



Republic of the Philippines
DEPARTMENT OF SCIENCE AND TECHNOLOGY
ADVANCED SCIENCE AND TECHNOLOGY INSTITUTE



PURCHASE ORDER

ASTI – FM 03-17
REV 4 / 09 June 2025

Supplier:	ACE ELECTRONIC TECHNOLOGY, INC.	PO No.:	25-07-144
Address:	12 Timog Ave., Brgy. Laging Handa, Quezon City	PO Date:	July 08, 2025
TIN:	005-423-495-000	Mode of Procurement:	NP-53.9 Small Value Procurement

Gentleman:

Please furnish this Office the following articles subject to the terms and conditions contained herein:

Place of Delivery:	ASTI Bldg., C.P. Garcia Ave., U.P. Technology Park Complex, U.P. Campus, Diliman, Quezon City 1101	Delivery Term:	Sixty (60) calendar days upon issuance of NTP
Date of Delivery:		Payment Term:	Government Terms
		Warranty Term:	

Stock / Property No.	Unit	Description	Quantity	Unit Cost	Amount
1	Unit	<p>Sector LoRa Antenna</p> <p>1. GENERAL OVERVIEW</p> <p>1.1. DOST-ASTI is seeking qualified and competent bidders for the Supply and Delivery of Five (5) Units of Sector LoRa Antenna.</p> <p>1.2. The Approved Budget for the Contract (ABC) is inclusive of government taxes and all applicable charges.</p> <p>1.3. Will be part of the <u>prototype</u> by the COMPASS Project.</p> <p>2. TECHNICAL SPECIFICATIONS</p> <p>2.1. Frequency range: 862 – 870 MHz</p> <p>2.2. Gain: 8.9 dBi</p> <p>2.3. Front to Back: -18 dB</p> <p>2.4. -3 dB Horizontal Beamwidth: 90.2°</p> <p>2.5. Polarization: Vertical</p> <p>2.6. Nominal Input Impedance: 50 Ohms</p> <p>2.7. Connector: "N"</p> <p>2.8. Input Return Loss: -20 dB</p> <p>3. WARRANTY AND AFTERSALES SUPPORT</p> <p>3.1. Any repair or replacement service must be successfully done within thirty (30) calendar days upon receipt of notice</p>	5	P14,488.00	P72,440.00 ICT PED

Postal Address : ASTI Bldg., U.P. Technology Park Complex,
CP Garcia Ave., Diliman, Quezon City 1101
Website : www.asti.dost.gov.ph
Email : info@asti.dost.gov.ph

Tel No. : +632 8249-8500
+632 8426-9755

		<p>from DOST-ASTI.</p> <p>3.2. The end-user must be able to request technical support by phone, email, or through a website.</p> <p>3.3. The Sector LoRa Antenna must have at least six (6) months of warranty from the time of delivery which covers defects in materials and workmanship. Warranty service shall commence from the date of end-user acceptance.</p> <p>4. DELIVERY AND PAYMENT TERMS</p> <p>4.1. The goods must be delivered sixty (60) calendar days upon issuance of Notice to Proceed (NTP).</p> <p>4.2. Full payment will only be processed once the item is completely delivered, inspected, and accepted by the end-user. No payment shall be made for items not delivered under this contract</p> <p>(Please see attached quotation.)</p>			
2	Unit	<p>45 in 1 Sensor Module with Kit Box</p> <p>1. GENERAL OVERVIEW</p> <p>1.1. DOST-ASTI is seeking qualified and competent bidders for the Supply and Delivery of One (1) Unit of 45 in 1 Sensor Module with Kit Box.</p> <p>1.2. The ABC is inclusive of government taxes and all applicable charges.</p> <p>1.3. Will be part of the <u>prototype</u> by the COMPASS Project.</p> <p>2. TECHNICAL SPECIFICATIONS</p> <p>2.1. Must be compatible with Arduino</p> <p>2.2. Supply Voltage: 3-5V</p> <p>2.3. Operating Temperature: -40°-+85°</p> <p>3. WARRANTY AND AFTERSALES SUPPORT</p> <p>3.1. Any repair or replacement service must be successfully done within thirty (30) calendar days upon receipt of notice from DOST-ASTI.</p> <p>3.2. The end-user must be able to request technical support by phone, email, or through a website.</p> <p>3.3. The Sensor Module must have at least six (6) months of warranty from the time of delivery which covers defects in materials and workmanship. Warranty</p>	1	P2,785.00	P2,785.00 10T REQ

		<p>service shall commence from the date of end-user acceptance.</p> <p>4. DELIVERY AND PAYMENT TERMS</p> <p>4.1. The goods must be delivered sixty (60) days upon issuance of NTP.</p> <p>4.2. Full payment will only be processed once the item is completely delivered, inspected, and accepted by the end-user. No payment shall be made for items not delivered under this contract.</p> <p>(Please see attached quotation.)</p>			
3	Unit	<p>5-RX- Channel Coherent SDR</p> <p>1. GENERAL OVERVIEW</p> <p>1.1. DOST-ASTI is seeking qualified and competent bidders for the Supply and Delivery of One (1) Unit of 5-RX-Channel Coherent SDR.</p> <p>1.2. The ABC is inclusive of government taxes and all applicable charges.</p> <p>1.3. Will be <u>part of the prototype</u> by the COMPASS Project.</p> <p>2. TECHNICAL SPECIFICATIONS</p> <p>2.1. Five-channel, coherent-capable RTL-SDR, all clocked to a single local oscillator</p> <p>2.2. Tuning Range: 24 MHz to 1766 Mhz</p> <p>2.3. Antenna Input Connector: SMA Female</p> <p>2.4. Interface:</p> <p>2.4.1 Data: USB-C</p> <p>2.4.2 Power: USB-C</p> <p>3. WARRANTY AND AFTERSALES SUPPORT</p> <p>3.1. Any repair or replacement service must be successfully done within thirty (30) calendar days upon receipt of notice from DOST-ASTI.</p> <p>3.2. The end-user must be able to request technical support by phone, email, or through a website.</p> <p>3.3. The 5-RX-Channel Coherent SDR must have at least six (6) months of warranty from the time of delivery which covers defects in materials and workmanship. Warranty service shall commence from the date of end-user acceptance.</p>	1	P42,878.00	P42,878.00 ICT PED

		<p>4. DELIVERY AND PAYMENT TERMS</p> <p>4.1. The goods must be delivered sixty (60) days upon issuance of NTP.</p> <p>4.2. Full payment will only be processed once the item is completely delivered, inspected, and accepted by the end-user. No payment shall be made for items not delivered under this contract.</p> <p>(Please see attached quotation.)</p>			
4	Unit	<p>5 Magnetic Whip Antennas for Direction Finding</p> <p>1. GENERAL OVERVIEW</p> <p>1.1. DOST-ASTI is seeking qualified and competent bidders for the Supply and Delivery of One (1) Unit of 5 Magnetic Whip Antennas for Direction Finding.</p> <p>1.2. The ABC is inclusive of government taxes and all applicable charges.</p> <p>1.3. Will be <u>part of the prototype</u> by the COMPASS Project.</p> <p>2. TECHNICAL SPECIFICATIONS</p> <p>2.1. 5x SMA whip antenna usable from 100 MHz to 1 GHz</p> <p>2.2. 5x Magnetic Mount Bases</p> <p>2.3. 5x SMA Tees</p> <p>2.4. Cable Interface: SMA to SMA</p> <p>3. WARRANTY AND AFTERSALES SUPPORT</p> <p>3.1. Any repair or replacement service must be successfully done within thirty (30) calendar days upon receipt of notice from DOST-ASTI.</p> <p>3.2. The end-user must be able to request technical support by phone, email, or through a website.</p> <p>3.3. The 5 Magnetic Whip Antennas for Direction Finding must have at least six (6) months of warranty from the time of delivery which covers defects in materials and workmanship. Warranty service shall commence from the date of end-user acceptance.</p> <p>4. DELIVERY AND PAYMENT TERMS</p> <p>4.1. The goods must be delivered sixty (60) days upon issuance of NTP.</p>	1	P17,850.00	P17,850.00 105 PFD

		<p>4.2. Full payment will only be processed once the item is completely delivered, inspected, and accepted by the end-user. No payment shall be made for items not delivered under this contract.</p> <p>(Please see attached quotation.)</p>			
5	Unit	<p>Handheld Meshtastic device with Keyboard</p> <p>1. GENERAL OVERVIEW</p> <p>1.1. DOST-ASTI is seeking qualified and competent bidders for the Supply and Delivery of Two (2) Units of Handheld Meshtastic Device with Keyboard.</p> <p>1.2. The ABC is inclusive of government taxes and all applicable charges.</p> <p>1.3. Will be <u>part of the prototype</u> by the COMPASS Project.</p> <p>2. TECHNICAL SPECIFICATIONS</p> <p>2.1. Frequency: 868 MHz</p> <p>2.2. MCU: Dual core</p> <p>2.3. Wireless Connectivity: 2.4 GHz Wi-Fi & Bluetooth 5 (LE)</p> <p>2.4. Development: Must be compatible with Arduino</p> <p>2.5. Flash: 16MB</p> <p>2.6. PSRAM: 8MB</p> <p>2.7. Battery ADC PIN: IO04</p> <p>2.8. Onboard functions: GPS, TF Card, Microphone, Speaker</p> <p>3. WARRANTY AND AFTERSALES SUPPORT</p> <p>3.1. Any repair or replacement service must be successfully done within thirty (30) calendar days upon receipt of notice from DOST-ASTI.</p> <p>3.2. The end-user must be able to request technical support by phone, email, or through a website.</p> <p>3.3. The Handheld Meshtastic device with Keyboard must have at least six (6) months of warranty from the time of delivery which covers defects in materials and workmanship. Warranty service shall commence from the date of end-user acceptance.</p> <p>4. DELIVERY AND PAYMENT TERMS</p> <p>4.1. The goods must be delivered sixty (60)</p>	2	P8,785.00	<p>P17,570.00</p> <p>10% RED</p>

		<p>days upon issuance of NTP.</p> <p>4.2. Full payment will only be processed once the item is completely delivered, inspected, and accepted by the end-user. No payment shall be made for items not delivered under this contract.</p> <p>(Please see attached quotation.)</p>			
6	Unit	<p>Single Board Computer with Small TFT screen</p> <p>1. GENERAL OVERVIEW</p> <p>1.1. DOST-ASTI is seeking qualified and competent bidders for the Supply and Delivery of One (1) Unit of Single Board Computer with Small TFT screen.</p> <p>1.2. The ABC is inclusive of government taxes and all applicable charges.</p> <p>1.3. Will be <u>part of the prototype</u> by the COMPASS Project.</p> <p>2. TECHNICAL SPECIFICATIONS</p> <p>2.1. Display: 4' 720X720 high resolution TFT display.</p> <p>2.2. Interface: 3 USB2.0 Ports, I2C</p> <p>2.3. Charging Ampere: 1A charging ampere</p> <p>2.4. TF card Slot</p> <p>3. WARRANTY AND AFTERSALES SUPPORT</p> <p>3.1. Any repair or replacement service must be successfully done within thirty (30) calendar days upon receipt of notice from DOST-ASTI.</p> <p>3.2. The end-user must be able to request technical support by phone, email, or through a website.</p> <p>3.3. The Single Board Computer with Small TFT screen must have at least six (6) months of warranty from the time of delivery which covers defects in materials and workmanship. Warranty service shall commence from the date of end-user acceptance.</p> <p>4. DELIVERY AND PAYMENT TERMS</p> <p>4.1. The goods must be delivered sixty (60) days upon issuance of NTP.</p> <p>4.2. Full payment will only be processed once the item is completely delivered, inspected, and accepted by the end-user.</p>	1	P12,388.00	<p>P12,388.00</p> <p>ICT RES</p>

		<p>No payment shall be made for items not delivered under this contract.</p> <p>(Please see attached quotation.)</p>			
7	Unit	<p>Single Board Computer (4 GB Ram, Quad Core 64 bit SOC)</p> <p>1. GENERAL OVERVIEW</p> <p>1.1. DOST-ASTI is seeking qualified and competent bidders for the Supply and Delivery of Five (5) units of Single Board Computer (4 GB Ram, Quad Core 64-bit SOC).</p> <p>1.2. The ABC is inclusive of government taxes and all applicable charges.</p> <p>1.3. Will be part of the <u>prototype</u> by the COMPASS Project.</p> <p>2. TECHNICAL SPECIFICATIONS</p> <p>2.1. CPU: Quad-core</p> <p>2.2. RAM: 4 GB</p> <p>2.3. Wireless Interface: 2.4 GHz and 5.0 GHz IEEE 802.11ac wireless, Bluetooth 5.0, BLE</p> <p>2.4. USB Ports: 2 USB 3.0 ports; 2 USB 2.0 ports.</p> <p>2.5. GPIO Pins: 40 Pin GPIO Headers</p> <p>2.6. Display Ports: 2 × micro-HDMI ports (up to 4kp60 supported)</p> <p>2.7. External Storage: Micro-SD card slot for loading operating system and data storage</p> <p>3. WARRANTY AND AFTERSALES SUPPORT</p> <p>3.1. Any repair or replacement service must be successfully done within thirty (30) calendar days upon receipt of notice from DOST-ASTI.</p> <p>3.2. The end-user must be able to request technical support by phone, email, or through a website.</p> <p>3.3. The Single Board Computer (4 GB Ram, Quad Core 64-bit SOC) must have at least six (6) months of warranty from the time of delivery which covers defects in materials and workmanship. Warranty service shall commence from the date of end-user acceptance.</p> <p>4. DELIVERY AND PAYMENT TERMS</p> <p>4.1. The goods must be delivered sixty (60)</p>	5	P5,678.00	<p>P28,390.00</p> <p>1GT RED</p>

		<p>days upon issuance of NTP.</p> <p>4.2. Full payment will only be processed once the item is completely delivered, inspected, and accepted by the end-user. No payment shall be made for items not delivered under this contract.</p> <p>(Please see attached quotation.)</p>			
8	Unit	<p>GNSS Receiver Breakout Board</p> <p>1. GENERAL OVERVIEW</p> <p>1.1. DOST-ASTI is seeking qualified and competent bidders for the Supply and Delivery of Two (2) Units of GNSS Receiver Breakout Board.</p> <p>1.2. The ABC is inclusive of government taxes and all applicable charges.</p> <p>1.3. Will be <u>part of the prototype</u> by the COMPASS Project.</p> <p>2. TECHNICAL SPECIFICATIONS</p> <p>2.1. GNSS Signal: GPS, GLONASS, Galileo, BeiDou, QZSS</p> <p>2.2. GNSS Bands: B1I, B2I, E1B/C, E5b, L1C/A, L1OF, L2C, L2OF</p> <p>2.3. Positioning Accuracy:</p> <p>2.3.1. 2.5m without RTK</p> <p>2.3.2. 0.010m with RTK</p> <p>2.4. Interface: USB, UART</p> <p>2.5. Navigation Update Rate</p> <p>2.5.1. PVT: (Basic location over UBX binary protocol) - 25Hz</p> <p>2.5.2. RAW: 25Hz</p> <p>2.5.3. RTK: 20Hz</p> <p>2.6. Antenna Connection Type: SMA Female</p> <p>3. WARRANTY AND AFTERSALES SUPPORT</p> <p>3.1. Any repair or replacement service must be successfully done within thirty (30) calendar days upon receipt of notice from DOST-ASTI.</p> <p>3.2. The end-user must be able to request technical support by phone, email, or through a website.</p> <p>3.3. The GNSS Receiver Breakout Board must have at least six (6) months of warranty from the time of delivery which covers defects in materials and workmanship. Warranty service shall commence from the date of end-user acceptance.</p>	2	P24,888.00	P49,776.00 <i>10T PFD</i>

		<p>4. DELIVERY AND PAYMENT TERMS</p> <p>4.1. The goods must be delivered sixty (60) days upon issuance of NTP.</p> <p>4.2. Full payment will only be processed once the item is completely delivered, inspected, and accepted by the end-user. No payment shall be made for items not delivered under this contract.</p> <p>(Please see attached quotation.)</p>			
9	Unit	<p>Handheld Portable Computer with WiFi and 4G</p> <p>1. GENERAL OVERVIEW</p> <p>1.1. DOST-ASTI is seeking qualified and competent bidders for the Supply and Delivery of One (1) Unit of Handheld Portable Computer with WiFi and 4G.</p> <p>1.2. The ABC is inclusive of government taxes and all applicable charges.</p> <p>1.3. Will be <u>part of the prototype</u> by the COMPASS Project.</p> <p>2. TECHNICAL SPECIFICATIONS</p> <p>2.1. Input Interface: QWERTY backlit keyboard</p> <p>2.2. With adapter for external computing module to the mainboard</p> <p>2.3. Wi-Fi gain antenna for external computing module</p> <p>2.4. Standard HD 720p 5.0-inch IPS screen</p> <p>3. WARRANTY AND AFTERSALES SUPPORT</p> <p>3.1. Any repair or replacement service must be successfully done within thirty (30) calendar days upon receipt of notice from DOST-ASTI.</p> <p>3.2. The end-user must be able to request technical support by phone, email, or through a website.</p> <p>3.3. The Handheld Portable Computer with Wi-Fi and 4G must have at least six (6) months of warranty from the time of delivery which covers defects in materials and workmanship. Warranty service shall commence from the date of end-user acceptance.</p> <p>4. DELIVERY AND PAYMENT TERMS</p>	1	P28,788.00	P28,788.00 ICT PED


	4.1. The goods must be delivered sixty (60) days upon issuance of NTP. 4.2. Full payment will only be processed once the item is completely delivered, inspected, and accepted by the end-user. No payment shall be made for items not delivered under this contract. (Please see attached quotation.)			
			TOTAL:	₱272,865.00
(Total Amount in Words)			Two Hundred Seventy Two Thousand Eight Hundred Sixty Five Pesos Only	

The contract price is inclusive of taxes and other fees or charges. In case of failure to make the full delivery within the time specified above, a penalty of one-tenth (1/10) of one percent for every day of delay shall be imposed on the undelivered item/s. Once the cumulative amount of liquidated damages reaches ten percent (10%) of the amount of the contract, DOST-ASTI may rescind or terminate the contract, without prejudice to other courses of action and remedies available under the circumstances and in accordance with the provisions of the latest implementing rules and regulations of RA 9184.

Conforme:

Very Truly Yours,

(Signature over Printed Name of Supplier)


FRANZ A. DE LEON, Ph.D.
Director, DOST-ASTI

Digitally signed by Jeffrey A. Abarat

(Date)

Fund Cluster:	01	ORS / BURS No.:	02011012025-07-000529
		ORS / BURS Date:	JULY 09, 2025
Funds Available:	₱ 272,865.00	Amount:	₱ 272,865.00
<div>GAY CONCEPCION S. BUGAGAO Accountant III</div>			



08 July 2025

NOTICE TO PROCEED
ALTERNATIVE MODE OF PROCUREMENT

Ms. MARIBELLE UY
General Manager ACE ELECTRONIC T
ACE ELECTRONIC TECHNOLOGY, INC.
12 Timog Ave., Brgy. Laging Handa
Quezon City

Dear Ms. Uy,

This Notice to Proceed is hereby issued for the following contract details:

Contract Name	: Supply and Delivery of Five (5) Units Sector LoRa Antenna and Other Items
Purchase Request No.	: GAA-25-06-21403
Purchase / Work Order No.	: 25-07-144
Total Contract Price	: Php 272,865.00
(inclusive of taxes, import duties and all other charges or fees)	
Total Contract Price in Words	: Two Hundred Seventy Two Thousand Eight Hundred Sixty Five Pesos

Upon issuance of this Notice, your company, **ACE ELECTRONIC TECHNOLOGY, INC.** is hereby directed to commence the delivery of items and/or performance of services stipulated in the said Purchase Order which shall become due and demandable in accordance with the delivery schedule stipulated therein.

Please acknowledge receipt and acceptance of this Notice by signing in the space provided below. There are two (2) copies of this document; you may keep one copy and return the other to the Bids and Awards Committee (BAC) Secretariat of the Advanced Science and Technology Institute. Should you have any questions or clarifications, you may reach us at bac-sec@asti.dost.gov.ph.

Respectfully,


FRANZ A. DE LEON, Ph.D. Digitally signed by Jeffrey A. Aberot
Director

DATE OF ISSUANCE:

JUL 14 2025

RECEIVED BY:

Signature over Printed Name

Date and Time

Postal Address : ASTI Bldg. UP Technology Park Complex
CP Garcia Ave., Diliman, Quezon City 1101
Website: : www.asti.dost.gov.ph
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