SPECIFICATIONS

1.0 Specifications Description:

Digital Microscopy System

Quantity: 1

Unit Type: Each

Minimum Requirements:

- The digital microscope system and all related components must be installed in the USDA-ARS Animal Disease Research Unit (ADRU) to the manufacturer's specification. The digital microscope system and all related components, including spare parts, accessories offered for sale and delivered to the ADRU must be new. All equipment and options necessary to meet the technical specifications listed must be included in the quote. The quote must include shipping and installation costs. A standard 1-year manufacturer's warranty shall be provided and described. The warranty period shall begin from the date of final acceptance of the digital microscope on-site. The microscope should include lifetime on-site/phone/email training and support. A support package must be included in the quote that will cover calibration, technical support, and training for the lifetime of the equipment.

- If the microscope is not purchased directly from the manufacturer, the supplying vendor must be authorized to provide a support package that is fully valid through the manufacturer and includes installation, assembly, training, warranty coverage, annual calibration, and routine maintenance support.

EQUIPMENT REQUIREMENTS must meet or exceed the following:

- High-resolution digital imaging with over 8 million pixels of resolution
- Minimum 27'' high-resolution digital display monitor
- 20x-200x magnification capability without having to switch lens hardware
- Must have an integrated stage camera for sample placement & focusing with a wide-angle view of the stage
- Must incorporate built-in user training resources
- Must include a license-free viewer software for remote analysis
- Must have 1TB hard drive

SPECIFICATIONS

- Must have dual camera capability to combine a high-resolution observation imaging component with a secondary wide-field imaging component
- Must offer multiple available lighting types and contrast enhancement methods: brightfield/darkfield/transmitted/polarized/DIC
- Combination Stage/Stand Tool (180° rotation & 250° tilt)
- XY Stage Movement up to 40mm x 40mm

PERFORMANCE REQUIREMENTS must meet or exceed the following:

- Must have built-in 2D/3D measurement capabilities for length, area, angle, radius, volume, and profile
- Must be able to generate a fully rendered three-dimensional surface model by capturing and combining images at multiple focal depths
- Must enable XY Stitching with 1-micron stage positioning
- Dynamic range imaging capability that will allow multiple exposures to be captured and made into a single image
- Must have real-time automatic focus adjustment
- Must allow directional lighting algorithms to simulate shadow and relief on the sample surface
- Must automatically optimize lighting settings allowing optimal combination of lighting type, intensity, and angle
- Must be able to record all system parameters from a prior inspection and replay them exactly for new samples. System parameters need to include 2D/3D measurements, XYZ /stage coordinates, lighting settings, image capture parameters, magnification settings.
- Must automatically detect, count, classify, and size particulate contamination and generate reports that comply with industrial cleanliness standards.

2.0 Place of Delivery

USDA-ARS Animal Disease Research Unit (ADRU), Pullman, WA.

3.0 Delivery Schedule

Item	QTY	Unit	Place of Delivery	Delivery Date
High resolution digital microscopy system	1	Each	USDA-ARS ADRU, Pullman, WA	TBD

SPECIFICATIONS

4.0 Delivery Point of Contact

TBD

Microscope will be installed in the Ueti lab at the USDA, ARS, ADBF, ADRU, Bustad building, room 374 in Pullman, WA.

Delivery instructions: There is a loading dock with a raised dock behind the Bustad building that can be accessed on an unnamed road along NE Stadium Way (coordinates: 46°43'44.8"N 117°09'37.9"W). Dollies can be borrowed to help with moving the equipment. There are elevators that lead from the loading dock to the room provided. If a pallet jack is needed, advanced notice is required.

5.0 Additional Requirements

- Installation Required: Yes
- Assembly Required: Yes
- Warranty Required: Standard commercial warranty.
- Training Required: General user training resources shall be provided.
- Maintenance Required: Routine maintenance support shall be available.