



**DOST-ASTI Bids and Awards Committee
REQUEST FOR QUOTATION**

Kind of Procurement Activity:	Negotiated Procurement: Small-value Procurement		
Deadline of Submission of Bids:	Oct-18-2021, 2:00 PM		
RFQ No.:	21-10-3582	Date:	October-13-2021
PR No.:	ROAMER-21-09-12114	Date:	September-21-2021

The Department of Science and Technology (DOST) - Advanced Science and Technology Institute (ASTI), through its Bids and Awards Committee (BAC), intends to procure the item/s listed below. As such, suppliers, contractors, or distributors are invited to submit their quotation/s duly signed by authorized representative. Prospective bidder/s who will submit a proposal with the single/lowest calculated and responsive quotation shall be selected. Guidelines on the format and eligibility documents are listed at the box below the item/s to be procured.

Quotations may be sent via **a)** electronic mail at bac-sec@asti.dost.gov.ph, **b)** fax message, or **c)** delivering documents to the BAC Secretariat. For further inquiries, you may contact +63 2 249-8500 local 1206/1212 or +63 2 426-7423.

Thank you.

Respectfully,

GERWIN P. GUBA
BAC Chairman

NO.	TECHNICAL SPECIFICATIONS	QTY	UNIT	UNIT PRICE(Php)	TOTAL PRICE(Php)
1	<p>Depth Camera</p> <p>1. General Overview</p> <p>1.1. The Advanced Science and Technology Institute is seeking qualified and competent bidders to supply and deliver one (1) pc. depth camera for use in the development and prototyping of the mobile robot, specifically as one of its sensors for integration into the mobile robot system to aid in its navigation.</p> <p>1.2. The technical specifications indicated herein are minimum requirements, unless otherwise specified.</p> <p>2. Technical Specifications</p> <p>2.1. Use Environment: Indoor/Outdoor</p> <p>2.2. Ideal Range: .3 m to 3 m</p> <p>2.3. Image Sensor Technology: Global Shutter</p> <p>2.4. Depth Technology: Stereoscopic</p> <p>2.5. Minimum Depth Distance (Min-Z) at Max Resolution: ~28 cm</p> <p>2.6. Depth Accuracy: <2% at 2 m</p> <p>2.7. Depth Field of View (FOV): 87° × 58°</p> <p>2.8. Depth Stream Output Resolution: Up to 1280 × 720</p> <p>2.9. Depth Stream Output Frame Rate: Up to 90 fps</p> <p>2.10. RGB Frame Resolution: 1920 × 1080</p> <p>2.11. RGB Frame Rate: 30 fps</p> <p>2.12. RGB Sensor Technology: Rolling Shutter</p> <p>2.13. RGB Sensor FOV: 69° × 42°</p>	1	pc	25000.00	25,000.00

	<p>2.14. RGB Sensor Resolution: 2 MP</p> <p>2.15. Camera Module: Intel RealSense Module D430 + RGB Camera</p> <p>2.16. Vision Processor Board: Intel RealSense Vision Processor D4</p> <p>2.17. Form factor: Camera Peripheral</p> <p>2.18. Camera Dimension (Length x Depth x Height): 90 mm x 25 mm x25 mm</p> <p>2.19. Connector: USB-C* 3.1 Gen 1*</p> <p>2.20. Mounting Mechanism:</p> <p>2.20.1. One (1) 1/4-20 UNC thread mounting point</p> <p>2.20.2. Two (2) M3 thread mounting points</p> <p>2.21. Must Include: Inertial Measurement Unit (IMU)</p> <p>3. Warranty</p> <p>3.1. Supplier warrants the items against defects in manufacturing and shipping and delivery issues</p> <p>3.2. Defective and incorrect items shall be replaced.</p> <p>3.3. Warranty Period should be at least one (1) year</p> <p>4. Payment and Delivery Terms</p> <p>4.1. The price of bid must be inclusive of government taxes and additional fees.</p> <p>4.2. Items must be delivered to ASTI ninety (90) calendar days upon issuance of NTP</p>				
2	<p>Water Pump - 10 Bar</p> <p>1. General Overview</p> <p>1.1. The Advanced Science and Technology Institute is seeking qualified and competent bidders to supply and deliver one (1) pc. Water pump (10 Bar) for use in development of a mobile robot, specifically in pumping liquid from its container to the nozzle in the automated liquid fertilizer/pesticide applicator for integration into the mobile robot.</p> <p>1.2. The technical specifications indicated herein are minimum requirements, unless otherwise specified.</p> <p>2. Technical Specifications:</p> <p>2.1. Dimension: 65 x 32 x 30 mm</p> <p>2.2. Weight: 110 g</p> <p>2.3. Operating Temperature (Low to High): -80 to 100 °C</p> <p>2.4. Fluid Connection: 1/8bsp (female)</p> <p>2.5. Maximum Flow Rate: 630 mL/min</p> <p>2.6. Maximum Working Pressure Pressure: 10.0 Bar</p> <p>2.7. Maximum Viscosity: 5000 cSt</p> <p>2.8. Typical Life: >20,000hrs</p> <p>2.9. Input Voltage: 6 - 24 V</p> <p>2.10. Power Usage: 3 - 30 W</p> <p>2.11. Integrated drive motor: Sensorless Brushless</p> <p>2.12. Motor control type: Brushless Driver required</p> <p>3. Warranty</p> <p>3.1. Supplier warrants the items against defects in manufacturing and shipping and delivery issues</p> <p>3.2. Defective and incorrect items shall be replaced.</p> <p>3.3. Warranty Period should be at least one (1) year</p> <p>4. Payment and Delivery Terms</p> <p>4.1. The price of bid must be inclusive of government taxes and additional fees.</p> <p>4.2. Items must be delivered to ASTI ninety (90) calendar days upon issuance of NTP</p>	1	pc	29500.00	29,500.00
3	<p>Autonomous Machine Developer Kit - Advanced</p>	1	pc	70000.00	70,000.00

	<p>1. General Overview</p> <p>1.1. The Advanced Science and Technology Institute is seeking qualified and competent bidders to supply and deliver one (1) pc. Autonomous Machine Developer Kit (Advanced) for use in development and prototyping of a mobile robot, specifically for powering autonomous machines that require maximum compute to run modern AI workloads to be used in the project.</p> <p>1.2. The technical specifications indicated herein are minimum requirements, unless otherwise specified.</p> <p>2. Technical Specifications</p> <p>2.1. CPU: 8-core ARM® v8.2 64-bit CPU, 8MB L2 + 4MB L3</p> <p>2.2. GPU: 512-core NVIDIA Volta™ GPU with Tensor cores</p> <p>2.3. DL Accelerator: 2x NVDLA Engines</p> <p>2.4. Vision Accelerator: 7-Way VLIW Vision Processor</p> <p>2.5. Memory: At least 32GB 256-bit LPDDR4x 137GB/s</p> <p>2.6. Storage: At least 32GB eMMC 5.1</p> <p>2.7. Power: DC power jack (10W - 30W)</p> <p>2.8. Dimensions: 105mm x 105mm x 65mm</p> <p>2.9. Developer Kit I/Os:</p> <p>2.9.1. PCIe: x16 connector with x8 PCIe Gen4 or x8 SLVS-EC</p> <p>2.9.2. Connectivity: RJ45 (Gigabit Ethernet)</p> <p>2.9.3. 2x USB-C 3.1 (supporting DisplayPort and USB PD)</p> <p>2.9.4. Micro-USB 2.0 (serial port interface only)</p> <p>2.9.5. MicroSD / UFS card slot</p> <p>2.9.6. eSATAp (eSATA USB 3.0 Type-A)</p> <p>2.9.7. M.2 Key M (NVMe)</p> <p>2.9.8. M.2 Key E (PCIe x1 + USB 2.0 + UART (for Wi-Fi/LTE) / I2S + DMIC + GPIOs)</p> <p>2.9.9. 40-pin header (UART, SPI, CAN, I2C, I2S, DMIC, GPIOs)</p> <p>2.9.10. 10-pin audio header</p> <p>2.9.11. 8-pin automation header (system power and related signals)</p> <p>2.9.12. 4-pin fan header</p> <p>2.10. Display: HDMI 2.0 Type A</p> <p>2.11. CSI Camera: 16x lanes MIPI CSI-2</p> <p>3. Warranty</p> <p>3.1. Supplier warrants the items against defects in manufacturing and shipping and delivery issues</p> <p>3.2. Defective and incorrect items shall be replaced.</p> <p>3.3. Warranty Period should be at least one (1) year</p> <p>4. Payment and Delivery Terms</p> <p>4.1. The price of bid must be inclusive of government taxes and additional fees.</p> <p>4.2. Items must be delivered to ASTI ninety (90) calendar days upon issuance of NTP</p>				
4	<p>GPS-RTK-SMA Breakout</p> <p>1. General Overview</p> <p>1.1. The Advanced Science and Technology Institute is seeking qualified and competent bidders to supply and deliver one (1) pc. GPS-RTK-SMA Breakout for use in development and prototyping of a mobile robot, specifically as a GPS module to be connected to the system to provide three-dimensional accuracy and</p>	1	pc	28000.00	28,000.00

	<p>precision in the location of the mobile robot and ultimately, to aid in navigation.</p> <p>1.2. The technical specifications indicated herein are minimum requirements, unless otherwise specified.</p> <p>2. Technical Specifications:</p> <p>2.1. Supported GNSS constellations:</p> <p>2.1.1. GPS, GLONASS, Galileo and BeiDou (concurrent reception)</p> <p>2.1.2. Receives both L1C/A and L2C bands</p> <p>2.2. Voltage: 5V or 3.3V but all logic is 3.3V</p> <p>2.3. Current: 68mA - 130mA (varies with constellations and tracking state)</p> <p>2.4. Time to First Fix: 25s (cold), 2s (hot)</p> <p>2.5. Maximum Navigation Rate:</p> <p>2.5.1. PVT (basic location over UBX binary protocol) - 25Hz</p> <p>2.5.2. RTK - 20Hz</p> <p>2.5.3. Raw - 25Hz</p> <p>2.6. Horizontal Position Accuracy:</p> <p>2.6.1. 2.5m without RTK</p> <p>2.6.2. 0.010m with RTK</p> <p>2.7. Maximum Altitude: 50km (31 miles)</p> <p>2.8. Maximum Velocity: 500m/s (1118mph)</p> <p>2.9. Weight: 6.8g</p> <p>2.10. Dimensions: 43.5mm x 43.2mm (1.71in x 1.7in)</p> <p>2.11. Must include two (2) Qwiic Connectors</p> <p>3. Warranty</p> <p>3.1. Supplier warrants the items against defects in manufacturing and shipping and delivery issues</p> <p>3.2. Defective and incorrect items shall be replaced.</p> <p>3.3. Warranty Period should be at least one (1) year</p> <p>4. Payment and Delivery Terms</p> <p>4.1. The price of bid must be inclusive of government taxes and additional fees.</p> <p>4.2. Items must be delivered to ASTI ninety (90) calendar days upon issuance of NTP</p>				
5	<p>Autonomous Machine Developer Kit - Basic</p> <p>1. General Overview</p> <p>1.1. The Advanced Science and Technology Institute is seeking qualified and competent bidders to supply and deliver five (5) pcs. Autonomous Machine Developer Kit – Basic for use in development and prototyping of a mobile robot, specifically for powering entry-level artificial intelligence (AI) applications and devices to be used in the project.</p> <p>1.2. The technical specifications indicated herein are minimum requirements, unless otherwise specified.</p> <p>2. Technical Specifications</p> <p>2.1. CPU: Quad-core ARM A57 @ 1.43 GHz</p> <p>2.2. GPU: 128-core Maxwell</p> <p>2.3. Memory: 4 GB 64-bit LPDDR4 25.6 GB/s</p> <p>2.4. Storage: 16 GB UHS-1 (microSD card included)</p> <p>2.5. Power: MicroUSB power supply (5V)</p> <p>2.6. Dimensions: 69 mm x 45 mm</p> <p>2.7. Video Encode: 4K @ 30 4x 1080p @ 30 9x 720p @ 30 (H.264/H.265)</p> <p>2.8. Video Decode: 4K @ 60 2x 4K @ 30 8x 1080p @ 30 18x 720p @ 30 (H.264/H.265)</p> <p>2.9. Developer Kit I/Os:</p> <p>2.9.1. PCIe: x1 connector</p>	5	pc	12000.00	60,000.00

	<p>2.9.2. Connectivity: Gigabit Ethernet</p> <p>2.9.3. 4x USB 3.0 Type A</p> <p>2.9.4. Micro-B USB 2.0</p> <p>2.9.5. M.2 Key E Slot</p> <p>2.9.6. 260-pin edge connector</p> <p>2.9.7. Interface Type: GPIO, I2C, I2S, SPI, UART</p> <p>2.9.8. 12-pin automation header (system power and related signals)</p> <p>2.9.9. 4-pin fan header</p> <p>2.10. Display: HDMI and display port</p> <p>2.11. CSI Camera: 2x MIPI CSI-2 DPHY lanes</p> <p>3. Warranty</p> <p>3.1. Supplier warrants the items against defects in manufacturing and shipping and delivery issues</p> <p>3.2. Defective and incorrect items shall be replaced.</p> <p>3.3. Warranty Period should be at least one (1) year</p> <p>4. Payment and Delivery Terms</p> <p>4.1. The price of bid must be inclusive of government taxes and additional fees.</p> <p>4.2. Items must be delivered to ASTI ninety (90) calendar days upon issuance of NTP</p>				
6	<p>WiFi Wireless Bluetooth Nano USB Adapter</p> <p>1. General Overview</p> <p>1.1. The Advanced Science and Technology Institute is seeking qualified and competent bidders to supply and deliver six (6) pcs. WiFi Wireless Bluetooth Nano USB Adapter for use in development and prototyping of a mobile robot, specifically to minimize interference in transferring data for real time monitoring between the mobile robot and command center.</p> <p>1.2. The technical specifications indicated herein are minimum requirements, unless otherwise specified.</p> <p>2. Technical Specifications</p> <p>2.1. Interface: USB 2.0</p> <p>2.2. Dimensions (W x D x H): 15 mm x 7.1 mm x 18.6mm</p> <p>2.3. Antenna Type: Omni Directional</p> <p>2.4. Wireless Standards: IEEE 802.11ac, IEEE 802.11a, IEEE 802.11n, IEEE 802.11g, IEEE 802.11b</p> <p>2.6. Frequency: 5GHz, 2.4GHz</p> <p>2.7. Signal Rate:</p> <p>2.7.1. 5GHz</p> <p>2.7.1.1. 11ac: Up to 433Mbps(dynamic)</p> <p>2.7.1.2. 11n: Up to 150Mbps(dynamic)</p> <p>2.7.1.3. 11a: Up to 54Mbps(dynamic)</p> <p>2.7.2. 2.4GHz</p> <p>2.7.2.1. 11n: Up to 200Mbps(dynamic)</p> <p>2.7.2.2. 11g: Up to 54Mbps(dynamic)</p> <p>2.7.2.3. 11b: Up to 11Mbps(dynamic)</p> <p>2.8. Reception Sensitivity:</p> <p>2.8.1. 5GHz:</p> <p>2.8.1.1. 11a 6Mbps: -90dBm</p> <p>2.8.1.2. 11a 54Mbps: -73dBm</p> <p>2.8.1.3. 11n HT20 MCS0: -89dBm</p> <p>2.8.1.4. 11n HT20 MCS7: -70dBm</p> <p>2.8.1.5. 11n HT40 MCS0: -86dBm</p> <p>2.8.1.6. 11n HT40 MCS7: -67dBm</p> <p>2.8.1.7. 11ac VHT80 MCS0: -82dBm</p> <p>2.8.1.8. 11ac VHT80 MCS9: -56dBm</p>	6	pc	1350.00	8,100.00

	<p>2.8.2. 2.4GHz:</p> <p>2.8.2.1. 11b 1Mbps: -96dBm</p> <p>2.8.2.2. 11b 11Mbps: -88dBm</p> <p>2.8.2.3. 11g 6Mbps: -89dBm</p> <p>2.8.2.4. 11g 54Mbps: -74dBm</p> <p>2.8.2.5. 11n HT20 MCS0: -89dBm</p> <p>2.8.2.6. 11n HT20 MCS7: -72dBm</p> <p>2.8.2.7. 11n HT40 MCS0: -86dBm</p> <p>2.8.2.8. 11n HT40 MCS7: -66dBm</p> <p>2.9. Transmit Power: <20dBm (EIRP)</p> <p>2.10. Wireless Modes: Ad-Hoc / Infrastructure mode</p> <p>2.11. Wireless Security: Support 64/128 bit WEP, WPA-PSK/WPA2-PSK, 802.1x</p> <p>2.12. Modulation Technology: DBPSK, DQPSK, CCK, OFDM, 16-QAM, 64-QAM, 256-QAM</p> <p>3. Warranty</p> <p>3.1. Supplier warrants the items against defects in manufacturing and shipping and delivery issues</p> <p>3.2. Defective and incorrect items shall be replaced.</p> <p>3.3. Warranty Period should be at least one (1) year</p> <p>4. Payment and Delivery Terms</p> <p>4.1. The price of bid must be inclusive of government taxes and additional fees.</p> <p>4.2. Items must be delivered to ASTI ninety (90) calendar days upon issuance of NTP</p>				
7	<p>Power Supply - Compatible with Basic Autonomous Machine Developer Kit</p> <p>1. General Overview</p> <p>1.1. The Advanced Science and Technology Institute is seeking qualified and competent bidders to supply and deliver five (5) pcs. Power Supply (Compatible with Basic Autonomous Machine Developer Kit) for use in development and prototyping of a mobile robot, specifically to provide a safe and reliable power source to the autonomous machine developer kits for the project</p> <p>1.2. The technical specifications indicated herein are minimum requirements, unless otherwise specified.</p> <p>2. Technical Specifications</p> <p>2.1. Interface: micro USB</p> <p>2.2. Voltage: 5V</p> <p>2.3. Current: 2.5A</p> <p>2.4. Power: 13W</p> <p>2.5. Output Cable: 1.5m Micro USB B 5 Pin</p> <p>2.6. Protection: Short circuit, over current and over voltage</p> <p>2.7. MTBF: 50,000 hours</p> <p>2.8. AC Inlet: UK, Euro, Aus & US changeable heads</p> <p>2.9. Dimensions (L x W x H): 73.2 mm x 45.1 mm x 35.1 mm</p> <p>2.10. Weight: Approximately 150g</p> <p>3. Warranty</p> <p>3.1. Supplier warrants the items against defects in manufacturing and shipping and delivery issues</p> <p>3.2. Defective and incorrect items shall be replaced.</p> <p>3.3. Warranty Period should be at least one (1) year</p> <p>4. Payment and Delivery Terms</p> <p>4.1. The price of bid must be inclusive of government taxes and additional fees.</p> <p>4.2. Items must be delivered to ASTI ninety (90)</p>	5	pc	1000.00	5,000.00

	calendar days upon issuance of NTP				
8	<p>Water Pump - 12V</p> <p>1. General Overview</p> <p>1.1. The Advanced Science and Technology Institute is seeking qualified and competent bidders to supply and deliver two (2) pcs. Water Pump (12V) for use in development and prototyping of a mobile robot, specifically in pumping liquid from its container to the nozzle in the automated liquid fertilizer/pesticide applicator for integration into the mobile robot.</p> <p>1.2. The technical specifications indicated herein are minimum requirements, unless otherwise specified.</p> <p>2. Technical Specifications</p> <p>2.1. Working voltage: DC12V</p> <p>2.2. Current work: 0.5-0.7A</p> <p>2.3. Traffic: 1.5-2L / Min (left and right)</p> <p>2.4. Maximum suction lift: 2 m</p> <p>2.5. Head: Vertical up to 3 meters</p> <p>2.6. Lifetime: up to 2500H</p> <p>2.7. Withstand water temperature: up to 80 °C</p> <p>2.8. Sound level: under 30db</p> <p>2.9. With filter and suction cup</p> <p>2.10. Must include:</p> <p>2.10.1. One (1) 12V R385 Water Pump</p> <p>2.10.2. Two (2) Fixed Bracket</p> <p>3. Warranty</p> <p>3.1. Supplier warrants the items against defects in manufacturing and shipping and delivery issues</p> <p>3.2. Defective and incorrect items shall be replaced.</p> <p>3.3. Warranty Period should be at least one (1) year</p> <p>4. Payment and Delivery Terms</p> <p>4.1. The price of bid must be inclusive of government taxes and additional fees.</p> <p>4.2. Items must be delivered to ASTI ninety (90) calendar days upon issuance of NTP</p>	2	pc	275.00	550.00
9	<p>Motor Driver Module - L298N</p> <p>1. General Overview</p> <p>1.1. The Advanced Science and Technology Institute is seeking qualified and competent bidders to supply and deliver four (4) pcs. Motor Driver Module (L298N) for use in the development and prototyping of a mobile robot, specifically in driving the DC motor in the automated liquid fertilizer/pesticide applicator for integration into the mobile robot.</p> <p>1.2. The technical specifications indicated herein are minimum requirements, unless otherwise specified.</p> <p>2. Technical Specifications</p> <p>2.1. Driver: L298 Dual H Bridge DC Motor Driver IC</p> <p>2.2. Operating Voltage: 7 to 35V</p> <p>2.3. Peak current: 2A</p> <p>2.4. Maximum power consumption @ T = 75 °C: 20W</p> <p>2.5. Driver Board Size (with fixed copper pillar and the heat sink height): 55mm * 49mm * 33mm</p> <p>2.6. Driver Board Weight: 33g</p> <p>2.7. Protection: Over temperature</p> <p>3. Warranty</p> <p>3.1. Supplier warrants the items against defects in manufacturing and shipping and delivery issues</p> <p>3.2. Defective and incorrect items shall be replaced.</p>	4	pc	150.00	600.00

	<p>3.3. Warranty Period should be at least one (1) year</p> <p>4. Payment and Delivery Terms</p> <p>4.1. The price of bid must be inclusive of government taxes and additional fees.</p> <p>4.2. Items must be delivered to ASTI ninety (90) calendar days upon issuance of NTP</p>				
10	<p>Silicone Tube - 5 x 8mm</p> <p>1. General Overview</p> <p>1.1. The Advanced Science and Technology Institute is seeking qualified and competent bidders to supply and deliver four (4) pcs. Silicone Tube (5x8mm) for use in development and prototyping of the automated liquid fertilizer/pesticide applicator, specifically to transport liquid from its container to the nozzle, for integration into the mobile robot</p> <p>1.2. The technical specifications indicated herein are minimum requirements, unless otherwise specified.</p> <p>2. Technical Specifications</p> <p>2.1. Material: Elastomeric Silicone</p> <p>2.2. Tube length: 2 meters</p> <p>2.3. Tube diameter: 5mm (internal diameter) / 8mm (external diameter)</p> <p>2.4. diameter)</p> <p>2.5. Compatibility: R385 Water Pump</p> <p>3. Warranty</p> <p>3.1. Supplier warrants the items against defects in manufacturing and shipping and delivery issues</p> <p>3.2. Defective and incorrect items shall be replaced.</p> <p>3.3. Warranty Period should be at least one (1) year</p> <p>4. Payment and Delivery Terms</p> <p>4.1. The price of bid must be inclusive of government taxes and additional fees.</p> <p>4.2. Items must be delivered to ASTI ninety (90) calendar days upon issuance of NTP</p>	4	pc	500.00	2,000.00
11	<p>DC Gear Motor</p> <p>1. General Overview</p> <p>1.1. The Advanced Science and Technology Institute is seeking qualified and competent bidders to supply and deliver four (4) pcs. DC Gear Motor for use in the development and prototyping of the automated liquid fertilizer/pesticide applicator, specifically to pump liquid from its container to the nozzle at a controlled speed, for integration into the mobile robot</p> <p>1.2. The technical specifications indicated herein are minimum requirements, unless otherwise specified.</p> <p>2. Technical Specifications</p> <p>2.1. Nominal voltage: 12 V</p> <p>2.2. Free-run speed @ 12 V: 19 RPM</p> <p>2.3. Free-run current @ 12 V: 0.8 A</p> <p>2.4. Stall current @ 12 V: 20 A</p> <p>2.5. Gear ratio: 1:810</p> <p>2.6. Reductor size: 29 mm</p> <p>2.7. Weight: 380 g</p> <p>3. Warranty</p> <p>3.1. Supplier warrants the items against defects in manufacturing and shipping and delivery issues</p> <p>3.2. Defective and incorrect items shall be replaced.</p> <p>3.3. Warranty Period should be at least one (1) year</p> <p>4. Payment and Delivery Terms</p>	4	pc	1350.00	5,400.00

	<p>4.1. The price of bid must be inclusive of government taxes and additional fees.</p> <p>4.2. Items must be delivered to ASTI ninety (90) calendar days upon issuance of NTP</p>				
12	<p>Sprinkler - 1/2"</p> <p>1. General Overview</p> <p>1.1. The Advanced Science and Technology Institute is seeking qualified and competent bidders to supply and deliver two (2) pcs. Sprinkler (1/2") for use in the development and prototyping of the automated liquid fertilizer/pesticide applicator, specifically to serve as a nozzle to control fluid flow of the applicator, for integration into the mobile robot</p> <p>1.2. The technical specifications indicated herein are minimum requirements, unless otherwise specified.</p> <p>2. Technical Specifications</p> <p>2.1. Material: Brass</p> <p>2.2. Water pressure: 0.75 - 2.5MPa</p> <p>2.3. Water flow: 30-215 liters/hour</p> <p>2.4. Coverage: 0.8-2 m.</p> <p>2.5. Height: 0.8-4 m.</p> <p>2.6. Connection diameter: 1/2 inch, DN15</p> <p>2.7. Features:</p> <p>2.7.1. rotary switch</p> <p>2.7.2. detachable spray nozzle</p> <p>2.7.3. adjustable to area covered</p> <p>3. Warranty</p> <p>3.1. Supplier warrants the items against defects in manufacturing and shipping and delivery issues</p> <p>3.2. Defective and incorrect items shall be replaced.</p> <p>3.3. Warranty Period should be at least one (1) year</p> <p>4. Payment and Delivery Terms</p> <p>4.1. The price of bid must be inclusive of government taxes and additional fees.</p> <p>4.2. Items must be delivered to ASTI ninety (90) calendar days upon issuance of NTP</p>	2	pc	275.00	550.00
13	<p>Compression Fitting - 1/2" to 8mm</p> <p>1. General Overview</p> <p>1.1. The Advanced Science and Technology Institute is seeking qualified and competent bidders to supply and deliver four (4) pcs. Compression Fitting (1/2" to 8 mm) for use in the development and prototyping of the automated liquid fertilizer/pesticide applicator, specifically to connect the metallic nozzle to the plastic tube, for integration into the mobile robot</p> <p>1.2. The technical specifications indicated herein are minimum requirements, unless otherwise specified.</p> <p>2. Technical Specifications</p> <p>2.1. Type: Coupling</p> <p>2.2. Connection: Male</p> <p>2.3. Head Code: Hexagon</p> <p>2.4. Material: Copper</p> <p>2.5. Shape: Equal</p> <p>2.6. Fit for Outer Tube Diameter: 8mm</p> <p>2.7. Male Thread Outer Diameter: 1/2"</p> <p>2.8. Fit For Tube Material: Polyurethane/Nylon</p> <p>3. Warranty</p> <p>3.1. Supplier warrants the items against defects in manufacturing and shipping and delivery issues</p>	4	pc	350.00	1,400.00

	<p>3.2. Defective and incorrect items shall be replaced.</p> <p>3.3. Warranty Period should be at least one (1) year</p> <p>4. Payment and Delivery Terms</p> <p>4.1. The price of bid must be inclusive of government taxes and additional fees.</p> <p>4.2. Items must be delivered to ASTI ninety (90) calendar days upon issuance of NTP</p>				
14	<p>Gear Set</p> <p>1. General Overview</p> <p>1.1. The Advanced Science and Technology Institute is seeking qualified and competent bidders to supply and deliver three (3) pcs. Gear Set for use in the development and prototyping of the automated liquid fertilizer/pesticide applicator, specifically to control the speed of its rotation movement, for integration into the mobile robot</p> <p>1.2. The technical specifications indicated herein are minimum requirements, unless otherwise specified.</p> <p>2. Technical Specifications</p> <p>2.1. Gear Ratio: 210 : 1</p> <p>2.2. Compatibility: Dynamixel XH430/XM430</p> <p>2.3. Weight: 0.01 lbs.</p> <p>2.4. Material: Metal with special coating</p> <p>2.5. Attachments: Exclusive magnet for non-contact absolute encoder</p> <p>2.6. Must Include:</p> <p>2.6.1. - X430 Gear #1 (for 210)</p> <p>2.6.2. - X430 Gear #2 (for 210)</p> <p>2.6.3. - X430 Gear #3</p> <p>2.6.4. - X430 Wheel Gear</p> <p>2.6.5. - Grease</p> <p>2.6.6. - Calibration Adaptor (for X430)</p> <p>2.6.7. - Two (2) Ball Bearing</p> <p>3. Warranty</p> <p>3.1. Supplier warrants the items against defects in manufacturing and shipping and delivery issues</p> <p>3.2. Defective and incorrect items shall be replaced.</p> <p>3.3. Warranty Period should be at least one (1) year</p> <p>4. Payment and Delivery Terms</p> <p>4.1. The price of bid must be inclusive of government taxes and additional fees.</p> <p>4.2. Items must be delivered to ASTI ninety (90) calendar days upon issuance of NTP</p>	3	pc	4000.00	12,000.00
15	<p>Brushless DC Motor Controller</p> <p>1. General Overview</p> <p>1.1. The Advanced Science and Technology Institute is seeking qualified and competent bidders to supply and deliver two (2) pcs. Brushless DC Motor Controller for use in the development and prototyping of the automated liquid fertilizer/pesticide applicator, specifically to control the speed and torque of the DC motor, for integration into the mobile robot</p> <p>1.2. The technical specifications indicated herein are minimum requirements, unless otherwise specified.</p> <p>2. Technical Specifications</p> <p>2.1. Input Voltage: 12 - 30 V DC</p> <p>2.2. Size: 24 x 57 x 17 mm</p> <p>2.3. Weight: 14g</p> <p>2.4. Operating Temperature: 0-80 °C</p>	2	pc	9500.00	19,000.00

	<p>2.5. Operating Pressure: 4.0 - 10.0 Bar</p> <p>2.6. Input: 2 screw terminal (up to 30v/GND)</p> <p>2.7. Output: 3 screw terminal (Phase XYZ)</p> <p>2.8. Flow Direction: Reversible</p> <p>2.9. Flow control: on board speed control pot/external 0-5v signal</p> <p>3. Warranty</p> <p>3.1. Supplier warrants the items against defects in manufacturing and shipping and delivery issues</p> <p>3.2. Defective and incorrect items shall be replaced.</p> <p>3.3. Warranty Period should be at least one (1) year</p> <p>4. Payment and Delivery Terms</p> <p>4.1. The price of bid must be inclusive of government taxes and additional fees.</p> <p>4.2. Items must be delivered to ASTI ninety (90) calendar days upon issuance of NTP</p>				
16	<p>GNSS Multi-Band Magnetic Mount Antenna - 5m (SMA)</p> <p>1. General Overview</p> <p>1.1. The Advanced Science and Technology Institute is seeking qualified and competent bidders to supply and deliver one (1) pc. GNSS Multi-Band Magnetic Mount Antenna - 5m (SMA) for use in development and prototyping of a mobile robot, specifically to provide a reliable multi-band antenna solution that can be used with any GPS/GNSS receiver</p> <p>1.2. The technical specifications indicated herein are minimum requirements, unless otherwise specified.</p> <p>2. Technical Specifications</p> <p>2.1. Frequency:</p> <p>2.1.1. - L1 Band: 1559-1606MHz</p> <p>2.1.2. - L2/L5 Band: 1197-1249MHz</p> <p>2.2. Peak gain (over 15cm diameter ground plane):</p> <p>2.2.1. - L1 Band: 3.5dBic</p> <p>2.2.2. - L2/L5 Band: 0-2.0dBic</p> <p>2.3. Output VSWR: max. 2</p> <p>2.4. Bandwidth: min. 200MHz</p> <p>2.5. Impedance: 50 Ohm</p> <p>2.6. Polarization: RHCP</p> <p>2.7. Supported GNSS constellations: GPS, GLONASS, Galileo, and BeiDou</p> <p>2.8. Dimensions: 60.0mm x 82.0mm x 22.5mm</p> <p>2.9. Weight (including cable): 175g (including cable)</p> <p>2.10. Cable type, length: RG174, 5m coaxial cable</p> <p>2.11. Connector options: SMA, SMB, MCX</p> <p>2.12. Mounting: Magnetic base, fixed installation option (screw mount, Two (2) M4 screws)</p> <p>3. Warranty</p> <p>3.1. Supplier warrants the items against defects in manufacturing and shipping and delivery issues</p> <p>3.2. Defective and incorrect items shall be replaced.</p> <p>3.3. Warranty Period should be at least one (1) year</p> <p>4. Payment and Delivery Terms</p> <p>4.1. The price of bid must be inclusive of government taxes and additional fees.</p> <p>4.2. Items must be delivered to ASTI ninety (90) calendar days upon issuance of NTP</p>	1	pc	7500.00	7,500.00
17	<p>Wireless Mouse</p> <p>1. General Overview</p>	6	pc	1150.00	6,900.00

	<p>1.1. The Advanced Science and Technology Institute is seeking qualified and competent bidders to supply and deliver six (6) pcs. wireless mouse to improve control in the movement of the mouse pointer involved in the daily work of project staff</p> <p>1.2. The technical specifications indicated herein are minimum requirements, unless otherwise specified.</p> <p>2. Technical Specifications</p> <p>2.1. Dimensions (H x W x D): 115.4 x 66.1x 40.3 mm</p> <p>2.2. Weight (with batteries): 89.9 g</p> <p>2.3. Sensor technology: Smooth Optical Tracking</p> <p>2.4. Sensor resolution: 1000 dpi</p> <p>2.5. Number of buttons: 3</p> <p>2.6. Scroll Wheel: Line-by-Line Precision</p> <p>2.7. Unifying ready mouse: No</p> <p>2.8. Unifying ready receiver: No</p> <p>2.9. Battery: 18 months</p> <p>2.10. Wireless operating distance: 10m</p> <p>2.11. Wireless technology: Logitech Nano Receiver</p> <p>2.12. Interface: USB</p> <p>2.13. Supported OS: Windows® 7,9,10 or later, macOS 10.10 or later, Chrome OS™, Linux®</p> <p>2.14. Must include: AA Battery (pre-installed)</p> <p>3. Warranty</p> <p>3.1. Supplier warrants the items against defects in manufacturing and shipping and delivery issues</p> <p>3.2. Defective and incorrect items shall be replaced.</p> <p>3.3. Warranty Period should be at least one (1) year</p> <p>4. Payment and Delivery Terms</p> <p>4.1. The price of bid must be inclusive of government taxes and additional fees.</p> <p>4.2. Items must be delivered to ASTI ninety (90) calendar days upon issuance of NTP</p>				
18	<p>Headset</p> <p>1. General Overview</p> <p>1.1. The Advanced Science and Technology Institute is seeking qualified and competent bidders to supply and deliver seven (7) pcs. headset to aid in virtual audio-related communication and learning involved in the daily work of project staff</p> <p>1.2. The technical specifications indicated herein are minimum requirements, unless otherwise specified.</p> <p>2. Technical Specifications</p> <p>2.1. Dimensions (H x W x D): 160 x 175x 60 mm</p> <p>2.2. Weight: 0.1 kg</p> <p>2.3. Cable length: 1.8m</p> <p>2.4. Connection: USB Type A</p> <p>2.5. Microphone Type: Bi-directional</p> <p>2.6. Input Impedance: 22 Ohms</p> <p>2.7. Sensitivity (headphone): 115 dB +/-3 dB</p> <p>2.8. Sensitivity (microphone): -42 dBV/Pa +/- 3 dB</p> <p>2.9. Frequency response (Headset): 20 Hz - 20 KHz</p> <p>2.10. Frequency response (Microphone): 100 Hz - 16 KHz</p> <p>3. Warranty</p> <p>3.1. Supplier warrants the items against defects in manufacturing and shipping and delivery issues</p> <p>3.2. Defective and incorrect items shall be replaced.</p> <p>3.3. Warranty Period should be at least one (1) year</p> <p>4. Payment and Delivery Terms</p>	7	pc	1500.00	10,500.00

	<p>4.1. The price of bid must be inclusive of government taxes and additional fees.</p> <p>4.2. Items must be delivered to ASTI ninety (90) calendar days upon issuance of NTP</p>				
19	<p>Laptop Riser</p> <p>1. General Overview</p> <p>1.1. The Advanced Science and Technology Institute is seeking qualified and competent bidders to supply and deliver six (6) pcs. laptop riser for to adjust the position of the laptop as suitable in the daily work of project staff</p> <p>1.2. The technical specifications indicated herein are minimum requirements, unless otherwise specified.</p> <p>2. Technical Specifications</p> <p>2.1. Material: Aluminum Alloy and rubber (for pads)</p> <p>2.2. Color: Silver</p> <p>2.3. Size: 253 x 240mm</p> <p>2.4. Weight: 14.8 oz. (419.6 g)</p> <p>2.5. Adjustable height: 10.9 cm and 11.6 cm</p> <p>2.6. Support adjust way: 2 angles</p> <p>2.7. Supported laptop size: 10"-16" laptops</p> <p>2.8. Supported laptop weight: Up to 15 kg.</p> <p>3. Warranty</p> <p>3.1. Supplier warrants the items against defects in manufacturing and shipping and delivery issues</p> <p>3.2. Defective and incorrect items shall be replaced.</p> <p>3.3. Warranty Period should be at least one (1) year</p> <p>4. Payment and Delivery Terms</p> <p>4.1. The price of bid must be inclusive of government taxes and additional fees.</p> <p>4.2. Items must be delivered to ASTI ninety (90) calendar days upon issuance of NTP</p>	6	pc	1900.00	11,400.00
20	<p>Office Chair</p> <p>1. General Overview</p> <p>1.1. The Advanced Science and Technology Institute is seeking qualified and competent bidders to supply and deliver seven (7) pcs. office chair to provide suitable ergonomic support in the daily work of project staff</p> <p>1.2. The technical specifications indicated herein are minimum requirements, unless otherwise specified.</p> <p>2. Technical Specifications</p> <p>2.1. Type: High Back</p> <p>2.2. Color: Black</p> <p>2.3. Dimensions:</p> <p>2.3.1. – Height: 89 cm</p> <p>2.3.2. – Head rest (W x H): 32 x 19 cm</p> <p>2.3.3. – Backrest frame (W x H) : 45 x 48 cm</p> <p>2.3.4. – Seat width: 58 cm</p> <p>2.3.5. – Seat height: 45 - 54 cm</p> <p>2.3.6. – Base diameter: 65 cm</p> <p>2.4. Material:</p> <p>2.4.1. – Cover: mesh</p> <p>2.4.2. – Seat: 5+1cm foam</p> <p>2.4.3. – Base: Chrome</p> <p>2.4.4. – Castors: PU</p> <p>2.5. Support: head, back lumbar and arm</p> <p>2.6. Armrest: fixed</p> <p>2.7. Mechanism: Tilt, 2.5mm thickness butterfly</p>	7	pc	4250.00	29,750.00

- 2.8. Weight capacity: 100KG
- 2.9. Must include: Assembly instructions
- 3. Warranty
 - 3.1. Supplier warrants the items against defects in manufacturing and shipping and delivery issues
 - 3.2. Defective and incorrect items shall be replaced.
 - 3.3. Warranty Period should be at least one (1) year
- 4. Payment and Delivery Terms
 - 4.1. The price of bid must be inclusive of government taxes and additional fees.
 - 4.2. Items must be delivered to ASTI ninety (90) calendar days upon issuance of NTP

TOTAL APPROVED BUDGET FOR THE CONTRACT:

Php 333,150.00

GUIDELINES

A. Submission of Quotations

- 1. Quotation/s shall include the Request for Quotation and/or the Purchase Request Number as state above;
- 2. Pictures or brand/model names or numbers, if applicable, should be specified in the quotation/s; and
- 3. Quotation/s must be signed by the company's duly authorized representative.

B. Eligibility Requirements

Pursuant to Annex "H" or Consolidated Guidelines for the Alternative Methods of Procurement of the 2016 Implementing Rules and Regulations (IRR) of Republic Act (RA) No. 9184, as amended by Government Procurement Policy Board Resolution No. 21-2017 dated 30 May 2017, the following documents shall be submitted except for Repeat Order, Shopping under Section 52.1(a), and Negotiated Procurement under Sections 53.1 (Two-Failed Biddings), and 53.5 (Agency-to-Agency):

For Procurement of Goods

- 1. Upon submission of quotation
 - ✓ PhilGEPS Platinum Membership Certificate including Annex "A". If not available, the following alternate documents may be submitted:
 - PhilGEPS Registration Number
 - Mayor's Permit
 - For individuals/professionals engaged under Section 53.6, 53.7 and 53.9 of the 2016 IRR of RA No. 9184, only the Bureau of Internal Revenue (BIR) Certificate of Registration shall be submitted in lieu of the Mayor's Permit.
- 2. Upon issuance of Notice of Award (NOA)
 - ✓ Omnibus Sworn Statement
 - Applicable only for bidders who have submitted their quotation on item/s with a total Approved Budget for the Contract (ABC) of above Php50,000.00.
 - ✓ Income/Business Tax Return
 - Applicable only for: **a)** bidders who have submitted their quotation on item/s with a total ABC of above Php500,000.00; and **b)** bidders for Lease of Real Property and Venue (except for government agencies as lessors).

For Procurement of Infrastructure

- 1. The requirements for Goods with the same submission indicated therein; and
- 2. Valid Philippine Contractors Accreditation Board License.

For Procurement of Consulting Services

- 1. The requirements for Goods with the same submission indicated therein; and
- 2. Valid Professional Regulation Commission License or Curriculum Vitae.

NOTE: For new suppliers, submit a BIR Certificate of Registration for accounting purposes.

C. Terms and Conditions

1. Additional requirements, if necessary, may be requested by the BAC depending on the item to be bid;
2. For all kinds of procurement, the bidder who passed the bid evaluation, shall submit a duly notarized Omnibus Sworn Statement upon issuance of NOA, unless otherwise provided;
3. All transactions are subject to creditable withholding tax and final Value Added Tax or percentage tax per revenue regulation/s of the BIR;
4. A penalty of one-tenth of one percent (0.001) of the total value of the undelivered goods/services shall be charged as liquidated damages for every day of delay of the delivery; and
5. The DOST-ASTI reserves the right to accept or reject any proposal, to annul the bidding process, and to reject all proposals at any time prior to contract award, without thereby incurring any liability to the affected proponent or proponents.