D/I/T/E/C/T
Digital Image Technology

Digital high speed camera
HAS-U2

USB 3. 0 bus power
5M 2592 × 2048 100 frames / second
Embedded memory / DMA hybrid model

HAS-U2 is a high speed camera with 1-inch CMOS sensor and 2592 × 2048 effective pixels that can shoot 100 fps at full resolution, 1,000 fps at VGA, and up to 7,500 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 be used in embedded 2GB memory mode or direct memory access mode with USB3. 0 as the situation demands.
- ●Fully synchronized multiple high speed cameras with just one laptop PC.
- ●Full spec operation available above USB3. 0 max data transfer speed.
- ●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 approx. 506MB / sec (embedded memory mode) and 303MB / sec (DMA transfer mode)
- ●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 – sized body

Connection diagram

Embedded memory mode
Multiple cameras with one PC.
Full spec operation available above USB3.0 max data transfer speed.

HAS-U2 — HUB — USB3. 0 — Laptop PC

DMA transfer mode
Large volume of memory available using 64bit OS. Frame rate and resolution will be limited by USB3.0 max data transfer speed.

HAS-U2 — USB3. 0 — Laptop PC

Frame rate and pixel size

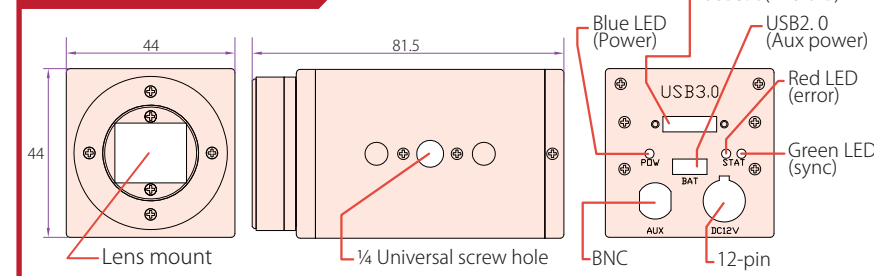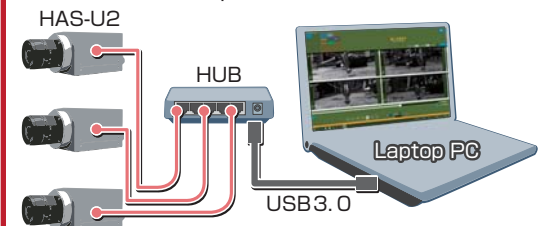| Pix H	320	320	240	320	320	576	512	640	800	1024	1280	1024	1280	1600	1920	2592
Fps V	20	120	180	240	320	256	480	480	600	768	768	1024	1024	1200	1080	2048
7500	●															
5000	●															
4000			●													
3000			●	●												
2500				●	●											
2000				●	●	●	★									
1500					●	●	●	★								
1000						●	●	●	★							
800								●	●	★						
500								●	●	●	★	★				
400								●	●	●	★	★	★			
300								●	●	●	●		★	★		
250								●	●	●	●	●		★	★	★
200									●	●	●	●			★	★
150											●	●	●			
100														●	●	● ★
60														●	●	●

★ Only for embedded memory mode
● Available for both embedded memory mode and DMA mode

Frame number, resolution and recording duration table

Fps	Resolution	Recording frames (at 2GB)	Recording time (at 2GB)
100	2592×2048	399 f	4 sec
250	1920×1080	1030 f	4.1 sec
500	1280×768	2178 f	4.3 sec
1000	640×480	6982 f	6.9 sec

HAS-U2 Dimensions

44 — 81.5 — USB3. 0(Micro-B) — Blue LED (Power) — USB2. 0 (Aux power) — USB3.0 — Red LED (error) — Green LED (sync)

Lens mount — ¼ Universal screw hole — BNC — 12-pin

Specifications

Camera	
Camera type	Mono (HAS-U2M)
	Color (HAS-U2C)
Sensor type	CMOS
A / D	10bit
Effective resolution	2592 × 2048 (5M pixel)
Sensor format	1-inch
Lens mount	C
Recording mode	Embedded memory / DMA transfer
Memory size	2GB
Data output	USB3. 0
Interface	Micro-B
Shutter(exposure)	Minimum 1/100,000(10μ)
Sensitivity(at 550nm)	7. 5 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. 3V TTL or contact signal)
Aux function	Histogram, Guide line, Focus peaking, Live image rotation, Time stamp, Trimming, Text
Image format	AVI, WMV, BMP / Jpeg, RAW
Supported OS	Windows7, Windows8 / 8.1, Windows10

*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.

eHASU2-201706