


TECHNICAL SPECIFICATION OF ITEM (DP-5)

TECHNICAL SPECIFICATIONS FOR PROCUREMENT AND INSTALLATION OF 10 X LINE ITEMS OF MICROWAVE SPARES FOR LOS MICROWAVE LINK BETWEEN BAF CXB AND CRU BAF (06 X LINE ITEMS, SER NO. 01-06 IN FOREIGN CURRENCY AND 04 X LINE ITEMS, SER NO. 07-10 IN LOCAL CURRENCY)

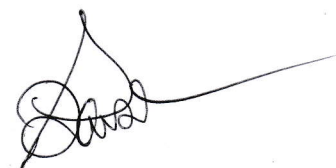
Technical Specifications

| Ser No | Name/Description of Eqpt | Unit | Qty | Technical Specifications | Compatibility | Remarks |
|--------|--|------|-----|--|--|--|
| 01. | Indoor Unit | Ea | 03 | a. Brand Name: Bidder is to mention b. Model: Bidder is to mention c. Country of Origin: USA/UK/ EU/ Canada /Japan/ Australia/ China/ Singapore d. Country of Manufacture & Assembly: Bidder is to mention e. Year of Manufacture: Not earlier than one Calendar Year of the contract f. Configuration: 1+1, space diversity g. Capacity: 16xE1 h. Minimum SFP port: 04 j. Independent Ethernet data port: 03 or morek. Minimum Total throughput: 500 Mbps. IDU Protection facility along with necessary requirement and related hardware, software, key, feature license, capacity license, Installation materials, connector's cables etc. | All items must be compatible with the MW eqpt of BAF 74 Sqn – CRU BAF MW link. | Prices are to be quoted in foreign currency (FC) |
| 02. | Outdoor Unit (ODU) High Freq with suitable Antenna | Ea | 03 | a. Brand Name: Bidder is to mention b. Model: Bidder is to mention c. Country of Origin: USA/UK/EU/Canada /Japan/ Australia/ China/ Singapore d. Country of Manufacture & Assembly: Bidder is to mention e. Year of Manufacture: Not earlier than one Calendar Year of the contract f. Freq: Tx: 7645-7785 MHz, 245 MHz Hi. Rx: 7400-75400 MHz, 245MHz Low. g. Minimum Total throughput: 500 Mbps | | |
| 03. | Outdoor Unit (ODU) Low Freq with suitable Antenna | Ea | 03 | a. Brand Name: Bidder is to mention b. Model: Bidder is to mention c. Country of Origin: USA/UK/ EU/ Canada /Japan/ Australia/ China/ Singapore d. Country of Manufacture & Assembly: Bidder is to mention e. Year of Manufacture: Not earlier than one Calendar Year of the contract f. Freq: Tx: 7400-75400 MHz, 245MHz Low. Rx: 7645-7785 MHz, 245 MHz Hi. g. Minimum Total throughput: 500 Mbps | | |
| 04. | If Feeder Cable with connector | Mtr | 500 | RG-8 75 Ω, USA Standard. Feeder cable must be capable to operate the quoted IDU and ODU along with 50 set (01 set = 02 connectors. 01 for ODU side and 01 for IDU side) suitable connectors. | | |



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|--------|---|------|-----|---|---|--|
| 05. | VCL-MUX 1E1, 2 Mb/s 30 ch voice drop - insert MUX | Ea | 03 | a. Brand Name: Bidder is to mention b. Model: Bidder is to mention c. Country of Origin: USA/UK/ EU/ Canada /Japan/ Australia/ Singapore d. Country of Manufacture & Assembly: Bidder is to mention e. Year of Manufacture: Not earlier than one Calendar Year of the contract f. Version: 2-STD E1 Voice and Data Multiplexer with the fol accessories for each VCL MUX: (1) Master Control Card (CC1) (2) Power Supply Card (PSU) (3) Ring Gen Card (4) NMS cards 5) 07 x FXO and 08 x FXS Card and reqr E1 interfacing cable, tel cable, cross cable, straight cable and other reqr nec accessories. | All items mut be compatible with the MW eqpt of BAF 74 Sqn – CRU BAF MW link. | Prices are to be quoted in foreign currency (FC) |
| 06. | Rectifier Charger with all accessories | Ea | 02 | a. Brand Name: Bidder is to mention b. Model: Bidder is to mention c. Country of origin: USA/UK/ EU/ Canada /Japan/ Australia/ China/ Singapore d. Country of Manufacture: Bidder is to be mention e. Input Voltage: 220VAC \pm 15% f. Output Voltage: - 52.52 VDC \pm 1% to 3% g. Output Current: 30 Amps along with AC lead, DC lead and all accessories. | | |
| 07. | Split Type Air Conditioner with all accessories | Ea | 01 | a. Brand Name: General/Panasonic/Gree b. Model: Bidder is to mention c. Country of Manufacture & Assembly: Bidder is to mention d. Year of Manufacture: Not earlier than one Calendar Year of the contract e. Capacity: 2 Ton | Locally supplied items | Prices are to be quoted in local currency (LC) |
| 08. | Sealed Rechargeable maintenance free Battery with all accessories | Ea | 04 | a. Brand Name: Bidder is to mention b. Model: Bidder is to mention c. Country of Manufacture & Assembly: Bidder is to mention d. Year of Manufacture: Not earlier than one Calendar Year of the contract e. Capacity: 12V DC, 120AH | | |
| 09. | Voltage Stabilizer 10 KVA | Ea | 01 | a. Brand Name: Bidder is to mention b. Model: Bidder is to mention c. Country of Manufacture & Assembly: Bidder is to mention d. Year of Manufacture: Not earlier than one Calendar Year of the contract e. Capacity: 10 KVA | | |



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|--------|---|------|-----|---|------------------------|--|
| 10. | 10 meters 4 Legged Self-supported Angle Tower | Ea | 01 | <p><u>Working Platform.</u> Required number of working platform(s) to be provided at suitable places on tower.</p> <p><u>Climbing Ladder.</u> To be provided Inside/ outside of the tower for easy climbing.</p> <p><u>Cable Tray.</u> Horizontal tray from tower to building and equipment room are to be provided.</p> <p><u>Load Bearing Capacity.</u> Tower must be capable of bearing the load of minimum 1000 (One thousand) Kgs.</p> <p><u>Lightning Protection System.</u> Appropriate Surge Protecting Device (SPD) and lightning arrester along with proper grounding (less than one ohm) are to be installed for safety of all equipment/ components in the following sections:</p> <ul style="list-style-type: none"> a. Antenna Tower b. Equipment Room <p><u>Aviation Warning Light.</u> The tower must have aviation LED warning lights (Total quantity 04 at the top) with ON/OFF switch at the equipment room. Among them, provision of photo voltaic cell for 02 x LED warning lights (02 x at the top) is to be made to facilitate automatic switching of tower lights according to presence of day light with emergency operating switch at the equipment room.</p> <p><u>Tower Earthing/Grounding.</u> The tower shall be provided with proper earthing system. The earthing should be performed using the copper plates of size at least 2'x4'x1/8" thick or any other method best used in telecom tower grounding. The design of earthing should be such that the earthing resistance can be maintained below one ohm. The Tower earthing should be separated from the equipment earthing.</p> <p><u>Painting.</u> ICAO standard anticorrosive painting is to be done. The paint may be any one of the following:</p> <ul style="list-style-type: none"> a. Tower shield 404 b. Dufy c. Nippon d. Jotun e. Berger <p><u>Expected Life of the Tower.</u> Should be minimum 30 (Thirty) years.</p> <p>Tower must be useable for the microwave antennas. In this regard, the bidders are to submit in details.</p> | Locally supplied items | Prices are to be quoted in local currency (LC) |



TERMS AND CONDITION FOR PROCUREMENT AND INSTALLATION OF 10 X LINE ITEMS OF MICROWAVE SPARES FOR LOS MICROWAVE LINK BETWEEN BAF CXB AND CRU BAF (06 X LINE ITEMS, SER NO. 01-06 IN FOREIGN CURRENCY AND 04 X LINE ITEMS, SER NO. 07-10 IN LOCAL CURRENCY)

Terms & Condition:

1. Offers are invited from the competent/ prospective bidders for supply and installation of 10 x line item of microwave spares to establish LOS microwave link between BAF CXB and CRU BAF. Details of the items are given in Technical Specifications.
2. Bidder may participate in the tender directly as a principal supplier/manufacturer or through their local agent enlisted in Directorate General of Defence Purchase (DGBP) in Bangladesh. Authorization certificate from principal supplier/manufacturer to local agent is to be included with the offer.
3. The bidder is to submit original brochure/catalog with the offer. All technical data provided with the quotation must be supported by the submitted brochure/catalog.
4. If the bidder is not the manufacturer of the item/equipment, then bidder should provide Original Equipment Manufacturer's (OEM) certificate mentioning date of production, warranty, guarantee and spare support as required along with the item/ equipment.
5. Each item should be brand new, unused and latest product. Bidder should mention the year of production of the offered items (not earlier than one calendar year of the contract). Offer of refurbished item will not be considered for further evaluation.
6. Appropriate software and necessary programming kits (if applicable) must have to be provided with the items (If required). Prices of the software and programming kits are to be quoted separately, if the same is/ are not provided free of cost (FOC).
7. The supplier is to offer all the items as a package. Lowest bidder will be determined on the basis of overall price of all the offered items. Offer of partial L/I will not be considered for evaluation.
8. In the offer, cost of each line item and other charges (if any) are to be quoted separately.
9. BAF may disqualify the offer of a bidder/ supplier who has previous record of poor performance, such as abandoning the works, not properly completing the contract, excessive delay to supply the contracted items, litigation history or financial failures.
10. BAF may disqualify any offered equipment/ item which model of equipment/ item has previous record of dissatisfactory performance during operation/ functional check in BAF.
11. Site Survey. The bidder is to carry out a pre-bid survey at proposed site (BAF CXB) at their own cost to assess/determine precisely the actions required to be taken for the installation of the tower (if required). In that case, bidders are to submit necessary information and bio-data to Air Headquarters, Directorate of Communication & Electronics (Dte C&E) at least 15 days before the date of survey/ meeting for arranging necessary security clearance.
12. Installation. The tower is to be installed on the rooftop of 13 storied BOQ building at BAF CXB. All other equipment are to be installed in the 2nd floor of the same building. In this regard, supplier is to supply and install all required ancillary items at own cost to establish microwave link between BAF CXB and CRU BAF.
13. Safety and Security. The supplier is to ensure the safety and security of their personnel during installation the items of the tower and any incident/ accident in this regard will be sole responsibility of the supplier.
14. Warranty.
 - a. For Tower: One year warranty from the date of acceptance of the tower is to be ensured. In case of incident/accident within warranty period (due to manufacturer defect/ metal failure, the supplier will be liable to replace the affected tower free of cost within 30 days from the date of reporting. In this regard certificate is to be submitted with the offer. The supplier has also to give an additional warranty certificate to BAF that up to five (5) years from the date of completion of PAT (Provisional Acceptance Test), no structural deviation shall be made due to natural calamities except the earthquake intensity more than 7.0 in Richter Scale. Technical offer without the above two warranty & guaranty certificate, will not be accepted.

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b. For Radio Equipment: Warranty period of each item shall be minimum 12 (twelve) months from the date of acceptance of the item by BAF. Supplier is to provide the warranty certificate during supply of the items.

15. Tower with climbing ladder, lightning arrestor, cable tray, power cable for aviation lamp and working platform(s) are required to be provided. Equipment and Tower Earthing must be proper and separate. All elements of the tower are to be made of brand new GI Pipe Gold and to be Galvanized. Tower must be useable for the microwave antenna mentioned as per technical specifications.

16. If any item is found unsatisfactory/ unserviceable during inspection/ functional check by BAF, must be replaced within 45 days by the supplier free of cost. If any item becomes unserviceable within the warranty period, supplier must repair or replace the item within 45 days. Both ways freight and insurance charges shall have to be borne by the supplier.

17. If the supplier fails to repair/ replace any item under warranty claim within the stipulated days as given above, then the warranty period would be extended by the number of days of delay in repairing/ replacing the item under warranty.

18. Delivery of the items is to be completed within 10 months from the date of signing the contract.

19. DGDP/BAF reserves the right to accept or reject any bid or all bids at any time before signing contract (without assigning any reason to the bidders).

20. The items will be accepted after satisfactory prompt and compatibility satisfactory acceptance check and functional test by BAF.

21. Physical inspection of all the radio equipment will be carried out at 201 MU BAF. Functional check of the same items will be carried out in presence of supplier's representative (if available) at BAF Comm Unit. After functional check, all the items are to be taken to installation sites at supplier's own expenses. After LOS microwave link establish, all the items are to be handed over to BAF by the supplier in serviceable and operational condition.

22. Prior permission from BTRC and any other required agency to import the items is to be done by the supplier (if applicable). In this regard, BAF will provide end user certificate to the supplier (if required).

23. Payment Terms. Payment in foreign currency will be made through an irrevocable letter of credit (LC) as under:

- a. 70% CFR/CPT value will be paid on production of shipping documents to the bank.
- b. 20% CFR/ CPT value will be paid on satisfactory acceptance of the 100% items by BAF after inspection/functional test (as applicable) and on production of CRV from 201 MU BAF.
- c. Rest 10% CFR/ CPT value will be paid after expiry of warranty period.
- d. 100% local payment will be paid on satisfactory acceptance of the 100% items by BAF after inspection/functional test (as applicable) and on production of CRV from 201 MU BAF.

24. The bidder must mention the full address including Telephone number, Fax number and e-mail address in the offer. The bidder also mention the name and full address (including Telephone number, Fax number and e-mail address) of the local agent (if any) in the offer.

25. Due to the fault of the bidder, if any change/amendment is required in the contract/LC, all such expenses/charges shall be borne by the bidder.

26. The cost of additional equipment /FOB including all charges is to be 'Firm and Fixed'. No increase of price at any stage after signing the contract will be accepted. If any item other than those already contracted is required, those are to be provided by the bidder within the contracted price.

27. Freight charges will be paid at actual, but not more than the contracted freight charge. As such, freight charge is to be mentioned in appropriate column of AWB/BL. Otherwise, FOB value of the supplied items will be paid.



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28. Cost of freight/transportation charge and insurance for any surplus spares/accessories, which will be taken back after completion of assembly/installation (if required) is to be borne by the bidder.
29. Bidders have to quote charges for air freight up to Dhaka, Bangladesh. The transportation of the equipment in Bangladesh (from airport to BAF site) is to be arranged and paid by the bidder.
30. The bidder is to quote FCA/ FOB cost and freight charges (by both air and sea) separately & clearly in financial offer. If freight is not quoted separately for each item, total freight will be distributed against each item based on its proportionate FCA/ FOB cost of all items. Any price/ cost quoted in the pages of quotation other than financial offer will not be considered.
31. The bidder is to mention the country of origin, country of manufacture and port of shipment of the items in the offer. After submission of offer country of origin, country of manufacturer will not be changed.
32. Offer must remain valid till 30 June 2026 from the date of opening the tender. Within the validity of the offer, withdrawal of offer or unwillingness to sign the contract by the bidder will not be accepted and in such cases action would be taken against the principal supplier and local agent as per DGDP rules.
33. Part shipment: Not allowed.
34. Part payment: Not Allowed.
35. AWB/BL must be in the name of consignee.
36. Normally transshipment is not allowed. However, if the bidder needs transshipment, they are to mention in the offer about their requirement. In case of such requirement, the transshipment may only be allowed under single AWB/BL.
37. Compliance of tender terms and conditions should be mentioned in the quotations by the bidders as per the above sequence.
38. Locally supplied items will be delivered to BAF site at suppliers cost and responsibility.
39. Any other terms and conditions not covered here will be as per DGDP rules and regulations.

