

*Digital high speed camera*

# HAS-DX

**Capable of Full HD at 2,000 fps**

**Maximum shooting speed at 100,000 fps**

**Flagship high definition digital high speed camera**



The HAS-DX (d-ten) is a high definition digital high speed camera equipped with a new image sensor.

With a resolution of 2 mega pixels, high-speed shooting at 2,000 fps is possible.

Laptop PC can also be used by the connection with USB 3.0, and it enables the easy operation of high-definition high-speed shooting.

- Capable of high-speed shooting at 2,000 fps with full HD
- High-speed interface enables live video confirmation without delay
- Record at short intervals with auto save trigger or random trigger
- Play back of slow motion video is available immediately after recording
- Support multi-camera synchronized shooting with external synchronization and external trigger
  - Ideal for stereo 3D motion analysis, 3D flow measurement with 3D PTV, and stereo PIV
  - Standard control software makes multi-camera video confirmation and control easy
  - With a clear GUI that is conscious of tablet PCs, highly flexible field operation is possible

# Full HD at 2,000 fps

# Maximum shooting speed at 100,000 fps

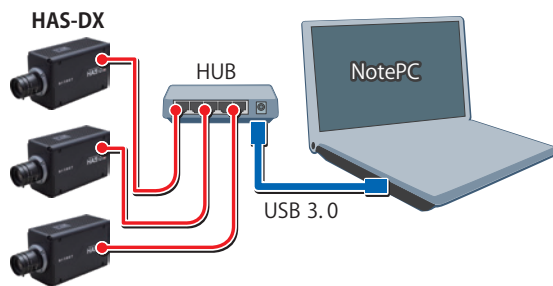
## Frame rate and image size

SIZE	H	1,920	1,280	1,280	800	1,920	640	320	160	1,920	1,920	1,920
FPS ↓	V	1,080	1,024	720	600	480	480	240	120	32	28	24
30		●	●	●	●	●	●	●	●	●	●	●
...		●	●	●	●	●	●	●	●	●	●	●
2,000		●	●	●	●	●	●	●	●	●	●	●
2,900				●	●	●	●	●	●	●	●	●
3,500					●	●	●	●	●	●	●	●
4,300						●	●	●	●	●	●	●
8,400								●	●	●	●	●
15,800									●	●	●	●
43,700										●	●	●
47,500											●	●
52,000												●

Can choose from 57,500 FPS(V20 pixel), 64,300 FPS(V16 pixel), 85,100 FPS(V8 pixel), 100,000 FPS(V4 pixel) [Horizontal 1920 pixel]

## Connection diagram

### Multi-camera imaging



## Camera control software

Easy control is possible with touch panel layout support.

A number of functions such as live view rotation / grid display / gain / gamma / bit shift / white balance are available by one action.



## Specifications

### Camera

Camera type	Monochrome(HAS-DXM) Color(HAS-DXC)
AD	10 bit
Sensor type	CMOS
Effective resolution	1,920×1,080(Full HD)
Sensor format	4/3 inch
Lens mount	C-mount
Interface	USB 3.0
Exposure time	Minimum 1 μsec
Sensitivity	20 V / lx.s(mono) / 6 V / lx.s(color)
Power delivery	DC 12 V(12 pin Connector) AC Adapter(accessory)
Body size	82mm×110mm×185mm
Electric requirements	20 W
Body weight	1,320 g(8 GB model)
Recording memory	8 GB(16 GB as option)
Supported trigger	TTL / Contact signal
<b>Camera control software</b>	
Display mode	Live / Stop / Playback
Recording mode	Normal / Endless loop
Trigger mode	Start / End / Variable / Motion trigger
Supported image format	AVI, WMV, MP4, BMP, JPEG, PNG
Supported OS	Windows 8.1 / 10 / 11

\*Specifications and external appearance may be subject to change without notice.



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Digital Image Technology

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