TERMS OF REFERENCE

PROCUREMENT OF INFORMATION AND COMMUNICATION TECHNOLOGY EQUIPMENT OF PMO SOCSARGEN FOR CY 2023

1. Background

The Port Management Office-SOCSARGEN (PMO) is a field operating unit of the Philippine Ports Authority, which under Presidential Decree 857 is mandated with the responsibility to administer, manage, operate, develop, and maintain (A-MODAM) PPA ports within the SOCSKSARGEN Region or Region XII.

For calendar year 2023, the PMO will be conducting the procurement of information and communication technology (ICT) equipment in accordance with the provisions of Republic Act 9184 known as the "Government Procurement Reform Act".

2. Objectives

The post COVID-19 pandemic scenario highlighted the need to adopt flexible organizational business processes and work arrangement which will allow in-person, virtual or remote transactions, in pursuance of the mandates of the PMO. The information and communication technology (ICT) equipment form a major backbone in the conduct of the transactions in line with the organization' mandates on A-MODAM.

For the efficient and conduct of transactions, there is a need to ensure that the ICT equipment used in the day-to-day operations of the PMO and the software applications running are compatible with the latest technologies prevailing in the business environment. Further, the physical health and life span of the ICT equipment must be reliable, thus, attain negligible downtime and breakdown.

The procurement of ICT equipment in optimum number and specifications which are at par with available best technologies is expected to further increase productivity and efficiency of the PMO to perform its mandates. On A-MODAM.

3. Approved Budget for the Contract

The Approved Budget of the Contract (ABC) is **Two Million One Hundred Three Thousand Pesos (Php 2,103,000.00)**, inclusive of VAT and other applicable government taxes to be charged against the CY 2023 Corporate Operating Budget (Information and Communication Technology Equipment) of PMO Socsargen

4. General Specifications

4.1. The Supplier shall be responsible for the:

4.1.1. Supply and delivery of the following ICT equipment:

4.1.1.1. **Lot No. 1**–Data Room & Local Area Network Infrastructure Equipment
4.1.1.2. **Lot No. 2** – High-end/Branded Computer Laptops
4.1.1.3. **Lot No**. 3 – Drone with combo kit, Mobile Phone Controller and Gimbal

4.2. The Manufacturer of the offered items (exceptfor Cable Tray) must have its own website wherein the specifications can be verified.

5. Technical Specifications

5.1. Lot No. 1 --Data Room and Local Area Network Infrastructure Equipment

Item	Quantity (Per each Set)	Particulars	Minimum Specification
Network Switch 24ports	18 units	Ports:	24x 10/100/1000BASE-T RJ45(4 Combo) | 4 1/10GE SFP+
		CPU:	Armsv7, 800M/800Mhz
		Switching capability:	598Gpbs
		Forwarding rate:	126Mbps
		SDRAM/DRAM/RAM:	512MB
		Flash Memory:	128M
		Input Range:	100~240VAC, 50Hz/60Hz
		Operating Temperature:	0 to 45°C
		Warranty:	1year minimum
		Other features:	Must be compatible with CISCO system, manufacturer/brand at least 30 years in the network switch industry
Network Switch 8ports	12 units	Ports:	24x 10/100/1000BASE-T RJ45(4 Combo) | 4 1/10GE SFP+
		CPU:	Armsv7, 800M/800Mhz
		Switching capability:	598Gpbs
		Forwarding rate:	126Mbps
		SDRAM/DRAM/RAM:	512MB
		Flash Memory:	128M
		Input Range:	100~240VAC, 50Hz/60Hz
		Operating Temperature:	0 to 45°C
		Warranty:	1yearsss minimum

		Other features:	Must be compatible with CISCO system, manufacturer/brand at least 30 years in the network switch industry
Network Cabinet	10 units	Rack:	2 layers (must be able to accommodate 2 switches)
		Dimensions(Depth x Width x Height):	366mm x600mm x400mm
		Mounting type:	Wall
		External case material:	Steel or Fiber
		Other feature:	Must have a built in fan, power outlet and power cord.
Cable Tray	108 pcs	Size (Length x Width):	100mm x50mm
		Material:	Steel
		Tray Type:	Perforated Cable Tray
		Usage/Application:	Industrial type
		Sheet thickness:	3 mm
		Shape:	U
		Surface Finishing:	Galvanized
Point to Point radio base (for wireless network)	1 unit	Dimensions (Height x width x depth):	224mm x 82mm x 48mm
		Weight:	0.5 kg (1.03 lbs.)
		Mounting:	airFiberXmount (Rocket mount compatible) GPS pole mount (included)
		Network interface:	(1) 10/100/1000 Mbe RJ45 port
		Power method:	Dual passive PoE
		Power Supply:	24V, 1A PoE Gigabit adapter (Included)
		Max. power consumption:	25W
		Supported voltage range:	18-54V DC

		Operating temperature:	-40° to 55° C (-40° to 131°F)
		Certifications:	FCC (Federal Communications Commissions)
		OS:	airOS®
		Operating mode:	PtMP Base Station radio
		Software management:	Bluetooth management for easy setup over UISP Mobile app WEB UI
		Minimum software requirements:	Any modern web browser/IOS™ or Android™ based smartphone
		Maximum throughput:	900+ Mbps*
		Supported clients count:	125+
		Maximum range:	200+ Km*
		Encryption:	128-bit AES
		Technology:	LTU (Line Terminating Unit)
Point to Point radio client (for wireless network)	1 unit	Dimensions (Height x width x depth)	316.5mm x 316.5mm x 174.3 mm
		Weight:	1.3kg (2.8lb)
		Enclosure material:	UV-stabilized polycarbonate
		Mounting:	Pole Mount (Kit included)
		Wind loading:	150 N at 200 km/h (33.72 lbf at 125 mph)
		Wind survivability:	200 km/h (125mph)
		Network interface:	(1) 10/100/1000 Mbe RJ45 port
		Power method:	Dual passive PoE
		Power Supply:	24V, 1A PoE Gigabit adapter (Included)
		Max. power consumption:	9W
		Supported voltage range:	22-26V DC
		Operating temperature:	-40° to 60° C (-40° to 140°F)
		Certifications:	FCC (Federal Communications

			Commissions), CE (Conformite Europeenne), IC (Industry Canada)
		OS:	airOS®
		Modes:	PtMP CPE only
		Management interface:	Bluetooth management for easy setup over UISP Mobile app WEB UI
		Minimum software requirements:	Any modern web browser/IOS™ or Android™ based smartphone
		Maximum throughput:	900+ Mbps*
		Technology:	LTU (Line Terminating Unit)
Laptop (for onsite/remote data room management)	2 units	Processor:	8-core to 10-core CPU, 1000GB/s memory bandwidth M-Series or equivalent
		Memory:	8 GB DDR4 (or DDR5) upgradeable to 16GB or 24GB
		Storage:	256 SSD, upgradeable to 512GB, 1TB or 2TB
		Display:	• 13.3inch (diagonal) LED-backlit display with IPS technology; 2560 by 1600 native resolution at 227 pixels per inch with support with millions of colors • 500 nits brightness • Wide color (p3) • True Tone technology
		Battery and Power:	• Up to 20hours working hours on connection • Up to 17hours working hour connection • 58.2 watts hour lithium polymer battery • 67W USB-C Power adapter
		Charging and expansion:	• Charging • Display Port • Thunderbolt 3 (up to 40Gb/s) • USB 4 (up to 40GB/s) • USB 3.1 Gen 2 (up to 10GB/s) • 3.5 mm headphone jack

		Keyboard:	• Backlit magic keyboard • Touch Bar • Touch ID • Ambient light sensor
		Operating System:	MacOS Sierra, 10.12.6 or latest/equivalent

5.2. Lot No. 2 -- High-end/Branded Laptops

Item	Quantity (Per each Set)	Particulars	Minimum Specification
Laptop (for M group 1 A-MODAM)	2 units	Processor:	8-core to 10-core CPU, 1000GB/s memory bandwidth M-Series or equivalent
		Memory:	8 GB DDR4 (or DDR5) upgradeable to 16GB or 24GB
		Storage:	256 SSD, upgradeable to 512GB, 1TB or 2TB
		Display:	• 13.3inch (diagonal) LED-backlit display with IPS technology; 2560 by 1600 native resolution at 227 pixels per inch with support with millions of colors • 500 nits brightness • Wide color (p3) • True Tone technology
		Battery and Power:	• Up to 20 hours working hours on connection • Up to 17 hours working hour connection • 58.2 watts hour lithium polymer battery • 67W USB-C Power adapter
		Charging and expansion:	• Charging • Display Port • Thunderbolt 3 (up to 40Gb/s) • USB 4 (up to 40GB/s) • USB 3.1 Gen 2 (up to 10GB/s) • 3.5 mm headphone jack

		Keyboard:	• Backlit magic keyboard • Touch Bar • Touch ID • Ambient light sensor
		Operating System:	MacOS Sierra, 10.12.6 or latest/equivalent
Laptop (for M Group 1 A-MODAM)	1 unit	Processor:	Intel core i5-12500H
		Memory:	16GB DDR4 3200Mhz
		Storage:	512GB PCIe 4.0 M.2 SSD
		Display:	• 15.6inch • 18:9 ratio • 1920x1080RES • NVIDIA GeForce RTX • IPS 165Hz 100% sRGB
		Battery and Power:	57 watts
		Keyboard and Touchpad:	Backlit keyboard
		Interfaces:	• Type C • HDMI • Headphone/Mic • Ethernet LAN USB 3.2
		Operating System	Windows 11
Laptop (for M group 2 A-MODAM)	8 units	Processor:	8-core CPU with 4 performance cores and 4 efficient cores M-Series orequivalent
		Memory:	8GB DDR4(or DDR5) upgradable to 16GB
		Storage:	256GB SSD upgradable to 512GB, 1TB, or 2TB
		Display:	• 13.3inch (diagonal) LED-backlit display with IPS technology; 2560 by 1600 native resolution at 227 pixels per inch with support with millions of colors • 500 nits brightness • Wide color (p3)

			• True Tone technology
		Battery and Power:	• Up to 18 hours working hours on connection • Up to 15 hours working hour connection • 49.9 watts hour lithium polymer battery • 30W USB-C Power adapter
		Charging and expansion:	• Charging • Display Port • Thunderbolt 3 (up to 40Gb/s) • USB 4 (up to 40GB/s) • USB 3.1 Gen 2 (up to 10GB/s) • 3.5 mm headphone jack
		Keyboard:	• Backlit magic keyboard • Ambient light sensor
		Operating System:	MacOS Sierra, 10.12.6 or latest/equivalent

5.3 Lot No. 3-- Drone with combo kit, Mobile Phone Controller and Gimbal

Item	Quantity (Per each Set)	Particulars	Minimum Specification
Camera Drone	1 unit	Takeoff weight:	595 g
		Dimensions (length×width×height):	• Folded 180 mm x 97mm x 77mm • Unfolded 183 mm x 253 mm x 77 mm
		Diagonal Length:	302 mm
		Max Ascent Speed:	• 6 m/s (S mode) • 6 m/s (N mode)
		Max Descent Speed:	• 6 m/s (S mode) • 6 m/s (N mode)
		Max Service Ceiling Above Sea Level:	500 m
		Max Flight Time	31 minutes

		(no wind):	
		Max Hovering Time (no wind):	30 minutes
		Max Flight Distance (no wind):	18.5 km
		Max Flight Speed (near sea level, no wind)	• 19 m/s (S mode) • 15 m/s (N Mode) • 5 m/s (C Mode)
		Max Wind Speed Resistance:	10.7 m/s
		Max Tilt Angle:	• 35° (S mode) • Front: 30°, Back: 20°, Left: 35°, Right: 35° (N mode)
		Max Angular Velocity:	• 250° /s (S mode) • 90° /s (N mode) • 60° /s (C mode)
		Operating Temperature:	0° to 40° C (32° to 104° F)
		Operating Frequency:	• 2.4 GHz • 5.8 GHz
		Propellers:	Quick Release, Low noise, folding
		Aircraft Arms:	Foldable
		GNSS:	GPS+GLONASS+GALILEO
		Compass:	Single Compass
		IMU:	Single IMU
		Internal Storage:	8Gb
		Number of batteries:	1 + 2 Batteries
		Number of propellers:	1 + 2 Pairs of propellers
		Other Accessories included:	• Shoulder travel bag • Battery charging hub • Battery to power bank adapter
Mobile Phone	1 unit	Storage and Ram:	• 8GB + 128GB • LPDDR4X + UFS2.2

Controller			Expandable storage up to 1GB
		Dimensions:	Height: 163.65mm x width: 76.19mm Thickness: 8.34mm Weight: 204g
		Display:	• 6.67” FHD + AMOLED DotDisplay • Refresh Rate: Up to 120Hz • Touch sampling rate: Up to 360Hz • Brightness: HBM 700nits (typ), 1200 nits peak brightness (typ) • Contrast Ratio: 4,500,000:1 • Resolution: 2400 x 1080 • DCI-P3 wide color gamut • 360° ambient light sensor • Sunlight Display • Reading mode
		Rear Camera:	• 108MP + 8MP + 2MP • 108MP Main Camera F/1.8 • 8MP ultra-wide angle camera F/2.2, FOV 120° • 2MP macro camera F/2.4 • Rear camera video recording: 4K 3840x2160 | 30fps 1080p 1920x1080 | 30/60fps 720p 1280x720 | 30fps
		Front Camera:	• 16MP front camera F/2.4 • Front camera video recording 1080p 1920x1080 | 30/60fps 720p 1280x720 | 30fps
		Processor:	• MediaTek Dimensity 920 • CPU: Octa-core CPU, up to 2.5Ghz • GPU: ARM Mali-G68 • 6nm manufacturing process

		Battery and charging:	• 4500mah battery (typ) battery* • USB-Type C • Support 120W HyperCharge* • 120W in-box charger
		Security:	• Side finger sensor • AI Face unlock
		Cooling System:	Liquid Cool Technology 2.0
		Vibration Motor:	X-axis Linear motor
		NFC:	Yes
		Network and connectivity:	Sim 1 + Hybrid (Sim or MicroSD) Support 5G/4G/3G/2G
		Package content:	• Adapter • USB Type-C cable • SIM eject tool • Protective case • Quick start guide • Warranty card • Safety Information
Gimbal for Mobile Phone	1 unit	Gimbal Dimensions (Length x Height x width):	• Unfolded 264.5mm x 111.1mm x 92.3mm • Folded 174.7mm x 74.6mm x 37mm
		Weight:	Gimbal: 292g Magnetic Phone Clamp: 34g
		Max length of build-in Extension rod	215mm
		Compatible Phone Weight:	230 ± 60g
		Compatible Phone thickness:	6.9-10mm
		Compatible Phone width:	67-84mm
		Gimbal:	Power consumption: 1.2 W (under ideal conditions with gimbal fully balanced)

			Mechanical Range: • Pan: -161.12° to 172.08° • Roll: -127.05° to 208.95° • Tilt: -101.46° to 229.54° Max Control Speed: 120°/s
		Battery:	Type: Pouch Cell Capacity: 1000mah Energy: 7.74Wh Voltage: 6-8.8V Charging Temperature: 5° to 40°C (41° to 104°F) Operating Temperature: 0° to 40°C (32° to 104°F) Operating Time: 6.4 hrs. (under ideal conditions with the gimbal fully balanced) Charging Time: 1.5 hrs. (measured with a 10W charger) Gimbal Charging Port: USB-C External Device Charging Port: No Universal Mount: ¼" Threaded Hole
		Wireless mode:	Bluetooth Low energy 5.0
		Grip Tripod:	Gimbal Dimensions: Length: 138 mm Diameter: 32 mm Can stand Weight up to: 72g

6. Delivery

6.1. Schedule of Delivery / Period

Delivery shall be made within thirty (30) days from the date specified in the Notice to Proceed (NTP). A Warranty Certificate shall be submitted after the completion and acceptance of the delivery.

6.2. Place or Address of Delivery

Delivery of items shall be made at the address below:

Philippine Ports Authority Port Management Office-SOCSARGEN
Port Operations Building, Makar Wharf
Barangay Labangal, 9500 General Santos City

7. Warranty and aftersales support

7.1. The Procuring Entity shall promptly notify the Supplier in writing of any claims arising under this warranty. Upon receipt of such notice, the Supplier shall, repair or replace the defective Goods or parts thereof without cost to the Procuring Entity, pursuant to the Generic Procurement Manual.

7.2. One (1) year for all equipment/items.

8. Payment

Payment shall be made after the completion and acceptance of all deliveries.

Prepared by:

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Date: 27 April 2023

Requested by:

(SGD) **FERNANDO B. MAPALO, JR**
Acting EA/AO IV
Date: _____

(SGD) **MOHAMMAD SHARIFF A. DATAYA**
Information System Analyst
Date: 27 April 2023

Approved by:

(SGD) **ATTY.CESAR M. DATAYA**
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Date: _____