

SI No. 1	Configuration A, Quantity = 22 Vendor must supply the workstations each compulsorily complying to the following specifications or, to a better configuration		
1.	Specification	Value	Compliance
1.1	Processor Base Frequency (GHz) :	2.4, or better	
1.2	Number of Cores per Processor :	28	
1.3	Operating System (Factory Pre-Loaded) :	Windows 11 Professional	
1.4	RAM Size (GB) :	256	
1.5	Memory RAM type	DDR4 or DDR5, with ECC	
1.6	Form Factor :	Desktop	
1.7	Graphic Card Description :	a) Each workstation should be configured with NVIDIA® RTX A5000 24GB or Higher Graphics	
		b) Vendor may note that the system will be hosting mission critical software driven over GUI supported via Nvidia Graphics capability. Vendor shall ensure the offered workstation platform is compatible with Nvidia Graphics card and the workstation product is listed under compatible product of Graphics Card's OEM.	
1.8	Hard Drive Capacity (GB) :	2TB usable Disk capacity with SSD/NVMe and RAID-1 Protection	
1.9	Display Monitor for each workstation	The monitor shall have following specification or better a) 27 inch Monitor b) Panel Type/ Surface: IPS, LED backlight, antiglare Display c) Aspect Ratio: 16:9 d) Resolution with 4K UHD (3840 x 2160 @ 60 Hz) or, better e) Viewing angle: Upto 178/ 178 degree f) Brightness: 400 nits or, better g) Contrast Ratio: 2000:1 static; 2000000:1 dynamic h) Interface: Compatible with the offered workstation model suitable to drive dual display configuration. i) Support for Tilt, Swivel and Pivot rotation j) Support for VESA mount (100mm x 100mm) k) Shall support for Tilt, Swivel and Pivot rotation. l) Environment: RoHS Compliance or Mercury Free display. m) Power Supply rating: AC 120/230 V (50/60 Hz)	
1.10	Display Connectivity	a) Support 1 HDMI 2.0, 1 DisplayPort 1.4 b) Offered workstation shall support dual monitor configuration. Required video cables and converters to be offered along with the monitor. All the cables and converters shall be OEM certified component. c) Vendor to provide 1 Mini DisplayPort to DisplayPort Adapter	
1.11	Software	Licensed 2021 Versions of Microsoft Word, Excel, PowerPoint	
1.12	Keyboard &	standard Keyboard & Mouse	

	Mouse		
1.13	Certification	<p>a) Workstation should support required device drivers & certified for Windows, RHEL, SUSE Linux, Ubuntu. Vendor should submit evidence certificate by OEM.</p> <p>b) Workstation shall be</p> <ol style="list-style-type: none"> i. TPM 2.0 Certified, ii. UEFI Secure Boot iii. The workstation shall support Chassis Intrusion Detection capability and shall have Chassis Intrusion Switch to detect such incident. Vendor to attach configuration manual as an evidence of features built in the hardware. <p>c) Compliance to BIS norms for safety standard IS 13252:2010 or equivalent BIS standard or Equivalent certification as mandated by Govt. of India.</p> <p>d) RoHS India[E-Waste (Management) Rules, 2016] certification or Equivalent certification Energy efficiency certification – As per Bureau of Energy Efficiency, Govt of India Guideline for Computer Equivalent certification</p>	
1.14	Hardware	<p>WS, Display (Monitor), Keyboard and mouse shall be from same OEM</p> <p>BIOS Thermal management Capability – The offered workstation must have BIOS feature for thermal management of the chassis. The feature shall allow the system to generate alert when the chassis temperature exceed threshold and shall be able to shutdown the hardware before electronic components are damaged. The feature must be available as a native BIOS feature and vendor shall provide required OEM datasheet for verification of the feature during technical evaluation.</p>	
1.15	Power	Power – Power supply with 80% or better efficiency, Compatible with standard rating 230 volt/50 Hz. System shall be supplied with Energy Efficiency, Energy STAR certified and EPEAT Gold Registered. Necessary IEC type power cables compatible to Indian electric sockets to be provided.	
1.16	Operating Condition	<p>Temperature range 5° to 40°C</p> <p>R-Humidity range 8% to 85%</p>	

SI No.	Configuration B, Quantity = 7		
2	Vendor must supply the workstations each compulsorily complying to the following specifications or, to a better configuration		
2.	Specification	Value	Compliance
2.1	Processor Base Frequency (GHz) :	2.4, or better	
2.2	Number of Cores per Processor :	28	
2.3	Operating System (Factory Pre-Loaded) :	Redhat Linux	
2.4	RAM Size (GB) :	256	
2.5	Memory RAM type	DDR4 or DDR5, with ECC	

2.6	Form Factor :	Desktop	
2.7	Graphic Card Description :	a) Each workstation should be configured with 4GB or Higher Graphics	
		b) Vendor may note that the system will be hosting mission critical software driven over GUI supported via Nvidia Graphics capability. Vendor shall ensure the offered workstation platform is compatible with Nvidia Graphics card and the workstation product is listed under compatible product of Graphics Card's OEM.	
2.8	Hard Drive Capacity (GB) :	2TB usable Disk capacity with SSD/NVMe and RAID-1 Protection	
2.9	Display Monitor for each workstation	<p>The monitor shall have following specification or better</p> <ul style="list-style-type: none"> a) 27 inch Monitor b) Panel Type/ Surface: IPS, LED backlight, antiglare Display c) Aspect Ratio: 16:9 d) Resolution with 4K UHD (3840 x 2160 @ 60 Hz) or, better e) Viewing angle: Upto 178/ 178 degree f) Brightness: 400 nits or, better g) Contrast Ratio: 2000:1 static; 2000000:1 dynamic h) Interface: Compatible with the offered workstation model suitable to drive dual display configuration. i) Support for Tilt, Swivel and Pivot rotation j) Support for VESA mount (100mm x 100mm) k) Shall support for Tilt, Swivel and Pivot rotation. l) Environment: RoHS Compliance or Mercury Free display. m) Power Supply rating: AC 120/230 V (50/60 Hz) 	
2.10	Display Connectivity	<ul style="list-style-type: none"> a) Support 1 HDMI 2.0, 1 DisplayPort 1.4 b) Offered workstation shall support dual monitor configuration. Required video cables and / convertors to be offered along with the monitor. All the cables and converters shall be OEM certified component. c) Vendor to provide 1 Mini DisplayPort to DisplayPort Adapter 	
2.11	Software	Licensed 2021 Versions of Microsoft Word, Excel, PowerPoint	
2.12	Keyboard & Mouse	standard Keyboard & Mouse	
2.13	Certification	<ul style="list-style-type: none"> a) Workstation should support required device drivers & certified for Windows, RHEL, SUSE Linux, Ubuntu. Vendor should submit evidence certificate by OEM. b) Workstation shall be <ul style="list-style-type: none"> i. TPM 2.0 Certified, ii. UEFI Secure Boot iii. The workstation shall support Chassis Intrusion Detection capability and shall have Chassis Intrusion Switch to detect such incident. Vendor to attach configuration manual as an evidence of features built in the hardware. c) Compliance to BIS norms for safety standard IS 13252:2010 or equivalent BIS standard or Equivalent certification as mandated by Govt. of India. d) RoHS India[E-Waste (Management) Rules, 2016] certification or Equivalent certification e) Energy efficiency certification – As per Bureau of Energy Efficiency, Govt of India Guideline for Computer Equivalent certification 	

2.14	Hardware	WS, Display (Monitor), Keyboard and mouse shall be from same OEM	
		BIOS Thermal management Capability – The offered workstation must have BIOS feature for thermal management of the chassis. The feature shall allow the system to generate alert when the chassis temperature exceed threshold and shall be able to shutdown the hardware before electronic components are damaged. The feature must be available as a native BIOS feature and vendor shall provide required OEM datasheet for verification of the feature during technical evaluation.	
2.15	Fan	Vendor must note that, the offered workstation must have front and rear fan loaded on the chassis. Workstation OEM which offer chassis fan as optional feature, must load fans on front and rear both panel for best cooling feature.	
2.16	Power	Power – Power supply with 80% or better efficiency, Compatible with standard rating 230 volt/50 Hz. System shall be supplied with Energy Efficiency, Energy STAR certified and EPEAT Gold Registered. Necessary IEC type power cables compatible to Indian electric sockets to be provided.	
2.17	Operating Condition	Temperature range 5° to 40°C R-Humidity range 8% to 85%	

SI No.	Common Specifications		
3.	Specification	Value	Compliance
3.1	Network and Ports	Each workstation should contain at least a) 2 X RJ-45 (10/100/1000 Mbps) b) 2 x10G SPF+ c) 1 xHDMI 2.0 d) 2 xDisplay Port e) 2 x USB Type-C 10 Gbps or, better f) 4 x USB Type-A 5 Gbps or, better	

SI No.	Delivery and Installation terms	
4	Specification	Compliance
4.1	a) Vendor shall deliver, install & commission the systems as per the configuration at SSA Control Centre , Peenya, Bangalore b) System installation, commissioning is the sole responsibility of the vendor	
4.2	Installation should include a) Verification of delivered items b) Unpacking c) Installation as per the configuration including the OS and drivers, system libraries and channel bonding. d) Registration of OS e) Verification of all hardware components f) Integration with the SSA control centre network. Vendor shall provide installation and acceptance report as a part of system installation on successful completion of system acceptance by end users	
4.3	All accessories and tools required to complete the installation is the responsibility	

	of the vendor.	
4.4	Vendor shall resolve all issues related to compatibility of hardware, drivers, and other system software with RHEL / Windows 11 Pro	
4.5	Vendor shall provide required skilled man-power during system installation and acceptance at SSA Control Centre , Peenya, Bangalore	
4.6	At the time of installation and commissioning of the system if it is found that some additional hardware accessories or software items with licenses are required to complete the configuration which were not included in the vendor's original list of deliverables, then vendor is required to supply such items to ensure the completeness of the configuration at no extra cost to ISTRAC. Vendor should ensure completeness of the list of deliverables in the offer to avoid such discovery during installation.	
4.7	System Acceptance Criteria: Vendor must meet the following acceptance criteria post-delivery of the system at ISTRAC. If vendor is unable to meet the acceptance criteria with-in two weeks time frame after delivery of the product at ISTRAC, the complete product shall be rejected by ISTRAC – <ul style="list-style-type: none"> a) All the workstations must qualify the technical specification as mentioned in the tender. b) The support portal shall be verified for availability of warranty details mentioned in the portal. c) ISTRAC will test the graphics compatibility via – <ul style="list-style-type: none"> i. Graphics OEM provided tools downloaded from OEM website for testing graphics compatibility ii. RHEL distributed tools for verification of graphics durability iii. Loop testing to rule out any display freezing or graphic distortion during. 	
4.8	It must be noted that, it is responsibility of the vendor along with the OEM of the workstation and Graphics card to have required backend arrangement to resolve all the incompatibility issues if any found during acceptance test.	

Warranty terms		
Sl No.	Specification	Compliance
5		
5.1	Vendor shall provide 5 years of comprehensive back to back 24 x 7 support with 4 hours or less response time from the OEM. The part number of the warranty shall be exclusively mentioned in the bill of quantities/materials. Vendor shall only quote for OEM part number for direct OEM support and indirect support via third party will not be acceptable.	
5.2	In addition to the support from OEM , the vendor has to provide support with response time less than 4 hours onsite.	
5.3	Vendor shall ensure that during the entire duration of the warranty, vendor is responsible for logging a support call with OEM, troubleshooting, log collection, fault diagnosis, failed part replacement, preventive maintenance, corrective maintenance and required health checks to ensure systems are working continuously 24 x 7.	
5.4	Manufacturers support package for Warranty and technical support only should be quoted. The specific part number for such support should be clearly indicated. Vendor shall not replace manufacturer's warranty with their own warranty package.	
5.5	Technical Support to cover the following <ul style="list-style-type: none"> a) Access to technical support information for resolving problems, configuration issues, utilities etc. b) Firmware & device drivers for RHEL / Windows as applicable and updates through a single portal under OEM domain. c) Access to technical literature relating to the system 	

	<ul style="list-style-type: none"> d) Onsite technical support in trouble-shooting and resolving the issue. e) The support portal shall enable ISTRAC to register each product by OEM serial number and access the patch updates and security updates for various hardware complements and register support calls. f) The details of the self-support URL shall be provided along with the technical offer for verification. 	
5.6	Warranty on entire system shall start from the acceptance of the product.	
5.7	The warranty details after acceptance of the product by ISTRAC must reflect on OEM website as per warranty SLA.	
5.8	Failed HDD shall not be returned back during warranty replacement	

SI No.	General Terms and Conditions	
6	Specification	Compliance
6.1	Vendor shall quote for "Make in India" workstations only.	
6.2	Workstation, Display (Monitor), Keyboard and mouse shall be from same OEM	
6.3	The design and production of critical subsystems like system motherboard, controllers etc., shall be under the control of manufacturer & international quality certified realization process.	
6.4	Vendor shall go through all the specifications and instructions for better understanding of the requirements. Vendors shall quote for the items mentioned in the tender or better systems to achieve best performance & quality	
6.5	The specifications mentioned under 'Warranty terms', 'Delivery and installation terms' and 'General terms and conditions' have to be compulsorily met by the vendor.	
6.6	Vendor should quote for MII products only	
6.7	Vendor should submit a detailed technical BOM clearly indicating the manufacturer's part number, description and quantity of the items offered. The part number offered by vendor shall match with part number of the hardware in the OEM datasheet. Vendor may note that offers submitted with-out detailed technical BOM and required datasheet, cannot be technically evaluated and shall be rejected from further processing.	
6.8	<p>Vendor shall submit following declarations from OEM on OEM's letter head -</p> <ul style="list-style-type: none"> a. The vendor is authorized for participating in the bid b. The offered hardware is not an obsolete product c. The OEM does not have any objection on retention of failed media during warranty replacements d. The offered hardware, software component support / warranty / SLA is back to back supported by the OEM during the warranty period <p>All the above points are mandatory to be in OEM Letter Head</p>	
6.9	Vendor shall submit detailed technical documents (datasheet, configuration guide, installation guide) and shall share reference to OEM website for verification of the datasheet. ISTRAC shall verify the datasheet submitted in the offer against the datasheet available in OEM website to verify the authenticity of the datasheet submitted along with the offer.	
6.10	For all items in the list of deliverables offered by the vendor, the manufacturer's part number should be clearly indicated. Offer of items without clear specification of part number will not be acceptable.	
6.11	Vendor should indicate the part nos. of the deliverable items clearly. The part numbers & description of the items in the offer should match the part numbers & description of the items mentioned in the manufacturer's spec sheets.	
6.12	Vendor shall ensure that required power cables IEC-C13 shall be offered with workstations and monitors .	

6.13	Complete technical documentation justifying the compliance should be enclosed along with their offer. Offer which are incomplete are liable to be considered noncompliant	
6.14	Systems from the manufacturers who primarily assemble systems by getting components/ subsystems from different suppliers and who do not have direct control over the production process/ quality of the items so obtained, will not be acceptable.	