# *ANNEX II + III:* TECHNICAL SPECIFICATIONS + TECHNICAL OFFER

**Contract title: Supply of ITC equipment for the purposes and functioning of the scientific laboratories of the BLUE GROWTH Research centre at “Prof. D-r Asen Zlatarov” University of Burgas**

**Lot 1** Supply of computer and presentation equipment for the Water Pollution Monitoring, Aquatic Ecosystem Modelling and Aquaculture and Biotechnology Labs

**p 1 /…**

**Publication reference:** CB005.3.12.001 - LP – Supply 5

**Columns 1-2 should be completed by the contracting authority**

**Columns 3-4 should be completed by the tenderer**

**Column 5 is reserved for the evaluation committee**

Annex III - the contractor's technical offer

The tenderers are requested to complete the template on the next pages:

* Column 2 is completed by the contracting authority shows the required specifications (not to be modified by the tenderer),
* Column 3 is to be filled in by the tenderer and must detail what is offered (for example the words ‘compliant’ or ‘yes’ are not sufficient)
* Column 4 allows the tenderer to make comments on its proposed supply and to make eventual references to the documentation

The eventual documentation supplied should clearly indicate (highlight, mark) the models offered and the options included, if any, so that the evaluators can see the exact configuration. Offers that do not permit to identify precisely the models and the specifications may be rejected by the evaluation committee.

The offer must be clear enough to allow the evaluators to make an easy comparison between the requested specifications and the offeredspecifications.

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| --- | --- | --- | --- | --- |
| **1.**  **Item number** | **2.**  **Specifications required** | **3.**  **Specifications offered** | **4.**  **Notes, remarks,  ref to documentation** | **5.**  **Evaluation committee’s notes** |
| **1.** | **Server** – 1 pc  Processors: 2 pcs with min 16 cores, frequency min 2.30 Ghz, 22 MB cache Memory: 12 x 32GB 2400/2666MHz DDR4 Reg. ECC (number of DIMM modules has to be optimal to the processor controllers) Hard disk: 4 x 1.92TB Server/Enterprise SSD, SATA, 2.5", min, reading speed 560MB/s, min. recording speed 510MB/s; Resistance > 7 PBW RAID controller: 8-port, 12Gb/s per port, RAID 0, 1, 5,6,10, 50, 60; с 2GB DDR3 cache net controller: 2x RJ45 1GbE Ethernet LAN ports, 1x RJ45 Dedicated IPMI LAN port, 1x 10Gbit SFP+ power: 2 x min 720W PSU, Redundant Frame: 1U, rackmount, maintenance of min 8 pcs hot-swap SATA/SAS disks Hypervisors: Citrix XenServer, XCP-ng |  |  |  |
| **2.** | **Laptop – 5 pcs.**  Software: Ubuntu Linux 18.04 Processor 2.40 GHz, 8 MB cache Chipset: Intel HM370 (equivalent performance) Hard disk, type SSD&SATA hard disk, GB 256GB M.2 PCIe NVMe SSD (Boot) + 1000GB 5.4krpm 2.5" SATA Display, inch 15.6'' (39.62 cm) Display resolution 1920x1080 Video card NVIDIA GeForce GTX 1650 Video card, МВ 4096MB GDDR5 Network Realtek RTL8111 Ethernet controller (integrated on system board) 10/100/1000 Mbps Wireless network 802.11ac 1x1 WiFi M.2 slot: One M.2 slot for the 2230 Wi-Fi and Bluetooth combo card, One M.2 slot for Solid-state drive (2230/2280) USB port 1 USB 3.1 Gen 2 Type-C port with DisplayPort, 1 USB 3.1 Gen 1, 2 USB 2.0 HDMI port HDMI Ethernet (RJ-45) port RJ-45 Web camera, MP WebCam |  |  |  |
| **3.** | **Projector** – 3 pcs.  Technology 1-Chip DLP, 0.55" diagonal x 1 Brightness, lumens 3100 lumens (2450 Eco Mode) Contrast 10 000:1 (full on / full off) Resolution 1024 x 768 (XGA), 786 432 pixels Size, inch 60" - 120" (122 x 91cm - 244 x 183cm) Supported formats 4:3 Sound 10W RMS, Monaural Inputs Analogue RGB 1/2 (Mini D-Sub 15-pin), S Video (Mini-Din4), Audio 1 (3.5mm stereo minijack), Service port USB Type B, Projector Control (RS-232C Mini D-Sub 9-pin), LAN Network Port - RJ-45 (100BASE-TX / 10BASE-T) Output (3.5mm stereo mini-jack (variable level)) HDMI HDMI v1.3 (with Deep Colour), MHL Input Lamp, W 210W Super High Pressure Mercury Lamp Lamp life, h 4000 (normal), 6000 (Eco) |  |  |  |
| **4.** | **Projection screen – 3 pcs.**  Diagonal, inch 135" (342.9 cm) measurement of the screen (w,h),cm 298.0 x 167.6 Format 16:9 |  |  |  |
| **5.** | **Communication system** – 1 pcs.  Switch, type Fixed Port Total number of ports 24 main ports, type 20x10/100/1000Base-T Uplink ports 4 dual personality Management: Web-based GUI; Command Line Interface (CLI); Telnet; TFTP; SNMP v1/v2c/v3; SNMP over IPv6 ; SNMP Traps; BootP/DHCP Client; Multiple Configurations; Debug Command Stackable: 2 dedicated stacking ports per switch; Power Optional Redundant Power Supply: DPS-200 MAC addresses 16000 MAC address table size VLAN (number, standards): IEEE 802.1Q Tagged VLAN; IEEE 802.1v Protocol VLAN; VLAN Group: max. 4K VLAN Groups; GVRP: max. 255 Dynamic VLAN Groups; Voice VLAN; MAC-based VLAN; ISM VLANAsymmetric VLAN; Private VLAN; VLAN Trunking QoS Installation optional: Rackmount |  |  |  |
| **6.** | **UPS – 2 pcs.**  Input power, V 230V Output power, VA 1600 VA Number of slots 8 Type of slots (4) Schuko Outlets with surge protection and backup + (4) Schuko Outlets with surge protection, USB Protection IEC 62040-1, IEC 60950-1, IEC 62040-2, CB Report, CE mark, Surge protection device compliant with IEC 61643-1 technology Off-Line Others Data Line Protection: Tel/Fax/Modem/Internet and Ethernet |  |  |  |
| **7.** | **Desktop computer – 3 pcs.**  Processor: Frequency 3.40 GHz, 8 MB cache Memory: 16 GB DDR4 2666MHz Hard disk, GB 512GB M.2 PCIe NVMe + 1000GB HDD 7200 rpm Video card NVIDIA Quadro P620, 2GB, 4 mDP to DP adapter Network: Network RJ-45 Interface: 2 USB 2.0, Type A, 2 USB 2.0 Type A (with SmartPower), 1 USB 3.1, Type C [10Gb], 5 USB 3.1, Type A, 2 PS2, 2 DisplayPort, RJ45, 2 Universal Audio Jack, Lock slot Monitor Screen, inch 23.8" (60.45 cm) Type of screen Flat Widescreen 16:9 Technology LED matrix type IPS Display type Anti-Glare Sensor display- Resolution 1920x1080 Synchronization type Standard HDMI HDMI Display port DisplayPort VGA VGA USBhub 3x USB3.0 (one up stream, two down stream) |  |  |  |
| **8.** | **Laser all in one device - 2 pcs.**  Interface Hi-Speed USB 2.0 Network 10Base-T / 100Base-TX Wireless network IEEE 802.11b / g / n Wi-Fi Double side printing Automatic incl. Booklet printing function Load, pages per month: 50 000 Compatible with: Windows/Mac OS/Linux; Mobile Device Compatibility (AirPrint, Android Print Service Plugin, Cortado Cloud Print, Google Cloud Print 2.0, iPrint&Scan) available functions: Print, Copy, Scan and Fax Printing speed black, ppm: 40 ppm (A4), 20 ipm (2-sided, A4), FPOT: Less than 7.2 seconds Printer resolution: 1200 x 1200 dpi Scanner, type B/W & Color, flatbed & ADF, Dual CIS (Contact Image Sensor) Scanner resolution: 1200 x 1200 dpi (from Scanner Glass); 600 x 600 dpi (from ADF); Copy speed black, cpm: 40 cpm Copy resolution: 1200 x 600 dpi number of copies Sorts/Stacks: 99 pages.  The equipment should be guaranteed for at least 2 year against any manufacturing and assembly defects. |  |  |  |
| **9.** | **Laser all in one device - 1 pc**  Available functions Print, copy, scan and fax  Printing speed black, ppm: 46pm (A4, normal); FPOT: As fast as 6.7 sec (A4, ready), As fast as 12 sec (A4, sleep)  Printing speed colour,ppm: 46 ppm (A4, normal); FPOT: As fast as 7.1 sec (A4, ready), As fast as 12.4 sec (A4, sleep)  Printer resolution Up to 1200 x 1200 dpi  Scanner, type: Flatbed, ADF; Scan technology: Charge Coupled Device (CCD) Flatbed; Contact Image Sensor (CIS) ADF  Scanner resolution: 600x600 dpi (optical)  Copy speed black, cpm: 46 cpm (A4)  Copy speed colour, cpm: 6 cpm (A4)  Copy resolution 600 x 600 dpi  Number of copies: 9999 копия  Interface  1 Hi-Speed Device USB 2.0; 2 Hi-Speed USB 2.0 rear host ports; 1 walkup USB 2.0 host port;  1 Hardware Integration Pocket 2nd generation (HIP2)  Network: Gigabit/Fast Ethernet 10/100/1000 Base-TX network port; Mobile printing capability: Apple AirPrint; Google Cloud Print; HP ePrint; Mopria Certified; Roam capable for easy printing or equivelent  Wireless network 802.11a/b/g/n  Media, type: Paper (plain, heavy, extra heavy, glossy, light, recycle, tough), envelopes, labels, glossy film, cardstock, transparencies  Double side printing Automatic (standard)  Load, pages per month: 200 000 pages A4;  Compatible with: Windows, Apple macOS, Mobile OS: iOS, Android or equivelent  The equipment should be guaranteed for at least 2 year against any manufacturing and assembly defects. |  |  |  |