30 MP, 360° SPHERICAL CAMERA IMAGING SYSTEM

FLIR LADYBUG® 5+ USB 3.1 Gen 1

P/N LD5P-U3-51S5

The Ladybug5+ 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 m. The Ladybug SDK provides a wide range of functionality, allowing users to record, process, and export spherical content with ease.

www.flir.com/spherical-vision

SUPERIOR IMAGE QUALITY

With it's 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.

SPECS	LD5P-U3-51S5
Resolution	2448 x 2048
Frame Rate	30 FPS (JPEG Compressed)
Megapixels	30 MP (5 MP x 6 sensors)
Sensor	Sony IMX264. CMOS, 2/3"
Readout Method	Global shutter
Pixel Size	3.45 μm
A/D Converter	12-bit
Data Formats	Raw8, Raw12, Raw16 uncompressed, and JPEG compressed
Precision Timestamps	RS232 GPS NMEA string and PPS over GPIO
Image Processing	Shutter, gain, white balance, gamma and JPEG compression, programmable via software
Shutter	Global shutter; Auto/manual/one-push/extended shutter modes 0.02 ms to 2 seconds (extended shutter)
Pixel Spatial Accuracy	Average accuracy of 2 mm at 10 m
Gain	Auto/manual/one-push modes for 8-bit formats; manual mode for 12-bit formats 0 - 18 dB
Gamma	0.50 to 4.00
White Balance	Presets/automatic/manual
High Dynamic Range	Cycle 4 gain and exposure presets
Digital Interface	USB3 with locking screws for secure connection
Transfer Rates	5 Gbit/s
GPIO	12-pin GPIO connector for external trigger input, strobe output, power, and PPS
External Trigger Modes	Standard, skip frames, overlapped, and multi shot trigger modes
Memory Channels	2 memory channels for custom camera settings
Flash Memory	1 MB
Case	Machined aluminum housing, anodized red or black; single unit, water resistant
Dimensions	197 mm diameter, 160 mm height (with lens hoods)
Mass	3.0 kg
Power Consumption	12-24 V, 13 W via GPIO (external power required)
Machine Vision Standard	IIDC v1.32
Camera Control	via Ladybug SDK, CSRs, or third party software
Camera Updates	In-field firmware updates
Optics	6 high quality 4.4 mm focal length lenses
Field of View	90% of full sphere
Spherical Distance	Calibrated from 2 m to infinity
Focus Distance	~200 cm. Objects have an acceptable sharpness from ~60 cm to infinity
Temperature	Operating: -20° to 50°C; Storage: -30° to 60°C
Humidity	Operating: 20 to 80% (no condensation); Storage: 20 to 95% (no condensation)
Compliance	CE, FCC, RoHS
Operating System	Windows or Linux 64-bit for capture and recording only with 8 GB RAM
Environmental Rating	IP65 Certified
Warranty	2 Years

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