Digital high speed camera
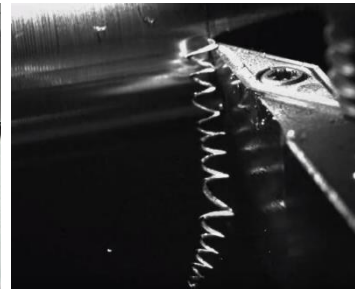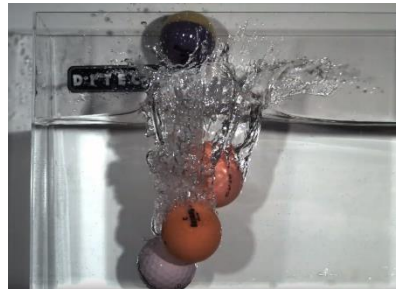
High speed cameras used to refer to the ones with 30fps or faster, but now we often find 60fps even with general digital cameras. There is no clear definition but now it is usually 100fps or faster to be recognized as "high speed camera".

At DITECT, we keep challenging every day to provide you the ability to see what you cannot see with your eyes. In order to provide you the sharp vision to precisely understand the problems you are facing in medical, production, construction, research, and any other fields, a wide variety of images are captured, tracked, and analyzed with our latest cameras and software. We are small, focused company and highly specialized in our field, with a solid customer base and years of experience.

Applications

Automotive
Crash tests, Air bag safety test, Spray analysis, Car door closure force test, Suspension test, etc.

Engineering
Bubble formation, Wind tunnel, Combustion, etc.

Industrial
Assembly, Packaging, Production line, etc.

R&D (Research & Development)
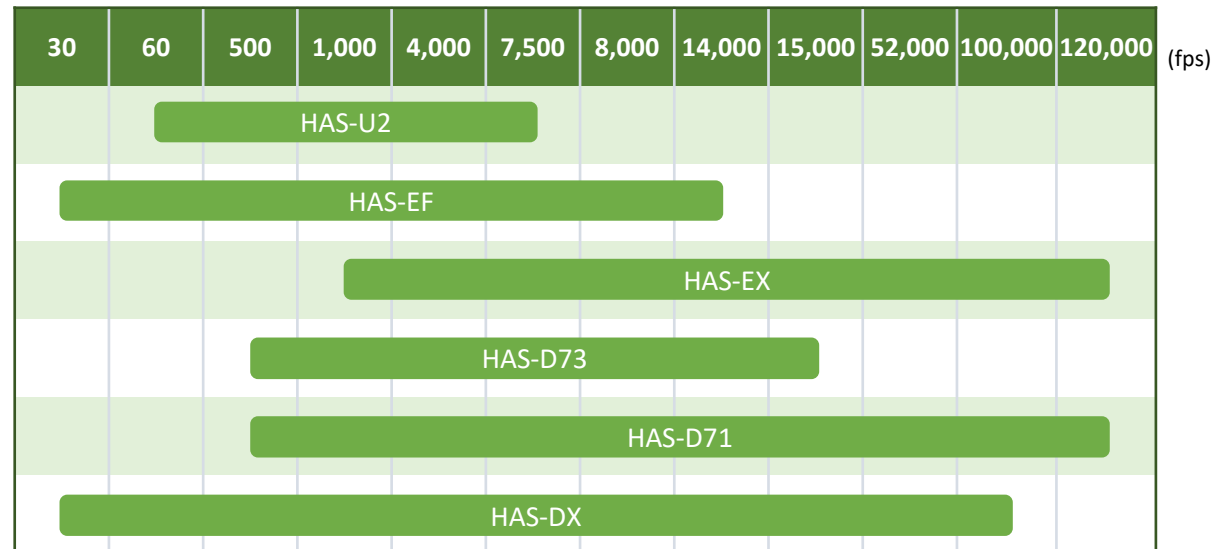Machine trouble shooting, Impact test, Drop test, etc.

Athletics & Sports
Biomechanics, Performance improvement, Gait analysis, etc.

Biological
Aerodynamics of insect flight, Behavioral analysis, etc.

FPS comparison chart

30	60	500	1,000	4,000	7,500	8,000	14,000	15,000	52,000	100,000	120,000	(fps)
		HAS-U2										
	HAS-EF											
				HAS-EX								
			HAS-D73									
			HAS-D71									
	HAS-DX											

HAS-DX

Suitable applications…

◆ Crash test
◆ Droplet dispersion
◆ Welding process visualization

◆ Full HD resolution at 2,000fps
◆ Maximum shooting speed at 100,000fps

Camera type	Monochrome, Color	Exposure time	Minimum 2.5µsec
Sensor type	CMOS	Pixel size	10µm
Sensor format	4/3 inch	Power delivery	DC12V (12pin connector) AC Adapter (accessory)
Effective resolution	1920 x 1080 (full HD)	Electrical Requirements	20W
Interface	USB3.0	Recording memory	8GB, 16GB
Lens mount	C-mount	Body size	82mm x 110mm x 185mm
Sensitivity	20V/lx.s (mono) 6V/lx.s (color)	Body weight	1,320g (8GB)

HAS-D71

Suitable applications…

◆ Cutting
◆ Combustion engine
◆ Destructive test

FC

Complying with FCC Part 15 Subpart B

◆ VGA resolution at 8,000fps
◆ Maximum shooting speed at 120,000fps
◆ Well suited for low light conditions

Camera type	Monochrome, Color	Exposure time	Minimum 2.5µsec
Sensor type	CMOS	Pixel size	11.2µm
Sensor format	1/1.8 inch	Power delivery	DC12V (12pin connector) AC Adapter (accessory)
Effective resolution	640 x 480 (VGA)	Electrical Requirements	24W
Interface	USB3.0	Recording memory	8GB, 16GB
Lens mount	C-mount	Body size	73mm x 118mm x 187.4mm
Sensitivity	38V/lx.s (mono) 20V/lx.s (color)	Body weight	1,200g (8GB)

HAS-D73

- SXGA resolution at 2,000fps
- Maximum shooting speed at 15,000fps

Suitable applications…

- ◆ Sled test
- ◆ Vehicle vibration, Engine vibration
- ◆ Melting solder

Camera type	Monochrome, Color	Exposure time	Minimum 2.5µsec
Sensor type	CMOS	Pixel size	10µm
Sensor format	1 inch	Power delivery	DC12V (12pin connector) AC Adapter (accessory)
Effective resolution	1280 x 1024	Electrical Requirements	20W
Interface	USB3.0	Recording memory	8GB, 16GB
Lens mount	C-mount	Body size	82mm x 110mm x 185mm
Sensitivity	20V/lx.s (mono) 6V/lx.s (color)	Body weight	1.320g (8GB)

HAS-EX

- SXGA resolution at 1,000fps
- Maximum shooting speed at 120,000fps (TBC)

Suitable applications…

- ◆ Trouble shooting at factories
- ◆ Cutting
- ◆ Crash test

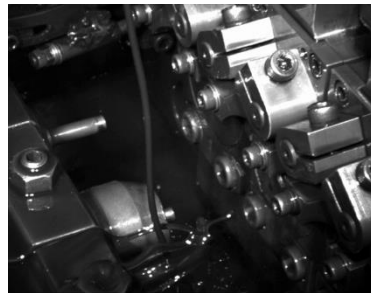| Camera type	Monochrome, Color	Exposure time	TBC
Sensor type	CMOS	Pixel size	6.6µm
Sensor format	2/3 inch	Power delivery	DC12V1A
Effective resolution	1280 x 1024	Electrical Requirements	TBC
Interface	USB3.0	Recording memory	6GB, 12GB (TBC)
Lens mount	C-mount	Body size	98.5mm x 146mm x 70mm
Sensitivity	9.6 V/lux.s	Body weight	Appx. 1,100g

HAS-EF

Suitable applications…

◆ Tensile test
◆ Compression test
◆ Machine behavior
◆ Observation of car suspension system

Camera type	Monochrome, Color	Exposure time	Minimum 10.5µsec
Sensor type	CMOS	Pixel size	5µm
Sensor format	1 inch	Power delivery	DC12V (12pin connector) AC Adapter (accessory)
Effective resolution	2560 x 2048	Electrical Requirements	12W
Interface	USB3.0	Recording memory	6GB
Lens mount	C-mount	Body size	46mm x 88.5mm x 127mm
Sensitivity	6V/lx.s	Body weight	430g

◆ Full HD at 500fps, and VGA at 1,400fps
◆ Maximum shooting speed at 14,000fps
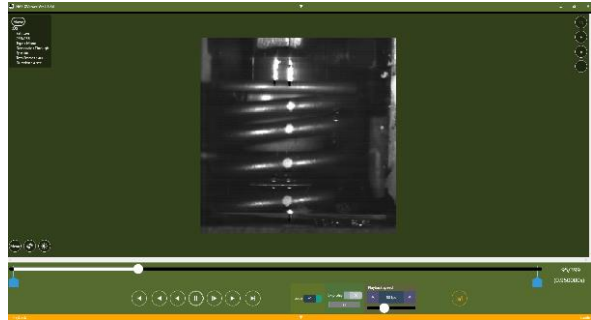
HAS-U2

Suitable applications…

◆ Shooting under microscopes
◆ Human movement, Sports
◆ Fluid flow in a tank,
◆ Short time breakdown at production sites

FC

Complying with FCC CFR 47 Part 15 Subpart B

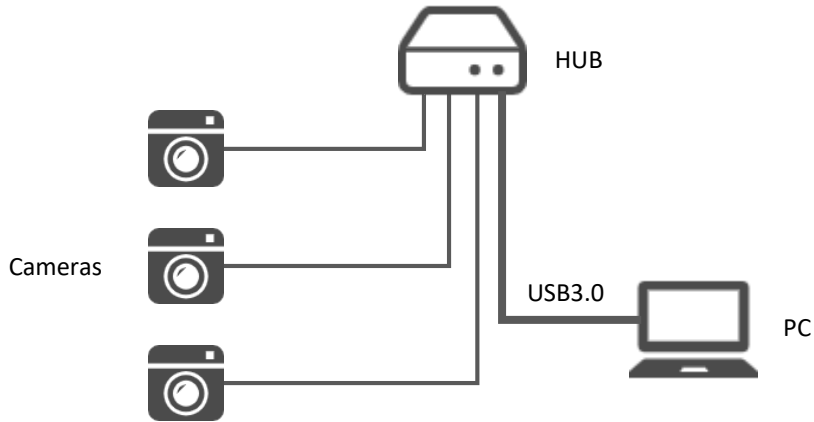| Camera type	Monochrome, Color	Exposure time	Minimum 50µsec
Sensor type	CMOS	Pixel size	4.8µm
Sensor format	1 inch	Power delivery	USB bus power 12pin connector
Effective resolution	2592 x 2048	Electrical Requirements	4.5W or under
Interface	Micro-B	Recording memory	2GB
Lens mount	C-mount	Body size	44mm x 44mm x 81.5mm
Sensitivity	7.5V/lx.s	Body weight	Appx. 210g

◆ SXGA at 300fps, and VGA at 1,000fps
◆ Maximum shooting speed at 7,500fps
◆ Powered by USB3.0 bus power
◆ DMA transfer is available

Camera control software "HAS-XViewer"

*HAS-XViewer is included with a purchase of camera.

Functions	Live view rotation / grid display / gain / gamma / bit shift / white balance, etc.	Trigger	Start / End / Variable / Motion trigger
Display	Live / Stop / Playback	Supported image format	AVI / WMV / MP4 / BMP / JPEG / PNG
Recording	Normal / Endless loop	Supported OS	Windows 7 / 8.1 / 10

Multi-camera recording

HUB

Cameras

USB3.0

PC

Optional products

Lighting options

LED Strobe Lighting   Halogen Lighting   LED Fiber Lighting   Laser Sheet Lighting

Lens options

C-mount lens
◆ Fixed lenses, Wide-angle lenses, Telescope lenses, Zoom lenses are available to add to your order.

F-mount lens
◆ Using an adapter, F-mount lenses are also available to use with DTECT's cameras.

  *Please ask for more details.

Memory options

◆ Standard memory size of HAS-DX and HAS-D7 series is 8GB.
◆ Memory size of 16GB is also available.

  *Please ask for more details.

Long-time recording option

◆ Long time recording system for small high speed cameras (HAS-U2 and HAS-U1).
◆ Available for multi-windows, video editing, several types of measurements, and various output formats (AVI, WMV, BMP, JPEG).

D I T E C T
Digital Image Technology

If you have any questions, please feel free to contact us.
Email: support@ditect.co.jp
Phone: +81-3-5457-1212

Price, technical specification, and appearance are subject to change without prior notice.