Ladybug®5+

KEY FEATURES

Superior Image Quality
With its Sony Pregius global shutter CMOS sensors, the Ladybug5+ delivers outstanding image quality across a wide range of lighting conditions There is no solar smearing in outdoor images, excellent color response, low noise, and a high dynamic range (approx. 70.6dB dynamic range or 12 stops) indoors and out. Fast f/2.5 lenses enable excellent low-light image quality.

Enhanced Image Quality with Post Processing
The workflow starts with Ladybug5+ capturing, compressing, and transmitting full bit depth 12-bit images. Users then use LadybugCapPro to apply white balance, gamma, and other image processing functions for maximum image quality.

Flexibility with Non Destructive Post Processing
The capture and post workflow model allows users to maintain flexibility by being able to return to the original content and re-apply post processing steps as desired.

APPLICATIONS

- HD Mapping
- Asset Management
- Roadside Inspection
- Street View
- Road Maintenance
- Heritage Scanning
- Building Management

The Ladybug5+ camera offers the highest quality in spherical 360° imaging and accuracy. It is able to acquire an impressive 8k30 or 4k60 of content. With its patented calibration and superior global shutter sensors, the Ladybug5+ has an accuracy level of +/-2 mm at 10-meter distance. The Ladybug SDK provides a wide range of functionality, allowing users to record, process, and export spherical content with ease.

SPECIFICATIONS	LD5P-U3-51S5C
Full Capture Resolution	8192 x 4096 (30 MP)
Frame Rate (Free Running)	30 FPS JPEG at 30 MP resolution | 60 FPS JPEG at 15 MP resolution
Spatial Accuracy	Within +/- 2 mm at a 10 meter distance
Data Formats	JPEG8, JPEG12
Image Processing (Camera)	Luminance: Auto Gain, Black Level, Gamma | Color: White Balance
Image Processing (SDK)	Luminance: Black Level, Gain, Gamma | Tonal: Tone Mapping | Color: White Balance, Saturation, Leveling, False color removal | Noise Reduction, Sharpening
Image Output (SDK)	Image Projections: Panoramic up to 16,382 x 8,192 (134 MP), Dome, Cubic, Individual Sensor, Rectified | File Types: JPG, BMP, PNG, TIFF
Video Output (SDK)	Video .AVI: H.264 | Video .MP4: H.264, HEVC/H.265, AV1
Data Transfer Interface	USB 3.2 Gen 1 protocol with 5 Gbit/s transfer rate | USB 3.0 Micro-B female connector with locking screw holes
General Purpose I/O Ports	12-pin GPIO connector for external trigger input, strobe output, PPS, and power
GPS Integration Interface	Timestamping support: TTL NMEA 0183 GGA, with one of ZDA or RMC | PPS support: PPS via GPIO pin | Satellite systems: GPS, Galileo, GLONASS, BeiDou
Power	12-24 V via GPIO (external power required) | 13 W maximum
External Trigger Modes	Standard, skip frames, overlapped, and multi shot trigger modes
Shutter Speed	0.02 ms to 2 seconds (extended shutter)
Shutter Type	Global shutter
Optics	Six high quality 4.4 mm focal length lenses
Focus Distance	~200 cm. Objects have an acceptable sharpness from ~60 cm to infinity
Field of View	~90% of full sphere
Angular FOV	Vertical: ~113.4° | Horizontal: ~94.8°
Spherical Distance	Calibrated from 2 m to infinity
Case	Machined aluminum housing, anodized red or black. Five M4-0.7 x 8 mm mounting holes to attach to tripod adapter or custom mount
Dimensions | Mass	197 mm (height) x 160 mm (diameter) | 3.0 kg
Protection Rating	IP65
Environmental Sensors	Temperature, Humidity
Temperature	Operating: -20° to 50°C | Storage: -30° to 60°C
Humidity	Operating: 20 to 80% (no condensation) | Storage: 20 to 95% (no condensation)
Desiccant	Desiccant plug to minimize moisture in the enclosure and prevent lens fogging
LED	One general purpose status LED for monitoring camera power, initialization, and USB3 activity
Memory Channels	2 memory channels for custom camera settings
Flash Memory	1 MB
Machine Vision Standard	IIDC v1.32
Compliance	CE, FCC, KCC, RoHS. The ECCN for this product is: EAR099.
Warranty	2 Years
Recommended Host Operating System	Windows 10 64-bit or Ubuntu 20.04 64-bit for capture, recording, and post processing
Recommended Host CPU	11th Gen Intel® Core™ i7 processor
Recommended Host RAM	8 GB for capture and recording | 16 GB for post processing
Recommended Compilers (SDK)	Microsoft Visual Studio 2015 or newer | g++ 9.3.0 or newer

FOR MORE INFORMATION CONTACT: