
TO: ALL BIDDERS FROM: Sally Alvarez de Schreiner
DATE: 26 April 2023 REF.: Chief, Procurement Services Section
ITB No. 2023-0008/STOMOV

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SUBJECT: Clarification No.1 - ITB No. 2023-0008/STOMOV
PROVISION OF COMPUTER EQUIPMENT AND SERVICES FOR IMS STATIONS

Dear Bidders,

Please find attached responses to queries raised by interested bidders in respect to Invitation to Bid No. 2023-0008 “*Provision of Computer Equipment and Services for IMS Stations*” (hereinafter referred to the ITB).

Please be kindly informed that as a result of these clarifications, the Commission included updates in the ITB pertaining to the following ITB documents:

- (i) Updated Annex B - Specifications
- (ii) Updated ITB Instructions Attachment 2 - Compliance Matrix
- (iii) Updated ITB Attachment 2.2.1- Commercial Matrix

Please see attached the above-mentioned documents, where the Commission’s updates are **highlighted in yellow**. Please take into account this update in the preparation and submission of your bid.

We look forward to receiving your bid before the deadline of 28 April 2023, 17:00 CET.

Best regards,



Sally Alvarez de Schreiner
Chief, Procurement Services Section

Attachment 1: Clarifications No.1 Table
Attachment 2: Updated Annex B – Specifications
Attachment 3: Updated ITB Attachment 2 - Compliance Matrix
Attachment 4: Updated ITB Attachment 2.2.1- Commercial Matrix

Invitation to Bid No. 2023-0008 “PROVISION OF COMPUTER EQUIPMENT AND SERVICES FOR IMS STATIONS”.

Clarifications No.1

Questions from a Bidder

Answers from the Commission

Question 1

Within the required technical specifications, for deliverable no. 2.1, 2.2. and 2.3 you require the following:

Packaging: Not to exceed 300 x 200 x 100 mm.

Could you please kindly specify what is your purpose for this requirement? [....]

Could you please kindly confirm that you will also accept at least the packaging with the following dimension: 215 mm(W) x 272mm (D) x 94mm (H)?

Answer 1

This is to confirm that the proposed packaging variant would be deemed technically acceptable.

The main purpose for keeping the size restriction in place is to cover the use of cases available at the IMS auxiliary stations, where in many configurations, the data acquisition computer is placed inside a small pelican case, along with the digitiser.

As such, the size factor was stipulated as one of the technical requirements. The deviation proposed is insignificant, and as such, can be accepted on technical basis.

Please refer to the updated Annex B - Specifications and the respective updates included in the ITB Compliance Matrix and ITB Commercial Matrix. Please be guided accordingly.

ANNEX B

SPECIFICATIONS

**PROVISION OF COMPUTER EQUIPMENT AND RELATED
ANCILLARY SERVICES FOR IMS STATIONS**

1 GENERAL

These Specifications describe the requirements for the provision of hardware and related ancillary services for items of standard computer equipment and peripherals with fixed prices on call-off basis over a period of three (3) years plus the option to extend the contract twice for 12 (twelve) months period each.

The computer equipment is for use at any of the stations of the International Monitoring System (IMS) being established by the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organisation (the Commission) (see <http://www.ctbto.org/map/#ims>).

The Commission requires the Contractor to provide computer equipment (including packaging and delivery) to its offices in Vienna, Austria, on call-off basis through Formal Requests for Delivery (FRD).

The Commission makes no firm commitment to purchase any specific quantity or make purchases at any specific time during the contract period. However, the Contractor must be able to supply equipment as and when requested by the Commission based on the fixed unit prices quoted in the Financial Bid. An indicative demand for planning purposes only, constitutes approximately **75 computer systems each year**.

The Contractor shall notify the Commission immediately in the event of a model change affecting significant product improvement of the computer equipment or obsolescence issues. The Commission will adopt or upgrade to new technologies and standards while phasing out technologies that are legacy, obsolete, expensive to maintain or operate, or have high costs of ownership.

The Contractor shall offer, supply and deliver the following items with, unless otherwise explicitly stated, **minimum technical specifications** as described in Section 2 below.

2 MINIMUM TECHNICAL SPECIFICATIONS

2.1 Ruggedized low power DC Computer with wide operating temperature range

This deliverable pertains to supply of ruggedized low power DC computer with wide operating temperature range to withstand deployments inside equipment vaults of IMS stations throughout the world and in widely ranging climates. The maximum power consumption and compliance with the environmental specifications below is a mandatory requirement. The bidders are free to propose any solution, which meets or exceeds the below minimum technical requirements (highlighted in **bold font**):

Processor: Minimum **6 Cores** / 6 Threads, **3 GHz** + processor
9th generation **Intel Core i5** or alternative CPU with similar or better performance

Memory: **16 GB** DDR4 SODIMM WT minimum

Data Storage: **500-1000 GB Solid State Drive (SSD)**, TLC WT, 2.5" SATA or better

The appointed SSD should comply with mean-time-between-failure (MTBF) classification of the following SSDs (WD Red SN700 SSD, Samsung 980 Pro SSD, or Intel 660p / 670p SSD). Utilization of one of the above SSDs inside the proposed deliverable is an asset.

Power Input: **12V – 36V DC** input, with AC adapter (100-240V AC, 50/60Hz, EU plug)
(6V/9V – 36/48V DC input complies with this requirement)

Power Consumption*: Peak power consumption < 20 W
Typical power consumption < **15W**

Environmental*: Operating temperature: **-25° C to +60° C**
-40° C to +75° C desired
Humidity: ≤ **95%**, non-condensing
Shock & Vibration: **IEC 60068-2-27 & IEC 60068-2-64** compliant
SSD withstanding **min 30G impact** for 11 ms duration

* Mandatory Requirement

Networking: **2 x RJ-45** LAN ports with WoL (Wake On Lan) support minimum

Interface ports: **2 x RS-232** COM ports minimum
6 x USB ports minimum
1 x DVI-D port (up to 1920 x 1080 @ 60 Hz) or
1 x DVI-I port (up to 1920 x 1080 @ 60 Hz)
1 x VGA port desired (not required for technical compliance)
1 x HDMI port, if DVI-D / DVI-I / VGA ports not available
Support of dual display is an asset

Packaging: Dimensions not to exceed 300 mm x 200 mm x 100 mm **or**
Dimensions: 215 mm(W) x 272mm (D) x 94mm (H)
Max weight not to exceed 5 kg

Approvals: **CE, FCC, RoHS**, EN50121-3-2, EN50155

Other: **Passive cooling**
19” rack-mountable option is an asset

Operating System: Support of Linux OS, to be installed post-delivery by the Commission

Optionally, if requested by the Commission:

- Windows 10 / Windows 11, preinstalled on the computer
- Windows 7 (32-bit), preinstalled on the computer

The Commission may Contract the Contractor to pre-configure the system based on the Commission’s requirements, utilizing the Engineering services on the Contract

The desired deliverable shall constitute [Stealth LPC-965](#) rugged fanless mini PC or alternative model meeting or exceeding the minimum technical specifications listed under section 2.1 of these ToR.

2.2 Ruggedized low power DC computer for high volume data acquisition

The principal requirement of this deliverable is a low power DC computer, which is to be deployed inside a Central Recording Facility (CRF) and tasked with acquisition of large data volumes, often representing IMS primary seismic arrays, capable to handle resources intensive I/O operations. The requirement of this deliverable focuses on faster processor with minimum four cores, higher amounts of RAM, and robust solid state hard drive(s). The bidders are free to propose any solution, which meets or exceeds the below minimum technical requirements.

Processor:	Minimum 8 Cores / 8 Threads, 3.6 GHz + processor 9 th generation Intel Core i7, or alternative CPU with similar or better performance
Memory:	16 GB DDR4 SODIMM WT minimum
Data Storage:	500-1000 GB Solid State Drive (SSD), 3D NAND , 2.5" SATA or better The appointed SSD should comply with mean-time-between-failure (MTBF) classification of the following SSDs (WD Red SN700 SSD, Samsung 980 Pro SSD, or Intel 660p / 670p SSD). Utilization of one of the above SSDs inside the proposed deliverable is an asset.
Power Input:	12V – 36V DC input, with AC adapter (100-240V AC, 50/60Hz, EU plug) (6V/9V – 36/48V DC input complies with this requirement)
Power Consumption*:	Peak power consumption < 25 W Typical power consumption < 20W
Environmental*:	Operating temperature: 0° C to +40° C Humidity: ≤ 95% , non-condensing Shock & Vibration: IEC 60068-2-27 & IEC 60068-2-64 compliant SSD withstanding min 30G impact for 11 ms duration

* Mandatory Requirement

Networking:	2 x RJ-45 LAN ports with WoL (Wake On Lan) support minimum
Interface ports:	2 x RS-232 COM ports minimum 6 x USB ports minimum 1 x DVI-D port (up to 1920 x 1080 @ 60 Hz) or 1 x DVI-I port (up to 1920 x 1080 @ 60 Hz) 1 x VGA port desired (not required for technical compliance) 1 x HDMI port, if DVI-D / DVI-I / VGA ports not available Support of dual display is an asset
Packaging:	Dimensions not to exceed 300 mm x 200 mm x 100 mm or Dimensions: 215 mm(W) x 272mm (D) x 94mm (H) Max weight not to exceed 5 kg
Approvals:	CE, FCC, RoHS , EN50121-3-2, EN50155
Other:	Passive cooling 19" rack-mountable option is an asset
Operating System:	Support of Linux OS, to be installed post-delivery by the Commission Optionally, if requested by the Commission: <ul style="list-style-type: none">• Windows 10 / Windows 11, preinstalled on the computer• Windows 7 (32-bit), preinstalled on the computer

The Commission may Contract the Contractor to pre-configure the system based on the Commissions requirements, utilizing the Engineering services on the Contract

The desired deliverable shall constitute [Stealth LPC-960](#), [Stealth LPC-490](#), rugged fanless mini PC or alternative model meeting or exceeding the minimum technical specifications listed under section 2.2 of these ToR.

2.3 Ruggedized low power DC computer – low data acquisition option

The Commission wishes to remain flexible in sourcing a low data acquisition solution to address the use cases representing low data volume installations in moderate climates. In such cases, low power DC computer with lower specifications and reduced temperature operating range represents best value for money, while meeting the performance demands at the IMS station and or CRF. The second use case arises from the deployment of this deliverable as the designated station operator computer, for monitoring data acquisition, state of health (SOH) of all data arriving at the CRF. The bidders are free to propose any solution, which meets or exceeds the below minimum technical requirements:

Processor:	Intel Celeron Quad Core processor, 2.4 GHz+, or alternative CPU with similar or better performance
Memory:	8 GB DDR3 SO-DIMM 16 GB DDR3 SO-DIMM is an asset
Data Storage:	500-1000 GB Solid State Drive (SSD) , TLC, 2.5", WT, SATA or better The appointed SSD should comply with mean-time-between-failure (MTBF) classification of the following SSDs (WD Red SN700 SSD, Samsung 980 Pro SSD, or Intel 660p / 670p SSD). Utilization of one of the above SSDs inside the proposed deliverable is an asset.
Power Input:	12V – 36V DC input, with AC adapter (100-240V AC, 50/60Hz, EU plug) (6V/9V – 36/48V DC input complies with this requirement)
Power Consumption*:	Peak power consumption < 17 W Typical power consumption < 12W
Environmental*:	Operating temperature: -20° C to +40° C Humidity: ≤ 95% , non-condensing Shock & Vibration: SSD withstanding min 30G impact for 11 ms duration

* Mandatory Requirement

Networking:	2 x RJ-45 LAN ports with WoL (Wake On Lan) support minimum
Interface ports:	2 x RS-232 COM ports minimum 4 x USB 2.0+ ports minimum 1 x DVI-D port (up to 1920 x 1080 @ 60 Hz) or 1 x DVI-I port (up to 1920 x 1080 @ 60 Hz) 1 x VGA port desired (not required for technical compliance) 1 x HDMI port, if DVI-D / DVI-I / VGA ports not available Support of dual display is an asset
Packaging:	Dimensions not to exceed 300 mm x 200 mm x 100 mm or Dimensions: 215 mm(W) x 272mm (D) x 94mm (H) Max weight not to exceed 5 kg

Approvals: CE, FCC, RoHS

Other: **Passive cooling**
19” rack-mountable option is an asset

Operating System: Support of Linux OS, to be installed post-delivery by the Commission

Optionally, if requested by the Commission:

- Windows 10 / Windows 11, preinstalled on the computer
- Windows 7 (32-bit), preinstalled on the computer

The Commission may Contract the Contractor to pre-configure the system based on the Commissions requirements, utilizing the Engineering services on the Contract

The desired deliverable shall constitute [Stealth LPC-815](#), [Stealth LPC-915](#) rugged fanless mini PC or alternative model meeting or exceeding the minimum technical specifications listed under section 2.3 of these ToR.

2.4 Ruggedized Notebook Computer

This deliverable pertains to the provision of ruggedized notebook computers with hardened requirements suited for use in open elements in field environments. The bidders are free to propose any solution meeting or exceeding the minimum technical requirements summarized below (hard requirements are listed in **bold font**):

Processor: Intel Core **i5 @ 2.7 GHz** minimum or equivalent CPU

Memory: **16 GB** DDR4 RAM

Data Storage: **500-1000 GB Solid State Drive (SSD)**

Display: **15”** anti-reflective, sunlight-readable display (resolution 1920 x 1080 or better)

Environmental*: Operating temperature: **-20° C to +55° C** minimum
Humidity: **≤ 95%**, non-condensing
Shock & Vibration: **Vibration and drop resistant**

* Mandatory Requirement

Networking: **2 x Integrated 10/100/100 base-T RJ-45 Ethernet ports**
Integrated WiFi 802.11a/b/g/n/ac

Interface ports: **3 x USB 3.0+** ports minimum
1 x HDMI or VGA port
1 x RS-232 port is an asset

Battery: **Long life battery pack** (Li-ion battery (**99 Wh** or equivalent))
Secondary battery bay with battery of similar specification is an asset
Material safety data sheet (MSDS) must be included with all shipments and provisions of deliverable 2.4

Power:	100-240VAC, 50 / 60 Hz (with EU plug) MIL-STD-461 AC adapter is an asset
Packaging:	Dimensions not to exceed 420 mm x 330 mm x 70 mm Max weight not to exceed 5.5 kg (without packing materials)
Approvals:	CE, FCC, RoHS
Other:	MIL-STD-810H certified is a strong asset CD/DVD drive read/write as an option
Operating System:	Preinstalled Windows 11 with valid license

The desired deliverable shall constitute [Getac X500](#), [Getac X600](#), [Panasonic Toughbook-40](#), or alternative model meeting or exceeding the minimum technical specifications listed under section 2.4 of these ToR.

2.5 Peripherals and Accessories

The bidders are requested to propose a list of computer peripherals and accessories fulfilling the below requirements:

A. Provision of spare parts for deliverables 2.1, 2.2, 2.3, to be procurable separately:

RAM:

- 32 GB DDR4 SO-DIMM WT RAM
- 64 GB DDR4 SO-DIMM WT RAM
- 32 GB DDR4 ECC SO-DIMM WT RAM
- 64 GB DDR4 ECC SO-DIMM WT RAM

Solid State Drives (SSDs):

- 256 GB SSD, TLC, WT, 2.5" SATA
- 512 GB SSD, TLC WT, 2.5" SATA
- 1 TB SSD, TLC, WT, 2.5" SATA
- 480 GB SSD, 3D NAND, 2.5" SATA
- 960 GB SSD, 3D NAND, 2.5" SATA

Accessories:

- DIN rail mounting brackets
- DP to VGA adapter
- DP to HDMI adapter
- DP to DVI adapter
- AC adapter (100-240 VAC, 50/60 Hz), with EU plug
- DVD+/-RW/CDRW Drive
- Blu-Ray Burner/DVD+/- Drive

B. Provision of spare parts for deliverable 2.4, to be procurable separately:

RAM:

- 32 GB DDR4 RAM

- 64 GB DDR4 RAM

Solid State Drives (SSDs):

- 512 GB SATA SSD
- 1 TB SATA SSD

Notebook accessories:

- Spare battery
Material safety data sheet (MSDS) must be included with all shipments
- Backpack
- AC adapter (100-240 VAC, 50/60 Hz), with EU plug

C. 1U 19” rack-mount keyboard tray LCD monitor with built-in KVM switch

- 1U for 19” rack-mountable
- 19” LCD widescreen with min resolution of 1920 x 1080
- Integrated 8 port KVM switch, with interface cables included
- 100-240 VAC, 50/60Hz
- HDMI + DVI-D + VGA support is an asset

D. 104-Key PC US English QWERTY USB keyboard & Optical USB mouse

E. Waterproof fold-up or roll-up keyboard with English QWERTY format and USB interface

F. USB Hub

- Supporting 6 or more USB 3.0 ports, backward compatible with USB 2.0, with interface cable

G. FHD Monitor

- 24” - 27” FHD (or similar) monitor with minimum resolution of 1920 x 1080 or better
- 1 x DVI and/or HDMI + 1 x VGA interfaces minimum

2.6 Micro-computer

This deliverable pertains to the provision of micro-computer with technical specifications meeting or exceeding the below:

fit-PC4 Pro with the below specifications:

- AMD GX-420CA processor with 64-bit quad core processor, 2 GHz (or similar)
- 8 GB DDR3 RAM minimum
- 1 x SSD drive (64GB+)
- 2 x Gbe LAN ports
- 2 x USB 3.0, 2 (or more) USB 2.0
- 1 x RS-232 serial port (with DB-9 adapter cable included)
- 1 x HDMI (up to 1920 x 1200 @ 60 Hz) display interface
- Power supply (100-240 VAC, 50/60 Hz), with EU plug

Fitlet2 micro-computer with the below specifications:

- Intel Atom x7x CPU (or similar)
- 8 GB DDR3 RAM, minimum

- 1 SSD drive (64GB+)
- 2 x Gbe LAN pots
- 4 x USB ports
- 1 x RS-232 serial port (with DB-9 adapter cable included)
- 1 x HDMI display interface
- Power supply (100-240 VAC, 50/60 Hz), with EU plug

This deliverable shall constitute the above or similar models meeting or exceeding the minimum technical specifications listed above. Power consumption of the proposed models is not to exceed **12W**.

3 REMOTE TECHNICAL SUPPORT

The Contractor shall provide a remote technical support upon request regarding issues relating to installation and integration of operating systems and other software onto computers listed in Section 2. Initial remote technical support response within **48 hours** of the Commission's request for assistance is required. The Contractor shall provide hourly or daily technical support.

4 EXPERT ENGINEERING AND/OR INTEGRATION SERVICES

As and when required by the Commission, the Contractor shall provide expert Engineering and/or integration services, which may be utilized for assistance of preconfiguring the deliverables with operating system, and or installation of custom Commission-supplied images prior to delivery. The Contractor shall provide person-day support as set out in this Section of the Specifications.

5 WARRANTY

All deliverables supplied under sections 2.1 through 2.6 of this ToR, shall be backed-up by a minimum of two (2) years manufacturer warranty. For item 2.4 (Ruggedized Notebook Computer) a 5 years bumper-to-bumper warranty is desired.

6 DOCUMENTATION

All documentation, instructions, and user manuals accompanying the hardware deliverables listed under section 2 of these ToR must be provided in the English language. All deliverables (especially 2.4, containing Lithium-based battery packs) are to be provided with **material safety data sheet (MSDSs)**.

7 DELIVERY

7.1 Delivery to Vienna, Austria

Delivery based on DAP (Incoterms 2020) shall be made to the following address:

Receiving Area
 Vienna International Centre (VIC)
 PTS/CTBTO
 Wargamer Strasse 5
 PO Box 1200
 A-1400 Vienna, Austria.

It is the responsibility of the Contractor to arrange packaging, insurance and safe delivery of the requested items of equipment to the Commission without any damage and in full accordance with the relevant FRD. The Contractor shall be liable for any damage to equipment until its written acceptance by the Commission.

The following additional information shall be provided for items with each delivery, where relevant:

- (a) Material safety data sheet (MSDS);
- (b) Data sheet and technical specifications for computer battery packs;
- (c) Country of origin;
- (d) MILL (quality assurance document used in the metals industry to quantify the chemical and physical properties of a material) certificate (if available).

7.2 Delivery Date

Unless otherwise agreed at the time of placement of order by the Commission (i.e. issuance of FRD), the Contractor shall ensure that the delivery date must be **as soon as possible but not later than 90 calendar days** (incl. weekends and/or holidays) from the date of the release of the FRD.

Attachment 2 – COMPLIANCE MATRIX

REQUIREMENTS AND MINIMUM TECHNICAL SPECIFICATIONS FOR INDUSTRIAL CLASS COMPUTERS

Please fill in the statements and/or provide descriptions to confirm the minimum technical specifications.

No.	SPECIFICATIONS SECTION: 1 GENERAL	Statement (Yes/No)	Comments and Reference to the Bid page number
1.1	The provision of hardware and related services for items of standard computer equipment and peripherals with fixed prices on call-off basis over a period of three (3) years with an option of extension for two (2) additional periods of twelve (12) months each.		
1.2	The Commission requires the Contractor to provide computer equipment (including packaging and delivery) to its offices in Vienna, Austria on call-off basis through Formal Requests for Delivery (FRD).		
1.3	The Commission makes no firm commitment to purchase any specific quantity or make purchases at any specific time during the contract period. However, the supplier must be able to supply equipment as and when requested by the Commission based on the fixed unit prices quoted in the Financial Bid.		
1.4	An indicative demand for planning purposes only constitutes approximately 75 computer systems each year .		
1.5	The Contractor shall notify the Commission immediately in the event of a model change effecting significant product improvement of the computer equipment or obsolescence issues. The Commission will adopt or upgrade to new technologies and standards while phasing out technologies that are legacy, obsolete, expensive to maintain or operate, or have high costs of ownership.		
1.6	The Contractor shall offer, supply and deliver the following items with, unless otherwise explicitly stated, minimum technical specifications as described in Section 2 of the Specifications.		

Deliverable No.	SPECIFICATIONS SECTION: 2 MINIMUM TECHNICAL SPECIFICATIONS	Statement (Yes/No)	Comments and Reference to the Bid page number
2.1.	RUGGEDIZED LOW POWER DC COMPUTER WITH WIDE OPERATING TEMPERATURE RANGE		
Processor	Minimum 6 Cores / 6 Threads, 3 GHz+		
Memory	16 GB minimum		
Data Storage	500-1000 GB Solid State Drive (SSD)		
Power Input	12-36V DC with AC adapter (100-240V AC)		
Power Consumption	< 15W (typical); < 20W (peak)		
Environmental	Operating temperature: 25° C to +60° C Humidity: ≤ 95% , non-condensing Shock & Vibration: IEC 60068-2-27 & IEC 60068-2-64 compliant		
Networking	2 x RJ-45 LAN ports with WoL support		
Interface Ports	2 x RS-232 6 x USB ports minimum 1 x DVI-D port (up to 1920 x 1080) or 1 x DVI-I port (up to 1920 x 1080) 1 x VGA port desired 1 x HDMI port, if DVI-D / DVI-I / VGA ports not available		
Packaging	Not to exceed 300 x 200 x 100 mm; ≤ 5 kg or 215 mm(W) x 272mm (D) x 94mm (H) ≤ 5 kg		
Approvals	CE, FCC, RoHS		
Other	Passive cooling		
Operating System	Linux OS support; Win 10 / 7 as an option		
Warranty	2 years		

Deliverable No.	SPECIFICATIONS SECTION: 2 MINIMUM TECHNICAL SPECIFICATIONS	Statement (Yes/No)	Comments and Reference to the Bid page number
2.2.	RUGGEDIZED LOW POWER DC COMPUTER FOR HIGH VOLUME DATA ACQUISITION		
Processor	Minimum 8 Cores / 8 Threads, 3.6 GHz+		
Memory	16 GB minimum		
Data Storage	500-1000 GB Solid State Drive (SSD)		
Power Input	12-36V DC with AC adapter (100-240V AC)		
Power Consumption	< 20W (typical); < 25W (peak)		
Environmental	Operating temperature: 0° C to +45° C Humidity: ≤ 95%, non-condensing Shock & Vibration: IEC 60068-2-27 & IEC 60068-2-64 compliant		
Networking	2 x RJ-45 LAN ports with WoL support		
Interface Ports	2 x RS-232 6 x USB ports minimum 1 x DVI-D port (up to 1920 x 1080) or 1 x DVI-I port (up to 1920 x 1080) 1 x VGA port desired 1 x HDMI port, if DVI-D / DVI-I / VGA ports not available		
Packaging	Not to exceed 300 x 200 x 100 mm; ≤ 5 kg or 215 mm(W) x 272mm (D) x 94mm (H) ≤ 5kg		
Approvals	CE, FCC, RoHS		
Other	Passive cooling		
Operating System	Linux OS support; Win 10 / 7 as an option		

Deliverable No.	SPECIFICATIONS SECTION: 2 MINIMUM TECHNICAL SPECIFICATIONS	Statement (Yes/No)	Comments and Reference to the Bid page number
2.3.	RUGGEDIZED LOW POWER DC COMPUTER LOW- LOW DATA ACQUISITION OPTION		
Processor	Quad Core processor, 2.4 GHz+		
Memory	8 GB minimum		
Data Storage	500-1000 GB Solid State Drive (SSD)		
Power Input	12-36V DC with AC adapter (100-240V AC)		
Power Consumption	< 12W (typical); < 17W (peak)		
Environmental	Operating temperature: -20° C to +40° C Humidity: ≤ 95% , non-condensing		
Networking	2 x RJ-45 LAN ports with WoL support		
Interface Ports	2 x RS-232 4 x USB ports minimum 1 x DVI-D port (up to 1920 x 1080) or 1 x DVI-I port (up to 1920 x 1080) 1 x VGA port desired 1 x HDMI port, if DVI-D / DVI-I / VGA ports not available		
Packaging	Not to exceed 300 x 200 x 100 mm; ≤ 5 kg or 215 mm(W) x 272mm (D) x 94mm (H) ≤5 kg		
Approvals	CE, FCC, RoHS		
Other	Passive cooling		
Operating System	Linux OS support; Win 10 / 7 as an option		

Deliverable No.	SPECIFICATIONS SECTION: 2 MINIMUM TECHNICAL SPECIFICATIONS	Statement (Yes/No)	Comments and Reference to the Bid page number
2.4.	RUGGEDIZED NOTEBOOK COMPUTER		
Processor	Intel Core i5 @ 2.7 GHz minimum		
Memory	16 GB minimum		
Data Storage	500-1000 GB Solid State Drive (SSD)		
Display	15" anti-reflective display (1920 x 1080 min)		
Environmental	Operating temperature: -20° C to +55° C Humidity: ≤ 95%, non-condensing Vibration and drop resistant		
Networking	2 x RJ-45 LAN ports Integrated WiFi 802.11a/b/g/n/ac		
Interface Ports	3 x USB ports minimum 1 x HDMI or VGA port 1 x RS-232 port is an asset		
Battery	Long life battery pack (99 Wh or equivalent) Secondary battery bay with battery of similar specification		
Power	100-240VAC, 50/60 Hz (EU plug)		
Packaging	Not to exceed 420 x 330 x 70 mm ≤ 5.5 kg weight without packing materials		
Approvals	CE, FCC, RoHS		
Other	Passive cooling MIL-STD-810H certified is a strong asset		
Operating System	Windows 11 with valid license preinstalled		
Deliverable No.	SPECIFICATIONS SECTION: 2 MINIMUM TECHNICAL SPECIFICATIONS	Statement (Yes/No)	Comments and Reference to the Bid page number

2.5.	PERIPHERALS AND ACCESSORIES		
A.	Spare parts for deliverables 2.1, 2.2, 2.3		
RAM	<ul style="list-style-type: none"> • 32 GB DDR4 SO-DIMM WT RAM • 64 GB DDR4 SO-DIMM WT RAM • 32 GB DDR4 ECC SO-DIMM WT RAM • 64 GB DDR4 ECC SO-DIMM WT RAM 		
SSD	<ul style="list-style-type: none"> • 256 GB SSD, TLC, WT, 2.5" SATA • 512 GB SSD, TLC WT, 2.5" SATA • 1 TB SSD, TLC, WT, 2.5" SATA • 480 GB SSD, 3D NAND, 2.5" SATA • 960 GB SSD, 3D NAND, 2.5" SATA 		
Accessories	<ul style="list-style-type: none"> • DIN rail mounting brackets • DP to VGA adapter • DP to HDMI adapter • DP to DVI adapter • AC adapter (100-240 VAC, 50/60 Hz; EU plug) • DVD+/-RW/CDRW Drive • Blu-Ray Burner/DVD+/- Drive 		
B.	Spare parts for deliverables 2.4		
RAM	<ul style="list-style-type: none"> • 32 GB DDR4 RAM • 64 GB DDR4 RAM 		
SSD	<ul style="list-style-type: none"> • 512 GB SATA SSD • 1 TB SATA SSD 		
Accessories	<ul style="list-style-type: none"> • Spare battery • Backpack • AC adapter (100-240 VAC, 50/60 Hz; EU plug) 		

Deliverable No.	SPECIFICATIONS SECTION: 2 MINIMUM TECHNICAL SPECIFICATIONS	Statement (Yes/No)	Comments and Reference to the Bid page number
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2.5.	PERIPHERALS AND ACCESSORIES		
C.	1U 19" rack-mount keyboard tray LCD monitor with built-in KVM switch <ul style="list-style-type: none"> ○ 1U for 19" rack-mountable ○ 19" LCD widescreen with min resolution of 1920 x 1080 ○ Integrated 8 port KVM switch, with interface cables included ○ 100-240 VAC, 50/60Hz ○ HDMI + DVI-D + VGA support is an asset 		
D.	104-Key PC US English QWERTY USB keyboard & Optical USB mouse		
E.	Waterproof fold-up or roll-up keyboard with English QWERTY format and USB interface		
F.	USB Hub Supporting 6 or more USB 3.0 ports, backward compatible with USB 2.0, with interface cable		
G.	FHD Monitor <ul style="list-style-type: none"> ○ 24" - 27" FHD (or similar) monitor with minimum resolution of 1920 x 1080 or better ○ 1 x DVI and/or HDMI + 1 x VGA interfaces minimum 		

Deliverable No.	SPECIFICATIONS SECTION: 2 MINIMUM TECHNICAL SPECIFICATIONS	Statement (Yes/No)	Comments and Reference to the Bid page number
2.6.	MICRO-COMPUTER		
Fit-PC4 PRO	<ul style="list-style-type: none"> • AMD GX-420CA processor with 64-bit quad core processor, 2 GHz (or similar) • 8 GB DDR3 RAM • 1 x SSD drive (64GB+) • 2 x Gbe LAN ports • 2 x USB 3.0, 2 (or more) USB 2.0 • 1 x RS-232 serial port (with DB-9 adapter cable included) • 1 x HDMI (up to 1920 x 1200 @ 60 Hz) display interface • Power supply (100-240 VAC, 50/60 Hz), with EU plug 		
Fitlet2	<ul style="list-style-type: none"> • Intel Atom x7x CPU (or similar) • 8 GB DDR3 RAM • 1 SSD drive (64GB+) • 2 x Gbe LAN pots • 4 x USB ports • 1 x RS-232 serial port (with DB-9 adapter cable included) • 1 x HDMI display interface • Power supply (100-240 VAC, 50/60 Hz), with EU plug 		

Deliverable No.	SPECIFICATIONS SECTION: 3 REMOTE TECHNICAL SUPPORT	Statement (Yes/No)	Comments and Reference to the Bid page number
3	The Contractor shall provide a remote technical support upon request regarding issues relating to installation and integration of operating systems and other software onto computers listed in Section 0. Initial remote technical support response within 48 hours of the Commission's request for assistance is required. The Contractor shall provide hourly or daily technical support.		
Deliverable No.	SPECIFICATIONS SECTION: 4 EXPERT ENGINEERING AND/OR INTEGRATION SERVICES	Statement (Yes/No)	Comments and Reference to the Bid page number
4	As and when required by the Commission, the Contractor shall provide expert Engineering and/or integration services, which may be utilized for assistance of preconfiguring the deliverables with operating system, and or installation of custom Commission-supplied images prior to delivery. The Contractor shall provide person-day support as set out in this Section of the Specifications.		
Deliverable No.	SPECIFICATIONS SECTION: 5 WARRANTY	Statement (Yes/No)	Comments and Reference to the Bid page number
5	All deliverables supplied under sections 2.1 through 2.6 of this Specifications shall be backed-up by a minimum of two (2) year manufacturer warranty. For item 2.4 (Ruggedized Notebook Computer) a 5 years bumper-to-bumper warranty is desired.		
Deliverable No.	SPECIFICATIONS SECTION: 6 DOCUMENTATION	Statement (Yes/No)	Comments and Reference to the Bid page number
6	All documentation, instructions, and user manuals accompanying the hardware deliverables listed under section 2 of the Specifications must be provided in the English language. All deliverables (especially 2.4, containing Lithium-based battery packs) are to be provided with material safety data sheet (MSDSs).		

Deliverable No.	SPECIFICATIONS SECTION: 7 DELIVERY	Statement (Yes/No)	Comments and Reference to the Bid page number
7.1	<p>Delivery to Vienna, Austria</p> <p>Delivery based on DAP (Incoterms 2020) shall be made to the following address:</p> <p>Receiving Area Vienna International Centre (VIC) PTS/CTBTO Wagramer Strasse 5 PO Box 1200 A-1400 Vienna, Austria.</p>		
	<p>It is the responsibility of the Contractor to arrange packaging, insurance and safe delivery of the requested items of equipment to the Commission without any damage and in full accordance with the relevant FRD. The Contractor shall be liable for any damage to equipment until its written acceptance by the Commission.</p>		
	<p>The following additional information shall be provided for items with each delivery, where relevant:</p> <ul style="list-style-type: none"> (a) Material safety data sheet (MSDS); (b) Data sheet and technical specifications for computer battery packs; (c) Country of origin; (d) MIL certificate (if available). 		
7.2	Delivery Date		
a	<p>Unless otherwise agreed at the time of placement of order by the Commission (i.e. issue of FRD), the delivery date must be as soon as possible but not later than 90 calendar days (incl. weekends and/or holidays) from the date of the issuance of the FRD.</p>		

ATTACHMENT 2.1 – COMMERCIAL MATRIX

Currency: EUR or USD

DELIVERABLE	INITIAL PERIOD 3 YEARS UNIT COST	UP TO TWO 12 MONTHS OPTIONAL EXTENSION(S) UNIT COST	COMMENTS
<p>1. RUGGEDIZED LOW POWER DC COMPUTER WITH WIDE OPERATING TEMPERATURE RANGE</p> <p><i>Processor</i> <i>Minimum 6 Cores / 6 Threads, 3 GHz+</i></p> <p><i>Memory</i> <i>16 GB minimum</i></p> <p><i>Data Storage</i> <i>500-1000 GB Solid State Drive (SSD)</i></p> <p><i>Power Input</i> <i>12-36V DC with AC adapter (100-240V AC)</i></p> <p><i>Power Consumption</i> <i>< 15W (typical); < 20W (peak)</i></p> <p><i>Environmental</i> <i>Operating temperature: 25° C to +60° C</i> <i>Humidity: ≤ 95%, non-condensing</i> <i>Shock & Vibration: IEC 60068-2-27 & IEC 60068-2-64 compliant</i></p> <p><i>gNetworking</i> <i>2 x RJ-45 LAN ports with WoL support</i></p> <p><i>Interface</i> <i>2 x RS-232</i></p> <p><i>Ports</i> <i>6 x USB ports minimum</i> <i>1 x DVI-D port (up to 1920 x 1080) or</i> <i>1 x DVI-I port (up to 1920 x 1080)</i> <i>1 x VGA port desired</i> <i>1 x HDMI port, if DVI-D / DVI-I / VGA ports not available</i></p> <p><i>Packaging</i> <i>Not to exceed 300 x 200 x 100 mm; ≤ 5 kg or</i> <i>215 mm(W) x 272mm (D) x 94mm (H) ≤ 5 kg</i></p> <p><i>Approvals</i> <i>CE, FCC, RoHS</i></p> <p><i>Other</i> <i>Passive cooling</i></p> <p><i>Operating System</i> <i>Linux OS support; Win 10 / 7 as an option</i></p>			
SHIPPING	DAP CTBTO, Vienna, Austria		

DELIVERABLE	INITIAL PERIOD 3 YEARS UNIT COST	UP TO TWO 12 MONTHS OPTIONAL EXTENSION(S) UNIT COST	COMMENTS
<p>2 RUGGEDIZED LOW POWER DC COMPUTER FOR HIGH VOLUME DATA ACQUISITION</p> <p><i>Processor</i> <i>Minimum 8 Cores / 8 Threads, 3.6 GHz+</i></p> <p><i>Memory</i> <i>16 GB minimum</i></p> <p><i>Data Storage</i> <i>500-1000 GB Solid State Drive (SSD)</i></p> <p><i>Power Input</i> <i>12-36V DC with AC adapter (100-240V AC)</i></p> <p><i>Power Consumption</i> <i>< 20W (typical); < 25W (peak)</i></p> <p><i>Environmental</i> <i>Operating temperature: 0° C to +45° C</i> <i>Humidity: ≤ 95%, non-condensing</i> <i>Shock & Vibration: IEC 60068-2-27 & IEC 60068-2-64 compliant</i></p> <p><i>Networking</i> <i>2 x RJ-45 LAN ports with WoL support</i></p> <p><i>Interface</i> <i>Ports</i> <i>2 x RS-232</i> <i>6 x USB ports minimum</i> <i>1 x DVI-D port (up to 1920 x 1080) or</i> <i>1 x DVI-I port (up to 1920 x 1080)</i> <i>1 x VGA port desired</i> <i>1 x HDMI port, if DVI-D / DVI-I / VGA ports not available</i></p> <p><i>Packaging</i> <i>Not to exceed 300 x 200 x 100 mm; ≤ 5 kg or</i> <i>215 mm(W) x 272mm (D) x 94mm (H) ≤ 5 kg</i></p> <p><i>Approvals</i> <i>CE, FCC, RoHS</i></p> <p><i>Other</i> <i>Passive cooling</i></p> <p><i>Operating System</i> <i>Linux OS support; Win 10 / 7 as an option</i></p>			
<p>SHIPPING DAP CTBTO, Vienna, Austria (INCOTERMS 2020)</p>			

DELIVERABLE	INITIAL PERIOD 3 YEARS UNIT COST	UP TO TWO 12 MONTHS OPTIONAL EXTENSION(S) UNIT COST	COMMENTS
<p>3 RUGGEDIZED LOW POWER DC COMPUTER LOWDATA ACQUISITION</p> <p><i>Processor</i> <i>Quad Core processor, 2.4 GHz+</i></p> <p><i>Memory</i> <i>8 GB minimum</i></p> <p><i>Data Storage</i> <i>500-1000 GB Solid State Drive (SSD)</i></p> <p><i>Power Input</i> <i>12-36V DC with AC adapter (100-240V AC)</i></p> <p><i>Power Consumption</i> <i>< 12W (typical); < 17W (peak)</i></p> <p><i>Environmental</i> <i>Operating temperature: -20° C to +40° C</i> <i>Humidity: ≤ 95%, non-condensing</i></p> <p><i>Networking</i> <i>2 x RJ-45 LAN ports with WoL support</i></p> <p><i>Interface</i> <i>Ports</i> <i>2 x RS-232</i> <i>4 x USB ports minimum</i> <i>1 x DVI-D port (up to 1920 x 1080) or</i> <i>1 x DVI-I port (up to 1920 x 1080)</i> <i>1 x VGA port desired</i> <i>1 x HDMI port, if DVI-D / DVI-I / VGA ports not available</i></p> <p><i>Packaging</i> <i>Not to exceed 300 x 200 x 100 mm; ≤ 5 kg or</i> <i>215 mm(W) x 272mm (D) x 94mm (H) ≤ 5 kg</i></p> <p><i>Approvals</i> <i>CE, FCC, RoHS</i></p> <p><i>Other</i> <i>Passive cooling</i></p> <p><i>Operating System</i> <i>Linux OS support; Win 10 / 7 as an option</i></p>			
<p>SHIPPING</p> <p>DAP CTBTO, Vienna, Austria</p>			

DELIVERABLE		INITIAL PERIOD 3 YEARS UNIT COST	UP TO TWO 12 MONTHS OPTIONAL EXTENSION(S) UNIT COST	COMMENTS
4 RUGGEDIZED NOTEBOOK COMPUTER				
<i>Processor</i>	<i>Intel Core i5 @ 2.7 GHz minimum</i>			
<i>Memory</i>	<i>16 GB minimum</i>			
<i>Data Storage</i>	<i>500-1000 GB Solid State Drive (SSD)</i>			
<i>Display</i>	<i>15" anti-reflective display (1920 x 1080 min)</i>			
<i>Environmental</i>	<i>Operating temperature: -20° C to +55° C Humidity: ≤ 95%, non-condensing Vibration and drop resistant</i>			
<i>Networking</i>	<i>2 x RJ-45 LAN ports Integrated WiFi 802.11a/b/g/n/ac</i>			
<i>Interface Ports</i>	<i>3 x USB ports minimum 1 x HDMI or VGA port 1 x RS-232 port is an asset</i>			
<i>Battery</i>	<i>Long life battery pack (99 Wh or equivalent) Secondary battery bay with battery of similar specification</i>			
<i>Power</i>	<i>100-240VAC, 50/60 Hz (EU plug)</i>			
<i>Packaging</i>	<i>Not to exceed 420 x 330 x 70 mm ≤ 5.5 kg weight without packing materials</i>			
<i>Approvals</i>	<i>CE, FCC, RoHS</i>			
<i>Other</i>	<i>Passive cooling MIL-STD-810H certified is a strong asset</i>			
<i>Operating System</i>	<i>Windows 11 with valid license preinstalled</i>			
SHIPPING	DAP CTBTO, Vienna, Austria (INCOTERMS 2020)			

DELIVERABLE		INITIAL PERIOD 3 YEARS UNIT COST	UP TO TWO 12 MONTHS OPTIONAL EXTENSION(S) UNIT COST	COMMENTS
5 PERIPHERALS AND ACCESSORIES				
A.	Spare parts for deliverables 2.1, 2.2, 2.3			
RAM	<ul style="list-style-type: none"> • 32 GB DDR4 SO-DIMM WT RAM • 64 GB DDR4 SO-DIMM WT RAM • 32 GB DDR4 ECC SO-DIMM WT RAM • 64 GB DDR4 ECC SO-DIMM WT RAM 			
SSD	<ul style="list-style-type: none"> • 256 GB SSD, TLC, WT, 2.5" SATA • 512 GB SSD, TLC WT, 2.5" SATA • 1 TB SSD, TLC, WT, 2.5" SATA • 480 GB SSD, 3D NAND, 2.5" SATA • 960 GB SSD, 3D NAND, 2.5" SATA 			
Accessories	<ul style="list-style-type: none"> • DIN rail mounting brackets • DP to VGA adapter • DP to HDMI adapter • DP to DVI adapter • AC adapter (100-240 VAC, 50/60 Hz; EU plug) • DVD+/-RW/CDRW Drive • Blu-Ray Burner/DVD+/- Drive 			
B.	Spare parts for deliverables 2.4			
RAM	<ul style="list-style-type: none"> • 32 GB DDR4 RAM • 64 GB DDR4 RAM 			
SSD	<ul style="list-style-type: none"> • 512 GB SATA SSD • 1 TB SATA SSD 			
Accessories	<ul style="list-style-type: none"> • Spare battery • Backpack • AC adapter (100-240 VAC, 50/60 Hz; EU plug) 			
SHIPPING	DAP CTBTO, Vienna, Austria			

DELIVERABLE		INITIAL PERIOD 3 YEARS UNIT COST	UP TO TWO 12 MONTHS OPTIONAL EXTENSION(S) UNIT COST	COMMENTS
6 PERIPHERALS AND ACCESSORIES				
C.	1U 19" rack-mount keyboard tray LCD monitor with built-in KVM switch <ul style="list-style-type: none"> ○ 1U for 19" rack-mountable ○ 19" LCD widescreen with min resolution of 1920 x 1080 ○ Integrated 8 port KVM switch, with interface cables included ○ 100-240 VAC, 50/60Hz ○ HDMI + DVI-D + VGA support is an asset 			
D.	104-Key PC US English QWERTY USB keyboard & Optical USB mouse			
E.	Waterproof fold-up or roll-up keyboard with English QWERTY format and USB interface			
F.	USB Hub Supporting 6 or more USB 3.0 ports, backward compatible with USB 2.0, with interface cable			
G.	FHD Monitor <ul style="list-style-type: none"> ○ 24" - 27" FHD (or similar) monitor with minimum resolution of 1920 x 1080 or better ○ 1 x DVI and/or HDMI + 1 x VGA interfaces minimum 			
SHIPPING	DAP CTBTO, Vienna, Austria (INCOTERMS 2020)			

DELIVERABLE	INITIAL PERIOD 3 YEARS UNIT COST	UP TO TWO 12 MONTHS OPTIONAL EXTENSION(S) UNIT COST	COMMENTS
7 MICRO-COMPUTER Fit-PC4 PRO <ul style="list-style-type: none"> • AMD GX-420CA processor with 64-bit quad core processor, 2 GHz (or similar) • 8 GB DDR3 RAM • 1 x SSD drive (64GB+) • 2 x Gbe LAN ports • 2 x USB 3.0, 2 (or more) USB 2.0 • 1 x RS-232 serial port (with DB-9 adapter cable included) • 1 x HDMI (up to 1920 x 1200 @ 60 Hz) display interface • Power supply (100-240 VAC, 50/60 Hz), with EU plug 			
Fitlet2 <ul style="list-style-type: none"> • Intel Atom x7x CPU (or similar) • 8 GB DDR3 RAM • 1 SSD drive (64GB+) • 2 x Gbe LAN pots • 4 x USB ports • 1 x RS-232 serial port (with DB-9 adapter cable included) • 1 x HDMI display interface Power supply (100-240 VAC, 50/60 Hz), with EU plug 			
SHIPPING	DAP CTBTO, Vienna, Austria (INCOTERMS 2020)		

DELIVERABLE	INITIAL PERIOD 3 YEARS UNIT COST (DAILY RATE)	UP TO TWO 12 MONTHS OPTIONAL EXTENSION(S) UNIT COST (DAILY RATE)	COMMENTS
- EXPERT ENGINEERING AND/OR INTEGRATION SERVICES			
DELIVERABLE	INITIAL PERIOD 3 YEARS UNIT COST (DAILY AND HOURLY RATE)	UP TO TWO 12 MONTHS OPTIONAL EXTENSION(S) UNIT COST (DAILY AND HOURLY RATE)	COMMENTS
- REMOTE TECHNICAL SUPPORT			

NOTE: Bidder may include additional lines for any alternative or optional items that may be deemed applicable clearly marked as ALTERNATIVE and/or OPTIONAL and relevant justification for such offerings.