

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
LYNDON B. JOHNSON SPACE CENTER

**JUSTIFICATION FOR OTHER THAN FULL AND OPEN COMPETITION  
PURSUANT TO 10 U.S.C. 2304(c)(1) and  
FEDERAL ACQUISITION REGULATION (FAR) 6.302-1**

**1. This document is a Justification for Other than Full and Open Competition prepared by the NASA Johnson Space Center.**

**2. The nature and/or description of the action being approved:**

This justification provides the rationale for contracting by Other than Full and Open Competition for the acquisition of a Digital Input/Output (I/O) & Resolver Interface System and Spare Parts and 8-Channel Strain Gage Simulator Boards. The proposed contract will be awarded to United Electronic Industries.

**3. Description of the supplies or services required, include an estimated value:**

The total estimated cost of this effort is \$250,550, and the estimated period of performance or lead-time for delivery is 6 weeks.

**4. Statutory authority permitting Other than Full and Open Competition:**

The statutory authority permitting Other than Full and Open Competition for this action is FAR 6.302-1(a)(2)(ii)(A), "Only one responsible source and no other supplies or services will satisfy agency requirements. Supplies may be deemed to be available only from the original source in the case of a follow-on contract for the continued development or production of a major system or highly specialized equipment, including major components thereof, when it is likely that award to any other source would result in substantial duplication of cost to the Government that is not expected to be recovered through competition."

**5. A demonstration that the proposed contractor's unique qualifications or the nature of the acquisition requires use of the authority cited:**

The Internal Low Impact Docking System (iLIDS) project requires the purchase of a Digital I/O & Resolver Interface System and 8-Channel Strain Gage Simulator Boards to be part of the iLIDS Emulator. The iLIDS Emulator will be used to develop and certify mission software.

The performance requirements for the Interface System are full emulation of the iLIDS environment, I/Os, resolvers, and analog, high speed Ethernet connectivity, seamless component integration, small footprint configuration, rugged rack mount construction, real time 1000 I/O scanning capability and Linux compatibility. The performance requirements for the 8-Channel Strain Gage Simulator Boards are suitability for installation and seamless integration into the existing Digital I/O & Resolver Interface System.

United Electronic Industries is the sole manufacturer and distributor of the required Digital I/O & Resolver Interface System and 8-Channel Strain Gage Simulator Boards.

Pursuant to FAR 6.302-1 (b)(1)(i) (Unique supplies or services available from only one source or only one supplier with unique capabilities) this procurement shall be awarded to United Electronic Industries.

**6. Description of the efforts made to ensure that offers are solicited from as many potential sources as practicable:**

A description of the requirement was posted on the NASA Acquisition Internet Service website on September 02, 2010. No responses resulted from the posted synopsis.

**7. Determination by the Contracting Officer (CO) that the anticipated cost to the Government will be fair and reasonable:**

The CO will ensure the contract price is fair and reasonable based upon a comparison with the cost of previous purchases for these required items and/or items similar in nature.

**8. Description of the market research conducted, and the results, or a statement of the reasons why market research was not conducted:**

IOTech and Omega are the only other known companies that provide resolver emulators. IOTech could not provide real time 1000 I/O scanning in a compact form. Their systems are not rack mountable or rugged (UEI is tested to 3g vibration, 50g shock and operates from -40 degrees C to +70 degrees C), and could provide only one of the three emulation requirements. Omega units are not rack mountable or rugged and do not support Ethernet connectivity. These Digital I/O & Resolver Interface System spare parts and 8-Channel Strain Gage Simulator Boards have been previously specified, purchased, and used in the iLIDS Emulator design development. Utilization of the exact same parts is required for continued data analysis and research while constructing electronic prototype units for iLIDS.

**9. Other facts supporting the use of Other than Full and Open Competition:**

United Electronics Industries is the sole manufacturer and distributor of the required Digital I/O & Resolver Interface System and 8-Channel Strain Gage Simulator Boards.

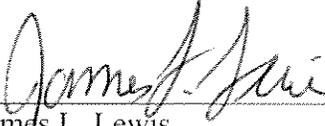
**10. Sources, if any, that expressed an interest in writing in the acquisition:**

No other sources have expressed an interest in writing for this acquisition.

**11. The actions, if any, the agency may take to remove or overcome any barriers to competition before any subsequent acquisition for the supplies or services required:**

The Agency will attempt to overcome barriers to competition by continual analysis of alternate products as they become available.

Technical Officer: I certify that the supporting data presented in this justification are accurate and complete.

  
\_\_\_\_\_  
James L. Lewis  
Contracting Officer's Technical Representative

9/21/10  
Date

Contracting Officer: I hereby determine that the anticipated cost to the Government will be fair and reasonable and certify that this justification is accurate and complete to the best of my knowledge and belief.

  
\_\_\_\_\_  
Adrian D. Clayton  
Contracting Officer

21 Sept 2010  
Date