



Imaging payload for small AUVs

Features

- ▶ Fully integrated, turnkey imaging payload for small AUVs
- ▶ Geo-referenced digital still-image and video capture
- ▶ High-output, dual-mode lighting (strobe or continuous)
- ▶ Onboard CPU and solid-state data storage
- ▶ Customizable for realtime machine vision tasks
- ▶ Customizable for any AUV
- ▶ Rated to 1,000m

Technical specifications on reverse.

Arctic Rays specializes in deep-sea lighting and imaging systems and other custom solutions specifically for use on AUVs, ROVs, manned submersibles and other offshore and underwater structures.



PARAMETER	SPECIFICATION
Model Number	AR 210
OPTICAL	
Imaging Type	Single camera; stills and video
Camera Sensor	Sony IMX304, 12.3 MP, 1.1 in. format, back-illuminated color CMOS with global shutter
Camera Lenses	12 mm f/1.6 rectilinear, low distortion (-0.26%)
Focus	Manual
Iris	Manual
Still Image Resolution	4,096 x 3,000 (12.3 MP)
Still Image Rep Rate	4 Hz max, full-res standard
Video Modes	720p HD @ 60 fps; 1,080p FHD @ 30 fps; 4K UHD @ 10 fps
Angle of View	72° in air; 52° in water
Field of View	Approximately 98% of altitude in water (diagonal)
Imaging Altitude	3–5 m recommended
LIGHTING	
Integrated Lighting	4x fixed dual-mode LED arrays
Color Temperature	5,700K, 70 CRI minimum standard
Output Lumens	60,000 Lm in strobe mode; 6,000 Lm in torch mode @ 5700K
Beam Angle (FWHM)	100°
Strobe Pulse Duration	5 ms max standard
Strobe Rep Rate	2 Hz max standard; 4 Hz optional
Torch Dimming	0–100% in 1% increments
ELECTRICAL	
Onboard CPU	Intel Core-i3
Onboard Storage	1 TB SSD
Voltage	18–42 VDC
Power	15–85 W, depending on lighting and image settings
INTERFACE	
Connector	Housed version: Subconn DBH13M; OEM version: GX16 / RJ45
Control	RS232 serial standard; ethernet, TTL trigger optional
Data Download	Gigabit ethernet
MECHANICAL	
Weight	Housed version: 4.0 kg in air; 2.2 kg in seawater OEM version: 2.0 kg in air
Materials	6061-T6 aluminum (AHC black); sapphire viewport; acrylic lighting windows; acetal (Delrin) bezel; 316SS fasteners; other materials optional
ENVIRONMENTAL	
Depth Rating	1,000 m (3,300 ft) standard
Temperatures	0°C to 45°C operating; -10°C to 60°C storage

YellowFin

Mechanical Drawings

