



EUROPEAN UNION
European Structural and Investing Funds
Operational Programme Research,
Development and Education



MINISTRY OF EDUCATION,
YOUTH AND SPORTS

PURCHASE CONTRACT

This purchase contract ("**Contract**") was concluded pursuant to section 2079 *et seq.* of the act no. 89/2012 Coll., Civil Code ("**Civil Code**"), on the day, month and year stated below by and between:

- (1) **Institute of Physics of the Czech Academy of Sciences, a public research institution**,
with its registered office at: Na Slovance 2, Praha 8, PSČ: 182 21,
registration no.: 68378271,
represented by: RNDr. Michael Prouza, Ph.D., director
(**"Buyer"**); and
- (2) **Blue Panther s.r.o.**,
with its registered office at: Novodvorská 994, PSČ: 142 21, Praha 4
registration no.: 45272441,
represented by: Ing. Jaroslav Smetana, director
(**"Seller"**).

(The Buyer and the Seller are hereinafter jointly referred to as "**Parties**" and individually as "**Party**".)

WHEREAS

- (A) The Buyer is a public contracting authority and the beneficiary of public grants for projects within the Operational Programme Research, Development and Education.
- (B) For the successful realization of projects it is necessary to purchase the Objects of Purchase (as defined below) in accordance with the act no. 134/2016 Coll., on public procurement, and Rules for the Selection of Suppliers within the Operational Programme Research, Development and Education.
- (C) The Seller wishes to provide the Objects of Purchase to the Buyer for consideration.
- (D) The Seller's bid for the public procurement entitled "*Real-time Digital Oscilloscopes TP22_028*", whose purpose was to procure the Objects of Purchase ("**Public Procurement**"), was selected by the Buyer as the most suitable.

IT WAS AGREED AS FOLLOWS:



1. BASIC PROVISIONS

1.1 Under this Contract the Seller shall hand over to the Buyer two (2) oscilloscopes that are described in Annex 1 (*Technical Specification*) to this Contract in the quality described therein (“**Objects of Purchase**”) and shall transfer to the Buyer ownership right to the Objects of Purchase, and the Buyer shall take over the Objects of Purchase and shall pay the Seller the Purchase Price (as defined below), all under the terms and conditions stipulated in this Contract.

1.2 Under this Contract the Seller shall also:

- a) transport the Objects of Purchase to the place of delivery;
- b) to elaborate and hand over to the Buyer operational and maintenance manuals of the Objects of Purchase in the extent specified in Annex 1 (*Technical Specification*) or other documents which are necessary for the proper takeover and use of the Objects of Purchase in Czech or English language;
- c) carry out other activities specified in Annex 1 (*Technical Specification*); and
- d) cooperate with the Buyer during the performance of this Contract (“**Related Activities**”).

2. THE PLACE OF DELIVERY

The place of delivery is at the address: Fyzikální ústav AV ČR v.v.i/ELI beamlines, Průmyslová 836, post code 252 41, Dolní Břežany, Czech Republic.

3. THE TIME OF DELIVERY

The Seller shall deliver the Objects of Purchase within 30 weeks.

4. THE OWNERSHIP RIGHT

The ownership right to the Objects of Purchase shall be transferred to the Buyer upon the acceptance of the Objects of Purchase by the Buyer.

5. PRICE AND PAYMENT TERMS

5.1 The purchase price for the Objects of Purchase is stated in the Annex 2 (*Price Table*) to this Contract (“**Purchase Price**”). The Purchase Price is stated without value added tax (“**VAT**”). VAT will be paid in accordance with the applicable legal regulations.

5.2 The Purchase Price cannot be exceeded and includes all costs and expenses of the Seller related to the performance of this Contract. The Purchase Price includes, among others, all expenses related to the handover and acceptance of the Objects of Purchase and execution



- of Related Activities, costs of copyright, insurance, customs, warranty service and any other costs and expenses connected with the performance of this Contract.
- 5.3 The Purchase Price for the Objects of Purchase shall be paid on the basis of a tax document – invoice, to the account of the Seller designated in the invoice. The Purchase Price shall be paid after the acceptance of Object(s) of Purchase by the Buyer. The acceptance protocol shall be attached to the invoice.
- 5.4 The Buyer shall realize payments on the basis of duly issued invoices within 30 days from their receipt (maturity period). The invoice shall be considered to be paid for on the day when the invoiced amount is deducted from the Buyer's account on behalf of the Seller's account. To avoid any doubts Parties declare that if on the invoice is stated a maturity period that is shorter than 30 days, then such maturity period may be disregarded by the Buyer.
- 5.5 The invoice issued by the Seller as a tax document must contain all information required by the applicable laws of the Czech Republic. Invoices issued by the Seller in accordance with this Contract shall contain in particular following information:
- a) name and registered office of the Buyer,
 - b) tax identification number of the Buyer,
 - c) name and registered office of the Seller,
 - d) tax identification number of the Seller,
 - e) registration number of the tax document,
 - f) scope of the performance (including the reference to this Contract),
 - g) the date of the issue of the tax document,
 - h) the date of the fulfilment of the Contract,
 - i) Purchase Price,
 - j) registration number of this Contract, which the Buyer shall communicate to the Seller based on Seller's request prior to the issuance of the invoice,
 - k) declaration that the performance of the Contract is for the purposes of a specific project (the number and the title of the project shall be communicated to the Seller based on Seller's request prior to the issuance of the invoice).
- 5.6 The Buyer prefers electronic invoicing on the following address: efaktury@fzu.cz.
- 5.7 In case that the invoice shall not contain the above mentioned information, the Buyer is entitled to return it to the Seller during its maturity period and this shall not be considered as a default. The new maturity period shall begin from the receipt of the supplemented or corrected invoice to the Buyer.



6. **SELLER'S DUTIES**

- 6.1 The Seller shall ensure that the Objects of Purchase and Related Activities are in compliance with this Contract including all its annexes and applicable legal (e.g. safety), technical and quality norms.
- 6.2 During the performance of this Contract the Seller proceeds independently. If the Seller receives instructions from the Buyer, the Seller shall follow such instructions unless these are against the law or in contradiction to this Contract. If the Seller finds out or should have found out if professional care was exercised that the instructions are for any reason inappropriate or illegal or in contradiction to this Contract, then the Seller must notify the Buyer.
- 6.3 All things necessary for the performance of this Contract shall procure the Seller, unless this Contract stipulates otherwise.
- 6.4 The Seller is aware that the Buyer does not have at its disposal premises for the storage of packaging and, therefore, shall not store packaging of the Objects of Purchase. The absence of original packaging cannot be an excuse for refusal of elimination of defects of the Objects of Purchase.

7. **HANDOVER AND ACCEPTANCE OF THE OBJECTS OF PURCHASE**

- 7.1 The Objects of Purchase shall be delivered to the place of delivery and handed over to the Buyer within the time stipulated in this Contract.
- 7.2 The Objects of Purchase may be delivered individually (separately).
- 7.3 If the Seller fails to duly carry out all Related Activities or if the Objects of Purchase do not meet requirements of this Contract, the Buyer is entitled to refuse the acceptance of the Objects of Purchase. In such a case the Seller shall remedy the deficiencies within ten (10) working days, unless Parties agree otherwise. The Buyer is entitled (but not obliged) to accept the Objects of Purchase despite the above mentioned deficiencies, in particular if such deficiencies do not prevent the Buyer in the proper operation of the Objects of Purchase. In such a case the Buyer shall notify the deficiencies to the Seller. The Seller shall remove the deficiencies within ten (10) working days, unless Parties (due to the nature of deficiencies) agree otherwise.

8. **WARRANTY**

- 8.1 The Seller shall provide a warranty of quality of the Objects of Purchase for the period of 36 months. If on the warranty list or other document is the warranty period of longer duration, then this longer warranty period shall have priority over the period stated in this Contract.
- 8.2 The warranty period shall begin on the day of the acceptance of the Objects of Purchase by the Buyer.



- 8.3 The Seller shall remove defects that occur during the warranty period free of charge and in the terms stipulated in this Contract.
- 8.4 If the Buyer ascertains a defect of the Objects of Purchase during the warranty period, the Buyer shall notify such defect without undue delay to the Seller. Defects may be notified on the last day of warranty period, at the latest.
- 8.5 The Buyer notifies defects in writing via e-mail. The Seller shall accept notifications of defects on the following e-mail address: servis@blue-panther.cz. The Seller shall confirm within 2 working days the receipt of the notification.
- 8.6 In the notification the Buyer shall describe the defect and the manner of removal of the defect. The Buyer has the right to:
- a) ask for the removal of the defect by the delivery of new Objects of Purchase or its individual parts, or
 - b) ask for the removal of the defect by repair, or
 - c) ask for the reasonable reduction of the Purchase Price.

The choice among the above mentioned rights belongs to the Buyer; however, the Buyer shall take into account Seller's suggestion.

- 8.7 The Seller shall remove the defect within 4 weeks from its notification, unless Parties agree due to the nature of the defect otherwise.
- 8.8 Parties shall execute a protocol on the removal of the defect, which shall contain the description of the defect and the confirmation that the defect was removed. The warranty period shall be extended by a period of time that elapses between the notification of the defect until its removal.
- 8.9 In case that the Seller does not remove the defect within stipulated time or if the Seller refuses to remove the defect, then the Buyer is entitled to remove the defect at his own costs and the Seller shall reimburse these costs within 10 days after the Buyer's request to do so.
- 8.10 The warranty does not cover defects caused by unprofessional manipulation or by the failure to follow Seller's instructions for the operation and maintenance of the Objects of Purchase.

9. **PENALTIES**

- 9.1 If the Seller is in delay with the removal of the defect, the Seller shall pay to the Buyer a contractual penalty in the amount of 0,05% of the Purchase Price for every (even commenced) day of delay.
- 9.2 The Seller shall pay contractual penalties within fifteen (15) days from the day, on which the Buyer enumerated its claims. The payment of contractual penalties shall not affect the



right of the Buyer to damages even to the extent to which such damages exceeds the contractual penalty.

- 9.3 The Buyer is entitled to unilaterally set off claims arising from the contractual penalties against the claim of the Seller for the payment of the Purchase Price.

10. **RIGHT OF WITHDRAWAL**

- 10.1 The Buyer is entitled to withdraw from this Contract without any penalties, if any of the following circumstances occur:

- a) the Seller shall be in delay with the fulfilment of this Contract and such delay lasts more than 3 weeks;
- b) the insolvency proceeding is initiated against the Seller; or
- c) the Buyer ascertains that the Seller provided in its bid for the Public Procurement information or documents that do not correspond to the reality and that had or could have had impact on the result of the tendering procedure, which preceded the conclusion of this Contract.

11. **SOCIAL, ECOLOGICAL AND INNOVATIVE ASPECTS**

- 11.1 The Buyer aims to conclude contracts with the suppliers that take into account and implement the principles of social responsibility, ecological sustainability and innovation. Therefore, the Seller shall ensure that

- 11.1.1 this Contract shall be fulfilled only by persons that are employed in accordance with the applicable legal regulations (no illegal or child workers);
- 11.1.2 while performing this Contract, all applicable health and safety regulations and rules at work place are observed;
- 11.1.3 all persons performing this Contract are employed under fair and non-discriminatory working conditions;
- 11.1.4 if presented with different manners of fulfilling this Contract, the Seller shall select the solution/process that is in accordance with the principles governing nature conservation and nature protection, ecological sustainability and ecological waste management; and
- 11.1.5 if presented with different manners of fulfilling this Contract, the Seller shall select the solution/process that is the most innovative.

12. **SPECIAL PROVISIONS**

By signing this Contract, the Seller becomes a person that must cooperate during the finance control within the meaning of Section 2 letter e) of the act no. 320/2001 Coll., on



finance control in the public administration, and shall provide to the Directing Body of the Operational Programme Research, Development and Education or other control bodies access to all parts of the bid, Contract or other documents that are related to the legal relationship formed by this Contract. This duty also covers documents that are subject to the protection in accordance with other acts (business secrets, secret information, etc.) provided that control bodies fulfil requirements stipulated by these acts. The Seller shall secure that all its subcontractors are also obliged to cooperate with control bodies in the above stipulated extent. The possibility of effective control must be preserved until the year 2038.

13. **FORCE MAJEURE**

Any delay or non-performance, partial or complete, of any obligation on the part of the Seller shall not constitute a delay or give rise to any claim for damages if and to the extent that such delay or failure results from events beyond the control and without fault or negligence of the Seller, the performance of which is thus affected (hereinafter referred to as "Force Majeure"). Force majeure events include, without limitation, strikes, lockouts or other industrial riots, pandemics, riots, fires, floods, storms, earthquakes, acts of force majeure, enemy wars, blockades, insurrections, revolutions, inability to provide sufficient auxiliary forces, materials or inability to provide means of transport.

14. **FINAL PROVISIONS**

- 14.1 This Contract is governed by the laws of the Czech Republic, especially by the Civil Code.
- 14.2 The Seller is aware that this Contract may be transferred from the Buyer to the Extreme Light Infrastructure ERIC (ELI ERIC), identification no. 10974938. The Seller hereby gives its consent to the abovementioned transfer of this Contract within the meaning of the Section 1895(1) of the Civil Code.
- 14.3 The terms and conditions of this Contract represent the whole agreement between the Parties regarding the subject matter of this Contract and any prior or oral agreements have been either consolidated into this Contract or are disregarded by the Parties.
- 14.4 Parties acknowledge that this Contract shall be published in the Register of Contracts in accordance with the Act no. 340/2015 Coll., on the Register of Contracts.
- 14.5 All disputes arising out of this Contract or out of legal relations connected with this Contract shall be preferably settled by a mutual negotiation. In case that the dispute is not settled within sixty (60) days, such dispute shall be decided by courts of the Czech Republic in the procedure initiated by one of the Parties.
- 14.6 The Seller is not entitled to set off any of its claims or his debtor's claims against the Buyer's claims. The Seller is not entitled to transfer its claims against Buyer that arose on the basis or in connection with this Contract on third parties. The Seller is not entitled to transfer rights and duties from this Contract or its part on third parties.
- 14.7 All modifications and supplements of this Contract must be in writing.



EUROPEAN UNION
European Structural and Investing Funds
Operational Programme Research,
Development and Education



- 14.8 If any of provisions of this Contract are invalid or ineffective, the Parties are bound to change this Contract in such a way that the invalid or ineffective provision is replaced by a new provision that is valid and effective and to the maximum possible extent correspond to the original invalid or ineffective provision.
- 14.9 This Contract is executed in four (4) counterparts and every Party shall receive two (2) counterparts.
- 14.10 An integral part of this Contract is Annex 1 (*Technical Specification*) and Annex 2 (*Price Table*). If Annex 1 (*Technical Specification*) uses the term “Contracting Authority”, it means Buyer and if it uses the term “Supplier”, it means Seller.
- 14.11 This Contract shall be valid on the date of the signature of both Parties and effective on the day, on which it is published in the Register of Contracts.

IN WITNESS WHEREOF attach Parties their signatures:

Buyer

Signature: _____

Name: RNDr. Michael Prouza, Ph.D., director

Position: director

Date:

Seller

Signature: _____

Name: Ing. Jaroslav Smetana

Position: director

Date:



EUROPEAN UNION
European Structural and Investing Funds
Operational Programme Research,
Development and Education



MINISTRY OF EDUCATION,
YOUTH AND SPORTS

ANNEX 1

TECHNICAL SPECIFICATION

Annex No 2 to the invitation to bid elaborated for the purposes of the Public Procurement (Technical Specification) to be inserted here before the final signature of this Contract with the selected supplier. For the purposes of bid submission bidders don't have to complete this Contract with Annexes.

| | | | |
|------------------------------|---|-------------------------|------------|
| Confidentiality Level | <i>PU - Publish</i> | TC ID / Revision | 00332375/C |
| Document Status | <i>Document Released</i> | Document No. | N/A |
| OBS code | 87 | | |
| PBS code | <i>E.E4.ELMA.ION.7.1</i> | | |
| Project branch | <i>Engineering & Scientific documents (E&S)</i> | | |
| Document Type | <i>Specification (SP)</i> | | |

[RSD product category A]

Real-time Digital Oscilloscopes

TP22_028



Keywords

N/A

| | Position | Name |
|---------------------------|---------------------------------|---|
| Responsible person | Research Assistant | Stanislav Stanček |
| Prepared by | Research Assistant, Engineer | Stanislav Stanček, Francesco Schillaci |

| RSS TC ID/revision | RSS - Date of Creation | RSS - Date of Last Modification | Systems Engineer |
|--------------------|------------------------|---------------------------------|------------------|
| 023979/A.001 | 03.06.2022 | 03.06.2022 | A. Kuzmenko |
| 023979/A.002 | 10.06.2022 | 10.06.2022 | A. Kuzmenko |
| | | | |

| <i>Reviewed By</i> | | | |
|--------------------|---|--|-----------|
| Name (Reviewer) | Position | Date | Signature |
| Daniele Margarone | Head of department of Ion Acceleration and Application of High Energy Particles | <u>NOTICE (RSD product category A)</u> | |
| Luboš Nims | Electrical Engineering Group leader | | |
| Jiří Kubricht | Lawyer | | |
| Roman Kuřátko | Head of Department of Building Infrastructure and IT | | |
| Veronika Olšovcová | Group Leader of Safety | | |
| Viktor Fedosov | Group Leader of Quality and Planning | | |

| <i>Approved by</i> | | | |
|--------------------|---|------------|-------------------------------|
| Name (Approver) | Position | Date | Signature |
| Daniele Margarone | Head of department of Ion Acceleration and Application of High Energy Particles | 10.06.2022 | <u>via TC</u> |

| <i>Revision History / Change Log</i> | | | | |
|--------------------------------------|------------------------------|------------|-------------------------------------|---------|
| Change No. | Made by | Date | Change description, Pages, Chapters | TC rev. |
| 1 | S. Stanček, F. Schillaci | 02.06.2022 | RSD draft creation | A |
| 2 | F. Schillaci, A. Kuzmenko | 06.06.2022 | RSD update; version for review | B |
| 3 | F. Schillaci, A. Kuzmenko | 10.06.2022 | RSD update; final version | C |

| | |
|---|---|
| 1. Introduction | 4 |
| 1.1. Purpose | 4 |
| 1.2. Scope | 4 |
| 1.3. Terms, Definitions and Abbreviations | 4 |
| 1.4. References to standards | 4 |
| 2. Functional, Performance and Design requirements..... | 5 |
| 2.1. General technical requirements | 5 |
| 3. Delivery requirements..... | 7 |
| 4. Safety Requirements | 7 |
| 5. Quality Requirements | 8 |
| 5.1. General Quality Requirements | 8 |
| 5.2. Specific Quality requirements | 8 |
| 5.1. Acceptance | 9 |

1. Introduction

1.1. Purpose

This Requirements Specification Document (RSD) lists the technical requirements and constraints on the product being purchased for department 87 of the ELI Beamlines project.

1.2. Scope

The RSD contains all of the technical requirements: functional, performance and delivery, safety and quality requirements for the following product (*tender code TP22_028*): **Real-time Digital Oscilloscopes** (further “**Oscilloscopes**”).

The Oscilloscopes are considered to be the standalone technology and will be placed at the ELI Beamlines facility in the E4 hall. These Oscilloscopes are registered in the PBS software under the following PBS code: *E.E4.ELMA.ION.7.1*.

This product is a product **Category A** according to the ELI Beamlines RSD categories of products. The Category A is an Off-the-shelf Product without the necessity of modifications and the necessity to be subjected to a verification program (review of design, inspection and testing) for ELI applications by the actual project specifications. All verification activities performed by a supplier shall be executed in accordance with the supplier’s plan of outgoing inspection and tests. Internal Acceptance Procedure of the product Category A shall be established and applied before the product implementation (operation phase).

1.3. Terms, Definitions and Abbreviations

For the purpose of this document, the following abbreviated terms are applied:

| Abbreviation | Meaning |
|--------------|--|
| AC | Alternating Current |
| CA | Contracting Authority (Institute of Physics CAS) |
| CPU | Central Processing Unit |
| DC | Direct Current |
| ELI | Extreme Light Infrastructure |
| GPIB | General Purpose Interface Bus |
| pts | points |
| RSD | Requirements Specification Document |
| USB | Universal Serial Bus |
| WXGA | Wide eXtended Graphics Array |

1.4. References to standards

If this document includes references to standards or standardized/ standardizing technical documents the CA allows/permits also another equivalent solution to be offered.

2. Functional, Performance and Design requirements

2.1. General technical requirements

REQ-034435/A

Each of the Oscilloscopes shall provide real-time signal registration of at least 4 analogue channels.

REQ-034436/A

The Oscilloscopes shall be provided with a WXGA Color Display, at least 12.1" Touch Screen and a Multi-tab Display Option with at least 4 channels simultaneous display of real-time signal.

REQ-034627/A

The operating system of the Oscilloscopes shall be fully compatible with CA's operating and control systems.

NOTE: The Microsoft Windows® 10 is used by the CA to interface with devices and the acquisition system.

REQ-034437/A

The Oscilloscopes shall have a power supply compatible with the input voltage in minimal ranges of 100-240 V AC $\pm 10\%$ at 50/60 Hz $\pm 5\%$; 110-120 V AC $\pm 10\%$ at 400 Hz $\pm 5\%$ (Automatic AC Voltage Selection).

REQ-034438/A

Each of the Oscilloscopes shall have the following maximum power consumption:

- Nominal Power Consumption 415 W / 415 VA
- Max. Power Consumption 500 W / 500 VA (with all PC peripherals and active probes connected to 4 channels).

REQ-034439/A

The performance parameters of the Oscilloscopes shall correspond to the requirements given in table 1 below.

| No | Parameters | Minimum Requirements |
|----|---|--------------------------|
| 1 | Analog Bandwidth (max) | 4 GHz |
| 2 | Analog Bandwidth @ 50 Ω (-3 dB) | 4 GHz (≥ 5 mV/div) |
| 3 | Analog Bandwidth @ 1 M Ω (-3 dB) | 500 MHz (typical) |
| 4 | Rise Time (10-90%, 50 Ω) | 100 ps (typical) |
| 5 | Rise Time (20-80%, 50 Ω) | 75 ps (typical) |
| 6 | Input Channels | 4 |
| 7 | Vertical Resolution | 8 bits |
| 8 | Vertical Noise Floor (1 mV/div) | 165 μ Vms |
| 9 | Vertical Noise Floor (2 mV/div) | 165 μ Vms |
| 10 | Vertical Noise Floor (5 mV/div) | 368 μ Vrms |
| 11 | Vertical Noise Floor (10 mV/div) | 420 μ Vrms |
| 12 | Vertical Noise Floor (20 mV/div) | 657 μ Vrms |
| 13 | Vertical Noise Floor (50 mV/div) | 1.21 mVrms |
| 14 | Vertical Noise Floor (100 mV/div) | 2.25 mVrms |

| No | Parameters | Minimum Requirements |
|----|---|--|
| 15 | Vertical Noise Floor (200 mV/div) | 6.35 mVrms |
| 16 | Vertical Noise Floor (500 mV/div) | 11.57 mVrms |
| 17 | Vertical Noise Floor (1 V/div) | 21.74 mVrms |
| 18 | Sensitivity @ 50 Ω | 1 mV-1 V/div, fully variable |
| 19 | Sensitivity @ 1 M Ω | 1 mV-10 V/div, fully variable |
| 20 | DC Vertical Gain Accuracy (Gain Component of DC Accuracy) | \pm (1%) F.S, offset at 0 V |
| 21 | DC Vertical Offset Accuracy | \pm (1.5% of offset setting +1% of full scale + 1 mV) (test limit) |
| 22 | Channel-Channel Isolation (for any two ProBus input channels, same v/div settings, typical) | DC-2.5 GHz: 40 dB (>100:1), 2.5 GHz to rated BW: 31.6 dB (>30:1) |
| 23 | Offset Range @ 50 Ω | BWL \leq 1 GHz: \pm 1.6 V @ 1 mV - 4.95 mV/div \pm 4 V @ 5 mV - 9.9 mV/div \pm 8 V @ 10 mV - 19.8 mV/div \pm 10 V @ 20 mV - 1V/div BWL > 1 GHz: \pm 1.4V @ 5 mV - 100 mV/div \pm 10V @ 102 mV - 1 V/div |
| 24 | Offset Range @ 1 M Ω | \pm 1.6 V @ 1 mV - 4.95 mV/div \pm 4 V @ 5 mV - 9.9 mV/div \pm 8 V @ 10 mV - 19.8 mV/div \pm 16 V @ 20 mV - 100 mV/div \pm 80 V @ 102 mV - 1.0 V/div \pm 160 V @ 1.02 V - 10 V/div |
| 25 | Maximum Input Voltage @ 50 Ω | 5 V RMS \pm 10 V peak |
| 26 | Maximum Input Voltage @ 1 M Ω | 400 V max. (DC + peak AC < 10 kHz) |
| 27 | Sample Rate (Single-shot) | 20 GS/s on 4 Ch, 40 GS/s on 2 Ch |
| 28 | Sample Rate (Repetitive) | 200 GS/s for repetitive signals (20 ps/div to 10 ns/div) |
| 29 | Memory Length (4 Ch / 2 Ch / 1Ch) | 64M / 128M / 128M |
| 30 | Number of Segments | 15000 |
| 31 | Intersegment Time | 1 μ s |
| 32 | Input Coupling @ 1 M Ω | AC, DC, GND |
| 33 | Input Coupling @ 50 Ω | DC, GND |
| 34 | CPU Passmark | 2553 score or better according to CPU Mark on the www.cpubenchmark.net |
| 35 | Processor Memory | 16 GB standard |
| 36 | Enhanced Resolution | From 8.5 to 11 bits vertical resolution |
| 37 | Ethernet Port | Supports 10/100/1000BaseT Ethernet interface (RJ45 port) |

| No | Parameters | Minimum Requirements |
|----|--|---|
| 38 | USB Host Ports | 4 side USB 3.1 Gen1 ports and 1 front USB 2.0 port support Windows compatible devices |
| 39 | USB Device Port | 1 port - USBTMC over USB 3.1 Gen1 |
| 40 | GPIB Port (optional) | Supports IEEE - 488.2 (External) |
| 41 | Remote Control | Via Windows Automation, or via Remote Desktop |
| 42 | Network Communication Standard | Compliant with VXI-11 or VICP, LXI Class C (v1.2) |
| 43 | Local language user interface (language preferences) | English |

Table 1: Performance parameters of the Oscilloscopes.

3. Delivery requirements

REQ-034440/A

The transportation to the ELI Beamlines facility in Dolní Břežany of the Oscilloscopes shall be conducted by the Supplier.

NOTE: The bid price will be considered by the CA as the final price, including transportation costs.

4. Safety Requirements

REQ-034441/A

The Supplier shall supply a Declaration of Conformity for each product type if the appropriate legislation determines the Supplier's obligation to have a Declaration of Conformity for the purposes of a Device sale in the Czech Republic. In such a case, the Declaration of Conformity shall comply with:

- Act No. 90/2016 Coll., as amended
- Act No. 22/1997 Coll., as amended
- The equivalent legal regulation of another EU member state so that the conditions for the sale of the product in the Czech Republic are met, and/or
- the relevant EU/EC regulation.

NOTE: The compliance with these obligations will be demonstrated by the (EU) Declaration of conformity, other relevant documents and the CE marking if required by the relevant regulations. If a delivered product is not required to assess conformity according to specific legislation, the supplier declares, in written form, by concluding the contract that the product complies with the general safety requirement of EU Directive 2001/95/EC on general product safety and that the Supplier duly complies their obligations under this Regulation.

5. Quality Requirements

5.1. General Quality Requirements

REQ-034442/A

The Supplier shall provide the Product User Manual as part of the delivered Device. The Manual shall include the instructions and descriptions regarding the following procedures:

- transport, handling, storage and cleaning;
- installation and calibration (see REQ-034444/A);
- safe operation and maintenance procedures;
- user manual for the software /communication protocols.

NOTE: The manual can be supplied in hardcopy or PDF formats.

REQ-034443/A

The Supplier shall provide information on outgoing check of the Product. At least this information shall comprise a report about the execution of outgoing check and fulfilment of the technical requirements defined by the product RSD, and completeness of the product.

NOTE: Alternatively, the Supplier might provide the CA with the information detailed enough to prove meeting all requirements stipulated herein (e.g. catalogue/technical datasheets, product manuals or other similar documentation).

REQ-034444/A

The Supplier shall supply a Calibration Certificate or Test protocol, which shall establish:

- the relation between quantity values with measurement uncertainties provided by measurement standards and the corresponding indications with associated measurement uncertainties;
- the relation for obtaining a measurement result from an indication (if required).

NOTE: The Supplier shall define the calibration interval for the Oscilloscopes.

REQ-034445/A

The Supplier shall establish and maintain a non-conformance control system compatible with ČSN EN ISO 9001 (equivalent to EN ISO 9001).

5.2. Specific Quality requirements

REQ-034446/A

In case of the Oscilloscope repair by the Supplier within the validity of the warranty, the Supplier shall recalibrate and verify the Oscilloscope once the repair is completed. The results of this process shall be provided to the CA.

5.1. Acceptance

Acceptance will be carried out by the CA upon delivery and final verification of the Oscilloscopes and documentation supporting the verification (see REQ-034442/A, REQ-034443/A and REQ-034444/A). The basis for acceptance will be the report about the execution of outgoing check and compliance with technical requirements (see REQ-034443/A).

In case of a successful acceptance phase, the CA will provide the Supplier signed acceptance protocol. In case of an unsuccessful acceptance stage, the CA will provide the Supplier Nonconformity Report (NCR) and a process in accordance with REQ-034445/A will be applied.

REQ-034447/A

The Acceptance phase shall demonstrate the following:

- Final Products have been successfully verified by the Supplier;
- All detected nonconformities have been solved in accordance with REQ-034445/A;
- Final Products are free of fabrication errors and are ready for the intended operational use.



EUROPEAN UNION
European Structural and Investing Funds
Operational Programme Research,
Development and Education



MINISTRY OF EDUCATION,
YOUTH AND SPORTS

ANNEX 2
PRICE TABLE

Annex No 4 to the invitation to bid elaborated for the purposes of the Public Procurement (Bid price table) to be inserted here before the signature of this Contract with the selected supplier in the form the selected bidder made it part of its bid for the Public Procurement. For the purposes of bid submission bidders don't have to complete this Contract with Annexes.

| Price Table (fill in the yellow boxes) | Currency (fill € or CZK here): € | |
|--|----------------------------------|------------------|
| Items | Unit price (exl. VAT) | Price for 2 pcs |
| Real-time Digital Oscilloscope | 36 935,00 | 73 870,00 |
| Please fill the currency in red box - € (for EURO) or CZK (for Czech Crowns). The bid can only be submitted in one currency and only these two currencies are allowed. | Total Bid Price: | |
| | | 73 870,00 |