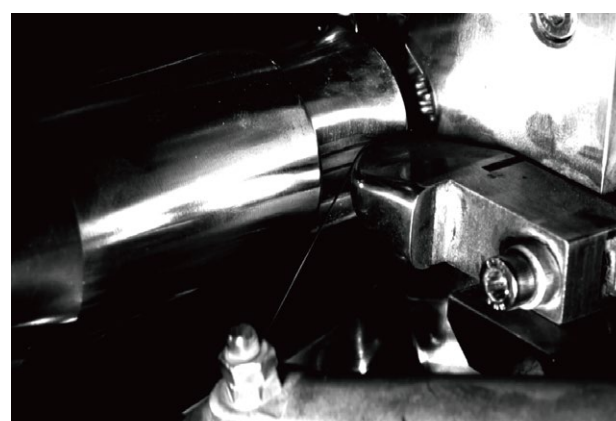
DIC Strain testing



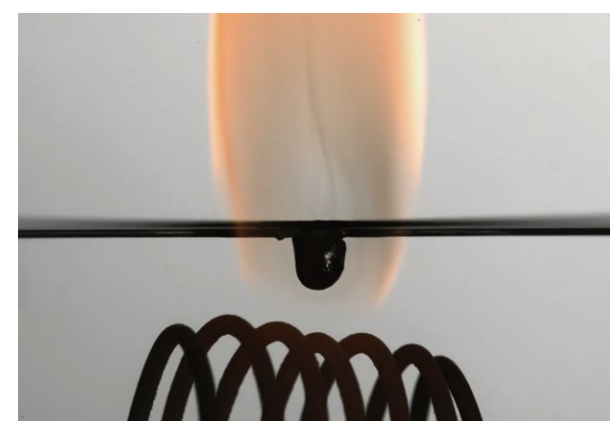
Air-liquid two-phase flow



Slow motion of sewing machine



Failure detection



Material combustion

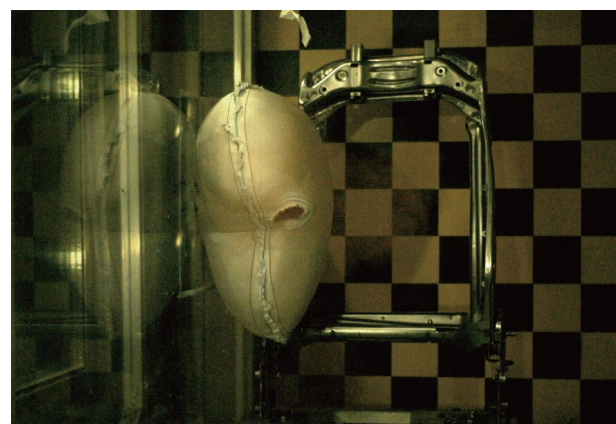


Explosion experiment

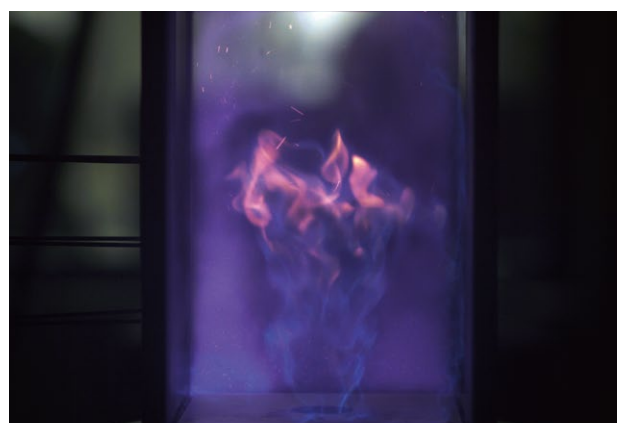
■ Application Cases



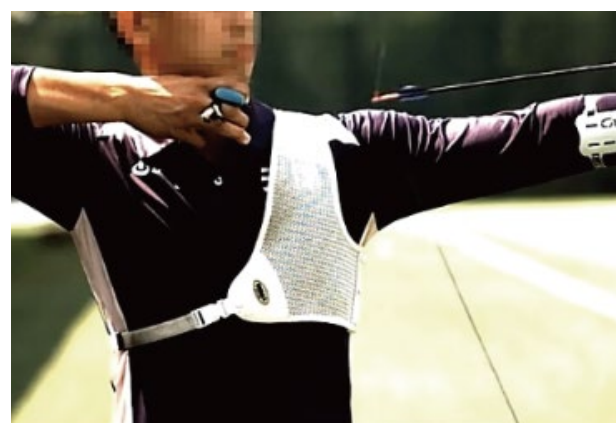
Seat safety testing



Airbag Surefire



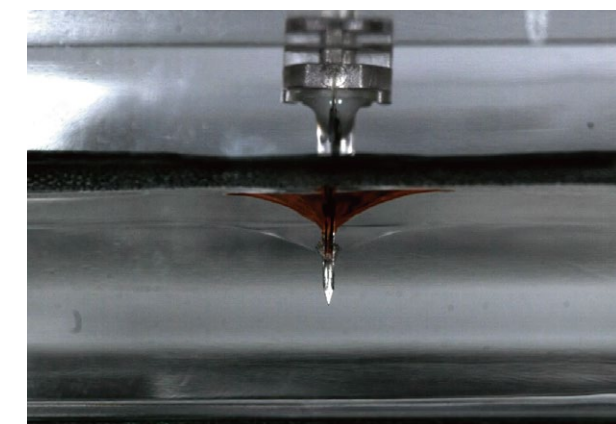
Methane combustion



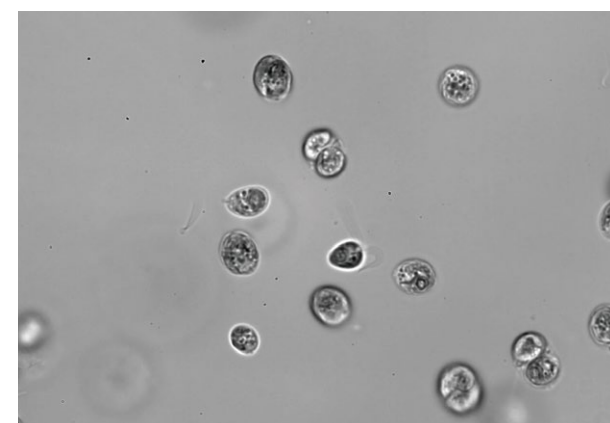
Sports



Biomimetic moth



Micro needling



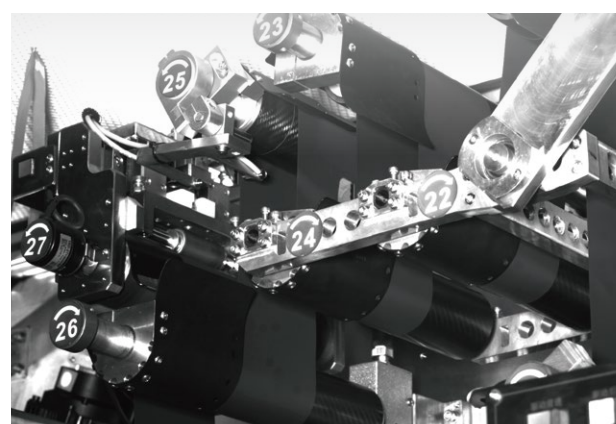
Cell Movement



Biological behavior research



Chip Capture



Battery cell winding



Pigment into water



Advertising production

01 SH8 | High-sensitivity & High-speed Series

High-sensitivity and ultra-high frame rate megapixel high-speed camera

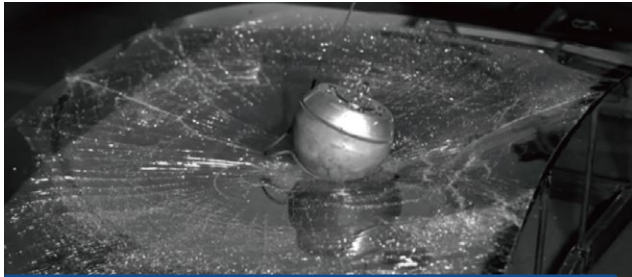
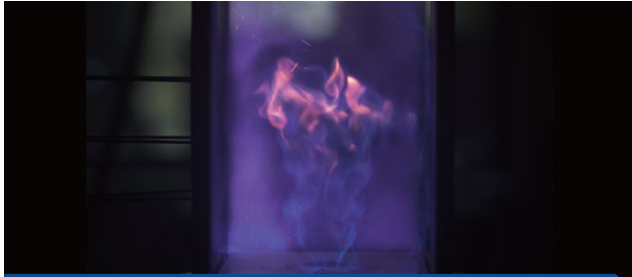


This series is SinceVision's flagship product, featuring a Backside Illumination (BSI) image sensor with a large pixel size of 20μm, extremely high light sensitivity, and a peak quantum efficiency of up to 85%. The series features an exceptional hardware circuit design and outstanding EMC interference resistance. It incorporates an ultra-large non-volatile memory with a capacity of up to 8TB, ensuring data is not lost in the event of a power failure. Additionally, the camera integrates an efficient data management system that allows for flexible segmentation of image data. These features enable the SH8 series to deliver significant technological advancements and support to users in fields such as scientific research, aerospace, and process engineering.

Core Features

		
30000fps Resolution 1280×1024	20μm Super-large pixel	BSI image sensor Peak quantum efficiency ≥85%
Frame rate increased by 4 times Support pixel binning	Up to 8TB Very large non-volatile memory	Excellent Circuit Design Anti-vibration design, EMC protection design

Application Cases

	
Split-Hopkinson Pressure Bar (SHPB) Test	Crack extension
	
Arc motion	Methane combustion

Core Functions

10GigE

PIV double exposure

IRIG B

Adapt in harsh temp. environment
UV enhancement

Auto exposure Double exposure

Image trigger

3G-SDI

8TB Non-volatile storage

Performance Parameters

Model	SH8-130	SH8-125	SH8-120
Full frame resolution	1280×1024	1280×1024	1280×1024
Full frame rate	30000fps	25000fps	20000fps
Pixel size	20μm		
Minimum Exposure Time	150ns		
Dynamic Range	60dB		
Analog Gain	x2, x4		
Bit depth	8bit/10bit/12bit		
Color	Monochrome (M) / Color (C)		
Input signal	Trigger signal, synchronization signal, Ready signal, IRIG-B signal, Serial port signal, Signals from the body buttons		
Output signal	Trigger signal, synchronization signal, Ready signal, Serial port signal		
Video interface	SDI/HDMI		

※ Detailed parameters can be found on the product leaflet.

Frame Rate

Model	SH8-130 (4T)		SH8-125(4T)		SH8-120 (4T)	
Resolution	Frame rate (fps)	Record time (s)	Frame rate (fps)	Record time (s)	Frame rate (fps)	Record time (s)
1280×1024	30000	85.3	25000	102.4	20000	256
1280×512	60000	85.3	50000	102.4	40000	256
1280×256	120000	85.3	100000	102.4	80000	256
1280×128	200000	102.4	165000	124.1	130000	315
1280×16	1100000	148.9	1000000	163.8	700000	468

※ All storage versions support full-frame, full-frame-rate real-time recording.
※ The recording time in the above table is calculated based on the bit depth of 10bit image.
※ The recording time of the 8TB version is twice as long as that of the 2TB version.

Storage Configuration

Model	SH8-130/125/120
Non-volatile storage	512GB/1TB/4TB/8TB
Pluggable hard disk	Support

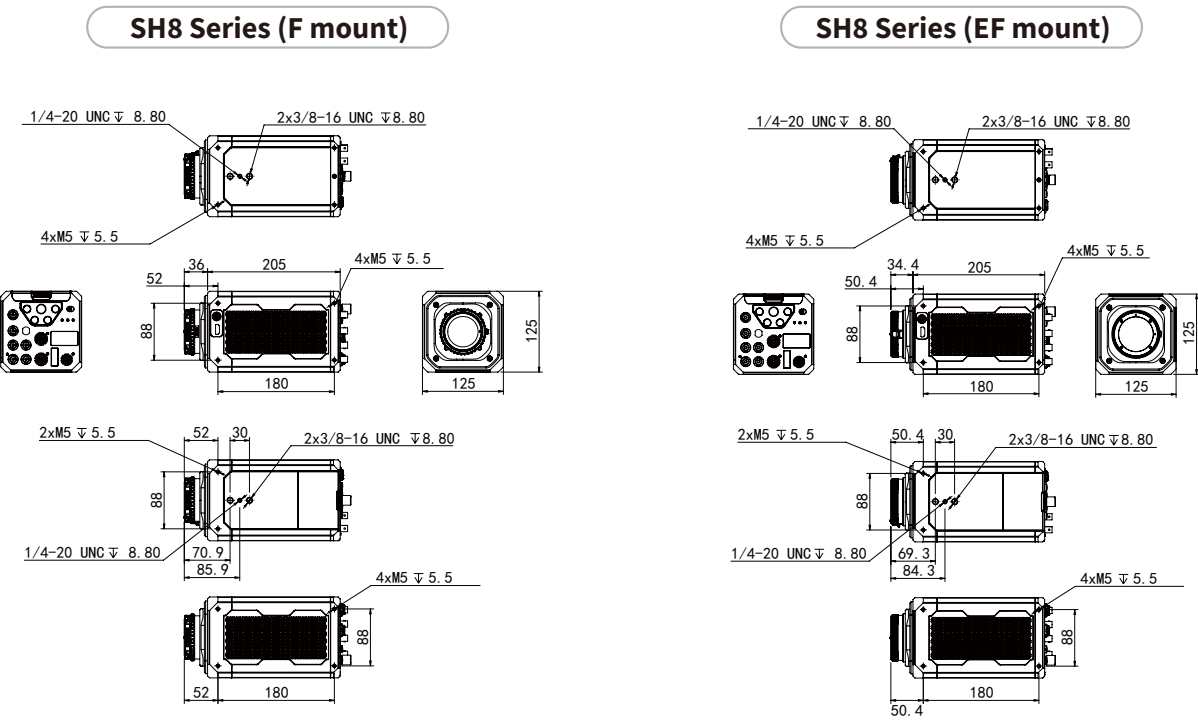
Mechanical Specification

Camera dimension	210D×125W×125H (Excluding protruding parts)	Installation hole position	Bottom: 1/4 mounting hole x1; 3/8 mounting hole x2.
Camera weight	Approximately 4 kg	Power consumption	≤200W
Power supply mode	DC 20-32V	Lens mount	Standard F mount. [E/EF mount (Electrically controlled), C mount are available]

Environmental Adaptability

Working temperature	-10~50°C. Customized large temperature version (-40~65°C)	EMC	Support
Working humidity	Below 95% (no condensation)	Vibration resistance	Anti vibration, safe transportation
Storage temperature	-40~70°C	Heat dissipation mode	Active heat dissipation, air cooling

Structural Dimension



02
SH6

Ultra-high Speed Series

The fastest high-speed camera of megapixel level in China



This series is a full-featured high-speed camera built by SinceVision for high-level scientific research, aviation and aerospace, high-speed industry and other fields, and inherits the excellent genes of Shensi product family for strict quality control. Through careful polishing of the product, the appearance, structure and performance are presented to the extreme. It not only has a data bandwidth of 160Gbps, but also supports an optional memory of up to 24TB, which meets the needs of long-term recording.

Core Features



20000fps

Resolution 1280x808

24TB

Support customized ultra-large non-volatile storage

210ns

PIV cross-frame interval

Standard with 10 Gigabit for all series

Compatible with 2.5G and Gigabit network transmission

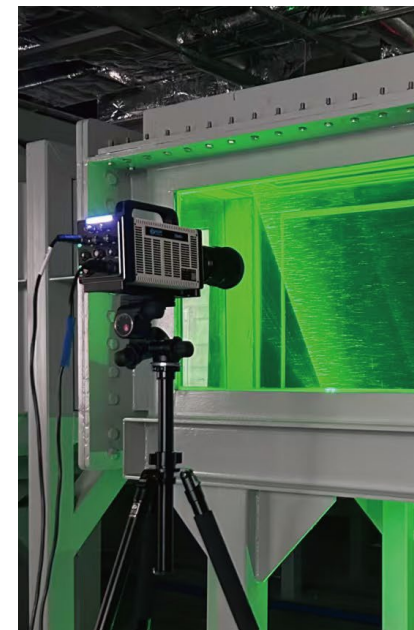
100ns

Minimum exposure time

Super stability

Adapt in harsh temperature environment

Application Cases



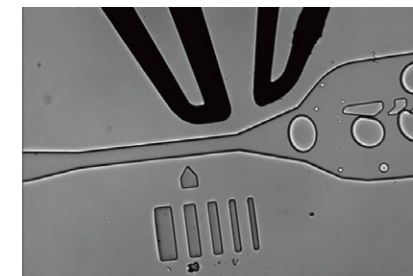
PIV flow field testing



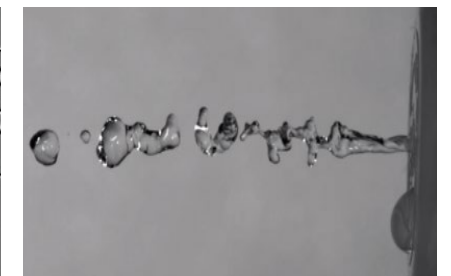
Crack extension



Methane combustion



Microfluidics



Liquid ejection

01 High-sensitivity & high-speed series

02 Ultra high-speed series

03 High-speed HD series

04 Ultra HD series

05 SH3 - MINI series

06 SH2 - Smart series

07 Real-time Transmission series

08 Air series

Supporting Software

Core Functions

 10GigE

 PIV double exposure

 IRIG B

 Adapt in harsh temp. environment

 Auto exposure Double exposure

 Image trigger

 3G-SDI

 24TB Non-volatile storage

Performance Parameters

Model	SH6-116	SH6-113	SH6-109
Full frame resolution	1280x1024	1280x1024	1280x1024
Full frame rate	15800fps	13800fps	9500fps
Pixel size	14.6um	14.6um	14.6um
Minimum Exposure Time	SH6-116	100ns	
Dynamic Range		60dB	
Analog Gain		x2, x4, x8	
Bit depth		8bit	
Color	Monochrome (M) / Color (C)		
Input signal	Trigger signal, synchronization signal, Ready signal, IRIG-B signal		
Output signal	Trigger signal, synchronization signal, Ready signal		
Video interface	3G-SDI		

※ Detailed parameters can be found on the product leaflet.

Frame Rate

Model	SH6-116(320G)		Model	SH6-113(320G)		SH6-109(320G)	
Resolution	Frame rate (fps)	Record time (s)	Resolution	Frame rate (fps)	Record time (s)	Frame rate (fps)	Record time (s)
1280×1024	15800	16	1280×1024	13800	18	9500	27
1280×808	20000	16	1280×768	18300	19	13700	25
1280×512	31500	16	1280×512	27400	19	20600	25
1280×256	62500	16	1280×256	54000	19	40700	25
1280×8	1150000	29	1280×8	1000000	33	750000	44

※ The recording time of the 320GB version is twice as long as that of the 160GB version, so as to calculate the 80GB/40GB recording time.
※ The recording time in the above table is calculated based on the bit depth of 8bit image.

Storage Configuration

Model	SH6-116	SH6-113	SH6-109
RAM	40GB/80GB/160GB/320GB	40GB/80GB/160GB/320GB	40GB/80GB/160GB/320GB
Real-time storage	4TB/12TB/24TB	4TB/12TB/24TB	4TB/12TB/24TB
Non-real-time storage	4TB	4TB	4TB

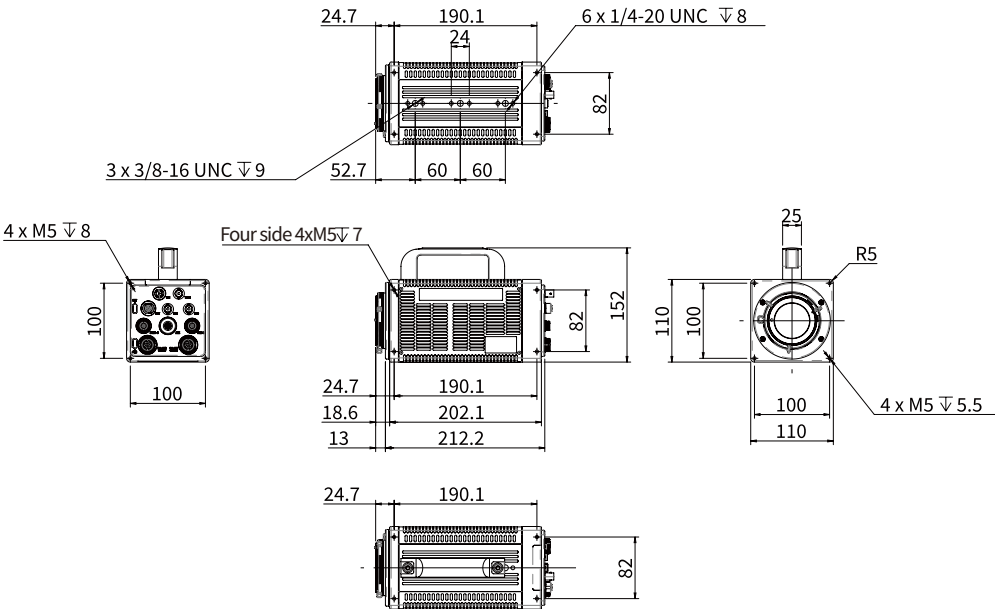
Mechanical Specification

Camera dimension	212Dx110Wx110H	Installation hole position	Top/bottom: 1/4 mounting hole x6; 3/8 mounting hole x3.
Camera weight	3.8kg	Power consumption	55W
Power supply mode	DC24V, 55W, Dual power supply	Lens mount	E mount (adapt to F mount, C mount and EF mount)

Environmental Adaptability

Working temperature	-10~50°C. Customized large temperature version (-40~65°C)	EMC	Support
Working humidity	Below 95% (no condensation)	Vibration resistance	Anti vibration, safe transportation
Storage temperature	-40~70°C	Heat dissipation mode	Active heat dissipation, air cooling

Structural Dimension



01	High-sensitivity & high-speed series
02	Ultra high-speed series
03	High-speed HD series
04	Ultra HD series
05	SH3 - MINI series
06	SH2 - Smart series
07	Real-time Transmission series
08	Air series
	Supporting Software

03 SH6 | High-speed HD series

High-speed camera with powerful performance and comprehensive functions



The high-speed HD series has a maximum resolution of 5 million and a maximum frame rate of 4500fps. This series applies the industry-class high-speed image acquisition and processing technology and large-capacity lossless data storage technology, and combines the innovative circuit design of SinceVision to make it have an effective bandwidth of up to 175Gbps and excellent imaging quality.

Core Features



4500fps

Maximum in the all product series 2560x2016

Professional ISP algorithm

Low noise control

HD excellent color image quality

Self-developed image algorithm supported

Dual-power supply

Prevent data loss from power failure of single power supply

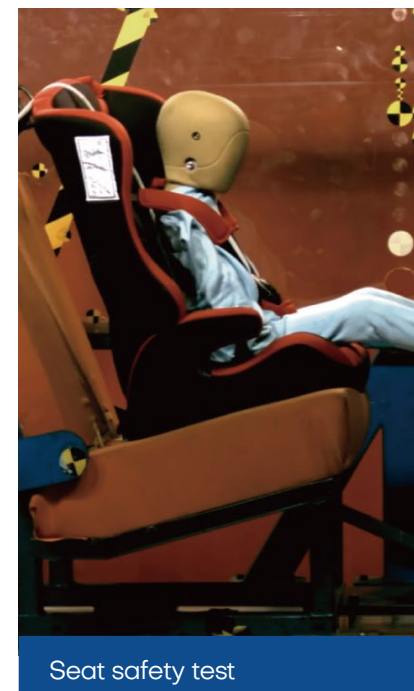
Intelligent image trigger

Multiple trigger modes

320GB

High-speed RAM storage, maximum optional 320GB

Application Cases



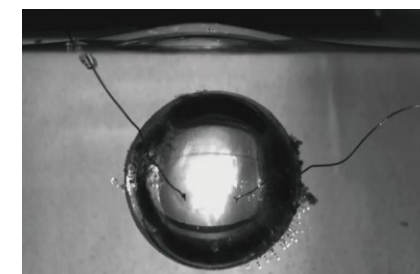
Seat safety test



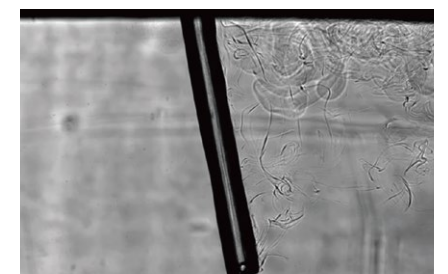
Crack extension



Slow motion of sewing machine



Cavitation phenomenon



Schlieren experiment

Core Functions

 10GigE

 320GB
Large memory

 IRIG B

 Adapt in harsh temp.
environment

 Auto exposure
Double exposure

 Image trigger

 3G-SDI

 24TB
Non-volatile
storage

Performance Parameters

Model	SH6-502S	SH6-503S	SH6-504	SH6-505	SH6-204	SH6-207
Full frame resolution	2560×1920	2560×1920	2560×2016	2560×2016	2048×1024	2048×1024
Full frame rate	2300fps	3000fps	3600fps	4500fps	4000fps	6600fps
Pixel size	7.8μm	7.8μm	9μm	9μm	9μm	9μm
Minimum Exposure Time	100ns	100ns	1us	1us	1us	1us
Dynamic Range	60dB	60dB	64dB	64dB	64dB	64dB
Analog Gain	x2, x4, x8					
Bit depth	8bit					
Color	Monochrome (M) / Color (C)					
Input signal	Trigger signal, synchronization signal, Ready signal, IRIG-B signal					
Output signal	Trigger signal, synchronization signal, Ready signal					
Video interface	3G-SDI					

※ Detailed parameters can be found on the product leaflet.
※ Detailed parameters of SH6-201/202 can be found on the product leaflet.

Frame Rate

Model	SH6-504(320G)		SH6-505(320G)		Model	SH6-204(320G)		SH6-207(320G)	
Resolution	Frame rate (fps)	Record time (s)	Frame rate (fps)	Record time (s)	Resolution	Frame rate (fps)	Record time (s)	Frame rate (fps)	Record time (s)
2560×2016	3600	18	4500	14	2048×1024	4000	40	6600	24
2560×1536	4800	18	5600	15	2048×768	5000	43	8500	25
2560×1280	5600	18	6600	15	2048×512	5600	58	11000	29
2560×256	17000	30	20000	26	2048×256	9000	72	17000	38
2560×32	50000	83	56000	74	2560×32	25000	209	50000	104

※ The recording time of the 320GB version is twice as long as that of the 160GB version, so as to calculate the 80GB/40GB recording time.
※ The recording time in the above table is calculated based on the bit depth of 8bit image.

Storage Configuration

Model	SH6-501/502/504/505/503S	SH6-204/207
RAM	40GB/80GB/160GB/320GB	40GB/80GB/160GB/320GB
Real-time storage	4TB/12TB/24TB	4TB/12TB/24TB
Non-real-time storage	4TB	4TB

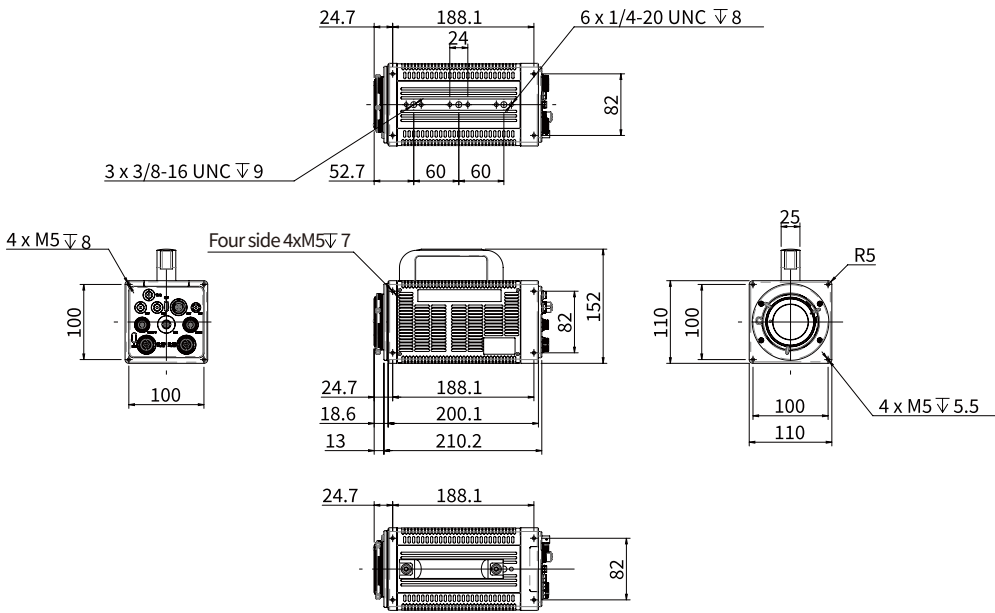
Mechanical Specification

Camera dimension	210Dx110Wx110H	Installation hole position	Top/bottom: 1/4 mounting hole x6; 3/8 mounting hole x3.
Camera weight	3.8kg	Power consumption	55W
Power supply mode	DC24V, Dual power supply	Lens mount	E mount (adapt to F mount, C mount and EF mount)

Environmental Adaptability

Working temperature	-10~50°C. Customized large temperature version (-40~65°C)	EMC	Support
Working humidity	Below 95% (no condensation)	Vibration resistance	Anti vibration, safe transportation
Storage temperature	-40~70°C	Heat dissipation mode	Active heat dissipation, air cooling

Structural Dimension



01	High sensitivity & high-speed series
02	Ultra high-speed series
03	High-speed HD series
04	Ultra HD series
05	SH3 - MINI series
06	SH2 - Smart series
07	Real-time Transmission series
08	Air series
	Supporting Software

04 SH6 | Ultra HD series

High-speed camera with 21 megapixel and powerful performance



The Ultra-HD Series (4K, 5K) consists of 21-megapixel high-speed cameras developed by SinceVision for high-end scientific research, aerospace, and high-speed industrial applications. With powerful data acquisition and processing capabilities, these cameras offer an effective bandwidth of up to 160 Gbps and industry-leading professional-grade image quality, opening up new possibilities for high-speed imaging applications.

Core Features



5K resolution

5120x4096@1000fps

4K resolution

4096x2048@2000fps

Professional image quality

Auto white balance
Intelligent denoising

Continuous dynamic adjustment

resolution and frame rate

Factory PRNU color correction

Factory dark field correction

High precision (ns level)

Time synchronization

Application Cases



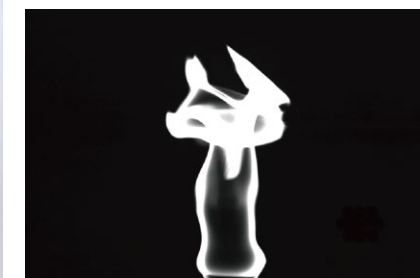
Dye into water



Water balloon explosion



Creative video



Flame observation



Droplet falling

Core Functions

10GigE

5K
Ultra-high resolution

IRIG B

Adapt in harsh temp.
environment

Auto exposure
Double exposure

Image trigger

3G-SDI

24TB
Non-volatile
storage

Performance Parameters

Model	SH6-802	SH6-2101
Full frame resolution	4096x2048	5120x4096
Full frame rate	2000fps	1000fps
Pixel size	4.5μm	4.5μm
Minimum Exposure Time	1μs	
Dynamic Range	64dB	
Analog Gain	x2, x4, x8	
Bit depth	8bit	
Color	Monochrome (M) / Color (C)	
Input signal	Trigger signal, synchronization signal, Ready signal, IRIG-B signal	
Output signal	Trigger signal, synchronization signal, Ready signal	
Video interface	3G-SDI	

※ Detailed parameters can be found on the product leaflet.

Frame Rate

Model	SH6-802(320G)		Model	SH6-2101(320G)	
Resolution	Frame rate (fps)	Record time (s)	Resolution	Frame rate (fps)	Record time (s)
4096x2048	2000	20	5120x4096	1000	16
4096x1536	2600	21	5120x2048	2000	16
4096x1024	3800	21	5120x1024	3800	17
4096x512	6800	24	5120x256	11500	22
4096x64	20000	65	5120x64	20000	52

※ The recording time of the 320GB version is twice as long as that of the 160GB version, so as to calculate the 80GB/40GB recording time.
※ The recording time in the above table is calculated based on the bit depth of 8bit image.

Storage Configuration

Model	SH6-802	SH6-2101
RAM	40GB/80GB/160GB/320GB	40GB/80GB/160GB/320GB
Real-time storage	4TB/12TB/24TB	4TB/12TB/24TB
Non-real-time storage	4TB	4TB

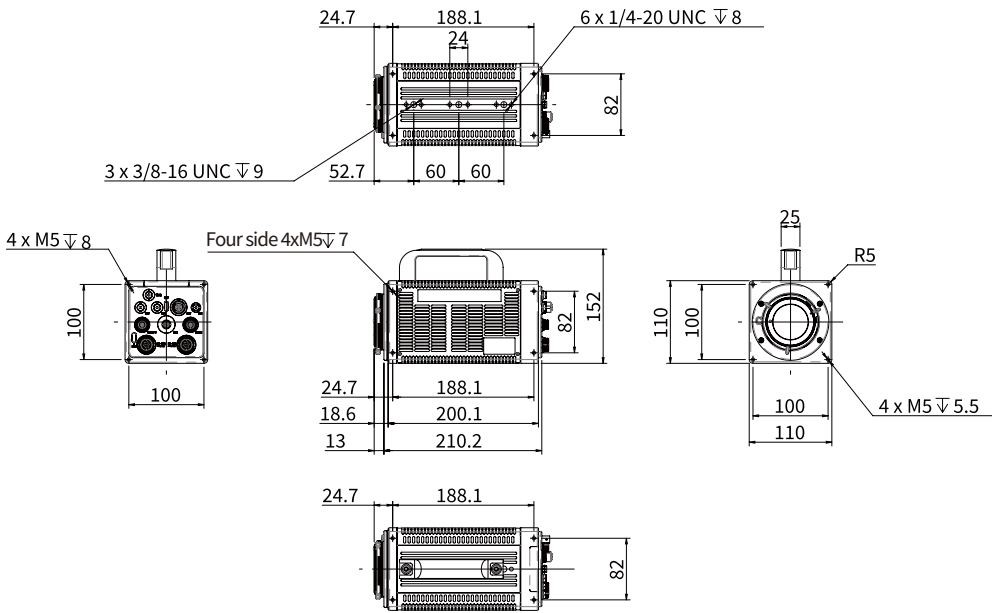
Mechanical Specification

Camera dimension	210Dx110Wx110H	Installation hole position	Top/bottom: 1/4 mounting hole x6; 3/8 mounting hole x3.
Camera weight	3.8kg	Power consumption	55W
Power supply mode	DC24V, Dual power supply	Lens mount	E mount (adapt to F mount, C mount and EF mount)

Environmental Adaptability

Working temperature	-10~50°C. Customized large temperature version (-40~65°C)	EMC	Support
Working humidity	Below 95% (no condensation)	Vibration resistance	Anti vibration, safe transportation
Storage temperature	-40~70°C	Heat dissipation mode	Active heat dissipation, air cooling

Structural Dimension



- 01 High-sensitivity & high-speed series
- 02 Ultra high-speed series
- 03 High-speed HD series
- 04 Ultra HD series
- 05 SH3 - MINI series
- 06 SH2 - Smart series
- 07 Real-time Transmission series
- 08 Air series
- Supporting Software

05 SH3 | MINI Series

Excellent balance between the volume and heat dissipation

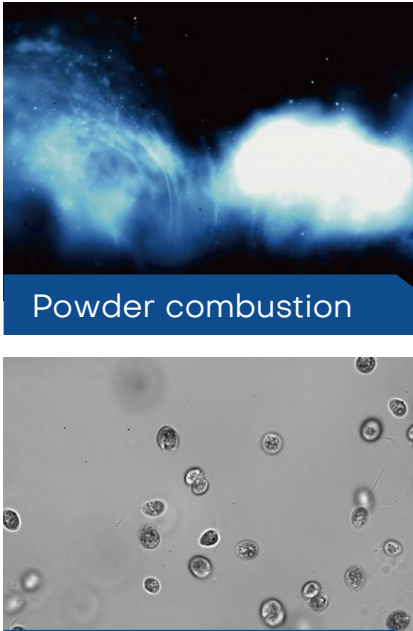
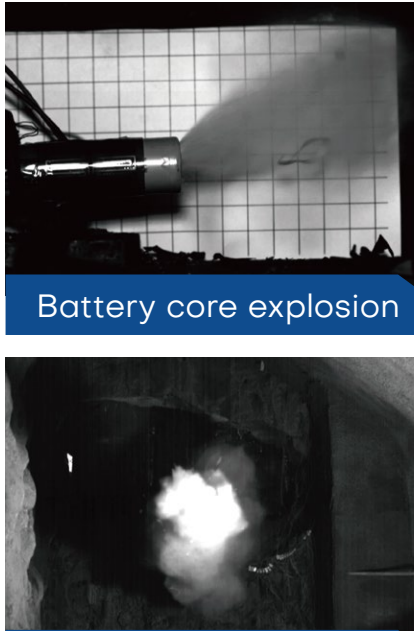
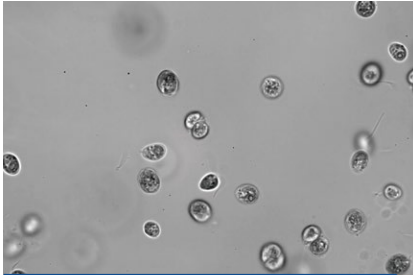


SH3 is another masterpiece of MINI series for high-end scientific research and industry in SinceVision's intelligent high-speed camera family, which has a perfect balance of body size and heat dissipation through its 20-layer PCB stacking design and 10Gbps Serdes on-board interconnection technology. At the same time, thanks to the self-developed array parallel storage architecture, the maximum storage in the device can be expanded to 4TB.

Core Features

		
14.6μm Large pixel	100ns Minimum Exposure Time	210ns Double exposure time PLV
Clear imaging Low noise circuit design, as low as 10e-	Intelligent image trigger Quickly positioning keyframes	200G Resist 200G impact

Application Cases

		
Drill bit cutting	Powder combustion	Battery core explosion
		
Cell observation	Blasting test	

01 High-sensitivity & high-speed series

02 Ultra high-speed series

03 High-speed HD series

04 Ultra HD series

05 SH3 - MINI series

06 SH2 - Smart series

07 Real-time Transmission series

08 Air series

Supporting Software

Core Functions

 10GigE

 PIV double exposure

 IRIG B

 Adapt in harsh temp. environment

 Auto exposure Double exposure

 Image trigger

 Resist 200G impact

 4TB Non-volatile storage

Performance Parameters

Model	SH3-101	SH3-103	SH3-105	SH3-108	SH3-502
Full frame resolution	1280x1024	1280x1024	1280x1024	1280x1024	2560x1920
Full frame rate	1000fps	3000fps	5000fps	8000fps	2000fps
Pixel size	14.6μm	14.6μm	14.6μm	14.6μm	7.8μm
Minimum Exposure Time	100ns				
Dynamic Range	64dB				
Analog Gain	x2, x4, x8				
Bit depth	8bit				8bit/10bit
Color	Monochrome (M) / Color (C)				
Input signal	Trigger signal, synchronization signal, Ready signal, IRIG-B signal				
Output signal	Trigger signal, synchronization signal, Ready signal				

※ Detailed parameters can be found on the product leaflet.

Frame Rate

Model	SH3-502(128G)		Model	SH3-108(128G)	
	Frame rate (fps)	Record time (s)		Frame rate (fps)	Record time (s)
2560×1920	2000	13	1280×1024	8000	13
2560×1440	2700	13	1280×768	10700	13
2560×960	4000	13	1280×512	16000	13
2560×512	7500	13	1280×256	31700	13
2560×256	15000	13	1280×128	61500	13
2560×8	365000	18	1280×8	585000	22

※ The recording time of the 128GB version is twice as long as that of the 64GB version, so as to calculate the 32GB/16GB recording time.
※ The recording time in the above table is calculated based on the bit depth of 8bit image.

Storage Configuration

Model	SH3-101/103/105/108	SH3-502
RAM	16GB/32GB/64GB/128GB	16GB/32GB/64GB/128GB
Real-time storage	2TB/4TB	2TB/4TB

※ SH3-502/105/108, the hard disk version needs to restrict the instant writing of parameters.

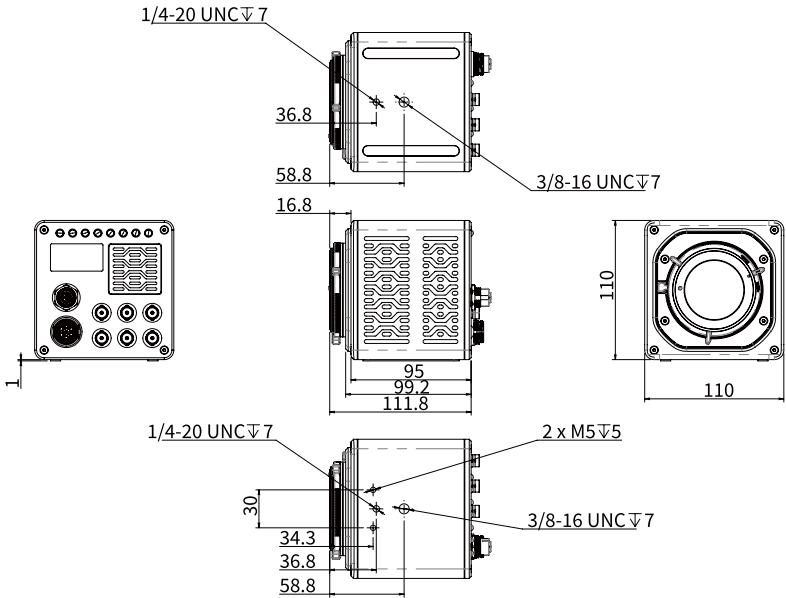
Mechanical Specification

Camera dimension	99Dx110Wx110H	Installation hole position	Bottom: 1/4 mounting hole x1; 3/8 mounting hole x1.
Camera weight	<1.8kg	Power consumption	30W
Power supply mode	DC 24V	Lens mount	E mount (adapt to F mount, C mount and EF mount)

Environmental Adaptability

Working temperature	-10~50℃. Customized large temperature version (-40~65℃)	EMC	Support
Working humidity	Below 95% (no condensation)	Vibration resistance	Anti vibration, safe transportation
Storage temperature	-40~70℃	Heat dissipation mode	Active heat dissipation, air cooling
Impact resistance	200G, 5ms, +/- 3 impacts per axis		

Structural Dimension



06 SH2 SMART Series

A smart high-performance camera with large memory



SinceVision's smart series high-speed cameras are closely matched with the design and structure of self-developed integrated PCB in hardware, which makes the machine have strong reliability, can resist 200G impact and reach IP64 protection level, and has good environmental adaptability; At the same time, the high-performance storage FLASH particles are used to realize large memory nonvolatile storage in ultra-small cameras, so as to realize power failure without losing data.

Core Features



89*72*72mm

Ultra-small body



100ns

Minimum exposure time



150ns

PIV cross-frame interval

1080P@3200FPS

Strong performance

680g

Ultra lightweight

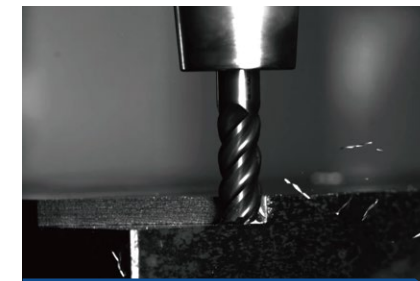
**Optional
E mount / C mount**

Meet different photography needs

Application Cases



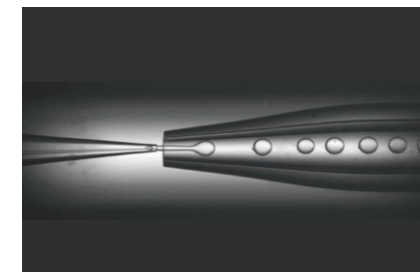
Deformation test



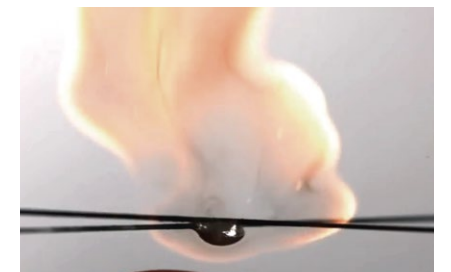
Drill bit cutting



Drone mounting



Microfluidics



Material combustion

01 High-sensitivity & high-speed series

02 Ultra high-speed series

03 High-speed HD series

04 Ultra HD series

05 SH3 - MINI series

06 SH2 - Smart series

07 Real-time Transmission series

08 Air series

Supporting Software

Core Functions

10GigE

PIV double exposure

Programmable IO

200G impact resistance

Auto exposure Double exposure

IP64 Dustproof and waterproof

3G-SDI

2TB Non-volatile storage

Performance Parameters

Model	SH2-203	SH2-202	SH2-201
Full frame resolution	1920x1080	1920x1080	1920x1080
Full frame rate	3200fps	2200fps	1200fps
Pixel size	10μm	10μm	10μm
Minimum Exposure Time	100ns		
Dynamic Range	60dB		
Analog Gain	x2, x4, x8		
Bit depth	8bit/10bit		
Color	Monochrome (M) / Color (C)		
Input signal	Trigger signal, synchronization signal, Ready signal, IRIG-B signal, RS422		
Output signal	Trigger signal, synchronization signal, Ready signal		
Video interface	3G-SDI		

※ Detailed parameters can be found on the product leaflet.

Frame Rate

Model	SH2-203 (2T)		SH2-202 (2T)		SH2-201 (2T)	
Resolution	Frame rate (fps)	Record time (s)	Frame rate (fps)	Record time (s)	Frame rate (fps)	Record time (s)
1920×1080	3200	5	2200	7	1200	14
1920×720	4800	5	3300	7	1800	14
1920×512	6800	5	4600	7	2500	14
1920×256	13500	5	9200	7	4900	14
1920×4	300000	15	205000	22	110000	41

※ The recording time of the 2TB version is twice as long as that of the 1TB version, so as to calculate the 512GB/256GB recording time.
※ The recording time in the above table is calculated based on the bit depth of 8bit image.

Storage Configuration

Model	SH2-203	SH2-202	SH2-201
Non-volatile storage	64GB/128GB/256GB /512GB/1TB/2TB	64GB/128GB/256GB /512GB/1TB/2TB	64GB/128GB/256GB /512GB/1TB/2TB

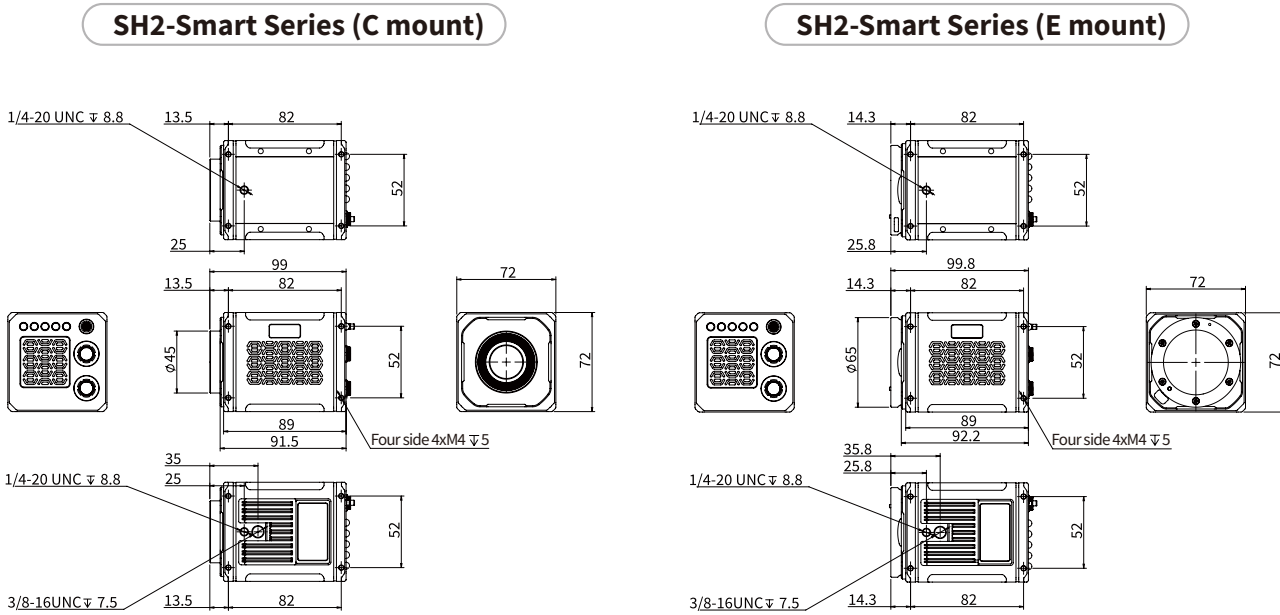
Mechanical Specification

Camera dimension	89Dx72Wx72H	Installation hole position	Bottom: 1/4 mounting hole x1; Top: 1/4 mounting hole x1; 3/8 mounting hole x1
Camera weight	730g(E mount), 680g(C mount)	Power consumption	< 30W
Power supply mode	DC 24	Lens mount	Optional, E mount or C mount

Environmental Adaptability

Working temperature	-10~50°C. Customized large temperature version (-40~65°C)	EMC	Support
Working humidity	Below 95% (no condensation)	Vibration resistance	20Grms, 10-2kHz, impact in 3 axis for 15min each axis
Storage temperature	-40~70°C	Heat dissipation mode	Active heat dissipation, air cooling
Impact resistance	200G, 5ms, +/- 3 impacts per axis	Protection Level	IP64

Structural Dimension



01 High-sensitivity & high-speed series

02 Ultra high-speed series

03 High-speed HD series

04 Ultra HD series

05 SH3 - MINI series

06 SH2 - Smart series

07 Real-time Transmission series

08 Air series

Supporting Software

07
SHS

Real-time Transmission Series

Lightweight high-speed camera with CXP 2.0 technology



With the advanced CoaxPress 12 data interface and coaxPress 2.0 transmission technology, the four-channel bandwidth reaches 50 Gbit/s. The body is compact and sturdy, with outstanding performance. The excellent heat dissipation design can easily face various application scenarios. It can be matched with a storage computer to realize real-time transmission of high-quality images and lossless data, and is suitable for industrial scene monitoring, destructive experiments, real-time image processing and other application scenarios.

Core Features



High definition image quality

1080P@2250FPS

>4GB/S

Real-time image data transmission

430g

Ultra-lightweight design

"Zero" frame loss

SinceVision self-developed high-speed image acquisition software

Detachable fan

Adaptive environment, free collocation

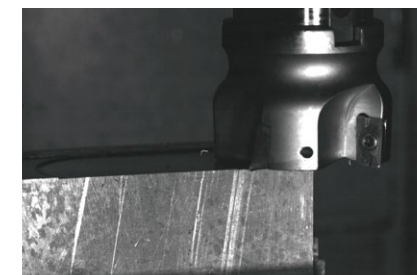
Resist 70G impact

Adapt to indoor and outdoor environments

Application Cases



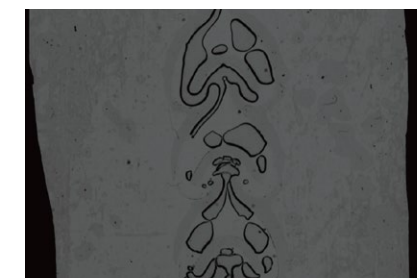
Material fracture



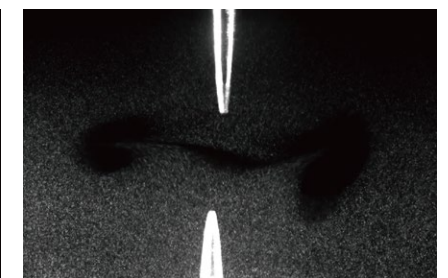
Milling



Molten pool observation



Microfluidics



Air disturbance experiment

01 High sensitivity & high-speed series

02 Ultra high-speed series

03 High-speed HD series

04 Ultra HD series

05 SH3 - MINI series

06 SH2 - Smart series

07 Real-time Transmission series

08 Air series

Supporting Software

Core Functions

 CXP protocol

 Resist 70G impact

 IRIG B

 Dual-recording mode
Support Central mode

 Auto exposure

 Fan-free design

 ROI
Region of interest

 PoCXP
power supply

Performance Parameters

Model	SHS-101	SHS-103	SHS-201	SHS-202
Full frame resolution	1280x864	1280x864	1920x1080	1920x1080
Full frame rate	1800fps	3600fps	1100fps	2250fps
Pixel size	10μm	10μm	10μm	10μm
Minimum Exposure Time	100ns			
Dynamic Range	60dB			
Analog Gain	x2, x4, x8			
Bit depth	8bit/10bit			
Color	Monochrome (M) / Color (C)			
Input signal	Trigger signal, synchronization signal, Ready signal, IRIG-B signal			
Output signal	Trigger signal, synchronization signal, Ready signal			

※ Detailed parameters can be found on the product leaflet.

Frame Rate

Model	SHS-202	SHS-201	Model	SHS-103	SHS-101
Resolution	Frame rate (fps)	Frame rate (fps)	Resolution	Frame rate (fps)	Frame rate (fps)
1920×1080	2250	1120	1280×864	3600	1800
1920×960	2500	1250	1280×720	4300	2150
1920×720	3350	1670	1280×512	6000	3000
1920×512	4700	2350	1280×256	12000	6000
1920×256	9400	4650	1280×128	23700	11800
1920×64	36200	18000	1280×64	46400	23200

Storage Configuration

Model	SHS-101	SHS-103	SHS-201	SHS-202
Computer storage (optional)	4TB-15TB	4TB-15TB	4TB-15TB	4TB-15TB
CXP pathway	2 channels	4 channels	2 channels	4 channels

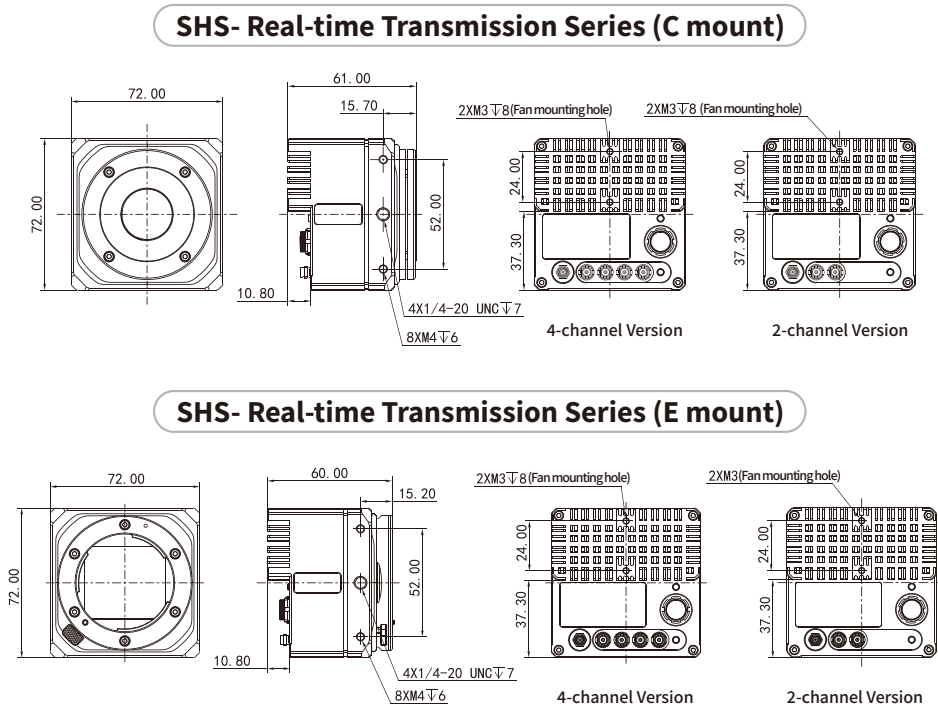
Mechanical Specification

Camera dimension	60Dx72Wx72H	Installation hole position	Bottom: 1/4 mounting hole x1; M4 mounting hole x2.
Camera weight	430g(E mount), 470g(C mount)	Power consumption	<12W
Power supply mode	DC 12V - 28V	Lens mount	Optional, E mount or C mount

Environmental Adaptability

Working temperature	0~40°C. Wide temperature version can be customized.	EMC	Support
Working humidity	Below 95% (no condensation)	Heat dissipation mode	Active heat dissipation, air cooling
Storage temperature	-40~70°C	Protection level	IP64
Impact resistance	70G, 5ms, +/- 3 impacts per axis		

Structural Dimension



※Two-channel CXP interface for SHS-101/201, and four-channel CXP interface for SHS-103/202. Please contact our sales personnel if you need drawings and documents.

01	High sensitivity & high-speed series
02	Ultra high-speed series
03	High-speed HD series
04	Ultra HD series
05	SH3 - MINI series
06	SH2 - Smart series
07	Real-time Transmission series
08	Air series
	Supporting Software

Real-time storage solution for high-speed images independently developed by SinceVision

FastStream High-speed Image Storage System



FastStream high-speed image storage system can choose suitable camera and storage configuration according to different application scenarios, and realize extremely high frame rate and long-time image recording. Combined with the disk writing algorithm independently developed by SinceVision, this system can realize extremely high frame rate and long-time image recording, and ensure the safety of massive data without loss.

Different from the conventional compressed storage method, the system can save the original data of the camera to the local computer in real time, ensuring that users can obtain high-quality and undistorted images. In addition, the system breaks through the limitations of the traditional split high-speed camera, integrates the post-trigger recording function in memory mode, and is suitable for flexible applications in various scenes. Many integrated camera functions, such as automatic exposure and intelligent image triggering, are also fully open to customers in this system.

The built-in camera in the system is a domestic high-speed camera independently developed by SinceVision. It is compact and sturdy, easy to integrate, with 70G impact resistance and IP64 protection level. It can be installed in a narrow space and used in harsh environments, which greatly enhances the user's experience.

Core Advantage

Independent R&D acquisition system

Double recording mode of memory/disk

Writing rate > 4.5GB/S

Large capacity storage, up to 15TB

Data security: "Zero" frame loss

Support image trigger, automatic exposure and other special functions

Function and Features

- Support intelligent image trigger and automatic exposure function.
- Support simultaneous connection, control, display and synchronous recording of multiple cameras of the same model.
- Support external signal input, Trigger signal, IRIG-DC signal and synchronization signal.
- Support the export of BMP\JPEG\TIFF\PNG picture files in common format, as well as compressed or lossless AVI\MP4 video files.
- Support software to automatically read locally stored documents, without opening local folders, so as to realize image preview and secondary editing/exporting.
- Support customized configuration of CPU\GPU\ memory \ network card, etc.
- Support continuous recording, with the maximum duration of hours. According to the configuration, you can choose professional storage disks with different capacities.

Camera Configuration

Camera Model	Resolution	Frame Rate	CXP channels
SHS-202	1920×1080	2250FPS	4
SHS-201	1920×1080	1100FPS	2
SHS-103	1280×864	3600FPS	4
SHS-101	1280×864	1800FPS	2

Storage Configuration

Optional computer type	Desktop server	Handheld server	Portable server
Storage capacity	3.84TB/7.68TB/15.36TB	3.84TB/7.68TB/15.36TB	3.84TB/7.68TB/15.36TB
CXP acquisition card	2-channel acquisition card /4-channel acquisition card (optional according to camera specifications)		

AIR Series

High-speed HD camera for aerospace field



Using BSI back-illuminated CMOS sensor, it has good sensitivity. The body can withstand high altitude, low pressure, strong vibration, strong interference and extreme high temperature and low temperature through outstanding heat dissipation design and high integration. AIR series is equipped with high-capacity CF memory card and built-in battery, which can be used offline without external power supply, and is suitable for aerospace, aircraft mounting, automobile collision and other application scenarios.

Core Features



Stack BSI process

Effectively improve quantum efficiency and sensitivity

Pluggable storage

Supports CF card storage

20 minutes of battery life

Built in rechargeable NiMH battery, no risk of combustion or explosion

IRIG-B/IEEE1588

Time code timing

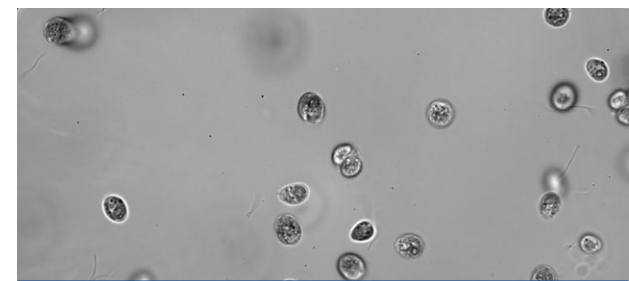
-40°C ~ 70°C

Meet the aircraft-mounting equal limit condition

Adaptable to harsh environments

Vibration resistance design, EMC protection design

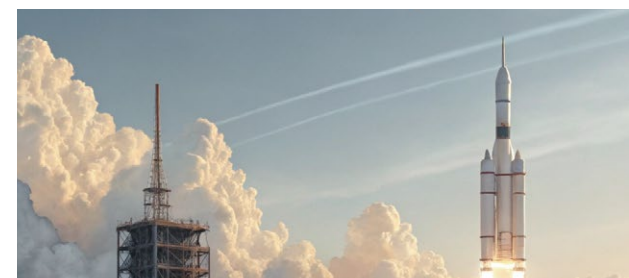
Application Cases



Cell research



Seat safety test



Aerospace



Aircraft mounting

01 High-sensitivity & high-speed series

02 Ultra high-speed series

03 High-speed HD series

04 Ultra HD series

05 SH3 - MINI series

06 SH2 - Smart series

07 Real-time Transmission series

08 Air series

Supporting Software

Core Functions

 10GigE

 Adapt in harsh temp. environment

 IRIG B

 Image trigger

 Auto exposure Double exposure

 High sensitivity and high image quality High dynamic mode

 3G-SDI

 1TB CF card storage

Performance Parameters

Model	AIR-501
Full frame resolution	2560x2048
Full frame rate	1000fps
Pixel size	5.5μm
Minimum Exposure Time	1μs
Dynamic Range	62dB
Analog Gain	x2, x4, x8
Bit depth	8bit
Color	Monochrome (M) / Color (C)
Input signal	Trigger signal, synchronization signal, Ready signal, IRIG-B signal
Output signal	Trigger signal, synchronization signal, Ready signal
Video interface	3G-SDI

Frame Rate

Resolution	Frame rate (fps)	Memory (s)	CF card storage time (min)
		64GB	1TB
2560×2048	1000	13	3
2560×1536	1200	14	3
2560×1024	2000	13	3
2560×512	3600	14	3
2560×128	10500	19	5

※ The recording time of the 64GB version is twice as long as that of the 32GB version.
※ The recording time in the above table is calculated based on the bit depth of 8bit image.

Storage Configuration

Model	AIR-501
RAM	32GB/64GB
CF Card	1TB

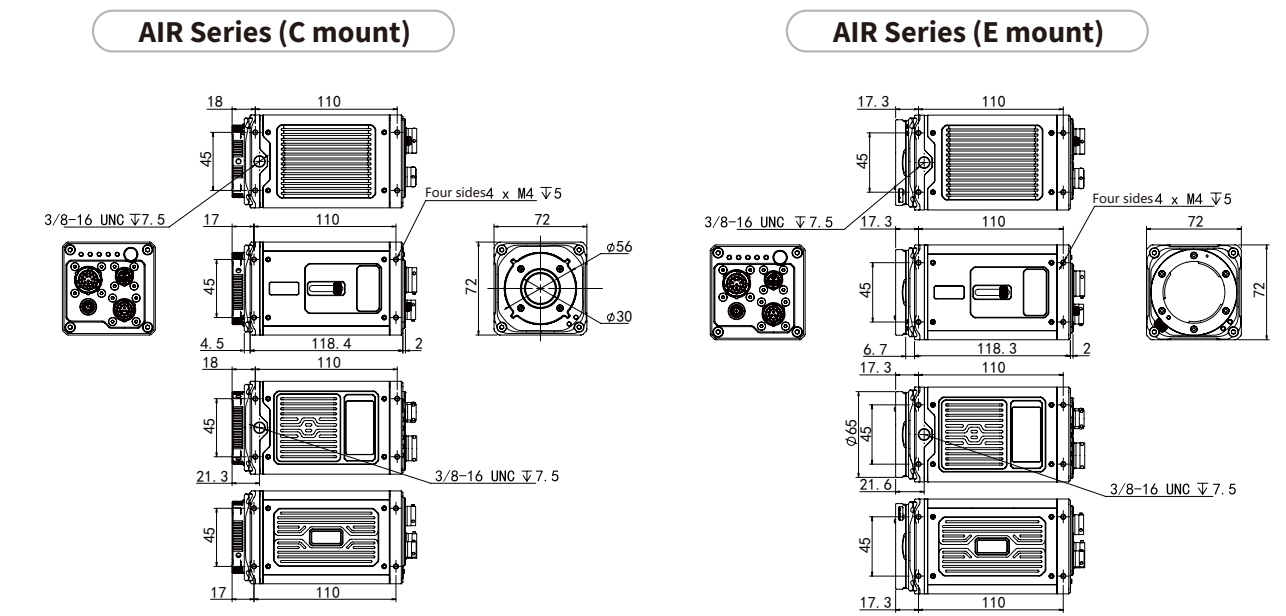
Mechanical Specification

Camera dimension	120Dx72Wx72H	Installation hole position	Top/Bottom: 3/8 mounting hole x1
Camera weight	1.4kg (built-in battery) / 1.1kg (excluding battery)	Power consumption	< 25W
Power supply mode	DC 24	Lens mount	E mount and C mount options available (with locking function)

Environmental Adaptability

Working temperature	-10~50°C. Customized large temperature version (-40~70°C)	EMC	Meet the requirements of CE102, RE102, CS101, CS114 and RS103 in GJB151B-2013
Working humidity	Below 95% (no condensation)		
Storage temperature	-40~70°C	Vibration resistance	W ₀ :0.08g ² /Hz each for 20 minutes in X, Y and Z direction
Heat dissipation mode	Passive heat dissipation		

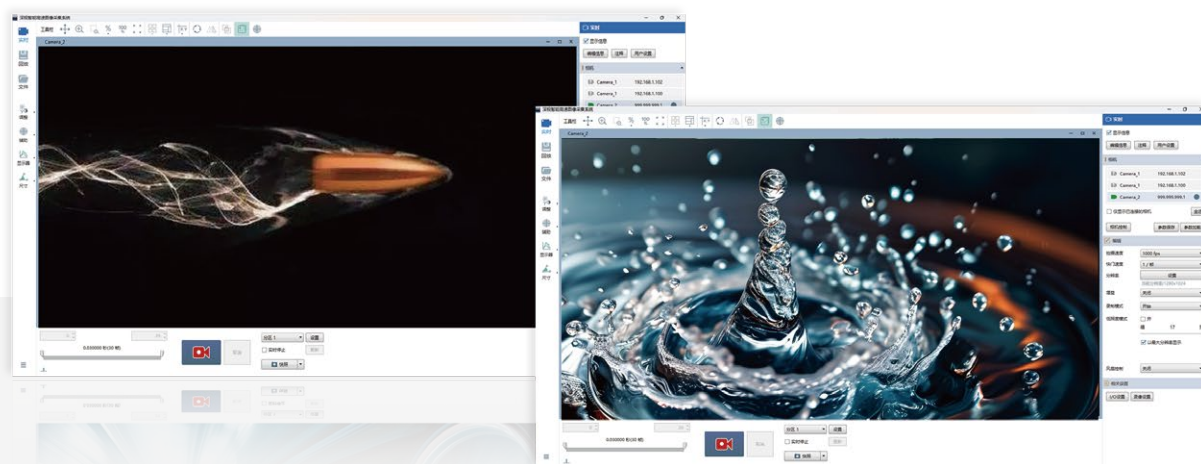
Structural Dimension



01	High-sensitivity & high-speed series
02	Ultra high-speed series
03	High-speed HD series
04	Ultra HD series
05	SH3 - MINI series
06	SH2 - Smart series
07	Real-time Transmission series
08	Air series
	Supporting Software

09 High-speed Camera Acquisition Software

Supporting Software



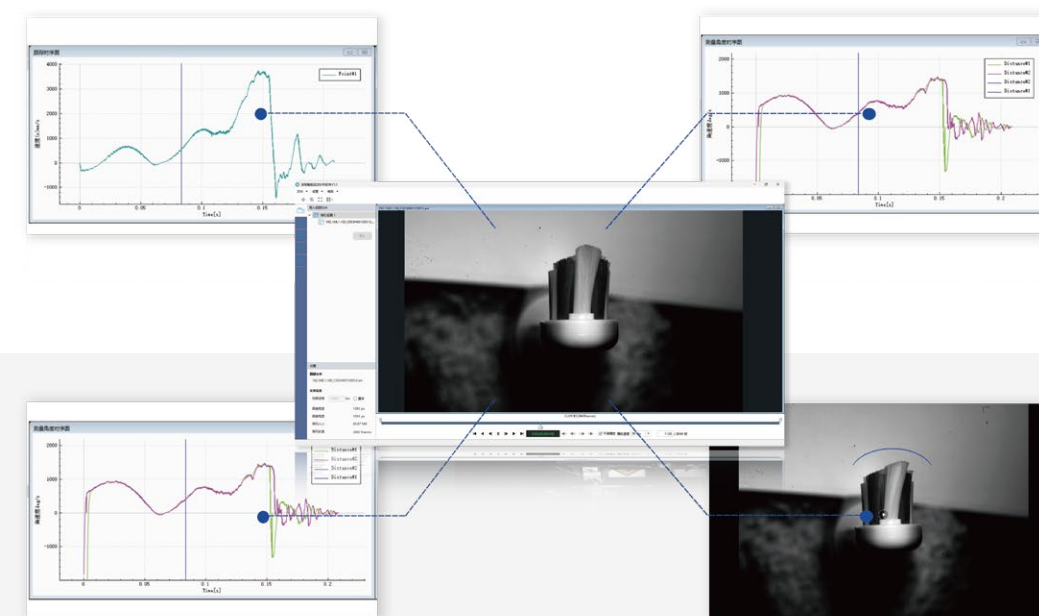
FastPhoto is a high-speed camera acquisition software developed by SinceVision, which can control high-speed cameras on the PC side. It not only has the basic functions of camera control software, such as camera setting, recording, playback and saving, but also has various image processing functions and video editing functions indispensable for high-speed shooting, and can be used as a powerful viewer and video editing software.

Core Functions

Support multiple recording modes Start, Center, End, Manual and Random	Support two-dimensional measurement, multi-point ranging, angle, radius, diameter, center distance and other measurements
Customized hard disk storage camera supports disk partition management	HD preview interface without delay intelligently and quickly locates key frames
Automatically save data without human supervision	Equipped with image processing, auxiliary focusing, overexposure warning, and electric focusing functions
Video recording, playback, and export, supporting image format transfer and storage	Supports multiple data storage formats BMP/JPEG/AVI/MP4 etc.
Cross network segment search, multi camera connection. Supports up to 8 cameras connected simultaneously	No need to connect a camera. Experience software through virtual cameras

10 Motion Analysis Software

Supporting Software



Smotion-H is a high-performance motion analysis software independently developed by SinceVision. The software comes standard with high-precision tracking algorithm, which can track and analyze almost any kind of target, and can accurately identify and analyze the target even without marking points. Compared with the traditional correlation algorithm, our original correlation and algorithm module greatly improves its tracking accuracy and adapts to all kinds of complex motion trajectories and relatively harsh analysis conditions.

Core Functions

Multi-target kinematic tracking Up to 20 target points can be tracked, calculated, displayed and analyzed simultaneously.	Supports the measurement of static angles, dynamic angles, angular velocities, angular accelerations, and other circular motion parameters.
Support image processing function, adjust brightness, contrast, Gamma and sharpness.	Automatically draw the motion trajectory of the target object.
Dynamic coordinate, displacement, velocity, and acceleration measurements are supported, along with static distance measurement.	Custom coordinate systems, support for static coordinate systems and dynamic coordinate system creation.
Supports contour measurement and vibration frequency measurement	Single-frame tracking, multi-frame continuous tracking, and support for manual correction of the tracked target.
Video editing and format conversion: BMP, TIFF, AVI, JPEG, etc.	Chinese-made software with a flexible and intuitive interface design.

01 High-sensitivity & high-speed series

02 Ultra high-speed series

03 High-speed HD series

04 Ultra HD series

05 SH3 - MINI series

06 SH2 - Smart series

07 Real-time Transmission series

08 Air series

Supporting Software

Precision, Scientific and Technological Innovation Brings Prosperity

SinceVision Launched Academic Paper Incentive Program

Project Background

Basic scientific research is the foundation of the country. In order to better motivate scientific researchers who have worked hard in the field of scientific research, at the same time, promote the in-depth application of domestic instruments in the academic field and help scientific research achievements to a new height.

SinceVision has launched a paper award program to encourage more researchers to use our high-speed cameras and scientific camera products to conduct scientific research and publish high-level academic papers. We look forward to your sharing the achievements and joy of scientific research with us.

Activity Period

The incentive policy of this paper collection activity lasts until December 31, 2026 (the incentive plan will be revised according to the results two years later).

Target people

For everyone, such as participants from universities, research institutes, enterprises and individuals.

Requirements

1. Conduct research using our high-speed cameras and scientific cameras and publish high-quality academic papers;
2. The article (main text or SI) or supplementary materials must clearly indicate our brand (Chinese: 深视智能; English: SINCEVISION), equipment model, and equipment images; please ensure that the product model and company name are written correctly, otherwise the award will not be awarded;
3. The applicant must be the first author (including the first co-first author) or corresponding author of the paper, and each paper can only be applied for once. If the corresponding author and the first author of the same paper apply at the same time, the application of the corresponding author shall prevail;
4. The paper must have been formally accepted by the journal and published online;
5. The paper must be the first application for our award, and the main text and SI must not contain any product information of other competing companies in the same industry.

Reward Standards

1. Publish papers in the top journals of NATURE, SCIENCE, and reward 10,000 CNY/article;
2. Publish papers in SCI- Q1 (impact factor (IF)≥15) and reward 3,000 CNY/article;
3. Published papers in SCI-Q1 (8≤IF<15) and SCI-Q2, and awarded 1,200 CNY/article;
4. Other SCI and EI retrieval journals and core journals, with an impact factor of IF≥2.0, will be awarded 600 CNY/article.

Note: the paper is subject to the ranking at the publication time of the Chinese Academy of Sciences (CAS), and will not be revised if there is any change in the later period.

Application process

I. Ways of Application

1. Mail application:
Please get ready of your company, name, contact information and detailed information of papers that meet the requirements to apply for awards, and send them to the official Email address of SinceVision (wangchangshun@cnsszn.com or fuyinzhe@cnsszn.com). The content of the Email must include the full text of the paper, the cover of the published journal and the electronic version of the directory page to ensure the accuracy and completeness of the information, so that we can accurately verify your application qualification.
2. Contact the sales representative to register:
You can also sign up directly with the local sales representative of SinceVision, and the sales representative will help you complete the initial registration.

II. Evaluation and Award Issuance

After you submit your application through any of the above methods and provide complete information, we will immediately start the review process. Your application materials will be carefully and professionally reviewed by the [Expert Review Committee of Shenzhen SinceVision Technology Co., Ltd.](#) Once you paper is passed, the corresponding reward will be deposited into your pre-registered bank account, ensuring that your research achievements receive timely and fair recognition and feedback.

Note: during the application process, please ensure that the personal data provided are true and valid. If it is false, the application qualification will be cancelled; If the information is incomplete, the evaluation committee shall have the right to ask for supplement and perfection, and if it fails to supplement within the time limit, it shall be deemed as a waiver of the application.

Others

1. If you publish papers of the same sensor for many times, it can apply for awards for many times;
2. The time when the paper is officially accepted by the journal must be within the validity period of this policy (January 1, 2025 to December 31, 2026);
3. If your papers are awarded, it is assumed that the author authorizes SinceVision (Shenzhen SinceVision Technology Co., Ltd.) to use the author's name and achievement name for publicity and promotion activities, including but not limited to media promotion, on-site display, network promotion and academic promotion.
4. The final interpretation right of this policy belongs to Shenzhen SinceVision Technology Co., Ltd., and the reward amount will be dynamically adjusted according to the annual budget and academic influence; SinceVision will fulfill the relevant tax obligations to the tax authorities on behalf of the applicant in accordance with the statutory time limit and procedures.

SinceVision is cordially looking forward to your participation!

Here, you can show your scientific research results and win exclusive awards. On the road of scientific research, we expect more talents to break through the difficulties of scientific research, let wisdom shine and illuminate the journey of scientific research with the help of SinceVision high-speed cameras. We will accompany you all the way, witness your glorious moment and work together with you to create brilliant scientific research.