



VCM™

Video ATR Common Module



VCM (Video ATR Common Module) is a modular, passive, electro-optic wet payload for Unmanned Underwater Vehicles (UUVs) enabling innovative techniques for onboard real-time algorithms including Video Enhancement, Video Mosaicking, and Video ATR. VCM is integrated with the MK 18 Mod 1 Swordfish and Mod 2 Kingfish and is currently being integrated into the MK 18 Advanced Sensor Payload (ASP) to provide identification of targets of interest on various platforms.

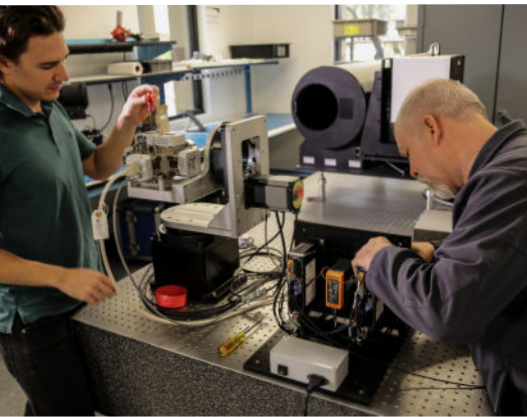
Key Features

- Low Size, Weight, and Power
- Real-time onboard algorithms
- Onboard data storage
- Dynamic Video Enhancement and Mosaicking
- Laser Visibility Sensor
- Image Compression
- Lighting Control



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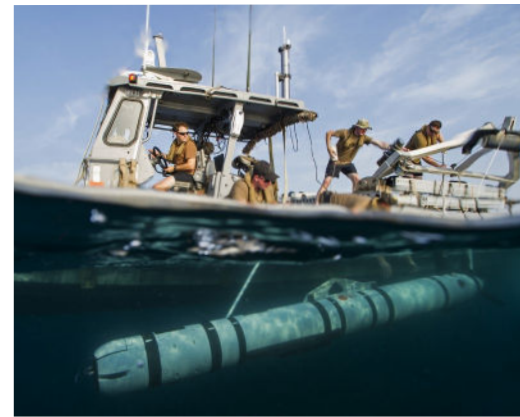




Discover



Develop



Deliver

TECHNICAL SUMMARY

The VCM provides onboard real-time algorithms including Video Enhancement, Video Mosaicking, Video ATR, LED lighting control, and Image Compression designed is-situ exfiltration. The VCM's onboard storage supports data archival. Additionally, VATR post-mission analysis (PMA) software was developed and delivered to support VATR data product offload, conversion, and display including Video Gap Fill (VGF). Onboard laser visibility sensor informs platform autonomy.

OPERATIONAL CAPABILITIES

The VCM is integrated with the MK 18 Mod 1 Swordfish (PoR), MK 18 Mod 2 Kingfish (PoR), and is currently being integrated into the MK 18 Advanced Sensor Payload (ASP) to provide identification of targets of interest. The VCM on the MK 18 program supports expeditionary missions performing low-visible exploration and reconnaissance in support of amphibious landing; mine countermeasures operations such as search, classification, mapping, reacquire, and identification; and hydrographic mapping.

DEVELOPMENT & APPLICATIONS

- **Development:** VCM was developed for the U.S. Navy's MK 18 to provide video automatic target recognition and is currently at Technology Readiness Level (TRL) 7.
- **Government Applications:** The VCM is integrated with the MK 18 Mod 1 Swordfish (PoR), MK 18 Mod 2 Kingfish (PoR), and is currently being integrated into the MK 18 Advanced Sensor Payload (ASP) to provide identification of targets of interest.
- **Commercial Applications:** VCM integrates into a variety of UUVs supporting a wide range of commercial platforms.



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