



ASTI-FM 03-10
REV 2 / 13 MAR 2019

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

Kind of Procurement Activity: Negotiated Procurement:Small-value Procurement	
Deadline of Submission of Bids: Oct-18-2019, 2:00 PM	
RFQ No.: 19-10-2890	Date: October-14-2019
PR No.: NetMeshR4-19-09-8486	Date: September-19-2019

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,


PEDRITO B. MANGAHAS
Chairperson, BAC-1

NO.	TECHNICAL SPECIFICATIONS	QTY	UNIT	UNIT PRICE(Php)	TOTAL PRICE(Php)
1	Multipolarized Antenna -Frequency Range: 88MHz-6GHz (transmit), 25MHz-6GHz (receive) -Gain: 3 dBi, unity -VSWR: 1:1-1.9:1 -Horizontal pattern type: Omnidirectional -Vertical pattern type: Hemispheric -Antenna feed: one -Connector Type: Standard NMO -Polarization: Multi-Polarized -Power: 200 Watts Input -Impedance: 50 ohms nominal -Construction: Stainless Steel, Aluminum -For outdoor applications -Operating Temperature: -40 to 85 deg C -IP Rating: IP66 -Must include the following: NMO to SMA Round Magnetic Mount Assembly with at least 3 meter cable - Delivery date: 30 Days upon issuance of NTP but not later than Nov.30, 2019.	2	pc	14950.00	29,900.00
2	Quadrature Demodulator -Operating RF and LO frequency: 400 MHz to 6 GHz -Input IP3 - 30 dBm at 900 MHz -28 dBm at 1900 MHz -Input IP2: >65 dBm at 900 MHz -Input P1dB (IP1dB): 11.6 dBm at 900 MHz	1	pc	10000.00	10,000.00

ASTI Bldg., U.P. Technology Park Complex, C.P. Garcia Ave., Diliman, Quezon City, Philippines 1101

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	<ul style="list-style-type: none"> -Noise figure (NF) -10.9 dB at 900 MHz -11.7 dB at 1900 MHz -Voltage conversion gain: ~7 dB -Quadrature demodulation accuracy at 900 MHz -Phase accuracy: ~0.2° -Amplitude balance: ~0.07 dB -Demodulation bandwidth: ~390 MHz -Baseband I/Q drive: 2 V p-p into 200 Ω -Single 5 V supply - Delivery date: 30 Days upon issuance of NTP but not later than Nov.30, 2019. 				
3	<p>Sim Card Writer</p> <ul style="list-style-type: none"> - Supports EMV Level 1 specification - Supports USB 2.0 full speed Based on ISO7816 implementation - Supports PC Smart Card industry standard – PC/SC 2.0 - Supports Microsoft Smart Card for Windows- Meet Microsoft WHQL USB Smart Card Reader requirements - Meets US Federal Information Processing Standards (FIPS) <ul style="list-style-type: none"> - Publication 201 requirements on smart card reader interoperability - Supports single slot - Supports T0, T1 protocol - Supports I2C memory card, SLE4418, SLE4428, SLE4432, SLE4442, SLE4436, SLE5536, SLE6636, AT88SC1608, - AT45D041 card and AT45DB041 card via external EEPROM - Supports ISO7816 Class A, B and C (5V/3V/1.8V) card - Implemented as an USB full speed device with bulk transfer endpoint, Mass Storage endpoint - Built-in PLL for USB and Smart Card clocks requirement - Support EEPROM for USB descriptors customization (PID/VID/ iManufacturer/ iProduct/Serial Number), - Direct Web Page Link, and accessing memory card module. -EEPROM programmable via USB interface -Supports software update for memory card module - Supports Direct Web Page Link via configuration in external EEPROM - Supports short APDU and extended APDU -Compatible with Microsoft USB-CCID driver <p>Include: Software (Will be emailed to the buyer) Simcard Converter 2 simcards</p> <ul style="list-style-type: none"> - Delivery date: 30 Days upon issuance of NTP but not later than Nov.30, 2019. 	1	pc	4336.00	4,336.00
4	<p>Blank 4G Sim Card</p> <p>Applications on the UICC :USIM Type: Blank USIM Card SIM Card Size: Standard SIM Card, Micro SIM Card</p>	20	pc	171.00	3,420.00

	<p>and Nano-SIM Card (3 in 1) Generation:2G,3G and 4G NetworkSupported: FDD LTE WCDMA GSM Feature: Writable ICCID, IMSI, KI, OPC(OP) Algorithm: Milenage - Delivery date: 30 Days upon issuance of NTP but not later than Nov.30, 2019</p>				
5	<p>RF LDMOS Wideband Integrated Power Amplifiers -Usable Frequency Range from 575 MHz to 960 MHz -Two-stage, two-branch integrated topology -Voltage Supply Rating from 48 V to 55 V -Power gain of >30 dB -On-chip matching (50 ohm input, DC blocked) -Integrated quiescent current temperature compensation with enable/disable function -Designed for digital predistortion error correction systems -Optimized for Doherty applications - Delivery date: 30 Days upon issuance of NTP but not later than Nov.30, 2019</p>	5	pc	2600.00	13,000.00
6	<p>GPS RTK Module Voltage: 5V or 3.3V, 3.3V logic Current: approximately 35mA Time to First Fix: 29s (cold), 1s (hot) Max Navigation Rate: PVT (basic location over UBX binary protocol): 10Hz RTK: 5Hz Moving Baseline RTK: 4Hz Raw: 10Hz Horizontal Position Accuracy: 2.5m without RTK 0.025m with RTK With Qwiic Connectors - Delivery date: 30 Days upon issuance of NTP but not later than Nov.30, 2019</p>	3	pc	14950.00	44,850.00
7	<p>Wideband Low Noise Amplifier Evaluation board Low noise figure, 0.47 dB typ. @ 900 MHz High gain, 39 dB typ. @900 MHz High OIP3, +40 dBm typ. at 900 MHz - Delivery date: 30 Days upon issuance of NTP but not later than Nov.30, 2019</p>	3	unit	9000.00	27,000.00
8	<p>Low Noise Amplifier, 1.71 to 2.4 GHz -Noise figure, 0.85 dB typ. -Gain, 30 dB typ. -Output power, up to +20 dBm typ. -output IP3, 36.5 dBm typ. -SMA connector - Delivery date: 30 Days upon issuance of NTP but not later than Nov.30, 2019</p>	2	unit	4000.00	8,000.00
9	<p>Low Noise Amplifier, 0.65 to 1.4 GHz -IP3, +40 dBm typ. -Noise figure, 0.8 dB typ. -Broadband flat gain response -Internal voltage regulated -Over-voltage and transient protected -SMA connector</p>	2	unit	9800.00	19,600.00

	- Delivery date: 30 Days upon issuance of NTP but not later than Nov.30, 2019				
10	RF Transceivers Test Card -Frequency: 915 MHz -Operating Supply Voltage: 3.3 V -For Use with: Si4460 -Receiver sensitivity: -126 dBm - Delivery date: 30 Days upon issuance of NTP but not later than Nov.30, 2019	2	pc	4000.00	8,000.00
11	Single Board Computer- 1GB LPDDR4 SDRAM 1GB LPDDR4 SDRAM 1.5GHz quad-core 64-bit ARM Cortex-A72 CPU Full-throughput Gigabit Ethernet Dual-band 802.11ac wireless networking Bluetooth 5.0 Two USB 3.0 and two USB 2.0 ports Dual monitor support, at resolutions up to 4K VideoCore VI graphics, supporting OpenGL ES 3.x 4Kp60 hardware decode of HEVC video Includes Power Supply Includes Case Delivery date: 30 Days upon issuance of NTP but not later than Nov.30, 2019	2	unit	3500.00	7,000.00
12	Single Board Computer- 4GB LPDDR4 SDRAM 1.5GHz quad-core 64-bit ARM Cortex-A72 CPU (~3x performance) Includes Power Supply Includes Case Delivery date: 30 Days upon issuance of NTP but not later than Nov.30, 2019	2	unit	4500.00	9,000.00
13	64GB micro SD Card UHS-1 Speed Class Rating Class 10 Delivery date: 30 Days upon issuance of NTP but not later than Nov.30, 2019	4	pc	2000.00	8,000.00
14	128GB micro SD Card UHS-1 Speed Class Rating Class 10 Delivery date: 30 Days upon issuance of NTP but not later than Nov.30, 2019	4	pc	3000.00	12,000.00
15	Low Noise Amplifier Evaluation Board Evaluation Board for Low Noise Amplifier Operating Frequency from 380MHz to 530 MHz - Noise Figure < 0.6 dB - Gain > 21.5 dB - Third order output intercept point > 33 dBm - 1 dB output compression point > 17 dBm - Flexible bias voltage: 3 to 5 V Delivery date: 30 Days upon issuance of NTP but not later than Nov.30, 2019	2	unit	5471.00	10,942.00
16	GSM/LTE Low Noise Amplifier Evaluation Board Evaluation Board for Low Noise Amplifier Operating Frequency from 650 MHz to 1100MHz - Noise Figure < 0.4 dB	2	unit	5471.00	10,942.00

	<ul style="list-style-type: none"> - Gain > 18 dB - Third order output intercept point > 36 dBm - 1 dB output compression point > 19 dBm - Flexible bias voltage: 3 to 5 V Delivery date: 30 Days upon issuance of NTP but not later than Nov.30, 2019				
17	2-Way Connectorized Power Splitter Frequency: 500 MHz to 5000 MHz Connector: SMA, 50 Ohm Maximum Power Input as splitter >= 10W Amplitude Unbalance: 0.5 dB Max., 0.05 dB Typical Phase Unbalance: 4 degrees Max., 0.5 deg Typical Isolation: 15 dB Min., 25 dB Typical Delivery date: 30 Days upon issuance of NTP but not later than Nov.30, 2019	2	unit	7020.00	14,040.00
18	High Power SPDT Switch Evaluation Board High-power switch for micro-cell and macro-cell base stations up to 100W Usable Frequency Range from 300 MHz to 3.8 GHz 50 Ohm SMA connectors for the three ports Compact, integrated high-power switch with driver circuit Small PCB footprint with minimal external components Operating Supply Voltage of +5 V DC Logic control of 0 to 3 V Low TX/RX insertion loss High TX to RX isolation Low DC power consumption: <130 mA in TX or RX mode Delivery date: 30 Days upon issuance of NTP but not later than Nov.30, 2019	2	unit	11000.00	22,000.00
19	2.4GHz Coaxial Circulator 2300 - 3000MHz Frequency Range 100W Max Input Power SMA Female Connector Delivery date: 30 Days upon issuance of NTP but not later than Nov.30, 2019	2	box	7000.00	14,000.00
20	600 MHz Coaxial Isolator 600 - 800 MHz 100W/30W Max Input Power SMA Female Connector Delivery date: 30 Days upon issuance of NTP but not later than Nov.30, 2019	2	unit	7000.00	14,000.00
21	RF Cable Gender: Male to Male Style: SMA to SMA Length: 2.0m Cable Type: RG-58 Impedance: 50ohms Frequency - Max : 12.4GHz Shielding: Shielded Delivery date: 30 Days upon issuance of NTP but not later than Nov.30, 2019	10	pc	1335.00	13,350.00
22	Bias Tee Frequency: 50MHz~6GHz	10	pc	6300.00	63,000.00

	RF Type: General Purpose Package/Case: Module Function: Bias Tee Delivery date: 30 Days upon issuance of NTP but not later than Nov.30, 2019				
23	RF port Gender: Male to Cable Style: BNC to Cable 1st Connector: BNC Male Plug 2nd Connector: Coaxial Cables, 2 Positions Length: 4.000" (101.60mm) Cable Type: 20 AWG Color: Black, Red Operating Temperature: 55°C Delivery date: 30 Days upon issuance of NTP but not later than Nov.30, 2019	10	pc	1200.00	12,000.00
24	SMA Connector Connector Style: SMA Connector Type: Jack, Female Socket Contact Termination: Solder Shield Termination: Solder Impedance: 50 ohms Mounting Type: Board Edge, End Launch Delivery date: 30 Days upon issuance of NTP but not later than Nov.30, 2019	20	pc	150.00	3,000.00
25	RF Connector N type Female Product Category: RF Connectors / Coaxial Connectors RoHS: RoHS Compliant By Exemption RF Series: N Gender: Female Impedance: 50 Ohms Minimum Frequency: <100 MHz Maximum Frequency: >6 GHz Termination Style: Solder Orientation: Straight Mounting Type: Panel Cable Type: LMR-400 Body Material: Brass Contact Plating: Gold Contact Material: Beryllium Copper Body Finish: White Bronze Mating Cycles: 500 Cycle Maximum Operating Temperature: + 85 C Minimum Operating Temperature: - 55 C Subcategory: RF Interconnects Delivery date: 30 Days upon issuance of NTP but not later than Nov.30, 2019	2	pc	1800.00	3,600.00
26	Vector Modulator Type: Evaluation Board for Vector Modulator Frequency: 1.8GHz~2.7GHz Continuous Phase Control: 360 degrees Continuous Gain Control: 40 dB Output Noise Floor: -160 dBm/Hz Input IP3: +35dBm Package: 16 lead 3x3mm SMT For use with/ Related Products: HMC631LP3	2	unit	21300.00	42,600.00

	Delivery date: 30 Days upon issuance of NTP but not later than Nov.30, 2019.				
27	Outdoor GPS Antenna With integrated Low Noise Amplifier Active gain: 27dB typ. Noise Figure: 1.5 max Includes 3 metres RG174 Cable SMA Male Connector Rugged Low Profile UV Resistant Case, Screw Fix connector Operating Temperature -35 to +85°C. Supply Voltage 2.7 to 5.5V Delivery date: 30 Days upon issuance of NTP but not later than Nov.30, 2019	3	pc	2823.00	8,469.00
28	6W RF Transistors Transistor Type: HEMT Technology: GaN Gain: 13 dB Transistor Polarity: N-Channel Vds - Drain-Source Breakdown Voltage: 120 V Vgs - Gate-Source Breakdown Voltage: - 10 V to 2 V Id - Continuous Drain Current: 0.75 A Output Power: 9 W Minimum Operating Temperature: - 40 C Maximum Operating Temperature: + 150 C Mounting Style: SMD/SMT Configuration: Single Height: 2.79 mm Length: 4.19 mm Product: GaN HEMT Width: 5.21 mm Delivery date: 30 Days upon issuance of NTP but not later than Nov.30, 2019.	3	pc	4320.00	12,960.00
29	10W RF JFET Transistors Transistor Type: HEMT RoHS: RoHS Compliant Technology: GaN Gain: 14.5 dB Transistor Polarity: N-Channel Vds - Drain-Source Breakdown Voltage: 120 V Vgs - Gate-Source Breakdown Voltage: - 10 V to 2 V Id - Continuous Drain Current: 1.5 A Output Power: 12.5 W Minimum Operating Temperature: - 40 C Maximum Operating Temperature: + 150 C Mounting Style: Screw Mount Configuration: Single Height: 3.43 mm Length: 5.21 mm Width: 4.19 mm Vgs th - Gate-Source Threshold Voltage: - 3 V" Delivery date: 30 Days upon issuance of NTP but not later than Nov.30, 2019.	3	pc	5400.00	16,200.00
30	Portable Antenna Tripod at least 1.8 meters in height Delivery date: 30 Days upon issuance of NTP but not	2	pc	10000.00	20,000.00

	later than Nov.30, 2019.				
31	RF Coupler Coupler Type: Standard Frequency: 2.3GHz ~ 2.7GHz Coupling Factor: 5dB Applications: General Purpose Insertion Loss: 0.18dB Power - Max: 60W Package / Case: 4-SMD, No Lead Supplier Device Package: SMD Delivery date: 30 Days upon issuance of NTP but not later than Nov.30, 2019.	10	pc	230.00	2,300.00
32	RF Combiner Splitter Frequency: 2.3GHz - 2.8GHz Packaging: 0805 (2012 Metric) Isolation (min) : 14dB, 21dB @ Output ports Port Impedance: 50 ohms Return Loss: 19dB Insertion Loss: 0.3 dB Phase Balance: 1 degrees Power Handling: 2 Watts Operational Temperature: -55 ~ +95 deg. Celsius Size: 2.00mm x 1.27mm Delivery date: 30 Days upon issuance of NTP but not later than Nov.30, 2019	10	pc	43.00	430.00
33	SMD Resistor Kit Type: Thin Film Inclusions: 47 ohm ~ 100k ohms Power Rating: 1/4W Tolerance: +- 0.1% Mounting Type: SMT Packages: Wide 0604 (1610 Metric) Delivery date: 30 Days upon issuance of NTP but not later than Nov.30, 2019	2	pc	4800.00	9,600.00
34	Surface Mount Circulator Frequency Range: 2200 MHz~ 2800MHz or 2.2GHz~2.8GHz Insertion Loss (Max): 0.4dB Isolation (min): 20dB VSWR (Max): 1.25 Forward Power: 60W Reverse Power: 60 W Mounting Type: Surface Mount" Delivery date: 30 Days upon issuance of NTP but not later than Nov.30, 2019	3	pc	7600.00	22,800.00
35	Single Board Computer with GPU GPU: 128-core Maxwell or equivalent CPU: Quad-core ARM A57 @ 1.43 GHz or equivalent Memory: 4 GB 64-bit LPDDR4 25.6 GB/s Storage: microSD (not included) Video Encode: 4K @ 30 4x 1080p @ 30 9x 720p @ 30 (H.264/H.265) Video Decode: 4K @ 60 2x 4K @ 30 8x 1080p @ 30 18x 720p @ 30 (H.264/H.265) Camera: 1x MIPI CSI-2 DPHY lanes Connectivity: Gigabit Ethernet, M.2 Key E	2	pc	9801.00	19,602.00

	<p>Display: HDMI 2.0 and eDP 1.4 USB: 4x USB 3.0, USB 2.0 Micro-B Others: GPIO, I2C, I2S, SPI, UART Mechanical: 69 mm x 45 mm, 260-pin edge connector Delivery date: 30 Days upon issuance of NTP but not later than Nov.30, 2019</p>				
36	<p>Microcontroller Mounting Style: Through Hole Package / Case: PDIP-28 Data Bus Width: 8 bit Maximum Clock Frequency: 20 MHz Program Memory Size: 32 kB Data RAM Size: 2 kB ADC Resolution: 10 bit Number of I/Os: 23 I/O Operating Supply Voltage: 1.8 V to 5.5 V Minimum Operating Temperature: Program Memory Type: Flash Data RAM Type: SRAM Data ROM Size: 1 kB Data ROM Type: EEPROM Interface Type: I2C, SPI, USART Number of ADC Channels: 6 Number of Timers/Counters: 3 Timer Delivery date: 30 Days upon issuance of NTP but not later than Nov.30, 2019</p>	20	pc	163.00	3,260.00
37	<p>RF Mixer Evaluation Board Frequency: 10 MHz to 6 GHz Operating Supply Voltage: 4.75 V to 5.25 V Interface Type: SMA Connector Delivery date: 30 Days upon issuance of NTP but not later than Nov.30, 2019</p>	2	unit	14950.00	29,900.00
38	<p>Wideband Synthesizer with Integrated RF Mixer LO Frequency Range: 85MHz-4200MHz With Fractional-N Synthesizer With single high linearity mixer Step Size: 1.5Hz Fully Integrated Low Phase Noise VCO and LO Buffers Integrated Phase Noise 0.18 degrees RMS at 1GHz, 0.52 degrees RMS at 3GHz 30MHz to 6000MHz Mixer Frequency Range Input IP3 +23dBm 2.7V to 3.3V Power Supply 3- or 4-Wire Serial Interface Delivery date: 30 Days upon issuance of NTP but not later than Nov.30, 2019</p>	5	unit	2000.00	10,000.00
39	<p>RF balun Frequency: 10 to 4000 MHz Balanced transmission line. Low insertion loss, 1.1 dB typ. 1:1 impedance ratio 50 ohms Delivery date: 30 Days upon issuance of NTP but not later than Nov.30, 2019</p>	20	pc	245.00	4,900.00
40	<p>RF balun (4:1)</p>	20	pc	250.00	5,000.00

Frequency: 100 to 1000 MHz DC isolated 50 ohms Low insertion loss, 0.6 dB Low amplitude unbalance, 0.5 dB in 1 dB bandwidth 50 ohms impedance impedance ratio: 4:1 Delivery date: 30 Days upon issuance of NTP but not later than Nov.30, 2019				
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TOTAL APPROVED BUDGET FOR THE CONTRACT:

Php 593,001.00

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.