

## SOLE SOURCE JUSTIFICATION

A waiver from the competitive solicitation process may be granted when based upon operational compatibility with existing equipment, strong technological grounds, a unique and cost-effective feature requirement, or when it is clearly in the State's best interest.

1.) Contract Amount: \$

2.) Requested Supplier:

### 3.) Description of Item/Service:

Quanser Qube Servo 3 Lab bundle - equipment is a fully integrated, modular servomotot experiment for teaching and research in controls, mechatronics, and robotics.

### 4.) Establish the reasons The Citadel absolutely requires this specific Item/Service and the unique benefits that will be realized:

The department of mechanical engineering curriculum utilizes the Quanser equipment in the classroom instruction. In order to maintain and continue to use the approved textbook for instruction, this is the only equipment that can be used. The courses MECH 350 and 351 have virtual experiments that are designed to be paired with Quanser equipment.

### 5.) Explanation as to why no other supplier can offer a comparable Item/Service:

The unique features to the Quanser Qube Servo are: it is fully integrated rotary servo motor plant with instrumentation, amplifier, and data acquisition (DAQ). This is the only fully integrated solution for rotary control systems labs available to academia. It is complemented by Qlabs Virtual Qube Servo 3 Digital Twin, a fully instrumented, dynamically accurate virtual twin of the physical Qube-Servo 3 system. It behaves in the same way as the physical hardware and can be measured and controlled using MATLAB/Simulink and other development environments that are currently used in the classroom. This allows students to explore and validate sophisticated control systems models from the comfort of their home, and they can find continuity by deploying the same ones onto real hardware. It is the only proven research grade platform with nearly 100 published research papers validated on the platform.


Right to Protest: If you are aggrieved in connection with the intended award of this project you may be entitled to protest, but only as provided in Section 11-35-420 (1) South Carolina Code of Laws. Any intent to protest or actual protest must be submitted in writing to the Chief Procurement Officer, Materials Management Office

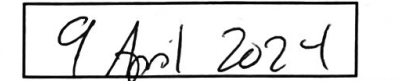
(a) via email to [protest-mmo@mmo.sc.gov](mailto:protest-mmo@mmo.sc.gov) or

(b) vis USPS or any other carrier to 1201 Main St., Suite 600, Columbia, SC 29201

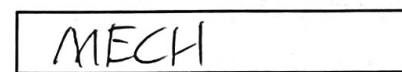
I hereby certify that the above information is accurate and request that a waiver from the State mandated bidding process be approved for the procurement of the above stated equipment, commodity, or service.

Based on the determination above, the proposed procurement action described is being procured pursuant to the authority of Section 11-35-1560 of the South Carolina Procurement Code and 19-445.2105 of the Rules and Regulations, 1976 South Carolina Code of Laws.

  
SIGNATURE

  
DATE

  
PRINT NAME OF DEPARTMENT HEAD

  
DEPARTMENT

FOR PROCUREMENT SERVICES USE ONLY	
APPROVED BY: _____ Director of Procurement Services	DATE: _____
APPROVED BY: _____ VP Finance & Business	DATE: _____
*VPFB signature only required for requests over \$100,000	

**GUIDANCE:**

**Section 3;** Provide a description of the item or service being requested with sufficient detail so that it is clear to the reviewer of this form what is being sought and the purpose it serves.

**Section 4;** Detail the specifics about the item or service and explain how it is uniquely positioned to meet the need at The Citadel. This section should address the role that will be played by the item/service and how it is positioned to be the only option that will work in this scenario. Factual evidence must be presented to substantiate why this is the sole item/service that will work.

**Section 5;** Cite the reasons why alternatives would not be acceptable and how comparable products or services from other suppliers could not meet the need. Also, include details about the market research that was performed to substantiate the sole source request. Detail the specific, quantifiable facts as to why this type of item/service cannot be purchased from any other supplier.

The Drug-free Work Place certification must be obtained for sole source procurements greater than \$50,000.