

The Texas A&M University System

ORGANIZATION		DEPARTMENT	
Organization	AM02 - Texas A&M University	Department	02NUEN
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BID INFORMATION			
Description	Tomographic PIV System		
Bulletin Desc.			
Bid Number	AM02-16-B000186	Bid Opening Date	03/09/2016 2:00 PM
Bid Type	Open Market	Type Code	Invitation for Bid
Alternate Id	56900AD	Fiscal Year	2016
		Available Date	02/24/2016 9:22 AM
Pre-Bid Conference			
Attachments	B000186.doc Insurance Requirements~2.pdf Texas AM Terms Conditions New~32.pdf		

AMENDMENTS

ITEMS					
Item	Description	Quantity	Unit	Unit Price	Total
1.000	CMOS Cameras - High Speed CMOS Camera (M120-VAR) - CMOS 1920 x 1200 pixel resolution sensor, 10 x 10 micron pixels, 730 frames/sec at full resolution, 5580 frames/sec at 512 x 512 pixel resolution, 12--bits digital output, 3 GB on-board memory (up to 12 GB RAM available), GigE interface	4.00	EA		
2.000	Mechanical Adapter - M42 Adapter - for M-series CMOS cameras, for attaching Scheimpflug adapters or M42 mount camera lenses	4.00	EA		
3.000	Camera 1 Accessory Kit - VR CMOS Camera Accessory Kit - for M-series Cameras, first camera, includes hard plastic case, GigE card, and all necessary trigger cables	1.00	EA		
4.000	Camera 2,3,4 Accessory Kit - VR Camera Accessory Kit - M-series Cameras, additional cameras. Includes hard plastic case, GigE router, and trigger cables	3.00	EA		
5.000	Scheimpflug Adapters - Scheimpflug Camera Lens Adapter (Series 3) - for F-mount camera lenses, 20° Scheimpflug tilt angle, full 360 degree adjustability about the axis of the camera (to achieve the proper Scheimpflug angle for compound viewing angles), image center preserving, rotation and tile locking mechanisms	4.00	EA		
6.000	Lenses and Filters - Camera Lens - Nikon 50 mm focal length, F/1.8, F-mount. AF	4.00	EA		
7.000	Rigid Mounting Rails for 4 Cameras - Camera rail mount - 1000 mm optical rail with two sliders and two 3--axis gear heads, for two-camera systems (e.g. stereo PIV, 3-D deformation, etc.). 12 kg maximum recommended load per gear head.	2.00	EA		
8.000	Electronics - Programmable Timing Unit (PTU-X); External -16 fast sequencer controlled output lines, 16 software controlled I/O lines, 2 input channels (cyclic trigger and image recording sequence start), 2 output analogue lines (0 - 10 V), 10 ns time resolution, jitter less than 50 psec, variable trigger delay for phase--resolved measurements, trigger delays based on time OR phase angle (for rotating machinery), USB-2 device.	1.00	EA		

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9.000	PTU-X HS Upgrade - for all high frame rate camera and high repetition rate laser systems, supports time--based and cycle--based image recording	1.00	EA		
10.000	System Computer (Configuration 3, w/RAID) - dual processor tower PC, including 2 x eight--core XEON processors, 32 GB RAM, 512 GB SSD boot drive, 8 x 600 GB SAS RAID array, PCI--e slots only, read/write DVD,1000 W power supply, 1 x GPU compatible, mouse, Windows 7 Ultimate (64-bit), DaVis software/camera interface/PTU installation and testing. Monitor not included.	1.00	EA		
11.000	Software - DaVis 8 Software package (hardware support and data processing license) ; 64--bit, parallelized software for image acquisition and data processing, control of all system hardware components for synchronized data acquisition for internally and externally triggered events, parameter scan image acquisition, phase--locked image acquisition with automatic scan of user--defined phase range, open macro programming language with source code provided for more than 100 image and vector processing functions, functions for: image arithmetic, image transformation (mirror, rotate apply image correction), geometric and adaptive image masking, copying and reorganizing data with a date set or project, linear and non--linear image filtering, shift and rotation correction (to remove vibration effects), subtraction of running average image overtime, profile and time plot generation, image/vector field stitching, and unlimited user definability of new image and vector field processing functions. data organization. Windows 7 (64-bit) operation system required (for system hardware support).	1.00	EA		
12.000	2D PIV and PTV Software package - sophisticated multi--pass cross--correlation processing with deformed window correlation and sub--pixel window off--set, Adaptive PIV with automatic local adjustment of interrogation spot size, shape, and orientation based on local velocity gradients, GPU processing compatible for extreme parallelization, 2--D Lagrangian PTV algorithms, fixed and automatic image masking, robust regional median filters and universal outlier detection post--processing, POD, Matlab and Tecplot readers, computation of all relevant vector and scalar field statics for two--component velocity fields. Includes PIV uncertainty quantification for instantaneous velocity fields using the Correlation Statistics method. Provides error estimation for calculated data	1.00	EA		
13.000	Stereo PIV Software Upgrade -includes patented SELF--CALIBRATION for correction of calibration errors do to misalignment of the calibration plate and laser sheet, support for experiments which do not allow for in--situ calibration, quantification of laser light sheet thickness and overlap between two laser pulses, multiple image overlay to assist field of view overlap for multiple cameras, calculation of all relevant vector and scalar statics for all three velocity components. Includes PIV uncertainty quantification for instantaneous velocity fields using the Correlation Statistics method. Provides error estimation for calculated data	1.00	EA		
14.000	Tomographic PIV Software - upgrade from DaVis with 2--D and Stereo PIV Licenses. Includes image pre--processing filters, Volume Self--Calibration, 3--D image volume reconstruction (MLOS, MnLOS, MTE, Fast MART, and multi--pass MART algorithms), volume correlation, and 3-D vector post--processing algorithms to glean instantaneous 3-component velocity measurements throughout a finite measurements volume. Supports images from up to 8 cameras.	1.00	EA		
15.000	Volume Optics - Divergent Volume Optics for Tomographic PIV - adjustable aspect ratio from 1:2 to 1:8, compact housing attaches directly to most lasers (with adapter), maximum entrance beam diameter: 6 mm, includes adjustable external aperture to form rectanfular illumination volumes	1.00	EA		
16.000	High Rep Rate Dual Cavity Laser - Nd: YLF Dual Cavity Diode Pumped Solid State, High Repetition Rate Laser -- dual head, 2 x 30 mJ/pulse (@527 nm) at 1 kHz repetition rate, up to 10 kHz repetition rate from each head, includes beam combination optics, laser heads, power supply, and chiller. Laser CLASS 4, according to EN60825-10:2001--11	1.00	EA		
17.000	Helium Filled Soap Bubble Generator	1.00	EA		

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0					
18.000	PIV System Installation and Training - on-site by a qualified representative	1.00	EA		
19.000	Shipping	1.00	EA		