**SHORT TIME TENDER ENQUIRY**

**BIT/PUR/LTE/EEE/21-22//IC000947/2021 DATE:08/03/2022**

To,

 **M/s. ..............................................**

Dear Sir,

Subject : Request for Quotation for Procurement Microcontroller kit & Single phase hall effect voltage current sensor card

You are requested to submit most competitive rates(s) for the following item(s) as per details given below (Sealed Quotations may be sent by hand or by post):

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| Last date and time for submissions of complete Quotations by Email to dr.purchase@bitmesra.ac.in, purchase2@bitmesra.ac.in sealed quotations can be submitted to the under mentioned address. | **14.03.2022 15:00 Hrs.**( If all LTE Vendors submit the quotation prior to the submission date, the quotations will be opened prior to last date of submission.) |

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| Sr.No. | Item Description | **Quantity** |
| 1 | MICROCONTROLLER KIT1.NIC04 -ARM CORTEX M4 32-BIT Microcontroller KitNI CM4ARMis a trainer kit based on STM32F407VGT6device; a member of CORTEX M4 based 32-bit microcontroller's family.STM32F407VGT6 is a Flash memory-based controller having hardware debugging facility within-System programming capability, eliminating the need for Universal Programmer to load programs in the controller's memory. DISCOVERY board developed by STMicroelectronics is used as a daughter board. A mother board with buffers, push buttons keys, LCD display, and RS-232 port is provided. Specifications:"Two boards1)Daughter board: This board is ST Discovery card for STM32F407VGT6 microcontroller running at 168 MHz.2)Mother board: This board is developed to provide buffering and signal conditioning of various signals of discovery card."A USB cable to connect the daughter board (Discovery) for hardware debugging and programming of the microcontroller."Power supply with transformer and mains cable."Evaluation version of the Keil MDK-ARM Development Kit which includes a C cross compiler, assembler, debugger and on-line manuals."Code examples for various peripherals for practice.Key features:"STM32F407VGT6microcontroller featuring 1MB of Flash memory, 192 KB of RAM in an LQFP100 package running at 168 MHz (max) providing peak throughput of 210MIPs."On-board ST-LINK/V2 debugger for hardware level debugging (SWD connector for programming and debugging)."3×12-bit, 2.4MSPS A/D converters: up to 24 channels (simultaneous sampling of all three ADCs is possible)."General-purpose DMA: 16-stream DMA controller with FIFOs and burst support Up to 17 timers: up to twelve 16-bit and two 32-bit timers up to 168MHz, each with up to 4 IC/OC/PWM or pulse counter and quadrature (incremental) encoder input."Board power supply: through USB bus or from an external 12V AC supply."LIS302DL, ST MEMS motion sensor, 3-axis digital output accelerometer."MP45DT02, ST MEMS audio sensor, Omni-directional digital microphone."CS43L22, audio DAC with integrated class D speaker driver."Eight LEDs: " LD1 (red/green) for USB communication, LD2 (red) for 3.3 V power on. " Four user LEDs, LD3 (orange), LD4 (green), LD5 (red) and LD6 (blue)." 2 USB OTG LEDs LD7 (green) VBus and LD8 (red) over-current." Two push buttons (user and reset)." USB OTG FS with micro-AB connector."GPIO ports are routed to header on mother board for easy connection (5V tolerant GPIO pins)"8 General purpose input lines, 8 General purpose output lines."16X2 LCD interface, 5 keys interface."4 high speed digital outputs and 2 High speed digital input lines."6 PWM outputs with programmable dead time insertion, 3 QEI inputs."SPI bus for SPI slave interface."9 Analog inputs for AC signal interface."2 DAC outputs (0-3.3 V)."9-pin D-type connector for RS232 interfaces."AUTO Code Generation from MATLAB Demo codes for Practice:"GPIO code examples(gpio\_write,gpio\_read\_write,gpio\_lcd)."USART code example."TIMER code examples(time base, timer output compare, pwm\_timer, pwm\_key)."REQ\_MEASURMENT\_LCD code examples (freq\_meas, freq\_meas\_avg, freq\_meas\_avg\_filter)."ADC code example."DAC RAMP WAVE code example."ADC\_DAC code example."ADC\_DMA\_TRUE\_RMS\_ MEAS code example. | **01 Nos.** |
| 2 | SINGLE PHASE HALL-EFFECT VOLTAGE & CURRENT SENSOR CARD (V3)2.NISC01: Single Phase Hall-effect Voltage & Current Sensor Card (V3)Single Phase Sensor card is developed to sense 01 AC Voltage, 01 AC Current Signals. It is possible to add offset voltage for interfacing sensed signal with unipolar ADC, Amplitude calibration is also possible. More than Two Single Phase Sensor cards can be cascaded with each other, therefore increasing number of channels available.Key features of Single-phase sensor cardSingle Phase Sensor card with following features:1.One AC/DC voltage measurement oOne voltage sensing using Hall-Voltage Sensor.o0-3V (peak-peak) output.oUnipolar output with DC offset.oSuitable for interfacing with unipolar ADC channel.oIsolated instrument2.One AC/DC current measurementoIsolated measurement.oOne current sensing using Hall-Current Sensor.o0-3V (peak-peak) output.oUnipolar output with DC offset.oSuitable for interfacing with unipolar ADC channel.3.Auxiliary power supply and connectors for power connections.4.Two or more cards can be cascaded together with expansion connectors when necessary.5.Hall-current Sensor SpecificationsoVout Output voltage at Ir, TA=25?: 4V.oOutput Impedance <170 ohm.oLoad Resistor >10Kohm.oVcc Supply Voltage: ±15V ±5%.oCurrent Consumption <20mA.oAccuracy at Ir, TA=25? (without offset) <1%.oLinearity from 0 to Ir, TA=25?.oFrequency Bandwidth (-3dB) 50KHz. | **01 Nos.** |

Sealed Quotation may be submitted superscribed with reference number as appended hereunder:-

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| Quotation for Supply of ---- Ref.No. -------- **BIT/PUR/LTE/EEE/21-22//IC000947/2021** To,Dy. Registrar (Purchase) Birla Institute of Technology From : M/s----------------------------------------Mesra , Ranchi , Jharkhand Address : ----------------------------------------835215 Contact No. ------------------------------------- Email ID---------------------------------------  |

GST Exemption: The Institute is partially exempted from the payment
of GST vide GOI Notification No.45/2017-Central Tax (Rate), dated
14.11.2017 and 47/2017-Integrated Tax (Rate), dated: 14.11.2017 the applicable IGST will be at the rate of 5%. Necessary documents (DSIR) and related certification will be provided.

1. HSN code of the material should be mentioned in quotation.
2. All entries in the quotation should be typed or computer printed without any ambiguity and should be free from correction etc. Hand written offers will be rejected.
3. Late and delayed tenders will not be considered. In case any unscheduled holiday occurs on prescribed closing date the next working day shall be the prescribed date of closing.
4. The quotation should be submitted with descriptive literature & drawing. The make of the items offered should be clearly specified.
5. Material should be confirming to our specification. The deviations if any should be clearly indicated in the quotations.
6. Successful bidder has to furnish the OEM test certificates along with the materials (if applicable).
7. Rate /Price: The offered price shall be on **FOR BIT Mesra on Door Delivery basis**.
8. No Advance payment will be considered at any circumstances.
9. If offered Price Term is other than the FOR-Destination term, approximate Freight & forwarding charges along with the applicable Insurance charges may be mentioned.
10. Details of GST registration, PAN No. should be furnished along with quotations.
11. Road Permit: The supplier shall arrange Road Permit on his own for transportation material to BIT Mesra and any additional tax liability on this account shall be borne and paid by the supplier.
12. Purchaser will not pay separately for transit insurance/taxes (if any) and the supplier will be responsible until the stores arrive in good condition at the destination.
13. Warranty: Period of warranty should be clearly mentioned and also the parts covered under it. Warranty will be applicable from the date of successful installation.
14. Service Facility: Supplier must mention about the service set up in India & confirm effective after sales service.
15. BIT Mesra is not bound to accept the lowest or any quotation for whatsoever reason and reserve its right to accept or reject in whole or in part any or all the quotations received without assigning any reason.
16. Applicable taxes shall be quoted separately for all items and levies payable by the supplier under the contract shall be included in the unit price.
17. Each bidder shall submit only one quotation and sealed quotation to be submitted / delivered at the address. (Alternatively it can be email ( Password protected ) at purchase2@bitmesra.ac.in or dr.purchase@bitmesra.ac.in) or deliver by hand.
18. Training clause ( if any )to be mentioned.
19. Delivery period should be mentioned clearly in the quotation. If a firm accepts an order and fails to execute the order in full as perthe terms and conditions stipulated therein, it will be open to this Institute to recover liquidated damages from the firm at the rate of 0.5% to 1% per week of the order value subject to a maximum of 10% of the order value.
20. Conditional tenders will not be considered.
21. Authorized dealership certificate should be submitted in case principal manufacturing company is not quoting directly.
22. Copy of Purchase Orders for similar equipment supplied to any other organization desired.
23. Annual turnover of company for last 3 year / CA Certificate to be provided.
24. Declaration required by the vendor that the price quoted are lowest that I have supplied to any other organization.
25. Customs Duty: The Institute is exempted from payment of Customs Duty Vide GOI Notification No. 51/96 Customs, dated 23.07.1996 & No.24/2007-Customs dated 01.03.2007 with registration no 11/161/90-TU-V dated 24.07.2019. Sd/-

Dy. Registrar Purchase

BIT Mesra Ranchi-835215