Digital high speed camera
HAS-U1

USB 3.0 bus power
1.3M 1280 × 1024 200fps
Embedded memory / DMA hybrid model

HAS-U1 is a high speed camera with ½-inch CMOS sensor and
1.3M 1280 × 1024 effective pixels that can shoot 200 fps
at full resolution, 800 fps at VGA,
and up to 4,000 fps by limiting the pixel area.
Perfect for multiple high speed camera imaging,
with embedded memory, in one compact solution.

● Good balance between high resolution and high frame rates.
● It can use both embedded 2GB memory mode and direct memory access mode with USB3.0 as the situation demands.
● Fully synchronized multiple high speed cameras with just one laptop PC.
● Large volume of memory by using 64bit OS.
● The low power consumption design, made for USB3.0 bus power, simplifies your cabling layout.
● Internal / External sync
● 10bit A / D
● Data transmission rate at 250MB / sec.
● Unit weight approx. 210g, unit size (W × H × D) 44 × 44 × 81.5mm

Perfect for all kinds of research / production engineering in behavior, fluid, sports science, biomechanical, robotics, machine vision, crash test, droplet, microscopy, trouble shooting, and more.

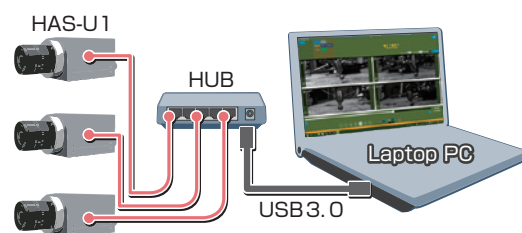## Product:
- ● Camera unit ● USB3. 0 cable
- ● Control software

Palm size body

Connection diagram

Embedded memory mode
Multiple cameras with one PC.

HAS-U1
HUB
Laptop PC
USB3. 0

DMA transfer mode
Large volume of memory available using 64bit OS.

HAS-U1
Laptop PC
USB3. 0

Frame rate and pixel size

Pix H	112	240	320	320	576	512	640	800	1024	1280	1024	1280
Fps V	80	180	240	320	256	480	480	600	768	768	1024	1024
4000	●											
3000	●	●										
2500		●	●									
2000		●	●	●								
1500			●	●	●							
1000				●	●	●						
800						●	●					
500						●	●	●				
400							●	●				
300							●	●	●			
250							●	●	●	●	●	
200							●	●	●	●	●	●
150										●	●	●
100										●	●	●
60										●	●	●

Frame number, resolution and recording duration table

Fps	Resolution	Recording frames (at 2GB)	Recording time (at 2GB)
200	1280×1024	1632 f	8. 1 sec
500	800×600	4466 f	8. 9 sec
800	640×480	6982 f	8. 7 sec
2500	320×240	27943 f	11. 1 sec

＊You can use a large volume of memory on the PC in DMA mode.
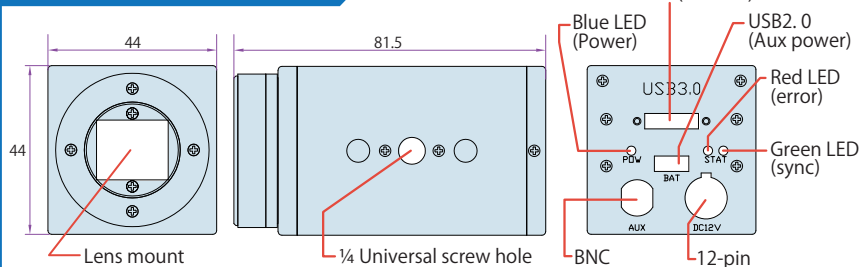
Specifications

Camera	
Camera type	Mono (HAS-U1M) Color (HAS-U1C)
Sensor type	CMOS
A / D	10bit
Effective resolution	1280 × 1024 (1. 3M pixel)
Sensor format	½ inch
Lens mount	C
Recording mode	Embedded memory / DMA transfer
Memory size	2GB
Data output	USB 3. 0
Interface	Micro-B
Shutter(exposure)	Minimum 1/100,000(10μ)
Sensitivity(at 550nm)	7. 7 V / lux. s
Power input	5 V
Power delivery	USB bus power / 12pin
Electric requirement	Under 4. 5W
Weight	Approx. 210g
Size	44mm × 44mm × 81. 5mm
Control software	
Trigger mode	Start / End / Variable (3. 3 V TTL or contact signal)
Aux function	Histogram, Guide line, Focus peeking, Live image rotation, Time stamp, Trimming, Text
Image format	AVI, WMV, BMP / Jpeg, RAW
Supported OS	Windows 7 , Windows8 / 8.1, Windows10

HAS-U1 Dimensions

44
81.5
44

USB3. 0(Micro-B)
Blue LED (Power)
USB2. 0 (Aux power)
Red LED (error)
Green LED (sync)
USB3.0
POW
STAT
BAT
AUX
DC12V

Lens mount
¼ Universal screw hole
BNC
12-pin

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

Please visit our website for more detailed information about Ditect's products. Find all the product descriptions and information about future exhibitions. You can make a request for more information and other inquiries.

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