



NCRA • TIFR

राष्ट्रीय रेडियो खगोलभौतिकी केंद्र
National Centre for Radio Astrophysics
टाटा मूलभूत अनुसंधान संस्थान
Tata Institute of Fundamental Research

गणेशखिंद डाकघर, सावित्रीबाई फुले पुणे विश्वविद्यालय परिसर, पुणे- 411007, महाराष्ट्र, दूरभाष : 020-2571-9000/9111/9242
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Corrigendum -2

Page 1 of 2

Date : 03 November 2025

Subject: Replies to Pre-bid Queries, Clarification/ Correction and Inclusion.

Bid No.: 2025_DAE_880655_1 dt. 08.10.2025 e-procurement portal (CPPP)

Tender Ref / Folder No. : NCRA:WF069:CPPP:2025

Tender Title: RFP for *Manufacture, Supply and delivery of fully tested Integrated ADU Boards on a Build-to-Print Basis for SKAO – 2550 Units.*

With reference to the above-mentioned tender published on the CPP Portal, the following replies, inclusions, corrections and clarification are hereby issued as Corrigendum-2:

1. Replies to Bidder Queries:

The queries received from bidders through e-mail and during the meeting held on 17.10.2025 have been duly examined. The consolidated replies to all queries are enclosed as **Annexure-A** (Page 01 to 6) of this corrigendum for information of all concerned bidders.

2. Inclusion of Clause – Limitation of Liability (LoL):

The following clause is hereby included in the tender document as a part of ATC Clause.

LIMITATION OF LIABILITY:

2.1 The Supplier shall be excused and not be liable or responsible for any delay or failure to perform to Deliverables under this contract to the extent that such delay or failure has arisen as a result of any delay or failure by the Buyer (NCRA) or its employees or agents or third-party service providers, to perform any of its duties and obligations as set out in these tendered items. In the event that the Supplier is delayed or prevented from performing its obligations due to such failure or delay on the part of or on behalf of the Buyer, the Supplier shall be allowed an additional period of time to perform its obligations and unless otherwise agreed the additional period shall be equal to the amount of time for which the Supplier is delayed or prevented from performing its obligations due to such failure or delay on the part of or on behalf of the Buyer. Such failures or delays shall be brought to the notice of the Buyer, and subject to mutual agreement with the Buyer, the Supplier shall take such actions as may be necessary to correct or remedy the failures or delays.

2.2 The Supplier shall be entitled to invoice the Buyer for additional costs incurred in connection with the correction or remedy as above as agreed herein, after mutually agreed by the Buyer. Neither party shall be liable to the other for any special, indirect, incidental, consequential (including loss of profit or revenue), exemplary or punitive damages, whether in contract, tort or other theories of law, even if such party has been advised of the possibility of such damages, subject to other terms of the tender.

2.3 The total cumulative liability of either party arising from or relating to this job shall not exceed in the aggregate the total amount paid to Supplier by the Buyer during contractual period immediately preceding the claim that gives rise to such liability (as of the date the liability arose); provided, however, that this limitation shall not apply to any liability for damages arising from (a) wilful misconduct and wilful negligence or (b) indemnification against third party claims for infringement.

3. **Correction in Tender Document** – Table-1 (Page 41 of 67) Clause no. 9.8 *ADU Production Roll-Out Plan* shall be read as follows:

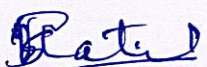
Timeline	Delivery to Tier-1 company at Lomagna, Italy Delivery																			Delivery to be made at NCRA (India)	Total	
Months from the month of getting PO @ →	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19			
ADU Delivery Schedule	0	0	0	20					50	100	100	150	200	200	200	250	300	330	320	310	20	2550

4. **CLARRIFICATIONS:**

- a) **Common Clause:** The Delivery Schedule mentioned in the tender may undergo changes and the fixed schedule will be given in the work order or separately, as the case may be. The delivery schedule may change depending on the resource availability at the Tier-1 company site, requirements from SKAO, or any other circumstances. The Supplier will be informed accordingly. Once the delivery schedule is confirmed by NCRA/SKAO, the Supplier shall be responsible for completing the delivery of batches as per the agreed schedule. Delay on the part of the Supplier, in any delivery schedule for any batches, shall attract the LD clause mentioned in the tender/work order.
- b) **Delivery Location:** Delivery of ADU boards to be sent for testing and acceptance purposes:
ELEMASTER SPA Electronic Technologies
Via Garcia Lorca, 29
23871 Lomagna (LC), ITALY
- c) **Regarding Test Jigs:** It is understood that NCRA would have made payment for all ADU boards delivered and accepted. After completion of this delivery process but before making final payment, the test jigs should be returned back to NCRA-TIFR Pune.

The **Corrigendum-1 & 2** shall be treated as an **integral part of the tender document** already published.

All other terms and conditions of the tender shall remain **unchanged**.


Administrative Officer (C) Purchase
NCRA-TIFR, Pune.
 Sadashiv Vitthal Patil
 Administrative Officer - C
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Encl : Annexure-A (Reply to Pre-bid queries 6 pages)

CORRIGENDUM-2			ANNEXURE-A	
Replies to Pre-bid Queries, Clarrification/ Correction and Inclusion.				
Bid No.: 2025_DAE_880655_1 dt. 08.10.2025 online e-procurement portal (CPPP)			Dated : 03 November 2025	
Tender Title: Manufacture, Supply and Delivery of fully tested Integrated ADU Boards on a Build-to-Print basis for SKAO - 2550				
Mode: e-Procurement through CPP Portal - 2 Part Bid				
Bid Opening Date: 11.11.2025 @ 3:00 pm				
Pre-Bid Meeting Date: 17.10.2025 @ 11:00 am				
Statement of Pre-Bid Queries Received from Shortlisted Bidders				
Sr. No.	Ref / Clause No.	Reference clause as per our Tender	Query Raised by Bidder	NCRA–TIFR Clarification / Reply to pre-bid discussion meeting.
1	SoW	Scope of Work (SoW) defines the responsibilities of the contractor/manufacturer in the procurement, assembly, testing, integration, and delivery of ADU boards for the SKA-Low Signal Processing System (SPS) on a Built to Print basis, as per the design and drawings provided by SKAO/NCRA and for the given quantity i.e., 2550 nos.	1) TCS will review the package and get back if any additional details are required. As an initial input, we will need the PCBA assembly drawings and any special assembly instructions, if any to be part of the package. 2) Have considered RoHS RoHS-compliant process for the PCBA manufacturing.	The PCBA assembly document and specical instruction file: 20184881 ADU_V2_0_assembled.pdf https://drive.google.com/file/d/18TtRa_cke4zVb67kaTVshd4WbjcmIYjB/view?usp=sharing Also special instruction to PCB ADU assembly tips are : ADU ASSEMBLY TIPS.pdf https://drive.google.com/file/d/1k7xsHGWYozGTNuRcGTSeb3aHOy_5t8xZ/view?usp=sharing adu assembly tips .pdf https://drive.google.com/file/d/1KQFTcZut7vH35jthhBVUaaRLQOg-J0a0/view?usp=sharing The process must be a RoHS - Lead free process has to adapt
2	9.3a	Critical components, including ADU PCB boards, must be sourced from the Tier-1 company at a cost provided in the BOM. This cost does not include any taxes, transport, and/or duties. This has to be taken care of by the Supplier.	We will need the point of contact from Elemaster, Lomagna for a) Onboarding of the supplier c) Getting compliance-related information such as HSN code, country of origin, ECCN number etc	Contact Person : Gualtiero Magni emai ID : gualtiero.magni@elemaster.com
3	9.3b	The rest of the components need to be sourced from approved market vendors listed as pref/alt. Alternate components (Alt) mentioned in the BoM can ONLY be used if preferred (Pref) components are not available. These components can not be sourced from countries sharing land borders with India. Any deviation from the component specifications in APPENDIX-B : BoM by the supplier/contractor/manufacturer is not permitted.	1) We have come across 2 EOL (End of Life) parts as listed below. Kindly advise on their replacement. Currently, they can be purchased till their stock lasts. a) Murata GRM155R60J105KE19D b) Infineon BCR133E6327 2) Can we get the LOA from NCRA to get better pricing for volume purchase, if required? 3) Can we share the project details, customer details with suppliers (against TCS EMS NDA) for volume RFQ, if required? 5) Information regarding the COO is not available at the RFQ stage, but will be known at the time of shipment after the order is placed. Based on our interaction with suppliers, the majority of OEM's have factories in multiple locations across globe including China & Taiwan(PRC). We will mention a note in our PO that the components shipped to us must not be of COO China & Taiwan(PRC).	1) BOM specifies Preferred and Alternate components in Column-E (Pref/Alt). Also some components reached EOL/discontinued but can be ordered till specific dates. BOM specifies Preferred and Alternate components in Column-E (Pref/Alt). Also some components reached EOL/discontinued but can be ordered till specific dates. Please see below details: 1) MURATA GRM155R60J105KE19D Alternate: a) SAMSUNG CL05A105KQ5NNNC b) YAGEO CC0402KRX5R5BB105 c) AVX 04026D105KAT2A d) KEMET C0402C105K9PACTU 2) TDK C1005X7R1H682K050BA - Obsolete : Though it is alternate Alternate: a) YAGEO CC0402KRX7R9BB682 b) KEMET C0402C682K5RACTU c) MURATA GRM155R71H682KA88D(Preferred) 3) MICRON N25Q256A13EF840E - Obsolete : Though alternate but preferred is available MICRON MT25QL256ABA1EW9-0SIT 4) COILCRAFT XAL5050-562MEC - Part Change Part Status : Active
4	9.7 AE	ADU TE ELECTRICAL	Quote has been provided by Elemaster, Lomagna. 1) Is the pricing negotiable ? 2) What are the items covered in this quote ? Does it cover only the fixture or does it cover fixture with external devices like power supply, Multimeter, Linux Industrial PC etc. ? 3) Need the Acceptance criteria. 4) What is the lead time for the test fixture ?	1) No. 2) The test jigs cost covers everything e.g. fixtures, external devices like porwe supplies, multimeter, linux industrial PC as all in all package. 3) A golden sample board will be provided along with the test Jigs setup for acceptance criteria. 4) Test Jigs are ready to ship.
5	9.7 AG	Environmental and Reliability Testing	Please provide the thermal profile parameters including ramp up/down time, soak time, Humidity etc. Profile snapshot is available.	Not required for bidding purpose
6	9.7b	First Article Inspection (FAI): Standards: Conducted in accordance with EN 9102 requirements	Will the template for the FAI as per the standard EN 9102 be provided by NCRA ?	This will be provided to the L1 bidder and not required for bidding at this stage.
7	9.7c	Test Documentation	1) Kindly confirm that the detailed test procedure including step-by-step instructions, acceptance criteria, and references to applicable standards will be provided with the test setups by Elemaster, Lomagna. 2) Is there a formal template for the test report or the required report will be automatically generated by the test jig after the completion of the test.	1) Test jigs will generate test reports automatically and will be uploaded online. 2) Tier-1 company/Elemaster team will come to install Test Jigs and will be present during FAI testing at Vendor's site and provide necessary assistance.
8	9.7e	Factory Acceptance Tests (FAT):	Kindly confirm that the FAT contains following tests using the test jig provided by Elemaster, Lomagna. 1) Electrical tests using ADU TE ELECTRICAL 2) Functional tests using ADU TE FUNCTIONAL	Yes and Tier-1 company/Elemaster team will come to install Test Jigs and will be present during FAI testing at Vendor's site.
9		Production Roll-Out and Delivery Early 2026 pilot run, fully tested and validated to be delivered within 30 days of getting the order. Minimum order quantity for 20 New Product Inspection (NPI) is mentioned in the BoM. 20 ADU boards duly completed in all aspects, should be delivered at NCRA-TIFR Pune.	1) What is the lead time for the critical components to be delivered by Elemaster, Lomagna ? 2) What is the time frame for the 20 ADU boards to be delivered to NCRA, Pune ?	1) The Tier-1 company lead time from order is 15 calendar day/10 working days in addition to the transit time from Italy to India. 2) Regarding delivery of 20 ready boards to NCRA, they can be delivered as last batch
10	9.9	Packing :	TCS will follow equivalent robust packaging, accurate marking, safe handling, controlled storage, and secure transportation as defined in internal quality procedure QP-086-ME. Can a printed label/sticker with below details be put on the package ? Item Nomenclature / Order/Contract No. / Country of Origin of Goods Supplier’s Name and Packing list reference number	Printed label/sticket with Item Nomenclature / Order/Contract No. / Country of Origin of Goods Supplier’s Name and Packing list reference number is allowed and Tier-1 company/Elemaster will provide packaging label instructions to L1 bidder

11	9.10	Delivery : All the materials must be delivered at the site of the Tier-1 Company. The unloading & positioning of all equipment at the designated locations specified by the Chief Engineer will be in the scope of the supplier. The supplier shall arrange for handling shipment labour for rigging etc. as required.	Kindly share more details about the designated area being mentioned here. Delivery on DDP basis will be managed through a freight forwarder who will deliver the material at the gate or their warehouse	The designated area / delivery location is already mentioned in the tender document as well as in this sheet. More details will be shared with the successful L1 bidder. Delivery Inco terms are now DAP and not DDP.
12	9.11	Insurance : The Goods supplied under the Contract shall be fully insured in Indian Rupees against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery.		Yes - Transit Insurance.
13		Insurance : The Goods supplied under the Contract shall be fully insured in Indian Rupees against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery. For delivery of goods at the purchaser's premises i.e. SKA Location at Lomangana, Italy and the insurance shall be obtained by the Supplier in an amount equal to 110% of the value of the goods from "warehouse to warehouse"(final destinations) on "All Risks" The insurance shall be valid for a period of not less than three months after installation and commissioning.	What kind of Insurance coverage is expected here ? Need more details. Normally, Insurance is applicable upto the delivery of goods free of damage or loss.	The successful bidder shall arrange for transit insurance. The insurance coverage must remain valid for a period of five months following the installation and commissioning of the supplied ADU boards.
14	9.13	Logistics & Costs: All costs related to removal, packaging, transportation (including re-export/import duties if applicable), repair/replacement, and re-delivery of defective parts under Defect Liability shall be borne by the Supplier.	1) Please provide the HSN code for the ADU boards to calculate the duties and taxes for logistics as the payment terms are DDP. 2) Export will be in the name of NCRA, Pune. NCRA to share Export invoice, Packing List, Export Value Declaration, NCRA IEC number & branch code. 3) Invoice should contain a remark "This product is manufactured by Tata Consultancy Services Ltd. Goa India with logistic arrangements" (This remark is required for DDP logistics arrangement by TCS). 4) SCOMET applicability needs to be evaluated by NCRA. 5) This will be DTA sale from TCS-EHTP to NCRA, Pune, Bill & ship to NCRA Pune in INR, payment of applicable reversal of duties+ GST, E-way Bill to be generated by TCS Goa on NCRA. 6) Logistics to be handled by TCS-GOA-EHTP unit on behalf of NCRA Pune. 7) VAT number of Elemaster, Lomagna, Italy will be required. 8) Authorization from Elemaster, Lomagna, Italy to our FF/Broker. Need EORI number of Elemaster, Lomagna, Italy for debiting VAT. 9) NCRA to issue authorization to TCS CHA for custom clearance. 10) Letter to be issued by NCRA to customs for FOC export (TCS can provide the format). 11) GR Waiver is required for the FOC export by NCRA for which NCRA needs to provide Export invoice, Packing List, GR waiver application letter (TCS can provide the format) OR Government / RBI notification for exporting free of cost to facilitate FOC export.	The ADU boards shall be delivered to the delivery location in Italy using DAP Incoterms. The applicable tariff code is 85423190. No customs duty applies from India, and there are no import restrictions - needs to be checked by the bidder with customs. Italian VAT will be recovered by the Italian party, with no additional cost to the Indian supplier (Successful Bidder). The Indian supplier handles Indian customs; Italy handles Italian customs and VAT. There will be no export duty applicable on the ADU boards as they are being supplied under a Deemed Export arrangement. The bidders needs to check with the CHA's and Custom Authority.
15	M1	Your representatives may have to be present for the assembly tests in Italy to witness the test and ensure acceptance of items delivered, at your cost.	Is the supplier representative required to be there during testing of every batch being delivered to Elemaster, Lomagna. ?	May not be required for every batch.
16	M2	The bidder can submit the invoice along with the Acceptance Certificate from the Tier-1 Company, for items delivered and accepted after final tests by the Tier-1 company, for processing payment from NCRA, within 30 days from the date of receipt of the invoice, duly certified by an authorised person in NCRA. It may be noted that there is no payment to be claimed from SKAO or any other company.	1) Invoice generation -TCS Goa will raise an INR invoice on NCRA (bill-to and ship-to) with applicable taxes. 2) E-way bill generation- E-way bill to be generated by TCS Goa on NCRA.	Invoice and E-way bill generation : For export purposes, the supplier (Indian Industry / Successful Bidder) shall generate the e-way bill for the movement of goods from their premises to the airport. The buyer for this transaction, as per the invoice, is NCRA, and the transporter details should include the vehicle or company responsible for carrying the goods to the airport. This ensures compliance with GST regulations for domestic movement prior to export clearance.
17	M3	If any or few or all of the items fail during the Defect Liability Period, it will be your responsibility to rectify them at your own cost and efforts, including import of failed items and export of rectified or new items to the same destination. Whenever items delivered in Italy have to be brought back to India for some changes or modifications, it is the responsibility of the bidder to take care of all legal, procedural, customs, government norms, etc. NCRA-TIFR shall not bear any cost towards the same.	TCS will require NCRA, Pune documentation support for fulfilling below requirements to get back the boards in case of failure or for modification: 1) All the documentation to be arranged in the name of NCRA. 2) Freight term while import will be Ex-works. 3) Applicable import duty on repair cost, to & Fro freight to be paid for repair- import shipment, under warranty. 4) Re-export freight term DDP and while re-exporting applicable duty in Italy is to be paid. 5) After repair, apply for GR Waiver permission + intimation to Customs. These transactions are under compliance and the import allowed limit is 3 years based on HSN.	YES - NCRA will provide the required export documents without involving financial implications, to the successful L1 bidder.

18	SOW	Page 33 of 67 iii. ADU (Build to Print Circuit Board):	1. Gerber Details, circuit diagram, PCB Size, Heat Sink Weight and export packaging details.	Gerber and OBD Details consisting of : 1) Gerber folder Copy of Gerber_ADU2_0_a_rev2.zip https://drive.google.com/file/d/1HNIB0zLiQmTkCU5pnPecPcCjw4MscsA/view?usp=sharing 2) OBD++ files iTPM_ADU_2_0_ODB_Reduced.7z https://drive.google.com/file/d/1iPUiLw95-2tGphQborRSTTyss0iuq19X/view?usp=sharing Circuit diagram : will be provided only to L1 bidder. Heat Sink Weight: a) TOP : 20129956 HEATSINK ADU BG569 REV.2 LF = 0.616KG b) BOT : 20184972 SUPPORT HEATSINK BOTTOM TPM_SHS_BOT NEW LF = 0.161KG 3) Export packaging details: Copy of 2020.pdf https://drive.google.com/file/d/1eVkJf1R-Wz3jtdJQldTPkjf1_NnLiRvv/view?usp=sharing
19	SoW		2. Is it okay for us if we buy same components from our listed supplier instead of Elemaster ? We will furnish all necessary certificate of compliances which assures genuinity of components.	Critical components must be bought from Tier-1 company as some of the components are customized specifically for SKA-Low application.
20	Information	19. Responsibility with regard to delivery of items: As described in this document, the delivery of completed items / products is outside India, i.e. Lomagna, Italy. The Supplier is expected to take care of all aspects related to transport, duty, customs clearance, legal compliances, required licences, etc., while sending goods from India to Italy and also from the Italian customs department to the Tier-1 Company in Italy. The concept is based on the DDP INCOTERM, inclusive of all. Bidders take note of this while submitting their bids. Secondly, whenever items delivered in Italy have to be brought back to India for some changes or modifications, it is the responsibility of the bidder to take care of all legal, procedural, customs, government norms, etc. NCRA-TIFR shall not bear any cost towards the same.	3. Duty - Who's responsibility will it be to clear custom duties in foreign country ? (In our case it is Italy)	The ADU boards shall be delivered to the delivery location in Italy using DAP Incoterms. The applicable tariff code is 85423190. No customs duty applies from India, and there are no import restrictions - needs to be checked by the bidder with customs. Italian VAT will be recovered by the Italian party, with no additional cost to the Indian supplier (Successful Bidder). The Indian supplier handles Indian customs; Italy handles Italian customs and VAT. There will be no export duty applicable on the ADU boards as they are being supplied under a Deemed Export arrangement. The bidders needs to check with the CHA's and Custom Authority.
21	Addl T & C	Defect liability clause.	4. Warranty - in this case the design belongs to SKA and we are only manufacturing partners so in case of Design failure of board who will be responsible ?	Warranty is only for workmanship defects. However, please refer to all clauses related to warranty and Defect Liability Period
22	SOW	ADU Component procurement	5. Testing Jigs/Fixtures - What are final prices of Jigs to get clear idea on costing ? After project is completed will the supplier get reimbursement/return of amount as they will no longer be of any use to supplier.	Price mentioned in the "Copy of test bench and ToT support.pdf". No reimbursement/return of amount possible.
23	SOW	Gerber File	There is no gerber file is present on the data package. Required gerber file and PCB specification. Gerber files are required to check the following points: 1.To identify any DFM issues on the PCBs. 2.To determine if any special nozzles are required for critical components. 3.To verify whether fine-pitch components are present. 4.To review PCB panelization suggestions. 5.To confirm PCB thickness and check whether SMT carrier pallet is required or not.	Gerber and OBD Details consisting of : 1) Gerber files folder Copy of Gerber_ADU2_0_a_rev2.zip 2) OBD++ files iTPM_ADU_2_0_ODB_Reduced.7z
24	SOW	BOM	We have received the BOM file in PDF format. We require Excel format because copying from PDF to Excel may cause some line items to be missed. Therefore, we require BOM file in Excel format Reference BOM File name:Requirement_ADU_BoM_for_BudgetaryQuote	Below is the BOM Excel format: PCA SKA ADU ITPM REV 2.07B.xlsx https://docs.google.com/spreadsheets/d/1jaFetLBs1etH7Hw-mW1Mzuv6LL5zB8Pj/edit?usp=sharing&ouid=105434477094595461977&rtpof=true&sd=true
25	SOW		Also reference designator or location is not provided in the BOM, making it difficult to identify the component type (SMT/THT/ASSY). Check the RD in the Gerber file for any DFA issues. Updated BOM is required	A folder detailing gerber file can be found here: Copy of Gerber_ADU2_0_a_rev2.zip https://drive.google.com/file/d/1HNIB0zLiQmTkCU5pnPecPcCjw4MscsA/view?usp=sharing BOM contains all required information viz. (SMT/THT/ASSY) in column-F "Description"
26	SOW	Heatsink Assembly	Please check the yellow-highlighted box below. In the PDF BOM, the heatsink is mentioned, but the assembly instructions for this part in the PCBA are missing. Therefore, an assembly instruction file is required.	Assembly instruction file to share for heatsink 20184881 ADU_V2_0_assembled.pdf https://drive.google.com/file/d/18TtRa_cke4zVb67kaTVshd4WbjcmIYjB/view?usp=sharing ADU assembly TIPS ADU ASSEMBLY TIPS.pdf https://drive.google.com/file/d/1k7xsHGWYozGTNuRcGTSeb3aHOy_5t8xZ/view?usp=sharing adu assembly tips .pdf https://drive.google.com/file/d/1KQFTcZut7vH35jthhBVUaaRLQOg-J0a0/view?usp=sharing
27	SOW	Conformal coating	Please confirm whether coating is applicable, as the coating-related documents are not available in the data package	No conformal coating is required.
28	SOW	Testing	Test specification Document request- Tester scope-In syрма scope or Customer scope Additional equipment for ADU Test Jig-In Syrma scope or Customer scope	Everything including industrial PC, golden sample, test equipments, softwares as a package. No additional equipment beyond what was mentioned in the tender document would be required. Tier-1 company will provide installation and demonstrating functionality. The acceptance criteria would include golden samples for electrical and RF testing, and test reports would be generated at the end of functional tests.

29	SOW	Logistics and Billing	Request contry and address to ship and Billing address	Shipping Address: ELEMASTER SPA Electronic Technologies Via Garcia Lorca, 29 23871 Lomagna (LC), ITALY Billing Address: National Centre for Radio Astrophysics Tata Institute of Fundamental Research Savitribai Phule Pune University Campus Pune - 411 007 Maharashtra, INDIA
30	SOW		1.Should the Technical/Testing Team visit ELEMASTER after every batch of delivery is made.	Attendance by vendor representatives after every batch of delivery testing is not required. It is optional to even visit during FAI, though vendor representative may attend if it is beneficial to their process. While physical attendance is not mandatory, the issuance of acceptance certificates following the successful batch-wise testing is essential.
31	SOW		2. Thermal Cycling temperature details are provided. Please confirm if the burn in period is 12 hrs in Powered off mode.	Yes
32	SOW		3. Is there further scope of negotiation of the value proposed by Elemaster.	No
33	SOW		4. Need Elemaster POC Details.	Contact Person : Gualtiero Magni emai ID : gualtiero.magni@elemaster.com
34	SOW		5. What is the Contingency plan if the Test jig stops working.	Already 2 sets of each test jigs type are provided. One extra set of test jigs is available with Tier-1 company/Elemaster.
35	SOW		6. Any specification for industrial PC/ any specific software is required other than Linux.	Everything is covered in the Test jig cost including Industrial PC, all test instruments, softwares as a package
36	SOW		7. "To ensure the validity of test results, all test facilities and equipment must be compliant with defined requirements and properly calibrated. The Tier 1 company will provide a full testing Bench BOM " Does the cost provided in the Appendix-D by Tier 1 company includes the cost of additional equipment's like Industrial PC , Power Supply & Digital Multimeter.?	Everything is covered in the Test jig cost including Industrial PC, all test instruments, softwares as a package
37	SOW		8. Please share the ADU Top & Bottom (.dxf) & Gerber for stencil requirement analysis.	Gerber details: Copy of Gerber_ADU2_0_a_rev2.zip https://drive.google.com/file/d/1HNIB0zLiOmTkCU5pnPecPcCjew4MscsA/view?usp=sharing ADU Top (.dxf) : Copy of ADU_v2_0_v2.0a_TOP.dxf https://drive.google.com/file/d/1pSRTwE6Etx62DwIZNzvkiquuONTK1MPu/view?usp=sharing ADU Bottom (.dxf) : Copy of ADU_v2_0_v2.0a_BOTTOM.dxf https://drive.google.com/file/d/1uSsiUCEfJZsIP6x306i5O74oVeBcf-bE/view?usp=sharing
38	SOW		9. As per the details in the User Manual ADU Functional Test Jig (.pdf), programming of the board happens from the script running on PC. Please confirm?	Yes
39	SOW		10. Local conctent percentage?	Consider 20% and provide the Local content certificate for Class-II supplier.
40	SOW		11. BG format for EMD	The submission may be made in the format issued by the issuing authority, provided that the purpose is clearly mentioned as “EMD Submission.”
41	SOW		12. GST applicability since it is exports.	Based on the HSN code 85423190, the applicable GST can be determined as per the provisions of the Indian GST law
42			1. Undertaking letter will be submitted in place of signing 67 pages of Tender document and upload in CPPP portal. Due to large size of the pdf document which will have issues in uploading.	Yes, accepted undertaking is uploaded on the CPP portal, provided the bidder submits the signed and stamped copies of the tender documents in hard copy to NCRA by post.
43			2. BG towards EMD will have 8 months validity from the date of issue by our Bank.	Yes, the EMD submitted in the form of collateral shall remain valid for a period of eight months from the date of submission.
44			3. DAP terms will be considered for exporting ADU boards to Elemaster, Italy. It means all duties in India will be borne by Kaynes and all statutory duties applicable in Italy will be borne by Elemaster.	Yes.
45			4. Elemaster has to provide the commercial term and conditions for the specified items that we need to procure from them. Mentioning warranty period, Shipment terms (Ex-stores at Kaynes), payment terms, delivery leadtime from date of PO, defective supplies, damaged supplies etc.	All items to be procured from Tier-1 company/Elemaster is with shipment terms as FCA Lomagna, Italy with 30 days credit and lead time from Tier-1 company/Elemaster from order is 15 calendar days/10 working days in addition to transit time from Italy to India. Warranty: a) Component :12 months form shipping date b) Test Equipment : 12 month from installation date at the vendor site (by Tier-1 company/Elemaster) The defects shall be communicated to the Tier-1 company/Elemaster in no more that eight days from the discovery. Returned/defective product : Claims connected with the product supplied will be analyzed only if communicated. Once the successful L1 bidder is identified, then the L1 bidder and the Tier-1 company/Elemaster, shall have contract/agreement in which all these clauses can be considered and covered.
46			5. Batch Code of the BOM items procured must not be restricted (which can be over 3 years old at the time of delivery of last shipment), since the procured BOM for total order quantity at the start of the project will be stored and supplied over 18months as per the staggered delivery schedule.	Noted. However it is not required for bidding process.
47			6. Local content percentage considered will be 20% and balance 80% imports, towards complying with make in India requirement.	Yes, provide the Local content certificate for Class-II supplier.
48			7. All Techno-commercial documents submitted will be digitally signed by authorized signatory.	Accepted.
49			8. Since ADU is PCBA module that will be supplied to Elemaster. HSN code will be considered accordingly for GST rate applicability.	HSN code is 85423190

50			9. Obsolete Component list for which alternates required.	The BOM has a column Pre/Alt and can be used to get alternate component/s. Also some components reached EOL/discontinued but can be ordered till specific dates. BOM specifies Preferred and Alternate components in Column-E (Pref/Alt). Also some components reached EOL/discontinued but can be ordered till specific dates. Please see below details: 1) MURATA - GRM155R60J105KE19D Alternate: a) SAMSUNG CL05A105KQ5NNNC b) YAGEO CC0402KRX5R5BB105 c) AVX 04026D105KAT2A d) KEMET C0402C105K9PACTU 2) TDK - C1005X7R1H682K050BA - Obsolete : Though it is alternate Alternate: a) YAGEO CC0402KRX7R9BB682 b) KEMET C0402C682K5RACTU c) MURATA GRM155R71H682KA88D(Preferred) 3) MICRON - N25Q256A13EF840E - Obsolete : Though alternate but preferred is available MICRON - MT25QL256ABA1EW9-0SIT 4) COILCRAFT - XAL5050-562MEC - Part Change Part Status : Active
51	M4	Freight terms for Import / Export from/to Elemaster.	Based on the discussion during the Pre-bid meeting, we understand freight terms to be following for the shipments from/to Elemaster. Kindly confirm. 1) For Import of critical components from Elemaster : FCA 2) For the export of PCBAs to Elemaster : DAP	1) Assembled ADU boards from India to Italy is Incoterms DAP. 2) Critical components including bare PCB boards from Italy to India Incoterms FCA.i.e. The Indian Supplier (Buyer) has to take care of costs.
52	M5	BOM Query: 20184513 : PACKING KIT FOR TPM MODULE SKA LF	What does this item refer to ? There is a remark of Mechanical Assemble for this part.	The item refers to packaging which can be done by vendor and a reference export packaging document is provided as Copy of 2020.pdf https://drive.google.com/file/d/1eVkJf1R-Wz3jtdJQldTPkif1_NnLiRvv/view?usp=sharing
53	M6	Heat Sink Assembly	As seen on the sample board, kindly provide the heat sink assembly details to understand the requirement.	The PCBA assembly document and special instruction file: 20184881 ADU_V2_0_assembled.pdf https://drive.google.com/file/d/18TtRa_cke4zVb67kaTVshd4WbjcmIYjB/view?usp=sharing
54		Gerber	20184881 PCA SKA ADU ITPM Kindly provide GERBER and Specs for PCB fab details	PCB fabrication is out of scope
		Drawing	20184881 PCA SKA ADU ITPM Please provide PCBA Assembly drawing and instructions.	Assembly instruction file to share for heatsink 20184881 ADU_V2_0_assembled.pdf https://drive.google.com/file/d/18TtRa_cke4zVb67kaTVshd4WbjcmIYjB/view?usp=sharing ADU assembly TIPS ADU ASSEMBLY TIPS.pdf https://drive.google.com/file/d/1k7xsHGWYozGTNuRcGTSeb3aHOy_5t8xZ/view?usp=sharing adu assembly tips .pdf https://drive.google.com/file/d/1KQFTcZut7vH35jthhBVUaaRLQOg-J0a0/view?usp=sharing
55		Drawing	20184881 PCA SKA ADU ITPM Please schematic drawings	Schematic drawing will be provided only to L1 bidder.
56		Process	20184881 PCA SKA ADU ITPM Please confirm Conformal coating is required or not. If required please provide material specifications and masking locations. 20184198 MURATA GRM155R60J105KE19D SMD CAP. CER. MULT. 1uF 6.3V 0402 X5R 10% (SKA)LF Given MPN is Discontinued with LTB date: 31-Dec-2021. Kindly provide alternate MPN or approve suggested MPN. 20174790 INFINEON TECHNOLOGIES BCR133E6327 SMD TRANSISTOR BCR133E6327 (SKA) SOT23 LF Given MPN is EOL with LTB date:31-Dec-2026. Kindly provide alternate MPN or approve suggested MPN to quote	Already answered. No conformal coating BOM specifies Preferred and Alternate components in Column-E (Pref/Alt). Also some components reached EOL/discontinued but can be ordered till specific dates. Please see below details: 1) MURATA - GRM155R60J105KE19D Alternate: a) SAMSUNG CL05A105KQ5NNNC b) YAGEO CC0402KRX5R5BB105 c) AVX 04026D105KAT2A d) KEMET C0402C105K9PACTU 2) Infineon - BCR133E6327 - Obsolete": Product discontinuation but in production till last order date ■ Last order date: 2026-12-31 ■ Last delivery date: 2028-03-31
57		ACTIVE	20124114 SMD IC AD89033BCPZ-1300 (SKA) LFCSP64 LF Given MPN is Incorrect. Kindly provide Alternate MPN.	It is a customized component for SKA-Low application and a part of Critical component list to be purchased from Tier-1 company.
58		Mechanical	20129956 HEATSINK ADU BG569 REV.6 LF Given MPN is Incorrect. Kindly provide Alternate MPN or drawing.	It is a customized component for SKA-Low application and a part of Critical component list to be purchased from Tier-1 company.
59		Document	999-01-210969 SPEC. COSTR. - MANUFACTURING SPECIFICATION Kindly provide the document as we have not received	Ignore it. Removed from provided BOM
60		Mechanical	20184971 SILPAD GAP FILLER 35x35 SP.1mm TG- A1250-35-35-1 LF Given MPN is Incorrect. Kindly provide Alternate MPN.	Contact to sales@tglobaltechnology.com to get quote for - TG-A1250-35-35-1.0 - TG-A1250-9-9-1.0 Very important to keep same parts, for the heating performance of the whole systems.
61		Mechanical	20184970 SILPAD GAP FILLER 9x9mm SP.1mm TG-A1250-9-9-1.0 LF Given MPN is Incorrect. Kindly provide Alternate MPN.	Contact to sales@tglobaltechnology.com to get quote for - TG-A1250-35-35-1.0 - TG-A1250-9-9-1.0 Very important to keep same parts, for the heating performance of the whole systems.
62		Mechanical	20184972 SUPPORT HEATSINK BOTTOM TPM_SHS_BOT NEW LF Given MPN is Incorrect. Kindly provide Alternate MPN.	It is a customized component for SKA-Low application and a part of Critical component list to be purchased from Tier-1 company.

63		Packing	20184513 PACKING KIT FOR TPM MODULE SKA LF Kindly provide packing kit part details and drawings	This referes to packaging which can be done by vendor and a reference export packaging document is provided as Copy of 2020.pdf https://drive.google.com/file/d/1eVkJf1R-Wz3jtdJQldTPkjf1_NnLiRvv/view?usp=sharing
64		Fasteners	10074345 SCREW COUNT. HEAD FLAT PHILIPS 2,5x12 INOX DIN965H Kindly provide MFR details.	A non-rusting (SS) type from any good manufacturer will be ok.
65		Logistics & Costs:	1) Please provide HSN code for the ADU boards to calculate the duties and taxes for logistics as the payment terms are DDP. 2) Export will be in the name of NCRA, Pune. NCRA to share Export invoice, Packing List, Export Value Declaration, NCRA IEC number & branch code. 3) Invoice should contain a remark "This product is manufactured by Tata Consultancy Services Ltd. Goa India with logistic arrangements" (This remark is required for DDP logistics arrangement by TCS). 4) SCOMET applicability need to be evaluated by NCRA. 5)This will be DTA sale from TCS-EHTP to NCRA, Pune, Bill & ship to NCRA Pune in INR, payment of applicable reversal of duties+ GST, E-way Bill to be generated by TCS Goa on NCRA. 6) Logistic to be handled by TCS-GOA-EHTP unit on behalf of NCRA Pune. 7) VAT number of Elemaster, Lomagna, Italy will be required. 8) Authorization from Elemaster, Lomagna, Italy to our FF/Broker. Need EORI number of Elemaster, Lomagna, Italy for debiting VAT. 9) NCRA to issue authorization to TCS CHA for custom clearance. 10) Letter to be issued by NCRA to customs for FOC export (TCS can provide the format). 11) GR Waiver is rquired for the FOC export by NCRA for which NCRA need to provide Export invoice, Packing List, GR waiver application letter (TCS can provide the format) OR Government / RBI notification for exporting free of cost to facilitate FOC export.	For export purposes, all necessary supporting documents required for customs clearance will be provided by NCRA as applicable. All costs related to removal, packaging, transportation (including re-export/import duties if applicable), repair/replacement, and re-delivery of defective parts under Defect Liability shall be borne by the Supplier.

Sd/-
Administrative Officer (C) – P&S.
NCRA-TIFR, Pune.