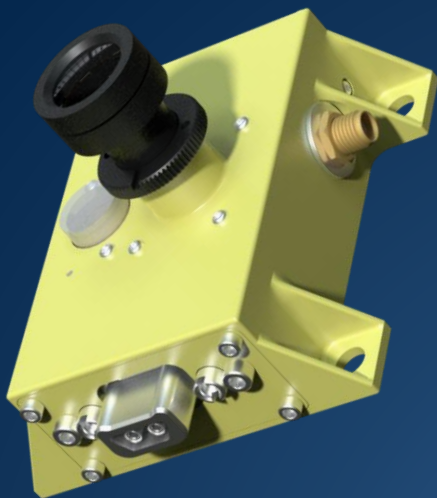


DSS 03-01-WLA-00-501 / 03-01-WLA-00-901



The Deep Space Systems 03-01-WLA-00-501 cameras are derived from the highly capable GoPro Hero 4 camera electronics. The 03-01-WLA-00-501 cameras include a wide range of features including a 12 MP camera with 4K video recording capability



Size, Weight and Power:

- Size: 3.0 x 2.6 x 2.0 in. (W x D x H)
- Weight 0.28 lbs.
- 5 VDC, Power: 10 W Peak Heater Mode, 5 W Avg Camera Recording (No LED), 2.5 W Avg Camera Idle (No LED), 1 W LED

Performance:

- 12 Megapixel (3840 X 2160) CMOS Image Sensor
- 4K Video @ 30fps at Full Resolution recorded to memory card.
- 640 x 720 @ 30 fps while in 1080p-sv @ 30 fps video mode recording for real-time WiFi streaming.
- 5.8 GHz RF SM A Interface
- Onboard data storage, fully Flight Programmable

The capabilities added by Deep Space Systems' installation of a Heater-Illumination-Power (HIP) board include:

- Built In Closed Loop Heater Control (enabled upon command)
- Over-temperature shutdown protection
- 60 Lumens LED Illuminator with beam focusing lens
- Power supply diodes for over-voltage and electro-static discharge (ESD) protection

Environmental Qualification

- Qualified operational baseplate temperature range in vacuum: -31°F to 153°F
- Radiation Tolerant (proton and heavy ion radiation tested)
- Random Vibration: 22.93 G_{rms} Qual for 660 seconds
- Shock: 1700 Gs, Qual Peak Gs
- Aluminum-to-aluminum and connector body to aluminum bonding < 2.5 milliohms

Lenses

- Lenses are ruggedized and space qualified
 - M12 wide angle lens (VFOV = 94.4°, HFOV = 122.6°)

Other Specifications

- 4K Video @ 30 fps (recording)
- 1080p-sv Video @ 30 fps (recording)
- 12 MP Full resolution stills
- Up to 640 x 720 @ 30 fps streaming via WiFi
- Auto Shutter Control and Exposure
- Auto control of White Balance, Color, ISO Limit
- Sharpness, Shutter, and Exposure Value Compensation
- .jpg and .mp4 files stored in internal 64 GB MicroSD Card
- HTTP/FTP file transfer via WiFi
- 5.8 GHz WiFi
- 3 qualified lenses (many optional lenses available)
- May be operated in a fully wired mode (Near zero RF emissions)

Video Modes:

Mode	Recording Only Resolution	Streaming Only Resolution	Streaming While Recording
4K @ 30 fps	3840x2160	432x240	432x240
1080p-sv @ 30 fps	1920x1080	848x480	640x720
720p @ 30 fps	1280x720	432x240	432x240