



NATIONAL SUPERCOMPUTING MISSION
INFRASTRUCTURE | APPLICATIONS | R&D | HRD

Centre for Development of Advanced Computing

A Scientific Society of Ministry of Electronics & Information Technology,

Government of India

Innovation Park, Panchavati, Pashan Road, Pune - 411008

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www.cdac.in

RFP no: CDACP/RUDRA-TOT-PARTNER/23-24/370

**C-DAC invites bids for Selection of
Multiple Partners for Transfer of Technology
to Manufacture, Assemble and Market the Rudra1 Server Systems**

Bidders may download the Tender Document from CDAC web site www.cdac.in. Bidders are advised to go through instructions provided at 'Instructions for online Bid Submission' and submit duly filled bids to CDAC @ email id: deepucv@cdac.in as per the schedule given in the Tender Document.



RFP Schedule

RFP No: CDACP/RUDRA-TOT-PARTNER/23-24/370

Name of the Institute	Centre for Development of Advanced Computing, Pune 411008.
Last date of submission of bids	12 June 2023 – 1500 hrs.
Date of opening of Technical bids	12 June 2023 – 1500 hrs.
Place of opening of technical bids	C-DAC, Pune 411008.

1. Instructions for On-line Bid Submission

The bidders are required to submit soft copies of their bids electronically to CDAC at email address: deepucv@cdac.in

2. Assistance to Bidders:

Any query relating to the process of online bid submission may be directed to the telephone number & e-mail: deepucv@cdac.in

3. *In case of any doubts and/ or queries pertaining to technical solution, specifications terms and conditions of the tender, Qualified Bidders selected through RFP this process may send their queries in writing through e-mail (deepucv@cdac.in). The queries, requests for clarifications etc. must be sent within 4-5 days from the date of publication of the Tender. The bidders are requested to go through the entire tender document thoroughly, before raising any query. C-DAC, Pune shall address the queries raised by the bidders. The replies to queries would be made available on C-DAC's web site in due course of time. All the queries, doubts, clarifications etc. must be submitted in xls format only as below:*

Name of the bidder:				
Sl. No.	Section / Page No	Clause Reference	Query from bidder	C-DAC Response



SECTION I: INSTRUCTIONS TO BIDDERS (ITB)

1. Introduction:

Centre for Development of Advanced Computing (C-DAC), an autonomous scientific society of Ministry of Electronics and Information Technology (MeitY), Government of India, was established in 1988, to develop indigenous ICTE solutions for the country to meet its societal and scientific obligations including building supercomputing systems. It has been leading the country's efforts in developing and deploying various generations of PARAM series of Supercomputers in India and abroad.

The National Supercomputing Mission (NSM) initiated by the Government of India aims towards achieving the goals of attaining self-reliance in supercomputing and problem solving in various domains of scientific and technological endeavors. Under this mission, C-DAC is creating an infrastructure of family of supercomputers of varying capacities spanning a wide range. One of the key modalities in this mission is to use indigenous build approach, where in design and manufacture of substantial sub-assemblies would be carried out in India.

Under the build approach, C-DAC has designed and developed a compute server "Rudra I" as one of the sub-assembly required for Supercomputer. A system based on Rudra server has been working and operational at C-DAC and displayed as Technology Demonstrator. Rudra Server has been benchmarked with HPL, HPC application benchmarks and cloud benchmarks. The Benchmark data may be shared with the selected shortlisted bidders of the RFP after they sign the NDA attached in Annexure D

C-DAC has already selected a partner to manufacture Seven Thousand Rudra I servers and entered into a Contract for availing Electronics Manufacturing services (EMS) to assemble, test and deliver Rudra I Servers under NSM HPC Projects to various institutions of higher learning and premiere research institutions in India, funded by Government of India.

The market for servers, beyond NSM projects, is very large. According to a commissioned survey Indian market for server reached a value of US\$ 1,195 Million in 2021, growing at a CAGR of 9.3% during 2016 - 2021. In 2021, India white box server accounted for a share of 19.2% of the overall server market in India. Growing at a CAGR of 18.6% during 2016-2021, the India white box server market reached a value of US\$ 229.5 Million in 2021. Looking forward, the market is expected to reach a value of US\$ 283 Million by 2022, growing at a CAGR of 22.1%.

With the Government of India's aggressive push towards complete digitization of transactions and services, the demand for data centers and hyper-converged infrastructures is poised to grow exponentially. Needless to say, a completely indigenous server like RUDRA1 which is designed, developed and manufactured in the country will have an exceptionally greater acceptance and have an edge in "security conscious" environments and businesses. The fact that C-DAC is involved in HPC sector for the past Thirty years will bring with it, the technological prowess to come out new server designs to meet the changing demands of the markets and provide a robust business continuity plan for RUDRA series of servers.



In order to achieve the true market potential of Rudra I server's matured technology, C-DAC plans to expand the activity of manufacturing and marketing of Rudra I servers serving beyond the limits of NSM projects through its Technology Transfer to Licensee/s.

1. Accordingly, C-DAC had invited bids vide Tender No: CDACP/RUDRA-TOT-PARTNER/22-23/363 from Qualified Bidders to select through a transparent RFP process for transferring the Technology of Rudra I Servers including its design and process instructions for assembly, manufacturing and testing to enable selected partners to supply Rudra I Servers to customers outside NSM projects. Qualified Bidders selected through RFP process were eligible to submit their bids against 1st Rudra 1 TOT tender. The duly constituted Evaluation Committee (TEC) had evaluated the bids of selected qualified Bidders. The evaluations were done on financial parameter, as the bidders had already been selected after evaluation of the Technical parameters during RFP process. Tender No: CDACP/RUDRA-TOT-PARTNER/22-23/363 stated that C-DAC reserves the right to award the ToT contract to maximum three eligible partners and only two selected qualified bidders had been found eligible and the Technology Transfer has been awarded to M/s. Kaynes Tech & M/s. VVDN at the same financial basis. Consequently CDAC is looking for the third/multiple partner(s), who will qualify for the same Technical criteria and offer the Financial offer at least at the same level of the first two partners viz. M/s. Kaynes and M/s. VVDN.

Centre for Development of Advanced Computing (C-DAC) invites offer from Bidders, who are Indian companies and complies with has relevant manufacturing set up mentioned in the Para 2 of Section IV to select the third partner for transfer of Rudra I Server technology (ToT) from C-DAC and to subscribe, acquire licenses to assemble, manufacture, test Rudra I Server, to enable them to market and sell in market (outside NSM projects) including the world market.

2. Objectives

- To implement Transfer of technology of Rudra I Server developed by CDAC with a focus on making it available to Indian industries, users and society at large in the shape of finished product competitively priced commercial products.
- To ensure that no IPR violation is caused by any party
- To ensure that commercial interests of all stakeholders are adequately addressed.
- To fulfil Manufacturing and Marketing potential beyond NSM Projects for Rudra I Server Technology, developed and registered by C-DAC.
- Government of India's PLI scheme will help to proliferate Rudra I Technology in Indian Manufacturing eco system. MeitY has notified the Production Linked Incentive Scheme for IT Hardware including Servers vide Gazette Notification No. CGDL-E-03032021-225613 dated March 03, 2021 extending for a period of four (4) years. Also as per Government of India policy preference is given to Make in India servers in public procurement. CDAC design would guarantee a layer of security trustworthiness in Rudra server.



- To realize 'Design in India' and 'Make in India' mission of the nation in Server domain, CDAC design would increase 'local value additions' in Rudra server manufactured
 - To continue improving and upgrading Rudra Server designs to fulfil needs of Indian Server Market.
 - To provide testing grounds for R&D talents and keep abreast and participate in technological developments in related application sectors for servers.
 - To lay strong foundation for long term Server product roadmap of C-DAC through the Technology Transfer experience of Rudra I Server.
 - To focus on white Box Rudra Servers in Indian Data Centre market having huge potential and which is already attracting significant investments. And also to extend applications of Rudra I for these applications.
3. Through this RFP C-DAC intends to identify one prospective partner who would meet the technical and financial criteria, as stipulated in this document, for being able to manufacture Rudra I servers using the transferred technology and market them at competitive prices to the prospective customers.

4. Contact information:

Mr. Deepu C. V. - Joint Director, HPC-Tech Business Activities,
Centre for Development of Advanced Computing (C-DAC)
Innovation Park, Panchavati, Pashan Road,
Pune 411008, Maharashtra, INDIA
Tel No.: +91-20-25503671-76/ 2586 8086, E-mail: deepucv@cdac.in

5. Two bid System:

The Two e-bid systems will be followed for this tender.

I: **e-Packet No. 1: "Technical e-Bid"**

II: **e-Packet No. 2: "Commercial e-Bid"**

The documents pertaining to Technical Bid and Commercial Bid must be submitted electronically to deepucv@cdac.in.

5.1. e-Packet No. 1: "Technical e-Bid":

The bidder must upload the copies of pdf documents through e-Packet – 1, as listed below:

- a. Covering letter, as per format given in **Annexure – A**.
- b. Authority letter, as per format given in **Annexure – B**.
- c. Scanned copy of Demand Draft / On-line receipt towards tender fee of Rs. 1000/- (Rupees One Thousand Only) (Non-refundable / Non-Exempted) drawn in favour of C-DAC payable at Pune. However, the original of Demand Draft must be submitted to C-DAC at address given at para 2 above, on or before the Due Date& Time of the Tender Submission.



- d. An undertaking towards Earnest Money Deposit (EMD), as per format given in **Annexure – C**.
- e. Compliance statement indicating the compliance of the scope of Technology Transfer, etc. as per the tender specifications.
- f. A photo copy of un-priced commercial bid (Prices Blocked). C-DAC reserves the right to reject the bid in case of discrepancy is observed in the un-priced commercial bid and the actual commercial bid.

Note: C-DAC reserves the right to reject the bid if any of the above listed document/s is not submitted.

5.2. Online – e-Packet No. 2: “Commercial e-Bid “shall contain: (.xls BoQ file only)

Duly filled Commercial Bids as per format given in Section–V, complete in all respects with name, designation, email id and contact no.

6. Both the technical bid and commercial bid should be addressed to:

Mr. Deepu C. V. - Joint Director, HPC-Tech Business Activities,
Centre for Development of Advanced Computing (C-DAC)
Innovation Park, Panchavati, Pashan Road,
Pune 411008, INDIA. Phone: 020-2550 3604-5.

7. Last Date of submission/ uploading:

The on-line bids, complete in all respect should be submitted to deepucv@cdac.in on or before the date given in tender schedule. The bidders are advised to submit the documents at least one day before the last date for uploading of documents, in order to avoid the possibilities of any last-minute surprises. C-DAC does not take any responsibility towards technical snags pertaining to connectivity issues. It may please be noted that the originals of Demand Drafts, Bank Guarantees etc must be submitted on or before last date of submission of bids. C-DAC shall not be responsible for any postal delays or any other reason, for on-receipt of the tender fees/ EMD etc. in the specified time and resulting in disqualification / rejection of the bid.

8. Opening of Technical e-bids:

The Technical e-bids will be opened - online on the date given in tender schedule.

The representatives of bidders are welcome to attend the opening of the 'on-line' technical e-bids via video conferencing mode. (Link will be provided appropriately)

Note: Please do not put "Commercial Bid" (prices quoted) in the technical bid e-packet. If the price quoted is submitted / leaked with technical bid, the tender will be rejected at the sole discretion of C-DAC.

9. Opening of commercial e-bids:

Commercial e-bids of the qualified bidders only will be opened. The decision of C-DAC's bid evaluation committee in this regard will be final and binding on bidders. C-DAC's bid evaluation committee will be authorised to take appropriate decision on minor deviations, if any. The date, time and venue of opening of commercial bids will be



informed later to the qualified bidder. The representatives of bidders are welcome to attend the opening of the `on-line` commercial e-bids via video conferencing mode.

The bidder's name, bid prices and other appropriate details will be displayed at the time of the opening of the commercial bids.

(END OF SECTION I)



SECTION II: GENERAL CONDITIONS OF CONTRACT (GCC)

1. The bidder who has been shortlisted must sign an NDA (Non-Disclosure- Agreement) with C-DAC for benchmarks. The format of the NDA document is as per Annexure – D
2. “Technical Specification of the Rudra I Server” is given below.
3. The Bidders would submit Technical and Financial bids as per the Tender Terms & Conditions
4. License Fee/s and Base rate for Royalty fee payable by the bidders has been fixed by the ToT committee of C-DAC.
5. Rudra1 Technology Transfer License Fee and Royalty Fee Structure Process
 - 5.1. One time Technology Transfer License Fee will be charged to the selected Bidder after its acceptance of the terms and conditions, valid for three years.
 - 5.2. After payment of 50% of Technology Transfer License Fee all Technology Transfer documents would be transferred to the selected partner.
 - 5.3. The selected partner will be allowed to start marketing and sales of Rudra1 after payment of rest 50% of Technology Transfer License Fee.
 - 5.4. The Technology Transfer License Fee for Rudra 1 would be Rupees 1 crore for 3 years from the date of Transfer of the Technology
 - 5.5. Royalty Fee will be charged for each sale of Rudra 1 server
 - 5.6. Base Royalty Fee for Sales of each unit of Rudra 1 would be 7% (plus GST) of the Sales Value (Net of Taxes) of Rudra 1
 - 5.7. The period for incentive will be counted from the date of sale of first Rudra 1 server by the Bidder.
6. An incentive structure is accompanied with the Technology Transfer License Fee and base rate of Royalty Fee. This is done to reward the partner by returning the full amount of TOT License Fee to the partner who is able to manufacture and market minimum number of Rudra1 Servers.

Sales	Incentive to be adjusted with Royalty payment every quarter
A. Cumulative Sales up to 25 Crore (Net of Taxes)	Accrued Incentive calculated on Cumulative Sales
5 crore	10 Lakhs
10 crore	25 Lakhs
15 crore	50 Lakhs
20 crore	75Lakhs
25 crore	1 Crore
B. For additional sales over 25 Crore	Additional incentive calculated on additional sales over 25 Crore
For each additional 5	7.5 Lakhs



Crore sale	
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7. The Royalty Fees proposed by the bidders who qualify the technical criteria shall be considered by the ToT committee of CDAC.
8. The proposals will be evaluated on the basis of the royalty per server proposed by the bidders and compared with the royalty finalized with the existing partners and will be considered for the award of the license.
9. **Highest rate quoted for royalty fees by the bidder will be considered for the award of the license. In the event of more than one qualified bidder quotes the same royalty the bidder who had submitted the bid earlier would be considered.**
10. The draft ToT agreement is attached this RFP document in Annexure E.
11. Upon agreement by the selected partner regarding the terms and conditions of the agreement, the agreement may be signed and after payment of 50% of the TOT license fee (First Instalment) all Technology Transfer data/documents would be transferred to the selected partner. 50% of the remaining payment (Second Instalment) shall be done by the selected partner to be allowed to start marketing and sales of Rudra1.
12. As detailed above in addition to the Transfer of Technology fee, the partner with the valid TOT license agreement shall pay a Royalty to C-DAC for every Rudra I server manufactured as detailed above. The payment of Royalty Fee will be paid in every quarter by the TOT partner along with GST invoices.
13. The Technology Transfer fee is non-refundable.
14. The partner cannot manufacture and/or sell the Rudra1 servers unless and until 100 % of ToT license fee is paid to C-DAC.
15. The TOT partner cannot transfer the technology further to any third party without written permission of C-DAC.
16. C-DAC reserves the right to forfeit the ToT charges paid by the partner in case of breach of agreement by the partner. The decision of C-DAC in this matter shall be final.
17. C-DAC reserves the right to award the contract to one more eligible partner on the basis of Royalty charge offered.
18. Validity of one time Technology Transfer fee & Renewal of TOT agreement
 - a. Payment of one time Technology Transfer fee (full payment) grants the partner to manufacture and sell Rudra I server for a period of 03 years from the date of signing of the agreement.
 - b. For the period beyond 3 years the partner should renew the ToT license agreement before expiry of one time Technology Transfer license period by paying the TOT support charges as decided by C-DAC.
 - c. If the renewal is initiated after the stipulated period, a fresh TOT agreement needs to be signed by the company based on the conditions prevailing at that time.

19. Special conditions:



- 19.1. C-DAC reserves the right to market Rudra1 directly to Strategic sectors and place orders of Rudra1 to Licensee at a mutually agreed price.
- 19.2. The Licensee must not refuse to accept order of Rudra1 from CDAC to satisfy CDAC customers and Licensee will not give higher priority to other buyers over C-DAC.
- 19.3. C-DAC will set maximum price cap for Rudra1 for sales in India after discussions with all the Licensees.

20. Amendment to Bidding Documents

- 20.1. At any time prior to the deadline for submission of bids, C-DAC may, for any reason, whether on its own initiative or in response to the clarification request by Bidders, modify the bid document.
- 20.2. The amendments to the tender documents, if any, will be notified by release of Corrigendum Notice on www.cdac.in/tender against this tender. The amendments/ modifications will be binding on the bidders.
- 20.3. C-DAC at its discretion may extend the deadline for the submission of bids if it thinks necessary to do so or if the bid document undergoes changes during the bidding period, in order to give Qualified Bidders selected through RFP process time to take into consideration the amendments while preparing their bids.

21. Preparation of Bids

Bidder should avoid, as far as possible, corrections, overwriting, erasures or postscripts in the bid documents. In case however, any corrections, overwriting, erasures or postscripts have to be made in the bids, they should be supported by dated signatures of the same authorized person signing the bid documents. However, bidder shall not be entitled to amend/ add/ delete/ correct the clauses mentioned in the entire tender document.

22. Period of validity of bids

- 22.1. Bids shall be valid for minimum 120 days from the date of submission. A bid valid for a shorter period shall stand rejected.
- 22.2. C-DAC may ask for the bidder's consent to extend the period of validity. Such request and the response shall be made in writing only. The bidder is free not to accept such request without forfeiting the EMD/BG. A bidder agreeing to the request for extension will not be permitted to modify his bid.

23. Submission of Bids- Online :

The Bid documents shall be neatly arranged and all pages should be numbered. They should not contain any terms and conditions, printed or otherwise, which are not applicable to the Bid. **The conditional bid will be summarily rejected.** Insertions, postscripts, additions and alterations shall not be recognized, unless confirmed by bidder's signature.



24. Evaluation of Bids:

The duly constituted Evaluation Committee (TEC) shall evaluate the bids. The TEC shall be empowered to take appropriate decisions on minor deviations, if any.

The evaluation will be done on financial parameter, as the bidders have been already selected after evaluation of the Technical parameters during RFP process.

25. Financial Parameter– Quoted Price

Sr No	Detail	In %
1	Royalty Fee in % on the Sales value for manufacture and marketing of each unit of Rudra1 Server (minimum 7%)	

26. Award of contract

- C-DAC reserves the right to enter into the Technology Transfer contract of Rudra1 Server with the qualified bidder/s.
- C-DAC reserves the right to enter into Technology Transfer contract of Rudra1 Server.
- The decision of C-DAC shall be final for Technology Transfer contract of Rudra1 Server with the qualified bidder.
- C-DAC reserves the right and has sole discretion to reject any bid.
- The selected Bidder will have to sign the Technology Transfer Agreement as per Annexure E, within one month of information from C-DAC.
- Failure on the part of the successful bidder to agree with the Legal Agreement and Terms & Conditions of the RFP shall constitute sufficient grounds for the annulment of the Technology Transfer contract of Rudra1 Server with the qualified bidder.

27. C-DAC's Right to amend /cancel

C-DAC reserves the right to amend the eligibility criteria, commercial terms & conditions. C-DAC reserves the right to cancel the entire tender without assigning any reasons thereof.

28. Corrupt or Fraudulent Practices

It is expected that the bidders who wish to bid for this project have highest standards of ethics. C-DAC will reject bid if it determines that the bidder has engaged in corrupt or fraudulent practices while competing for this contract; C-DAC may declare a vendor ineligible, either indefinitely or for a stated duration, after being awarded a contract if it at any time determines that the vendor has engaged in corrupt and fraudulent practices during the award / execution of contract.



29. Interpretation of the clauses in the Tender / Contract Document

In case of any ambiguity/ dispute in the interpretation of any of the clauses in this RFP Document, the interpretation of the clauses by Director General C-DAC shall be final and binding on all parties.

(END OF SECTION II)

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SECTION III: SPECIAL CONDITIONS OF TOT RFP FOR Rudra1 Server (SCC)

1. Completeness Responsibility:

Notwithstanding the scope of work stated in bid document the responsibility of completion of supply of the Server by the TOT partner to its own customers will be solely on the TOT partner.

2. Warranty:

- a. The TOT partner warrants that all the Integrated Circuit devices, connectors and passive components to be used for assembly would be new, unused and would be procured from original manufacturers or from authorized distributors only.
- b. The bidder warrants that the servers will be manufactured in accordance with the applicable Specifications and shall be free from defects in workmanship for a period of [Thirty Six (36) months] from the date of delivery. In addition, the bidder warrants that Production Materials are in compliance with Environmental Regulations.

3. NSM-BRANDING and packing boxes:

The TOT Partner would be required to carry out the RUDRA1 Branding' in addition to their own branding on the front and back of server enclosures as per the specification (Specifications / drawings will be provided by C-DAC.

(END OF SECTION III)



SECTION IV: SCOPE OF Technology Transfer

1. Details about the Server:

C-DAC has designed state-of-the-art Server Platform Rudra based on Intel Cascade Lake Processor. There are two SKUs of Rudra Server designed for following form factors.

1. 1U ½ Width (2 servers in 1 U) with centralized power supply from third party
2. 2U ½ Width (2 servers in 2 U) with centralized power supply from third party
3. 2U form factor with in-built power supply from third party

The ToT partner may customize the above models on their own, as per market requirement.

The 1U ½ Width Server Platform assembly includes following PCBAs

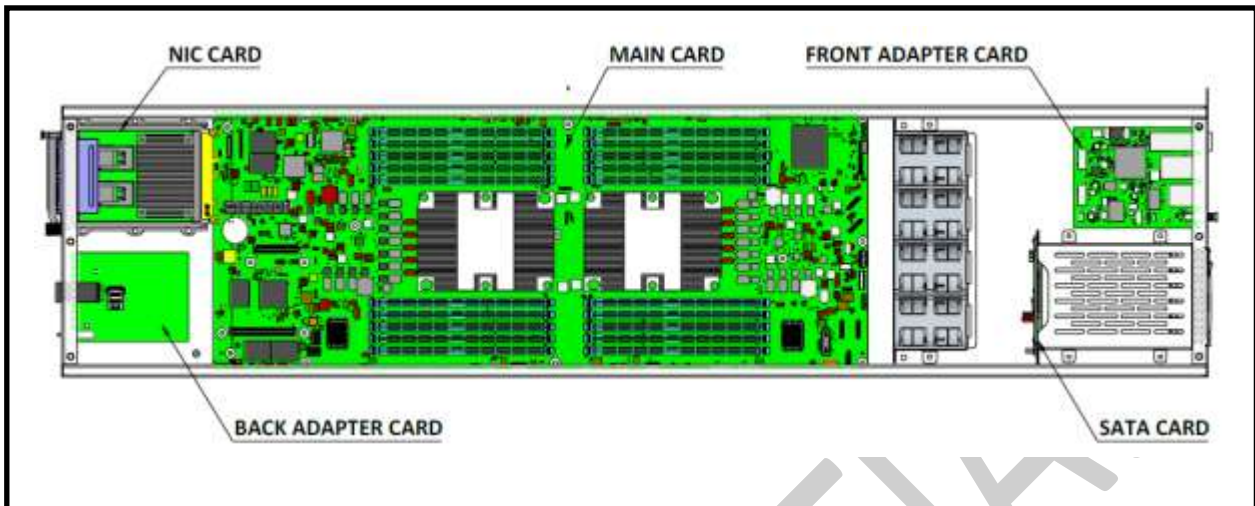
1. Mother Board
2. Front Adaptor Card (FAC)
3. SSD Adaptor Card (SAC)
4. 1U-Back adaptor Card (1U-BAC)
5. Facia card (FC)

The 2U ½ Width Server Platform assembly includes

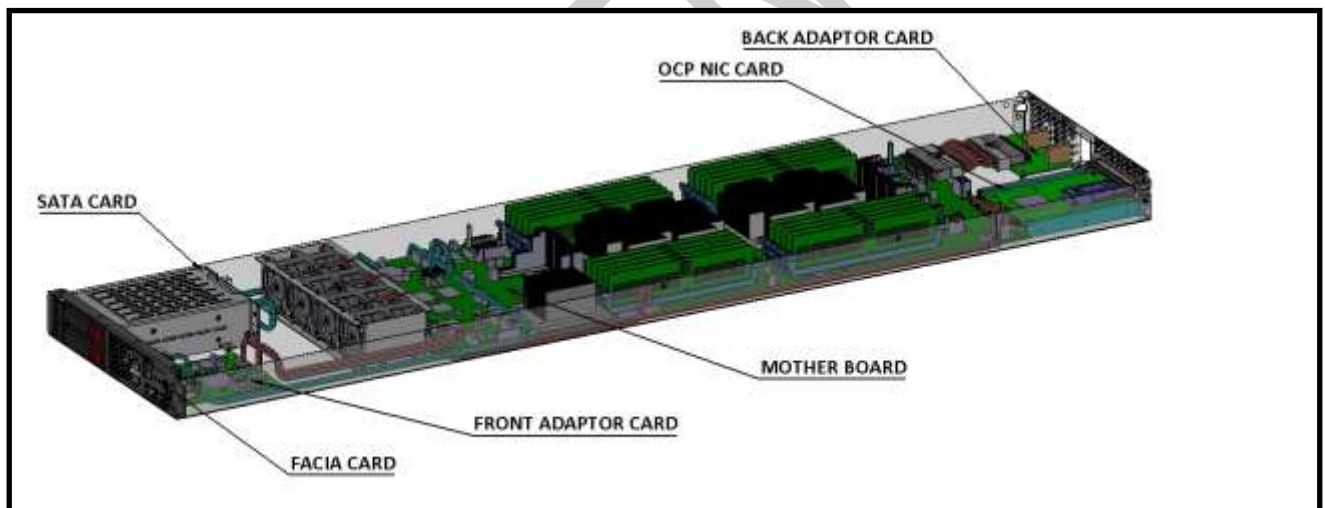
1. Mother Board
2. Front Adaptor Card (FAC)
3. SSD Adaptor Card (SAC)
4. 1U-Back adaptor Card (1U-BAC)
5. Facia card (FC)
6. 2U-Back adaptor Card (2U-BAC)
7. F-Riser Card (FRC)
8. B-Riser Card (BRC)

The Server with in built power supply Platform assembly includes

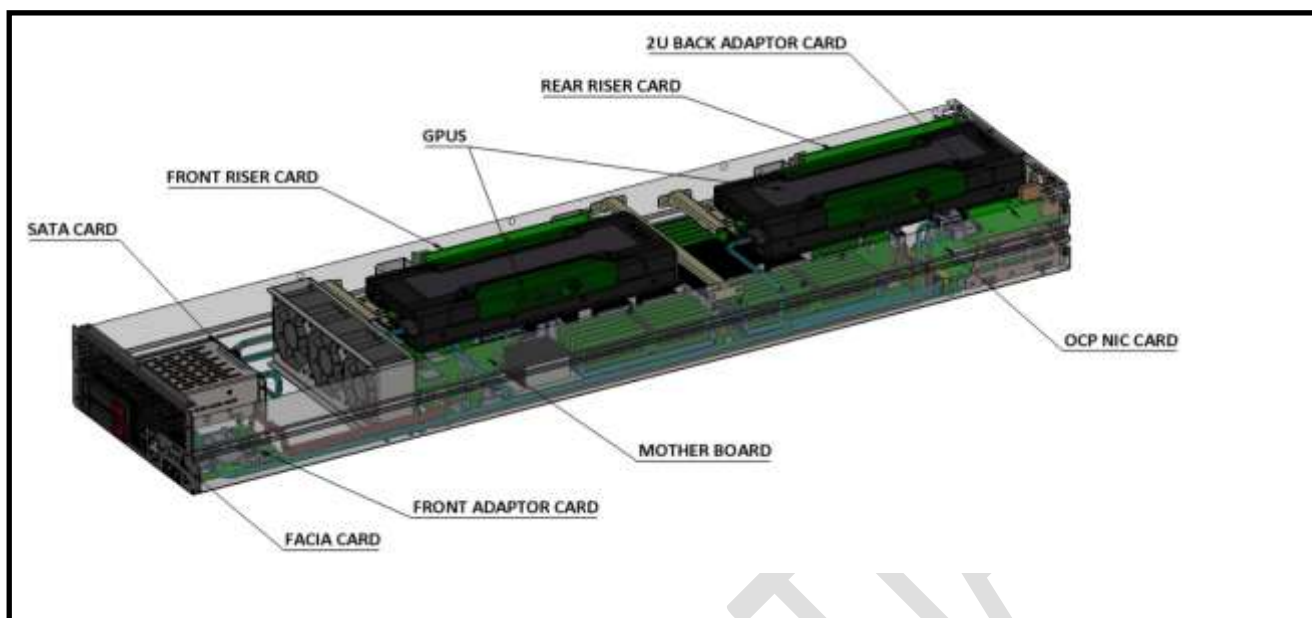
1. Mother Board
2. Front Adaptor Card (FAC)
3. SSD Adaptor Card (SAC)
4. Power distribution card
5. Facia card (FC)
6. F-Riser Card (FRC)
7. B-Riser Card (BRC)



Rudra assembly for 1U



Rudra assembly for 2U



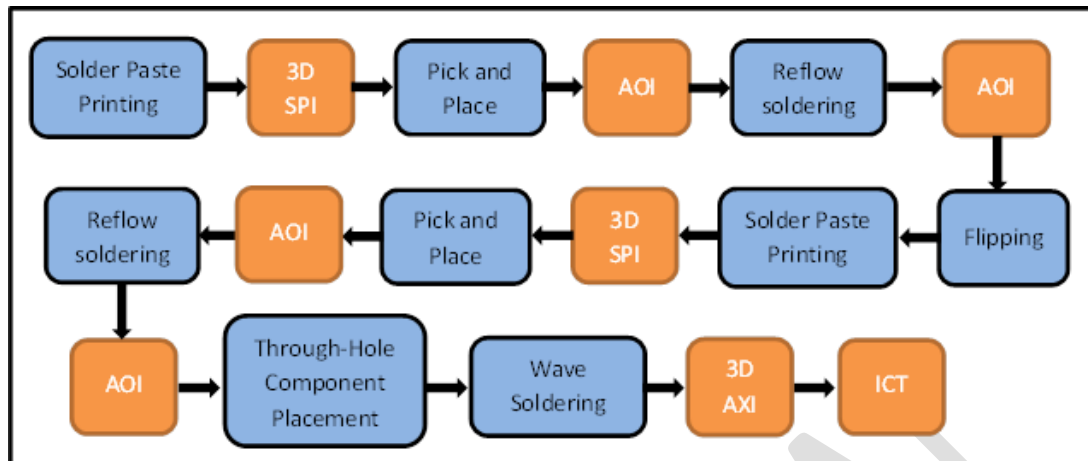
2. Brief of Scope of Manufacturing work by the partner:

- a. PCBA Manufacturing
- b. Mechanical Chassis Manufacturing including plastic parts
- c. Preparation of Manufacturing and test jigs and tools required
- d. Fan and Cable Assembly
- e. Server Assembly
- f. First Article Inspection report
- g. Server Functional Testing as per the C-DAC provided procedure
- h. Burn-in Test
- i. Traceability requirement
- j. Packaging and supply of tested servers on site
- k. Report submission to C-DAC
- l. Compliance Certification
- m. Provide RMA support which included Repair or Replacement with fixed turnaround

a. PCBA Manufacturing

C-DAC provide the Gerber data for all the PCBs to the ToT partner, after which the ToT partner will carry out following jobs for each type of PCB.

- BOM Validation and DFM feedback for design data
- Derating Evaluation of the BoM
- Component procurement
- PCB fabrication
- PCBA Manufacturing



- i. Incoming Material Inspection (IQC) Solder Paste Printing
- ii. Solder Past Inspection (SPI) with 3D SPI Machine
- iii. SMD Component Placement
- iv. Automated Optical Inspection (AOI) with 3D AOI Machine
- v. Reflow Soldering
- vi. Automated Optical Inspection (AOI) with 3D AOI Machine
- vii. Repair
- viii. Through-Hole Component Placement
- ix. Wave Soldering
- x. Automated 3D X-Ray Inspection: Automated 3D X-Ray Inspection is required to be done for 100% of PCBAs for first batch till consecutive 100 nos of a particular PCBA found to be 100% defect free in the X-RAY inspection. Subsequently 3D XRay inspection is to be done on randomly selected 10% of PCBAs of each type. If any defect found during sampled X-RAY inspection for a batch, full batch is required to be X-Ray inspected and corrective action is to be taken.
- xi. After every inspection step, corrective action should be taken if a problem/fault
- xii. Design Manufacturing jigs for ICT for all the required PCBAs and PCBA ICT Testing
- xiii. IC Programming: VRs, CPLD, system BIOS, Firmware BIOS. Each PCBA needs to be tested with functional or electrical test as required. Minimum Two Test jigs required -One for testing Motherboard and One for associated boards. These test jigs are to be created from initial golden board samples. Test jigs to be created by partner with power cable.
- xiv. Visual Inspection
- xv. PCBA Cleaning

b. Mechanical Chassis Manufacturing



C-DAC shall provide the Mechanical Enclosure Design data of all three models to the TOT partner. The Mechanical Chassis will be manufactured by the Service partner as per the design and C-DAC provided data.

- i. The Mechanical designs for all three models enclosures will be provided by C-DAC. The required changes if required for fabrication will be done TOT partner.
 - ii. The Mechanical Enclosure for the Server Platform should be manufactured using SGCC galvanized steel material.
 - iii. The prototype assembly, along with enclosure and Server Platform PCBAs for first 5 will be submitted to C-DAC for Rudra sales approval.
- iv. The mechanical tools and jigs required for manufacturing to be made by Tot Partner.

c. Fan and Cable Assembly

The engineering includes the required fans, Cable assembly and Heat sinks for FET drivers. Some of the heat sinks are to be manufactured; corresponding heat sink design drawings will be shared.

d. Server Assembly

TOT partner will assemble required number of 1U and 2U servers as per Server Assembly procedure which will be provided by C-DAC. Processor, Memory, Assembly along with tool requirement shall be as per guidelines given by C-DAC.

e. Server Functional Testing

Once Server Assembly is complete Service partner will carry out Functional test for both the SKUs. Test programs will be provided by C-DAC.

Burn-in Test

Bidder is required to run burn-in test for each server supplied for 24 hrs without any failure. Failure report should be submitted along with corrective action taken.

C-DAC will provide set of system benchmark tests for evaluating reliability and stability of server. The log report of the burn-in test with successful test run should be provided with each server.

f. Packaging and supply of tested servers on site and RMA support

Tested Servers will be packed and Supplied on the site within India.

Packaging should be done adhering to norms for following

- Material for packaging should be ESD safe and RoHS compliant
- The packaging should be Shock proof/resistant
- The package should carry Labels for: Energy safe, WEEE, Recycle, Direction



Packaging should be custom designed for Rudra servers with industry standard materials like

- anti-static bags,
- air-cellular cushioning material
- polyethylene foam
- Card board box (Min 5ply or higher as per requirement)
- Crating

Bidder should prepare, print stickers/labels with brand Identification of Rudra provided by C-DAC. Finalization of packaging and branding should be finalized in consultation with C-DAC.

RMA support also will be provided by the bidder for 3 Years from the delivery date as per warranty services clause in this document.

g. Report Submission:

TOT Partner will submit all the report for first 5 RUDRA1 server mentioned below to C-DAC

- Quality check
- Functional test reports
- Any other reports identified while kick-off meeting

h. Compliance Certification

Service partner will carry out the BIS & FCC for tested Server Platform

i. Other requirements:

The successful bidder shall enter into an NDA with Intel to the effect that the Manufacturing Advantage Services (MAS), guides etc., released to them by Intel is treated as confidential.

3. Deliverables from C-DAC to Successful TOT Partner :

- a. Layer-stack and Substrate material details for all the PCBs in the Server Platform
- b. Bill of Material (BOM) for all the PCBs in the Server Platform
- c. Data sheets for BOM components if required
- d. PCB schematics and Gerber data for all the PCBs in the Server Platform
- e. 1U and 2U Mechanical Design for Enclosures
- f. Firmware binaries for BIOS, BMC, EPLDs, Power Controllers. **The royalty fee for BIOS is to be paid to AMI (Approx. USD 10 per server) by the ToT partner per server.**
- g. Testing procedure and test software/firmware for assembled servers
- h. Any other test setup like racks, programming tools, power supply, PCIe cards for testing required for testing of the servers are to be purchased by ToT partner

4. Handholding Support from C-DAC to Successful TOT Partner :



- a. 2 Man-Month of Free ‘Hand Holding Support from CDAC’ excluding travel and boarding expenses, which will be borne by the TOT Partner)
- b. Additional ‘Hand Holding Support from CDAC’ will be payable at the rate of INR 5 Lakh per Man Month basis which will be borne by the TOT Partner excluding travel and boarding expenses. Which also will be paid by TOT partner.

5. Report to be submitted by successful TOT Partner to C-DAC for authorization of marketing Rudra 1 server.

a. Yield Targets and Production Reliability Quality Testing

1) Yield Targets:

Yield targets are defined to improve the quality and reliability of the product. It also will lead to reduced pricing in long run. The test stations are defined as SPI, pre SMT AOI, Post SMT AOI, AXI, ICT, TS1, TS2, TS3.

Prototypes are 5 numbers which will be sent to CDAC with test results of SPI, Pre SMT AOI, Post SMT AOI and AXI. CDAC will assists in testing of these prototypes.

Tests	Pilot Build
SPI	95%
Pre SMT AOI	95%
Post SMT AOI	95%
AXI	100%
ICT	95%
TS1	90%
TS2	90%
TS3	90%
Overall First Pass Yield	90%

TS1: Basic diagnostics + Short stress testing (tested mother board and other PCBAs individually) (Test on the Zig)

TS2: Basic functional testing at System Level in the final build as per configuration of order.

TS3: Long Burn-in testing (24Hr) at System Level in the final build as per configuration of order.

(END OF SECTION IV)



SECTION V

Financial BID

Sr No	Detail	In %
1	Royalty Fee in % (Minimum 7%) on the Sales value of each unit of Rudra1 Server	
2	GST	

Authorized Signatory:

Name and Title of Signatory:

e-mail:

Mobile No:



ANNEXURE A– COVERING LETTER

Date:

To:

The Director General,
Centre for Development of Advanced Computing (C-DAC)
Innovation Park, Panchavati, Pashan Road,
Pune - 411008 Maharashtra, INDIA

Subject: Submission of bid for Manufacture, Assembly and Supply of Rudra Server

Dear Sir,

We, the undersigned, offer our bid for Technology Transfer royalty fees of the RUDRA 1 SERVERS to C-DAC, in response to your ~~Tender~~ RFP No **CDACP/RUDRA-TOT-PARTNER/23-24/370**. We are hereby submitting our proposal for same, which includes Technical bid and the Financial Bid on www.eprocure.gov.in

We hereby declare that all the information and statements made in this bid are true and we accept that any misinterpretation contained in it, may lead to our disqualification.

We hereby certify that my/ our firm has not been disqualified and / or blacklisted by any Office/ Department/ Undertaking of the State Government / Central Govt. of India, PSU/ Autonomous Body of Government of India, at the time of submission of this bid.

We agree to abide by all the terms and conditions of the tender document, including corrigenda. We would hold the terms of our bid valid for 120 days as stipulated in the tender document.

We understand you are not bound to accept any Proposal you receive.

The undersigned is authorized to sign this bid document. The authority letter to this effect is enclosed.

Yours sincerely,

Authorized Signatory:

Name and Title of Signatory:

e-mail:

Mobile No:



ANNEXURE B– AUTHORITY LETTER

Date:

To:

The Director General,
Centre for Development of Advanced Computing (C-DAC)
Innovation Park, Panchavati, Pashan Road,
Pune - 411008 Maharashtra, INDIA

Subject: Authority Letter

Reference: RFP No CDACP/RUDRA-TOT-PARTNER/23-24/370

Dear Sir,

We, M/s _____ (Name of the bidder) having registered office at _____ (address of the bidder) herewith submit our bid against the said tender document.

Mr./Ms. _____ (Name and designation of the signatory), whose signature is appended below, is authorized to sign and submit the bid documents on our behalf against said RFP

Specimen Signature:

The undersigned is authorised to issue such authorisation on behalf of us.

For M/s _____ (Name of the bidder)

Signature and company seal

Name

Designation

Email

Mobile No.



ANNEXURE C- EMD Undertaking

Date:

To,
The Executive Director,
Centre for Development of Advanced Computing,
Pune

Subject: Undertaking as per GFR – 2017, Rule 170(iii)

Dear Sir,

We, the undersigned, offer our bid for Technology Transfer of the RUDRA 1 SERVERS, in response to your RFP no. **CDACP/RUDRA-TOT-PARTNER/23-24/370**, we are hereby submitting our proposal for same, which includes all the requisite documents. As a part of RFP requirement, we hereby submit a declaration in lieu of Earnest Money Deposit (EMD), as given below:

1. Our bid shall remain valid for 120-days from the date of submission and that we will not withdraw or modify our bid during the validity period,
2. In case, we are declared as successful bidder, we will submit the acceptance in writing within 7 days of placement of order on us.
3. In case of failure on our part to comply with any of the above said requirements, we are aware that we shall be declared as un-eligible for said tender and /or debarred from any future bidding process of C-DAC/ MeitY for a period of minimum one year.
4. The undersigned is authorized to sign this undertaking.

Yours sincerely,

Authorized Signatory:

Name and Title of Signatory:

email id:

Mobile No:



ANNEXURE – D Non-Disclosure-Agreement (NDA)

(To be signed and submitted by Shortlisted Bidders)

This Non-Disclosure Agreement is made and executed on

2023, at.

By and Between

CENTRE FOR DEVELOPMENT OF ADVANCED COMPUTING, a Scientific Society of Ministry of Electronics and Information Technology, Government of India, registered under the Societies Registration Act 1860 and the Bombay Public Trusts Act 1950 and having its registered Office at Innovation Park, Panchavati, Pashan, Pune 411 008, hereinafter referred as “C-DAC” (which expression shall unless repugnant to the context or meaning thereof be deemed to mean and include its administrators, successors and assigns)....PARTY OF THE FIRST PART

AND

, a Company/ Partnership Firm/ a Society, Registered under , having its Registered Office at

hereinafter referred to as the “ _ ” (which expression, shall unless repugnant to the context or meaning thereof shall mean and include his administrators and assigns)....PARTY OF THE SECOND PART

Hereinafter collectively referred as “Parties”, and individually as the “Party” as the case may be.

WHEREAS:

A. C-DAC has after being set up as India’s national initiative for the development of indigenous super computing technology, diversified into other advanced areas of information technology, more particularly in multilingual computing technology, network security, Geomatics, Artificial Intelligence, Data Warehousing, Data Mining, Real Times System and has offered software solutions for sector of health, power, telecom, financial services e- governance for various government agencies and organizations.

B. “.....” is engaged in

Parties are in discussion whereby disclosing Party C-DAC, would be sharing Confidential Information with the receiving Party, EMS partner, with respect to possible business transaction “Manufacturing of Rudra server” & allied activities, as stipulated in RFP No. CDACP/RFP-TOT-RUDRA/22-23/352.

NOW THEREFORE, in consideration of the mutual understandings and obligations set forth herein, the Parties agree as follows:

1. The Receiving Party acknowledges and confirms the confidential and sensitive nature of all information, data, documents and material relating to the purpose and objectives of the Proposed Activity and/or of the assets and operations of Disclosing Party’s and/or its affiliates’ businesses, undertakings and establishments: (i) that may be disclosed or made available to the Receiving Party by Disclosing Party or its directors, officers, employees,



representatives, advisors, consultants; (ii) the Receiving Party may gain or gather from any source identified by the Disclosing Party during the course of the Permitted Activity; (all the information referred to above is hereinafter referred to as the “Confidential Information”).

2. Without limiting the generality of the foregoing, Confidential Information (whether made available in written, verbal, machine recognizable, graphic, sample or electronic form) is understood to include without limitation, non-public commercial, technical or financial information, trade secrets, know-how, patent and ancillary information and other proprietary information, content, audios, videos, audio-visual content (including any conversions, transcodes, etc.), files, articles, literature, writings, documents, manuals, images, illustrations, drawings, photographs, sketches, models, design or performance specifications, analysis, compilations, studies, research, reviews, investigations, notes, business plans, business and accounting practices and records, business methods, market research, database, business tools, customer/client lists and data, enabling software, applications, source codes, object codes, websites, domain names, business processes, computer programs, processes, procedures, presentations, discussions, dialogues, scripts, creatives, media (planning and buying) plans, rates, ideas, concepts, raw and final content, design, technology, marketing, commercial knowledge, personnel/employee information, third party confidential information, information communicated or obtained through discussion, documents, negotiation and/or meeting between the Parties, any information or materials to which it gains access, directly and/or indirectly regardless of the form, format, mode or media.

3. Provided, however, that Confidential Information shall not include information which: (i) is, or becomes, publicly known, otherwise than through a wrongful act of the Receiving Party or its representatives; (ii) is in the possession of the Receiving Party prior to receipt from Disclosing Party or its representatives without an obligation of confidentiality; (iii) is independently developed by the Receiving Party, provided that it was not derived from the Confidential Information; (iv) is approved in writing by Disclosing Party for disclosure; v) is received by the Receiving party from a source not bound to the Disclosing Party or any of its affiliate by obligations of confidentiality.

4. The Receiving Party shall not disclose the Confidential Information to any other person save and except with the express consent in writing given by Disclosing Party except that the Receiving Party might share the Confidential Information to its employees/third parties providing support only for the Proposed Activity on a need to know basis. The Receiving Party, however, may disclose such part of the Confidential Information where:

(i) such disclosure is in response to a valid order of a court or any other governmental body having jurisdiction over this Agreement provided that the Receiving Party has given prior written notice to Disclosing Party forthwith it came to learn about such order

or

(ii) such disclosure is otherwise required by law, provided that the Receiving Party has given prior written notice to Disclosing Party, forthwith after it came to learn about such disclosure requirement or the demand for such disclosure and made all reasonable efforts to protect the Confidential Information in connection with such disclosure.



5. The Receiving Party shall with reference to the Confidential Information take all actions as may be necessary to:

- (i) maintain the confidentiality thereof;
- (ii) limit its use of such Confidential Information solely for the purpose of the Proposed Activity;
- (iii) avoid disclosure even to any of its employees that are not associated with the Proposed Activity except as stated in this agreement;
- (iv) avoid any dissemination or publication by any of its employees/representatives associated with the Proposed Activity; and
- (v) safeguard the Confidential Information from being accessed, modified and/or exploited in any manner by any unauthorized person
- (vi) if the Proposed Activity consists of creation of any product using the Confidential Information which is to be shared with any other person, then such product shall be shared only after prior written approval of the Disclosing Party. Such actions shall include but not be limited to maintaining appropriate non-disclosure undertakings from its employees, third party service provider/vendor providing support directly or indirectly engaged in the Proposed Activity.

6. Receiving Party may use Disclosing Party's Confidential Information in combination with other data for statistical or analytical purposes provided that such Confidential Information shall not be shared with any third party without prior written consent of the Disclosing Party.

7. In no event the Disclosing Party shall be liable to other parties for consequential, special, incidental or punitive loss, damage or expense (including without limitation, lost profits, opportunity costs, etc.) even if the Party has been advised of their possible existence, if the loss, damage or expenses etc. is without mens rea and beyond reasonable control.

8. No license from either Party hereto is hereby granted or implied, by estoppels or otherwise, under any trademarks, copyrights, patents (existing or future) or for any use of Confidential Information except such use which is expressly contemplated by this Agreement.

9. Each Disclosure warrants that it has right to disclose the Confidential Information.

10. Nothing in this Agreement is intended to grant any rights to either party under any patents, copyrights, trademarks and designs of either Party nor shall this Agreement grant Receiving Party any right in or to the Confidential Information except as expressly set forth herein. No license grant or intellectual property rights are provided under this Agreement and all intellectual property rights are owned by the Disclosing Party.

11. The Receiving Party and its representatives acknowledge that neither Disclosing Party nor any of its representatives make any express or implied representation or warranty as to the accuracy or completeness of the information supplied. In addition, neither Disclosing Party nor any of its representatives shall have any liability to the Receiving Party or any other person in connection with the use of the information.



12. The Receiving Party hereby agrees to indemnify and hold harmless Disclosing Party, its parent, affiliates, subsidiaries, associates and group entities and their respective directors, officers, employees and representatives from and against any direct damage, loss, cost or liability (including all expenses and costs of enforcing rights under the Agreement) arising out of or resulting from:

(i) any use or disclosure by the Receiving Party of Confidential Information in violation of the Agreement;

(ii) any leakage of the Confidential Information at the end of the Receiving Party or its employees and/or its representatives; and/or

(iii) breach or violation of any of the other covenants herein.

13. The Receiving Party will, within reasonable time upon the receipt of written request from the Disclosing Party, deliver to Disclosing Party, the documents comprising the Confidential Information or any part thereof and will destroy any copies, notes, or extracts thereof, retaining only one copy for archival purpose thereof, except that any portion of the Confidential Information that consists of analysis and any written Confidential Information not requested for destruction and return, shall be retained and kept by the Receiving Party subject to the terms of this Agreement, or upon Disclosing Party's written request be destroyed.

14. The obligation to maintain confidentiality of Disclosing Party's Confidential Information shall survive the termination of this Agreement for a period of 4-years. The agreements, obligations, warranties and undertakings on the Receiving Party's part set out in this Agreement will continue in full force for a period of 4years from the Execution Date of this Agreement. Even after the expiry of validity of this agreement, the receiving party will not reveal any of the information received under this agreement.

15. The provisions of this Agreement are necessary for the protection of the business and goodwill of Disclosing Party and are considered by the Receiving Party to be reasonable for such purpose. The Receiving Party hereby acknowledges that breach of this Agreement, unauthorized disclosure or use of Confidential Information will cause irreparable harm, significant injury and substantial damages to Disclosing Party that may be difficult to ascertain. Accordingly, the Receiving Party agrees that in addition to other remedies that may be available to Disclosing Party under law and/or in equity and/or under this Agreement, Disclosing Party shall have the right to seek and obtain immediate injunctive relief to enforce an obligation under this Agreement.

16. The Receiving Party hereby represents warrants and undertakes that in performing its obligations or exercising its rights etc. under this Agreement, the Receiving Party and its employees shall abide with all applicable laws.

17. This Agreement shall be governed by the laws of India. Any dispute, difference or claim related to or arising under, out of or in connection with this Agreement shall be first place, in good faith, resolved amicably.

18. If the dispute is not resolved within 30 days after such dispute arises, the dispute shall be referred to Arbitration as per provisions of Arbitration and Conciliation Act, 1996 including any rules, amendments, revisions or ordinances issued there under. The



Arbitration proceeding shall be in English language and venue of the Arbitration shall be Pune. The decision of the Arbitrator shall be final and binding on both the parties. The courts in Pune shall be exclusive to decide on issues/disputes, if the same is beyond the ambit of Arbitration.

19. The obligations and duties imposed by this Agreement regarding Confidential Information may be enforced by the Discloser of such confidential information against any and all recipients of such Confidential Information. The receiving Party is liable and responsible for breach of the terms of this Agreement by any of its Affiliates, employees and representatives.

20. In case of merger, acquisition, closure etc. the new entity coming into existence will equally be bound over by the terms and conditions of this agreement.

In witness thereof this Non-Disclosure Agreement is signed, sealed and delivered under the hands of the authorized representatives of both the parties hereto on the date first written herein above.

For and on behalf of C-DAC,

For and on behalf of Bidder,

M/s.....

Authorized Signatory

Authorized Signatory

Name

Name



ANNEXURE E – DOCUMENTS LIST / INDEX

Sr. No	Description	Page No (s)
1	Index List – Annexure - E	
2	Covering Letter as per format given in Annexure - A	
3	Authority Letter as per format given in Annexure - B	
4	Undertaking towards EMD, as per format given in Annexure – C.	
5	NDA – Annexure- D	
6	Licence Agreement – Annexure- F	
7	Copies of documents in support of technical parameters	
8	Un-priced FINANCIAL BID as per Section – V (without rate/prices)	
9	Any other documents as required as requirement of this tender document	
e-Pkt-2	PRICE BID IN B.O.Q. FORMAT IN FINANCIAL BID (EPACKET-2)	



ANNEXURE- E

LICENSE AGREEMENT ON TRANSFER OF TECHNOLOGY

THIS LICENSE AGREEMENT is made and executed on this
Two thousand and Twenty Three (hereinafter known as **EFFECTIVE DATE**) at
.....

Between

Centre for Development of Advanced Computing, a Scientific Society of Department of Electronics and Information Technology, the Ministry of Communications and Information Technology, Government of India, registered under the Societies Registration Act of 1860, having its registered office at Pune University campus, Ganeshkhind, Pune and having one of its constituent unit at (herein after referred to as "**Licensor**", which expression shall, unless it be repugnant to or inconsistent with subject or context thereof, include and be deemed to include its executors, successors or administrators and permitted assigns) on the ONE PART

AND

..... with its registered office located at (hereinafter referred to as "**Licensee**", which expression shall, unless it be repugnant to or inconsistent with subject or context thereof, include and be deemed to include its executors, successors or administrators and permitted assigns) on the OTHER PART.

Hereinafter Licensor and Licensee are collectively referred to as the "Parties" or individually as the "Party". None of the parties hereto shall be construed as an agent or representative of the other party.

WHEREAS Licensor have developed a KNOW-HOW pertaining to (Rudra1 server) having features listed in (Annexure-I) through NSM project sponsored and financed by (MEITY). and the said (Annexure-I) shall be treated as part and parcel of this agreement

AND WHEREAS the **Licensee** has carefully examined the said KNOW-HOW of Rudra 1 Server developed by **Licensor** and is interested in utilizing the same for its business purpose;

AND WHEREAS the **Licensee** has agreed to the condition that the **Licensor** would take no responsibility whatsoever regarding the productionisability, commercialisability of the said KNOW-HOW of Rudra1 server;

AND WHEREAS **Licensor** on the request of the **Licensee** has agreed to grant to the **Licensee** such license to use the said KNOW-HOW of Rudra1 server to manufacture and sell



and/or use articles made in accordance with the said KNOW-HOW on the terms and conditions hereinafter contained:

1. INTERPRETATION

Subject to the context hereof, the following words and expressions shall be construed and interpreted, so as to have the following meanings;

"**ARTICLE**" shall mean the substance or product produced, made or manufactured by use, exercise and/or practice of the KNOW-HOW of Rudra1 server.

"**PROCESSES**" shall mean method or manner of manufacture or production or testing of the ARTICLE by use, exercise and practice of the developments or modifications thereof.

"**KNOW-HOW**" shall mean the technology, the technical knowledge, the processes, the information and data pertaining to the technology (described in (Annexure I) developed by the Licensor and under consideration for this agreement. KNOW-HOW shall include the right to use/manufacture/procure IC besides other artifacts.

"**IMPROVEMENTS**" shall mean all refinements, developments, and alterations of the KNOW-HOW or in the KNOW-HOW.

"**PLANT**" shall mean a factory, facility, works or premises set up or used within the geographical bounds of the republic of India for any of the purposes of this license.

2. GRANT OF LICENSE

In consideration of the payments to be made in the forms of License Fee and Royalty as provided in this agreement and performance of the covenants herein contained, the Licensor hereby grants to the Licensee, this license and it shall comprise the right to manufacture the said KNOW-HOW (Rudra1 server) at the Licensee's Plant and to sell and/or use the articles manufactured in accordance with the said KNOW-HOW of Rudra1 server. The Licensor hereby grants this license on a non-exclusive basis, covering the locations in India. Though Licensee normally would cover the locations in India, Licensee may also be allowed to sell outside India after sharing with the information of the export location and getting approval from Licensor.

Licensor reserves the right to grant similar licenses in respect of the said KNOW-HOW of Rudra1 server to any other person at its sole discretion. The Licensee shall have no right to interfere in the same and shall respect the rights of the Licensor in this regard.

2.1 LICENSE FEE

In consideration of the grant of license to use the said KNOW-HOW of Rudra1 server, the Licensee shall pay a one-time License fee of Indian Rupees One Crore plus the applicable taxes for use of proprietary hardware/software developed by CDAC, as



mentioned in this agreement. Terms and Conditions for all payments including the license fee by Licensee is listed in Section 5 of this agreement.

2.2 ROYALTY

In addition to the license fee, Licensee shall pay a royalty to Licensor at the agreed rate of the Sale Value of the Rudra1 server plus applicable taxes as per terms and conditions for all payments including the Royalty fee by Licensee is listed in Section 5 of this agreement.

3. DURATION OF LICENSE

This license shall come into force on the EFFECTIVE DATE and subject to covenants and conditions herein contained, shall remain in force for a period of three years from the EFFECTIVE DATE, unless terminated earlier according to the provisions contained herein.

Upon the expiration of the license, the two parties shall evaluate and renew the license on a mutually agreed terms and conditions in writing and signed by the parties. In case the license cannot be renewed, the Licensee shall stop manufacturing and selling Rudra1 server using the said KNOW-HOW immediately.

Upon the expiration of the License, Licensor may allow the Licensee to complete all the existing unfulfilled purchase orders, which had been informed to CDAC beforehand. (This will require Licensee to keep Licensor informed about all acquired Purchase orders on quarterly basis).

All obligations of the Parties shall be applicable for the duration of the license. All rights, intellectual property, processes, KNOW-HOW, improvements etc. obtained by the Licensee by virtue of this agreement shall stand withdrawn and the Licensee shall stop using any such rights / knowledge acquired immediately upon the expiration / termination of this agreement. Licensee shall undertake to return all documents, records, artifacts acquired or generated by virtue of this agreement immediately upon the expiration/termination of this agreement.

4. REPRESENTATIONS AND UNDERTAKINGS

The covenants/Representation/Undertaking contained in shall survive the termination or the expiry of this license.

The Licensee undertakes the following.



-
- 4.1 That during the continuance of the License and otherwise it will observe and perform the covenants and conditions of this License diligently and faithfully and to the satisfaction of the Licensor.
 - 4.2 That it will employ its best endeavour to work upon the said know how, and manufacture and sell the Rudra1 server on a commercial scale within licensed territory at prices fixed by the Licensee
 - 4.3 That it shall fulfil and comply with all procedural, legal, operational requirements for the commercial implementation of the License.
 - 4.4 That it shall report progress every three months to the Licensor, as to the number of Rudra1 server s made and sold as a part of utilization of said know-how.
 - 4.5 That it shall take the prior written permission of the Licensor for introduction of any modifications/improvements, which the Licensee may consider essential while in the process of commercial production of the article covered under this agreement.
 - 4.6 That it shall, at all reasonable times, produce the books of accounts so maintained and all other relevant books of accounts, vouchers, documents, receipts and connected papers, if any, to the Licensor, its attorneys or duly authorized agent(s) and will permit the Licensor, its attorneys or duly authorized agent(s) to inspect the same, take copies of extracts there from and the Licensee shall give full information as may be required by the Licensor for determination of the amount of royalties payable hereunder as aforesaid.
 - 4.7 That it shall permit the Licensor, its attorneys or duly authorized agent(s), at all convenient times to enter into any premises of the Licensee where any Rudra1 server s manufactured as aforesaid may be stored or manufactured or sold under this license for the purpose of inspecting the same and the manner of manufacture thereof and generally to ascertain that the provisions of this license are being complied with.
 - 4.8 That it shall, before the first day of April every year, deliver to the Licensor, its attorneys or duly authorized agent(s), a true and complete statement of the Rudra1 server s manufactured, stored and marketed or used for its own purposes during the period one year before the date. All such statements shall be duly certified by the auditor of the Licensee.
 - 4.9 That it shall notify to the Licensor the change in address, if any, of its Registered Office / Plant within 15 days of such change and shall also notify the changes in the constitution of the Licensee within the aforesaid stipulated period.



-
- 4.10 That it shall not manufacture the Rudral server (said Know-How) outside the plant without the prior written consent of the Licensor.
- 4.11 That it shall not, at any time, disclose the said Know-How of Rudral server to any third party or person, without prior written consent of the Licensor and shall take all precautions against any such disclosure.
- 4.12 That it shall not assign, transfer, encumber, mortgage, charge of sub-license or part with possession of the said Know-How of Rudral server, wholly or partially, without the prior written consent of the Licensor.
- 4.13 That it shall not, at any time, deny or dispute the legality, validity or enforceability of the terms and conditions of this license or any of its obligations.
- 4.14 That it shall not, at any time, claim any independent, exclusive or any other right to the said Know-How of Rudral server.
- 4.15 That it shall affix in a conspicuous manner upon every product, box, packet and leaflets, brochures pertaining to the said articles or articles manufactured under this license, a label or plate bearing the inscription "RUDRA A C-DAC Technology" in an approved graphical/visual reproduction by the Licensor. Any such label or plate will be manufactured/supplied by the Licensee at its own cost and the Licensee shall not sell or use any articles, boxes or packets intended to carry the articles without such labels being affixed thereon. Every advertisement in respect of the articles so manufactured shall include the same inscription as aforesaid at some conspicuous place.
- 4.16 That it shall not, in its own name or in the name of any third party, file any patent application for the grant of patent of the Know-How of Rudral server or derivatives thereupon without prior written permission of the Licensor. The Licensee shall also not oppose at any time any patent application made by the Licensor either jointly or individually.
- 4.17 That it shall not, directly or indirectly and either by himself or by his agent(s), use the said Know-How of Rudral server in a manner other than in accordance with this agreement.
- 4.18 That it shall not use and practice the said Know-How of Rudral server outside the plant without the prior written consent of the Licensor.
- 4.19 That it shall not use or practice the said Know-How of Rudral server and the modules/sub-systems as manufactured under this agreement for applications without the prior written permission of the Licensor.



-
- 4.20 That it shall not claim any exemption from or reduction in the payment of royalty on the plea of having used its own intellectual property or its own/other processes or improvement thereupon. The Licensee shall be liable for the payment of the royalties for all the articles manufactured by them and covered by this agreement irrespective of any plea whether the same have been manufactured by the said invention or otherwise.
- 4.21 The Licensee shall not refuse to accept order of Rudra1 from the Licensor and Licensee shall not give higher priority to other buyers over Licensor in delivery of Rudra 1 server.
- 4.22 Licensor reserves the right to market Rudra1 Server directly to Strategic sectors and place orders of Rudra1 to Licensee/s at a mutually agreed price.
- 4.23 Licensor shall set maximum price cap for Rudra1 for sales in India after discussions with the Licensee/s.

The Licensor undertakes the following.

- 4.24 That it shall disclose to the Licensee in a documented form any improvements, developments or modifications as made by the Licensor to the Know-How of Rudra1 server, for the benefit of the Licensee, as an integral part of the Know-How, for a period of the license validity
- 4.25 That the Licensor shall, train (or arrange to train) at the premises of Licensor, or any other location mutually acceptable, the representatives and/or the authorized employees of the Licensee a maximum of 10 members at a time, possessing the requisite qualification and experience as stipulated by the Licensor. The training period would be counted on 'Trainer-month' basis and may include 'On-Line Training. The trainings would be of following two types:
1. One-Time Free training
 2. Additional Handholding training, as and when required and requested by the Licensee.

The Licensor undertakes to provide for the first time at the request of the Licensee two "Trainer-Month" of Free Training.

For free one-time training the Licensee shall only pay for the cost of travel of the trainer/s and the costs of boarding and lodging of the trainer/s.

In addition to the Free one-time training, the Licensor also undertakes to impart Additional training as and when requested by the Licensee.

For this Additional Handholding the Licensee shall pay for the training costs at the rate of INR 5 Lakh per Trainer-Month along with the costs of travel for the trainer/s and the costs for boarding and lodging of the trainer/s,



-
- 4.26 That it may, at the request of the Licensee, provide any other technical assistance as deemed beneficial for this agreement and to promote the cause of the said Know-How of Rudra1 server, to the Licensee on terms and conditions stipulated in Section II of Tender.
- 4.27 That it shall give the Licensee the rights to manufacture the Rudra1 server in accordance with the said Know-How and the rights to retain the benefits of all technical information and experience acquired by it in accordance to this agreement.
- 4.28 That it hereby authorizes and empowers the Licensee to institute and prosecute such suits or proceedings as the Licensee may deem expedient, to protect the rights hereby conferred and for the recoveries of damages and penalties for the infringement of such rights and to secure to the Licensee full benefits of this license.

5. PAYMENT OBLIGATION

In consideration of the license hereby granted, the Licensee shall pay the license fee and royalties as per this agreement under the following terms and conditions.

- 5.1 All payments shall be made by the Licensee to the Licensor by demand draft in the name of the Licensor drawn upon a nationalized bank payable at Pune or by online payment method.
- 5.2 One time Technology Transfer License Fee of Rupees 1 crore with applicable Taxes e shall be payable by the Licensee in two instalments
- 5.3 The first instalment of 50% shall be payable at the time of signing of this agreement, after which the Licensor will transfer of documentation
- 5.4 The second instalment of 50% shall be payable by the Licensee before starting the marketing of the Article.
- 5.5 The royalty as defined below shall be paid by the Licensee after end of every quarter on the sales of Rudra 1 Server in previous three months.
- 5.5.1 Royalty Fee shall be paid by the Licensee for each sale of Rudra 1 server
- 5.5.2 Royalty Fee for Sales of each unit of Rudra 1 would be 7% (plus GST) of the Sales Value (Net of Taxes) of Rudra 1
- 5.5.3 Incentive ; detailed in 5.5.5 will be adjusted with the Royalty payment every quarter
- 5.5.4 Both Incentive and Royalty Charges will be also applicable for any order (other than NSM Rate Contract) placed by Licensor .



5.5.5 Incentive structure; Licensee will be eligible for incentive after attaining a cumulative Sales of Rupees 5 Crore, The period for incentive will be counted from the date of sale of first Rudra 1 server by the Licensee.

Sales	Incentive to be adjusted with Royalty payment every quarter
For Cumulative Sales up to Rs 25 Crore (Net of Taxes)	Accrued Incentive calculated on Cumulative Sales up to Rs 25 Crore
5 crore	10 Lakhs
10 crore	25 Lakhs
15 crore	50 Lakhs
20 crore	75Lakhs
25 crore	1 Crore
C. For additional sales over Rs 25 Crore	Additional incentive calculated on additional sales over 25 Crore
For each additional 5 Crore sale	7.5 Lakhs

5.6 Interest @ 1.50% per calendar month or part therefore shall be payable by the Licensee to Licensor on all overdue amounts (including any interest in arrear) from the due dates of payments till realization / recovery of such amounts by the Licensor, provided that interest on interest in arrear shall not be charged until the expiry of the period fixed by the Licensor.

5.7 All payments made to Licensor by Licensee shall be non-refundable including but not limited to at the time of termination of the agreement.

5.8 In case of dishonouring of cheque /demand draft or any other instrument of payment by bank when presented by Licensor to bank upon receipt from the Licensee, the Licensee shall be liable to bear and pay all charges levied by the bank and interest arising out of delay in realizing such payments.

5.9 Unless specified otherwise, all payments exclude the statutory payments such as levies, taxes, duties etc., which shall be payable additionally by the Licensee.

6. TERMINATION

6.1 Rights to terminate

The Licensor, without prejudice to its other rights and remedies, shall have rights to terminate the license agreement by one-month notice in writing to the Licensee under the following conditions.



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- 6.1.1 If the Licensee fails to take the documentation within one month of notification calling for the Licensee to collect the same from Licensor.
 - 6.1.2 If the Licensee fails to manufacture the Rudral Server according to the said KNOW-HOW within a period of 12 months from the EFFECTIVE DATE of this agreement. In the event, the Licensee being unable to set-up production within stipulated period, viz. 12 months, due to unavoidable circumstances and causes beyond its control, the Licensee shall make a request in writing for extension of this period before the expiry explaining the details thereof. While this request will be examined and considered by the Licensor, the decision of the Licensor in this regard shall be final and binding on the Licensee.
 - 6.1.3 If the Licensee suspends or discontinues manufacture according to the said know-how for a period exceeding three months, provided such suspension or discontinuance is not due to recognized Force Majeure and causes beyond the control of the Licensee. The licensee may make a request to Licensor in writing for further extension of this period explaining the justifications therefore. Such a request if made three months after discontinuing the productions shall not be honored by the Licensor. While this request will be considered by the Licensor, the decision of the Licensor in this regard shall be final and binding on the Licensee.
 - 6.1.4 If the Licensee transfers its business, or takes any partner in its said business relating to manufacture of articles covered under the agreement or if the business of the Licensee changes hands or if the Licensee is adjudged insolvent or have a receiving order or other order under an Insolvency Act made against the Licensee or if the Licensee enters into any arrangement or composition with its creditors.
 - 6.1.5 If the Licensee violates any conditions of this agreement.
 - 6.1.6 If the Licensee violates any law of the land and is charged under criminal law of the country. In such a condition, the Licensor shall have the right to terminate the agreement forthwith.

Parties, without prejudice to its other rights and remedies, shall have rights to terminate the license agreement by three-month notice in writing to the other.

6.2 Effect of Termination

Upon termination of this agreement, for whatever cause, the Licensee or its assignees shall not manufacture the articles covered under this agreement.

Licensee shall not utilize the KNOW-HOW, processes, improvements, articles or any intellectual property of the Licensor or any trade secrets of the Licensor to manufacture the article and the Licensee shall immediately return with the Licensor the original and all copies of documentation, processes, know-how, improvements, articles or any other intellectual property of the Licensor or any trade secret of the Licensor.



Licensee shall immediately pay to Licensor all payments pending or due under this agreement.

7. INTELLECTUAL PROPERTY RIGHTS (IPR)

The processes, know-how, improvements, any trade secret of the Licensor shall be the intellectual property of the Licensor and the IPR in/of such intellectual property shall remain owned by Licensor exclusively. Licensee shall not have any rights on the intellectual property of the Licensor.

Licensee shall not have any right on the improvements/ changes/ alterations/ innovations made by them under this agreement. The same shall remain with the Licensor exclusively.

8. NON LIABILITY

Licensor shall not be responsible and/or liable for any manufacturing defects and for any damages arising out of the manufacture, sale, supply and usage of the articles manufactured by Licensee under this agreement, to Licensee or/and its customers.

9. CONFIDENTIALITY

Licensee agrees to maintain strict confidentiality in all the inputs received from Licensor as per this agreement. Licensee undertakes this responsibility to not disclose such input to any other organization or to any other third person. Licensee assures and confirms that it shall obtain necessary undertakings from their employees/customers/ contractors of maintaining confidentiality during and after the currency of this agreement. This confidentiality obligation shall survive expiry or termination of this agreement.

10. LIMITATION OF WARRANTIES AND LIABILITY

- 10.1 Licensee warrants that it has right to enter in to this Agreement and authority to perform all obligations herein undertaken.
- 10.2 Licensee warrants that any data, information and materials furnished by Licensee to Licensor do not infringe any rights of any other third party.
- 10.3 Licensor disclaims any and all promises, representations and warranties except as expressly set forth in this Agreement.
- 10.4 Notwithstanding anything contained herein, the Licensor shall not be liable to the Licensee, its customers or any other person for any direct or indirect, incidental or non-incident, special, exemplary or consequential damages, or any claims or demands brought against Licensee, even if Licensor has been advised of the possibility of such damages, including without limitation, any costs, expenses or liabilities incurred as a result of lost income including but not limited to profits, opportunities, business, revenues etc.



11. INDEMNITY

Licensee shall keep the Licensor, its affiliates, shareholders, officers, directors, employees, agents, representatives and customers indemnified and harmless from and against any and all costs, liabilities, losses, and expenses (including, but not limited to attorneys' fees) arising out of any claim, suit, action, proceeding etc., for any act(s) and omissions of such party under any proposal(s) to Prospective client(s) or any resulting contract(s) therefrom or any incidental matter or in any way arising therefrom.

12. ADVERTISEMENT AND PUBLICITY

Unless specified in this agreement, the Licensee shall not use, display, print, circulate and distribute brochures, leaflets, letterheads, visiting cards, or any other print/distribution material etc. physical or electronic, mentioning logos, trade names / marks, product names, association etc. of the Licensor without the written permission of the Licensor and as per the provisions of this agreement. No publicity of any kind except required by law, statute or government will be made of this agreement by the Licensee without prior written permission of the Licensor.

13. WAIVER

Any indulgence shown by the Licensor to the Licensee in any manner shall not constitute waiver of its rights and remedies against the Licensee. The waiver, if any, by the Licensor, of any right of Licensor or any breach by the Licensee of any term, the condition or obligation of this license shall not in any event be construed as a waiver of any subsequent rights or remedy or breach as the case may be.

14. NON-ASSIGNMENT

Neither Party shall assign or otherwise transfer this agreement or any part thereof without the other Party's written consent thereupon.

15. NOTICES

All notices required to be served on the Licensee under the terms of this license shall be considered to be duly served if the same shall have been delivered to, left with or posted by registered mail to the Licensee at his last known address of business or the address given in this agreement. Similarly, any notice to be given to the Licensor shall be considered as duly served if the same shall have been delivered to, left with or posted by registered mail to the Licensor at its address given in this agreement.

16. AMENDMENT

This agreement shall be the sole repository of the terms agreed to between the parties and no amendment thereof shall take effect and be binding unless such amendment is recorded in writing and signed by the representatives of both the parties.

17. NON-SOLICITATION



Licensee shall ensure that during the subsistence and one year thereafter of this Agreement, they will not solicit each other's clients/customers and employees.

18. SEVERABILITY

If any part of this Agreement is found by a court of competent jurisdiction or other competent authority to be invalid, unlawful or unenforceable, then such part will be severed from the remainder of this agreement which will continue to be valid and enforceable to the fullest extent permitted by any law.

19. FORCE MAJEURE

Neither party shall be liable to the other for any delay or failure on their part in performing any of their obligations under this agreement, resulting from any cause beyond their control including, but not limited to strikes/lock-outs, fires, floods, earthquakes, explosions, riots, acts of God, acts of Governments, war, enemy action or political changes etc.

20. ARBITRATION

In the event of a dispute or a difference of any nature whatsoever between the parties during the course of performance of respective obligations arising out of this Agreement, the parties agree to refer the matter to their respective Heads of the organization to resolve the disputes keeping in view the best interest of the Parties and with the spirit of performance of this Agreement. If the matter still remains unresolved, dispute shall be referred to the sole arbitrator appointed by the Licensor. Arbitration proceedings shall be conducted in accordance with the provisions of the Arbitration and Conciliation Act, 1996 and Rules made there under, or any legislative amendment or modification made thereto. The venue of arbitration shall be Pune.

21. JURISDICTION

The Parties to this Agreement hereby declare that the Courts in Pune alone are competent to deal with disputes, if any, arising out of this Agreement.

22. COMMUNICATION

Each Party shall nominate its representative who shall be the single point of contact on behalf of the party. Each party is free to change or reappoint such representative with a notice to the other party.

Any notice, request, demand, approval, consent or other communication shall be in writing and given by personal delivery or sent by registered post or by fax/email addressed to such representative of the party as hereinunder.

Licensor	Licensee
<<Name of the Person>>	
<<Designation>>	



<<Address>>	
<<Email Id and Phone No.>>	

23. ENTIRE AGREEMENT

Each party acknowledges that it has read this agreement, understood it, and agreed to be bound by its terms and conditions and further agrees that this is the complete and exclusive statement of the agreement between the parties and this supersedes any previous agreement, written or otherwise, in regard to the know-how.

24. HEADINGS

Headings of sections in this agreement are inserted only for convenience and are not to be used to define limit or construe the scope of any term or provision of this agreement.

25. SEAL OF PARTIES

In witness whereof, the duly authorized representatives of the parties have signed this agreement at the place and on the day written herein under.

For and on behalf of Licensor

For and on behalf of Licensee

Name:

Name:

Designation:

Designation:

Date:

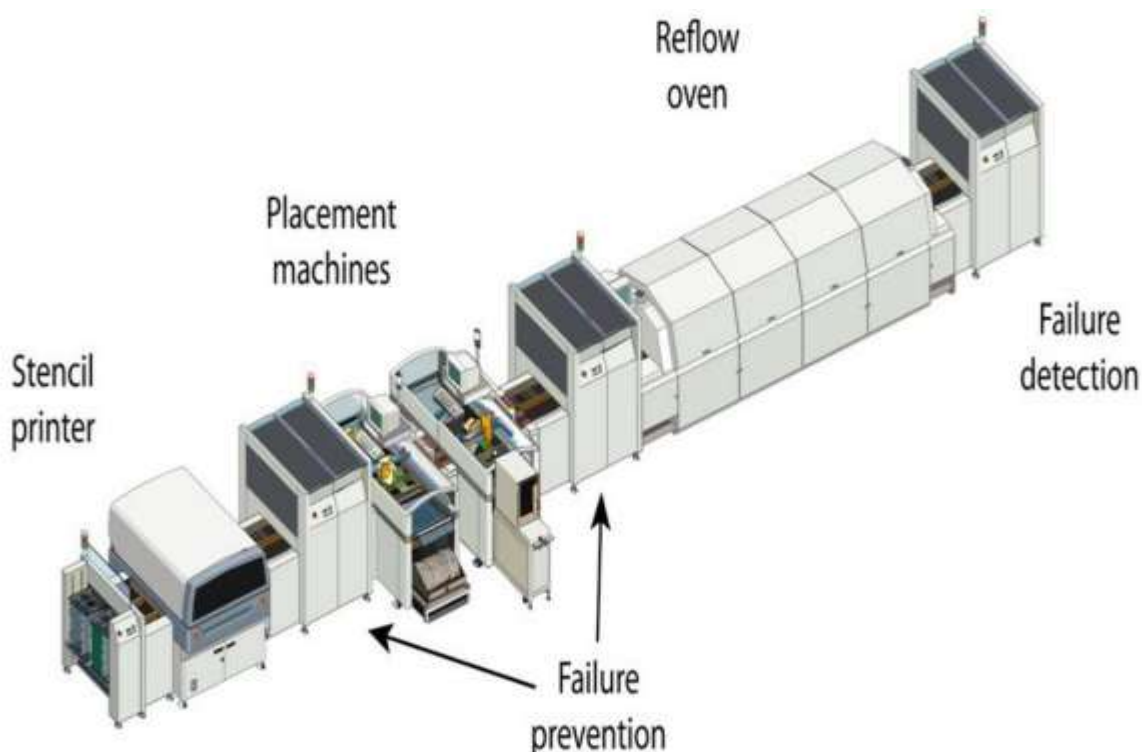
Date:

In Presence of

In Presence of

SECTION VI

1. Typical expected SMT Assembly Line



1.1 Surface Mount Assembly Process

- The successful bidder should give confirmation that the design is DFM, i.e. 'Design For Manufacture' and DFT i.e. 'Design For Testing' before it is taken up for manufacturing.
- Manufacturing of the multilayer bare PCB for server may not be done by the bidder. The PCB manufacturing data will be sent by the Bidder to the selected PCB manufacturing company (the information of the PCB manufacturer will be shared with CDAC).
- The received bare PCB from third party PCB manufacturing company will be tested by the Bidder/Manufacturing partner. The test criteria for testing the bare PCB including the impedance testing will be shared with CDAC. The impedance test coupons of the manufactured PCB will be provided to C-DAC.

1.2 Solder Paste Printing



The bidder would be responsible to design and get the stencil manufactured with proper, Stencil thickness, Aperture design and Stencil material to ensure that there is good release of solder paste from the apertures and to obtain the correct volume of solder paste to achieve the desired solder joint for the complex Rudra PCBs. Proper Stencil mounting and Alignment are to be ensured. The Stencils Quality must be checked and recorded before use for solder paste printing. The procedure of stencil quality assurance will be provided.

In order to run an error-free manufacturing plant, the solder paste printing process needs to be perfect. "A solder paste printing system is fundamental to setting up a PCB assembly line based on SMT.

The temperature conditioning of the Solder paste container must be done before it is put into the solder paste m/c and must be recorded for traceability. The process will be provided.

The Automated printer should be capable of handling and applying solder paste on the complex bare PCB. Keeping control of this process is critical as any printing defects, if undetected, will lead to defects further down the line. With Server PCBs being complex, the design of the stencil is key. PCB support, Squeegee speed, Squeegee pressure, Stencil separation speed, regular checking of Stencil and squeegee condition and cil cleaning are important parameters which need to be controlled to ensure Repeatability and stability of the printing process. All relevant specifications of Automated Printer including the accuracy of printing in micron for six-sigma are to be provided.

1.3 Solder Paste Inspection (SPI)

The Solder Paste inspection after solder paste printing stage must be incorporated. Automatic inspection 3D technology is required to be used to enable a thorough inspection is done to accurately check solder paste deposition including the height of the deposition, print area and solder paste volume per pad.

Errors of 'Slumped print', 'Scavenged print', 'Bridging', 'Peaking' identified through the SPI must be eliminated by optimising solder paste printing process and solder paste transfer efficiency.

Optimising printing stage of the assembly process is vitally important. as errors introduced at this stage would give "knock on" effects throughout the process

All relevant specifications of SPI and methodologies of highest quality solder paste printing adopted for Rudra Server PCB, are to be provided.

Estimated Upper Spec Limit (USL) and Lower Spec Limit (LSL) for different components to be used in SPI for Rudra PCB are to be provided.

1.4 Component Placement M/c(s)

Automated component placement m/c(s) need to be selected to match the requirement of the design. The speed of the chip shooter and BGA placer, number of heads and nozzles and maximum number of feeders and maximum size of the PCB handling capacity will have to be ascertained to be able to place the components as per the



design. The Selection of pick and place m/c will determine the speed and accuracy of the entire SMT Line. All relevant specifications of component placement m/c(s) including designed CPH and expected CPH are to be provided.

Intelligent feeders will be preferred so that the placement machines are able to recognise the component reels and feed the data automatically on the system. Detailed procedure for component reel change to be provided for traceability.

1.5 Pre-Reflow Automated Optical Inspection (AOI)

Automated Optical Inspection before reflow stage is desirable to check all criteria of placement such as component presence, type/value and polarity following the component placement process to verify that no mistakes have been made and that all parts have been correctly placed. This pre-reflow AOI is preferably to be used as a process control tool, finding defects pre-reflow, both for components and solder paste and by using SPC tools and line management software improve the process of the pick & place and screen printers. All relevant specifications of AOI and processes deployed are to be provided.

1.6 Reflow Soldering

After all component placements have been checked; the PCB assembly will move into the reflow soldering machine where all the electrical solder connections are formed between the components and PCB by heating the assembly to a sufficient temperature. Correct reflow temperature profile is the key to ensure acceptable solder joints without damaging the parts or assembly due to excessive heat. Especially while using lead-free solder, a carefully profiled assembly is very important as the required reflow temperature can often be very close to many components maximum rated temperature.

The Reflow Soldering M/c must be consisting of **at least 12 Zones** with Nitrogen facility and Lead-free process as required by the design of the bidder. All relevant details of the Reflow Oven including the profiler and the profiling process to be provided. The process of creating specific thermal profile for the Rudra Server Board to be provided.

1.7 Post-Reflow Automated Optical Inspection (AOI)

Automated Optical Inspection after reflow stage is required to check all errors due to reflow process including Component Tombstone, Head-in-Pillow (HIP), Graping Effect on Solder Joint, cracked SMD Capacitor, Insufficient Solder or Dry Joint, Damaged Thermally Sensitive Component, Solder Balls around SMD Components, etc and take corrective actions. This post -reflow AOI is also to be used as a process control tool for reflow parameters , component placement and solder paste printers to improve the total process for getting better yield.. All relevant specifications of AOI are to be provided.

1.8 Post-Reflow X-ray Inspection (AXI)



The process must again conduct inspection by using an automated AXI machine to confirm that no mistakes have been made in soldering process; to check solder joint quality.

3D technology AXI process is preferably to be used for inspection systems that will quickly, non-destructively inspect PCB assemblies to provide 100% defect coverage covering the hidden solder joints which is one of the biggest concern of the whole SMT process, such as contacts of BGA and quad flat pack with no lead (QFN) devices.

All relevant specifications of AXI are to be provided.

One of the preferred features on the inspection machines will be that they may be networked together to allow instant feedback to the preceding machine to enable automatic adjustments.

1.9 Wave Soldering

After all through hole component placements have been done and checked; the PCB assembly will be fixed with special wave pallets manufactured and move into the wave soldering machine where all the electrical solder connections are formed between the through hole components and PCB by heating the assembly to a sufficient temperature. Correct wave soldering temperature profile is the key to ensure acceptable solder joints without damaging the parts or assembly due to excessive heat. Especially while using lead-free solder, a carefully profiled assembly is very important as the required wave soldering temperature can often be very. Manufacturing bespoke wave pallets are very critical for proper soldering of through hole components without damaging nearby SMT components.

1.10 In Circuit Test (ICT)

The Line must have an ICT including following functions:

- Shorts/Opens Drivers which utilize both linear and binary detection algorithms to quickly and accurately diagnose short and open defects
- Analog Subsystem capable of performing precise measurements of Resistors, Capacitors, Inductors, Diodes, Transistors, FET's, Opamps and Rectifiers
- High-Voltage Source and Measurement Instruments capable of sourcing 120V and measuring up to 200V
- Arbitrary Waveform Generator capable of sourcing sine, square, triangle or complex user-defined waveforms
- Digital Voltmeter/Digitizer instrument that can be configured as a sampling scope to capture on board signals
- Synchronized Analog & Digital Subsystems for performing coherent measurements of mixed-signal devices



- Minimum Eight Channel Instrument Multiplexer and High Performance Pin Scanner matrix allows any instrument or tester pin to be routed to any one of eight measurement channels
- Junction Xpress vector less test technique which is capable of detecting open device pins and marginal solder joints on digital ICs by applying AC signals and measuring harmonic frequencies at diode junctions
- IEEE-488 Instrument Bus with minimum nine external ports for connecting external GPIB compatible instruments to the tester internal instrument bus
- Calibration Standards and self-test circuits built into the tester for reliable system verification procedures
- User-Level Programmable Relay Drivers support switching in external circuits and fixture hardware
- High-Level Programming Language which allows programmers to quickly create custom test procedures and modify existing test sequences
- AutoFLASH and ISP Toolset supporting automatic generation of test vector models for Programmable Logic Devices
- Data Logging and Data Display software for powerful analysis of test and production measurement data

Important Note: All the equipment in the PCBA line must support PCB size with requisite margin as mentioned in this tender.

The Bidder must give details of the entire manufacturing set up with its integrated system features relevant to proposed PCB manufacturing along with the bid.

(END OF DOCUMENT)