

*Digital high speed camera*

# HAS-DX

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

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

**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 2,000fps is possible.**

**Laptop PC can also be used by the connection with USB3.0,**

**and it enables the easy operation of high-definition high-speed shooting.**

- Capable of high-speed shooting at 2,000fps 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 3DPTV, 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 2,000fps

# Maximum shooting speed at 100,000fps

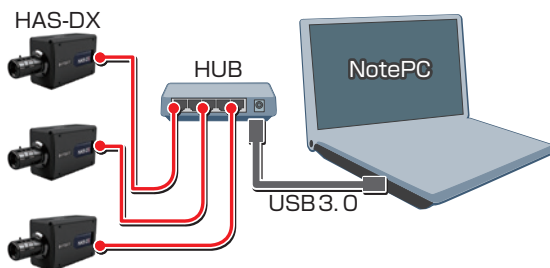
## Frame rate and image size

SIZE	H	1920	1280	1280	800	1920	640	320	160	1920	1920	1920
FPS ↓	V	1080	1024	720	600	480	480	240	120	32	28	24
30		●	●	●	●	●	●	●	●	●	●	●
...		●	●	●	●	●	●	●	●	●	●	●
2000		●	●	●	●	●	●	●	●	●	●	●
2900				●	●	●	●	●	●	●	●	●
3500					●	●	●	●	●	●	●	●
4300						●	●	●	●	●	●	●
8400								●	●	●	●	●
15800									●	●	●	●
43700										●	●	●
47500											●	●
52000												●

Can choose from 57,500FPS(V20pixel), 64,300FPS(V16pixel), 85,100FPS(V8pixel), 100,000FPS(V4pixel) [Horizontal 1920pixel]

## 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	10bit
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	20V/lx. s(mono) / 6V/lx. s(color)
Power delivery	DC12V(12pin Connector) AC Adapter(accessory)
Body size	82mm × 110mm × 185mm
Electric requirements	20W
Body weight	1,320g(8GB model)
Recording memory	8GB(16GB 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 7 / 8.1 / 10

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



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