DRAGONFLY® S

Industrial Machine Vision Cameras | DR-U3-50Y2M and DR-U3-50Y2C
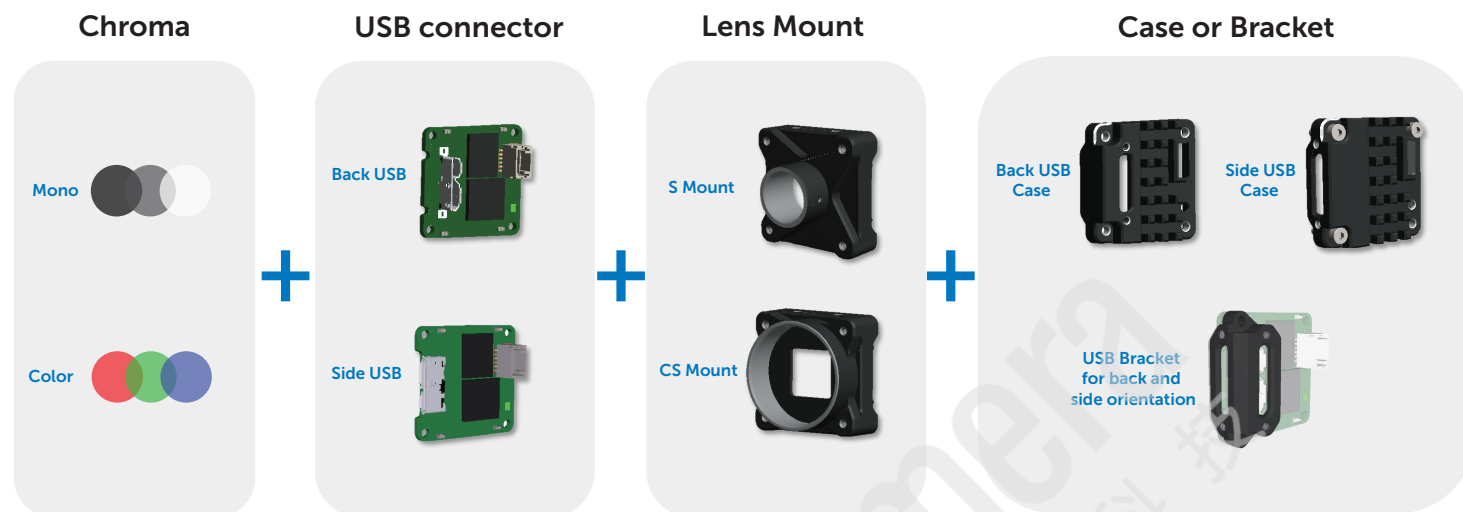
Test, Develop and Deploy at Speed

Dragonfly® S is a first of its kind, practical option for industries ranging from life science instrumentation to factory automation. The modular, compact, and lightweight design accelerates the inception stage of imaging application development for at-scale manufacturing, volume-based applications, and multi-camera systems. Paired with CMOS sensor options from Sony, Onsemi and Teledyne e2v, Dragonfly® S is ideal for embedded or handheld device applications and more.

KEY FEATURES

Flexible Camera Configurations

Board-level to fully enclosed models with lightweight aluminum case. Side/back USB3 connector orientations, with locking mechanism.

Compact And Lightweight

Compact, lightweight design for handheld or embedded devices. Class B EMC safety compliant for cased models.

Reliable Image Delivery

Onboard image buffering ensures that every captured image frame is reliably transferred to the host CPU

APPLICATIONS

- Ophthalmoscopy
- Biometrics Kiosk Solutions
- Mobile Robotics
- Handheld 3D Scanning
- Automated Optical Inspection
- Vision Based Monitoring System

SPECIFICATIONS

	DR-U3-50Y2M/C
RESOLUTION	2592 x 1944
MAX FRAME RATE	49 fps
MEGAPIXELS	5.0 MP
SENSOR MODEL	AR0521 (Rolling Shutter)
SENSOR SIZE	Rolling Shutter
PIXEL SIZE	2.2 µm
SPECTRUM	Mono or Color
LENS MOUNT	S-mount or CS-mount
ADC	10-bit / 12-bit
GAIN RANGE*	0 – 23.1 dB
EXPOSURE RANGE*	6 µs to 0.54 seconds
PARTIAL IMAGE MODES	2x2 binning, Region of Interest
IMAGE PROCESSING	Gamma, lookup table
IMAGE BUFFER	112 MB
NON-ISOLATED I/O	4 bi-directional
SERIAL PORT	1 over non-isolated I/O
INTERFACE	USB 3.1 Micro B, rear or side connector
DIMENSIONS / MASS	29.5 mm x 29.5 mm x 15.8-18.1 mm / 23 g (Cased) 27 mm x 27 mm x 9.5 mm / 5 g (Board-level)
TEMPERATURE	Operating: 0°C to TBD / Storage: -30°C to 60°C
HUMIDITY (NO CONDENSATION)	Operating: 20% - 85% / Storage: 20% - 95%
WARRANTY	3 years

*Values are the same in binning and no binning modes.

MODULAR PRODUCT CONFIGURATION

Chroma

Mono

Color

+

USB connector

Back USB

Side USB

+

Lens Mount

S Mount

CS Mount

+

Case or Bracket

Back USB Case

Side USB Case

USB Bracket for back and side orientation

ACCESSORIES

Product Number	Description	Accessories Photos
ACC-01-0020	Dragonfly S board level universal USB locking bracket	
ACC-01-0017	Tripod adaptor	
ACC-01-1201	RoHS Generic USB 3.1 PCI Express 2.0 x1 host adapter card, PD720202 chipset, 2-port	
ACC-01-1203	RoHS Generic USB 3.1 PCI Express 2.0 x4 host adapter card, FL1100 chipset, 4-port quad-channel	
ACC-01-2300	3 meter USB3.0 CABLE, Type-A to Micro-B (locking)	
ACC-01-2301	5 meter USB3.0 CABLE, Type-A to Micro-B (locking)	
ACC-01-5004	Optical CS to C Mount 5 mm Spacer	

FOR MORE INFORMATION CONTACT: