

**GOVERNMENT OF INDIA
DEPARTMENT OF SPACE
SPACE APPLICATIONS CENTRE (SAC)
AHMEDABAD**

**Tender for Multichannel AIS ground processing hardware for RISAT-
2A**

Bids to be submitted online

Tender No.: SAC/HPUR/SA202000015401 dated 20-05-2021

A. Tender Details

Tender No :	SAC/HPUR/SA202000015401
Tender Date :	20-05-2021
Tender Classification:	GOODS
Purchase Entity :	HPUR
Centre :	SPACE APPLICATIONS CENTRE (SAC)

Procurement of Multichannel AIS ground processing hardware for RISAT-2A

(1) Please submit your offer as per attached Terms & Conditions.

(2) If our Standard Terms of the Tender like Payment Terms, Liquidated Damages, Security Deposit, Performance Bank Guarantee etc. are not accepted by you, the appropriate loading factor will be added to the quoted prices for ranking the offer.

(3) SAC is eligible for concessional GST vide Government of India, Ministry of Finance, Department of Revenue Notification No.45/2017-Central Tax (Rate) & Notification No.47/2017-Integrated Tax (Rate) dated 14/11/2017.

Necessary Certificates shall be issued by SAC for claiming concessional GST.

(4) GeM Report ID: GEM/GARPTS/20052021/BY16DR3N1SCK DATED 20/05/2021

(5) MAKE IN INDIA:Preference to Make In India products (For bids < 200 Crore):Preference shall be given to Class 1 local supplier as defined in public procurement (Preference to Make in India), Order 2017 as amended from time to time and its subsequent Orders/Notifications issued by concerned Nodal Ministry for specific Goods/Products. The minimum local content to qualify as a Class 1 local supplier is denoted in the bid document. If the bidder wants to avail the Purchase preference, the bidder must upload a certificate from the OEM regarding the percentage of the local content and the details of locations at which the local value addition is made along with their bid, failing which no purchase preference shall be granted. In case the bid value is more than Rs 10 Crore, the declaration relating to percentage of local content shall be certified by the statutory auditor or cost auditor, if the OEM is a company and by a practicing cost accountant or a chartered accountant for OEMs other than companies as per the Public Procurement (preference to Make-in -India) order 2017 dated 04.06.2020. Only Class-I and Class-II Local suppliers as per MII order dated 4.6.2020 will be eligible to bid. Non - Local suppliers as per MII order dated 04.06.2020 are not eligible to participate. However, eligible micro and small enterprises will be allowed to participate .

(6) Purchase preference to Micro and Small Enterprises (MSEs): Purchase preference will be given to MSEs as defined in Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012 dated 23.03.2012 issued by Ministry of Micro, Small and Medium Enterprises and its subsequent

Orders/Notifications issued by concerned Ministry. If the bidder wants to avail the Purchase preference, the bidder must be the manufacturer of the offered product in case of bid for supply of goods. Traders are excluded from the purview of Public Procurement Policy for Micro and Small Enterprises. In respect of bid for Services, the bidder must be the Service provider of the offered Service. Relevant documentary evidence in this regard shall be uploaded along with the bid in respect of the offered product or service. If L-1 is not an MSE and MSE Seller (s) has/have quoted price within L-1+ 15% (Selected by Buyer)of margin of purchase preference /price band defined in relevant policy, such Seller shall be given opportunity to match L-1 price and contract will be awarded for 25%(selected by Buyer) percentage of total QUANTITY.

A.1 Tender Schedule

Bid Submission Start Date :	20-05-2021 17:00
Bid Clarification Due Date :	10-06-2021 16:22
Bid Submission Due Date :	22-06-2021 15:00
Bid Opening Date :	22-06-2021 15:30

B. Tender Attachments

NA

C. Bid Templates

C.1 Technical Bid - Multichannel AIS ground processing hardware for RISAT-2A

1. FPGA BOARD DEVELOPMENT

Document : RFP

Common Specifications (Applicable for all items)

Sl No	Specification	Value	Compliance	Offered Specification	Remark
1	Initial bench test (IBT)	In A/C Lab (at +25°C), Specified parameter to be measured.	Yes / No / Explain		
2	Burn-in	100 hrs at +40°C	Yes / No / Explain		
3	Post Burn-in Electrical test	In A/C Lab (at +25°C), Specified parameter to be measured.	Yes / No / Explain		
4	Operational temp. test	0°C to +40°C, Dwell time 6 hrs (specified elect. parameter measurement at 0°C, +25°C, +50°C and +25°C).	Yes / No / Explain		
5	External visual inspection	Inspect for surface finish and any mechanical damage of interfaces etc.	Yes / No / Explain		
6	Final Bench test (FBT)	In A/C Lab (at +25°C), Specified parameter to be measured.	Yes / No / Explain		
7	SINGLE CHANNEL RECEIVER SPECIFICATIONS		-		

8	Device	Xilinx Zynq Ultrascale+ ZU19EG which consists Quad Cortex A53 @ 1.5GHz Dual Cortex R5, ARM Mali 400 MP2 and Programmable logic with 1143K logic cells	Yes / No / Explain		
9	Memory	4GB DDR4 for PS with ECC (or better) and 4GB DDR4 for PL (or better)	Yes / No / Explain		
10	Flash	8GB eMMC Flash	Yes / No / Explain		
11	Interfaces	SD card (boot), JTAG (USB (preferable)/ Xilinx compatible platform cable), USB-UART, Tri-speed Ethernet PHY(10/100/1000Mbps) with RJ-45, 4X2 GPIO Header (2.54 mm pitch), FMC connector, 4 Status LEDs (Front panel), 2 Reset Push buttons with Tactical feedback (Front panel), 1 Power On/Off switch (Front panel)	Yes / No / Explain		
12	POWER MODULE SPECIFICATIONS		-		
13	Nominal Input Voltage	230 V AC	Yes / No / Explain		
14	Input Voltage range	184-264 V AC or better	Yes / No / Explain		
15	Input Frequency Range	47-63 Hz or better	Yes / No / Explain		
16	Max. Output Power	450 W or better	Yes / No / Explain		
17	Output	12V dc @ 37.5 A or better	Yes / No / Explain		
18	In rush current	40A or better	Yes / No / Explain		
19	ETHERNET SWITCH SPECIFICATIONS		-		
20	Ports	10 x RJ45 or more	Yes / No / Explain		

21	Transmission speed	10/100/1000 Mbps	Yes / No / Explain		
22	Supported Protocols	IEEE 802.3, IEEE 802.3u, IEEE 802.3ab, IEEE 802.3x, IEEE 802.1P/Q, IEEE 802.3az	Yes / No / Explain		
23	MECHANICAL CHASSIS DETAILS		-		
24	Size	Standard rack mount chassis (4U or smaller)	Yes / No / Explain		
25	Front Panel	4 x 8 status LED (4 per channel), 2 x 8 Reset Push buttons with tactical feedback (2 per channel), 1 x 8 On/off switch (1 per channel)	Yes / No / Explain		
26	Back Panel	1 x RJ-45 connector (Providing connection with Ethernet switch).	Yes / No / Explain		
27	ENVIRONMENTAL SPECIFICATIONS		-		
28	Operational Temperature range	0°C to +40° C	Yes / No / Explain		
29	Storage Temperature range	0°C to +55°C	Yes / No / Explain		
30	Relative Humidity	5% to 95% non-condensing at + 40°C	Yes / No / Explain		
31	Vibration	The unit shall be fabricated to withstand vibration during transportation.	Yes / No / Explain		
32	ENVIRONMENTAL TESTS		-		

Supporting Documents required from Vendor

1. Zynq Ultrascale+ ZU19EG MPSoC based eight(8) channel Receiver enclosed in a rack mountable chassis with 8GB SD card for each channel, Ethernet switch and power supply. Quantity: 2

2. PCB Schematic, placement details for power module and Receiver card and Gerber files in case of non- COTS based components.

3. Chassis design and other manufacturing related files

4. Interface Control Document

5. Certificate of Compliance (CoC)

6. Detailed test reports of testing as per Section D

7. Operating manual containing Operating instruction, marking details, Function diagram, detailed Specifications sheet, handling and storage instruction for long-term storage, warranty card, etc. in soft copy.

8. Any software used for acceptance testing of the hardware.

5 additional documents can be uploaded by the vendor

C.2 Commercial Terms / Bid

Sl. No.	Description	Compliance	Vendor Terms
1	The reports & hardware delivered will be property of SAC.	Yes / No / Explain	
2	In case of any problem, hardware modification if required during warranty period shall be done free of cost.	Yes / No / Explain	
3	The vendor shall provide warranty for a period of at least 12 months for any defects in material or workmanship from the date of acceptance & commissioning.	Yes / No / Explain	
4	The vendor shall submit point by point compliance for all the specifications and quality parameters along with quotation.	Yes / No / Explain	
5	All information provided by ISRO should be treated confidential and shall be used only for the purpose as mentioned.	Yes / No / Explain	
6	Performance Security	Yes / No / Explain	
7	Delivery Terms	Yes / No / Explain	
8	Delivery Period	Yes / No / Explain	
9	Payment Terms with Bank Charges	Yes / No / Explain	
10	Name and address of the Indian Agent, with e-mail ID (if any)	Yes / No / Explain	
11	Percentage of agency commission included in the quoted price payable in Indian Rupees only directly to the Indian Agent.	Yes / No / Explain	
12	Validity of the offer	Yes / No / Explain	
13	Liquidated Damages	Yes / No / Explain	
14	Warranty Period	Yes / No / Explain	
15	Taxes and duties	-	
16	Bank Charges, if any	-	

17	Security Deposit	-	
18	Any other Terms	-	

C.3 Price Bid

Sl. No.	Item	Quantity	Unit Price	Currency	Total Price	Remark
1	FPGA BOARD DEVELOPM ENT	2.00 Nos.		-		