



UNIVERSITY OF SCIENCE AND TECHNOLOGY OF SOUTHERN PHILIPPINES

Alubijid | Balubal | Cagayan de Oro | Claveria | Jasaan | Oroquieta | Panaon | Villanueva

OFFICE OF THE BIDS AND AWARDS COMMITTEE I

Section VII. Technical Specifications

Notes for Preparing the Technical Specifications

A set of precise and clear specifications is a prerequisite for Bidders to respond realistically and competitively to the requirements of the Procuring Entity without qualifying their bids. In the context of Competitive Bidding, the specifications (e.g. production/delivery schedule, manpower requirements, and after-sales service/parts) must be prepared to permit the widest possible competition and, at the same time, present a clear statement of the required standards of workmanship, materials, and performance of the goods and services to be procured. Only if this is done will the objectives of transparency, equity, efficiency, fairness and economy in procurement be realized, responsiveness of bids be ensured, and the subsequent task of bid evaluation and post-qualification facilitated. The specifications should require that all items, materials and accessories to be included or incorporated in the goods be new, unused, and of the most recent or current models, and that they include or incorporate all recent improvements in design and materials unless otherwise provided in this Contract.

Samples of specifications from previous similar procurements are useful in this respect. The use of metric units is encouraged. Depending on the complexity of the goods and the repetitiveness of the type of procurement, it may be advantageous to standardize the General Technical Specifications and incorporate them in a separate subsection. The General Technical Specifications should cover all classes of workmanship, materials, and equipment commonly involved in manufacturing similar goods. Deletions or addenda should then adapt the General Technical Specifications to the particular procurement.

Prudence must be exercised in drafting specifications to ensure that they are not restrictive. In the specification of standards for equipment, materials, and workmanship, recognized Philippine and international standards should be used as much as possible. Where other particular standards are used, whether national standards or other standards, the specifications should state that equipment, materials, and workmanship that meet other authoritative standards, and which ensure at least a substantially equal quality than the standards mentioned, will also be acceptable.

The following clause may be inserted in the Special Conditions of Contract or the Technical Specifications:

Sample Clause: Equivalency of Standards and Codes

Wherever reference is made in the Technical Specifications to specific standards and codes to be met by the goods and materials to be furnished or tested, the provisions of the latest edition or revision of the relevant standards and codes shall apply, unless otherwise expressly stated in this Contract. Where such standards and codes are national or relate to a particular country or region, other authoritative standards that ensure substantial equivalence to the standards and codes specified will be acceptable.

Reference to brand name shall not be allowed except for reasons of technical compatibility, interoperability, servicing, maintenance, or preservation of supplier warranty in order to keep the performance, functionality, and useful life of the equipment, in which case, the Procuring Entity shall indicate the reasons or justifications for availing of the exception as part of the Technical Specifications, Scope of Work, or Terms of Reference, as the case may be.

Where appropriate, drawings, including site plans as required, may be furnished by the Procuring Entity with the Bidding Documents. Similarly, the Supplier may be requested to provide drawings or samples either with its Bid or for prior review by the Procuring Entity during contract execution.

Bidders are also required, as part of the Technical Specifications, to complete their statement of compliance demonstrating how the items comply with the specification.

Technical Specifications – Proposed Procurement of the Supply and Delivery for aiRack: AI-Driven Hybrid-Powered Smart Data Cabinet with Intelligent Thermal and Power Management for Sustainable IT Operations for USTP-CDO Campus CY 2026



Technical Specifications

Item	Specification	Statement of Compliance
		[Add 2 columns if the award criterion to be used is MEARB, or MARB (one for parameters and one for rating)] Bidders must state “Comply” or “Not Comply” for each specification and provide the corresponding performance parameters for offered equipment. Each response must be supported by a clear documentary support in the bid and properly cross-referenced. Acceptable evidence includes unaltered manufacturer sales brochures, official specification sheets, product samples, independent test results, and similar documents. Claims should be backed by documentary support. If the evidence contradicts the claim, the bid may be rejected. Any false statement—whether in the compliance form or supporting documents—found during evaluation, post-qualification, or contract implementation may be considered fraudulent in accordance with ITB Clause 3.1(a)(ii) and without prejudice to the imposition of appropriate administrative, civil, and criminal penalty in accordance with law.
1	EMBEDDED SECURITY, INTERFACE AND MONITORING MODULE - Integrated monitoring and security system with 10-inch industrial HMI, environmental sensors, access control (RFID and facial recognition), 1080p IP camera with 128 GB storage, alarm system, and ≥1 kVA UPS, providing real-time monitoring, data acquisition, secure access, and supervisory control via Modbus and TCP/IP communication interfaces.	

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2	INTEGRATED PRECISION COOLING AND THERMAL MANAGEMENT SYSTEM - Hybrid precision cooling system with minimum 1.3 TR capacity utilizing DX refrigeration (R410A), liquid cooling loop, and PCM thermal storage (~50 kg). Includes radiator-based heat rejection, IoT-controlled exhaust, and instrumentation, capable of maintaining $\leq 27^{\circ}\text{C}$ cabinet temperature under 3 kW IT load with adaptive, energy-efficient thermal control.	
3	INTELLIGENT POWER AND HYBRID ENERGY SYSTEM - Intelligent hybrid power system with minimum 12 kW inverter capacity, integrated MPPT supporting ≥ 12 kWp solar PV, and 48 VDC 100 Ah LiFePO4 battery storage. Includes complete protection, grounding, distribution, and metering, capable of continuous operation with hybrid solar, grid, and battery supply and monitored energy management.	
4	SERVER RACK WITH INTEGRATABLE AI-ENABLED MICROCONTROLLER SWITCHES - 19-inch rack-mounted AI-enabled smart cabinet system, minimum 42U galvanized steel enclosure (≥ 1000 mm depth), with integrated mounting, thermal insulation, rack PDU, KVM console, 10-inch HMI, access control, surveillance, AI controllers (≥ 20 TOPS each), microcontrollers, rack server, networking devices, and centralized AI-based monitoring, control, and data logging system.	

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*** **Nothing Follows** ***

Additional Requirements:

The technical specification that shall be submitted by the Bidder shall include, among others:

- a. *product specifications as supported by brochures or catalogues for all items;*
- b. *bidder's certification that it has after-sales support in Region X for all items;*
- c. *bidder's certification for one (1) year warranty for all items;*
- d. *certification of Service Center in Region X for all items; and*
- e. *certification from manufacturer/distributor that bidder is an authorized reseller for Item Nos. 3 & 4 only.*

I hereby verify to comply with all the above requirements.

Signature over printed name of the authorized representative

Company name

Date

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