

**TENDER SPECIFICATION OF EMI/EMC TESTING SYSTEM WITH ACCESSORIES FOR
BNS SHAHEED MOAZZAM**

1. **Name of the Equipment.** EMI/EMC Testing System with Accessories.
2. **Purpose.** To familiarize trainees regarding EMI and demonstrate practical lessons in the Lab About the generation/ source of EMI, interference check and compatibility establishment procedures.
3. **Quantity** : 01 (one) complete system.
4. **Type** : Portable.
5. **Brand** : To be mentioned.
6. **Model** : To be mentioned.
7. **Country of Origin** : Canada, EU countries, South Korea, Singapore, Germany, Japan, UK, USA and Australia(to be mentioned).
8. **Country of Manufacture** : Canada, EU countries, South Korea, Singapore, Germany, Japan, UK, USA and Australia(to be mentioned).
9. **Year of Manufacture** : 2026.
10. **Original Equipment Manufacturer (OEM).** Name &full address with e-mail of OEM is to be mentioned.
11. **Bidder (Full name and address).** Name &full address with e-mail of Bidder/Supplier is to be mentioned.
12. **Qualification of Bidder.** Manufacturer of EMI/EMC Testing System with Accessories or their authorized distributor/agent can submit quotations through their authorized local agent in Bangladesh. In case of offer from distributor/agent, certificate of dealership/agent ship from OEM is to be submitted with the offer.
13. **Classification/Standard.** The offered items/ equipment under the scope of supply (Art-15) are to fulfill the requirement of IEEE/IEC/IMO/ISO/DNV/RINA or other internationally recognized standards. The applicable classification standard(s) of offered items are to be mentioned and should be well supported by the certificates/ OEM brochures.
14. **Environmental Condition.** Environmental condition requirements are as follows:
 - a. Operating Temperature : -5°C to +55°C.
 - b. Relative Humidity : Up to 95% (non-condensing).
15. **Scope of Supply.**
 - a. 01 x Complete set of EMI/EMC Testing System with all associated necessary accessories for immediate operation (as per paragraph 16-17).
 - b. Standard Accessories (as per paragraph 19).
 - c. EMI Test Procedure (as per paragraph 20).
 - d. Documentation (as per paragraph 21 & 22).
 - e. Software (as per paragraph 23).
 - f. Optional Items & Special Tools (as per paragraph 24).
 - g. Installation, Supervision & STW (Setting to Work) (as per paragraph 25 & 26).
 - h. Local Training (as per paragraph 27).
 - j. Test/ Trial and Acceptance (as per paragraph 28).
 - k. Certification (as per paragraph 29).

16. **Composition of the System** Composition of the EMI/EMC Testing System are as follows:

Ser	Description	Deno	Qty	Remarks
a.	Complete set of EMI/EMC Testing System with all necessary accessories	Set	01	Details to be mentioned
b.	Carrying case	Set	01	Details to be mentioned
c.	USB cable for LAN for connectivity	Set	01	Details to be mentioned
d.	AC/DC charger	Set	01	Details to be mentioned
e.	Any others necessary item (If required)	-	As required	Details to be mentioned

17. **Technical Specification.**

a. **General Features.** EMI/EMC Testing System is to have the following (but not limited to) features:

- (1) Field probes to measure E-field covering different frequencies ranges from 10 MHz to 3 GHz (Automatic detection and recognition of the probe).
- (2) Spectrum analysis [FFT] mode ($10 \text{ Hz} \leq \text{span} \leq 600 \text{ MHz}$) to deliver faster sweep speed 20 ms to 2000 s. (Max).
- (3) Broadband probes(s) for (10MHz to 3GHz) selective measurements.
- (4) Electromagnetic field values in X, Y, Z direction.
- (5) Graphical display in real time.
- (6) Weighted peak method/Average and peak method.
- (7) Database and storage.
- (8) Screenshot function.
- (9) Fiber optics/Land and USB connectivity options.
- (10) Additional Specification:

Ser	Description	
1.	Measurement Time for FFT	To be mentioned
2.	Measurement Modes	To be mentioned
3.	Memory Capacity	To be mentioned
4.	Firmware updating	To be mentioned
5.	Alarm	Audible Signal (To be mentioned)
6.	Display Type	Color Transmissive TFT (To be mentioned)
7.	Battery	Internal Rechargeable Li-ion (Capacity To be mentioned)

b. **Source of EMI**

- (1) **Power Line.** To be mentioned.
- (2) **Lighting.** To be mentioned.
- (3) **Relay & Solenoid.** To be mentioned.
- (4) **Spark Generator.** To be mentioned.

c. **EMI Test Kit.**

- (1) **Antennas.** Required Antenna to support testing from 30MHz to 2GHz with stand/ tripod to be provided. (Brand and Model to be mentioned).
- (2) **Pre-Amplifier.** Required pre-amplifier of minimum 32dB gain is to be provided (To be mentioned).
- (3) **Near field Probe Set With Contact Tip.** To be mentioned.
- (4) **Comb Generator.**
 - (a) **Model:** To be mentioned.
 - (b) **Frequency Step:** To be mentioned.
 - (c) **User Selectable Frequency:** To be mentioned.
 - (d) **Power Supply:** To be mentioned.
 - (d) **Battery Operated:** To be mentioned.
- (5) **Spectrum Analyzer.**
 - (a) **Model:** To be mentioned.
 - (b) **Frequency Range:** 5 kHz to minimum 3GHz.
 - (c) **Resolution Bandwidth:** 1Hz to 3MHz, in 1/3 sequence.

- (d) **Displayed Average Noise Level:** -158 dBm, typical -163dBm, Normalized to 1Hz, preamplifier = on (10 MHz to 3 GHz).
- (e) **Phase Noise:** <-98 dBc(1Hz), -105dBc(1Hz) (typ), frequency=500MHz, carrier offset = 100 kHz offset.
- (f) **Amplitude Precision:** To be mentioned.

(6) **Line Impedance Stabilization Network (LISN).** Required (Model and Freq range To be mentioned).

(7) **RF Cable.** Necessary cable should be of high quality multi strand, EMI resistant and screened. A detail of cable specification and unit price (per meter) is to be quoted separately.

(8) The supplier shall be responsible for supplying all necessary connection accessories required for the complete installation, commissioning, and full functionality of the offered system.

18. **Power Supply.** The system should be operated within 220V AC, 50Hz, 1Ph and 24V DC power supply. Provision should be made to switch over automatically from the normal AC supply to 24V DC supply. The system should have Battery power at least for **60 minutes** in case of power failure. Details of the power supply is to be mentioned with standard accessories for smooth connection.

19. **Standard Accessories.** Standard accessories must include every item and accessories, which are essential to make the offered system operational with full functionality, whether those are mentioned in the specification or not are to be supplied by the bidder within the scope of the supply. Any such accessories, kit and items associated to operate the said equipment with full functionality are to be mentioned clearly with purpose and to be submitted with the offer mentioning item wise unit price.

20. **EMI Test Procedure.**

- a. EMI test by the item/ System will be done by the supplier's/ manufacturer's representative in presence of the purchaser.
- b. Environmental condition requirement for the full functionality of the system to be mentioned by the supplier's/manufacturer's representative.
- c. Any damage to onboard existing systems, items, equipment and machineries due to the test process shall be compensated by supplier to make the damaged items operational.

21. **Documents.** 01 (One) set of following documents and manuals (in English) are to be provided at the time of delivery:

- a. Operation and Maintenance Manual.
- b. Technical Manual with Circuit Diagram.
- c. Necessary parts catalog.

22. **Brochure/ Booklet.** 01 (One) set of original brochures/ booklet (in English) having detailed technical information is to be provided with the offer.

23. **Software.** The Software must be genuine and should be free from bug. It must be compatible with hardware configuration of the item and will satisfy the BN requirement. The system backup software is to be provided by supplier with installation tools (i.e., patch/connecting cord etc).

24. **Optional Items/ Special Tools.** Optional Items/ Special tools (if needed) is to be quoted separately with item wise unit price.

25. **Installation of the system.**

- a. Installation of the items will be done by the manufacturers/ supplier's qualified representative(s) in presence of the purchaser.
- b. Installation work schedule, layout diagram and technical documents (installation drawings, installation instruction, specifications etc) required for installation of the EMI/EMC Testing System are to be supplied by the manufacturer during delivery of the item.
- c. Any damage to onboard existing systems, items, equipment and machineries due to cable laying or any other associated work shall be compensated to make the damaged items operational.

26. **Installation Materials.** All required installation materials like JB's, Sockets, Plugs, Nuts, Securing tie clips, Slips and Channels (not limited to) are to be provided by bidder. Shock mounting/Absorber etc which are essential for installation are to be provided by the bidder free of cost.

27. **Local Training.** The manufacturer is to arrange onboard operation and maintenance training by its technical representative(s) including system configuration to a group of BN personnel for a duration of at least 03 (Three) working days after necessary test/ trial and commissioning of the item. Training content is to be provided by supplier to BN 02 (Two) weeks prior to the said training. The training should include (but not limited to) the following:

- a. Composition of the item, principle of and troubleshooting.
- b. procedure of tests (practical).
- c. Maintenance.

28. **Test, Trial and Acceptance.** On completion of installation and STW, Test/Trial is to be conducted by supplier's/ manufacturer's representative in presence of BN representative. Final acceptance will be given by CINS after satisfactory Test and Trial of the system.

29. **Certification.** The supplier shall provide the following certificate:

- a. Manufacturer's Authorization Certificate or authentication certificates of OEM authorized foreign trading companies/distributor/ agent with the offer.
- b. Quality Assurance Certificate with the offer at the time of delivery.
- c. Factory test certificates at the time of delivery.
- d. Guarantee and warranty certificates with the offer at the time of delivery.
- e. After sales service support certificate from OEM or from OEM authorized local agent.

30. **Warranty.**

a. 12 (Twelve) months manufacturer's warranty for trouble free operation is to be provided for the item from the date of acceptance by the buyer. If any component of the supplied items becomes defective during the warranty period, the warranty (for defective component) shall be extended automatically for the period of the subject mentioned component remains defective. Moreover, if the whole system becomes defective or non-operational due to any defective items or component, then the overall system's warranty shall be extended automatically for the of subject mentioned component remains defective.

b. For warranty repair/ replacement, the supplier will collect the defective item from NSD Chittagong/ NSSD Dhaka (as applicable) and re-supply the same to collecting place after warranty repair or for replacement within 60 (Sixty) days from the date of defect at no cost to the purchaser.

31. **Guarantee of Supply of Spares.** The supplier is to give guarantee (in written) for the continued supply of spares for the offered item for at least 05 (Five) years from the delivery of the item at a reasonable price. A list of such spares with item-wise unit price is to be provided.

32. **Site Visit.** The bidder may visit the installation site (BNS SHAHEED MOAZZAM at Kaptai, Rangamati) before submission of tender to avoid any difficulties/ confusion after placing order. In this regard, bidder have to submit the relevant personnel information and application to NSSD Dhaka for site visit 03 (Three) weeks prior to the said site visit.

33. **User List.** List of users of the offered item is to be mentioned with full address. The list shall provide the name of various users with respective model and brand of the item. The offered item should be widely used by various users.

34. **Shipment & Delivery.**

a. The supplied items are to be delivered within **03 (Three)** months after signing the contract to the following consignee:

The Commanding Officer
Naval Stores Depot
New Mooring, Chattogram,
Bangladesh

or

Officer In Charge
Naval Stores Sub Depot Dhaka
Naval Unit Khilkhet
Namapara, Dhaka-1229, Bangladesh

b. In case of CFR, the supplier will carry the items from Chattogram sea port/ air port (as applicable) to NSD Chattogram at the cost and risk of supplier.

c. **Port of Shipment.** The port of shipment is to be from the country of manufacturer or country of origin (To be mentioned).

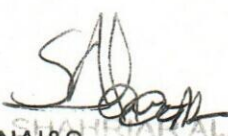
d. **Partial Shipment.** Allowed.

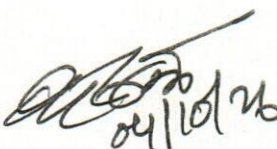
35. **Source of Supply.** The source of supply is to from the country of manufacturer or country of origin (To be mentioned).
36. **Validity.** The offer shall remain valid till 30 June 2027.
37. **Terms of Payment.** 100% Payment will be made in local currency after satisfactory test/ trial and acceptance by CINS.
38. **Price.** If the item is imported against this tender, price is to be quoted without import duties.
39. **Compliance Statement.** A compliance statement fulfilling all the requirement of the tender is to be submitted for evaluation of the quotations. Stating mere 'Yes or No' will not suffice and detailed evidences with description/ information, brochures/ booklet, drawing and diagram as required is to be given. An incomplete compliance statement may attribute to cancellation of the offer. If any clause of this specification does not commensurate with offered System, the deviation has to be spelt out clearly.


 4/10/26
 SANJIDA AROOZ SADIA
 Lt Commander BN
 Staff Officer (NS-1)
 Naval Headquarters
 Banani, Dhaka-1213
 Member Secy
 Date


 04.10.26
 A B M HASIB RAHMAN
 Lt Commander BN
 Staff Officer (NS-1)
 Naval Headquarters
 Banani, Dhaka-1213
 DNS (Rep)
 Member
 Date


 MD TARIFUL ISLAM
 Lt Cdr BN
 Staff Officer (Mans-II)
 Naval Headquarters
 Banani, Dhaka-1213
 DNP (Rep)
 Member
 Date 04.10.26


 MD SHAHIDUL ALAM
 Captain BN
 Director Naval Armament
 Installation and Supply
 NHQ, Banani, Dhaka-1213
 DNI&S
 Member
 Date 04/10/26


 04/10/26
 A B M BODRUL QADIR
 Captain BN
 Director Naval Info & Tech
 Naval Headquarters
 Banani, Dhaka-1213
 DNIT
 Member
 Date


 05/10/26
 S M M ANIRUZZAMAN
 Commodore BN
 Director of Naval Weapons
 and Electrical Engineering
 NHQ, Banani, Dhaka-1213
 DNW&EE
 Member
 Date


 06/10/26
 MD SHAHIDULLAH AL FARUK
 Commodore BN
 Director Naval Engineering
 Naval Headquarters
 Banani, Dhaka-1213
 DNE
 President
 Date