



INCOIS: PUR: 29&34/2019

24.07.2019

**Request for Proposal for "Up gradation of INSAT HUB station at INCOIS, Hyderabad"**

consisting of following items :

- (1) Up gradation of Antenna Mechanical & Control system with auto tracking facility along with 5 years standard onsite warranty under buy back of old ACU, MCU, Motors, Encoders and Limit switches
- (2) Supply of spares for RF systems along with 5 years standard onsite warranty and
- (3) 5 Years onsite Comprehensive annual maintenance (CAMC) for existing Antenna & associated equipment

Dear Sirs,

On behalf of Director, ESSO-INCOIS tenders are invited in "Two Bid System" (Techno Commercial Bid and Price Bid) from Contractors with appropriate registration having adequate resources and setup and dealing with similar works for " INSAT HUB station ". The offers, in the prescribed format, shall be submitted online at <http://eprocure.gov.in/eprocure/app> as per the tender document. No tender will be accepted in hard copy, fax, e-mail or any other such means. The intending, bidders must be registered with Public Procurement <http://eprocure.gov.in/eprocure/app>.

1.	Name of the work	:	Up-gradation of the existing INSAT HUB station at INCOIS, Hyderabad
2.	Submission of Bid	:	Please note that the subject tender has to be submitted online via our e-tender portal <a href="http://eprocure.gov.in/eprocure/app">http://eprocure.gov.in/eprocure/app</a>
3.	Type of Bid	:	Two Bid; Cover I - Techno-Commercial Bid, EMD of Rs 3,00,000/- or USD 4,300/-  Cover II - Price Bid in the prescribed format.
4.	Clarifications end date	:	On or before 1500 Hrs of July 31, 2019
5.	Pre bid Meeting	:	On 11 00 Hrs of August 06, 2019 at INCOIS, Hyderabad
6.	Bid submission due date online	:	On or before 1500 Hrs of August 26, 2019
7.	Bid opening date	:	After 1500 Hrs of August 27, 2019
8.	Bid validity	:	90 days from the date of opening of tender

Being an e-tender the bid have to submitted online in the e-tender portal i.e., <https://eprocure.gov.in/eprocure/app>. Kindly refer **Appendix** for the detailed procedure. For any assistance, please contact help line of e-Tender portal or the following persons also may be contacted: Mr. Devendra Kumar /Mr. R V Giridhar, Phone No. 040-2388 6055/2388 6074, email: [devendra.kumar@incois.gov.in](mailto:devendra.kumar@incois.gov.in) / [rvgiridhar@incois.gov.in](mailto:rvgiridhar@incois.gov.in)

INCOIS may, at its discretion, extend the deadline for submission of bids by issuing a corrigendum, in which case all rights and obligations of the Owner and the bidders previously subject to the original deadline will thereafter be subject to the deadline as extended.

Postal Address	Location Address
INDIAN NATIONAL CENTRE FOR OCEAN INFORMATION SERVICES (INCOIS), MINISTRY OF EARTH SCIENCES, GOVT. OF INDIA, "Ocean Valley", Pragathi Nagar (BO), Nizampet (SO), Hyderabad - 500 090	Indian National Centre for Ocean Information Services (INCOIS), Ministry of Earth Sciences, Govt. of India, "Ocean Valley", Survey No.342/3, Beside ALEAP, Near Pragathi Nagar, Opp. JNTU-Kukatpally, Hyderabad 500 090, Ph.No.040-23886000, Fax No.040-23892910

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### 1. INTRODUCTION

Indian National Centre for Ocean Information Services (INCOIS), Hyderabad is an autonomous body under the Ministry of Earth Sciences (MoES) and responsible for providing ocean information and advisory services to the society. The mission of INCOIS is “to provide ocean data, information and advisory services to society, industry, the government and the scientific community through sustained ocean observations and constant improvements through systematic and focused research”

The major objectives of INCOIS are

1. To establish, maintain and manage systems for data acquisition, analysis, interpretation and archival for Ocean Information and related services.
2. To undertake, aid, promote, guide and co-ordinate research in the field of ocean information and related services including satellite oceanography.
3. To carry out surveys and acquire information using satellite technology, ships, buoys, boats or any other platforms to generate information on fisheries, minerals, oil, biology, hydrology, bathymetry, geology, meteorology, coastal zone management and associated resources.
4. To generate and provide data along with value added data products to user communities.
5. To cooperate and collaborate with other national and international institutions in the field of ocean remote sensing, oceanography, atmospheric sciences/meteorology and coastal zone management.
6. To establish Early Warning System for Tsunami and Storm Surges.
7. To support research centres in conducting investigations in specified areas related to oceanic processes, ocean atmospheric interaction, coastal zone information, data synthesis, data analysis and data collection.
8. To organize training programmes, seminars and symposia to advance study and research related to oceanography and technology.
9. To publish and disseminate information, results of research, data products, maps and digital information through all technologically possible methods to users for promoting research and to meet societal needs for improvement of living standards.
10. To provide consultancy services in the fields of ocean information and advisory services.
11. To coordinate with space agencies to ensure continuity, consistency and to obtain state-of-the-art ocean data from satellite observations.
12. To encourage and support governmental and non-governmental agencies/organizations for furthering programmes in the generation and dissemination of ocean information.

13. To undertake other lawful activities as may be necessary, incidental or conducive to the attainment and furtherance of all or any of the above objectives of ESSO-INCOIS

As part of National Tsunami Early Warning System (NTEWS), INCOIS has established INSAT MSS & DRT HUB station through M/s BEL, Bangalore in the year 2007 for the purpose of receiving the real time data from various ocean observational systems. at present INCOIS is receiving the following real time data at INSAT Hub station (MSS & DRT)

- Tide data from 36 No. of Tide Gauge stations around the coastal mainland and Island locations
- AWS data from 35 On board vessels
- Wave Rider Buoy (WRB) data from 15 locations
- NIOT Moored buoy data & Land AWS

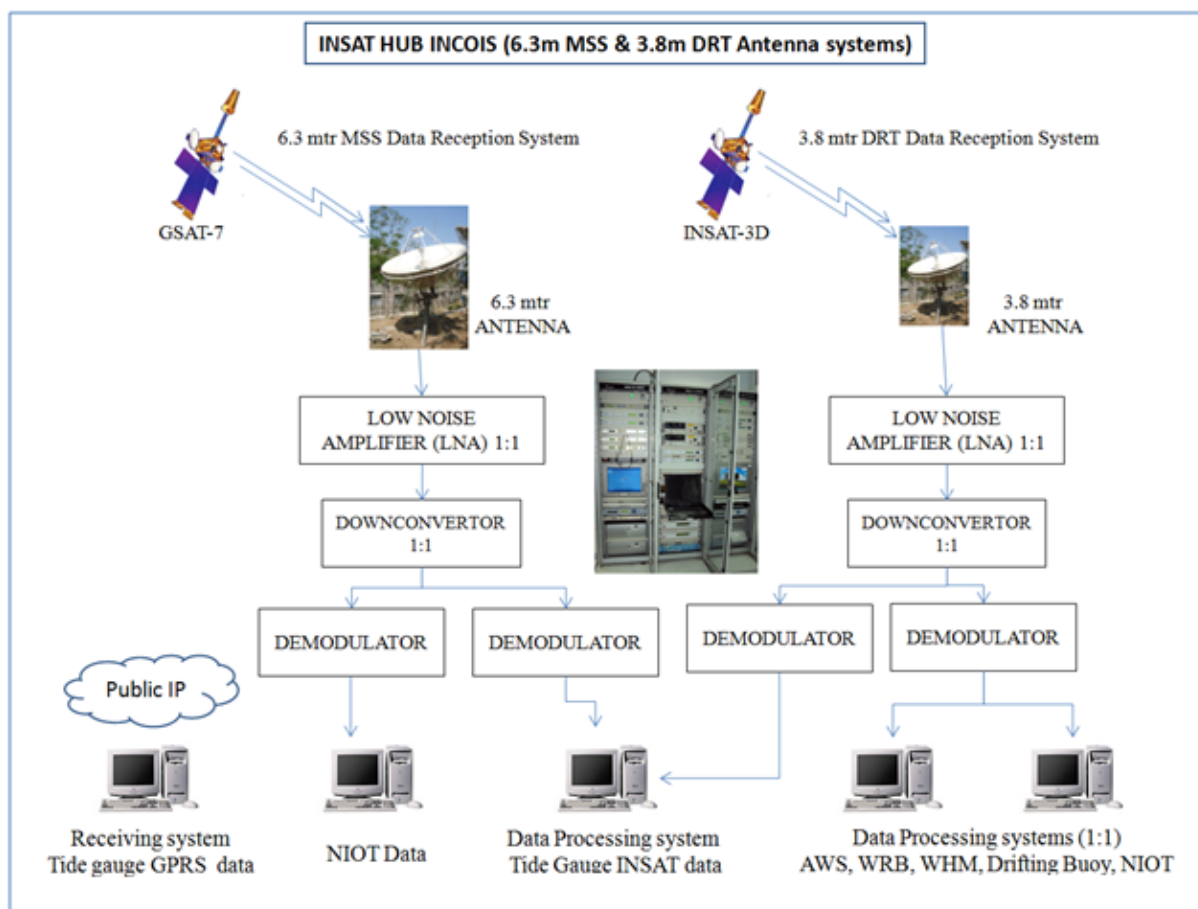
These real time data is being used to provide Tsunami alerts/warnings to 26 rim countries, Ocean state forecast (Wind speed, direction, Wave height, direction) to Coast Guard, Navy & Fishing community and for day-day to navigational activities to the port personals.

Keeping in-view of the criticality & aging of the same, INCOIS is planning to upgrade the existing INSAT HUB station with auto tracking facility with 5 years warranty.

## 2. Brief Description of the existing INSAT Hub Station

Various components of the existing INSAT Hub Station are broadly categorized as (1) Antenna Control Systems, (2) RF Equipment and (3) Antenna Mechanical Systems consisting of antenna units and associated cables & connectors.

The typical block diagram of the MSS Hub, DRT Hub terminals is enclosed.



More technical details of each of the above area are:

**I) Antenna Mechanical & Control systems**

S.No	Equipment	Make/Supplier	Model no	Total Quantity (MSS+DRT)
1	Antenna Control Unit (ACU)	Comsat	CSPL-ACU-01E	2 (MSS)
2	Motor Control unit (Outdoor)	Comsat		1 (MSS)
3	Manual Antenna Control Unit (MACU)	Comsat	CSPL-MACU-01E	1 (DRT)
4	Beacon Tracking Receiver (BTR)	ASC	ASC300C	2 (MSS)
5	Motors (Azimuth, Elevation, Feed)	Comsat		2 (1MSS, 1DRT)
6	Encoders & Limit switches	Comsat		2 (1MSS, 1DRT)
7	Interface & control cables	Comsat		2 (1MSS, 1DRT)

**II) RF Equipment**

S.No	Equipment	Make	Model no	Total Quantity (MSS+DRT)
1	LNA 1:1 Redundant Amplifier system	Narda- Miteq	LN1-360480	2 (1MSS, 1DRT)
2	Down Converter (C-band)	Comtech	DT4503	2 (MSS)
3	Down Converter (Ex C-band)	Comtech	DT4503e	2 (DRT)
4	Up Converter	Comtech	UT4505	2 (MSS)
5	1:1 redundant 200W TWTA (Power Amplifier)	CPI	NCB1600H2	2 (MSS)
6	Power Splitter (1:4) (5-500 MHz) (BNC type)	Mini Circuits	ZB4PD1-500	2 (1MSS, 1DRT)
7	Power Splitter (1:4) (1700-4200 MHz) (N type)	Mini Circuits	ZB4PD-42-N	2 (1MSS, 1DRT)
8	Wave guide			1 (MSS)
9	Coaxial cables			2 (1MSS, 1DRT)

**III) Antenna Mechanical System - antenna & associated equipment**

S.No	Equipment	Make/Supplier	Model no	Total Quantity (MSS+DRT)
1	MSS 6.3mtr antenna & Feed (2-port LP) system with accessories	Comsat		1 (MSS)
2	DRT 3.8mtr antenna & Feed (2-port LP) system with accessories	Comsat		1 (DRT)
3	Interface cables			2 (1MSS, 1DRT)

**3. Scope of Work**

Scope of the work is to

- (1) Up gradation of Antenna Mechanical & Control system with auto tracking facility along with 5 years standard onsite warranty under buy back of old ACU, MCU, Motors, Encoders and Limit switches
- (2) Supply of spares for RF systems along with 5 years standard onsite warranty and

(3) 5 Years onsite Comprehensive annual maintenance (CAMC) for existing Antenna & associated equipment

The scope also includes the following.

1. Supply, installation, Integration & commissioning of Antenna Mechanical and Control system with auto tracking facility which includes ACU, MCU, BTR, Motors, Encoders, Limit switches and Interface cables along with 5 years onsite warranty for both Antenna systems (6.3mtr MSS & 3.8mtr DRT)
2. Monitoring software (GUI) for the antenna control systems (for both MSS & DRT systems) for monitoring and configuration of the required parameters.
3. Supply of spares of RF equipment with 5 years standard onsite warranty.
4. CAMC of Mechanical maintenance of both existing antenna systems with accessories (Periodic, Preventive, Breakdown)
5. The vendor is responsible for Up-gradation (Supply, Installation, Integration, Commissioning) and onsite warranty of Hub station at INCOIS Hyderabad.
6. Vendor has to provide Monitoring software and GUI for configure & monitor the required parameters of Antenna control systems.
7. Site preparation & civil work: The vendor has to undertake feasibility site survey for mounting of the motors and outdoor motor control unit. The vendor has to undertake the civil works (if required) or any other works for mounting and proper routing of the cables to be done.
8. Vendor has to lay/route the new RF cables and new control cables in the existing trench between the outdoor antenna to indoor receive chain rack.
9. Vendor has to bring the required tools & equipment for installation/Up-gradation of the Antenna system.
10. Both the Antenna systems are operational and we are receiving the data from more than 100 locations. Considering this, the vendor has to complete the installation & commissioning with minimum down time.
11. The Technical documentation (Training Manual) – one set (hard copy-original documentation and soft copy) having detailed instructions for Installation, Operations, Maintenance and trouble-shooting is to be delivered with every unit of the equipment supplied. The language of the documentation should be in English. It should include system integration, maintenance, trouble-shooting procedures.
12. Vendor should provide 2 day training program along with operational mechanism and trouble shooting of the total system.
13. Project execution structure: The vendor should present the detailed action plan, design architecture and time schedules with-in three weeks after receiving Purchase order from INCOIS.

#### 4. Technical Specifications

##### 4.01 Technical Specifications of Antenna Mechanical & Control Systems

###### Antenna Control system:

- Three axis movement i.e. Azimuth, Elevation and Feed (2-port LP ) with resolution accuracy 0.001  
Selection of Axis form ACU  
Azimuth : 10-350 deg  
Elevation : 5-90 deg  
Feed : ±100 deg
- **Indoor - Antenna Control Unit:**
  - Manual:
    - Jog
    - Step (Step Size configurable)
  - Tracking
    - Position Tracking
      - Three axis (Azimuth, Elevation, feed and polarization)
    - Auto tracking : In this mode antenna will peak/track the required satellites from the auto calculation of look angles.
    - Memory track

- Program track
- Table track
- Step tracking
  - Time interval (for user defined time interval & min threshold)
  - Adaptive (antenna will peaked to beacon, whenever signal level goes beyond the configured level to peak)
- Operation : Front panel & Remote monitor & control (M&C) on web Web GUI
  - 1) Access of unit from any PC connecting directly or local LAN
  - 2) Access of the unit from anywhere connecting on WAN
- Front panel Display : Azimuth, Elevation and feed present angles, Signal strength, Currently selected mode
- Settings : Lat-Long, Az, EL & feed angles, soft limits, Encoder (inverse/non-inverse), Motors (inverse/non-inverse)
- Display : 5" LCD TFT
- Enclosure : EMI-EMC protected , 2 RU size
- Remote Interface : TCP IP - RJ-45
- Interface connectors : Mil Grade Circular connectors
- Alarm : Active alarm indication (hardware & software inter locks) on front panel & remote (web access on laptop)
- Limits : Soft & Hard limits and status should be displayed on the screen
  - Soft limits as per user requirement
  - Hard limits as per antenna movement limitation
- Operational logs : Log record of the complete antenna control system operations, data for the trouble shooting & historical data analysis.

**Electrical:**

- Power Input : AC mains 230 V AC, 50Hz
- Protection : MCB for EL, AZ & Feed - overload & short protections

**Environmental:**

- Temperature : 0-50 deg C
- Humidity : 0-95 non condensing
- Mechanical mounting : 19" rack mount

➤ **Outdoor - Motor Control Unit :**

- Power : AC mains 230V AC, 50Hz, single phase (3 Phase optional) (IEC Socket)
- Mounting : Pole mount
- Environment : IP 65 Certified & Rain hood on top
- Surge protection : MCB
- No of Axis controlled : 3 (Azimuth, Elevation, feed )
- Interface connectors : MS connector & Metal glands
- Local control panel : for operations form Outdoor MCU
- Controls : Remote/ Manual - CW/CCW, Up/down, Feed CW/CCW, Emergency stop

**Environmental**

- Temperature : 0 to 55 deg C
- Humidity : 0-95 non condensing
- Storage:
  - Internal and External (USB)
- Login credentials:
  - Administration access
  - Monitoring access for five users
- Network diagram:
  - On-built High level network diagram for complete system with individual cable marking for easy identification and trouble shooting
- GUI features:

- Ethernet port with Web access by having IP. Access from any desktop/laptop by connecting to local LAN
- Logs of the tracking
- Real time Graphical representation of the RF signal details, Azimuth and Elevation angles.
- Monitoring the signal levels

**Motors:**

1. Elevation Motor:
  - Three Phase Input and Three phase output
  - Capacity: 3 HP
  - Type: Flange
  - Necessary coupler (to integrate to Jacuator)
  - Preferable motor: Havells/ Equivalent
2. Azimuth Motor:
  - Three Phase Input and Three phase output (415V)
  - Capacity: 2 HP
  - Type: Flange
  - Necessary coupler (to integrate to Jacuator)
  - Preferable motor: Havells/ Equivalent
3. Feed Motor:
  - Single phase input
  - Capacity: 40 W
  - Necessary
    - Teeth wheel (to integrate to feed assembly)
    - Brackets (to enclose encoders)
  - Preferable motor: AP Motronics/ Equivalent

**Encoders:**

Supply voltage	: DC 10-30 V
Max. current w/o load	: 250 mA (ST / MT)
Resolution single turn	: 10 - 17 Bit
Resolution multi turn	: 12 Bit
Output code	: Binary, Gray
Housing diameter	: 58 mm
Shaft diameter	: 6 mm / 10 mm (Solid shaft) 10 mm / 12 mm (Hub shaft)
Flange (Mounting of housing)	: Synchro flange, Clamping flange, Tether, Square flange
Shaft load axial / radial	: 40 N / 60 N
Max. speed	: max. 10 000 rpm (continuous), max. 12 000 rpm (short term)
Protection class shaft input (EN 60529)	: IP64 or IP67
Protection class housing (EN 60529)	: IP64 (IP67 optional)
Material shaft	: Stainless Steel
Material housing	: Aluminum
Connection	: Cable, axial or radial

**Limit Switches:**

Conditional S. C. Current	: 100A
Short Ckt Protection Device	: 10A fuse
Contact Combination	: 1 NO+ 1 NC
Mech. Life	: 10 million oprns.
Frequency of Operation	: 7200 oprns / hr.
Electrical Life	: 0.3 million oprns.
IP category	: IP 64
Rated thermal current (Ith)	: 5A
Resistive Load	: 5A, 250V AC
Operating temp limits	: -20 to + 600 C
Rated operating voltage (Ve)	: 250V

Rated insulation voltage (Vi)	: 250V
Rated impulse withstand voltage (Vimp):	2.5kV
Rated Frequency	: 50/60 Hz
<b><u>Beacon Tracking Receiver:</u></b>	
Input Frequency	: 3400.000 to 4200.000 MHz
Pre-detection Bandwidth	: 50 kHz
Input Level	: - 85 dBm, min.; - 25 dBm max.
Frequency Tuning	: 10 kHz Steps
Frequency Adjust	: Front Panel or Remotely
AFC	: + 23 kHz
Threshold	: <45 dB-Hz (C/No) for acquisition
Input Impedance	: 50 Ohm
Input Connector	: Type-N, Female
Output Impedance	: 100 Ohm, single ended
Output Connector	: Terminal plug and BNC Female
Tracking Gradient	: 0.5 V/dB, Std
Tracking Response	: 0 to +10 VDC for a 20 dB input level change
System Level Adjust	: 60 dB, 0.5 dB Steps
Frequency Stability	: <1 ppm, 00 c to +500 c
Frequency Reference	: 10 MHz (Internal)
Phase Noise	: >75 dB-Hz, 1 kHz from Carrier
Alarms	: Unit Lock
Front Panel Display	: Vacuum Fluorescent
M&C Connector	: DB-9, Female RJ-45 Connector
Operating Temperature	: 0°c to +50° c
Storage Temperature	: -40°c to +70° c
Humidity	: 95% RH@ 40° c

#### **8 Port Switch:**

Interfaces	: 8x Gigabit Ethernet port
Power port	
Power Adapter :	Input 100-240V, 50-60 Hz
	Output : 12V

### **4.02 Technical Specifications of RF Equipment**

#### **RF Equipments:**

##### **1:1 Low Noise Amplifier system (Make: Narda- Miteq):**

Frequency range	: 3.6 - 4.8 GHz
Noise Temperature	: 45 k at 23° c
Gain	: 60 dB
Gain flatness	: ± 0.5 dB over full band
Gain slope	: ± 0.2 dB over 40 MHz
Gain stability	: less than 0.01 db / MHz (max) over any 40 MHz band
Gain stability	: ± 0.1 dB / hour, ± 0.2 dB/day, ± 0.2 dB / month
Output power	: +12dBm (min.) at 1 dB compression point
Input/output VSWR	: 1.25: 1 max.
Input interface	: CPR229 g waveguide flange
Output connector	: N female
Operating temperature	: 0 to 60° c
Humidity	: 95% at 40° c
	outdoor environment
Primary power	: 230 v 50 Hz, ac single phase

##### **Down Converter ( C-band) (Make: Comtech EF Data): DT 4503**



Input frequency range	: 3.64 to 4.2 GHz
Output frequency	: 70MHz
Step size	: 1 KHz
Input impedance	: 50 Ω
Input return loss	: 20 db (min)
Input level range	: -65 to -50 dBm
Instantaneous band width	: 36 MHz
Output impedance	: 50 Ω
Output return loss	: 22 db (min)
Manual/ AGC switchable output	: required
Output level	: -15dBm (nominal)
Gain response (over 36 mhz)	: 1.0 dB
Noise figure	: 12 dB (max)
Image rejection	: 70 dB
Spurious outputs	
Signal related	: 65 dBc minimum
Signal independent	: -90 dBm maximum
Phase noise off set from carrier	: ssb phase noise (in 1 Hz of band width)
100 Hz	: -55 dBc
300 Hz	: -70 dBc
1000 Hz	: -80 dBc
LO frequency stability	: 1x10-8 per day
External/internal lo selection	: to be provided
External LO	: 5MHz / 10MHz
External LO level	: + 3dBm max.
Power supply	: 230 v ac single phase
Opera ting temperature	: 0 to 50° c
Relative humidity	: up to 95 % at 40° c

**Down Converter (Ex - C band) (Make: Comtech EF Data): DT 4503E**

Input frequency range	: 4.5 to 4.8 GHz
Output frequency	: 70MHz
Step size	: 1 KHz
Input impedance	: 50 Ω
Input return loss	: 20 dB(min)
Input level range	: -65 to -50 dBm
Instantaneous band width	: 36 MHz
Output impedance	: 50 Ω
Output return loss	: 22 dB (min)
Manual/ AGC switchable output	: required
Output level	: -15dBm (nominal)
Gain response (over 36 MHz)	: 1.0 dB
Noise figure	: 12 dB (max)
Image rejection	: 70 dB
Spurious outputs	
Signal related	: 65 dBc minimum
Signal independent	: -90 dBm maximum
Phase noise off set from carrier	: ssb phase noise (in 1 Hz of band width)
100 Hz	: -55 dBc
300 Hz	: -70 dBc
1000 Hz	: -80 dBc
LO frequency stability	: 1x10-8 per day
External/internal LO selection	: to be provided
External LO	: 5MHz / 10MHz
External LO level	: + 3dBm max.
Power supply	: 230 v ac single phase
Operating temperature	: 0° to 50° c

Relative humidity : up to 95 % at 40° c

**RF & IF Power Dividers:**

A) RF Divider - Mini circuits (ZB4PD-42-N- )

- Frequency Range : 1700 to 4200 MHz
- No of outputs : 4 Way, 0°, 50Ω
- Isolation : 23 dB typ.
- Operating Temperature : -55°C to 100°C
- Power Input : 10W max. (as a splitter)
- Internal Dissipation : 0.375W max.
- DC Current : 1.0 A (250mA for each port)
- rugged, shielded case
- Input/ Output connectors : N Type

B) IF Divider - Mini circuits(ZB4PD1-500- )

- Frequency Range : 5 to 500 MHz
- No of outputs : 4 Way, 0°, 50Ω
- Isolation : 34 dB typ.
- Operating Temperature : -55°C to 100°C
- Power Input : 1W max. (as a splitter)
- Internal Dissipation : 0.250W max.
- DC Current : 1.0 A (250mA for each port)
- rugged, shielded case
- Input/ Output connectors : BNC Type

**Coaxial Cables:**

A) RF Cables

- Frequency Range : 10 to 8000 MHz
- Unit cable Length : 50mtr
- Center conductor type : Solid
- Impedance : 50Ohm
- Insertion loss for 50mtr : 10dB max
- VSWR : 1.25:1
- Input & Output connector : N (M)
- Power Handling : 0.3KWatt
- Operating Temperature Range : -30/ +85 deg C
- 50 ohm termination N (M) 1 no has to be supplied along with the cable.
- Test data : should be supplied along with delivery for each cable
  - a. Insertion loss Vs frequency plot
  - b. VSWR/RL Vs frequency plot

B) IF Cables

- Frequency Range : DC to 1000 MHz
- Unit cable Length : 1mtr 1.5mtr
- Insertion loss : 0.5dB Max
- Impedance : 50Ohm
- VSWR : 1.25:1
- Input & Output connector : BNC (M)
- Operating Temperature Range : -30/ +85 deg C
- Test data : should be supplied along with delivery for each cable
  - a. Insertion loss Vs frequency plot
  - b. VSWR/RL Vs frequency plot

**Waveguide to coaxial adaptor:**

- Waveguide size : WR-229
- Flange : CPR-229G
- RF connector : N Female
- Impedance : 50ohm
- VSWR : 1.5:1

Note: Technical compliance should be supported with data sheet from original manufacturer.

#### 4.03 Requirements for Comprehensive Annual Maintenance of existing Antenna Mechanical Systems consisting of antenna units and associated cables & connectors

##### Mechanical maintenance of the antenna systems (6.3mtr & 3.8mtr):

Scope of the work includes the following:

##### A) CAMC For 6.3 Mtr Antenna System:

- 6.3mtr Cassegrain antenna system with feed
- Interfacing cables, connectors & Waveguides
- IFL cables (from antenna feed to LNA Switch)
- Cleaning & greasing of jacks once in 3 months
- Maintenance of All mechanical items, feed motor, feed assembly & Antenna earthing
- Antenna performance testing once in 3 months
- Preventive Maintenance once in 3 months
- Attending the breakdown calls within 24Hrs.

##### B) CAMC For 3.8 Mtr Antenna System:

- 3.8mtr Gregorian antenna system with feed
- Interfacing cables and connectors
- IFL cables (from antenna feed to LNA Switch)
- Cleaning & greasing of jacks once in 3 months
- Maintenance of All mechanical items, feed motor, feed assembly & Antenna earthing
- Antenna performance testing once in 3 months
- Preventive Maintenance once in 3 months
- Attending the breakdown calls within 24Hrs.

Note: Preventive maintenance services like checking the beacon signal & measuring G/T, etc are to be performed once in 3 months and it includes antenna cleaning, inspecting the routine operational checks to ensure the workings of all the systems covered under this contract.

During maintenance period, If it is found that any part/equipment is not working, vendor has to repair/replace without any extra cost to INCOIS. Detailed service report should be submitted upon completion of specified work.

The bidder will deploy competent trained manpower, so that the problems are rectified in short time. The deployed engineers should have at least 2 year experience in the relevant field of handling installation of antennas, and maintenance of hub systems and knowledge in RF section.

In case of any problem with the equipment in the hub station, vendor is responsible to replace and make it operational with the redundant equipment and the problem has to be rectified within short time.

Availability of real time data over a year should be more than 99.7%.

The vendor has to maintain the hub station with 99.7% uptime.

#### 5. Deliverables

S.No	Equipment	Qty.	Remarks
<b>Material Component along with 5 years standard onsite warranty</b>			
<b>A) Antenna Mechanical &amp; Control systems:</b>			
1	Antenna Control System Includes ACU, MCU, Motors, Encoders, Limit switches, Interface Cables, BTR Along with monitoring software with 5 years warranty - For MSS	1 set	As per the technical specifications

2	Antenna Control System Includes ACU, MCU, Motors, Encoders, Limit switches, Interface Cables, BTR Along with monitoring software with 5 years warranty - For DRT	1 set	given at 4.01
3	Interface & control cables with standard make	2 (1MSS, 1DRT )	
4	8 port switch	2 Nos.	
<b>B) RF Equipment</b>			
1	LNA 1:1 Redundant Amplifier system	1 No.	As per the technical specifications given at 4.02
2	Down Converter (C-band)	1 No.	
3	Down Converter (Ex C-band)	1 No.	
4	Power Splitter (1:4) (5-500 MHz) (BNC type)	1 No.	
5	Power Splitter (1:4) (1700-4200 MHz) (N type)	1 No.	
6	RF coaxial Cables with standard make- 50 mtrs	2No.	
7	Waveguide to coaxial adaptor (WR-229) with 50ohm termination	1No.	

**Antenna Mechanical Systems consisting of antenna units and associated cables & connectors.**

<b>Service Component</b>			
1	CAMC of MSS 6.3mtr antenna & Feed (2-port LP) system with accessories	1No.	As per the technical specifications given at 4.03
2	CAMC of DRT 3.8mtr antenna & Feed (2-port LP) system with accessories	1No.	

## 6. Eligibility Criteria

Only those bidders fulfilling the following criteria should respond to the tender.

1. The Tenderer must be a Company registered under Indian Company Act 1956 or a registered firm. Registration certificate to be submitted. Proofs for Registration of company, PAN and GST certificates to be submitted.
2. Quotation should be submitted by the original manufacturer / supplier or its sole authorized distributor / dealer / Indian agent. In case of bid by authorized dealer / distributor / Indian agent, the manufactures authorization should be attached with the technical bid
3. One Indian Channel Partner/Agent can participate in a tender on behalf of one manufacturer only. No offer will be entertained if the same Indian Agent is representing another manufacturer for the same item.
4. Each OEM is allowed to bid directly or through multiple system integrator (SI) / Bidder for this tender. (Manufacturer Authorization Form (MAF) from OEM with specific reference to this tender is to be attached).
5. Bidder should submit an authorization letter from principal company in case of foreign principal authorizing Indian representative to submit the tender document on behalf of its foreign principal
6. The bidder should be reputed and having proven expertise in integration of antennas and maintenance of Hubs.
7. Consortium:
  - a. A bidding firm may be a corporation/company or consortium of companies/corporations. Consortium shall mean more than one company with complementing skills joining together to undertake the scope of the work defined.
  - b. In case of consortium applicant, consortia shall submit a valid Memorandum of Association (MoA) agreement among the members signed by the authorized signatories of the companies dated prior to the submission of the bid.
  - c. If the Bidder had formed an association, each member of the association may be evaluated separately/jointly as per the qualification/eligibility.

- d. The MoA shall specify the prime bidder, stake of each member and outline the roles and responsibilities of each member. The MoA shall be exclusively for this project and should confirm that each member of the consortia is liable jointly and severally for execution of the contract.
  - e. The bidder and consortium companies must be a Company registered under Indian Companies Act 1956 or may be reputed foreign bidder.
  - f. In the event of consortium, one of the partners shall be designated as "Prime Bidder". Each member of the consortium shall be equally responsible jointly and separately for execution of the contract.
  - g. A bidding company/ consortium cannot be part of more than one consortium. Any member of consortium cannot bid separately as a sole bidder. The bidder (all consortium partners) must have company registration certificate, valid GST registration certificate and Income Tax return with Audit report from CA. Bidder shall provide an attested copy of all the above certificates along with this document.
  - h. Where the Bid is made by a Consortium, the bid shall specifically indicate the members of the consortium by whom and/or on whose behalf the Bid is being made and shall indicate with reference to each whether such member contributes directly to the work or not and, if so, to what extent he contributes to the said work. In the event of a person/firm who is not a member of the said consortium, details of name and address of such person/firm shall be accompanied by valid proof of authority drawn in favour of Consortium to bind such person/firm.
8. Vendor should have well established service / support centre in India with trained manpower in maintaining the infrastructure covered under this tender. The details of location of service / support centre is to be submitted.
  9. Tenderer must submit Quotations with technical compliance statement for all the specifications along with the detailed data sheets/ catalogues. Relevant remarks can be provided in the compliance statement if required. Quotations without technical compliance and data sheets/catalogues will not be considered.
  10. The bidder should have an average annual financial turnover of Rs. 0.57 cr or more during the last three years ending March 31 2018. The bidding companies should be earning profit at least during two (02) years in the last three (03) years. Proof of turnover and Proof of annual profit certificate issued by the chartered accountant to be submitted.
  11. Tenderer (OEM/SI) should have past experience of having supplied, installed, commissioned and maintained 4 Nos. of similar geo stationary hub stations with auto track facility in the last 5 years in India ending previous day of last date of submission of the online Bid. Out of which one work of value Rs.1.14 Cr or two works of value Rs. 0.85 Cr or three works of value Rs. 0.57 Cr. Client certificates/Work Completion Certificate/ Experience certificate/ on-going along with the P.O no. as a reference to be enclosed in this regard.
  12. . If the quote is from a foreign firm it should be through an Indian partner who meets the above experience criteria. The bidder should have end to end arrangement with the OEM/(s) to supply and maintain the equipments supplied under this tender.
  13. The bidder should provide company profile including its infrastructure, technical manpower and their expertise.

**Note**

- a. Offers of bidders who do not fulfill the eligibility criteria or who fail to submit documentary proof for all the points under eligibility criteria will not be considered for further evaluation.
- b. No further communication in this regard will be entertained.

## 7. Contents of Proposal:

The quote should be submitted in two bid system. (i) Technical Bid and (ii) Commercial Bid

**(i) Technical Bid:** Technical bid should contain all the information as listed below without which the offer will not be considered further.

### NOTE:

- Technical bid should contain filled-in Table-1 and Table-2 along with legible documentary proof, without which the offer will not be considered further.
- Part/conditional/incomplete quotations will not be accepted.

**Table-1: Compliance Statement - 1**

S No	Description	Make	Model No.	Complied (Yes/No)	Documentary Proof Attached (Yes/No), wherever applicable	Remarks, if any
<b>A</b>	<b>Technical specifications:</b>					
<b>I</b>	<b>Supply of Antenna Mechanical &amp; Control systems along with 05 years standard onsite warranty</b>					
a)	Antenna Control System Includes ACU, MCU, Motors, Encoders, Limit switches, Interface Cables, BTR Along with monitoring software with 5 years warranty - For MSS					
b)	Antenna Control System Includes ACU, MCU, Motors, Encoders, Limit switches, Interface Cables, BTR Along with monitoring software with 5 years warranty - For DRT					
c)	Interface & control cables with standard make					
d)	8 port switch					
<b>II</b>	<b>Supply of Spares of RF Equipment along with 05 years standard onsite warranty</b>					
a)	LNA 1:1 Redundant Amplifier system	Narda-Miteq				
b)	Down Converter (C-band)	Comtech				
c)	Down Converter (Ex C-band)	Comtech				
d)	Power Splitter (1:4) (5-500 MHz) (BNC type)	Mini Circuits				
e)	Power Splitter (1:4) (1700-4200 MHz) (N type)	Mini Circuits				
f)	RF coaxial Cables with standard make - 50 mtrs					
g)	Waveguide to coaxial adaptor (WR-229) with 50 ohm termination					
<b>III</b>	<b>CAMC of Mechanical maintenance of Antenna system</b>					
a)	CAMC of MSS 6.3mtr antenna system with accessories	COMSAT				
b)	CAMC of DRT 3.8mtr antenna system with accessories	COMSAT				
<b>B</b>	<b>General terms</b>					
a)	The bidder must be a Company registered appropriately for foreign bidders or Indian Company Act 1956 for Indian bidders. <b>(Proofs for Registration of company, PAN and GST certificates to be submitted.)</b>					
b)	The bidder should have an average annual financial turnover of Rs. 0.57 cr or more during the last three years ending March 31 2018. The bidding companies should be earning profit at least during two (02) years in the last three (03) years. to be submitted. <b>(Proof of turnover and Proof of annual profit certificate issued by</b>					

	<b>the chartered accountant to be submitted)</b>			
c)	Tenderer (OEM/SI) should have past experience in similar nature of works in last seven years ending previous day of last date of submission of the online Bid. Out of which one work of value Rs.1.14Cr or two works of value Rs. 0.85 Cr or three works of value Rs. 0.57 Cr. Client certificates/Work Completion Certificate/ Experience certificate/ on-going along with the P.O no. as a reference to be enclosed in this regard.			
d)	Vendor should have well established service / support centre in India with trained / certified manpower in maintaining the infrastructure covered under this tender. The details of location of service / support centre are to be submitted. <b>(Bidder should provide profile of their company including its infrastructure, technical manpower and their expertise and location details, etc. at India)</b>			
e)	In case of bid by authorized dealer / distributor / Indian agent, the manufacture authorization should be attached with the technical bid as for the format in Annexure for this tender. <b>(MAF from OEM with specific reference to this tender is to be attached</b>			
f)	Earnest Money Deposit (EMD)			
g)	Signature on all the pages of the tender document, including addendum, if any, issued by INCOIS.			
h)	Compliance to the detailed specifications given at Section 4 above. <b>(Please mention the Make and Model offered against each of the line item. Detailed Specification sheet from OEM to be attached).</b>			
i)	Compliance to the "Scope of the Work" mentioned in Section 3 and "General Terms and Conditions" mentioned in Section 9.			
j)	Client side contact details of completed / on-going Work orders of similar nature.			
k)	Letter of satisfactory services from Clients (Clients testimonials) for such similar nature of works.			
l)	Escalation matrix with full contact details, for the resolution of reported issues during contract period.			
m)	Quotation should be submitted by the original manufacturer / supplier or its sole authorized distributor / dealer / Indian agent. In case of bid by authorized dealer / distributor / Indian agent, the manufactures authorization should be attached with the technical bid			

Also the bidders can visit the site location where the equipment is proposed and can suggest the pre-site requirements, if any.

**(ii) Commercial Bid:**

It should be a separate document from the technical proposal and should be filled in the .xls format provided in the price bid cover of e-tender only.

- Financial quote should consist of item wise price details for ALL the items, without which the offers will not be considered. (The successful bidder may be asked to submit details with respect to price break-up, if required.)
- Partial quotations will not be accepted.
- Price should be quoted as per the format. Lump-sum quotes will not be considered and line-item-wise break-up is mandatory. The format of the Price bid should not be changed in any case.

**Table-2: Compliance Statement – 2 (un-priced bid)**

**NOTE:**

- Technical bid should contain filled-in Table-1 and Table-2 along with legible documentary proof, without which the offer will not be considered further.
- Part/conditional/incomplete quotations will not be accepted.
- Bidder has to quote for all the components given in the Price bid. Hence, please indicate as Yes or No in the table given below.

S.No.	Description	Qty	Please confirm whether prices are Quoted in commercial bid or not. (Yes / No) <i>Please do not mention prices here.</i>
1.	<b>Material Component along with 05 years standard warranty</b>		
2.	<b>Supply of Antenna Mechanical &amp; Control systems:</b>		
2.01	Antenna Control System Includes ACU, MCU, Motors, Encoders, Limit switches, Interface Cables, BTR Along with monitoring software with 5 years warranty - For MSS	1 set	
2.02	Antenna Control System Includes ACU, MCU, Motors, Encoders, Limit switches, Interface Cables, BTR Along with monitoring software with 5 years warranty - For DRT	1 set	
2.03	Interface & control cables with standard make	2 sets	
2.04	8 port switch	2 Nos.	
3	<b>Supply of Spares of RF Equipment</b>		
3.01	LNA 1:1 Redundant Amplifier system	1 No.	
3.02	Down Converter (C-band)	1 No.	
3.03	Down Converter (Ex C-band)	1 No.	
3.04	Power Splitter (1:4) (5-500 MHz) (BNC type)	1 No.	
3.05	Power Splitter (1:4) (1700-4200 MHz) (N type)	1 No.	
3.06	RF coaxial Cables with standard make - 50 mtrs	2 Nos.	
3.07	Waveguide to coaxial adaptor (WR-229) with 50 ohm termination	1 No.	
4	<b>Service Component</b>		
5	CAMC- Mechanical maintenance of 6.3mtr existing Antenna system COMSAT make for a period of 5 years		
5.01	CAMC for 1st year	1 year	
5.02	CAMC for 2nd year	1 year	
5.03	CAMC for 3rd year	1 year	
5.04	CAMC for 4th year	1 year	
5.05	CAMC for 5th year	1 year	
6	CAMC- Mechanical maintenance of 3.8mtr existing Antenna system COMSAT make for a period of 5 years		
6.01	CAMC for 1st year	1 year	
6.02	CAMC for 2nd year	1 year	
6.03	CAMC for 3rd year	1 year	
6.04	CAMC for 4th year	1 year	
6.05	CAMC for 5th year	1 year	
7	<b>Optional Items: Buyback of the following items</b>		
7.01	ACU & MCU	3 Nos.	
7.02	Motors	4 Nos.	
7.03	Encoders & Limit Switches	4 Nos.	

- Price bid is to be submitted on-line in enclosed price bid format only. Price bids submitted in any other formats will be summarily rejected.
- Foreign bidder(s) has to give quote/price on the INCO term of CIP, Hyderabad, India
- The vendor should quote for all the items specified. Partial quotations will not be accepted
- If the order is to be placed on foreign vendor, Insurance should be obtained for 110% of value from warehouse of origin to warehouse of destination basis.



## 8. Quality of Service & Service Level Agreement (SLA):

The successful bidder has to sign the Service Level Agreement (SLA) and the bidder shall guarantee and adhere to the following standards.

- a) The complete set up of the equipment should be functioning and has to maintain an up time of 100% .
- b) The vendor should make at least Four preventive maintenance visits per year during the standard warranty period as well as during the CAMC period.
- c) Corrective maintenance should be carried out as and when required on call basis.

In case of breakdown of the Hub during CAMC period, the successful bidder should resolve the issue within the following time lines. Failing of which, the penalties will be levied accordingly.

### Penalty during CAMC:

Penalty	Targeted Uptime
No Penalty	Within 48 hours
5% of quarterly CAMC amount	Between 3-4 days
10% of quarterly CAMC amount	Between 5-7 days
30% of quarterly CAMC amount	Between 8-10 days
100% of quarterly CAMC amount	More than 10 days
In addition to the 100% penalty, the rectification of the problem through OEM / alternative means will be initiated at the risk and cost of the successful bidder.	
Failing which, INCOIS reserves the right to invoke PBG or take any suitable action as deemed fit.	

In case, if successful bidder fails to resolve the reported issues with-in time period as mentioned above and INCOIS gets the issues resolved through alternative means, it should not have any implications on the already agreed support for the systems / peripherals provided.

## 9. Technical Evaluation Criteria

The following elements will be the primary considerations in evaluating all submitted proposals and in the selection of a vendor or vendors:

- Completeness of the Proposal
  - Financial Status of the Firm
  - Project Management Strategies
  - Track Record of similar projects executed
  - Technical Compliance of the Products Quoted
  - Price & Acceptance to Payment Terms
- The purpose of two bid systems (technical and commercial) is to evaluate all the firms on technical basis with reference to the tendered specifications, performance of similar service rendered elsewhere and obtaining users views with reference to the earlier services. This will enable the technical committee to arrive at a fair recommendation in the interest of the organization.
  - In the event of seeking any clarification from various bidders by INCOIS, the bidders are required to furnish only technical clarifications that are asked for. No amendment to commercial bid will be entertained at that stage. In case, if a bidder fails to quote for a particular item, it amounts to non-compliance and such bid will not be considered for further evaluation. Further, during this process, if any bidder indicates the price during the clarification, such bids also will not be considered for further evaluation.
  - Technical bids will be opened on due date.

- The bids submitted will be examined vis-a-vis the tendered specifications and evaluation is made accordingly.
- Bids complete in all respects will qualify for further evaluation.
- After initial technical evaluation based on the bids submitted, all technically qualified vendor/s have to provide onsite demonstration of technical specifications (including accuracies required) on the pre-existing EA-IRMS systems installed in India, preferably Hyderabad to the technical experts nominated by INCOIS. The demonstration will be evaluated by the members of the technical expert's panel/ committee constituted for the purpose. The vendor/s, whose accuracies of the equipment is acceptable to the committee, those bids will only be considered as the technically qualified bids.
- After completion of technical evaluation, the commercial bid of the technically qualified bidders will be opened through e-Portal.
- Preference will be given to the eligible Make in India offered products for this scientific requirement.

#### 10. Commercial Evaluation Criteria

- Generally the contract is awarded to the technically qualified eligible bidder whose bid has been determined as the lowest evaluated commercial bid.
- Notwithstanding anything stated above, INCOIS reserves the right to assess Bidder's capability and capacity to perform the contract. Should circumstances warrant such an assessment in the overall interest of the organisation, INCOIS reserves the right to reject any or all tenders/ bids at any time prior to award of contract, without assigning reasons thereof, and without thereby incurring any liability to the affected Bidder or Bidders.
- If the order is to be placed on foreign firm, Price quoted should be on INCO term CIP, Hyderabad, India. The firm has to ship the goods with the insurance coverage of 110% of invoice value from the warehouse of to the warehouse of INCOIS, Hyderabad, India.
- The un-satisfactory performance / delay in services during warranty period may lead to forfeiture of PBG amount submitted, which is at the discretion of Director , INCOIS.

Foreign bidders have to give quote/price on the Inco term of CIP, Hyderabad, India basis

#### 11. General Terms and Conditions

Point No.	Details
1.	Quotation: Quotation have to submitted online in the e-tender portal i.e., <a href="http://eprocure.gov.in/eprocure/app">http://eprocure.gov.in/eprocure/app</a> only.
2.	A two bid system will be followed in selecting the vendor
3.	Validity Period: Bids/Offer shall have the validity period of 90 days from the tender closing date.
4.	<p><b>Delivery Schedule:</b> i) Supply, Installation &amp; Commissioning of Antenna Control System at INCOIS shall be completed within 6 months from the date of issue/dispatch of the order.</p> <p>ii) Supply of RF equipments at INCOIS shall be completed within 9 months from the date of issue of the order.</p> <p>Bidders must undertake to complete all aspects of the work as detailed in this Tender Document to the best satisfaction of INCOIS. A bar chart indicating various activities from the placement of order to commissioning of the equipment/machine shall be furnished.</p>
5.	<p>Warranty clause: Warranty of the Equipment will start from the date of Installation, Commissioning and Acceptance. <b>All the equipments are with standard warranty for a period of 5 years.</b></p> <p>Standard onsite warranty for a period of five years from the date of acceptance of the systems by INCOIS shall be provided. During warranty period, Vendor should ensure that the system</p>

	<p>is maintained in good working condition. During Warranty, all the components/subsystems delivered under bill of materials shall be maintained with satisfactory performance.</p> <p>i. During the warranty period, the systems shall be fully functional and operational on 24 x 7 basis.</p> <p>ii. In the event of failure of the system or degradation in performance of any component, subsystem of the entire system during the period of warranty, Vendor shall put the system in upright condition within a period of 48 hours of intimation by INCOIS personnel irrespective of no of visits by vendor. Failing which, INCOIS shall reserve the right to invoke PBG in part or full at discretion of INCOIS.</p>
6.	<p>Earnest Money Deposit (EMD) : An amount of Rs. 3,00,000/- or USD 4,300/- has to be submitted by way of Demand Draft from any Nationalized Bank in favour of "Director, INCOIS payable at Hyderabad". The Scanned copy of the Demand Draft is to be uploaded to the CPP Portal while submitting the offer.</p> <p><i>The original DDs should reach to INCOIS on or before 1430Hrs of August 26, 2019. Offers received without EMD will be summarily rejected.</i></p> <p><i>If a bidder wishes to provide the EMD through BG , the BG (with validity of 90 days from the date of opening of tender + 60 days claim period) has to be sent /forwarded directly by the issuing bank to INCOIS and must reach INCOIS on or before 14 30Hrs of August 26, 2019.</i></p> <p>Contractors registered with Ministry of Micro Small and Medium Enterprises (MSME) /National Small Scale Industries Corporation (NSIC) are exempted from payment of EMD only <b><u>if the Contractor is manufacturing/providing/supplying the tendered products/services for this particular tender.</u></b> A copy of valid registration certificate should be submitted along with the technical bid.</p> <p>This deposit will be free of interest. The EMD submitted by the unsuccessful bidder shall be returned to the respective bidder .</p>
7.	<p><b>Tender Document Cost</b> : Tender document can be downloaded from tender portal or our website on <b>Free of Cost</b>. However, if the bidder wishes to collect the tender document personally from our office (INCOIS, Hyderabad) , needs to submit a written request letter along with a demand draft for an amount of Rs. 500/- or USD 10/- issued by any Nationalized Bank in favour of "Director, INCOIS payable at Hyderabad".</p> <p>Vendors registered with Ministry of Micro Small and Medium Enterprises (MSME) /National Small Scale Industries Corporation (NSIC) are exempted from payment of Tender fee only <b><u>if the vendor is manufacturing and supplying the tendered products for this particular tender.</u></b> A copy of valid registration certificate should be submitted along with the technical bid.</p> <p>Tender fee/Tender document cost/DD received towards the tender is non refundable.</p>
8.	<p>Security Deposit: Successful bidder has to submit 05% of the Order value (Material component) towards Security Deposit by means of Demand Draft drawn in favour of Director, INCOIS payable at Hyderabad or Bank Guarantee from any Nationalized Bank valid for a <b>period of 12 months</b>. The EMD submitted by the successful tenderer shall be converted as Security Deposit and the balance amount required for 05% of order value to be submitted in the form of Demand Draft / Bank Guarantee for the purpose of fulfillment of the contract. This deposit will be free of interest and is refundable after the satisfactory execution of the contract and complete fulfillment of contractual obligations.</p>
9.	<p>Performance Guarantee: Successful bidder has to submit 5% of the CAMC Order value towards Performance Guarantee by means of Demand Draft drawn in favour of Director, INCOIS payable at Hyderabad or Bank Guarantee from any Nationalized Bank valid for applicable contract period plus 60 days. This deposit will be free of interest and is refundable after the satisfactory execution of the contract and complete fulfillment of contractual obligations.</p>
10.	<p>SD/PG is liable to forfeiture in the event of :</p> <p>a. Withdrawal of order during validity period of the contract</p> <p>b. If the service of the successful bidder is found to be unsatisfactory and fails to adhere to our</p>

	<p>tender terms and conditions.</p> <p>c. Any unilateral revision made by the successful bidder during the validity period of the contract.</p>									
11.	<p>Payment Terms:</p> <p><b>Payments for Supply:</b></p> <p>If Indian Purchase Order</p> <table border="1"> <tr> <td>Up - gradation of Antenna Mechanical &amp; Control systems with auto tracking facility</td> <td> <p>70% will be released upon successful delivery of the systems at INCOIS, Hyderabad along with submission of documentary proof of Invoice, Test Certificate, Pre-shipment inspection/QC passed certificate.</p> <p>20% will be released upon successful installation &amp; commissioning of the system at INCOIS.</p> <p>10% will be paid after successful completion of warranty period or against submission of advance bank guarantee from a nationalized bank for the like amount and period plus 60 days claim period</p> </td> </tr> <tr> <td>Supply of RF equipments at INCOIS</td> <td> <p>90% will be released on pro-rata basis (equipment wise, mentioned in Item No 5B) upon delivery &amp; acceptance by INCOIS upon submission of documentary proof of Invoice, Test Certificate, Pre-shipment inspection/QC passed certificate and Warranty Undertaking on prorata basis.</p> <p>10% will be paid after successful completion of warranty period or against submission of advance bank guarantee from a nationalized bank for the like amount and period plus 60 days claim period</p> </td> </tr> </table> <p>If Foreign Purchase Order</p> <table border="1"> <tr> <td>Up - gradation of Antenna Mechanical &amp; Control systems with auto tracking facility</td> <td> <p>LC will be established for 70% value upon receipt of Order Acceptance and Proforma Invoice, proof of Invoice, Test Certificate, Pre-shipment inspection/QC passed certificate.</p> <p>20% will be released upon successful installation &amp; commissioning of the system at INCOIS.</p> <p>10% will be paid after successful completion of warranty period or against submission of advance bank guarantee from a nationalized bank for the like amount and period plus 60 days claim period</p> </td> </tr> <tr> <td>Supply of RF equipments at INCOIS</td> <td> <p>90% payment will be released through wire transfer on pro-rata basis (equipment wise, mentioned in Item No 5B) upon delivery &amp; acceptance by INCOIS upon submission of documentary proof of Invoice, Test Certificate, Pre-shipment inspection/QC passed certificate and Warranty Undertaking on prorata basis.</p> <p>10% will be paid after successful completion of warranty period or against submission of advance bank guarantee from a nationalized bank for the like amount and period plus 60 days claim period</p> </td> </tr> </table>		Up - gradation of Antenna Mechanical & Control systems with auto tracking facility	<p>70% will be released upon successful delivery of the systems at INCOIS, Hyderabad along with submission of documentary proof of Invoice, Test Certificate, Pre-shipment inspection/QC passed certificate.</p> <p>20% will be released upon successful installation &amp; commissioning of the system at INCOIS.</p> <p>10% will be paid after successful completion of warranty period or against submission of advance bank guarantee from a nationalized bank for the like amount and period plus 60 days claim period</p>	Supply of RF equipments at INCOIS	<p>90% will be released on pro-rata basis (equipment wise, mentioned in Item No 5B) upon delivery &amp; acceptance by INCOIS upon submission of documentary proof of Invoice, Test Certificate, Pre-shipment inspection/QC passed certificate and Warranty Undertaking on prorata basis.</p> <p>10% will be paid after successful completion of warranty period or against submission of advance bank guarantee from a nationalized bank for the like amount and period plus 60 days claim period</p>	Up - gradation of Antenna Mechanical & Control systems with auto tracking facility	<p>LC will be established for 70% value upon receipt of Order Acceptance and Proforma Invoice, proof of Invoice, Test Certificate, Pre-shipment inspection/QC passed certificate.</p> <p>20% will be released upon successful installation &amp; commissioning of the system at INCOIS.</p> <p>10% will be paid after successful completion of warranty period or against submission of advance bank guarantee from a nationalized bank for the like amount and period plus 60 days claim period</p>	Supply of RF equipments at INCOIS	<p>90% payment will be released through wire transfer on pro-rata basis (equipment wise, mentioned in Item No 5B) upon delivery &amp; acceptance by INCOIS upon submission of documentary proof of Invoice, Test Certificate, Pre-shipment inspection/QC passed certificate and Warranty Undertaking on prorata basis.</p> <p>10% will be paid after successful completion of warranty period or against submission of advance bank guarantee from a nationalized bank for the like amount and period plus 60 days claim period</p>
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	<b>Payments for CAMC:</b>	
	CAMC of Mechanical maintenance of 6.3 & 3.8mtr Antenna systems and other associated components	The CAMC charges will be paid for each completed maintenance period (Quarterly basis) or against advance bank guarantee for the like amount upon submission of the maintenance / service reports, uptime report and Invoice on prorata basis, subject to satisfactory services/penalties if any.
	<i>Net payment will be released after statutory deductions. No advance payment will be allowed and no other payment terms will be considered.</i>	
12.	INCOIS is partially exempted from GST under Notification No. 45/2017-Central Tax (Rate) dated 14.11.2017. <b>Concessional GST under this section is 5% only. INCOIS will issue the Concessional GST Certificate upon request.</b>	
13.	<i>GST: The bidder should specifically/particularly state GST if any applicable as extra and the rate at which the same is chargeable, failing which, the prices quoted, will be deemed to be inclusive of such levies. If a particular bidder is not registered under the GST Act, the prices quoted by him will be treated as net and inclusive of all taxes and statutory levies and that any future claims made by him for reimbursement of those levies on account of retrospective registration under the GST Act will under no circumstances be entertained by the INCOIS and that liability for payment of these levies will be wholly and exclusively that of the bidder quoting against our tender.</i>	
14.	Bidder should clearly indicate the Make & model of the unit offered by him along with supporting documents for the model. Bidder should also fill the technical specification compliance sheet enclosed along with his technical offer.	
15.	INCOIS is partially exempted from Custom duty under Notification No. 51/96 dated 23.7.1996	
16.	Price bid is to be submitted on-line in enclosed price bid format only. Price bids submitted in any other formats will be summarily rejected.  <b><u>Price quoted should be on Inco term CIP, Hyderabad basis, if the order is be placed on foreign firm. Insurance should be obtained for 110% of value from warehouse of origin to warehouse of destination basis.</u></b>	
17.	If the quote is offered on High Sea Sale basis, price should be inclusive of clearance charges, Nominal Customs Duty applicable for Duty Exempted items under notification 51/96, Transportation charges including unloading. Standard format of High Sea Sales Agreement will be signed by INCOIS upon submission of the same by the contractor. Documents such as DSIR Registration Copy, Customs Duty Exemption Certificate duly signed by the Head of the Institute/Authorized signatory and Authorization will be provided by INCOIS. The complete responsibility to deliver the material at designated sites lies with the successful bidder only (including payment of nominal customs duty (approx @5.13% at present), clearance of the material and delivery at designated sites), if the order is to be placed on Indian firm on 'High sea Sales basis'.	
18.	Price quoted by Bidder should remain firm during the entire period of contract and no escalation in any form will be considered by INCOIS. No extra will be paid by INCOIS and neither any exemption certificate will be issued.	
19.	Bidders should fill and submit the technical compliance sheet along with Techno-Commercial bid. Offers received without the compliance sheet will be summarily rejected.	
20.	Tenders not in complete shape or not conforming to technical specifications or not conforming to terms and conditions are liable for rejection.	
21.	All relevant above documents must be enclosed with technical bids failing which bids may be ignored and will not be considered for technical evaluation.	
22.	The bidder must submit a copy of UNPRICED commercial bid along with the technical bid, which should be identical with the commercial bid except the Price column. Technical bids without the copy of UNPRICED commercial bid shall not be considered.	
23.	Full details of technical specifications along with catalogues / literature of the models offered, documentary proof of the eligibility criteria and commercial conditions should be submitted along with the technical bid. Full illustrative literature, details of previous experience with documentary proof, details about agreements entered into with various companies, etc. should	

	be attached separately with the bid.
24.	Proof for fulfillment of eligibility criteria mentioned above should be submitted along with the tender. If the tender is submitted without valid documents, INCOIS shall not consider the bid offered as responsive. Tenders received without proof of eligibility criteria will be rejected
25.	Any deviations technically or commercially should be clearly indicated in the Technical bid offer only.
26.	In event of award of work, a SLA will be executed between contractor and INCOIS. The SLA which should comprise of Technical & General terms of the tender, warranty terms offered by the successful bidder and accepted by INCOIS and any other conditions mutually agreed by both the parties within 30 days of AOC. Contractor should attend this office, along with a non judicial stamp /e-stamping/ valid franking of the value of Rs. 200/- accordingly.
27.	<p><b>Liquidated Damages Clause:</b> In case the supply/delivery/services is delayed and delay is attributed to the successful bidder or is not as per our specifications and in the event of breach of any of the terms and conditions mentioned in the Purchase Order, INCOIS shall have the right.</p> <p>a) To recover at the rate of 0.5% per week for the value equivalent to undelivered material / services against the delay in execution of the order or part thereof subject to a maximum of 10% of the services/material not executed.</p> <p>b) To purchase elsewhere, after due notice to the Tenderer Inc., on the account and at the risk of the defaulting supplier for the stores/services not supplied or others of a similar description without cancelling the work order in respect of the job not yet due for supply or</p> <p>c) To cancel the order or a portion thereof and if so desired to purchase the stores / services at the risk and cost of the defaulting supplier and also.</p> <p>d) To extend the period of delivery with or without penalty shall not be more than agreed liquidated damages referred to in clause (a) above,</p> <p>e) To forfeit the security deposit full or in part at the discretion of Director, INCOIS.</p>
28.	<p><b>Force Majeure Clause:</b></p> <p>If the execution of the contract / supply order is delayed beyond the period stipulated in the contract as a result on out-break of hostilities, declaration of an embargo's or blockage or fire flood, acts of nature or any other contingency beyond the supplier's control, Director, INCOIS may allow such additional time by extending the delivery period as he considers to be justified by the circumstances of the case and his decision shall be final, conclusive and binding. If and when additional time is granted by the INCOIS, the contract/supply shall be read and understood as if it had contained from its inception the delivery date as extended.</p>
29.	<p><b>Patent Indemnification Clause:</b></p> <p>The Contractor shall indemnify and keep indemnified the purchaser from and against any and all claims, action, cost charges and expenses arising from or for infringement of patent rights, copy right and other protected rights of any design, plans, diagrams drawings in respect of the stores supplied by the contractor or any of the manufacturing methods or process adopted by the contractor for the stores supplied under the contract. In the event of any claim being made or action being brought against the purchaser in respect of the matter referred above, the contractor shall promptly be notified thereof and he shall at his own expense, conduct all negotiations for settlement of the same and any drawings, plans or diagrams or any manufacturing methods or of patent or any other protected rights and use thereof is at no costs to the latter, the rights to continue using the same or to the extent it is possible to replace the same so as to avoid such infringement and subject to approval by the purchases or modify them so that they become non-infringing but such modifications shall otherwise be to the entire satisfaction of the purchaser. The provision of this clause shall remain effective and binding upon the contractor even after the completion, expiration or termination of the contract.</p>
30.	If any tenderer withdraws his tender after price bid is opened, within the validity period or makes any modifications in the terms and conditions of tender, which are not acceptable to the INCOIS, then INCOIS shall without prejudice to any other right or remedy available to it, be at liberty to forfeit the partial or entire Earnest Money amount.
31.	The bidder shall sign and upload the Bids with the exact name and address of the firm, which is bidding for the tendered work.
32.	The Bids shall be uploaded only after signed by a duly authorized officer of the firm which is bidding for the tendered work, and in the case of a Corporation, seal, or otherwise appropriately executed under seal.

33.	Where the Bid is made by a Consortium, the bid shall specifically indicate the members of the consortium by whom and/or on whose behalf the Bid is being made and shall indicate with reference to each whether such member contributes directly to the work or not and, if so, to what extent he contributes to the said work. In the event of a person/firm who is not a member of the said consortium, details of name and address of such person/firm shall be accompanied by valid proof of authority drawn in favour of Consortium to bind such person/firm.
34.	The acceptance of tender will solely rest with Director, INCOIS who does not bind himself to accept the lowest or any other tender. No reasons will be furnished for acceptance or rejection of any tender.
35.	Canvassing in connection with tender is strictly prohibited and any canvassing will render the bid of such tenderer ineligible.
36.	Director, INCOIS reserves the right to cancel the tender at any stage due to any technical /administrative reasons. The bidder shall not have any claim under what so ever reasons.
37.	INCOIS reserves the right to alter the scope/or reduce enhance quantum of work, before/after issue of work order and tenderer shall not have any claim whatsoever on this account. INCOIS also reserves the right to split the tender and award to separate tenderer(s) if necessary and tenderer shall not have any claim whatsoever on this account.
38.	In case of any un resolved dispute or differences arising at any time between this Institute and the firm holding the contract, these shall be resolved in terms of the Arbitration and Conciliation Act 1996 and held at Hyderabad, Telangana, India only. Further, this contract is subject to laws of India alone

#### 11 . Clarifications, Pre-bid Meet and Technical Presentation:

- i. **Pre-Bid meet:** INCOIS has made every effort to bring out the requirements to facilitate the Firms to make their proposals. However, keeping in view that Firms may have clarifications on certain points in this Document before submitting their Proposal, a Pre-bid meeting will be held at INCOIS, Hyderabad on **August 06, 2019 at 1100 hrs**. During the pre-bid meet, a brief presentation will be done by INCOIS on the tender requirement. All the clarifications will be consolidated and clarified to the vendors during the pre-bid meet and addendum/corrigendum will be added in the tender INCOIS Web site and CPP Portal (if required only). Vendor will be given another reasonable sufficient time to submit their technical and financial quote.

ii. **Technical presentations**

First the technical quote will be opened and the firms are required to make detailed Presentation of their technical proposal (Company Profile, Proposed Products, Implementation plan, etc) if required. It is desired that the firm also demonstrate the features of the products that they have quoted.

iii. **Technical Clarifications:**

Queries or clarifications on tender document, if any, may be submitted by the firms (via e-mail) **1500hrs of July 31, 2019**. Note: Firms may submit a consolidated query only once. e-mail: [bvs@incois.gov.in](mailto:bvs@incois.gov.in) and [muralikrishna@incois.gov.in](mailto:muralikrishna@incois.gov.in) ; E-mail subject should be mentioned as **"Queries on tender for Up-gradation of the existing INSAT HUB station at INCOIS , Hyderabad - reg"**.

#### 12. Contact/Delivery Address:

1) Head-CWG  
Indian National Centre for Ocean Information Services (INCOIS)  
Ministry of Earth Sciences, Govt. of India  
"Ocean Valley", Pragathi Nagar (BO), Nizampet (SO)  
Hyderabad - 500 090, T.S., India  
Phone:009140 2389 5005; FAX: 009140- 23892910  
E-mail: [bvs@incois.gov.in](mailto:bvs@incois.gov.in) / [muralikrishna@incois.gov.in](mailto:muralikrishna@incois.gov.in)

2) Director  
Indian National Centre for Ocean Information Services (INCOIS)  
Ministry of Earth Sciences, Govt. of India  
"Ocean Valley", Pragathi Nagar (BO), Nizampet (SO)  
Hyderabad - 500 090, T.S., India  
Fax: 040 2389 5001 / 23892910  
e-mail: [director@incois.gov.in](mailto:director@incois.gov.in)

*We have read and understood the above terms and conditions in detail and the same are accepted by us.*

Signature of the Tenderer/ Authorised Signatory & date

Name

OFFICE SEAL,

Address

*Note: The bidder/tenderer has to sign & stamp on all pages of tender document and upload the same*



**BANK GUARANTEE FORMAT FOR BID SECURITY:**

Whereas.....<sup>1</sup> (hereinafter called "the Bidder") has submitted its bid dated.....(date of submission of bid) for the supply of .....(name and / or description of the goods) (hereinafter called "the Bid").  
KNOW ALL PEOPLE by these presents that WE .....(name of bank) of .....(name of country), having our registered office at .....(address of bank) (hereinafter called "the Bank"), are bound unto.....(name of Purchaser) (hereinafter called "the Purchaser") in the sum of \_\_\_for which payment well and truly to be made to the said Purchaser, the Bank binds itself, its successors, and assigns by these presents. Sealed with the Common Seal of the said Bank this \_\_\_\_\_day of \_20 \_\_\_\_.

THE CONDITIONS of this obligation are:

1. If the Bidder Withdraws its Bid during the period of bid validity specified by the Bidder on the Bid Form; or
2. If the Bidder, having been notified of the acceptance of its bid by the Purchaser during the period of bid validity:
  - (a) fails or refuses to execute the Contract Form if required; or
  - (b) fails or refuses to furnish the performance security, in accordance with the instruction to Bidders.

We undertake to pay the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser will note that the amount claimed by it is due to it, owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This guarantee shall remain in force up to \_\_\_\_\_from the date of submission of the bid and any demand in respect thereof should reach the Bank not later than the above date.

(Signature of the Bank)

Name of the Bidder

## Instructions for Online Bid Submission

As per the directives of Department of Expenditure, this tender document has been published on the Central Public Procurement Portal (URL: <http://eprocure.gov.in>). The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates.

The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal. More information useful for submitting online bids on the CPP Portal may be obtained at: <https://eprocure.gov.in/eprocure/app>.

### REGISTRATION

1. Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL: <https://eprocure.gov.in/eprocure/app>) by clicking on the link "Click **here to Enroll**" on the CPP Portal is free of charge.
2. As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
3. Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
4. Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / TCS / nCode / eMudhra etc.), with their profile.
5. Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.
6. Bidder then logs in to the site through the secured log-in by entering their user ID / password and the password of the DSC / e-Token.

### SEARCHING FOR TENDER DOCUMENTS

1. There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, organization name, location, date, value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as organization name, form of contract, location, date, other keywords etc. to search for a tender published on the CPP Portal.
2. Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective 'My Tenders' folder. This would enable the CPP Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.
3. The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

### PREPARATION OF BIDS

1. Bidder should take into account any corrigendum published on the tender document before submitting their bids.
2. Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
3. Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF formats. Bid documents may be scanned with 100 dpi with black and white option. To avoid the time and effort required in uploading the same set of standard documents which are required to

be submitted as a part of every bid, a provision of uploading such standard documents(e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders.

4. Bidders can use "My Space" area available to them to upload such documents. These documents may be directly submitted from the "My Space" area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

## **SUBMISSION OF BIDS**

1. Bidder should log into the site well in advance for bid submission so that he/she upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
2. The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
3. Bidder has to select the payment option as "offline" to pay the tender fee / EMD as applicable and enter details of the instrument.
4. Bidder should prepare the EMD as per the instructions specified in the tender document. The original should be posted/couriered/given in person to the Tender Processing Section, latest by the last date of bid submission or as specified in the tender documents. The details of the DD/any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise the uploaded bid will be rejected.
5. Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BoQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BoQ file, open it and complete the white coloured (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BoQ file is found to be modified by the bidder, the bid will be rejected.
6. The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
7. All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured. Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done.
8. The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
9. Upon the successful and timely submission of bids, the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
10. The bid summary has to be printed and kept as an acknowledgement of the submission of the bid. This acknowledgement may be used as an entry pass for any bid opening meetings.

## **ASSISTANCE TO BIDDERS**

1. Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
2. Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk. The contact number for the helpdesk is 1800-3070-2232.