

# Klein UUV-3500 Integrated into Riptide 1MP UUV



A Klein Marine Systems Model 3500 installed in a Riptide Autonomous Solutions 1MP UUV, a 1-man portable 7.5" (190mm) diameter unmanned underwater vehicle, has successfully participated in a USSOCOM industry event in Key West, Florida. The intent of this industry event was to evaluate the effectiveness of diver assistance available with different platforms and sensors.

The Klein UUV-3500 Combined Side Scan and Interferometric Bathymetric Sonar produces very high combined sidescan sonar data and interferometric bathymetry data, which when the datasets are merged, produces higher Probability of Detection (Pd) figures for small and difficult to detect targets, providing an effective alternative - particularly on small autonomous underwater

vehicles (AUVs) - to the size, complexity and motion sensitivity of highly expensive sidescan sonar generating synthetic beams (SAS).

This demonstration provided an excellent example of the potential for rapid integration of a high-performance sensor, such as the Klein 3500 Combined Side Scan and Interferometric Sonar, onto a low-cost AUV platform, such as the Riptide UUV/AUV platforms.

The Riptide 1MP was successfully launched from shore into the ocean in shallow water, executed a preprogrammed mission and returned to the operator standing on the shore with the propulsion motor stopping exactly as the operator's position, proving, among other things, Klein transducers' hydrodynamic performance. It is interesting to notice that the Klein UUV3500 Combined Side Scan and Interferometric Sonar was fully integrated into a Riptide UUV/AUV in less than 4 working days, demonstrating easy-to-integrate features of the UUV-3500 architecture (mechanical, electrical and software) and a remarkable cooperation result between the Klein Engineering Integration Team - which supports all integration efforts of new and existing customers - and the Riptide Engineering Team.

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<https://www.hydro-international.com/content/news/klein-uuv-3500-integrated-into-riptide-1mp-uuv>

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