



NATIONAL INSTITUTE OF ELECTRONICS
Ministry of Science & Technology
Government of Pakistan
17, H-9, Islamabad



Tel: 051-9265009-13 (Ext: 217)

Fax: 051-9265027

TENDER NO. 05/2018-NIE

PROCUREMENT OF MISC. EQUIPMENT, COMPONENTS AND TOOLS FOR LONG RANGE TRANSMISSION & MISC. COMPONENTS, TESTERS, DEVELOPMENT BOARDS AND SENSORS FOR POWER IMPROVEMENT DEVICE – COMMUNICATION LAB

A. MISC. EQUIPMENT, COMPONENTS AND TOOLS FOR LONG RANGE TRANSMISSION

S. No	Name of Item	Qty	Unit Price	Total Price
1	Seven Segment Display with standard accessories and following specifications Make: Any Reputable Firm <u>Specifications:</u> - High bright blue color	50 Nos.		
2	2 pin connectors with following specifications Make: Any Reputable Firm <u>Specifications:</u> - PCB Mounted	100 Nos.		
3	Keypads with standard accessories and following specifications Make: Any Reputable Firm <u>Specifications:</u> - 3X4 HEX keypad	10 Nos.		
4	Female Headers with standard accessories and following specifications Make: Any Reputable Firm <u>Specifications:</u> - SIL 40 Pin 2.54mm	50 Nos.		
5	Male Header with standard accessories and following specifications Make: Any Reputable Firm	50 Nos.		

	<p>Specifications:</p> <ul style="list-style-type: none"> - SIL 40 Pin 2.54mm 			
6	<p>DORJI Transceivers with standard accessories and following specifications Make: Any Reputable Firm</p> <p>Specifications:</p> <ul style="list-style-type: none"> - Part # DRF7020D20 - 433MHz transceiver - 27dBm output power - -117dBm sensitivity 	10 Nos.		
7	<p>NRF Transceivers with standard accessories and following specifications Make: Any Reputable Firm</p> <p>Specifications:</p> <ul style="list-style-type: none"> - Part # NRF24L01 - 2.4GHz transceiver 	20 Nos.		
8	<p>Dielectric Box with standard accessories and following specifications Make: Any Reputable Firm</p> <p>Specifications:</p> <ul style="list-style-type: none"> - 8X8X2 inch dielectric Box 	12 Nos.		
9	<p>Arduino Nano with standard accessories and following specifications Make: Any Reputable Firm</p> <p>Specifications:</p> <ul style="list-style-type: none"> - Microcontroller: ATmega328 (Arduino Nano Version 3.0) or Atmel ATmega168 (older versions, Arduino Nano Version 2.x) - Operating Voltage (logic level): 5 V - Input Voltage (recommended): 7-12 V - Input Voltage (limits): 6-20 V - Digital I/O Pins: 14 (of which 6 provide PWM output) - Analog Input Pins: 8 	05 Nos.		
10	<p>Node MCU with standard accessories and following specifications Make: Any Reputable Firm</p> <p>Specifications:</p> <ul style="list-style-type: none"> - Wi-Fi Development Board - 	05 Nos.		

11	<p>FET with standard accessories and following specifications</p> <p>Make: Any Reputable Firm</p> <p><u>Specifications:</u> - Part # IRF1404 25</p>	10 Nos.		
12	<p>Raspberry pi 3 with standard accessories and following specifications</p> <p>Make: Any Reputable Firm</p> <p><u>Specifications:</u> - Raspberry Pi 3 Model B - Original By Element 14 - Broadcom BCM2387 chipset - Built in WiFi and Bluetooth - 64-bit CPU - IoT Ready - 802.11 bgn Wireless LAN and Bluetooth 4.1 (Bluetooth Classic and LE)</p>	02 Nos.		

B. MISC. COMPONENTS, TESTERS, DEVELOPMENT BOARDS AND SENSORS FOR POWER IMPROVEMENT DEVICE

S. #	Name of Item	Qty	Unit Price	Total Price
1	Opto-Couplers (Spec: Through-Hole) Make: Imported Part # MOC3021, MOC3041, 4N25, TLP250	50 each		
2	Resistors (Spec: 1% Tolerance ¼ Watt through hole) Make: Imported Part # 47R, 100R, 220R, 330R, 470R, 550R, 1k, 10k, 100k, 2.2k, 3.3k, 4.7k, 1M	50 each		
3	TRIAC (Spec: 600V 25A through hole) Part No. BTA24-600B Make: Imported	50 Nos.		
4	a. Relays (Spec: 5Vdc coil, 250V 10amp) Make: Imported Part # SRD-05VDC-SL-C	50 Nos.		
	b. Relays (Spec: General Purpose Relay DPDT Through-Hole) Make: Imported Part # EC2-5NU	30 Nos.		
5	a. Diodes 1kV 3A (Fast Recovery Diode) Make: Imported Part # FR307	50 Nos.		
	b. Diodes (Spec: 40V 1A Schottky Diode) Make: Imported Part # 1N5819	30 Nos.		
6	Zener Diodes (Spec: 1 Watt) Make: Imported	50 each		

	Part # 3.3 V, 5.1 V, 12 V, 15 V			
7	a. Bridge Rectifiers (Spec: 1amp, 1000V) Make: Imported Part # DB 107	50 Nos.		
	b. Bridge Rectifiers (Spec: 4 Amp, 800V) Make: Imported Part # RS406L	50 Nos.		
8	Voltage Regulators (Spec: Through-Hole) Make: Imported Part # 7805,7809,7812	50 each		
9	AC to DC Power Supply 3 Watts Make: Imported Part # HLK-PM01	10 Nos.		
10	Potential Transformer (Spec: 220Vac to 6Vac 300mA) Make: Imported	10 Nos.		
11	a. Current Transformers (Spec: 20A Non-Invasive CT) Make: Imported Part # TA17L-04	10 Nos.		
	b. Current Transformers (Spec: 5A Non-Invasive CT) Make: Imported Part # TA12-100	10 Nos.		
12	a. Microcontroller (Spec: Through Hole) Make: Imported Part # PIC16F628A	10 Nos.		
	b. Microcontroller(Spec: Through Hole) Make: Imported Part # PIC16F877A	10 Nos.		
	c. Microcontroller(Spec: Through Hole)	10 Nos.		

	Make: Imported Part # PIC18F452			
	d. Microcontroller(Spec: Through Hole) Make: Imported Part # ATMEGA328P	10 Nos.		
13	a. Transistors (Spec: 15A 60V MOSFET) Make: Imported Part # IRFZ24N	30 Nos.		
	b. Transistors (Spec: 49A 55V MOSFET) Make: Imported Part # IRFZ44N	30 Nos.		
	c. Transistors (Spec: Through hole Relay Driver) Make: Imported Part # ULN2003A	20 Nos.		
	d. Transistors (Spec: Fast 1GBT, through hole) Make: Imported Part # SGW25N120	50 Nos.		
	e. Transistors (Spec: Gate drivers for 1 GBT) Make: Imported Part # IR2132	20 Nos.		
14	a. LCD (Spec: 20x4 LCD Display) Make: Imported Part # LM044L	10 Nos.		
	b. LCD (Spec: 16x2 LCD Display) Make: Imported Part # LM016L	10 Nos.		
15	a. Capacitors (Spec: High Voltage (1000V) non polar, Through-Hole)	20 each		

	Make: Imported Part # 1uF, 2uF, 2.5uF, 3uF, 4.7uF, 6.8uF, 10uF			
	b. Capacitors (Spec: 50V Polarized, Through-Hole) Make: Imported Part # 0.1uF, 1uF, 10uF, 100uF, 1000uF	20 each		
	c. Capacitors (Spec: Multi-Layer, Non-Polar, Through-Hole) Make: Imported Part # 102H, 103H, 104H, 105H	30 each		
16	Op-Amps (Spec: Operational Amplifiers, Through-Hole) Make: Imported Part # LM358, LM393, LM741	20 each		
17	PIC KIT 3 (Spec: PIC Programmer) Make: Imported	02 Nos.		
18	Breadboard (Spec: 10 col, 60 Rows) Make: Imported	10 Nos.		
19	Veroboard (Spec: 4" x 9.5") Make: Imported	20 Nos.		
20	Terminal Block Connector (Spec: 2 POS, 12Amp) Make: Imported	100 Nos.		
21	Male Header (Spec: SIL 40 Pin 2.54mm) Make: Imported	20 Nos.		
22	Female Header (Spec: SIL 40 Pin 2.54mm) Make: Imported	20 Nos.		
23	Potentiometer (Spec: Trimmer Potentiometer) Make: Imported Part # 1k, 10k, 20k, 50k, 100k	20 each		
24	Crystal Oscillators (Spec: Through-Hole Oscillators)	20 each		

	Make: Imported			
	Part # 4, 8, 10, 16, 20,32 (Mhz)			
25	Tactile Push Button (Spec: 4-PIN DIP	30 Nos.		
	Make: Imported			
26	Vertical Toggle Switch (Spec: SPDT Through-Hole)	20 Nos.		
	Make: Imported			
27	Push-To-Make Switch (Spec: Through-Hole)	30 Nos.		
	Make: Imported			
28	Glue Gun	01 No.		
	Make: Imported			
29	Glue Gun Stick	50 Nos.		
	Make: Imported			
30	Soldering Iron, Part # KS-60R	01 No.		
	Make: Imported			
31	De-Soldering Pump	01 No.		
	Make: Imported			
32	Soldering Wire (Spec: 60/40 0.8mm Rosin Core)	05 No.		
	Make: Imported			
33	Heat Shrink Tube (Spec: 2mm, 4mm, 8mm, 10mm)	10m each		
	Make: Imported			
34	LEDs (Spec: Red, Green, Yellow, Blue, White (3mm each) Through-Hole)	50 each		
	Make: Imported			
35	16 Core Jumper Wire (Spec: Multi-Color (AWG-27)	20 feet		
	Make: Imported			
36	PVC Insulated Wire (Spec: Red, Blue, Green, Black[Stranded (AWG-27)]	50 feet each		
	Make: Imported			
37	Micro USB Cable For Arduino Communication	05 Nos.		

	Make: Imported			
38	USB Cable (Spec: Type A (Male-to-Female)) Make: Imported	05 Nos.		
39	USB Cable (Spec: Type A (Female-to-Female)) Make: Imported	05 Nos.		
40	Digital Multi-meter Make: Fluke OR Equivalent Part # Fluke- 17 B OR Equivalent	01 No.		
41	Digital Power Clamp Meter Make: Imported Part # UT232	01 No.		
42	Wire Stripper Make: Imported Part # CP-108	02 Nos.		
43	Soldering Iron Tip Make: Imported Part # KADA 852	10 Nos.		
44	Single Phase Induction 1 hp Motor Make: Imported	01 No.		
45	Three Phase 2hp Induction Motor Make: Imported	01 No.		



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TERM & CONDITIONS:

1. Price to be quoted in Pak Rupees on (FOR) free home delivery basis.
2. As the equipment/ items to be procured are based on high tech technology therefore for competitive bidding single stage-two envelopes bidding procedure shall be adopted.
 - (i). the bid shall be comprised a single package containing two separate envelopes, containing separately **“TECHNICAL PROPOSAL”** and **“FINANCIAL PROPOSAL”**.
 - (ii). the envelope shall be marked as **“TECHNICAL PROPOSAL”** and **“FINANCIAL PROPOSAL”** in the bold and legible letters to avoid any confusion.
 - (iii). initially the envelope marked with **“TECHNICAL PROPOSAL”** shall be opened.
 - (iv). the envelope marked with **“FINANCIAL PROPOSAL”** shall be retained in the custody of NIE without being opened.
 - (v). upon evaluation of technical proposals, NIE shall publically open the financial proposal of the technically accepted bids only. The financial proposal of the bids found technically rejected shall be returned un-opened to the respective firms.
3. The bids of the firm operating from their residential address and P.O. Box number will not be considered.
4. Tender number must be specified on the left corner of the bidding envelope.
5. The rates should be valid for at least **“90”** days from the date of tender opening.
6. The offered equipment/ items must be brand new of the original manufacturer and covered under normal warranty/guarantee with necessary back-up support.
7. The bid must be supported with necessary catalogue/ brochure indicating make, model detailed specification and country of origin of the offered equipment.

8. The scope of supplies includes supply of equipment, installation, testing and commissioning of equipment and if necessary training to NIE Personnel's.
9. The financial bid should reflect at sight the following costs separately for fair comparison purpose.
 - i. Unit Price of equipment.
 - ii. GST, if applicable.
10. Conditional/ ambiguous bids will not be entertained.
11. Earnest money @ 2% of quoted prices (Refundable) must be accompanied with tender in shape of a crossed bank draft/ pay order in favour of the Director General NIE.
12. E/M of the successful bidder will be refunded upon submission of prescribe performance/ bank guarantee to NIE and the same shall be released after satisfactory completion of warranty/ guarantee period of the supplied goods.
13. The successful bidder shall provide 5% performance/ bank Guarantee of the total order value of the order to NIE for satisfactory execution of the supply order.
14. The bid found to be lowest evaluated bid shall be accepted only either overall whole tender/items base or each item wise.
15. The estimated delivery/ completion period of supplies/ work must be specified in the quotation.
16. In case of any delay in supplies of ordered items, the successful bidder shall bound to inform NIE to prior to "15" days of the ending of last date of delivery, so that necessary approval regarding extension in delivery period may be obtained from Director General NIE otherwise at the time of payment to firm a penalty @ 2% per month of the total order value will be charged from the successful bidder without any notice.
17. Tender of all items may be awarded either to a single party or can be divided among different parties depending upon their professional capabilities and competitiveness in prices individually.
- 18. No advance payment will be made.**
19. NTN and GST number must be mentioned on the quotation along with providing copy of its documentary evidence, failing which bid will not be considered.
20. Payment will be made on submission of the prescribed bill in duplicate through crossed cheque after satisfactory completion of supply order and our acceptance thereof, which includes installation, testing, commissioning of the equipment and training etc. The bill presented on the letterhead of the firm will not be accepted for payment purpose.

21. As per Government Policy payment to the firm is subject to the registration of firm name in **Active Tax Payer List of FBR**, otherwise payment will be stopped till the appearance of vendor name in ATL of FBR.
22. Income Tax/ Sales Tax etc. will be deducted from bill as per Govt. Rules.
23. Last date for receipt of the tender in the Procurement Section of NIE is **March 08, 2018 up to 11:00 hours**. Technical proposals of the received firms shall be opened on the same day at **11:30 hours** in the presence of those who wish to be present. Tenders received late will not be considered in any case.
24. The Director General NIE reserves the right to accept or reject any or all tenders in part or whole, or change the quantity of tendered items as per provision of PPRA Rules.

Inam Ullah Khan
Dy. Director Procurement
NIE, Islamabad
Ph: 051-9265009 (Ext: 111)