

Lublin, 11th December 2023.

**INQUIRY ABOUT THE ESTIMATED VALUE OF THE ORDER
No. RSARKI-1/2023
TO PURCHASE
motion capture system based on active LED markers**

Lublin University of Technology (*Purchaser*) in Lublin (20-618) Nadbystrzycka 38D Street, Tax Identification Number: 7120104651, REGON: 000001726 is going to initiate a public procurement procedure for the purchase of a motion capture system based on active LED markers, implemented as part of the project entitled "Expansion of the motion capture stand in the Department of Computer Science" co-financed by the state budget, granted by the Minister of Education and Science as part of a targeted subsidy, contract number 7354/IA/SP/2023 dated July 27, 2023.

Due to the above, in order to estimate the value of the order, the *Purchaser* would like to ask about providing information on **the estimated cost of the order**.

I. The order:

The order concerns purchasing motion capture system based on active LED markers

II. CPV code:

30236000-2

III. Description of the order:

Description of the motion capture system:

Motion capture system allowing for capturing human and object motion. The system:

- must be able to track objects in real time (maximal latency of registered data: not greater than 3ms when tracking maximal number of markers)
- must be equipped with at least 28 cameras (detailed camera specifications are listed below); each camera should be equipped with: clamp with head, wall mount and tripod with ball head
- must be equipped with a specialized unit (server) that controls the system. The unit must be equipped with integrated hub and a base station (detailed specifications below)
- must use active LED marker technology that allows for unique marker identification
- must be equipped with at least 15 LED controllers, each with all required cabling and 8 LED markers (detailed specifications below)
- must be able to register at least 950 frames per second
- must be equipped with rendering workstations (detailed specifications below)
- must come with motion capture software (detailed specifications below)



- must be equipped with a device for system calibrations
- must come with full body motion capture suits in S, M, L and XL sizes (2 suits in each size); the suits must allow for mounting LED controllers and LED markers
- must be expandable to at least 48 cameras
- must allow for one person configuration and operation
- must be portable (allow for both indoor and outdoor use)
- must come with all necessary cabling
- must have at least 1-year warranty and at least 1-year technical support

Detailed motion capture software specification. The software:

- must be able to record motion data
- must have plugins at least for the following tools: Unreal, Unity, Autodesk MotionBuilder
- must have API/SDK at least for the following programming languages: C++ and Python
- must be able to stream motion data to multiple client devices over a network (including the Internet)

Detailed camera specifications:

- size - at most 110x95x60mm
- weight - at most 400g
- optical resolution - at least 3600x3600
- detector dynamic range - at least 16-bit
- ability to register at least 950 frames per second
- field of view - at least 60 degrees
- ability to be daisy-chained
- ability to be powered from the hub

Detailed LED controller specifications:

- size - at most 130x70x25mm
- weight - at most 100g
- ability to control at least 8 LED markers
- battery powered; battery life - at least 2 hours of continuous use
- integrated 2,4Ghz transceiver
- equipped with all necessary cabling and at least 8 LED markers (for each controller)

Detailed specifications of the specialized unit (server) that controls the motion capture system

- at least 4-core CPU
- at least 4GB of RAM
- integrated hub for controlling cameras



- at least 1Gbit network adapter
- integrated 2,4Ghz transceiver for LED driver synchronization
- ability to share registered data with multiple client computers

Detailed specifications of the rendering workstation

- CPU compatible with x86-64 architecture; Passmark benchmark result (cpubenchmark.net) at least 65500 points
- at least 512GB of RAM; RAM speed - at least 3200MHz
- Solid state drive with NVMe interface and at least 2TB of capacity
- video card: at least 24GB of RAM, compatible with CUDA Compute Capability 8.9, Passmark benchmark result (videocardbenchmark.net) at least 38500 points
- motherboard: fully compatible with the supplied CPU and RAM, integrated audio, integrated network adapter (at least 1Gbit); at least 6 USB 3.2 sockets; at least 5 PCI Express x16 co najmniej 5
- efficient power supply (at least 1600W); fully compatible with the components of the workstation
- case equipped with an efficient cooling system fully compatible with the workstation's CPU
- operating system: Windows 11 Pro or equivalent
- monitor: 27"; IPS panel; resolution - at least 1920x1080; connectors - at least 1xHDMI, 1xDisplay Port
- wired USB mouse, wired USB keyboard, keyboard layout - English QWERTY ANSI or ISO, power cables

IV. Another important information:

Order completion date: 2024 year

V. Place and date of submitting information on the cost of services:

The price calculation should be submitted by e-mail (scan) to the following address: p.powroznik@pollub.pl by December 15, 2023

VI. Additional information:

- 1) The price calculation should be submitted on the attached *order value estimation form*.
- 2) This inquiry is conducted in order to properly determine the value of the target order, in accordance with article 28 of the Act of September 11, 2019, Public Procurement Law.
- 3) This estimate of the order value does not constitute an offer within the meaning of article 66 of the Civil Code, and is not an announcement within the meaning of the Public Procurement Law. This information is intended solely to recognize the market and obtain knowledge about the costs of providing the described service.

Rozbudowa stanowiska akwizycji ruchu Katedry Informatyki

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[https://cs.pollub.pl/projects/rozbudowa-](https://cs.pollub.pl/projects/rozbudowa-stanowiska-akwizycji-ruchu-katedry-informatyki/)

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- 4) Submitting a cost calculation as part of the inquiry about the estimated value of the order is not tantamount to awarding the order by the Purchaser and does not result in the conclusion of a contract.
- 5) The order will be co-financed from funds co-financed from the state budget, granted by the Minister of Education and Science under a targeted subsidy, contract number 7354/IA/SP/2023 dated July 27, 2023.
- 6) The cost calculation is to be expressed in Polish zlotys or euros in net amount. The cost calculation should be accurate to two decimal places.
- 7) The cost calculation should cover the full scope of order specified in the inquiry and include all costs related to the implementation of the subject of the order.

VII. Contact person:

Paweł Powroźnik, Phone. +48 81 538 4354, p.powroznik@pollub.pl

(Name, surname, phone and email)

Kierownik projektu

M Skublewska-Paszkowska
dr inż. Maria Skublewska-Paszkowska



Ministerstwo
Edukacji i Nauki



ORDER VALUE ESTIMATION FORM

I. Company:

NAME:	
ADDRESS:	
TAX NUMBER:	
REGON:	
PHONE:	
E-MAIL:	

II. Order

Purchase of motion capture system based on active LED markers

III. Estimated cost calculation:

In response to the inquiry about the estimated value of the order, we estimate the value of the performance of the subject of the order, in the full scope included in the inquiry, at a price in PLN or EUR:

Net price PLN	Net price EUR

IV. Additional information *(if concerns)*

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Place, date

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Signature – name and surname or stamp

