



## SPECIFICATION

### Workstation

#### 1. Scope

- 1.1 This specification describes the requirements for a stand-alone computer system for the primary purpose of running in the large scale, massively parallel, computer programs (such as MCNP) to simulate various physics processes.
- 1.2 The end-user of the Workstation is Nuclear Research Centre, National University of Mongolia, Ulaanbaatar, Mongolia, (hereinafter referred to as the 'End-User')

#### 2. Requirements

The Workstation shall meet the following requirements:

- 2.1. CUDA Parallel-Processing Cores shall be 12,000 or equivalent;
- 2.2. NVIDIA Tensor Cores shall be 1,500 or equivalent;
- 2.3. GPU Memory shall be 120 GB GDDR6 with ECC or equivalent;
- 2.4. Graphics Bus shall be PCI Express 3.0 x 16 or equivalent;
- 2.5. Shall have maximum Memory Bandwidth: 720 GB/s;
- 2.6. Shall have each GPU unit of QUADRO RTX 8000 series or equivalent;
- 2.7. GPU units shall be connected through NVLINK HB BRIDGE;
- 2.8. CPU shall have 12 core or higher and 3.2 GHz or higher clock;
- 2.9. The Memory shall be 256 GB with DDR4 ECC or higher
- 2.10. Hard drive shall have 12 TB SSD 6.0GB/s or higher;
- 2.11. Operating system shall be Ubuntu Desktop - 20.04.2.0 LTS or later;
- 2.12. Shall include Standard US qwerty keyboard with USB connector;
- 2.13. Shall include Optical mouse with 2000 dpi or more with USB connector;
- 2.14. Shall include (2) two 24-inch LED monitors with HDMI connector;
- 2.15. Shall operate with 220-240V;
- 2.16. Shall include all accessories to allow immediate operation of the Workstation; and

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2.17. Shall include complete set(s) of cables for interconnection of all components.

## 2. Marking

The Workstation shall be clearly marked with the following information:

Manufacturer

Model number

Serial number

## 3. Packing

The Workstation, for the shipment to the End-user, shall be packed in accordance with international standards that are applicable for the shipment by air of this kind of equipment.

## 4. Quality Requirements

5.1 The Workstation shall be manufactured in accordance with the Supplier's ISO quality assurance system or an equivalent quality assurance system.

5.2 The Supplier shall document the compliance with this quality assurance system.

## 5. Testing and Acceptance

6.1. The Workstation, prior to shipment, shall be tested for conformance of the performance specifications and the minimum requirements specified herein.

The results of the testing of the computer system shall be documented.

## 6. Deliverable Data Items

The Contractor shall provide a manual in the English language. The copy shall be provided electronically.

The Contractor will provide a Recovery DVD.

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