

## 2026 Underwater Cameras by CHARPIE

6 specialized mission-specific cameras for underwater tasks.

### 1. Observer: 360° P&T Full-View HD Camera

Price: \$660.00 – \$1,240.00.00 (without/with Lighting)

- **Function:** A Pan-and-Tilt (P&T) streaming camera that allows for a 360° horizontal and 180° vertical field of view.
- **Application:** Ideal for fixed-point monitoring (aquaculture, dams) or as a high-situational awareness tool on an ROV.

### 2. Deep Water Gopro Hero System (500m)

Price: \$1,100.00

- **Function:** A professional pressure-rated housing (500m) with an embedded mini-computer. It allows for remote ground-control of a Gopro Hero Black 12/13.
- **Capability:** Real-time 5.3k/4k video feedback and 27MP photo capture.

### 3. AI-M: Target Recognition Camera

Price: \$1,100.00

- **Function:** An “Intelligent” camera module designed for automated target identification and tracking.
- **Application:** Used for search and rescue or automated inspections (e.g., identifying a specific pipe defect or marine species). It is compatible with OpenCV/Machine Vision suites.

### 4. AI-D: Underwater AI Vision with a “Sense of Distance”

Price: \$1,750.00

- **Function:** A camera that provides real-time distance measurement (ranging) and aids in autonomous obstacle avoidance and underwater SLAM
- **Application:** Crucial for navigating in tight environments like bridge foundations or complex shipwrecks.

## 5. HD Optical Zoom Underwater Camera (Optical Zoom)

Price: \$1,750.00

- **Function:** Features electric 20xoptical zoom to allow close-up visual inspection (CVI) from a safe distance.
- **Application:** Used for identifying small cracks in dams or reading serial numbers on subsea equipment without getting too close to structures.

## 6. RPI Underwater Camera

Price: \$610.00

- **Function:** This RPi Underwater Camera is a high-performance, open-source imaging solution designed to enable underwater AI vision at a low cost. Great entry level choice for developers and research institutes.
- **Capability:** can serve as the core “brain” for advanced underwater missions, specifically focusing on Auto-category of underwater targets and AI-driven navigation.

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### Quick Reference: Camera Functions by Mission

- **For Cinema/Research:** Deep Water Gopro System.
- **For Surveillance:** 360° P&T Observer.
- **For Automation/AI:** AI-M Target Recognition or AI-D Ranging cameras.
- **For Technical Inspection:** Underwater Zoom camera.
- **For Developers & DIY:** RPI Underwater Camera