

Tender No. STPI/P/PUR/14/2019-20 Dated 04.03.2020



SOFTWARE TECHNOLOGY PARKS OF INDIA

(An Autonomous Society Under Ministry of Electronics & Information Technology,
Govt. of India)

Plot No. P-1, Rajiv Gandhi Infotech Park, MIDC,
Hinjawadi, Phase -1, Pune- 411057

Website- www.mah.stpi.in

Tel. No. 91-20-2298 1000.

for & on behalf of



**STPINEXT
INITIATIVES**

AIC STPINEXT INITIATIVES INITIATIVES,

6, CGO Complex, Electronics Niketan, Lodhi Road, New Delhi - 110 003

Website- www.stpinext.in

invites bids for

*Supply, Installation, Testing and Commissioning of Lab Equipment for
"MOTION-CoE" with total comprehensive support for 5 years.*

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Section I

Request for Proposal (RFP)

Software Technology Parks of India (STPI) Pune for & on behalf of AIC STPINEXT INITIATIVES invites proposals **under two-bid system (Technical and Commercial bids)** from OEM/ authorized partners of OEM for **Supply, Installation, Testing and Commissioning of Lab Equipment for MOTION, a Centre of Excellence (CoE) in Automotive: Autonomous /Connected/ Electric/ Shared Vehicles (ACES) at Pune (herein after referred as "MOTION-CoE") with total comprehensive support of 5 years.**

The important Bid Schedule & Venue are mentioned below:

Table 1:

I	Proposal inviting officer Authority, Designation and Address	The Director, Software Technology Parks of India (Pune), Plot no. 1, Rajiv Gandhi Infotech Park, Phase 1, MIDC, Hinjawadi, Pune -411 057 Tel No.: - 020 2298 1000 For and on behalf of CEO, AIC STPINEXT INITIATIVES, 6, CGO Complex, Electronics Niketan, Lodhi Road, New Delhi - 110 003
II	Name of the Work	Supply, Installation, Testing and Commissioning of Lab Equipment for "MOTION-CoE" with total comprehensive support for 5 years.
III	Place of Execution	Software Technology Parks of India (STPI), Ground Floor, Electronic Sadan-III, MIDC, Bhosari, Pune. Pin - 411026 (Maharashtra) Tel. No. 020-2298-1000
IV	Location of Pre-bid Meeting	Software Technology Parks of India (Pune), Plot no. 1, Rajiv Gandhi Infotech Park, Phase 1, MIDC, Hinjawadi, Pune -411 057 Tel No.: - 020 2298 1000
V	Place of submission of Tender	Address Mentioned at S. No.- IV above
VI	Place of Tender Opening	Address Mentioned at S. No.- IV above
VII	Validity of Bids	120 Days from the last date of Bid Submission
VII	Any other important criteria specified by the RFP inviting authority	Tender received after due date and time will be summarily rejected

Table 2:

Published on https://eprocure.gov.in/eprocure/app	04 th March, 2020 at 0900 Hrs.
Bid Document Download Start Date	04 th March, 2020 at 0930 Hrs.
Start Date & Time of Bid Clarification	05 th March, 2020 at 0900 Hrs.
End Date & Time of Bid Clarification	12 th March, 2020 at 1700 Hrs.
Date & Time of Pre-bid meeting	16 th March, 2020 at 1130 Hrs.
Bid Submission Start Date & Time	17 th March, 2020 at 0900 Hrs.
Bid Submission End Date & Time	26 th March, 2020 at 1500 Hrs.
Technical Bid Opening Date & Time	27 th March, 2020 at 1500 Hrs.
Commercial Bid Opening Date & Time	Shall be intimated later

RFP document can be downloaded from the website <https://eprocure.gov.in/eprocure/app>, <http://www.motion.stpi.in> & <http://www.mah.stpi.in> and the bidder shall submit

1. Tender Fee of amount **Rs. 5,000.00 (Rupees Five Thousand only)** and
2. EMD for an amount of **Rs. 2,00,000/- (Rupees: Two Lakhs Only)**

through NEFT/ RTGS as per following details:

- Account Name : AIC STPINEXT INITIATIVES
- Account No. : 604810110004551
- IFSC Code : BKID0006048
- Bank : Bank of India, CGO Complex, Electronics Niketan branch, Lodhi Road, New Delhi

**Director
STPI- Pune**

Section-II

Instructions To Bidders (ITB)

Software Technology Parks of India (STPI) is an Autonomous Society under Ministry of Electronics and Information Technology, Government of India, established by the Government of India in 1991 with the objective of boosting the Software Exports from India.

“AIC STPINEXT INITIATIVES” is a section 8 company incorporated by STPI to act as the nodal agency and common implementation vehicle for various startup and entrepreneurship activities at STPI.

“MOTION-CoE”, is a Centre of Excellence (CoE) in Autonomous, Connected, Electric and Shared (ACES) Mobility by STPI at Pune, with specialized state-of-the-art incubation facility and physical laboratories for start-ups in the area of Autonomous Connected Electric Shared Mobility where the highest-standards and best-practices in terms of infrastructure, technology, leadership, mentoring, training, research & development, funding, networking for the given focus area is made available.

For the purpose of this document, STPI, STPI-Pune, AIC STPINEXT INITIATIVES & MOTION-CoE can mean to refer singularly to any one or combinedly to all of them.

1. PURPOSE OF TENDER

Proposals under two bid system are hereby invited by STPI Pune for & on behalf of AIC STPINEXT INITIATIVES for **Supply, Installation, Testing and Commissioning of Lab Equipment for “MOTION-CoE” with total comprehensive support for 5 years.**

2. VALIDITY OF THE BID

The Bid must be valid for a minimum period of 120 days from the last date of Bid Submission. The Bidder shall not be entitled (during the said period of 120 days without the consent in writing of STPI) to revoke or cancel the offer or to vary any term thereof.

3. REJECTION & RETURN OF BID

- 3.1. STPI for & on behalf of AIC STPINEXT INITIATIVES reserves the right to reject any or part of any Bid without assigning any reason. The documentation submitted by Bidders shall not be returned. STPI shall not pay any costs incurred for the purchase, preparation and submission of any Bid.

- 3.2. If the Bidder gives wrong information in the Bid, STPI for & on behalf of AIC STPINEXT INITIATIVES reserves the right to reject such Bid at any stage or to cancel the Contract, if awarded.
- 3.3. Canvassing in any form in connection with the Bids is strictly prohibited and the Bids submitted by the Contractors who resort to canvassing are liable for rejection.
- 3.4. Bids, in which any of the particulars and prescribed information are missing or are incomplete, in any respect and / or prescribed conditions are not fulfilled, shall be considered non responsive and are liable to be rejected.

4 BIDDER'S ELIGIBILITY CRITERIA

- 4.1 Bidder shall be a registered Indian company, firm, proprietorship, etc. **Documentary evidence to be submitted.**
- 4.2 Bidder must be an OEM or authorized partner of reputed and renowned OEM. **Copy of Certificate of Authorized partner from OEM only, to be provided.**
- 4.3 Bidder shall have necessary experience and capability of supply, installation, testing and commissioning of similar lab equipment to Government organizations, educational institutions, industry, etc. in timely manner. Bidder should have completed minimum two works of similar nature during financial years 2016-17, 2017-18, 2018-19 and 2019-20. **Copies of two such work orders showing name of client, description of work, order no., order date and order amount to be provided as documentary evidence. Altered, redacted or tampered copies of work orders will not be accepted as documentary evidences.**
- 4.4 The bidders should not be Blacklisted by any State/Central Govt. body/PSU/ Autonomous Body/Private Company/Firm. Bidders should not be under a declaration of ineligibility for corrupt and fraudulent practices.
- 4.5 The bidder shall have necessary statutory registration certificate for GST and PAN Registration. **Documentary evidence to be submitted.**
- 4.6 The EMD of Rs. 2,00,000/- should be deposited through NEFT/RTGS in favor of M/s. AIC STPINEXT INITIATIVES on or before last date and time for submission of bid. **Proof of payment of EMD or necessary certificate of EMD exemption is to be provided along with technical bid.**
- 4.7 The tender fee of Rs. 5,000/- should be deposited through NEFT/RTGS in favor of M/s. AIC STPINEXT INITIATIVES on or before last date and time for submission of bid. **Proof of payment of Tender Fee or necessary certificate of tender fee exemption is to be provided along with technical bid.**

4.8 The bidder's average Annual turnover during last three years (FY 2016-17, 2017-18 & 2018-19) should be above Rs. 3.00 Crores. Annual turnover FY 2016-17, 2017-18 & 2018-19 duly certified by Chartered Accountant to be provided as documentary evidence.

5 EARNEST MONEY DEPOSIT (EMD) & TENDER FEE:

- 5.1 The Bids submitted without EMD and Tender fee will stand rejected. EMD and Tender fee will not be accepted in the form of cash /cheque/DD/Bankers Cheque.
- 5.2 The interest free EMD of the unsuccessful bidder will be returned within 30 working days from the acceptance of purchase order(s) by all the successful bidders.
- 5.3 However, if there is any delay in the refund of the EMD of the unsuccessful bidders, STPI Pune/ AIC STPINEXT INITIATIVES will not be liable to pay any penalty or interest, etc.
- 5.4 **The bank details /cancelled cheque may be submitted by the bidders along with technical bid for refund of EMD.**
- 5.5 EMD of the successful bidder(s) will returned within 30 working days from the acceptance of purchase order(s), submission of required performance bank guarantee and signed copy of Non-disclosure Agreement.
- 5.6 The EMD may be forfeited if a bidder withdraws his bid during the period of validity specified by the bidder on the Bid form.
- 5.7 **EMD Exemption:** The exemption of EMD shall be applicable to Micro and Small Enterprises (MSEs) as defined in MSE Procurement Policy issued by Department of Micro, Small and Medium Enterprises (MSME) or are registered with the Central Purchase Organization or the concerned Ministry or Department. **Certificate of NSIC registration to be submitted along with the Technical Bid.**
- 5.8 Tender fee of Rs. 5,000.00 to be paid by the bidders, is **non-refundable** and is towards the processing of the tender. The applicable certificate such as NSIC certificate for MSME, etc. to be provided by the bidder for availing tender fee exemption, as per Government procurement norms.

6 TENDERING PROCESS

Bidders should submit their proposal in SEALED MASTER ENVELOPE via Speed Post/Courier/By hand to

**The Director
Software Technology Parks of India**

**Plot No. P-1, Rajiv Gandhi Infotech Park
Phase 1, Hinjawadi, Pune, Maharashtra-411057**

Please super scribe on the Master envelope as “*Supply, Installation, Testing and Commissioning of Lab Equipment for “MOTION-CoE” with total comprehensive support for 5 years.*”.

If the bid is submitted without super scribing on the master envelop as mentioned above or the bid is a cover/envelop without properly sealed condition, STPI Pune will not be responsible for accidental misplacement of the bid document in partial or whole or accidental opening of the bid prior to the scheduled date and time of bid opening.

The quote should reach us **on or before 26th March, 2020 at 1500 Hrs.** The quotation received after the due date will not be accepted.

6.1 PREPARATION OF BIDS

MASTER SEALED ENVELOP should contain Technical Bid and Commercials Bids in **SEPARATE SEALED ENVELOPES (inside the master envelop)** as described below,

- a) *Duly completed technical bid should be sealed inside an envelope, super scribed, “Technical bid”.*
- b) *There should be separate envelope for commercial bid of each category i. e. Category A, Category B, Category C.*
- c) *Commercial bid for each of the three categories must be enclosed in separate sealed envelopes, super scribed, “Commercial Bid for BoQ Category-A/ B/ C (whichever is applicable)”.* Failure to do so may lead to cancellation of bid.
- d) *The envelopes containing Technical bid and commercial bids must be sealed inside a master envelop and sent to above address.*

7 CONTENTS OF TECHNICAL BID:

Technical bid should contain copies of all the following documents, towards eligibility criteria, in the stipulated format

- 7.1 Copy of certificate of incorporation/ registration of the company, firm, proprietorship, etc.
- 7.2 CA certified copy/ copies of annual turnover of the bidder for FY 2016-17, 2017-18 and 2018-19.

- 7.3 Copies of minimum two purchase orders of similar nature, executed by the bidder during FY 2016-17, 2017-18, 2018-19 and 2019-20. The submitted copies of work order should not be altered, redacted or tempered with in any manner. The copies must clearly mention description and scope of order, name of client, order number and date, order amount, delivery period, etc.
- 7.4 Copy of letter of authorization (on company letter) to signatory, issued by the bidder company, firm, etc.
- 7.5 Copy of Authorized Partnership/ distributorship certificate, issued by OEM to bidder.
- 7.6 Copy of the PAN Card and GST Registration certificates.
- 7.7 Duly Filled and signed Technical Compliance Sheet as per Annexure-II.
- 7.8 Copy of EMD Transaction (NEFT/RTGS) details/Certificate of NSIC Registration for EMD exemption.
- 7.9 Copy of receipt of Tender fee Transaction (NEFT/RTGS) or applicable certificate of exemption as per Government Procurement Norms, such as NSIC Registration for MSME, etc.
- 7.10 Any other related and relevant document.
- 7.11 Copy of cancelled cheque or bank passbook of the bidder for refund of EMD amount (Not applicable for EMD exempted bidders).

8 CONTENTS OF COMMERCIAL BID:

The format for Commercial/price bid is attached at ANNEXURE-III. The same is to be downloaded by the bidder and duly filled in, signed by the authorized signatory along with company seal on each page, before submission in separate sealed envelopes for each category.

The bidder will be required to clearly mention the following, in the Commercial bid

- a) Applicable warranty (in years) for each item of the chosen category
- b) Unit price of each item, including all taxes and charges, of the chosen category
- c) Total price of each item, including all taxes and charges, of the chosen category
- d) Total COMPREHENSIVE AMC cost, including all taxes and charges, for each of the items, for remaining period (for 5 years minus Applicable warranty).

The amount mentioned against each item in the Commercial bid must be fixed, complete and final and inclusive of all taxes and charges.

The bidder should quote the prices applicable to start-up incubator/ educational/ research institutes for equipment/ licenses.

- 9 Bidders shall adhere to the procedure and processes laid down in this document and shall follow fair and ethical practices of trade.

10 Deadline for Submission of Bids

Bids must be submitted within the due date & time, specified in the tender.

10.1 STPI Pune for & on behalf of AIC STPINEXT INITIATIVES may extend this deadline for submission of bids by amending the bid documents. This will be suitably notified in the websites www.mah.stpi.in, www.motion.stpi.in and <https://eprocure.gov.in/eprocure/app>

10.2 The date fixed for opening of bids, if subsequently declared as holiday by STPI, the revised date of schedule will be notified. However, in absence of such notification, the bids will be opened on next working day. The time and venue remaining unaltered.

- 11 STPI Pune/ AIC STPINEXT INITIATIVES reserves the right to accept the offer in full or in parts or reject summarily.

- 12 No financial information is to be mentioned in the technical bid. Failure to do so may lead to rejection of the bid.

13 Clarification on the bid Document

The bidding process is stipulated in the tender document clearly. In case of any clarifications about bidding process/eligibility criteria, the bidders may seek clarification during the pre-bid meeting or through email to motion@stpi.in prior to pre-bid meeting. The clarifications sought after the pre-bid meeting will not be entertained.

- 14 The bid shall contain no insertions, erasures or overwriting except as necessary to correct errors made by the bidder in which case, such corrections shall be signed by the person or persons signing the bid and the same have to be scanned and uploaded by the bidder.

15 SITE VISIT:

Bidders are advised to inspect and examine the site of delivery and installation and its surrounding and satisfy themselves before submitting their tenders. A tenderer shall be deemed to have full knowledge of the site whether he/ she inspects it or not and no extra charges consequent on misunderstanding or otherwise, shall be allowed. For access to the installation site for inspection, please contact Mr. Sachin Purnale, Joint Director @ motion@stpi.in 24 hours in advance, on week days between 9:00AM to 6:00 PM.

- 16 Conditional bids will not be accepted.
- 17 In case of submission of more than one bids from the same bidder, only the latest bid will be considered.
- 18** The bidders are requested to submit only the relevant documents as requested/mentioned in the tender document.

Section-III

General Terms and Conditions

1. The bill of material for supply, installation, testing and commissioning are divided into following 3 categories,

Category A : General equipment and software

Category B : Autonomous Vehicle Development platform/ Equipment

Category C : Electric Vehicle Lab Equipment

A bidder may bid for any one or more categories mentioned above. However, the bidder must compulsorily have to bid for all items listed in that category.

In case, bidder submits a partial bid for any category, such bid will be treated as incomplete and will be rejected for that category only.

2. **BID EVALUATION PROCESS**

The Bid evaluation process shall be in two steps as follows,

a. **Technical bid evaluation**

Technical bid shall be opened first and will be evaluated for fulfilment of the Bidder's Eligibility Criteria stated as per para 4 of Section-II and documents mentioned in para 7 of Section-II.

If the Bidder's Eligibility Criteria is fulfilled, STPI for & on behalf of AIC STPINEXT INITIATIVES may call the bidder for any clarifications during technical evaluation process.

Commercial Bids will be opened only for those bidders who will be found technically qualified during evaluation.

b. **Commercial bid evaluation**

The commercial bids of all the technically qualified bidders will be opened and evaluated separately for each category (A, B and C).

The bidder with lowest commercial offer (L-1) as per "I. - Net Payable Amount", of Commercial Bid (Annexure-III) for each category will be considered for award of contract.

NOTE: Arithmetical errors, if any, in the Commercial bids shall be rectified on the following basis:

- I. If there is a discrepancy between net payable amount mentioned in words and figures, the lowest of the two shall be considered.

- II. If there is any discrepancy in the calculation of Net Payable Amount, the same will be corrected by the evaluation committee by considering the Unit Price and Comprehensive AMC cost.

If the Contractor does not accept the correction of the errors, his/ her bid shall be rejected and the EMD will be forfeited.

3. SEEKING CLARIFICATION ON SUBMITTED BIDS:

To assist in the examination, evaluation and comparison of bids STPI may, at its discretion ask the bidder for the clarification of its bid. The request for clarification and the response shall be in writing. However, no post bid clarification at the initiative of the bidder shall be entertained after opening of the tender.

If a bidder does not provide clarifications of its bid by the date and time set by STPI for clarification, their bid may be rejected.

4. In respect of interpretation/clarification of this bid document and in respect of any matter relating to this bid document, the decision of Director, STPI-Pune will be final.

5. AWARD OF CONTRACT

- a. Separate purchase orders will be released to the L1 bidder(s) for each of the categories.
- b. The selected bidder(s) will be required to provide
 - i. an acceptance of the purchase order(s), in writing, within 7 working days from the date of purchase order
 - ii. performance bank guarantee, as explained in para 9 of this section
 - iii. Signed copy of Non-Disclosure Agreement, as per Annexure-VI.
- c. If the successful bidder fails to provide the above-mentioned documents (in para b above) within 7 working days, STPI Pune for & on behalf of AIC STPINEXT INITIATIVES reserves the right to cancel the purchase order to the bidder and in this case, EMD of the bidder will be forfeited.
- d. STPI Pune for & on behalf of AIC STPINEXT INITIATIVES reserves the right to award the contract partly or wholly to one or more bidders.

6. PAYMENT TERMS

- I. 10% of the purchase order amount(s) (excluding COMPREHENSIVE AMC Cost) will be paid in advance to the successful bidder(s) within 15 working days from the receiving of acceptance of the purchase order(s) and submission of performance bank guarantee, whichever is later.

- II. 75% of the order amount(s) (excluding COMPREHENSIVE AMC Cost) will be paid to the bidder(s), within 15 working days, after the successful delivery of complete bill of material mentioned in the order and based on Delivery Acceptance Report.
- III. Remaining 15% order amount(s) (excluding COMPREHENSIVE AMC Cost) will be paid to the bidder(s), will be paid within 15 working days, from the date of successful installation, testing, commissioning and demo/ training of the delivered goods and based on Final Acceptance Report (FAR) conducted
- IV. The payments of 75% and 15% of order amount(s) (excluding COMPREHENSIVE AMC Cost), mentioned in para II and III above will be subject to liquidity damages, as per Delivery Acceptance Report (DAR) and Final Acceptance Report (FAR) respectively.
- V. **The COMPREHENSIVE AMC charges for respective items will be paid on quarterly basis, after the successful delivery of Comprehensive AMC (CAMC) service, during the AMC period.**

7. PERFORMANCE SECURITY:

- a. Within 7 days of award of the work, the successful bidder(s) shall furnish Performance Security @ 10% of the total value of order amount (excluding COMPREHENSIVE AMC Cost) by way of irrevocable and unconditional Bank Guarantee (BG) from a reputed Nationalized Bank in favor of AIC STPINEXT INITIATIVES.
- b. This BG must be valid for minimum 5 years and 60 days to cover the risk of AIC STPINEXT INITIATIVES which may be extended further as per requirement of AIC STPINEXT INITIATIVES.
- c. The proceeds of the BG shall be payable to AIC STPINEXT INITIATIVES as compensation for any loss resulting from the successful bidder's failure to compete its obligations under the terms and conditions of the contract. The BG will be discharged by AIC STPINEXT INITIATIVES and returned to the successful bidder(s) not later than 60 days following the date of completion of the successful bidder's performance related obligations under the terms & conditions of the 5 year contract.

8. Liquidity Damages:

Penalty for Delayed Delivery will be applicable @ 0.5% of the contract value per week subject to maximum of 5% of total order value (excluding COMPREHENSIVE AMC Cost), in case of delay / non completion of work within the stipulated time period.

9. Comprehensive support:

- I. “Comprehensive support of 5 years” for the purpose of this bid document, means applicable warranty plus comprehensive AMC after the end of applicable warranty, should be of 5 years in total.
i.e. **Applicable warranty period + CAMC Period = 5 Years**
- II. The comprehensive support for all hardware and software items supplied by the successful bidder(s) shall be onsite at “MOTION-CoE” (as per Service Level Agreement- Annexure-IV).
- III. Documentary proof of applicable warranty to be provided by the supplier at the time of delivery.
- IV. If defective items require such type of servicing, maintenance, repair, replacement, etc. which cannot be carried out Onsite at “MOTION-CoE” and hence required to be taken offsite, the supplier will be solely responsible for logistics and safety of the item and their complete repair, replacement, etc. Also, the supplier will also provide alternate/ replacement for the defective item during repair period. No additional cost will be paid to the supplier for the above.

10. Non-Disclosure Agreement (NDA)

The successful bidder has to enter into NDA as per the Annexure-VI. The NDA shall be submitted along with the acceptance of the Order.

11. Disputes Clause & Arbitration:

- i. In the event of any dispute arises out of or in connection with this agreement, both parties shall seek to resolve by mutual discussions. The decision of the Chairman, AIC STPINEXT INITIATIVES cum Chairman, Governing Council of “MOTION-CoE” will be final and binding on both the parties.
- ii. The provisions of the Arbitration and Conciliation Act, 1996 shall be applicable and the award made there under shall be final and binding upon the parties hereto, subject to legal remedies available under the law. Such differences shall be deemed to be a submission to arbitration under the Indian Arbitration and Conciliation Act, 1996, or of any modifications, Rules or re-enactments thereof.
- iii. The arbitral proceedings shall be conducted in English.
- iv. The venue of arbitration shall be in New Delhi.

12. Force Majeure:

Notwithstanding the provisions relating to time line fixed elsewhere in the Agreement, the Vendor/Parties shall not be liable for forfeiture of its performance security, liquidated damages, or termination for default if and to the extent that the delay in performance or

other failure to perform its obligation under the Contract/Agreement is the result of an event of Force Majeure. The Force Majeure in the context of this Contract/Agreement, means an event beyond the control of the Vendor/Party and not involving the Vendor's/Party's fault or negligence and not foreseeable. Such events may include, interalia, wars or revolutions, fires, floods, epidemics, quarantine restrictions, freight embargoes, earthquakes, explosions, strikes and other acts of God referred to as eventualities.

If, at any time, during the continuance of the agreement, the performance in whole or in any part by either party of obligation under this Contract/Agreement shall be prevented or delayed by reasons of the eventualities then, notice of such happening of any such eventualities is given by either party to the other within two days from the date of occurrence thereon, neither party shall, by reason of such eventualities be entitled to terminate this contract/agreement nor shall either party have any claim of damages against the other in respect of such non-performance or delay in performance. Performance of the contract agreement shall, however, be resumed as soon as practicable but not later than seven days after such eventuality has come to an end.

13. Termination By default

The AIC STPINEXT INITIATIVES may, without prejudice to any other remedy for breach of contract, by written notice of default sent to supplier, terminate the Contract in whole or part:

- a If the Supplier fails to provide services /rectify the fault within the time period specified in the contract or any extension thereof granted by the STPI-Pune for & on behalf of AIC STPINEXT INITIATIVES.
- b If the Supplier fails to perform any other obligations under the Contract.
- c In case of violation of any clause of Non-Disclosure Agreement.

14. Other Terms and Conditions

a. Product Specifications & Compliance Statement:

- i. The technical specifications mentioned in Annexure-I (Bill of Material) are minimum requirement.
- ii. Any part number specified in Annexure-I is only to help the supplier to understand better the requirement. It does not indicate preference for any vendor, OEM, etc. in any manner.
- iii. The supplier should quote the products either with the technical specifications strictly as mentioned in the Annexure-I (Bill of Material) or

higher and only of technically reputed, reliable and globally acclaimed brands / OEMs.

- iv. The bidder should not quote the end of life/ support products.
- v. The supplier should quote the prices applicable to start-up incubator/ educational/ research institutes for equipment/ licenses.
- b. **Delivery:** The delivery, installation, testing and commissioning of the equipment and afterwards demo/training are to be done at "MOTION-CoE", Ground Floor, Electronic Sadan-III, MIDC, Bhosari, Pune - 411026 (Maharashtra) and should be completed **within 8 weeks** from the date of award of contract.
- c. STPI Pune, for & on behalf of AIC STPINEXT INITIATIVES will not accept any material/ software delivered and/ or installed/ commissioned in damaged condition, i.e. safety of the equipment during delivery to "MOTION-CoE" and during installation and commissioning is sole responsibility of the respective supplier.
- d. If the material or part thereof is lost or rendered defective during transit/ installation/ commissioning, the supplier shall immediately arrange for the supply of the equipment or part thereof, as the case may be, at no extra cost.
- e. Supplier material must be properly packed against any damage and insured up to the destination. The material should directly be supplied to "MOTION-CoE", Ground Floor, Electronic Sadan-III, MIDC, Bhosari, Pune - 411026 (Maharashtra). All the expenses involved in shipping the equipment to "MOTION-CoE" and installation and commissioning of the equipment thereafter shall be borne by the Suppliers. All aspects of safe delivery shall be the exclusive responsibility of the Supplier.
- f. STPI Pune for & on behalf of AIC STPINEXT INITIATIVES will have the right to reject the items supplied, if these do not comply with the specifications at any point of installation / inspection.
- g. STPI Pune for & on behalf of AIC STPINEXT INITIATIVES reserves the right to accept / reject the offers or cancel the whole RFP proceedings without assigning any reason whatsoever.
- h. Bids received through Email / Fax, by post, courier, etc. and open offers shall not be accepted. Late / Delayed bids shall not be accepted under any circumstances. Incomplete offers will be rejected.
- i. **Disclaimer:** This Request for Proposal (RFP) is not an offer by STPI Pune for & on behalf of AIC STPINEXT INITIATIVES but an invitation for supplier's response. No contractual obligation whatsoever shall arise from the RFP process.

j. Confidentiality & RFP Ownership

- i. This RFP is both confidential and proprietary to STPI Pune for & on behalf of AIC STPINEXT, and it reserves the right to recall the RFP in its entirety or in part. Suppliers must not duplicate, distribute or otherwise disseminate or make available this document or the information contained in it without the express written consent of STPI Pune for & on behalf AIC STPINEXT.
- ii. The supplier shall not include or refer the contents of this RFP in public without prior written approval from the client, which, if required, shall be requested in written to the individuals named above. Suppliers must accept all of the foregoing terms and conditions without exception. All responses to the RFP will become the property of STPI Pune for & on behalf of AIC STPINEXT INITIATIVES and will not be returned.

SECTION III
SCOPE OF WORKS

The Scope of Work shall be as follows: -

- 1 Supply, installation, testing and commissioning of equipment in 'ready-to-work' mode.
- 2 Providing detailed demo/training about the working, operations and routine maintenance for all the equipment and/or tools as may be required for its safe and normal operations. To this effect, necessary documentation, manuals, datasheets, website URLs, etc. are to be provided by the supplier.
- 3 Providing regular servicing/ preventive maintenance of the equipment and tools as per the SLA enclosed at Annexure-IV or any prescribed norms or as per any industry standards to ensure their highest uptime levels and working conditions. To this effect, the supplier will be required to submit, preventive maintenance/ servicing schedule at the time of Final Acceptance Report (FAR).
- 4 Facilitating inspection and testing of the tools and equipment by way of supply of samples, etc. during Delivery Acceptance Report (DAR) and Final Acceptance Report (FAR) and wherever requested by STPI/ AIC STPINEXT INITIATIVES during the contract period of 5 years.
- 5 Providing comprehensive technical support and continuous engagement for operation and maintenance of each of the equipment during the entire contract period of 5 years onsite. The project is for a period of 5 years with a possibility of extension.
- 6 **Testing of Equipment:**
 - 6.1 **Delivery Acceptance Report (DAR)**
 - 6.1.1 A nominated committee, designated by STPI Pune/ AIC STPI NEXT will prepare Delivery Acceptance Report, after the delivery of the all the equipment as per Purchase order, by the supplier at "MOTION-CoE".
 - 6.1.2 The objective of DAR is to determine the successful and timely supply of the equipment as per order and Service Level Agreement (SLA) and along with all the required, necessary and standard spares and documentations, comprehensive support details, etc.
 - 6.1.3 Based on the report of DAR, 75% payment of the respective order amount (excluding Comprehensive AMC charges) will be paid after deducting liquidity damages (if any).

6.2 Final Acceptance Report (FAR)

- 6.2.1 A committee, nominated by STPI Pune/ AIC STPINEXT INITIATIVES will conduct final acceptance test and prepare FAR, after the installation and commissioning of the all the equipment as per purchase order by the supplier at "MOTION-CoE".
- 6.2.2 The objective of FAR is to check the successful and timely installation, commissioning of the equipment by the respective supplier, as per order and Service Level Agreement (SLA), functional testing of each equipment and necessary training and demo sessions provided by the supplier, OEM, etc. for proper working, operations and maintenance of each of the equipment.
- 6.2.3 Based on FAR, remaining 15% payment of the respective order amount will be paid after deducting liquidity damages (if any).

ANNEXURE-I

Bill of Material (BoM)

CATEGORY A: General Equipment and Software

No.	Equipment Category	Item Description	Minimum Specifications	Remark
1.	Oscilloscopes and Accessories	OSCILLOSCOPE, MSO, 1 GHZ	<ul style="list-style-type: none"> i) Analog Channel: Minimum 4 ii) Analog Bandwidth: 1Ghz or Better iii) Hardware ADC Resolution: Minimum 12 Bits iv) Minimum Sample Rate All Channels: ≥ 6 GS/s per analog channels simultaneously v) Minimum Record Length per channel simultaneously: ≥ 60 Million Points vi) Digital Channels: ≥ 16 with Digital probe vii) Display: ≥ 11 inch viii) Operating Systems: Windows ix) Standard Probes: 1 GHz Passive/ Active Probe per Analog channel mandatory should be provided x) Optional serial bus trigger, decode and analysis: I2C, SPI, RS-232/422/485/UART, CAN, LIN, FlexRay, USB 2.0, Ethernet, I2S, LJ, RJ, TDM 	
2.		MSO (500 MHz)	<ul style="list-style-type: none"> i) Analog Channel: Minimum 4 ii) Bandwidth: 500Mhz or Better and upgradable up to 1 GHz iii) Hardware ADC Resolution: Minimum 8 Bits iv) Minimum Sample Rate All Channels: ≥ 2.5 GS/s on all analog channels simultaneously 	

			<p>v) Minimum Record Length per Analog channel simultaneously: ≥ 10 million points</p> <p>vi) Digital Channel: ≥ 16 with Digital probe</p> <p>vii) Display: ≥ 11 inch</p> <p>viii) Standard Probes: 500 MHZ Passive Probe/ Active per analog channel of Capacitive loading 4 pf or better should be provided mandatorily</p>	
3.		Isolated Oscilloscope (500 MHZ)	<p>≥ 500 MHz, 4 Analog Isolated Channels</p> <p>≥ 5 GS/s Real Time Sampling rate</p> <p>Up to 1000 V CAT III/600 V CAT IV between inputs</p> <p>Independently floating isolated inputs</p> <p>Connect-and-View continuous auto-trigger, single shot, pulse width, and video triggering, Trend Plot, trend measurement readings</p> <p>analog trigger system, edge, pulse width, video (PAL, PAL+, NTSC, SECAM, non-interlaced)</p> <p>IP-51 rated for protection</p> <p>Isolated USB ports for memory devices and PC connectivity</p> <p>Built in digital multimeter</p> <p>Automatic capture and REPLAY of ≥ 100 screens</p> <p>Portable Battery Operated</p> <p>Battery operating time (with backlight low): ≥ 7 hours</p>	
4.		CURRENT PROBE, 20A, 50MHZ, AC-DC	<p>Bandwidth: DC to ≥ 50 MHz</p> <p>Rise Time: ≤ 7 ns or better</p> <p>Max Current: 20 Arms or better</p> <p>Maximum Sensitivity: 10mA</p> <p>DC Accuracy: ± 3 % or better</p>	

5.		High Voltage Probe of 500Mhz	<table border="1"> <tr><td data-bbox="691 163 1317 212">Bandwidth: 500Mhz</td></tr> <tr><td data-bbox="691 212 1317 260">Rise time : < 700ps or better</td></tr> <tr><td data-bbox="691 260 1317 308">Attenuation: 100X</td></tr> <tr><td data-bbox="691 308 1317 386">Maximum Input voltage: Minimum 2.5kVpeak or better</td></tr> <tr><td data-bbox="691 386 1317 422">Loading: 2.5pf or better</td></tr> </table>	Bandwidth: 500Mhz	Rise time : < 700ps or better	Attenuation: 100X	Maximum Input voltage: Minimum 2.5kVpeak or better	Loading: 2.5pf or better			
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6.		High Voltage Differential Probe 50Mhz	<table border="1"> <tr><td data-bbox="691 422 1317 470">Bandwidth: 50Mhz</td></tr> <tr><td data-bbox="691 470 1317 518">Differential Voltage: 1.3kV or better</td></tr> <tr><td data-bbox="691 518 1317 567">Attenuation: 50X & 500X</td></tr> <tr><td data-bbox="691 567 1317 615">Typical CMRR: DC: >80 dB</td></tr> <tr><td data-bbox="691 615 1317 701">Differential Input Impedance: - 2 pf or better</td></tr> </table>	Bandwidth: 50Mhz	Differential Voltage: 1.3kV or better	Attenuation: 50X & 500X	Typical CMRR: DC: >80 dB	Differential Input Impedance: - 2 pf or better			
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Differential Input Impedance: - 2 pf or better											
7.	Spectrum Analyzer	Spectrum Analyzer (6 Ghz)	<table border="1"> <tr><td data-bbox="691 701 1317 749">RF input frequency range: 9 kHz to 6 GHz</td></tr> <tr><td data-bbox="691 749 1317 798">IF bandwidth: 40 Mhz</td></tr> <tr><td data-bbox="691 798 1317 875">ADC sample rate and bit width: 100 Ms/s, 14 bits</td></tr> <tr><td data-bbox="691 875 1317 953">Displayed Average Noise Level (DANL) @ 1 Ghz : ≤-158 dBm/Hz or better</td></tr> <tr><td data-bbox="691 953 1317 1031">Trace Function: Normal, Average (VRMS), Max Hold, Min Hold, Average of Logs</td></tr> <tr><td data-bbox="691 1031 1317 1079">RF input: N type Connector</td></tr> <tr><td data-bbox="691 1079 1317 1239">Spectrum analysis Software: Software should be available to connect & control Spectrum analyzer using laptop/PC.</td></tr> </table>	RF input frequency range: 9 kHz to 6 GHz	IF bandwidth: 40 Mhz	ADC sample rate and bit width: 100 Ms/s, 14 bits	Displayed Average Noise Level (DANL) @ 1 Ghz : ≤-158 dBm/Hz or better	Trace Function: Normal, Average (VRMS), Max Hold, Min Hold, Average of Logs	RF input: N type Connector	Spectrum analysis Software: Software should be available to connect & control Spectrum analyzer using laptop/PC.	
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RF input: N type Connector											
Spectrum analysis Software: Software should be available to connect & control Spectrum analyzer using laptop/PC.											

8.	Function/ Waveform generator	50 MHz Dual Channel Arbitrary function generator	<table border="1"> <tr> <td data-bbox="691 205 1320 363">Standard waveforms: -Sine, Square, Pulse, Ramp, More (Noise, DC, Sin(x)/x, Gaussian, Lorentz, Exponential Rise, Exponential Decay, Haversine.</td> </tr> <tr> <td data-bbox="691 363 1320 527">Sine wave: - 1 μHz to 50 MHz Square wave: -1 μHz to 40 MHz Ramp wave: - 1 μHz to 800 kHz Pulse Wave: -1 μHz to 40 MHz</td> </tr> <tr> <td data-bbox="691 527 1320 569">Sample rate: - 1 GSa/s</td> </tr> <tr> <td data-bbox="691 569 1320 611">No of channels: -2</td> </tr> <tr> <td data-bbox="691 611 1320 653">Vertical resolution: \geq14 bits</td> </tr> <tr> <td data-bbox="691 653 1320 730">Type of Modulation: - AM, FM, PM, FSK, PWM</td> </tr> <tr> <td data-bbox="691 730 1320 814">Modes: Continuous, Modulation, Sweep and Burst</td> </tr> <tr> <td data-bbox="691 814 1320 856">Waveform Memory: - 16M</td> </tr> <tr> <td data-bbox="691 856 1320 934">Amplitude Range (into 50 Ω): 1 mVp-p to 10 Vp-p</td> </tr> <tr> <td data-bbox="691 934 1320 989">\geq 9-inch Display</td> </tr> </table>	Standard waveforms: -Sine, Square, Pulse, Ramp, More (Noise, DC, Sin(x)/x, Gaussian, Lorentz, Exponential Rise, Exponential Decay, Haversine.	Sine wave: - 1 μ Hz to 50 MHz Square wave: -1 μ Hz to 40 MHz Ramp wave: - 1 μ Hz to 800 kHz Pulse Wave: -1 μ Hz to 40 MHz	Sample rate: - 1 GSa/s	No of channels: -2	Vertical resolution: \geq 14 bits	Type of Modulation: - AM, FM, PM, FSK, PWM	Modes: Continuous, Modulation, Sweep and Burst	Waveform Memory: - 16M	Amplitude Range (into 50 Ω): 1 mVp-p to 10 Vp-p	\geq 9-inch Display	
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9.	Multimeter	MULTIMETER, Bench Top	<table border="1"> <tr> <td data-bbox="691 1045 1341 1087">6.5-digit DMM Benchtop</td> </tr> <tr> <td data-bbox="691 1087 1341 1129">1 MS/s sampling rate</td> </tr> <tr> <td data-bbox="691 1129 1341 1171">Built-in \geq7 million with buffer</td> </tr> <tr> <td data-bbox="691 1171 1341 1234">\geq 5-inch (12.7 cm)</td> </tr> <tr> <td data-bbox="691 1234 1341 1325">USB-TMC and LXI/Ethernet communication interfaces</td> </tr> <tr> <td data-bbox="691 1325 1341 1556">Measurement Should Include: AC/DC Voltage, AC/DC Current, Resistance 2wire/ 4-wire, Capacitance, period, Frequency, Diode, Digitized Voltage and Current, Thermocouple, thermistor and RTD measurement Capability</td> </tr> </table>	6.5-digit DMM Benchtop	1 MS/s sampling rate	Built-in \geq 7 million with buffer	\geq 5-inch (12.7 cm)	USB-TMC and LXI/Ethernet communication interfaces	Measurement Should Include: AC/DC Voltage, AC/DC Current, Resistance 2wire/ 4-wire, Capacitance, period, Frequency, Diode, Digitized Voltage and Current, Thermocouple, thermistor and RTD measurement Capability					
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10.	Multimeter	MULTIMETER, Handheld, OLED Display	Handheld 3.5 Digit DMM, Features True RMS capabilities for accurate measurements on non-linear loads, with its integrated non-contact voltage detection, Auto Volts and LoZ functions that help prevent false readings caused by ghost voltage											

11.	Power supply	80V/40A (It must give 14A at 60V DC)	#	Item Particulars	Requirement
			1.	Input Supply	230V Single Phase AC with 50 Hz frequency.
			2.	Type/ Technology	Switch mode/ Linear mode
			3.	Programmable DC Output Voltage (Min.)	0 - 80 V DC
			4.	Programmable DC Output Current (Min.)	0 - 40 A (It must give 14A at 60V DC)
			5.	Min Output Power	840 Watt minimum
			6.	Computer Control interface	RS232/USB
			7.	Constant Voltage Mode	
			a)	Line Regulation	$\leq 0.01\%$
			b)	Load Regulation CV	$\leq 0.01\%$
			c)	Ripple and Noise (max.)	$\leq 100\text{mVp-p}$, $\leq 50\text{mA rms}$
			8.	Constant Current Mode	
			a)	Line Regulation	$\leq 0.1\% + 10\text{mA}$
			b)	Load Regulation	$\leq 0.1\% + 10\text{mA}$
			9.	Timer function	(0.1 ~ 99999s)
10.	Protections	OVP/OCP/OTP			

12.	Power supply	80V/40A (It must give 36V at 24A DC output)	#	Item Particulars	Requirement	36 V/ 24V, 2 Channel
			1.	Input Supply	230V AC \pm 10% Single with 50 Hz supply.	
			2.	Type/ Technology	Switch mode/ Linear mode	
			3.	DC Output Voltage (Min.)	0 - 80 V DC	
			4.	DC Output Current (Min.)	0 - 40 A (It must give 36V at 24A DC output)	
			5.	Min Power	864 W minimum	
			6.	Computer Control interface	Standard communication interface RS232/USB	
			7.	Constant Voltage Mode		
			a)	Line Regulation	\leq 0.01%+10mV	
			b)	Load Regulation CV	\leq 0.01%+10mV	
			c)	Ripple and Noise (max.)	\leq 100mVp-p; \leq 50mA rms	
			8.	Constant Current Mode		
			a)	Line Regulation	\leq 0.1%+10mA	
			b)	Load Regulation	\leq 0.1%+10mA	
9.	Indications	High visibility vacuum fluorescent display (VFD)				
10.	Protections	OVP/OCP/OT P protection				
11.	Timer function	(0.1 ~ 99999s)				
13.	Power supply	200V/60A	#	Item Particulars	Requirement	100V/ 50A
			1.	Input Supply	230V AC \pm 10% Single with 50 Hz supply.	
			2.	Type/ Technology	Switch mode/ Linear mode	

			3.	DC Output Voltage (Min.)	0 - 200 V DC
			4.	DC Output Current (Min.)	0 - 60 A
			5.	Min Power	1800 W minimum
			6.	Computer Control interface	Support USB/RS232/GP IB/LAN standard interface
			7.	Constant Voltage Mode	
			a)	Line Regulation	$\leq 0.01\% + 20\text{mV}$ or better
			b)	Load Regulation CV	$\leq 0.01\% + 50\text{mV}$ or better
			c)	Ripple and Noise (max.)	$\leq 200\text{mVp-p}$, $\leq 50\text{mArms}$
			8.	Constant Current Mode	
			a)	Line Regulation	$\leq 0.01\% + 10\text{mA}$ or better
			b)	Load Regulation	$\leq 0.01\% + 10\text{mA}$ or better
			9.	Indications	1) Mains ON/OFF 2) CV Mode and CC Mode by indication on front panel
			10.	Protections	Support OVP, OCP, OPP, OTP, Vsense reverse Protection
			11.	Controls	output ON/OFF switch
14.	Data Logger	Data Logger with Windows	A controller (1.33 GHz (min.) Dual Core processor, 4 GB Internal Storage and Max. 32GB SD card capacity) and 2M Gate User		

		Based Software for data input and configuration	<p>Programmable FPGA with 8 Slots for IO Modules with D-type connectors and following hot swappable IO modules/rails</p> <ol style="list-style-type: none"> 1. Analog Voltage Input module (1 in No.) with <ol style="list-style-type: none"> a. No. of Analog channels= 4 b. Input Voltage Range= -10V to +10V c. Max. Input Current= 25 mA d. Sampling Rate= 50 kS/s/channel e. ADC Resolution=16/24 Bits f. Isolated/ Differential channels g. Screw Type/ Spring input channel h. CMRR (at 60Hz) > 100dB 2. CAN interface module with 2 nos. of CAN I/O ports 3. Digital Input Module <ol style="list-style-type: none"> a. 8 channel Digital Input b. Isolated banks c. Screw Type Input Terminal d. Input Voltage Range= -5V to +5V e. ADC = 12 bit f. Max. Sampling Rate = 20kS/s <p>Real time OS in the controller and Windows based software for data IO and configuration of data logger.</p>	
15.	Data Logger		<p>Simultaneous operations on all CAN/LIN/J1850 networks, 6x CAN Channels, 4x LIN (Local Interconnect), 1x J1850 VPW</p>	Interpied neo-VI Red or similar
16.	Vector USB or similar		<p>CAN channels: 2x CAN high-speed Channel CAN: up to 2 Mbit/s CAN FD: up to 8 Mbit/s Temperature range Operating: -40 °C...+70 °C Operating system requirements: Windows</p>	

17.	Thermal imaging camera		-20 °C to +650 °C , Laser Sharp Auto Focus, for consistently in-focus images. Should calculates distance to the target for precisely focused images and displays distance on Screen, >=3.4 inch (landscape), Touchscreen adjustable level/ span, Removable >=4 GB micro SD memory card, >=4 GB internal flash memory, Auto focus, for consistently in-focus images. Every Single Time. Built-in digital camera: >=4.9 Mpixel																																							
18.	3D Prototype Printer	Moulding, models rapid prototyping.	<table border="1"> <thead> <tr> <th data-bbox="691 606 751 659">#</th> <th data-bbox="751 606 1065 659">Item Particulars</th> <th data-bbox="1065 606 1349 659">Requirement</th> </tr> </thead> <tbody> <tr> <td data-bbox="691 659 751 758">1.</td> <td data-bbox="751 659 1065 758">Industrial Design</td> <td data-bbox="1065 659 1349 758">Should be all enclosed</td> </tr> <tr> <td data-bbox="691 758 751 1020">2.</td> <td data-bbox="751 758 1065 1020">Materials Compatible</td> <td data-bbox="1065 758 1349 1020">ABS, ASA, HIPS, Carbon Fiber, PLA, PETG, Wood, Metal Composites</td> </tr> <tr> <td data-bbox="691 1020 751 1119">3.</td> <td data-bbox="751 1020 1065 1119">Bed Levelling</td> <td data-bbox="1065 1020 1349 1119">Assisted or semi auto</td> </tr> <tr> <td data-bbox="691 1119 751 1182">4.</td> <td data-bbox="751 1119 1065 1182">Heated Bed</td> <td data-bbox="1065 1119 1349 1182">Yes</td> </tr> <tr> <td data-bbox="691 1182 751 1245">5.</td> <td data-bbox="751 1182 1065 1245">File Type</td> <td data-bbox="1065 1182 1349 1245">STL, OBJ, AMF</td> </tr> <tr> <td data-bbox="691 1245 751 1381">6.</td> <td data-bbox="751 1245 1065 1381">Software compatibility</td> <td data-bbox="1065 1245 1349 1381">Cura, Sli3r, Simplify3D, Matter Control</td> </tr> <tr> <td data-bbox="691 1381 751 1566">7.</td> <td data-bbox="751 1381 1065 1566">Connectivity / Interface</td> <td data-bbox="1065 1381 1349 1566">USB, WIFI, Ethernet, SD Card / LCD Display</td> </tr> <tr> <td data-bbox="691 1566 751 1629">8.</td> <td data-bbox="751 1566 1065 1629">Build Volume</td> <td data-bbox="1065 1566 1349 1629">To be specified</td> </tr> <tr> <td data-bbox="691 1629 751 1692">9.</td> <td data-bbox="751 1629 1065 1692">Layer Height</td> <td data-bbox="1065 1629 1349 1692">To be specified</td> </tr> <tr> <td data-bbox="691 1692 751 1791">10.</td> <td data-bbox="751 1692 1065 1791">Power Consumption</td> <td data-bbox="1065 1692 1349 1791">To be specified</td> </tr> <tr> <td data-bbox="691 1791 751 1890">11.</td> <td data-bbox="751 1791 1065 1890">Feeder Mechanism</td> <td data-bbox="1065 1791 1349 1890">Bowden Drive</td> </tr> </tbody> </table>			#	Item Particulars	Requirement	1.	Industrial Design	Should be all enclosed	2.	Materials Compatible	ABS, ASA, HIPS, Carbon Fiber, PLA, PETG, Wood, Metal Composites	3.	Bed Levelling	Assisted or semi auto	4.	Heated Bed	Yes	5.	File Type	STL, OBJ, AMF	6.	Software compatibility	Cura, Sli3r, Simplify3D, Matter Control	7.	Connectivity / Interface	USB, WIFI, Ethernet, SD Card / LCD Display	8.	Build Volume	To be specified	9.	Layer Height	To be specified	10.	Power Consumption	To be specified	11.	Feeder Mechanism	Bowden Drive	
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			12.	Language	English
			13.	AC Input	~220 V, 50-60 Hz
19.	PCB Prototyping Machine	PCB Prototyping Machine	#	Item Particulars	Requirement
			1.	PCB Prototyping System	PCB Prototyping Machine-Manual
			2.	Software	Copper CAM and Mach3 Mill
			3.	Accessories	Handheld Remote-Control unit for Machine Setting
			4.	Resolution (X/Y)	<= 3.125 Micro Meter (0.123 Mil)
			5.	Working Area (X/Y/Z)(mm)	220x330x120
			6.	Minimum Width Line & Space in mm	< = 0.1 (4 mil)
			7.	Max Travel Speed (mm/sec)	>=58 (2.28 ")
			8.	Drilling (mm)	0.2 -3.175 (8-125 mil)
			9.	Maximum Drilling Cycles/ Min	> 45
			10.	Conversion Software	Converts Gerber, G code

			11.	Main Axle Power Rate	≥ 300 W
			12.	Main Axle Rotating Speed	≥ 25000 RPM
			13.	Max working speed	≥ 3500 mm/min
			14.	Feeding Height	>100 mm
			15.	Working drive	0.02-0.05mm
			16.	Repositioning accuracy	≤ 0.03 mm
			17.	Capability of Processing various materials	FR4, Copper clad, Acrylic, Metal, Aluminum and etc.,
			18.	Power	220 V AC
20.	Professional Soldering equipment	Professional Soldering equipment with hot air gun	Integrated Soldering / Desoldering Station, Soldering Iron, SMD, Stand ESD, Output Power : > 65 , Input Voltage: 220V, 480 degree Celsius, ESD safe, IC desoldering tip, Temperature Control		
21.	Tools, Tweezers etc.	KIT, TOOL, ELECT, S/IRON, UK PLUG	With accessories Tweezers, wire straighter, cutter, wire stripper, suction unit / Vacuum Pick, IP Solution, Desoldering Wick, Flux Pen, Power Drill, Hand Drill, Power Spanner, Mechanical Vice.		
22.	ESD Matt		120 cm X 60 cm		
23.	Embedded development platforms	Open hardware computing	#	Parameter	Required Specifications
			1.	Type	Single board Computer/SoC
			2.	Processor (CPU)	64 Bit ARM Cortex Quad core processor with min. 1.5 GHz frequency
			3.	Power supply	Micro USB/ USB C Type,

					DC Power Jack (optional), 5V 3Amp
			4.	Power Adaptor	Dedicated power adaptor to be provided by the supplier.
			5.	RAM	Min. 2 GB 2400 MHz LPDDR4 SDRAM (onboard)
			6.	GPIO	Min. 40-pin
			7.	Graphics	GPU with 400MHz frequency, OpenGL or better Min. 1080p video support at min. 30 fps
			8.	Connectivity/ Interfaces	Gigabit Ethernet port (1 in no.), Power over Ethernet (PoE) enabled, 2.4 GHz and 5.0 GHz IEEE 802.11ac wireless, Bluetooth 5.0, BLE USB 3.0 ports (2 in nos.) USB 2.0 ports (2 in nos.) HDMI (1 in No.) /Micro HDMI Port (2 in nos.) 2-lane MIPI DSI display port 2-lane MIPI CSI camera port 4-pole stereo audio and composite video port
			9.	Storage	Micro-SD card slot for loading operating system and data storage
			10.	OS Compatibility	Windows, Linux OS e.g. Android, Ubuntu, etc.

26.	Lab computers High Speed		<table border="1"> <thead> <tr> <th data-bbox="688 201 753 279">#</th> <th data-bbox="753 201 1000 279">Particulars</th> <th data-bbox="1000 201 1344 279">Required Specification</th> </tr> </thead> <tbody> <tr> <td data-bbox="688 279 753 359">1</td> <td data-bbox="753 279 1000 359">Processor Make</td> <td data-bbox="1000 279 1344 359">Intel</td> </tr> <tr> <td data-bbox="688 359 753 520">2</td> <td data-bbox="753 359 1000 520">Processor Generation</td> <td data-bbox="1000 359 1344 520">7th or 8th Intel Core i5 or i7 (preferred) Latest generation Xeon Processor</td> </tr> <tr> <td data-bbox="688 520 753 642">3</td> <td data-bbox="753 520 1000 642">Number of Cores of Processor</td> <td data-bbox="1000 520 1344 642">Min. 4</td> </tr> <tr> <td data-bbox="688 642 753 722">4</td> <td data-bbox="753 642 1000 722">Processor Base Frequency</td> <td data-bbox="1000 642 1344 722">Min. 2.2 GHz</td> </tr> <tr> <td data-bbox="688 722 753 802">6</td> <td data-bbox="753 722 1000 802">Type of Hard Drive</td> <td data-bbox="1000 722 1344 802">Any (SATA, SSD, etc.)</td> </tr> <tr> <td data-bbox="688 802 753 882">7</td> <td data-bbox="753 802 1000 882">Max. Hard Disk Capacity</td> <td data-bbox="1000 802 1344 882">Min. 8 TB</td> </tr> <tr> <td data-bbox="688 882 753 919">8</td> <td data-bbox="753 882 1000 919">Hard Disk</td> <td data-bbox="1000 882 1344 919">2 TB</td> </tr> <tr> <td data-bbox="688 919 753 957">9</td> <td data-bbox="753 919 1000 957">RAM</td> <td data-bbox="1000 919 1344 957">Min. 32 GB</td> </tr> <tr> <td data-bbox="688 957 753 1079">10</td> <td data-bbox="753 957 1000 1079">Max. RAM Expandability / Capacity</td> <td data-bbox="1000 957 1344 1079">Min. 64 GB</td> </tr> <tr> <td data-bbox="688 1079 753 1117">11</td> <td data-bbox="753 1079 1000 1117">Graphics Card</td> <td data-bbox="1000 1079 1344 1117">Dedicated</td> </tr> <tr> <td data-bbox="688 1117 753 1239">12</td> <td data-bbox="753 1117 1000 1239">Graphics Memory</td> <td data-bbox="1000 1117 1344 1239">Min. 4 GB Latest Generator of Graphics Card</td> </tr> <tr> <td data-bbox="688 1239 753 1318">13</td> <td data-bbox="753 1239 1000 1318">Operating System</td> <td data-bbox="1000 1239 1344 1318">Windows 10 Professional (64 bit)</td> </tr> <tr> <td data-bbox="688 1318 753 1398">14</td> <td data-bbox="753 1318 1000 1398">WiFi Connectivity</td> <td data-bbox="1000 1318 1344 1398">Optional (WiFi 802.11 ac)</td> </tr> <tr> <td data-bbox="688 1398 753 1478">15</td> <td data-bbox="753 1398 1000 1478">Bluetooth Connectivity</td> <td data-bbox="1000 1398 1344 1478">Optional</td> </tr> <tr> <td data-bbox="688 1478 753 1516">16</td> <td data-bbox="753 1478 1000 1516">Ethernet Port</td> <td data-bbox="1000 1478 1344 1516">Min. 1 (RJ-45)</td> </tr> <tr> <td data-bbox="688 1516 753 1596">17</td> <td data-bbox="753 1516 1000 1596">USB Port 3.0 or 3.1</td> <td data-bbox="1000 1516 1344 1596">Min. 2</td> </tr> <tr> <td data-bbox="688 1596 753 1633">18</td> <td data-bbox="753 1596 1000 1633">Display Size</td> <td data-bbox="1000 1596 1344 1633">27"</td> </tr> <tr> <td data-bbox="688 1633 753 1713">19</td> <td data-bbox="753 1633 1000 1713">Display Resolution</td> <td data-bbox="1000 1633 1344 1713">Min. 1600 x 900</td> </tr> <tr> <td data-bbox="688 1713 753 1751">20</td> <td data-bbox="753 1713 1000 1751">Panel Type</td> <td data-bbox="1000 1713 1344 1751">IPS (preferred)</td> </tr> <tr> <td data-bbox="688 1751 753 1831">21</td> <td data-bbox="753 1751 1000 1831">Keyboard Type</td> <td data-bbox="1000 1751 1344 1831">Wired and Standard (preferred)</td> </tr> <tr> <td data-bbox="688 1831 753 1869">22</td> <td data-bbox="753 1831 1000 1869">Mouse Type</td> <td data-bbox="1000 1831 1344 1869">Wired</td> </tr> </tbody> </table>	#	Particulars	Required Specification	1	Processor Make	Intel	2	Processor Generation	7 th or 8 th Intel Core i5 or i7 (preferred) Latest generation Xeon Processor	3	Number of Cores of Processor	Min. 4	4	Processor Base Frequency	Min. 2.2 GHz	6	Type of Hard Drive	Any (SATA, SSD, etc.)	7	Max. Hard Disk Capacity	Min. 8 TB	8	Hard Disk	2 TB	9	RAM	Min. 32 GB	10	Max. RAM Expandability / Capacity	Min. 64 GB	11	Graphics Card	Dedicated	12	Graphics Memory	Min. 4 GB Latest Generator of Graphics Card	13	Operating System	Windows 10 Professional (64 bit)	14	WiFi Connectivity	Optional (WiFi 802.11 ac)	15	Bluetooth Connectivity	Optional	16	Ethernet Port	Min. 1 (RJ-45)	17	USB Port 3.0 or 3.1	Min. 2	18	Display Size	27"	19	Display Resolution	Min. 1600 x 900	20	Panel Type	IPS (preferred)	21	Keyboard Type	Wired and Standard (preferred)	22	Mouse Type	Wired	
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			23	DVD Drive	DVD R/W	
27.	High Storage Server		#	Particulars	Required Specification	
			1	Form Factor	Rack/ Tower	
			2	Processor Make	Intel Xeon Processor	
			3	Processor Frequency	(Min.) 2GHz with Turbo boost Technology	
			4	Processor Generation	4 th or Higher	
			5	Processor Cache	(min.) 8 MB	
			6	Number of Core per processor	4 or more	
			7	No. of Threads	8 or More	
			8	Number of Processors	2 (preferred)	
			9	RAM Requirement	DDR4, 64/128 GB, min. 2400 MHz	
			10	Hard Disk Installed	Min. 4 TB	
			12	Max. Hard Disk Capacity	(Min.) 8 TB	
			13	Type of Hard Disk	SAS @ 10k/15K, SSD	
			14	RAID Type	5 (preferred)	
			15	Network Card Supported	1GE or Higher (Ethernet RJ-45 connectivity) 10 GE Copper RJ45 will be preferred	
			16	Total No. of Network Ports	Min. 2	
			17	Operating Systems	Windows 10 (preinstalled with recovery media)	
28.	Network Attached Storage	NAS	40 TB Capacity with Support for SAS Hard Disk (10k/ 15k) and SSD Hard Disk, 1GE /10GE Network Port (2 in Nos.)			

Software for ACES Lab			
1.	Compilers ARM Family	IDE/C Compiler for ARM family with Middleware	IDE with Pack Installer, CMSIS RTX5 RTOS with source code, C/C++ Arm Compiler, Middleware: IPv4 Network, USB Device, File System, Graphics, Arm processor support Cortex- M0/ M0+/ M3/ M4/ M7, Cortex- M23 / M33, ARM7, ARM9, Cortex-R4, SecurCore SC000, SC300, ARMv8-M architecture, Middleware
2.	Compilers Microchip Family	IDE/C Compiler for Microchip Family or similar	ANSI C compiler for PIC devices from Microchip. solution for developing code for PIC devices. intuitive IDE, powerful compiler with advanced optimizations, lots of hardware and software libraries,
3.	Hardware circuit simulation	Pspice or similar	LTSpice or similar

CATEGORY B: Autonomous Vehicle Development Platform / Equipment

No.	Equipment Category	Item Description	Minimum Specifications			Remark
1	Compute Platform	Compute platform for Sensor Data Processing and computing the Trajectory	#	Particulars	Specifications	
			1.	AI Performance	32 TOPs	
			2.	GPU	512-core NVIDIA GPU with 64 Tensor Cores	
			3.	CPU	8-Core Carmel ARM v8.2 64-bit NVIDIA Carmel CPU, 8MB L2 + 4MB L3	
			4.	Memory	16GB 256-Bit LPDDR4x 136.5 GB/s	
			5.	Storage	32GB eMMC 5.1	
			6.	Power	30W	
			7.	PCIe	1 x8 or 1 x4 or 1 x2 or 2 x1 PCIe (Gen4)	
			8.	CSI	16x MIPI CSI-2 D-PHY 1.2 (Up to 40 GB/s) C-PHY 1.1 (Up to 109 GB/s)	
			9.	Display	DP 1.2 eDP 1.4 HDMI 2.0	
10.	DL Accelerator	5 TFLOPS (FP16) 10 TOPS (INT8)				

			11. Vision Accelerator	7-Way VLIW Vision Processor																					
2	Open-Source Hardware Platforms		<table border="1"> <thead> <tr> <th>#</th> <th>Particulars</th> <th>Specifications</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Processor</td> <td>32 Bit Arm Cortex-M7, 216MHz, 2MB memory, 512KB RAM</td> </tr> <tr> <td>2.</td> <td>IO Processor</td> <td>32 Bit Arm Cortex-M3, 24MHz, 8KB SRAM</td> </tr> <tr> <td>3.</td> <td>On-board sensors</td> <td>Accel/Gyro Mag Barometer</td> </tr> <tr> <td>4.</td> <td>GPS</td> <td>GPS/GLONASS receiver; integrated magnetometer</td> </tr> <tr> <td>5.</td> <td>Interfaces</td> <td> <ul style="list-style-type: none"> PWM, UART, SPI, I2C, CAN, ADC </td> </tr> <tr> <td>6.</td> <td>Voltage Ratings</td> <td> <ul style="list-style-type: none"> Power module output: 4.9~5.5V Max input voltage: 6V Max current sensing: 120A USB Power Input: 4.75~5.25V Servo Rail Input: 0~36V </td> </tr> </tbody> </table>	#	Particulars	Specifications	1.	Processor	32 Bit Arm Cortex-M7, 216MHz, 2MB memory, 512KB RAM	2.	IO Processor	32 Bit Arm Cortex-M3, 24MHz, 8KB SRAM	3.	On-board sensors	Accel/Gyro Mag Barometer	4.	GPS	GPS/GLONASS receiver; integrated magnetometer	5.	Interfaces	<ul style="list-style-type: none"> PWM, UART, SPI, I2C, CAN, ADC 	6.	Voltage Ratings	<ul style="list-style-type: none"> Power module output: 4.9~5.5V Max input voltage: 6V Max current sensing: 120A USB Power Input: 4.75~5.25V Servo Rail Input: 0~36V 	
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			2.	Electrical	<p>Input voltage on USB and JST GH connectors: 4.75 - 5.5 V</p> <p>Antenna DC bias: 3.3 V</p> <p>Average current consumption @5V: 200 mA</p>
			3.	Data	<p>Internal storage: ≥ 8 GB</p> <p>Correction input: RTCM2, RTCM3</p> <p>Solution input: ERB, plain text, NMEA (RMC, GGA, GSA, GSV)</p> <p>Logs: RINEX2.X, RINEX3.X</p>
			4.	Connectivity	<p>Wireless: Wi-Fi (802.11b/g/n), Bluetooth (4.0/2.1 EDR)</p> <p>Interfaces: USB, UART, Event</p>
			5.	Positioning	<p>Static: H: 5mm + 1ppm, V: 10mm + 2ppm</p> <p>Kinematic: H: 7mm + 1ppm, V: 14mm + 2ppm</p>

4	RADAR Sensor & Kit	Radio Detection and Ranging	#	Item Particulars	Specifications
				Should have following features:	
			1.	Multi-mode, multi-application capability	
			2.	Solid-state Technology	
			3.	Resistant to vibration and extremely robust	
			4.	Compact packaging	
			5.	Self-diagnosing fail-safe operation	
			6.	Produces quality targets, free of false positives, without the use of additional filters.	
			7.	Frequency	77-79 GHz
			8.	Min Range (m)	1
			9.	Max Range (m)	>= 175 @ 10dB (Long Range)
					>=60 @ 10dB (Mid-Range)
			10.	Range Accuracy	±.5m (noise) ±5% (bias) (Long Range)
					±.25m (noise) ±5% (bias) (Mid-Range)
			11.	Range Rate Accuracy (m/s)	±0.1
			12.	Azimuth Accuracy (°)	±0.5
			13.	Update Rate (ms)	~50
			14.	HFOV (°)	20 (Long Range)
					90 (Mid-Range)
15.	VFOV (°)	> = 4			
16.	Power (W)	<= 12			
17.	Tracking Targets	64			
18.	Interface	CAN/ ETH			

5	LiDAR Sensor	Light Detection and Ranging	<table border="1"> <thead> <tr> <th>#</th> <th>Item Particulars</th> <th>Requirement</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Range</td> <td>≥ 100 m</td> </tr> <tr> <td>2.</td> <td>Range Accuracy</td> <td>Up to ± 3 cm</td> </tr> <tr> <td>3.</td> <td>Channels</td> <td>16</td> </tr> <tr> <td>4.</td> <td>Horizontal FoV</td> <td>360°</td> </tr> <tr> <td>5.</td> <td>Vertical FoV</td> <td>$+15.0^\circ$ to -15.0° (30°)</td> </tr> <tr> <td>6.</td> <td>Angular Resolution (Horizontal/ Azimuth)</td> <td>$0.1^\circ - 0.4^\circ$</td> </tr> <tr> <td>7.</td> <td>Angular Resolution (Vertical)</td> <td>2.0° (min)</td> </tr> <tr> <td>8.</td> <td>Points Per Second (Single Return Mode)</td> <td>$\sim 300,000$</td> </tr> <tr> <td>9.</td> <td>Points Per Second (Dual Return mode)</td> <td>$\sim 600,000$</td> </tr> <tr> <td>10.</td> <td>Rotation Rate</td> <td>5-20 Hz</td> </tr> <tr> <td>11.</td> <td>Operating Voltage</td> <td>9 V - 18 V</td> </tr> <tr> <td>12.</td> <td>Power Consumption</td> <td>≤ 8 W (Typical)</td> </tr> <tr> <td>13.</td> <td>Operating Temp</td> <td>-10°C to $+60^\circ\text{C}$</td> </tr> <tr> <td>14.</td> <td>Storage Temp</td> <td>-40°C to $+105^\circ\text{C}$</td> </tr> <tr> <td>15.</td> <td>Output</td> <td>Output UDP packets over Ethernet</td> </tr> <tr> <td>16.</td> <td>Ethernet Connection</td> <td>1000 Mbps</td> </tr> <tr> <td>17.</td> <td>GPS Timesync</td> <td>\$GPRMC + \$GPGGA</td> </tr> <tr> <td>18.</td> <td>Laser</td> <td>903nm Class 1 eye safe</td> </tr> <tr> <td>19.</td> <td>Environmental Protection</td> <td>IP67</td> </tr> </tbody> </table>	#	Item Particulars	Requirement	1.	Range	≥ 100 m	2.	Range Accuracy	Up to ± 3 cm	3.	Channels	16	4.	Horizontal FoV	360°	5.	Vertical FoV	$+15.0^\circ$ to -15.0° (30°)	6.	Angular Resolution (Horizontal/ Azimuth)	$0.1^\circ - 0.4^\circ$	7.	Angular Resolution (Vertical)	2.0° (min)	8.	Points Per Second (Single Return Mode)	$\sim 300,000$	9.	Points Per Second (Dual Return mode)	$\sim 600,000$	10.	Rotation Rate	5-20 Hz	11.	Operating Voltage	9 V - 18 V	12.	Power Consumption	≤ 8 W (Typical)	13.	Operating Temp	-10°C to $+60^\circ\text{C}$	14.	Storage Temp	-40°C to $+105^\circ\text{C}$	15.	Output	Output UDP packets over Ethernet	16.	Ethernet Connection	1000 Mbps	17.	GPS Timesync	\$GPRMC + \$GPGGA	18.	Laser	903nm Class 1 eye safe	19.	Environmental Protection	IP67
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6	Camera	Stereo & Mono with stand	#	Item Particulars	Requirements
			1.	Features	<ul style="list-style-type: none"> • High-Resolution and High Frame-rate 3D Video Capture • Depth Perception indoors and outdoors at up to 20m • 6-DoF Positional Tracking • Spatial Mapping
			2.	Video Mode	<ul style="list-style-type: none"> • 2.2 K, 1080p,720p and WVGA
				Depth	
			3.	Depth Range	0.5 - 20 m (1.64 to 65 ft)
			4.	Depth Format	32-bits
			5.	Stereo Baseline	120 mm (4.7")
				Motion	
			6.	6-axis Pose Accuracy	Position: +/- 1mm Orientation: 0.1°
			7.	Frequency	Up to 100Hz
			8.	Technology	Real-time depth-based visual odometry and SLAM
				Lens	
			9.	Lens	Interchangeable lens, Wide-angle all-glass dual lens with reduced distortion Field of View: 90° (H) x 60° (V) x 110° (D) max. <i>f</i> /2.0 aperture
				Sensor	
10.	Sensor Resolution	4M pixels per sensor with large 2-micron pixels			
11.	Sensor Size	1/3" backside illumination			

					sensors with high low-light sensitivity
			12.	Camera Controls	Adjust Resolution, Frame-rate, Exposure, Brightness, Contrast, Saturation, Gamma and White Balance
			13.	Sensor Format	Native 16:9 Format for a greater horizontal field of view
			14.	Shutter Sync	Electronic Synchronized Rolling Shutter
			15.	Connector	USB 3.0 port with 1.5m integrated cable
			16.	Power	Power via USB 5V / 380mA, PoE (Power on Ethernet)
			17.	Operating Temperature	0°C to +45°C
			18.	Compatible OS	Windows 7, 8, 10 and Linux
			19.	Third-Party Support	ROS, Unity, OpenCV, MATLAB
			20.	SDK System Requirements	To be Specified by supplier

CATEGORY C: Electrical Vehicle Lab Equipment

No.	Equipment Category	Item Description	Minimum Specifications	Remark										
1	Motor Control Evaluation Module (EVM) / kit	Three Phase BLDC Motor Kit	<ul style="list-style-type: none"> • Motor Control Evaluation Kit for Spinning Three-Phase Brushless DC (BLDC) and brushless AC (BLAC) • High-Performance, Power-Efficient, Cost-Effective Sensorless field-oriented control (FOC) and sensored/sensorless trapezoidal commutation platform • 24 V power supply • USB Cable • Isolated CAN and SPI communication <p>Over current protection on the inverter stage</p>	Three Phase BLDC Motor Kit with DRV8312 and Piccolo MCU or similar										
2	3-phase Sensor less BLDC Development Kit	For rapid prototyping and evaluation of the motor control application	<ul style="list-style-type: none"> • Motor Control Development Kit for sensorless applications requiring BLDC motor • DC-bus overvoltage, overcurrent, and undervoltage fault detection • ANSI-C based motor control reference software with easy portability • Sensorless control using back EMF zero-crossing detection • Hardware support for Hall sensor-based motor control 	NXP MPC5606B MCU or similar										
3	High voltage power source (18 kW) 0-200V		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">DC Power Supply 500V,120A, 18KW</td> </tr> <tr> <td style="padding: 2px;">Fast response DC power Supply</td> </tr> <tr> <td style="padding: 2px;">Slew rate controlled</td> </tr> <tr> <td style="padding: 2px;">Should have 2 quadrant source and sink Capability, battery simulation function</td> </tr> <tr> <td style="padding: 2px;">Should support Master Slave Operation</td> </tr> <tr> <td style="padding: 2px;">Should list Mode Programming with full protection</td> </tr> <tr> <td style="padding: 2px;">Front Panel Programming</td> </tr> <tr> <td style="padding: 2px;">Master-Slave Parallel Operation</td> </tr> <tr> <td style="padding: 2px;">Supports control loop priority settings: CV and CC</td> </tr> <tr> <td style="padding: 2px;">Should have interface : USB/CAN/LAN/digital IO communication interface,</td> </tr> </table>	DC Power Supply 500V,120A, 18KW	Fast response DC power Supply	Slew rate controlled	Should have 2 quadrant source and sink Capability, battery simulation function	Should support Master Slave Operation	Should list Mode Programming with full protection	Front Panel Programming	Master-Slave Parallel Operation	Supports control loop priority settings: CV and CC	Should have interface : USB/CAN/LAN/digital IO communication interface,	
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Should have interface : USB/CAN/LAN/digital IO communication interface,														

			Full protections: support OVP, ±OCP, ±OPP, OTP, power down protection, anti-islanding protection																															
4	Electronic load	600 V / 1260A / 18kW DC E-load	<table border="1"> <tr><td>600 V / 1260A / 18kW DC E-load</td></tr> <tr><td>Minimum 8 operating modes: CC, CV, CR, CP, CC+CV, CV+CR, CR+CC, CP+CC</td></tr> <tr><td>Transient over-power loading capability</td></tr> <tr><td>Adjustable CV loop speed</td></tr> <tr><td>Should have Soft start and soft stop prevent voltage fluctuations at on/off</td></tr> <tr><td>Timing control list programming</td></tr> <tr><td>I-monitor</td></tr> <tr><td>Should have LAN, USB, RS232, CAN, GPIB, analog interface</td></tr> <tr><td>OCP/OPP test function</td></tr> <tr><td>Up to 100 groups memories</td></tr> <tr><td>Protection functions: OVP, OCP, OPP, OTP, current oscillation protection, limited current protection, limited power protection, reverse alarm protection</td></tr> <tr><td>Time measurement, battery discharge test function</td></tr> <tr><td>Master-slave paralleling</td></tr> <tr><td>Dynamic and List function</td></tr> </table>	600 V / 1260A / 18kW DC E-load	Minimum 8 operating modes: CC, CV, CR, CP, CC+CV, CV+CR, CR+CC, CP+CC	Transient over-power loading capability	Adjustable CV loop speed	Should have Soft start and soft stop prevent voltage fluctuations at on/off	Timing control list programming	I-monitor	Should have LAN, USB, RS232, CAN, GPIB, analog interface	OCP/OPP test function	Up to 100 groups memories	Protection functions: OVP, OCP, OPP, OTP, current oscillation protection, limited current protection, limited power protection, reverse alarm protection	Time measurement, battery discharge test function	Master-slave paralleling	Dynamic and List function																	
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			8.	Output Rating	230Vac, 50Hz, 3.3KW Max. per output			
			ENVIRONMENT					
			9.	Ambient Temperature	-30 ⁰ C to 55 ⁰ C			
			10	Storage Temperature	-40 ⁰ C to 70 ⁰ C			
			11	Altitude	<2000Mtr			
			12	Humidity	<95%, Non- Condensing			
			USER INTERFACE AND CONTROL					
			13	Display	4.3 LCD			
			14	Language	English			
			15	Push Button	Emergency Stop			
			16	User Authentication	OCPP			
			17	Visual Indication	LED (available, charging fault)			
			PROTECTION					
			18	Protection	Over voltage, under voltage, over current, short circuit, surge protection, over temperature, ground fault, residual current.			
			COMMUNICATION					
			19	Charger and CMS	Protocol: OCPP (Open Charge Point Protocol) Interface: Ethernet, 2G/3G/4G			
			MECHANICAL					
			20	Ingress Protection	IP55			
			21	Enclosure Protection	IK10 vandal proof			
			22	Cooling	Natural cooling			
			6	BEVC DC- 001 Charger				
						#	Parameter	Description
General Requirements								

			1	EVSE Type	Dual-connector DC EVSE
			2	Energy Transfer Mode	Conductive
			3	Charging mode	Mode 4
			4	Reliability and Serviceability	Modularity, self-diagnostic features, fault codes and easy serviceability
			System Structure		
			1	Regulation Method	Regulated d.c EV charging station with combination of CVC or CCC but not simultaneously
			2	Isolation	Each output isolated from each other with proper insulation
			3	Power supply	d.c. EV charging station connected to a.c. mains
			4	DC output voltage rating	Up to and including 100 V
			5	Charge control communication	Communicate by digital and analog signals
			6	Interface interoperability	Inter-operable with any EV(non-dedicated)
			Input Requirements		
			1	AC Supply System	3-Phase, 5 Wire AC system (3Ph+N+E)
			2	Nominal Input voltage	3Ø, 415V (+6% and -10%) as per IS 12360
			3	Input Frequency	50Hz, ±1.5Hz
			4	Supply side AC Connector for Input	IEC 62196 Type 2
			5	Input Supply Failure backup	Battery backup for minimum 1 hour for control system and billing unit, to enable activities

					such as billing, to be provided.
Output Requirements					
1	Output Details	Suitable for 48V and 72V vehicle battery configuration			
2	Charger Configuration Types	<p>Type 1: Single vehicle charging at 48V or 72V with a maximum of 10kW power, or a 2W vehicle charging at 48V with maximum power of 3.3 kW.</p> <p>Type 2 : Single vehicle charging at 48V with a maximum of 10kW power or 72V with a maximum of 15 kW power or a 2W vehicle charging at 48V with maximum power of 3.3 kW.</p>			
3	Output Current	200 Amp Max			
4	Number of Outputs	2			
5	Output Connectors	2 output connectors			
6	Output Connector Compatibly	one connector with GB/T 20234.3			
7	Converter Efficiency	> 92 % at nominal output power			
8	Power factor	≥ 0.90 (Full load)			
Cable Requirements					
1	Charging Cable Length	5 Meter, Straight Cable			
2	Cable Type	Charging cable and connector permanently attached to DC FC			

Environmental Requirements		
1	Ambient Temperature Range	0°C to 55°C
2	Ambient Humidity	5 to 95%
3	Ambient Pressure	86 kpa to 106 kpa
4	Storage Temperature	0 to 60°C
Mechanical Requirements		
1	Ingress Protection	IP 54
2	Mechanical Stability	Shall not be damaged by mechanical impact as defined in Section 11.11.2 of IEC 61851-1
3	Cooling	Air Cooled
User Interface & Display Requirements		
1	ON- OFF (Start-Stop) switches	Simple Push button type
2	Emergency stop switch	Simple Push button type in Red Color
3	Visual Indicators	Error indication, Presence of input supply indication, State of charge process indication
4	Display	Minimum 6 inches with 720 x 480 pixels TFT LCD
5	Support Language	English

			6	Display Messages	EVSE should display appropriate messages for user during the various charging states like: <ul style="list-style-type: none"> • Vehicle plugged in / Vehicle plugged out • Duration since start of charge, Time to charge, kWh. • User authorization status • Idle / Charging in progress: SOC • Fault conditions • Metering Information: Consumption Units 	
			7	Authentication	As per OCPP (through mobile application or card reader)	
Performance Requirements						
			1	DC Output voltage and current tolerance	DC Output current regulation in Constant Current Charging (CCC): ± 2.5 A for the requirement below 50 A, and ± 5 % of the required value for 50 A or more DC Output voltage regulation in Constant Voltage Charging (CVC): Max. 2 % for the max rated voltage of the EVSE	

			2	Control delay of charging current in CCC	DC output current Demand Response Time: <1 s Ramp up rate: 20 A/s or more Ramp Down rate: 100 A/s or more
			3	Descending rate of charging current	EVSE should be able to reduce DC current with the descending rate of 100 A/s or more
			4	Periodic and random deviation (current ripple)	DC output current ripple limit of EVSE: 1.5 A below 10 Hz, 6 A below 5kHz, 9A below 150 kHz
			5	Periodic and random deviation (voltage ripple)	Max. ripple voltage: ± 5 V. Max slew rate: ± 20 V/ms
			Communication Requirements		
			1	Communication between EVSE and Vehicle	CAN based as per IEC 61851-24
			2	Communication interface between charger and central management system(CMS)	Ethernet (Standard), Wi-Fi
			3	Communication between EVSE and Central Server	Open Charge Point Protocol (OCPP) 1.5 protocol. Should be upgradable to next version of OCPP whenever it is released
			Protection & Safety Requirements		

			1	Safety Parameters	Over current, under voltage, over voltage, Residual current, Surge protection, Short circuit, Earth fault at input and output, Input phase reversal, Prevention of vehicle movement during charging, Emergency shut-down with alarm, Over temperature, Protection against electric shock	
7	Electrical Safety Analyzer (100V to 5kV)		#	Parameter	Requirement	
			1	AC Withstand Voltage Test	Output Voltage: 0 - 5000 V Output Frequency: 50 Hz / 60 Hz Output Waveform: Sine wave Output Regulation: +/-1% of output Test Time: 0.4 - 999.9 s, continuous Cut-off Current: 40 mA Facility for arc detection	
			2	DC Withstand Voltage Test	Output Voltage: 0 - 5000 V Cut-off current: 12 mA Test Time: 0.3 - 999.9 s, continuous Facility for arc detection	
			3	Insulation Resistance Measurement	Output Voltage: 50 - 1000 VDC Measurement Range: 1 Mohm - 50 Gohm	

				Resistance Resolution: 0.1 Mohm Resistance Accuracy: 5% typical
			4	Ground Bond Test AC Output Current: 1 - 40 A Resistance Range: - 0 - 600 mohm Test Method: 4 wire
			5	Line Leakage Current Test Frequency Range: DC - 1 MHz Leakage Current Range: 0 - 6000 microA (RMS/Peak)
			6	Functional Run Test AC Voltage: 0 -277 V AC Current: 0 - 15 A Power: 0 - 4200 W Power Factor: 0 - 1.00 Leakage Current: 0 - 10 mA
			7	DUT Power AC Voltage: 0 - 277 VAC, single phase, 0 - 15 A max. Power Rating: 4200 W max. DUT Protection: Short circuit current 23 A <3 sec. Inrush current 68 A Response time 1ms
			8	Compliance Standards UL 544, UL 1563, UL 2601-1 EN 60204, IEC/EN 60601-1, IEC 60950, IEC 60990
			9	General Power Requirement: 230 VAC +/- 15%, 50 +/- 5% Hz Environment: 0-40 °C, 20-80% RH

					Safety: Built-in GFI circuit. GFI trip current 450 microA max. HV shutdown speed < 1 ms Interface: RS 232 / GPIB Software: Test automation software																														
8	Power Meter and analyzer	3 phases	<table border="1"> <thead> <tr> <th>#</th> <th>Parameter</th> <th>Requirement</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>No of Channels</td> <td>4</td> </tr> <tr> <td>2.</td> <td>Measurement Accuracy</td> <td>0.04% (basic voltage & current accuracy)</td> </tr> <tr> <td>3.</td> <td>Internal Current Shunts</td> <td>Dual (30Arms and 1 Arms)</td> </tr> <tr> <td>4.</td> <td>ADC</td> <td>16 Bit</td> </tr> <tr> <td>5.</td> <td>Measurement Bandwidth</td> <td>1 Mhz</td> </tr> <tr> <td>6.</td> <td>Sample Rate</td> <td>1 MS/s</td> </tr> <tr> <td>7.</td> <td>Communication Ports</td> <td>USB , Ethernet</td> </tr> <tr> <td>8.</td> <td>Software</td> <td>Software for data downloading and Analysis Should be Provided</td> </tr> <tr> <td>9.</td> <td>Display</td> <td>Full color graphical display for intuitive readouts of measured values, waveforms, harmonics, and energy integration plots</td> </tr> </tbody> </table>			#	Parameter	Requirement	1.	No of Channels	4	2.	Measurement Accuracy	0.04% (basic voltage & current accuracy)	3.	Internal Current Shunts	Dual (30Arms and 1 Arms)	4.	ADC	16 Bit	5.	Measurement Bandwidth	1 Mhz	6.	Sample Rate	1 MS/s	7.	Communication Ports	USB , Ethernet	8.	Software	Software for data downloading and Analysis Should be Provided	9.	Display	Full color graphical display for intuitive readouts of measured values, waveforms, harmonics, and energy integration plots
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			3.	DC voltage range	4.2 V (0.001 V resolution) to 600 V (1 V resolution), 4 ranges, Accuracy: $\pm 1.3\%$ rdg. ± 4 dgt., Input resistance: 100 k Ω or higher
			4.	AC voltage range	420 V (0.1 V resolution) / 600 V (1 V resolution), 2 ranges, 50/60 Hz, Accuracy: $\pm 2.3\%$ rdg. ± 8 dgt., Input resistance: 100 k Ω or higher, Average rectifier
			5.	Low resistance range	For checking the continuity of ground wiring, 10 Ω (0.01 Ω resolution) to 1000 Ω (1 Ω resolution), 3 ranges, Basic accuracy: $\pm 3\%$ rdg. ± 2 dgt., testing current 200 mA or more (at 6 Ω or less)
			6.	Display	Semi-transmissive FSTN LCD with back lighting, bar-graph indicator
			7.	Response time	Approx. 0.8 second for PASS/FAIL decision (based on in-house testing)
			8.	Other functions	Live circuit indicator, Automatic electric discharge, Automatic DC/AC detection, Comparator, Drop proof, Auto power save
			9.	Power supply	LR6 (AA) alkaline batteries $\times 4$, Continuous use: 20 hours (Comparator off, backlight off, 500 V range, no load) Number of measurements: 1000 times (at 5 s ON, 25 s OFF cycle, insulation measurement of lower limit resistance value to

					maintain nominal output voltage)	
			10.	Degree of protection	IP40 and Overload protection	
			11.	Standards	EN61326 (EMC), EN61557-1/ -2/ -4*/ -10	

Note:

1. All the measuring equipment are required to be communicating through suitable ports. The equipment supplied should have the communication and interfacing possibilities in the Graphical Programming Tool supplied/ suggested by the vendors.
2. The software licenses or related software graphical packages are assumed to be bundled in every case.
3. The above specifications are the minimum required specifications, the bidders may quote equipment with better specifications.
4. All the units in this list are supplied as independent / stand-alone units and not as modules to be mounted on separate racks.

ANNEXURE-II

FORMAT OF TECHNICAL COMPLIANCE

To be printed on Company Letter Head

Tender Inviting Authority : **Director, Software Technology Parks Of India, Pune**

Name of Work/Tender Title :

.....

.....

Tender No : **STPI/P/PUR/14/2019-20 dated 04.03.2020**

Name Of Bidder Company :

(i) - Technical Compliance

S. No.	Category of BoM, as per Annexure-I	Compliance (Yes or No)	Remarks, (in any)
1	Category A: General Equipment and Software		
2	Category B: Autonomous Vehicle Development Platform / Equipment		
3	Category C: Electric Vehicle Lab Equipment		

Note: The bidder is required to write "YES" under Compliance Column for the chosen category(s) for Bill of material, as mentioned in Annexure-I.

(ii) Checklist of Submitted Document in Technical Bid

S. No.	List of Submitted Document	Compliance (Yes or No)	Remarks, (in any)
1	Copy of certificate of incorporation/ registration of the company, firm, proprietorship, etc.		
2	CA certified copy/ copies of annual turnover of the bidder for FY 2016-17, 2017-18 and 2018-19.		
3	Copies of minimum two purchase orders of similar nature, executed by the bidder during FY 2016-17, 2017-18, 2018-19 and 2019-20. The submitted copies of work order should not be altered, redacted or tempered with in any manner. The copies must clearly mention description and scope of order, name of client,		

	order number and date, order amount, delivery period, etc.		
4	Copy of letter of authorization (on company letter) to signatory, issued by the bidder company, firm, etc.		
5	Copy of Authorized Partnership/distributorship certificate, issued by OEM to bidder.		
6	Copy of the PAN Card and GST Registration certificates.		
7	Duly Filled and signed Technical Compliance Sheet as per Annexure-'II'.		
8	Copy of EMD Transaction (NEFT/RTGS) details/ NSIC Registration Certificate for EMD exemption.		
9	Copy of receipt of Tender fee Transaction (NEFT/RTGS) or applicable certificate of exemption as per Government Procurement Norms, such as NSIC Registration for MSME, etc.		
10	Any other related and relevant document.		
11	Copy of cancelled cheque or bank passbook of the bidder for refund of EMD amount (Not applicable for EMD exempted bidders).		

I/We hereby certify that

1. I/We have read the complete bid document and corrigendum, if any, complete and understood and accept the complete scope of work and terms and conditions.
2. I/We also have the complete capability to carry out the complete work, defined in this bid document under the mentioned terms and conditions.
3. I/we/our company/firm/organization has/have not been barred/blacklisted by any Government/Public Sector/Private Company, firm or organization.
4. I/We understand that in case any deviation is found in the above statement at any stage, I/we/our company/firm/organization will be blacklisted and will not be permitted to have any dealing with the STPI/ AIC STPINEXT INITIATIVES in future.

Name:

Signature of Authorized Person

Designation:

Date:

Place:

Company Seal

ANNEXURE-III

FORMAT OF COMMERCIAL PROPOSAL for CATEGORY A (General Equipment & Software)

To be printed on Company Letter Head

Tender Inviting Authority : **Director, Software Technology Parks of India, Pune**

Name of Work/Tender Title :

.....

.....

Tender No : **STPI/P/PUR/14/2019-20 dated 04.03.2020**

Name Of Bidder Company :

Commercial Bid/Price Schedule for Category A (General Equipment & Software)

No	Equipment Category	Item Description	Applicable Warranty (in Years)	Units Price (INR)	Units	Total Price (INR)	Total Comprehensive AMC Cost (In Rs.)
A	B	C	D	E	F	G = E x F	H
1.	Oscilloscopes and Accessories	OSCILLOSCOPE, MSO, 1 GHZ			1		
2.		MSO (500 MHz)			1		
3.		Isolated Oscilloscope (500 MHz)			1		
4.		CURRENT PROBE, 20A, 50 MHz, AC-DC			1		
5.		High Voltage Probe of 500Mhz			1		
6.		PROBE, DIFFERENTIAL, 50 MHZ, 1.3 KV			1		
7.	Function/Waveform generator	FUNCTION GENERATOR, 2Channel: 50 MHz			2		
8.	Multimeter	MULTIMETER, Bench Top 6.5 digit DMM			1		

9.		MULTIMETER, Handheld, OLED Display Handheld 3.5 Digit DMM			4		
10.	Power supply	60V/14A, 2 Channel			2		
11.	Power supply	36V/24A, 2 Channel			3		
12.	Power supply	100V/50A, 2 Channel			1		
13.	Data Logger	With NI software or similar			1		
14.	Data Logger	Interpied neo-VI Red or similar			2		
15.	Vector USB or similar				3		
16.	Thermal imaging camera	-20 °C to +650 °C Removable 4 GB micro SD memory card, 4 GB internal flash memory, 2-3 hours per battery			1		
17.	3D Prototype Printer	Moulding, models rapid prototyping			1		
18.	PCB Prototyping Machine	PCB Prototyping Machine			1		
19.	Professional Soldering equipment	Professional Soldering equipment with SMT, with hot air gun			2		
20.	Tools, Tweezers etc.	KIT, TOOL, ELECT, S/IRON, UK PLUG, Power Drill, Hand Drill, Power Spanner, Mechanical Vice			2		
21.	ESD Matt	120 cm X 60 cm			10		
22.	Embedded development platforms	Open hardware computing			3		
23.	Lab Computers High Speed	Intel 8 th or 9 th Gen i7, 32 GB RAM, 4GB Graphics			4		
24.	High Storage Server	Xeon High End Server			1		

25.	Network Area Storage	Network Area Storage (NAS)			1		
Software							
1.	Compilers (3 to 4 microcontroller families)	Keil compiler, ARM Family, Microchip Family or similar			1		
2.	Hardware circuit simulation	Pspice or similar			1		
I. - NET PAYABLE AMOUNT (Total of G + H) (Including Comprehensive AMC Cost, taxes, etc.)						

NET PAYABLE AMOUNT (in words)
.....
.....

I/We hereby certify that

1. All the prices mentioned above are fixed, firm, final, complete and inclusive of all applicable taxes, charges, etc. for complete scope of work, defined in this bid document for all the items listed above.
2. The validity of the bid is 120 days from last date of bid submission.

Name:
Designation:
Date:
Place:

Signature of Authorized Person

Company Seal

FORMAT OF COMMERCIAL PROPOSAL for CATEGORY B (Autonomous Vehicle Development Platform / Equipment)

To be printed on Company Letter Head

Tender Inviting Authority : **Director, Software Technology Parks of India, Pune**
Name of Work/Tender Title :

Tender No : STPI/P/PUR/14/2019-20 dated 04.03.2020
Name Of Bidder Company :

Commercial Bid/Price Schedule for Category B: Autonomous Vehicle Development Platform / Equipment

No	Equipment Category	Item Description	Applicable Warranty (in Years)	Units Price (INR)	Units	Total Price (INR)	Total Comprehensive AMC Cost (In Rs.)
A	B	C	D	E	F	G = E x F	H
1.	Compute Platform	Xavier AGX or similar			1		
2.	Open-Source Hardware Platforms	PixHawk /PX4 or similar			1		
3.	IMU + GNSS / REACH RS+ SURVEY Kit	Signals: GPS/QZSS, GLONASS, BeiDou, Galileo, SBAS IMU			1		
4.	RADAR Sensor & Kit	Frequency Range: 77 - 79Ghz Multi-mode, multi-application capability			2		
5.	LiDAR Development Kit	Puck Lite Range: >= 100m horizontal (360°) and vertical (30°) FoV			1		

6.	Camera	Stereo & Mono with stand Video Mode:2.2 K, 1080p,720p and WVGA			3		
I. - NET PAYABLE AMOUNT (Total of G + H) (Including CAMC Cost, taxes, etc.)						

NET PAYABLE AMOUNT (in words)

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.....

I/We hereby certify that

1. All the prices mentioned above are fixed, firm, final, complete and inclusive of all applicable taxes, charges, etc. for complete scope of work, defined in this bid document for all the items listed above.
2. All the prices mentioned above are in INR only.

Name:

Signature of Authorized Person

Designation:

Date:

Place:

Company Seal

FORMAT OF COMMERCIAL PROPOSAL for CATEGORY C (Electric Vehicle Lab Equipment)

To be printed on Company Letter Head

Tender Inviting Authority : **Director, Software Technology Parks of India, Pune**

Name of Work/Tender Title :

.....

.....

Tender No : **Dated**.....

Name Of Bidder Company :

Commercial Bid/Price Schedule for Category C: Electric Vehicle Lab Equipment

No	Equipment Category	Item Description	Applicable Warranty (in Years)	Units Price (INR)	Units	Total Price (INR)	Total Comprehensive AMC Cost (In Rs.)
A	B	C	D	E	F	G = E x F	H
1.	Motor Control Evaluation Module (EVM) / kit	Three Phase BLDC Motor Kit with DRV8312 and Piccolo MCU or similar			1		
2.	3-phase Sensor less BLDC Development Kit	For rapid prototyping and evaluation of the motor control application			1		
3.	High voltage power source (18 kW) 0-200V				1		
4.	Electronic load	600V / 1260A / 18kW DC E-load,			1		
5.	BEVC AC-001 charger				1		

6.	BEVC DC-001 Charger				1		
7.	Electrical Safety Analyzer (100V to 5kV)				1		
8.	Power Meter and analyzer	3 phases, 4 channels			1		
9.	Megger/insulation meter	<ul style="list-style-type: none"> • 1KV Insulation tester • Insulation test range: 0.01 MΩ to 10 GΩ 			1		
10.	PP Safety Kit				1		
I. - NET PAYABLE AMOUNT (Total of G + H)							
(Including CAMC Cost, taxes, etc.)						

NET PAYABLE AMOUNT (in words)

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1. All the prices mentioned above are fixed, firm, final, complete and inclusive of all applicable taxes, charges, etc. for complete scope of work, defined in this bid document for all the items listed above.
2. The validity of the bid is 120 days from last date of bid submission.

Name:
Designation:
Date:
Place:

Signature of Authorized Person

Company Seal

ANNEXURE-IV

SERVICE LEVEL AGREEMENT

After commissioning & acceptance, during comprehensive support, the supplier shall be responsible for the uptime of the equipment and shall enter into a contract with an SLA of maintaining the setup for 95% uptime on 24x7 basis.

The Supplier would need to provide resolution to the fault in the equipment within 48 hours of its reporting. The penal provisions would become applicable on violation of the SLA terms three times in an individual year. Reporting of the same fault again, not attended within the SLA norms mentioned above, would be counted as the 2nd incident of the equipment fault.

Penalty clause for non-conformance to above SLA:

- *The penal provisions would be applicable in case of non-adherence to the SLA Agreement.*
- *The penal provisions would be applicable if the SLA norms are not met from the reporting of the 4th incident of the equipment fault.*
- *The penal charges applicable would be Rs 10000/- per hour of downtime at a stretch or in parts up to total down time of 20 hours. This down time shall be calculated over and above the total hours of downtime permissible. Beyond 20 hours of down time, the Performance Bank Guarantee submitted by the Supplier to "MOTION-CoE" shall be forfeited. Any payments (payable to Supplier) shall also not be made. This will be deemed to be an event of default and "MOTION-CoE" may terminate the contract.*
- *"MOTION-CoE" can relax the penal provisions on case to case basis.*

SLA Terms

1. The supplier will carry out the work at user locations as specified by "MOTION-CoE" and will be responsible for total integration and execution of project as per the satisfaction of "MOTION-CoE".
2. The bidder will carry out comprehensive site survey, prepare the necessary drawings, equipment layout plan, power estimation and distribution, power cabling from equipment to the power outlet, power and communication cabling plan, equipment's rack placement, etc. for the "MOTION-CoE" & other infrastructure in consultation with the "MOTION-CoE".
3. The supplier will design, supply, install, commission, integrate and maintain the equipment supplied "MOTION-CoE" as per the requirement in conformity as per the Technical Specifications and terms & conditions of the proposal. The supplier will ensure to install the supplied systems and make it operational on the premise and provide maintenance for Five years from the date of successful installation and commissioning.

4. The supplier shall deliver and implement the technologies in conjunction with a set of best practices guidelines & global industry standards.
5. The supplier will ensure smooth integration of the offered equipment with any existing equipment/network at the site.
6. The supplier will provide user manual to end-user detailing operations of the equipment and on-site user level training at the time of installation.
7. The supplier will submit project plan after consultation with "MOTION-CoE" within one week from the date of purchase order.
8. The supplier has to ensure that during the execution of the project they do not damage or disrupt the existing services under and above the ground.
9. The Supplier has to comply with the security policy of the "MOTION-CoE" End-user and Non-Disclosure Agreement (NDA).
10. The supplier shall organise technical training on the operations of all the equipment after installation and commissioning has been completed. Annual Training for two batches will be provided every year for five years at no additional cost for a batch of 25-30 people for 2 days (twice a year) at the place of installation. The supplier must provide all the training material in both hard and soft copies (10 sets each).
11. The supplier will ensure the availability of services from professionally qualified team during implementation of the project and to provide the required on-site comprehensive support & maintenance for a period of five years.
12. The Supplier will be liable for any hardware and software up-gradation for maintenance without any extra cost during comprehensive support period.
13. On completion of the work the supplier shall submit the detailed diagram/drawings & documentation of the project to the "MOTION-CoE" and obtain a certificate.

COMPREHENSIVE SUPPORT

Comprehensive support shall include free maintenance of the whole equipment supplied including free replacement of hardware parts, free software/firmware upgrades/ updates/ renewals. The defects, if any shall be attended to on immediate basis but in no case any defect should prolong for more than 48 hours. The comprehensive onsite comprehensive support shall be for a minimum period of FIVE YEARS from the date of acceptance of the equipment by "MOTION-CoE". The Comprehensive AMC includes onsite comprehensive support with

parts and software updates/upgrades/renewals. The Proposals received without FIVE YEARS of Comprehensive support would be outrightly rejected.

In WITNESS WHEREOF THE parties hereto signed these presents on the date, month and year written above.

Witness

Witness

01.

02.

Name:

Signature of Authorized Person

Designation:

Date:

Place:

Company Seal

Annexure V
Tender Acceptance Letter

To be printed on Company letter head

Ref. No.-.....

Date:.....

To,
The Director,
Software Technology Parks of India
Plot P1, Rajiv Gandhi Infotech Park,
Hinjawadi Phase-I, Pune. Maharashtra-411057.

Sub: Tender Acceptance letter

Ref: Tender No..... Dated.

Sir,

With reference to above tender for Supply, Installation, Testing and Commissioning of Lab Equipment for "MOTION-CoE" at Pune, with total comprehensive support for 5 years, I/we hereby certify that,

1. I/We have downloaded/obtained the tender document(s) for the above mentioned 'Tender/Work' from the website <https://eprocure.gov.in/eprocure/app>, <http://www.motion.stpi.in> or <http://www.mah.stpi.in>
2. I/We hereby certify that I/we have read all the terms and conditions of tender document from Page No. 1 to 74 (including all Annexure(s)/Para's, etc., which shall form part of the contract agreement and I/we shall abide hereby by all the terms & conditions contained therein.
3. The corrigendum(s) issued from time to time by your department/organization too has also been taken into consideration, while submitting this acceptance letter.
4. I/ We hereby unconditionally accept all the terms and conditions of above-mentioned tender document and corrigendum(s) as applicable.
5. In case any provisions of this tender are found violated, then your department/organization shall without prejudice to any other right or remedy be at liberty to reject my bid including the forfeiture of earnest money deposit.

6. I/ We confirm that our bid shall be valid up to 120 days from the date of opening of Commercial Bid.
7. I/ We hereby certify that all the statements made and information supplied in the enclosed Annexures/Para's etc. furnished herewith are true and correct.
8. I/ We have furnished all information and details necessary for demonstrating our qualification and have no further prominent information to supply.
9. I/ We understand that you are not bound to accept the lowest or any bid you may receive.
10. I/ We certify/ confirm that we comply with the eligibility requirements as per Bid documents.

Name:

Signature of Authorized Person

Designation:

Date:

Place:

Company Seal

Annexure -VI
NON-DISCLOSURE AGREEMENT

To be printed on Non-judicial stamp paper

THIS AGREEMENT is valid till 5 years from the date of work order, and is made by and between AIC STPINEXT, an autonomous body under Ministry of Electronics & Information Technology, Govt. of India herein referred to as 'DISCLOSING PARTY' whose address is C/o STPI, Ground Floor, Electronics Niketan, 6, CGO Complex, Lodhi Road, New Delhi-110003 and

M/s.

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Both the parties shall mean and include their successors at Office from time to time, legal representatives, administrators, executors and assigns, etc.

This agreement shall govern the conditions of disclosure by disclosing party to Recipient of certain confidential and proprietary information that is oral, written, or in computer file format. Examples of Confidential Information include the identities of companies, consultants and other service providers used by disclosing party, both foreign and domestic, in connection with disclosing party's business, supplier lists, supplier information, computer databases containing customer, product and vendor information, designs, drawings, specifications, techniques, models, documentation, diagrams, flow charts, research and development process and procedures, 'know-how', new product or new technology information, financial, marketing and sales information and projections, product pricing, profitability, marketing techniques and materials, marketing timetables, strategies and development plans, trade names and trademarks not yet disclosed to the public, business methods and trade secrets, and personnel information.

1. **Purpose of Disclosure:** Disclosing party is disclosing the Confidential Information to Recipient in order for Recipient to evaluate the possibility of using disclosing party's services like Call Centers/Contact Centers Projects, Business Process Outsourcing covering all different kind of Verticals, Information Technology Services, Back and Transaction Processing Services, Business Analysis, Business Process Re-engineering, Data Analysis, Quality Analysis and the Statutory & Datacom services etc.
2. Confidentiality Obligations of Recipient. Recipient hereby agrees:
 - (a) Recipient will hold the Confidential Information in complete confidence and not to disclose the Confidential Information to any other person or entity, or otherwise

transfer, publish, reveal, or permit access to the Confidential Information without the express prior written consent of Disclosing Party.

- (b) Recipient will not copy, photograph, modify, disassemble, reverse engineer, decompile, or in any other manner reproduce the Confidential Information without the express prior written consent of disclosing party.

If any Confidential Information is delivered to Recipient in physical form, such as data files or hard copies, recipient will return the Confidential Information, together with any copies thereof, promptly after the purpose for which they were furnished has been accomplished, or upon the request of disclosing party. In addition, upon request off disclosing party in writing/email Recipient will destroy materials prepared by Recipient that contain Confidential Information.

- (c) Recipient shall use Confidential Information only for the purpose of evaluating Recipient's interest in using disclosing party's services, and for no other purpose. Without limiting the generality of the previous sentence, Recipient specifically agrees not to sell, rent, or otherwise disclose any of disclosing party's Confidential Information either in full or part to any competitor of disclosing party, nor will Recipient use the Confidential Information to directly or indirectly contact or contract with any of disclosing party's employees, vendors, contractors and agents who carry out or otherwise fulfill the services on behalf of disclosing party (its 'Affiliates'). Recipient shall promptly notify disclosing party of any disclosure or use of Confidential Information in violation of this Agreement for which disclosing party shall indemnify the Recipient for that part.

3. **Exclusions.** None of the following shall be considered to be 'Confidential Information':
 - (a) Information which was in the lawful and unrestricted possession of Recipient prior to its disclosure by disclosing party;
 - (b) Information which is readily ascertainable from sources of information freely/easily available in the general public;
 - (c) Information which is obtained by Recipient from a third party who did not derive such information from disclosing party.
4. **Remedies.** Recipient acknowledges that disclosing party's Confidential Information has been developed or obtained by the investment of significant time, effort and expense and provides disclosing party with a significant competitive advantage in its business, and that if Recipient breaches its obligations hereunder, disclosing party will suffer immediate, irreparable harm for which monetary damages will provide inadequate compensation. Accordingly, the disclosing party will be entitled, in addition to any other

remedies available at law in equity, to injunctive relief to specifically enforce the terms of this Agreement. Recipient agrees to indemnify disclosing party against any losses sustained by disclosing party, including reasonable attorney's fees, by reason of the breach of any provision of this Agreement by Recipient. Recipient further acknowledges that disclosing party's business would be severely hurt if Recipient were to directly contract with its Affiliates without the participation of disclosing party. Therefore, if Recipient directly or indirectly contracts with any of disclosing party's Affiliates whose identity and/or particulars are disclosed to Recipient pursuant to this Agreement (Except Affiliates with whom Recipient had a demonstrable prior existing business relationship). In the event of circumvention, by the Recipient whether directly or indirectly, the disclosing party shall be entitled to a legal monetary penalty award, equal to the maximum consulting service/consulting fee, commission/profit originally expected or contemplated to be realized from such transaction(s). This payment levied against and paid immediately by the party engaged in circumvention and also in addition includes all legal expenses in the recovery of these funds if collected through legal action by either party. This penalty shall not apply when the alleged Circumventure does not result in a transaction being concluded. The parties acknowledge it would be extremely difficult or impossible to accurately it would be extremely difficult or impossible to accurately fix the actual damages that disclosing party would suffer in the event of a breach of the aforementioned obligations, and that the liquidated damages provided for herein are a reasonable estimate of disclosing party's actual damages, which shall be fixed by the arbitrator who shall also be in the same business.

5. No Rights Granted to Recipient. Recipient further acknowledges and agrees that the furnishing of Confidential Information to Recipient by disclosing party shall not constitute any grant or license to Recipient under any legal rights now or hereinafter held by disclosing party.

6. Miscellaneous Provisions:

- (a) This Agreement sets forth the entire understanding and Agreement between the parties with respect to the subject matter hereof and supersedes all other oral or written representations and understanding. This Agreement may only be amended or modified by a writing signed by both parties.
- (b) If any provision of the Agreement is held to be illegal, invalid or unenforceable, the legality, validity and enforceability of the remaining provisions will not be affected or impaired.

- (c) This Agreement is binding upon the successors, assigns and legal representatives the parties hereto, and is intended to protect Confidential Information of any successors or assign of disclosing party.
- (d) Each Provision of this Agreement is intended to be valid and enforceable to the fullest extent permitted by law. If any provision of this Agreement is determined by any court of competent jurisdiction or arbitrator to be invalid, illegal, or enforceable to any extent, that provision shall, if possible, be construed as though more narrowly drawn, if a narrower construction would avoid such invalidity, illegality, or unenforceability, be served, and the remaining provisions of this Agreement shall remain in effect/force.
- (e) The terms and conditions governing the provision of the agreement shall be governed by and construed in accordance with laws of the union of India and shall be subject to the exclusive Jurisdiction of the courts of Pune.
1. Any or all disputes arising out or in connection with this agreement shall so far as may be possible to settled amicably between the parties within a period of thirty days from such dispute(s) arising.
 2. In the event of any queries, dispute or difference arising out of the agreement or in connection there-with (except as to the matters, the decision to which is specifically provided under this agreement), the same shall be referred to arbitration of a sole arbitrator to be appointed by the Director General, STPI.
 3. The provisions of the Arbitration and Conciliation Act, 1996 shall be applicable and the award made there under shall be final and binding upon the parties hereto, subject to legal remedies available under the law. Such differences shall be deemed to be a submission to arbitration under the Indian Arbitration and Conciliation Act, 1996, or of any modifications, Rules or re-enactments thereof.
 4. The parties shall mutually ensure and co-operate with each other in the arbitral proceedings, so that the same can be concluded and awarded within a period of six months from the date of commencement of the arbitral proceedings.
 5. The arbitral proceedings shall be conducted in English, both parties shall be bound by the award passed and delivered by the arbitral tribunal and shall not attempt to challenge the authenticity of the award, before any authority or courts or any other statutory body.
 6. The venue of arbitration shall be Pune, India.

(f) If any litigation is brought by either party regarding the interpretation or enforcement of this Agreement, the prevailing party will recover from the other all costs, attorney's fees and other expenses incurred by the prevailing party from the other party.

Signed on behalf of

Software Technology Parks of India Pune/

AIC STPINEXT

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Signed on Behalf of

.....

.....

.....

Signature:

Name:

Designation:

Date:

Signature:

Name:

Designation:

Date: