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Tender

Supply of a Motion Control Platform

Diamond Light Source Ltd

F02: Contract notice

Notice identifier: 2021/S 000-028059
Procurement identifier (OCID): ocds-h6vhtk-02c983
Published 9 November 2021, 2:07pm

The closing date and time has been changed to:

4 January 2022, 12:00pm

See the change notice.

Section I: Contracting authority

I.1) Name and addresses

Diamond Light Source Ltd

Harwell Science and Innovation Campus

Didcot

OX11 0DE

Contact

Debbie Pryor

Email

procurement@diamond.ac.uk

Telephone

+44 1235567575

Country

United Kingdom

NUTS code

UKJ14 - Oxfordshire

Internet address(es)

Main address

https://www.diamond.ac.uk

I.3) Communication

The procurement documents are available for unrestricted and full direct access, free of charge, at

https://www.diamondtenders@diamond.ac.uk

Additional information can be obtained from the above-mentioned address

Tenders or requests to participate must be submitted electronically via

https://www.diamondtenders@diamond.ac.uk

Tenders or requests to participate must be submitted to the above-mentioned address

I.4) Type of the contracting authority

Body governed by public law

I.5) Main activity

Other activity

Scientific Research

Section II: Object

II.1) Scope of the procurement

II.1.1) Title

Supply of a Motion Control Platform

Reference number

DLSITT0426

II.1.2) Main CPV code

- 31000000 - Electrical machinery, apparatus, equipment and consumables; lighting

II.1.3) Type of contract

Supplies

II.1.4) Short description

DLS are looking for a replacement standard Motion Control Platform capable of driving a range of prevision motors and providing high levels of accuracy, repeatability and response. The controller must be able to perform control of complex motion including multi axis coordinated movement. It is expected that the solution would be used to provide control for 1000 axes of motions on a range of projects. After an initial evaluation, DLS will purchase and evaluate units from those best suited and once satisfied with the performance select a preferred supplier. DLS will then purchase units to control several hundred axes a year from early 2022 for a minimum of 5 years.

II.1.6) Information about lots

This contract is divided into lots: No

II.2) Description

II.2.3) Place of performance

NUTS codes

- UKJ14 - Oxfordshire

II.2.4) Description of the procurement

The scope of the contract is to design, manufacture, supply and deliver a high density, highly flexible, ideally integrated Motion Controller and amplifier solution. It must be capable of providing control for a multitude of different types of Stepper, Servo, Voice Coil and Piezo motors and therefore interface to suitable encoders to facilitate closed loop control. The target solution drives a block of 8 motion axes from a single compact, rack-mounted unit, or many motors if distributed. For the purpose of this tender document, it can be assumed that 70% of the axes under control will be stepper motors, 10% servo motors and the remaining 20% external amplifier driven devices. Of these axes 80% can be considered to require either synchronisation with other axes on the same (highly desirable) or separate controller and or potentially operate with Kinematic routines. The motion controller should either be housed within the amplifier units or be a separate card to be located within a suitable modular style system attached by 1 or 2 cables to the drive amplifier unit. For an integrated amplifier and controller, the interface to our control and data acquisition system (EPICS) will be an Ethernet interface.

The system could take the form of a standard off the shelf offering or 'a special' in a suitable enclosure with back panel connectors. If this approach is taken it must conform to DLS Electrical and connector standards. For this reason, it is anticipated that solutions that comprise a standard system modified in some way to meet the DLS connector standard will be given an advantageous cost weighting to compensate for the extra cost of packaging and connectors.

The motion controller should be fully supported within the EPICS software framework.

II.2.5) Award criteria

Quality criterion - Name: Technical Quality / Weighting: 25

Quality criterion - Name: Experience & Capacity / Weighting: 20

Quality criterion - Name: Acceptance of Diamond Terms & Conditions / Weighting: 3

Quality criterion - Name: Currency / Weighting: 3

Quality criterion - Name: Delivery / Weighting: 4

Price - Weighting: 45

II.2.7) Duration of the contract, framework agreement or dynamic purchasing system

Start date

25 January 2022

End date

22 April 2027

This contract is subject to renewal

Yes

Description of renewals

It is expected that this contract will run for a period of 5 years with the view to being extended for a further 5 years before being re-tendered. The minimum number of axes purchased will exceed 600 and is likely to reach 1500 (to cover obsolescence & breakdowns) over the full 10-year period.

II.2.10) Information about variants

Variants will be accepted: No

II.2.11) Information about options

Options: Yes

Description of options

The specification describes an extremely versatile system, and it is fully understood that a single system may not meet all requirements. If it is more cost effective, then a solution which achieves 80 % of our requirements will be selected and applications requirements that cannot be achieved on the platform will be assessed on a case-by-case basis and the most suitable controller purchased. (See Section 2.3 of the specification).

Section IV. Procedure

IV.1) Description

IV.1.1) Type of procedure

Open procedure

IV.1.8) Information about the Government Procurement Agreement (GPA)

The procurement is covered by the Government Procurement Agreement: Yes

IV.2) Administrative information

IV.2.1) Previous publication concerning this procedure

Notice number: 2021/S 000-016918

IV.2.2) Time limit for receipt of tenders or requests to participate

Originally published as:

Date

9 December 2021

Local time

12:00pm

Changed to:

Date

4 January 2022

Local time

12:00pm

See the change notice.

IV.2.4) Languages in which tenders or requests to participate may be submitted

English

IV.2.7) Conditions for opening of tenders

Date

9 December 2021

Local time

1:00pm

Section VI. Complementary information

VI.1) Information about recurrence

This is a recurrent procurement: No

VI.4) Procedures for review

VI.4.1) Review body

Diamond Light Source

Harwell Science and Innovation Campus

Didcot

OX11 0DE

Country

United Kingdom