HC8CS

Ultra-High-Speed Series

The fastest domestic million-pixel high-speed camera



Ultra-High-Speed Series

The HC8CS series is one of HEVOX's flagship products, featuring a back-illuminated (BSI) image sensor with a large 20 μm pixel size, exceptional light sensitivity, and a peak quantum efficiency of up to 85%. Built on an advanced hardware circuit design, the series delivers excellent electromagnetic compatibility (EMC) and resistance to electromagnetic interference. Its integrated high-capacity non-volatile storage, with a capacity of up to 8 TB, ensures data retention even after power loss. In addition, the camera incorporates an efficient data management system that enables flexible segmentation and organization of image data. These advanced features provide significant technological advantages and enhanced research capabilities for users in scientific research, weapons manufacturing, aerospace, and process development.

Core Features

20μm
Ultra-large pixel

30000fps
1280x1024 resolution



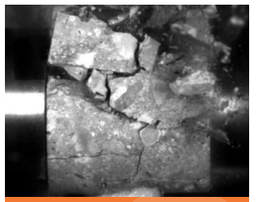
250ns
PIV frame-to-frame interval

The entire series comes standard with 10 Gigabit Ethernet
Compatible with 2.5G and gigabit network transmission

support AE/EDR
Quickly locate the key frame in 5 seconds

150ns
Minimum exposure time

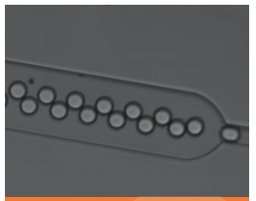
ApplicationCases


▸ Hopkinson ImpactImpact


▸ Crack propagation


▸ Arc Movement


▸ Arms Research


▸ Microfluidics


▸ laser beam welding


▸ destructive test


▸ Mechanical Motion Monitoring

COREFUNCTIONS

10GigE

PIV double exposure

IRIG B

Military Standard
Wide Temperature
Range

Automatic exposure

Double exposure

Image triggering

3G-SDI

8T

Non-volatile storage

PERFORMANCE PARAMETERS

Type	HC8CS-120	HC8CS-125	HC8CS-130
resolution	1280x1024	1280x1024	1280x1024
Full-frame frame rate	20000fps	25000fps	30000fps
Pixel size	20μm	20μm	20μm
Minimum exposure time	150ns		
Dynamic range	60dB		
Analogue gain	x2、x4		
Bit depth	8bit/10bit/12bit		
PIV inter-frame time	250ns		
Colour	Monochrome(M)		
Input signal	Trigger signal, synchronisation signal, Ready signal, IRIG-B signal		
Output signal	Trigger signal, synchronisation signal, Ready signal		
Pixel Merging	Support		
Sensitivity	ISO 125000(M)		
Shutter type	Global shutter		
Timecode	BNC, supports IRIG-B DC/AC signal input		
Region of Interest (ROI) Acquisition	support		
Video signal output	SDI/HDMI,support 1080P@60FPS		
Recording mode	Start, End, Centre, Random, Manual		
Buttons on the body	Camera shutter button, playback button, etc.		
Data Interface	10 Gigabit Ethernet port, auto-negotiation		
External trigger signal	BNC, Supports input/output		
External synchronisation signal	BNC, RS422/RS232		

FRAMERATETABLE

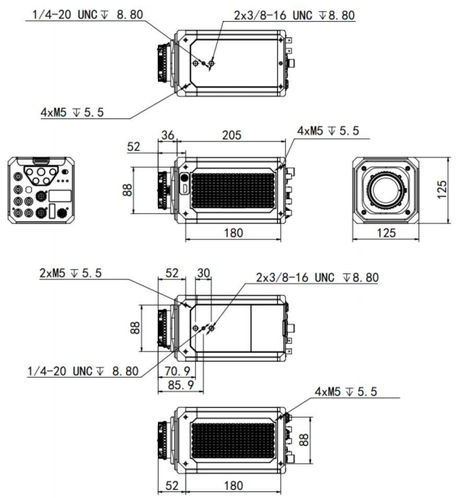
		HC8CS-120				HC8CS-125				HC8CS-130			
	resolution	frame rate (fps)	1TB	4TB	8TB	frame rate (fps)	1TB	4TB	8TB	frame rate (fps)	1TB	4TB	8TB
Standard Mode	1280×1024	20000	32.8	131.1	262.1	25000	33.55	134.22	268.44	30000	21.8	87.4	174.8
	1280×512	40000	32.8	131.1	262.1	50000	33.55	134.22	268.44	60000	21.8	87.4	174.8
	1280×256	80000	32.8	131.1	262.1	100000	33.55	134.22	268.44	120000	21.8	87.4	174.8
	1280×128	130000	40.3	161.3	239.7	165000	40.67	162.69	325.38	200000	26.2	104.9	209.7
	1280×16	700000	59.9	239.7	479.3	1000000	53.69	214.75	429.50	1100000	38.1	152.5	305
Binning Mode	640×512	80000	32.8	131.1	262.1	100000	33.55	134.22	268.44	120000	21.8	87.4	174.8
	640×256	160000	32.8	131.1	262.1	200000	33.55	134.22	268.44	240000	21.8	87.4	174.8
	640×128	320000	32.8	131.1	262.1	400000	33.55	134.22	268.44	480000	21.8	87.4	174.8

MECHANICAL SPECIFICATIONS

standard storage	512GB/1TB/4TB/8TBcan choose	Removable hard drive	support
camera size	210D×125W×125H	Operating temperature	standard-10~50℃，customisable for a wide temperature range
camera weight	about 4kg	Lens mount	Standard F-mount; E-mount/EF-mount (electronically controlled) and C-mount available as options
Power supply metho	DC20-32V，Dual power supply	Cooling method	Air-cooled, with on/off function

MECHANICAL DRAWING

F-mount



EF-mount

