SINGAPORE – VisionAsia Technology and Beijing Microvec, developers of analytical systems used in fluid mechanics, have released 3 affordable digital PIV systems for educational customers. This new systems are based on the 3rd generation of MicroVec software and include cameras, frame grabbers, DPSS laser and optional synchronizer. Each system offers a complete solution ready to be used for educational and research purposes.

Dr. Wei Runjie, president of Microvec, explains the new addition to the existing offers of flow analysis systems: "Many educational entities around the world teach their students about combustion, fluid mechanics, spray analysis and other related subjects, but have no ability to show it in practice. Our systems have been put together as a complete solution ready to use and is intended to give many academic institutions an affordable empirical way to show flow visualization in real life." All 3 systems include complete MicroVec 3.3 version of software with all options like PTV, GPU support, batch processing, etc. "These 3 PIV systems have been designed to give the user the power of MicroVec software and are fully scalable for future additions like PIV laser or enhancement to stereo PIV." says Dr. Wei.

Besides full version of the software, these 3 systems include CCD cameras from the leading designer and manufacturer of high-performance, high-quality digital cameras – Imperx (USA) and frame grabbers from EPIX (USA). "We strive to select only world class component for our PIV systems" adds on Dr. Wei. "By including our high-precision master timing controller with phase lock with the unprecedented accuracy of 0.25ns, we assure the highest accuracy and quality of the calculations." Microvec software uses the most advanced set of software techniques. The PIV base algorithm is based on FFT Cross-Correlation with multi-grid interrogation windows, multi-pass, window deformation and auto batch post-processing. It uses 64 bit algorithm, GPU acceleration support, multi area combination, multiphase flow function, real time calculation function, auto multi-folder process and high precision flow calibration function. It also offers optional modules for Proper Orthogonal Decomposition (POD) and Dynamic Mode Decomposition (DMD). Microvec is in the process of releasing a Tomography PIV system.

Fully configured educational PIV systems start at 19,950 USD with a VGA resolution camera capturing up to 260fps and cost 24,950 USD with added synchronizer and 29,950 USD with upgrading to 5 megapixel camera with the frame straddle time of as low as 200ns. The systems can be used for research of flows in the air, including supersonic, as well as flow analysis in water. More detailed information can be found at http://piv.com.sg/pivpromotions.php

Beijing Mirovec (www.piv.com.cn) is a designer of technologically superior, high-quality PIV systems applying most innovative and newest algorithms and solutions. Microvec has been granted 8 patents and inventions the field of PIV. It has delivered systems to over 130 customers, including many universities, research institutes and several large corporate customers. MicroVec PIV systems have also been used by successful Chinese space program (CARDC) including Shenzhou spacecraft and Tiangong space station. Multiple scientific papers have been published with results based on MicroVec systems, including extreme applications such as: 1000m/s ultrasonic flow, combustion field of gasoline, large models of more than 2 meter or small field of view as low as 200μm.
VisionAsia (www.piv.com.sg) is a Singapore based provider of imaging technology solutions and as an international partner of Microvec, bringing Microvec fluid mechanics measurement technology to the global market.