

Antrix Corporation limited
Antariksh Bhavan
New BEL Road
Bangalore – 560 231
Ph: +91 80-2217 2414 / 2217 2415
Fax Nos.: +91 80 2351 4166 / 2341 8981
Email ID: ramaa@isro.gov.in

June 29, 2011

Sub: Request for Proposal for provision of C-Band capacity
Ref: Our Enquiry No. Antx/C-Band/42/2011-12

Antrix Corporation Limited (Antrix) is the commercial wing of the Department of Space with a mandate to market space products and services from the Indian Space Programme. As part of its activities, Antrix provides transponder bandwidth lease to various customers for DTH, VSAT, TV, DSNG and various other applications.

Antrix intends to lease satellite bandwidth of upto 12 Transponders (each 36 MHz equivalent) for telecom applications, initially for a period of three years which may be extended beyond this period based on actual user requirements.

1. The space segment capacity requested is for upto 12 C band transponders (each Transponder 36 MHz equivalent) in a single location.
2. The services are expected to commence from last quarter of 2011 for a period of Minimum 3 years.
3. The satellite from which the services are expected should have atleast 5 years of remaining life.
4. The satellite services shall be provided from the bidder's orbital slot and spectrum coordinated by the bidder.

The technical specifications and instructions to bidders are attached herewith for your kind perusal. Bidders are requested to send in their quotations in two parts, first being the Technical & Commercial (other than price) and second being the Price. Five copies of your quotations may please be sent to the undersigned, latest by 1600 hrs, on or before, 20.07.2011, by courier only.

Please submit your proposal to:

Purchase and Stores Officer
Antrix Corporation Limited
Antariksh Bhavan, New BEL Road,
Bangalore – 560 231, INDIA
Ph: 2217 2414 / 2415
Fax: 2351 4166 / 2341 8981
Email ID: ramaa@isro.gov.in

Any further details in connection with this service may be provided. After receiving the proposals, the vendor will be selected based on the evaluation of technical & commercial proposals.

Thanking you,

Yours faithfully,
For Antrix Corporation Limited,

Purchase & Stores Officer
Ph: 2217 2414
Fax Nos.: 2351 4166 / 2341 8981

Encl:

1. Technical Specification.
2. Two Part Instructions.

ANNEXURE - 1

Transponder Specification for C-band

Sl. No.	Performance Parameters	Preferred Specifications
1	Effective Isotropic Radiated Power in 27/36 MHz under single carrier saturation, EIRP (EOC) min., EOL.	≥ 35 dBW for Coverage as defined in specification no. 3
2	Receive Gain to Noise Temperature, G/T (EOC) min., EOL.	≥ -7 dB/°k for Coverage as defined in specification no. 3
3	Coverage Area	Preferred: Wide coverage including Indian mainland & It's Islands , Middle east, South East Asia, Australia
4	Operational Saturation Flux Density	≤ -80 dBW/m ²
5	Usable Transponder Bandwidth	27/36 MHz (27 MHz should not be a part of 36MHz transponder)
6	Uplink Frequency Range	5925-6725 MHz
7	Downlink Frequency Range	3400-4200 MHz
8	Polarization Sense Tx./Rx.	Linear H/V or V/H
9	Cross Polarization Isolation, EOC	≥ 30.0 dB
10	Orbital Slot	63°E to 102°E Frequency Spectrum should be already co-ordinated at these orbital slots
11	Transponder Power back up during Eclipse	Required
12	No. of Transponders / Bandwidth required	432 MHz i.e. 12 Transponders of 36 MHz Bandwidth in a single location

In addition, the vendor should provide following data directly and not by referring any standard documents;

- i) In-Band Frequency Response
 - Over 80% of Channel BW
 - Over 90% of Channel BW
 - Over 100% of Channel BW
- ii) Total Channel Amplitude Linearity
 - Flux Density of each of the two carriers, below single carrier saturation
 - 3.0 dB
 - 6.0 dB
 - 10.0 dB
 - 17.0 dB

In dBpp

Linearized HPA preferable
Third Order IMP, dBc

This performance should be met with any separation of the carriers with a minimum of 100 KHz, but within the usable bandwidth of the Channels

- iii) Transponder Input and output back off for multiple carriers operation.
- iv) Launch date , expected remaining life of the satellite, details of replacement planned after EOL of satellite proposed under RFP.

ANTRIX CORPORATION LIMITED
ANTRIX BHAVAN, NEW BEL ROAD,
BANGALORE 560 231.

Ref No.Antrix/C-Band/42/2011-12

INSTRUCTIONS FOR TWO PART TENDERS

1. We invite your offer duly signed, consisting in two parts/envelopes marked as follows:-
 - a. Part – I - TECHNICAL & COMMERCIAL (OTHER THAN PRICE)
 - b. Part- II - PRICE

- 1.1. PART – I – TECHNICAL & COMMERCIAL BID IN HARD AND SOFT FORM i.e. IN CD MEDIA ONLY

- 1.1.1 TECHNICAL: Our RFP (Annexure- contains Technical requirement and specification for RFP for Providing Satellite Capacity in C-Band. The detailed technical specification of offer should be covered in this Part. Please enclose a compliance statement for all the specification (point by point). Also enclose a copy of the details indicated in price quotation (WITHOUT PRICES OR BY MASKING THE PRICES) mainly to know the items/specifications for which you have indicated prices in price bid. This part should not contain prices.

- 1.1.2 COMMERCIAL TERMS: This part shall also contain commercial terms and conditions offered by you.

This part i.e. Part-I Technical & Commercial should not contain any price details and be kept in a sealed cover duly super scribing as under:

QUOTATION AGAINST RFP No Antrix/C-Band/42/2011-12
DUE ON 20.07.2011

PART I - TECHNICAL & COMMERCIAL
The cover should indicate "SENDERS" address

- 1.2 PART II – PRICE BID ONLY IN HARD FORM

- 1.2.1 This part shall indicate Price.

- 1.2.2 The price for the items should be indicated item in this part. All the items/specifications mentioned in the Technical Part should be reflected here and prices indicated against each. The break-up for each item of supply or services should be indicated. Whenever options are quoted, the same should also be indicated with quantity and unit rate separately. The prices are to be mentioned both in figures and in words. The price bid shall be submitted as per the proposal at Annexure-I and shall provide Compliance Statement for all the points. This part should also be kept in a sealed cover super scribing as follows

QUOTATION AGAINST RFP No. Antrix/C-Band/42/2011-12
DUE ON 20.07.2011
PART II - PRICE

- 2 The Two sealed covers prepared as above should be kept in another envelope, sealed and super scribed as under:-

Quotation against Tender No. Antrix/C-Band/42/2011-12
For RFP for Providing Satellite Capacity in C Band
Containing 2 separate covers Part-I, Part – II and addressed to:

PURCHASE & STORES OFFICER
ANTRIX CORPORATION LIMITED
ANTRIX BHAVAN,
NEW BEL ROAD, BANGALORE 560 231.

- 3 Your offer should reach us on or before the due date and time. Late offers received after the due date and times are not opened.