

**GOVERNMENT OF INDIA
DEPARTMENT OF SPACE
MASTER CONTROL FACILITY (MCF)
HASSAN**

Tender for 1:2 Redundant C-Band LNA Switching Complex

Bids to be submitted online

Tender No.: MCF/PURCHASE-01/MC202100001601 dated 03-06-2021

A. Tender Details

Tender No : **MCF/PURCHASE-01/MC202100001601**

Tender Date : **03-06-2021**

Tender Classification: **GOODS**

Purchase Entity : **PURCHASE-01**

Centre : **MASTER CONTROL FACILITY (MCF)**

Supply of 1:2 Redundant C-Band LNA Switching Complex

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A.1 Tender Schedule

Bid Submission Start Date : **03-06-2021 12:38**

Bid Clarification Due Date : **09-06-2021 14:00**

Bid Submission Due Date : **30-06-2021 16:00**

Bid Opening Date : **01-07-2021 10:00**

Price Bid Opening Date : **31-07-2021 10:00**

B. Tender Attachments

Technical Write-up/Drawings

Document : compliance sheet

Document : specs of LNA Complex

Instructions To Vendors

1. Instruction on Two-Part Tender

1. This is two-part tender. Please do not attach price details in pdf or in any other form along with technical bid. If the same is attached, the offer shall be rejected.

2. All information in Vendor Specified Terms shall be provided without fail to avoid unnecessary correspondence / delay in process. The same should reach before technical bid opening date and time without fail.

2. Instructions for PT

1. Suppliers can contact Master Control Facility with Tender Number for pre-bid technical discussions if required. They can contact through email psopurchase@mcf.gov in or telephone +91 8172 273594 well in advance before due date.

2. TENDER DOCUMENT FEE IS NOT APPLICABLE FOR TENDER DOWNLOAD.

3. Interested tenderers may, at their option, login to <https://eproc.isro.gov.in/EProcInternetPortalStage/home.html.in> and submit offers.

4. Indian agents while quoting on behalf of their principals are requested to attach necessary authorization letter from their Principals in their bid.

5. The vendors are requested to submit the bids online at least two days prior to closing date to avoid last minute computer network related problems. Request for the extension of the due date will not be considered.

6. This being a two-part tender - Technical and Commercial part separate, the tenders should not attach any documents containing Pricing information. Normally we do not open PART- II (Commercial

Offer), if PART - I (Technical Offer) does not meet with our technical specification requirements.

7. Our Tender Enquiry contains technical requirements and specification. The detailed technical specification of your offer should be covered in this part. The Technical documents need to be attached online as a single PDF file without any price information. The tender attachment containing Price details will be treated as unsolicited offers and rejected.

8. The Commercial Terms to be covered in the first Part are Delivery Terms (INCOTERMS in case of imports), Delivery Period, Payment Terms (without mentioning the price or amount), acceptance of Bank Charges payable outside India to the account of supplier, Whether item needs Export License, Validity of the Offer, Warranty/Guarantee, Performance Guarantee, Liquidated Damages (for delayed supplies) etc., which have to be filled up on-line.

9. The quote should indicate quantity wise unit rates separately which have to be filled online. The Prices are to be mentioned both in figures as well as in words. The taxes, duties etc. are to be calculated and indicated in the column provided in online forms explicitly.

10. Once the offer is submitted in online mode by the vendor, he will not be able to provide revised offer.

11. Purchase and Stores Officer, MCF, Hassan reserves the right to accept or reject any bid in part or full without assigning any reason thereof.

12. The exact date and time of opening of price bid of successful tenderers will be intimated as and when the same is scheduled.

13. The technical bid / commercial bid opening date and time indicated is tentative. There may be changes / delay due to Network / Computer Server related problems the tender opening may get delayed by one or two days.

14. In a tender, either the Indian agent on behalf of the Principal/OEM or Principal/OEM themselves can bid. But both cannot bid simultaneously for the same item/product in the same tender.

3. Instruction to Tenderers & Terms and Conditions

1. The Purchaser reserves the right to place order on the successful tenderer for additional quantity up to 25% of the quantity offered by them at the rates quoted.

2. The authority of the person signing the tender, if called for, should be produced.

3.

TERMS & CONDITIONS OF TENDER

4. DEFINITIONS:

- (a) The term Purchaser shall mean the President of India or his successors or assigns.
- (b) The term Contractor shall mean, the person, firm or company with whom or with which the order for the supply of stores is placed and shall be deemed to include the Contractor's successors, representative, heirs, executors and administrators unless excluded by the Contract.
- (c) The term Stores shall mean what the Contractor agrees to supply under the Contract as specified in the Purchase Order including erection of plants & machinery and subsequent testing, should such a condition is included in the Purchase Order.
- (d) The term Purchase Order shall mean the communication signed on behalf of the Purchaser by an Officer duly authorized intimating the acceptance on behalf of the Purchaser on the terms and conditions mentioned or referred to in the said communication accepting the tender or offer of the Contractor for supply of stores or plant, machinery or equipment or part thereof.

5. PRICES:

Tender offering firm prices will be preferred. Where a price variation clause is insisted upon by a tenderer, quotation with a reasonable ceiling should be submitted. Such offers should invariably be supported by the base price taken into account at the time of tendering and also the formula for any such variation/s.

6. SECURITY DEPOSIT:

On acceptance of the tender, the Contractor shall, at the option of the Purchaser and within the period specified by him, deposit with him, in cash or in any other form as the Purchaser may determine, security deposit not exceeding three percent (3%) of the value of the Contract as the Purchaser shall specify. If the Contractor is called upon by the Purchaser to deposit, Security and the Contractor fails to provide the security within the period specified, such failure shall constitute a breach of the Contract, and the Purchaser shall be entitled to make other arrangements for the re-purchase of the stores Contracted at the risk of the Contractor in terms of Sub-Clause (ii) and (iii) of clause 23 (b) hereof and/or to recover from the Contractor, damages arising from such cancellation.

- (a) Security Deposit of three percent (3%) of Purchase Order value is applicable, if PO value exceeds Rs. 500000/-. Same shall be submitted within 15 days from the date of award of PO/Contract

7. WARRANTY/GUARANTEE & REPLACEMENT:

- (a) The Contractor shall guarantee that the stores supplied shall comply fully with the specifications laid down, for material, workmanship and performance.
- (b) For a period of twelve months after the acceptance of the stores, if any defects are discovered therein or any defects therein found to have developed under proper use, arising from faulty stores design or workmanship, the Contractor shall remedy such defects at his own cost provided he is called upon to do so within reasonable period from the date of acceptance thereof by the purchaser who shall

state in writing in what respect the stores or any part thereof are faulty.

(c) If, in the opinion of the purchaser, it becomes necessary to replace or renew any defective stores such replacement or renewal shall be made by the Contractor free of all costs to the purchaser, provided the notice informing the Contractor of the defect is given by the purchaser in this regard within the said period of 14 months from the date of acceptance thereof.

(d) Should the Contractor fail to rectify the defects, the purchaser shall have the right to reject or repair or replace at the cost of the Contractor the whole or any portion of the defective stores.

(e) The decision of the purchaser notwithstanding any prior approval or acceptance or inspection thereof on behalf of the purchaser, as to whether or not the stores supplied by the Contractor are defective or any defect has developed within the said period of 12 months or as to whether the nature of the defects requires renewal or replacement, shall be final, conclusive and binding on the Contractor.

(f) To fulfil guarantee conditions outlined in clause 7 (a) to (e) above, the Contractor shall, at the option of the purchaser, furnish a Bank Guarantee (as prescribed by the purchaser) from a Bank approved by the purchaser for an amount equivalent to three percent (3%) of the value of the Contract along with first shipment documents. On the performance and completion of the Contract in all respects, the Bank Guarantee will be returned to the Contractor without any interest.

(g) All the replacement stores shall also be guaranteed for a period of 12 months from the date of arrival of the stores at purchaser's site.

(h) Even while the 12 months guarantee applies to all stores, in case where a greater period is called for by our specifications then such a specification shall apply in such cases the period of 14 months referred to in para 7 (b) & (c) shall be the asked for guarantee period plus two months.

8. PACKING FORWARDING & INSURANCE:

The Contractor will be held responsible for the stores being sufficiently and properly packed for transport by rail, road, sea or air to withstand transit hazards and ensure safe arrival at the destination. The packing and marking of packages shall be done by and at the expense of the Contractor. The purchaser will not pay separately for transit insurance, all risks in transit being exclusively of the Contractor and the Purchaser shall pay only for such stores as are actually received in good condition in accordance with the Contract.

9. DESPATCH:

The Contractor is responsible for obtaining a clear receipt from the Transport Authorities specifying the goods despatched. The consignment should be despatched with clear Railway Receipt/Lorry Receipt. If sent in any other mode, it shall be at the risk of the Contractor. Purchaser will take no responsibility for short deliveries or wrong supply of goods when the same are booked on said to contain basis. Purchaser shall pay for only such stores as are actually received by them in accordance with the Contract.

10. TEST CERTIFICATE:

Wherever required, test certificates should be sent along with the dispatch documents

11. ACCEPTANCE OF STORES:

(a)The stores shall be tendered by the Contractor for inspection at such places as may be specified by the purchaser at the Contractor's own risk, expense and cost.

(b)It is expressly agreed that the acceptance of the stores Contracted for, is subject to final approval by the purchaser, whose decision shall be final.

(c)If, in the opinion of the purchaser, all or any of the stores do not meet the performance or quality requirements specified in the Purchase Order, they may be either rejected or accepted at a price to be fixed by the purchaser and his decision as to rejection and the prices to be fixed shall be final and binding on the Contractor.

(d)If the whole or any part of the stores supplied are rejected in accordance with Clause No. 11 (c) above, the purchaser shall be at liberty, with or without notice to the Contractor, to purchase in the open market at the expense of the Contractor stores meeting the necessary performance and quality Contracted for in place of those rejected, provided that either the purchase, or the agreement to purchase, from another supplier is made within six months from the date of rejection of the stores as aforesaid.

12. REJECTED STORES:

Rejected stores will remain at destination at the Contractor's risk and responsibility. If instructions for their disposal are not received from the Contractor within a period of 14 days from the date of receipt of the advice of rejection, the purchaser or his representative has, at his discretion, the right to scrap or sell or consign the rejected stores to Contractor's address at the Contractor's entire risk and expense, freight being payable by the Contractor at actuals.

13. INSTRUCTIONS TO TENDERERS:

14. Tenders should be submitted online and follow the activities as per the schedule.

15. Taxes and/or other duties/levies legally leviable and intended to be claimed should be distinctly shown in the relevant fields.

16. As a Government of India Department, this office is exempted from payment of Octroi and similar local levies. Tenderers shall ensure that necessary Exemption Certificates are obtained by them from the Purchase Officer concerned to avoid any payment of such levies.

17. The minimum validity of the tender shall be as follows:

(a)Public Tender/Global Tender (Two-Part) - 120 days from the date of Tender Opening (Part-I) and 60 days from the date of opening of Part-II.

(b)Limited Tender (Two-Part) - 120 days from the date of Tender Opening (Part-I) and 60 days from the date of opening of Part-II.

(c)Open/Public Tender (Single Part) - 90 days from the date of Tender Opening.

(d)Limited Tender (Single Part) - 90 days from the date of Tender Opening.

18. Prices are required to be quoted according to the units indicated. When quotations are given in terms of units other than those specified in the tender form, relationship between the two sets of units must be furnished.

19. (a) All available technical literature, catalogues and other data in support of the specifications and details of the items should be furnished along with the offer as attachments for which provision is made.

(b)Samples, if called for, should be submitted free of all charges by the tenderer and the Purchaser shall not be responsible for any loss or damage thereof due to any reason whatsoever. In the event of non-acceptance of tender, the tenderer will have to remove the samples at his own expense.

(c)Approximate net and gross weight of the items offered shall be indicated in your offer. If dimensional details are available the same should also be indicated in your offer and the same is attached.

(d)Specifications: Stores offered should strictly conform to our specifications. Deviations, if any, should be clearly indicated. The tenderer should also indicate the Make/Type number of the stores offered and provide catalogues, technical literature and samples, wherever necessary, along with the quotations as attachment. Test Certificates, wherever necessary, should be forwarded along with supplies. Wherever options have been called for in our specifications, the tenderer should address all such options. Wherever specifically mentioned by us, the tenderer could suggest changes to specifications with appropriate response for the same.

20. The purchaser shall be under no obligation to accept the lowest or any tender and reserves the right of acceptance of the whole or any part of the tender or portions of the quantity offered and the tenderers shall supply the same at the rates quoted.

21. Corrections, if any, must be attested. All amounts shall be indicated both in words as well as in figures. Where there is difference between amount quoted in words and figures, amount quoted in words shall prevail.

22. The tenderer should supply along with his tender, the name of his bankers as well as the latest Income-Tax clearance certificate duly countersigned by the Income-Tax Officer of the Circle concerned under the seal of his office, if required by the Purchaser.

23. DELIVERY:

(a)The time for and the date of delivery of the stores stipulated in the Purchase Order shall be deemed to be the essence of the Contract and delivery must be completed on or before the specified dates.

(b)Should the Contractor fail to deliver the stores or any consignment thereof within the period prescribed for such delivery, the purchaser shall be entitled at his option either.

(i) to recover from the Contractor as agreed liquidated damages and not by way of penalty, a sum of

0.5% per week of the price of any stores which the Contractor has failed to deliver as aforesaid or during which the delivery of such store may be in arrears subject to a maximum of 10%, or (ii) to purchase from elsewhere, without notice to the Contractor on the account and at the risk of the Contractor, the stores not delivered or others of a similar description (where others exactly complying with the particulars, are not, in the opinion of the purchaser, readily procurable, such opinion being final) without cancelling the Contract in respect of the consignment (s) not yet due for delivery, or (iii) to cancel the Contract or a portion thereof and if so desired to purchase or authorize the purchase of stores not so delivered or others of a similar description (where others exactly if complying with the particulars are not, in the opinion of the purchaser, readily procurable, such opinion final) at the risk and cost of the Contractor.

(c) In the event of action being taken under sub-clause (ii) & (iii) of clause 23 (b) above, the Contractor shall be liable for any loss which the purchaser may sustain on that account, provided that the re-purchase or if there is an agreement to repurchase then such agreement is made within six months from the date of such failure. But the Contractor shall not be entitled to any gain on such re-purchase made against default. The manner and method of such re-purchase shall be at the discretion of the purchaser, whose decision shall be final. It shall not be necessary for the purchaser to serve a notice of such re-purchase on the defaulting Contractor. This right shall be without prejudice to the right of the purchaser to recover damages for breach of Contract by the Contractor.

24. EXTENSION OF TIME:

As soon as it is apparent that the Contract dates cannot be adhered to, an application shall be sent by the Contractor to the purchaser. If failure, on the part of the Contractor, to deliver the stores in proper time shall have arisen from any cause which the purchaser may admit as reasonable ground for an extension of the time (and his decision shall be final) he may allow such additional time as he considers it to be justified by circumstances, of the case without prejudice to the purchaser's right to recover liquidated damages under clause 23 thereof.

25. ERECTION OF PLANT & MACHINERY:

Wherever erection of a plant or machinery is the responsibility of the Contractor as per the terms of the Contract and in case the Contractor fails to carry out the erection as and when called upon to do so within the period specified by the purchaser, the purchaser shall have the right to get the erection done through any source of his choice. In such an event, the Contractor shall be liable to bear any additional expenditure that the purchaser is liable to incur towards erection. The Contractor shall, however, not be entitled to any gain due to such an action by the purchaser.

26. PAYMENT:

Contractor's bill will be passed for payment only after the stores have been received, inspected and accepted by the Purchaser.

27. MODE OF PAYMENT:

Normally payment will be made for the accepted stores within 30 days from the date of receipt of the

materials.

28. RECOVERY OF SUM DUE:

Whenever any claim for the payment of, whether liquidated or not, money arising out of or under this Contract against the Contractor, the purchaser shall be entitled to recover such sum by appropriating in part or whole, the security deposited by the Contractor, if a security is taken against the Contract. In the event of the security being insufficient or if no security has been taken from the Contractor, then the balance or the total sum recoverable as the case may be, shall be deducted from any sum then due or which at any time thereafter may become due to the Contractor under this or any other Contract with the purchaser. Should this sum be not sufficient to cover the full amount recoverable, the Contractor shall pay to the purchaser on demand the remaining balance due. Similarly, if the purchaser has or makes any claim, whether liquidated or not, against the Contractor under any other Contract with the purchaser, the payment of all moneys payable under the Contract to the Contractor including the security deposit shall be withheld till such claims of the purchaser are finally adjudicated upon and paid by the Contractor.

29. INDEMNITY:

The Contractor shall warrant and be deemed to have warranted that all stores supplied against this Contract are free and clean of infringement of any Patent, Copyright or Trademark, and shall at all times indemnify the purchaser against all claims which may be made in respect of the stores for infringement of any right protected by Patent Registration of design or Trade mark and shall take all risk of accidents or damage which may cause a failure of the supply from whatever cause arising and the entire responsibility for sufficiency of all means used by him for the fulfillment of the contract.

30. ARBITRATION:

In the event of any dispute/s, difference/s or claim/s arising out of or relating to the interpretation and application of the Contract, such dispute/s or difference/s or claim/s shall be settled amicably by mutual consultations of the good Offices of the respective Parties and recognizing their mutual interests attempt to reach a solution satisfactory to both the parties. If such a resolution is not possible, within 30 days from the date of receipt of written notice of the existence of such dispute/s, then the unresolved dispute/s or difference/s or claim/s shall be referred to the Sole Arbitrator appointed by the Parties by mutual consent in accordance with the rules and procedures of Arbitration and Conciliation Act 1996 as amended from time to time. The arbitration shall be conducted in Bengaluru in the Arbitration and Conciliation Centre - Bengaluru (Domestic and International) as per its rules and regulations. The expenses for the Arbitration shall be shared equally or as may be determined by the Arbitrator. The considered and written decision of the Arbitrator shall be final and binding between the Parties. The applicable language for Arbitration shall be "English" only.

Work under the Contract shall be continued by the CONTRACTOR during the pendency of arbitration proceedings, without prejudice to a final adjustment in accordance with the decision of the Arbitrator unless otherwise directed in writing by the DEPARTMENT or unless the matter is such that the works cannot be possibly continued until the decision (whether final or interim) of the Arbitrator is obtained.

31. COUNTER TERMS AND CONDITION OF SUPPLIERS:

Where counter terms and conditions printed or cyclostyled conditions have been offered by the supplier, the same shall not be deemed to have been accepted by the Purchaser, unless specific written acceptance thereof is obtained.

32. SECURITY FOR PURCHASE OF MATERIALS:

Successful tenderer will have to furnish in the form of a bank guarantee or any other form as called for by the purchaser towards adequate security for the materials and properties provided by the Purchaser for the due execution of the Contract.

4. Exemption - Customs Duty & GST

1. MCF is eligible for availing Customs Duty Exemption under Notification No. 51/96 for imported components. The applicable Basic CD as of now is 5% + Social welfare charges under the scope of this Tender.

2. MCF is eligible for availing Concessional GST in terms of Government of India, Ministry of Finance, Department of Revenue Notification No. 45/2017-Central Tax [Rate] dated 14.11.2017 and Notification No. 47/2017-Central Tax [Rate] dated 14.11.2017 and as per the same applicable percentage of GST is 5% for supplies under the scope of this Tender

5. GFR Compliance to Rule 144 (xi)

1. As per Rule 144(xi) of General Financial Rules, 2017, any bidder from a country which shares a land border with India will be eligible to bid in any procurement whether of goods, services (including consultancy services and non-consultancy services) or works (including turnkey projects) only if the bidder is registered with the Competent Authority (i.e., Department for Promotion of Industry and Internal Trade) in line with Order (Public Procurement No. 1, 2 and 3) dated 23/07/2020 and 24/07/2020 or any amendments thereon issued by the Public Procurement Division, Department of Expenditure, Ministry of Finance.

2.

Hence, Vendors or Agents of a Vendor (Indian or Others) from a country sharing land border with India shall submit the copy of Valid Registration made with DPIIT along with the tender mandatorily, without which the offer will be treated as invalid.

3. Model Certificate for Tenders:

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered.

4. Model Certificates for Tenders for Work involving possibility of sub-contacting:

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contracting from such countries; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority and will not sub-contract any work to a contract form such countries unless such contractor is registered with the Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered.

5. Provide Compliance for the above in Vendor Specified Commercial Terms.

C. Bid Templates

C.1 Technical Bid - 1:2 Redundant C-Band LNA Switching Complex

1. RF Low Noise Amplifiers

1:2 Redundant C-Band LNA Switching Complex

Item specifications for RF Low Noise Amplifiers

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Frequency	3625 to 4200 MHz	Yes / No / Explain		
2	Noise temperature	40 deg. K max. (Including LNA & Switching)	Yes / No / Explain		
3	Gain	60 dB min.	Yes / No / Explain		
4	Gain flatness over the band	± 1 dB	Yes / No / Explain		
5	Gain overall stability over Temperature	± 1 dB over the band 0.40 dB p-p over 40MHz	Yes / No / Explain		
6	Input VSWR	1.30 : 1	Yes / No / Explain		
7	Output VSWR	1.30 : 1	Yes / No / Explain		
8	I/P interface	WR 229 CPR (G), (Standard feed interface dimensions)	Yes / No / Explain		
9	O/P interface	N-type (female) connector	Yes / No / Explain		
10	Group delay	0.02 ns / MHz max. Linear 0.003ns/MHz. Sq. Max. Parabolic 0.3ns peak to peak max. Ripple	Yes / No / Explain		
11	Max. Input Power without damage	0 dBm	Yes / No / Explain		
12	Power Output (@ 1-dB Gain Compression)	+10 dBm Min.	Yes / No / Explain		

13	Third Order Intercept	+ 20 dBm Min.	Yes / No / Explain		
14	Temperature Range (Switch Plate Assembly)	0 to +60 °C	Yes / No / Explain		
15	Operating Power Supply	Control unit shall be Powered with 230 Volts AC Supply. Dual AC inputs and dual redundant power supplies	Yes / No / Explain		
16	Switchover Time	100 ms maximum	Yes / No / Explain		
17	Operating Temperature Range	0 to +50 °C	Yes / No / Explain		
18	Relative Humidity	Operating: 5% to 95% non-condensing	Yes / No / Explain		
19	Reliability	MTBF: 48000 hours or better	Yes / No / Explain		
20	Auto/Manual Switch and Indicators	In Auto mode, a unit failure initiates automatic switchover to the standby unit. In manual mode, the on-line unit can be selected from the front panel or by serial I/O, parallel I/O or network command.	Yes / No / Explain		
21	Remote/Local Switch and Indicators	Selects local (front panel) control, or remote control from serial I/O, parallel I/O, or network	Yes / No / Explain		
22	For M&C operation RS-232/ RS-422/ LAN interface shall be provided in the control unit. ICD Details to be provided for the LNA Controller.		-		
23	Remote Operation	Remote operation of the LNA switching unit from ES which is 75 meter away from the LNAs	Yes / No / Explain		

24	Control Unit shall be 19-inch rack mountable. Unit shall provide Status of Online / Back-up LNAs properly through suitable LED indicators.		-		
25	Standard warranty of 1 year to be provided		-		
26	Mating connector with proper length of cable to be supplied		-		
27	All accessories e.g. fasteners for LNA Mounting, Gasket etc. to be provided.		-		
28	Factory test data shall be provided with operation and maintenance manual.		-		
29	Mechanical interface drawings with the feed to be provided.		-		
30	Make / Model of LNA complex & Controller to be provided by the Vendor		-		
31	Product catalog / datasheet to be provided by the Vendor to substantiate offered product specifications against Indent Specifications.		-		
32	Compliance statement to be provided for all the specifications along with the quote.		-		

Document : specs of LNA complex

Common Specifications (Applicable for all items)

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Frequency	3625 to 4200 MHz	Yes / No / Explain		
2	Noise temperature	40 deg. K max. (Including LNA & Switching)	Yes / No / Explain		

3	Gain	60 dB min.	Yes / No / Explain		
4	Gain flatness over the band	± 1 dB	Yes / No / Explain		
5	Gain overall stability over Temperature	± 1 dB over the band 0.40 dB p-p over 40 MHz	Yes / No / Explain		
6	Input VSWR	1.30 : 1	Yes / No / Explain		
7	Output VSWR	1.30 : 1	Yes / No / Explain		
8	I/P interface	WR 229 CPR (G), (Standard feed interface dimensions)	Yes / No / Explain		
9	O/P interface	N-type (female) connector	Yes / No / Explain		
10	Group delay	0.02 ns / MHz max. Linear 0.003 ns / MHz Sq. Max. Parabolic 0.3 ns peak to peak max. Ripple	Yes / No / Explain		
11	Max. Input Power without damage	0 dBm	Yes / No / Explain		
12	Power Output (@ 1-dB Gain Compression)	+10 dBm Min.	Yes / No / Explain		
13	Third Order Intercept	+ 20 dBm Min.	Yes / No / Explain		
14	Temperature Range (Switch Plate Assembly)	0 to +60 °C	Yes / No / Explain		
15	Operating Power Supply	Control unit shall be Powered with 230 Volts AC Supply. Dual AC inputs and dual redundant power supplies.	Yes / No / Explain		
16	Switchover Time	100 ms maximum	Yes / No / Explain		
17	Operating Temperature Range	0 to +50 °C	Yes / No / Explain		
18	Relative Humidity	Operating: 5% to 95% non-condensing	Yes / No / Explain		
19	Reliability	MTBF: 48000 hours or better	Yes / No / Explain		

20	Auto/Manual Switch and Indicators	In Auto mode, a unit failure initiates automatic switchover to the standby unit. In manual mode, the on-line unit can be selected from the front panel or by serial I/O, parallel I/O or network command.	Yes / No / Explain		
21	Remote/Local Switch and Indicators	Selects local (front panel) control, or remote control from serial I/O, parallel I/O, or network	Yes / No / Explain		
22	For M&C operation RS-232/ RS-422/ LAN interface shall be provided in the control unit. ICD Details to be provided for the LNA Controller.		-		
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24	Control Unit shall be 19-inch rack mountable. Unit shall provide Status of Online / Back-up LNAs properly through suitable LED indicators.		-		
25	Standard warranty of 1 year to be provided		-		
26	Mating connector with proper length of cable to be supplied		-		
27	All accessories e.g. fasteners for LNA Mounting, Gasket etc. to be provided.		-		

28	Factory test data shall be provided with operation and maintenance manual.		-		
29	Mechanical interface drawings with the feed to be provided.		-		
30	Make / Model of LNA complex & Controller to be provided by the Vendor		-		
31	Product catalog / datasheet to be provided by the Vendor to substantiate offered product specifications against Indent Specifications.		-		
32	Compliance statement to be provided for all the specifications along with the quote.		-		

Supporting Documents required from Vendor

1. Catalog Or Data Sheet,compliance sheet

2. Catalog, Manual , Technical data sheet

5 additional documents can be uploaded by the vendor

C.2 Commercial Terms / Bid

Sl. No.	Description	Compliance	Vendor Terms
1	Delivery to MCF Bhopal	Yes / No / Explain	
2	Warranty / Guarantee Period (Provide compliance as per Specifications/Tender T&C)	Yes / No / Explain	
3	Delivery Term: (1) F.O.R. MCF, Hassan/Bhopal (Ref. place of delivery) - for indigenous supplies. (2) In case of Supply, Installation & commissioning, Quote shall be on FOR-Destination basis only.	Yes / No / Explain	
4	Payment Term (Provide compliance as per Tender T&C)	Yes / No / Explain	
5	Validity of Tender (Provide compliance as per Tender instruction)	Yes / No / Explain	
6	Delivery Period (Indicate fixed period from the date of award of PO/Contract).	Yes / No / Explain	
7	Currency quoted	Yes / No / Explain	
8	Provide compliance for Performance Bank Guarantee (PBG) as per Tender Terms & Conditions (Required).	Yes / No / Explain	
9	Provide compliance to Security Deposit as per Tender Terms & Conditions.	Yes / No / Explain	
10	Indicate applicable percentage (%) of Taxes and/or Duties (Extra/Inclusive).	Yes / No / Explain	
11	Provide compliance to Rule No. 144 (xi) of GFR, 2017 (Refer Instruction)	Yes / No / Explain	
12	Any other terms (Restricted to Commercial Terms)	-	
13	MCF UIN 2918IND00020ONS. Indicate your GSTIN.	-	

C.3 Price Bid

Sl. No.	Item	Quantity	Unit Price	Currency	Total Price	Packing and Forwarding Charges	Freight Charges	Customs Duties	Remark
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1	RF Low Noise Amplifiers	1.00 Nos.		-					
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Common charges (Applicable for all items)

Other Charges (If any)	
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