Date: 30/04/2024

Supply of Data Acquisition, Analysis and Online Display System.
Standard Terms and Conditions

The Bidder is required to give confirmation of their acceptance of the Standard Terms and Conditions of the RFP mentioned below which will automatically be considered as part of the Contract concluded with the successful Bidder as selected by the Buyer. Failure to do so may result in rejection of the Bid submitted by the Bidder.

1. **Effective Date of the Contract:** In case of placement of a supply order, the date of acceptance of the Supply Order would be the effective date. The firm should check the supply order and convey acceptance of the same within seven days of its receipt. If such an acceptance or communication conveying firm's objection to certain parts of the supply order is not received within the stipulated period, the supply order will be deemed to have been fully accepted by the firm. In case a contract is to be signed by both the parties, the Contract shall come into effect on the date of signatures of both the parties on the Contract (Effective Date) or as agreed during negotiations. The performance of the Contract shall commence from the Effective Date of the Contract/Supply Order.

2. **Law:** The Contract shall be considered and made in accordance with the laws of the Republic of India and shall be governed by and interpreted in accordance with the laws of the Republic of India.

3. **Arbitration:** All disputes or differences arising out of or in connection with the Contract shall be settled by bilateral discussions. Any dispute, disagreement or question arising out of or relating to the Contract or relating to product or performance, which cannot be settled amicably, shall be resolved by arbitration in accordance with the following provision:

Option-1: The case of arbitration may be referred to respective CFA or a person appointed by him who will be sole arbitrator and the proceedings shall be conducted in accordance with procedure of Indian Arbitration and Conciliation Act, 1996 as amended.

(OR)

Option-2: The case of arbitration may be referred to International Centre for Alternative Dispute Resolution (ICADR) for the appointment of arbitrator and proceedings shall be conducted in accordance with procedure of Indian Arbitration and Conciliation Act, 1996, as amended.

(OR)

Option-3: The case of arbitration may be conducted in accordance with the rules of Arbitration of the International Chamber of Commerce by one or more arbitrators appointed in accordance with the said rules in India. However, the arbitration proceedings shall be conducted in India under Indian Arbitration and Conciliation Act, 1996 as amended.

4. **Penalty for Use of Undue influence:** The Seller undertakes that he has not given, offered or promised to give, directly or indirectly, any gift, consideration, reward, commission, fees, brokerage or inducement to any person in service of the Buyer or otherwise in procuring the Contract or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of the Contract or any other contract with the Government of India for showing or forbearing to show favour or disfavour to any person in relation to the Contract or any other contract with the Government of India. Any breach of the aforesaid undertaking by the Seller or anyone employed by him or acting on his behalf (whether with or without the knowledge of the Seller) or the commission of any offers by the Seller or anyone employed by him or acting on his behalf, as defined in Chapter IX of the Indian Penal Code, 1860 or the Prevention of Corruption Act, 1986 or any other Act enacted for the prevention of corruption

shall entitle the Buyer to cancel the contract and all or any other contracts with the Seller and recover from the Seller the amount of any loss arising from such cancellation. A decision of the Buyer or his nominee to the effect that a breach of the undertaking had been committed shall be final and binding on the Seller. Giving or offering of any gift, bribe or inducement or any attempt at any such act on behalf of the Seller towards any officer/employee of the Buyer or to any other person in a position to influence any officer/employee of the Buyer for showing any favour in relation to this or any other contract, shall render the Seller to such liability/ penalty as the Buyer may deem proper, including but not limited to termination of the contract, imposition of penal damages, forfeiture of the Bank Guarantee and refund of the amounts paid by the Buyer.

5. **Agents / Agency Commission:** The Seller confirms and declares to the Buyer that the Seller has not engaged any individual or firm, whether Indian or foreign whatsoever, to intercede, facilitate or in any way to recommend to the Government of India or any of its functionaries, whether officially or unofficially, to the award of the contract to the Seller; nor has any amount been paid, promised or intended to be paid to any such individual or firm in respect of any such intercession, facilitation or recommendation. The Seller agrees that if it is established at any time to the satisfaction of the Buyer that the present declaration is in any way incorrect or if at a later stage it is discovered by the Buyer that the Seller has engaged any such individual/firm, and paid or intended to pay any amount, gift, reward, fees, commission or consideration to such person, party, firm or institution, whether before or after the signing of this contract, the Seller will be liable to refund that amount to the Buyer. The Seller will also be debarred from entering into any contract with the Government of India for a minimum period of five years. The Buyer will also have a right to consider cancellation of the Contract either wholly or in part, without any entitlement or compensation to the Seller who shall in such an event be liable to refund all payments made by the Buyer in terms of the Contract along with interest at the rate of 2% above MCLR (Marginal Cost of Funds based Lending Rate) declared by RBI pertaining to State Bank of India for Indian bidders. The Buyer will also have the right to recover any such amount from any contracts in vogue with the Government of India.

<div align="center">Or</div>

   The Seller confirms and declares in the Techno-Commercial bid that they have engaged an agent, individual or firm, for promotion of their product. In such case, following details are to be submitted in the Techno-Commercial bid:
   a) Name of the Agent
   b) Agency Agreement between the seller and the agent giving details of their contractual obligation
   c) PAN Number, name and address of bankers in India and abroad in respect of Indian agent
   d) The nature of services to be rendered by the agent and
   e) Percentage of Commission payable to the agent

6. **Access to Books of Accounts:** In case it is found to the satisfaction of the Buyer that the Bidder/Seller has violated the provisions of Para 4 and/or Para 5 above to obtain the Contract, the Bidder/Seller, on a specific request of the Buyer, shall provide necessary information/ inspection of the relevant financial documents/information/Books of Accounts.

7. **Non-disclosure of Contract Documents:** Except with the written consent of the Buyer/ Seller, other party shall not disclose the Contract or any provision, specification, plan, design, pattern, sample or information thereof to any third party.

8. **Handling of Classified information by Indian Licensed Defence Industry:** Any classified document/information/equipment being shared with Indian Licensed Defence Industries will be protected/handled to prevent unauthorised access as per provisions of Chapter 5 of Security Manual for Indian Licensed Defence Industries issued by MOD (Department of Defence Production).

9. **Withholding of Payment:** In the event of the Seller's failure to submit the Bonds, Guarantees and Documents, supply the stores/goods and conduct trials, installation of equipment, training, etc. as specified in the Contract, the Buyer may, at his discretion, withhold any payment until the completion of the Contract.

10. **Liquidated Damages:** The Buyer may deduct from the Seller, as agreed, liquidated damages at the rate of 0.5% per week/part thereof, of basic cost of the delayed stores/services which the vendor has failed to deliver within the period agreed for delivery in the contract. LD shall also be levied on the basic cost of the stores supplied partially within the scope of the Order/Contract that could not be put to use due to late delivery of the remaining stores. The maximum Quantum of LD would be 10% of the total order value.

11. **Termination of Contract:** The Buyer shall have the right to terminate the Contract in part or in full in any of the following cases:-

    i)   The store/service is not received/rendered as per the contracted schedule(s) and the same has not been extended by the Buyer.

    <div align="center">Or</div>

    The delivery of the store/service is delayed for causes not attributable to Force Majeure for more than 3 months after the scheduled date of delivery and the delivery period has not been extended by the Buyer.

    ii)   The delivery of store/service is delayed due to causes of Force Majeure by more than 6 months provided Force Majeure clause is included in the contract and the delivery period has not been extended by the Buyer.

    iii) The Seller is declared bankrupt or becomes insolvent.

    iv)   The Buyer has noticed that the Seller has violated the provisions of Para 4 (Use of Undue Influence) and/or Para 5 (Employment of Agent) above to obtain the Contract.

    v)   The Buyer is entitled at their option, to cancel the order or a portion thereof, due to not meeting any of the terms and conditions of the order / delayed execution of the order by the Seller beyond reasonable time as may be considered by the Buyer, without prejudice to the terms and conditions of this order.

    vi)   As per decision of the Arbitration Tribunal.

    vii) ADA reserves the right to cancel the procurement process at any stage and accept or reject any bid, fully or partially, without assigning any reasons.

12. **Notices:** Any notice required or permitted by the Contract shall be written in English language and may be delivered personally or may be sent by FAX or registered pre-paid mail/ airmail, addressed to the last known address of the party to whom it is sent.

13. **Transfer and Sub-letting:** The Seller has no right to give, bargain, sell, assign or sublet or otherwise dispose of the Contract or any part thereof, as well as to give or to let a third party take benefit or advantage of the Contract or any part thereof without written consent of the Buyer.

14. **Use of Patents and other Industrial Property Rights:** The prices stated in the Contract shall be deemed to include all amounts payable for the use of patents, copyrights, registered charges, trademarks and payments for any other Industrial Property Rights. The Seller shall indemnify the Buyer against all claims from a third party at any time on account of the infringement of any or all the rights mentioned in the previous paragraphs, whether such claims arise in respect of manufacture or use. The Seller shall be responsible for the completion of the supplies including spares, tools, technical literature and training aggregates irrespective of the fact of infringement of the supplies or any or all the rights mentioned above.

15. **Amendments:** No provision of the Contract shall be changed or modified in any way (including this provision) either in whole or in part except when both the parties are in written agreement for amending the Contract.

16. **Taxes and Duties**
    In respect of Indigenous Bidders
    A) **General**
    a) If the quoted prices exclude GST / Local Tax or any other Statutory Duties/Taxes, the same must be specifically stated with applicable rates. In the absence of same, it will be presumed that the prices include all such charges and no claim for the same will be entertained.
    b) If reimbursement of any Duty/Tax is intended as extra over the quoted prices, the Bidder must specifically say so. In the absence of any such stipulation, it will be presumed that the prices quoted are firm and final and no claim on account of such duty/tax will be entertained after the opening of tenders.
    c) If a Bidder chooses to quote a price inclusive of any duty/tax and does not confirm that duty/tax so included is firm and final, he should clearly indicate the rate of such duty/tax and quantum of such duty/tax included in the price. Failure to do so may result in ignoring any request for change of duty/tax at a later date due to any reason whatsoever.
    d) Any addition to duty/tax and change in any duty/tax upward/downward as a result of any statutory variation in duty/tax taking place within contract terms shall be allowed to the extent of actual quantum of such variation of duty/tax paid by the supplier. Similarly, in case of downward revision in any duty/tax, the actual quantum of reduction of such duty/tax shall be reimbursed to the Buyer by the Seller. All such adjustments shall include all reliefs, exemptions, rebates, concession etc., if any, obtained by the Seller.
    e) TDS as per Income Tax Rules and GST Rules will be deducted and a certificate to that effect will be issued by the Buyer/ Buyer's paying authority. GST TDS as applicable would also be deducted.

17. **Denial Clause:** Denial clause informs Seller that the Buyer reserves the right to admit additional payment due to upward revision of statutory levies beyond the original delivery schedule in case Seller fails to deliver the goods as per schedule. Variations in the rates of statutory levies within the original delivery schedule will be allowed if taxes are explicitly mentioned in the contract/supply order and delivery has not been made till the revision of the statutory levies. Buyer reserves the right not to reimburse the enhancement of cost due to increase in statutory levies beyond the original delivery period of the supply order/contract even if such extension is granted without imposition of LD.

18. **Undertaking from the Bidders:** The Bidder/Firm/Company will submit an undertaking that in the past, they have never been banned/debarred for doing business dealings with Ministry of Defence/Govt. of India/any other Govt. organization and that there is no enquiry going on by CBI/ED/any other Govt. agency against them.

Special Terms and Conditions

The Bidder is required to give confirmation of their acceptance of Special Terms and Conditions of the RFP mentioned below which will automatically be considered as part of the Contract concluded with the successful Bidder as selected by the Buyer. Failure to do so may result in rejection of Bid submitted by the Bidder.

1. **Performance Security:**

   The Seller may be required to furnish a Performance Security in the form of Insurance Surety Bonds, Account Payee Demand Draft, Fixed Deposit Receipt, Banker's Cheque or Indemnity Bond/Bank Guarantee (including e- Bank Guarantee) from any of the scheduled commercial banks or payment online in favour of Aeronautical Development Agency, payable at Bangalore, for a sum equal to **5%** of the Contract value (including taxes and duties) within **14 days** from the date of the Order valid upto 60 days beyond completion of all the Contractual obligations including warranty, if any. The specimen of BG is attached at *Annexure-A.* Bank Guarantee is to be issued through SFMS by Applicant's Bank to ADA's Bank details as indicated below:

   Name : ADA; A/c No. :10461037271; IFSC Code : SBIN0004815
   Bank : State Bank of India, NAL Branch, Bangalore

   Note : While submitting the Bank Guarantee, Vendor should ensure that Bank Details such as Name of the Bank, Branch Name, Fax Number, Contact Person, E-mail ID, etc. shall be sent along with the Bank Guarantee.

   The Performance Security will be forfeited by the Buyer, in case the conditions regarding adherence to delivery schedule and/or other provisions of the contract are not fulfilled by the Seller.

2. **Guidelines for Submission of Bank Guarantee/Indemnity Bond:**

   a) Bank Guarantee/IB should be submitted by Bidders/Vendor in the specified format (as per *Annexure 1A*). Bidders should comply with prevailing formats and guidelines of ADA with respect to BGs at the time of issue of BGs.

   b) All Bank Guarantee/IB should be submitted to ADA directly by the Issuing Bank under Registered Post (A.D.) / Speed Post / Courier.

   c) Bank Guarantee/IB shall be free from all typographical error / deletions / inclusions, riders etc., and requires to be authenticated by Bank's signatory with official seal.

   d) The name, designation and code numbers of the Bank officer / officers signing the BGs should be incorporated under the signature(s) of the officials signing the BGs along with the complete postal address and email ID.

   Note: Bank Guarantee should be issued from a Scheduled Commercial Bank in India. All charges connected with issue/extension of BG shall be borne by bidders/vendor.

3. **Permissible Time Frame for Submission of Bills:**
   To claim payment (part or full), the Seller shall submit the bill(s) along with the relevant documents within 30 days from the completion of the activity/supply and acceptance.

4. **Payment Terms:**
   100% payment with applicable GST shall be paid within 30 days against delivery & Final Acceptance duly certified by the Project coordinator and counter-signed/approved by PD/TD

5.   Mode of Payment

It will be mandatory for the Bidders to indicate their bank account numbers and other relevant e-payment details to facilitate payments through ECS / NEFT. If payment to vendor is being made for the first time, vendor is advised to provide their ECS details in Original duly attested by their Bankers.

6.   Terms of Delivery

The delivery of goods shall be FOR ADA, Bangalore basis.

7.   Packing and Marking Instructions:

a) The Seller shall provide packing and preservation of the equipment and spares/goods contracted so as to ensure their safety against damage in the conditions of land, sea and air transportation, transhipment, storage and weather hazards during transportation, subject to proper cargo handling. The Seller shall ensure that the stores are packed in containers, which are made sufficiently strong. The packing cases should have provisions for lifting by crane/fork lift truck. Tags with proper marking shall be fastened to the special equipment, which cannot be packed.

b) The packing of the equipment and spares/goods shall conform to the requirements of specifications and standards in force in the territory of the Seller's country.

c) A label in English shall be pasted on the carton indicating the under mentioned details of the item contained in the carton. The cartons shall then be packed in packing cases as required.
   - Part Number :
   - Nomenclature :
   - Contract annex number :
   - Annex serial number :
   - Quantity contracted :

d) One copy of the packing list in English shall be inserted in each cargo package, and the full set of the packing lists shall be placed in Case No.1 painted in a yellow colour.

e) The Seller shall mark each package with indelible paint in English language as follows:-
   i)   Contract No. _____
   ii) Consignee _____
   iii) Port / airport of destination _____
   iv) Ultimate consignee _____
   v)   Package No. _____
   - Gross/net weight _____
   - Overall dimensions/volume _____
   - The Seller's marking _____

f) If necessary, each package shall be marked with warning inscriptions: <Top>, <Do not turn over>, category of cargo etc.

g) Should any special equipment be returned to the Seller by the Buyer, the latter shall provide normal packing, which protects the equipment and spares/goods from damage or deterioration during transportation by land, air or sea. In such case the Buyer shall finalize the marking with the Seller.

8. Warranty:

a) The Seller will declare that the goods, stores articles sold/supplied shall be of the best quality and workmanship and new in all respects and shall be strictly in accordance with the specifications and particulars contained/mentioned in the contract. The Seller will guarantee that the said goods/stores/articles/spares would continue to conform to the description and quality for a period of **3 years** from the date of acceptance of the said goods stores/articles. If during the aforesaid period of 3 years, the said goods/stores are discovered not to conform to the description and quality aforesaid, not giving satisfactory performance

or have deteriorated, the Buyer shall be entitled to call upon the Seller to rectify the goods/stores/articles or such portion thereof as is found to be defective by the Buyer within a reasonable period without any financial implication on the Buyer.

b) If the defective part / subsystem / system needs to be taken by the Seller outside Buyer's premises to rectify the defect, Seller shall provide a comprehensive (**during transit & storage insurance for repair period**) insurance cover of the equivalent amount to the Buyer to cover for the time taken to rectify the defective goods and deliver the repaired or replaced goods at the same location without any financial implications on Buyer.

c) In cases of procurement of Software/Seller shall issue/provide upgrades of the Software free of cost during the warranty period.

9. **Evaluation and Acceptance Criteria of Bids:** The bid will be considered and selected based on instructions contained in RFP for further evaluation of bids as per sequence given below:

i) **Techno-Commercial Bid Evaluation:** Bids will be evaluated based on vendor qualification criteria of RFP and SOW and bids of the qualified bidders will be considered for further evaluation.

The bidders hereby agrees to respond to the "techno-commercial queries" sent by TCEC (if any) via e-mail / Fax (as provided by Bidder) within the time limit, failing which the Bidder's offer will be rejected summarily without any further communication.

ii) **Price Bid Evaluation:** The Price bid of those bidders whose Techno-Commercial bid has been accepted will be opened and comparative statement will be prepared. The best acceptable bid will be decided upon the lowest price quoted by the particular Bidder. The ultimate cost to ADA would be the deciding factor for ranking of Bids. ADA reserves the right to call the lowest acceptable bidder for techno-commercial negotiations, if the cost indicated is beyond the budgeted estimate. **The basis for evaluation of Price bid will be LOT WISE.**

10. **Force Majeure Clause:**

i) Neither party shall bear responsibility for the complete or partial non-performance of any of its obligations, if the non-performance results from such Force Majeure circumstances as Flood, Fire, Earth Quake and other acts of God as well as War, Military operations, blockade, Acts or Actions of State Authorities or any other circumstances beyond the parties control that have arisen after the conclusion of the present contract.

ii) In such circumstances the time stipulated for the performance of an obligation under the Contract is extended correspondingly for the period of time commensurate with actions or circumstances and their consequences.

iii) The party for which it becomes impossible to meet obligations under the Contract due to Force Majeure conditions, is to notify in written form to the other party of the beginning and cessation of the above circumstances immediately, but in any case, not later than 10 (Ten) days from their commencement.

iv) Certificate of Chamber of Commerce (Commerce and Industry) or other competent authority or organization of the respective country shall be considered as sufficient proof of commencement and cessation of the above circumstances.

v) If the impossibility of complete or partial performance of an obligation lasts for more than 6 (six) months, either party hereto reserves the right to terminate the Contract totally or partially upon giving prior written notice of 30 (thirty) days to the other party of the intention to terminate without any liability other than reimbursement on the terms provided in the agreement for the goods received.

11. **Purchase Preference Policy:**

- **Make in India:** This RFP complies with Public Procurement (Preference to Make in India), order 2017 by Department of Industrial Policy and Promotion, Ministry of Commerce and Industry Government of India issued vide letter No. P-

45021/2/2017- B.E-II dated 15th June 2017 and as amended (for updated details please refer to www.dipp.gov.in).

- Purchase preference to Micro and small enterprises (MSEs) will be given to MSEs as per provisions of Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012 as amended (for details please refer www.dcmsme.gov.in)

12. Documents to be furnished for Claiming Payment

Indigenous Sellers: The payment of bills will be made on submission of the following documents (wherever applicable) by the Seller to the Buyer:

a) Original Ink-signed / Digitally Signed Invoice/Electronically Signed Invoice/ System generated Invoice

b) Performance Security Bank Guarantee/Indemnity Bond

c) Installation & Acceptance Certificate duly certified by Project Co-ordinator

d) Details for electronic payment as per ECS Mandate Form viz. Bank name, Branch name and address, Account Number, IFS Code, MICR Number, duly certified by your banker

f) Any other document / certificate that may be provided for in the SOW/Contract.

g) Bank Guarantee/Indemnity Bond for advance payment.

13. Franking Clause:

i) **In Case of Acceptance of Store(s):** "The fact that the goods have been inspected after the delivery period and passed by the Inspecting Officer will not have the effect of keeping the contract alive. The goods are being passed without prejudice to the rights of the Buyer under the terms and conditions of the Contract".

ii) **In Case of Rejection of Store(s):** "The fact that the goods have been inspected after the delivery period and rejected by the Inspecting Officer will not bind the Buyer in any manner. The goods are being rejected without prejudice to the rights of the Buyer under the terms and conditions of the contract."

14. Claims:

i) The quantity claims for deficiency of quantity and/ or the quality claims for defects or deficiencies in quality noticed during the inspection shall be presented within 45 days of completion of inspection.

ii) The Seller shall collect the defective or rejected goods from the location nominated by the Buyer and deliver the repaired or replaced goods at the same location, within mutually agreed period, under Seller's arrangement without any financial implication on the Buyer.

15. Liability Clause:

a. Any damage caused to the property or suffered by the personnel of Buyer during the execution of Contract shall remain the liability of the Buyer. Such liability shall be fixed on Seller in case of grossly negligent act or omission on the part of Seller.

b. This provision is limited to the relations between the Parties. It is without prejudice to the rights and actions to which the victims of damage, or any Social Security Organizations could prevail themselves legally.

c. Either party would provide reasonable assistance to resolve the claim of other Party to mitigate loss or damage.

d. Neither, the Seller shall be liable to the Buyer, nor shall the Buyer be liable to the Seller for any immaterial, punitive, indirect, special, incidental, or consequential loss or damage. This will hold good irrespective of whether such liability is based or claimed to be based on any breach of a Party's obligation under the Contract, or any negligent act or omission of a Party, its employees, servants, appointed representatives, sub-contractor or professional consultants, or such liability arises otherwise out of or in connection with the Contract.

e. The Buyer shall not be liable for any compensation in any manner to the Seller for whatsoever reason.

    f. The Seller shall be liable to the Buyer for any compensation in any manner for whatsoever reasons for a sum not exceeding value of the Contract.

16. **Jurisdiction:** The Courts of Bangalore only shall have jurisdiction to deal with and decide on any legal matter whatsoever, arising out of this order.

17. **Earnest Money Deposit:** Bidders are required to upload scanned copy of the Earnest Money Deposit (EMD), in favour of **Aeronautical Development Agency, Bangalore**, in the currency of their quote for amount equivalent to **Rs.10,25,000/- [Rupees Ten Lakhs Twenty-five Thousand only]** along with their bid. The EMD may be submitted by Indigenous bidder in the form of Insurance Surety Bonds/ Account Payee Demand Draft/ Fixed Deposit Receipt/ Banker's Cheque or Bank Guarantee (including e-Bank Guarantee) from any of the scheduled commercial banks or payment online (format enclosed at *Annexure-B*). EMD is to remain valid for a period of **45 days** beyond the final bid validity period. EMD of the unsuccessful bidders will be returned to them, without any interest whatsoever, at the earliest after expiry of the final bid validity and latest on or before the thirtieth day after the award of the Contract.
EMD of the successful bidder would be returned without any interest whatsoever after the receipt of Performance Security Bank Guarantee from them as called for in the Contract. EMD is not required to be submitted by those Bidders who are registered with the National Small Industries Corporation (NSIC), Departments of MoD, other DRDO labs, MSEs and as per the policy of Government of India in vogue. Such bidders shall be required to furnish the relevant documents in their Techno-Commercial bid in support of the claim. The EMD will be forfeited if the Bidder withdraws, amends, impairs or derogates from the tender in any respect within the validity period of their tender.

Note:
1. Original **EMD instrument** should be sent by post in an envelope, addressed to **Director [Materials Management]**, Aeronautical Development Agency, P.B.No.1718, Vimanapura Post, Bangalore – 560017. The cover of envelope should clearly mention "EMD", Gem number, Description and Bid due date.

2. In case **EMD instrument** (if applicable) is not received on or before **"techno-commercial bid opening date and time"**, bid of such vendors will summarily be rejected.

18. **Pre-bid Conference:** A pre-bid meeting will be held at **<u>As detailed in GeM Portal</u>** to answer any queries or to clarify doubts regarding submission of proposals. Bidders or their authorized representatives (duly authorized in writing) are invited to attend. This event will not be postponed due to nonpresence of your representative.

General:
Compliance for the Terms & Conditions is mandatory without which the offer will not be considered.
Bidders are requested to sign all pages of SOW and all the enclosure and annexures along with company stamp (at the bottom of pages) and submit the same along with their quotation (along with Techno-Commercial bid in case of Two Bid System)
Price details are to be furnished only in the price Bid. Technical Bids, if contain prices will summarily be rejected.
ADA reserves the right to accept or reject any or all offers in part or in full without assigning any reasons.
The bidder should be registered in India. GST Registration Number and its validity should be indicated. Documentary evidences should be supplied/attached to the Bid Proposal documents.
The Bidder must have PAN/TAN for Income Tax Department and the same may be quoted.
The bidder shall submit financial standing through copies of Annual Report (Balance Sheet and Profit & Loss Account) of last 03 years
The technical bid should contain supporting documents to prove all claims of the company.

> Company's expertise needs to be highlighted and submitted to ADA to facilitate assessment of capabilities of company towards meeting the requirements by the Technical Evaluation Committee.

19. Vendor Qualification Criteria:

a. Vendor must provide manufacturer authorization letter referring to this tender reference number from the original manufacturer for National Instruments (NI) products.

b. The vendor should have executed at least 5 similar DAS installations.

c. The vendor must have at least 10 years of development experience using LabVIEW and specially in Defence & Aerospace industry. Vendor shall have experience in implementing ATE and HILS SYSTEM facilities for development, integration, testing, and evaluation of mission systems using LabVIEW.

d. Vendor shall have prior experience in LabVIEW, LabVIEW FPGA, LabVIEW RT, VC++.

e. Vendor shall be well experienced in designing and implementing PXI and PXIe based system, peer-to-peer programming using LabVIEW FPGA,

f. Vendor shall be prior experience in programming RS422, MIL-1553B interfaces etc. using LabVIEW.

g. The vendor shall be an Authorized Alliance Partner from National Instruments for at least continuous past 5years and an Authorized Supplier of NI's Hardware and software with capability to develop systems based on the National Instruments platform. Vendor shall produce the certificates of the same, failing which the vendor shall be rejected. The vendor should furnish an OEM Authorization letter from their OEM's India office to participate in tendering confirmation of their technical support during the development and post installation phase. Vendor, in technical proposal during bid, should also provide authentication letter from OEM of all LabVIEW and its Add-Ons and perpetual licenses proposed by vendor for realization of facility, mentioning the Tender Enquire Number in the authorization letter for this exclusive tender case, without which the bids will not be considered for further processing.

h. The bidder should have demonstrable Quality Systems and should have ISO 9001-2015/AS9100/CSIA or their equivalent Certifications. Proof must be attached.

i. Bidders should be familiar with CEMILAC/DGAQA Documentation processes. Proof must be attached as process of documentation followed as per DGAQA/CEMILAC references in other projects.

j. Software should be designed by the Certified LabVIEW Architect and Software should be developed by Certified LabVIEW Developer. The bidder must have Certified LabVIEW/C Architects and Certified LabVIEW/C Developers as full time employees of the company. Certificate shall be enclosed at the time of submission of quote otherwise vendor shall be rejected

20. General Terms and Conditions:

i. Vendor shall use all hardware subsystems manufactured by National Instruments (NI) only. Original copies of all Device Drivers supplied by NI shall be provided. The vendor shall provide NI conformance certificate for all sub systems. Authority letter from NI shall be submitted for the same mentioning tender number.

ii. Power supply, Grounding, Environmental working condition, etc shall be compatible with aircraft industry requirements.

iii. The system along with the accessories to have end-to-end compatibility with existing test equipment installed at Iron Bird.

iv. Standalone Acceptance Test Procedure (ATP) shall be carried out by the vendors at his premises in the presence of QA-ADA and IFCS-ADA representative (ADA). The required documents shall be prepared by the vendor in co-ordination with ADA. Vendor shall submit the ATP Results document (ATR) duly coordinated by ADA along with delivery of the equipment to Stores.

v. The Integrated mode ATP shall be carried out by the vendor at Iron bird Facilities in the presence of ADA. The required documents shall be prepared by the vendor in co-ordination with ADA. Vendor shall submit the Integrated ATP Results document duly coordinated by ADA. The system GRAN

will be cleared only after successful completion of the Integrated ATP and clearance from certification agencies of ADA.

vi. Source code of the application software and ATP software should be provided as part of the deliverables

vii. The system shall be operational in closed environment at room temperature from 0° C to 50°C and Humidity range of 20% to 90% RH non-condensing.

viii. Power and signal cable looms shall be of aircraft standard. Cable loom construction details will be provided by the user.

ix. The list of deliverable is as listed in Tables. For further information, the vendor shall contact the user and obtain the required information. No assumption shall be made by the vendor. The system shall be covered for minimum of three years warranty period.

x. The vendor shall supply only those hardware modules that are well proven and has at least two installations of same standard.

xi. While the vendor is submitting the technical bid, he shall bring out all the technical details to show the compliance of each requirement and if any alternative is proposed it shall be explained as in what way it meets the requirements.

xii. The vendor shall bring out clearly if there is any noncompliance to the requirement. The vendor shall quote for the entire system as a whole. The cost breakup for each item shall be shown for clarity.

xiii. Vendor shall depute developers who are certified in LabVIEW/C and shall enclose the certificate of relevant competency acquired through National Instruments certification program, failing which the vendor shall be rejected.

xiv. Vendor shall submit a detailed software development plan after placement of supply order.

xv. Vendor shall provide the developed source code to ADA in a digital storage media after the completion of the software development.

xvi. Vendor shall depute dedicated personnel for this activity with necessary expertise on the job defined and shall give monthly progress report including names of the personnel working in the project. The vendor/contractor shall ensure continuity of personnel throughout the execution of the project. If any person leaves the job/shifted to any other job the contractor shall explicitly mention the same and ensure the same level of expertise for replacement. Obtaining all the security clearances for the vendor staff is vendor responsibility.

21. Acceptance Criteria & Acceptance Authority:

i. Vendor shall prepare Standalone Acceptance Test Procedure (ATP) and Integrated ATP documents and obtain clearance of the certification agencies.

ii. Vendor shall carryout ATP at his premises in the presence of QA, RD-AQA and representatives from end user of ADA, hereafter called as ADA. Vendor shall submit the ATP Results document (ATR) duly coordinated by QA, RD-AQA and representatives from ADA along with delivery of the equipment to Stores.

Vendor shall integrate the system with Advanced Ironbird sub-systems like FDS, AETS, AIRDATS-E, Cockpit etc. The Integrated mode ATP shall be carried out by the vendor at Ironbird Facility in the presence of QA, RD-AQA and representatives from ADA.Vendor shall submit the Integrated ATP Results document duly coordinated by QA, RD-AQA and representatives from ADA.

Details of Stores/Services Required

1. List of Deliverables:

Sl. No.	Description	Qty
01	Hardware requirements of the system as per clause 10 & other Miscellaneous requirements as per clause 11 of Annexure-1	2 Set

2. Technical Details

2.1. Document References:

1. "TOP LEVEL FUNCTIONAL REQUIREMENT SPECIFICATIONS OF ADVANCED IRON BIRD FOR SINGLE ENGINE & TWIN ENGINE - HILS TEST RIG FACILITY", Doc. No.: ADA/IFCS/SAE/AIB/001, Dated: 25/01/2023
2. "FRAMEWORK AND PROCEDURE FOR DESIGN, DEVELOPMENT AND PRODUCTION OF MILITARY AIR SYSTEMS AND AIRBORNE STORES", DDPMAS Version 1.0, FEBRUARY 2021
3. "DESIGN, DEVELOPMENT AND PRODUCTION OF MILITARY AIR SYSTEMS AND AIRBORNE STORES", DDPMAS INDIAN MILITARY TECHNICAL AIRWORTHINESS REGULATIONS, IMTAR-21 Verison 1.0, FEBRUARY 2021

3. Bidders are required to furnish clause by clause compliance of specifications bringing out clearly the deviations from specification, if any. Bidders are advised to submit compliance statement for the i) **Technical** and ii) **Techno-commercial parameters separately** in the following format along with the Techno-Commercial Bid:

Para of RFP specifications (item-wise)	Specifications of item offered	Compliance to RFP specifications – whether Yes / No	Remarks (In case of non-compliance, deviation from RFP to be Specified in unambiguous terms. In case of compliance, catalogue/brochure reference, if available, to be indicated)

4. Vendors to upload the SOW in entirety and provide compliance without fail.

SUMMARY OF ADA's COMMERCIAL TERMS AND CONDITIONS

Sl. No.	Terms	Description	Confirmation of Bidders to ADA Terms	Remarks
1.	EMD Details	As per Clause 17 of Special Terms and Conditions.	Yes/No	
2.	Currency of payment	INR	Yes/No	
3.	Delivery Period (Including Acceptance)	As per Clause 5 of Details of Stores/Services Required.	Yes/No	
4.	Customs Duty	As per Clause 16 of Standard Terms and Conditions	Yes/No	
5.	Payment Terms	As per Clause 4 of Special Terms and Conditions)	Yes/No	
6.	GST percentage	18%	Yes/No	
7.	Performance Security Bank Guarantee	5% of the order value (including taxes & duties) in the form of Bank Guarantee/Indemnity Bond valid till 60 days beyond the completion of all the contractual obligations including	Yes/No	

		warranty should be submitted within 14 days of date of PO.		
8.	Inspection & Acceptance	At ADA, Bangalore	Yes/No	
9.	Liquidated Damages (LD)	As per Clause 10 of Standard Terms and Conditions		
10.	Ordering Information	(Indicate Name and Address of Firm on whom the Order is to be placed)		
11.	Validity of quote	90 Days	Yes/No	
12.	GeM Unique Seller ID (Mandatory)	As per GeM		
13.	Warranty	As per Clause 8 of Special Terms and Conditions.		
14.	Price Breakup in Percentage (Total 100% of Basic Cost)	% of Import Content	Import _ %	
		% of Indigenous Content including Services	Indigenous_%	
15.	Price	Basic Cost excludes Custom Duty and IGST	Yes/No	
16.	HSN Code(s) for the Imported Items and percentage of Custom Duty + IGST percentage if any	Details Furnished	Yes/No	
17.	Contact Details	Contact Person: Phone No: Email Id:		

For Commercially-Off-The-Shelf (COTS) items, it is mandatory to enclose catalogue/technical brochure to support the claims of compliance.

5. Time Schedule:

The table below gives milestone details and time required for completion of each milestone

SI. No.	Item Descriptions	Tentative schedule (weeks)	
		Start	**End**
1.	Placement of PO	To	
2.	Detailed HW Req. Capturing + Hardware Design + clearance	To	To+4 Weeks
3.	Hardware Procurement	To+4 Weeks	To+28 Weeks
4.	Software Discussion	To+2 Weeks	To+6 Weeks
5.	MDI Document (GA,ED,BOM)	To+8 Weeks	To+16 Weeks
6.	SRS SDD Release	To+6 Weeks	To+16 Weeks
7.	Software Development	To+8 Weeks	To+36 Weeks
8.	Vendor SW IV&V	To+24 Weeks	To+36 Weeks
9.	Cable loom Wiring Work	To+28 Weeks	To+36 Weeks
10.	Vendor QA SATP	To+36 Weeks	To+40 Weeks
11.	ADA QA SATP and clearance	To+40 Weeks	To+41 Weeks
12.	IATP at ADA and clearance	To+42 Weeks	To+52 Weeks
Total Duration: Approximately 12 months from the date of placement of purchase order			

6. **Consignee details:**
   - Name   : Chief Commercial Officer [Stores]
   - Address   : Aeronautical Development Agency,
     P.B.No.1718, Vimanapura Post,
     Bangalore - 560017
   - Contact details : 080 2508 7030

7. Technical Co-ordinate:

   - Name : Shri. Aneesh S L / Shri. Laxmikanth Bhat J
   - Contact details : 080 2508 7931/ 9916077838/080-25087193/9880514238
   - Email Id: aneesh.ada@gov.in/jlaxb.ada@gov.in

<u>**TENDER ACCEPTANCE LETTER**</u>
(To be filled by Bidder and uploaded in Techno-Commercial Bid)
(To be given on Company Letter Head)

Date:

To,

_____

_____

Sub: Acceptance of Terms & Conditions of Tender.
RFP / Tender Reference No: _____
Name of Tender/Supply/Work:_____

Dear Sir,

1. I / We have downloaded / obtained the tender document(s) for the above mentioned 'Tender/Work' from the website(s) namely:

   _____
   as per your advertisement, given in the above mentioned website(s).

2. I / We hereby certify that I / we have read the entire terms and conditions of the tender documents from Page No. _____ to _____ (including all documents like annexure(s), schedule(s), etc.,), which will form part of the contract agreement and I / we shall abide hereby by the terms / conditions / clauses contained therein.

3. The corrigendum(s) issued from time to time by your department/ organizations related to this tender too have also been taken into consideration, while submitting this acceptance letter.

4. I / We hereby unconditionally accept the tender conditions of above mentioned tender document(s) / corrigendum(s) in its totality / entirety.

5. I / We hereby undertake to respond to the "techno-commercial queries" (if any) which will be communicated by TCEC/ADA to our email id _____ or to our Fax No: _____ within the time limit set by TCEC without fail. I / We hereby agree that failure to respond for queries raised by TCEC within the set time limit will call for rejection of our bid/offer apart from I / We will be treated as "Default-Bidder".

6. I / We do hereby declare that our firm/company has not been blacklisted / debarred by any Govt. Department/Public Sector undertaking.

7. I / We hereby agree that the Terms & Conditions of SO / Contract will be followed without any deviation, in case SO / Contract is placed on us after due procurement process, failing which I / We will be treated as "Default-Bidder". I / We also aware that the detail of such Default-Bidder is being uploaded in the "Defaulter Vendor Data Base". Once the Bidder/Vendor becomes **three times** default, then such Bidder/Vendor will become **in-eligible** to receive any kind of tender enquiries for a period of **one** (1) year.

8. I / We certify that all information furnished by the our firm/company is true & correct and in the event that the information is found to be incorrect/untrue or found violated, then your department/organization shall without giving any notice or reason therefore or summarily reject the bid or terminate the contract, without prejudice to any other rights or remedy including the forfeiture of the full said earnest money deposit absolutely.

Yours faithfully,

(Signature of the Bidder, with Official Seal)

Annexure to Order No.COM/IND/___/___/2023-2024 dated _____

Format of Bank Guarantee for Performance Security
(To be issued by any Scheduled Commercial Bank on non-judicial stamp paper as applicable)

GUARANTEE No.................

Date:.............

To:
Aeronautical Development Agency
Min. of Defence, Govt. of India
P.B. No. 1718, Vimanapura post,
Bangalore – 560 017, India

Dear Sirs,

Sub: Your PO No. COM/IND/___/___/2023-2024 dated _____

1.   You have placed a PO vide Number as given above with ....
(hereinafter referred to as the Supplier) for the Supply of ....
(hereinafter referred to as Products) for the price and on the terms and conditions contained in the
said PO.

2.   In accordance with the terms of the said PO, you have agreed on the Supplier furnishing
you with an acceptable Bank Guarantee for Rs.................... (Rupees ....),
being ___% (.... percent) of the total PO Value (including taxes and duties) valid from the effective
date of the PO till completion of contract in fulfillment of the obligations under the said PO. For
this purpose, you have agreed to accept our guarantee.

3.   In consideration thereof, we hereby at the request of the Supplier, expressly, irrevocably
and unconditionally undertake and guarantee to refund to you on demand and without demur and
without reference to the Supplier the said payment of Rs......................... (Rupees
...........................) on receipt of your intimation that the Supplier has not fulfilled the
conditions of the PO.

4.   This guarantee shall not be revoked without your express consent and shall not be affected
by your granting any indulgence to the Supplier, which shall include but not be limited to
postponement from time to time of the exercise of any powers vested in you or any right which you
may have against the Supplier and to exercise the same in any manner at any time and either to
enforce or forbear to enforce any covenant contained or implied in the said PO or any other course
or remedy or security available to you, and our Bank shall not be released from its obligations
under this guarantee by your exercising any of your rights with reference to matters aforesaid or
any of them or by reason of any other act or forbearance or other acts of omission or commission
on your part or any other indulgence shown by you or by any other matter or thing whatsoever
which under law would , but for this provision, have the effect of relieving our Bank from its
obligation under this guarantee.

5.   We also agree that you shall be entitled to your option to enforce this guarantee against our
Bank as a principal debtor by a mere demand in writing from you which shall be conclusive
evidence to us that such repayment is due and payable to you under the terms of the said PO and
shall be binding on us not withstanding any other security, or guarantee that you may have in

relation to the Supplier's liabilities in respect of the premises. This guarantee shall not be affected by any change in the constitution of our Bank or the Supplier or for any other reason whatsoever.

6.   This bank guarantee shall expire, unless extended, on .... The bank will, however, honor claims submitted by you upto 60 working days after the expiry date.

7.   Not withstanding anything herein contained, our liability under this guarantee is restricted to Rs.. (Rupees ....). This guarantee in original shall be returned to us duly discharged upon final expiry of the validity.

8.   Payment by us to you will be made within 15 working days from receipt of your written request making reference to this guarantee and on demand.

Date:

<div align="right">

Authorized Signatory
Seal of the Bank

</div>

Annexure-B

EMD Bank Guarantee Format
[To be issued by Scheduled Commercial Bank]

Guarantee No............................
Date.......................................

To

M/s. Aeronautical Development Agency
Min. of Defence, Govt. of India
P.B. No.1718, Vimanapura Post
Bangalore – 560 017, India

Dear Sirs,

1. Whereas .... (hereinafter called the 'Bidder') has submitted their offer Ref...dated.............. for the supply of .... (hereinafter called the 'Bid') against the Buyer's Request for proposal No. ....

2. KNOW ALL MEN by these presents that WE .... of .... having our registered office at .... are bound unto M/s. Aeronautical Development Agency, Min. of Defence, Govt. of India, P.B.No.1718, Vimanapura Post, Bangalore – 560 017 (hereinafter called the "Buyer") in the sum of .... for which payment will and truly to be made to the said Buyer, the Bank binds itself, its successors and assigns by these presents.

3. Sealed with the Common Seal of the said Bank this .... day of .... 20.........

4. The conditions of obligations are –

(1) If the Bidder withdraws or amends, impairs or derogates from the Bid in any respect within the period of validity of this tender.

(2) If the Bidder having been notified of the acceptance of his tender by the Buyer during the period of its validity.

   a) If the Bidder fails to furnish the Performance Security for the due performance of the contract.

   b) Fails or refuses to accept / execute the contract.

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

5. This guarantee will remain in force up to and including 45 days after the period of tender validity and any demand in respect thereof should reach the Bank not later than the above date.

....
(Signature of the authorized officer of the Bank)
Name and designation of the officer
Seal, name & address of the Bank address of branch

<div align="center">

Non-Disclosure Agreement

</div>

This Agreement is made effective this   ("Effective Date")

Between

(i)   ; and

(i)   .

Both ------------- and   --------------------------- are hereinafter referred to collectively as "the Parties" and individually referred to as a "Party".

1.   Definitions

1.1   For the purposes of this Agreement:

   (a)   "Confidential Information" shall mean this Agreement and all information of a commercial, technical or financial nature which is directly or indirectly disclosed by the Disclosing Party (or a member of its Group or another person on behalf of the Disclosing Party as applicable) (whether before, on or after the date of this Agreement) Confidential Information includes, without limitation, any information relating to, or materials of whatever nature embodying, the Disclosing Party's products, services, operations, plans or intentions, product information, protocols, intellectual property, data, know-how, secret formulae, processes, designs, photographs, drawings, specifications research and development, trade secrets, opportunities, business affairs, customer and clients, business plans, software code, listings, holdings, alliances, investments and transactions, regardless of form, format or media and whether communicated or obtained through meetings, documents, correspondence or inspection of a tangible item that is in each case either (i) by its very nature confidential; (ii) is marked as such; or (iii) it is reasonable to assume to be confidential from the context;

   (b)   "Disclosing Party" means the Party disclosing Confidential information to the Receiving Party;

   (c)   "Group" shall mean in relation to a Party, that Party, each and any subsidiary or holding company of that Party, and each and any subsidiary of such holding company;

   (d)   "Purpose" means discussions and exchange of information related to [...];

   (e)   "Receiving Party" means the Party who receives Confidential Information from the Disclosing Party; and

   (f)   **"Representatives" shall mean** employees, agents, contractors, directors and other professional advisers of the Receiving Party and the Receiving Party's Group.

2.   Term and Termination

2.1   This Agreement shall continue in full force and effect for a period of one (1) year from the Effective Date unless earlier terminated by either Party upon the provision of thirty (30) days' notice in writing to the other. Each Party hereby undertakes to keep confidential all of the other Party's Confidential Information that it may acquire in any manner for a period of five (5) years after the termination or expiration of this Agreement.

2.2   At the expiration or in the event of early termination of this Agreement, or at any time on receipt of a written request from the Disclosing Party, the Receiving Party shall:

(a)   immediately discontinue all use of the Disclosing Party's Confidential Information disclosed under this Agreement;

(b)   return forthwith all documents and/or other materials (whether in paper, electronic or other form) bearing or incorporating the said Confidential Information or any of it, or certify that same have been destroyed; and

(c)   ensure that each of its Representatives who have been given access to the Confidential Information pursuant to the terms of this Agreement are aware that the continued use of same for the Purpose is no longer permitted.

2.3   The obligations in Clause 2.2(b) to return or destroy Confidential Information shall not apply to:

(a)   minutes or papers of any meeting of the Receiving Party's board of directors, or to those of a duly appointed committee of such a board; or

(b)   the retention of Confidential Information by the Receiving Party and its Representatives to comply with applicable law, rule, regulation, professional record-keeping obligations, internal compliance procedure and internal document retention policies or any competent judicial, governmental, supervisory or regulatory body.

3.   Undertakings and Acknowledgements

3.1   In consideration of each Party disclosing its Confidential Information to the other, each Party hereby undertakes to:

(a)   keep the Confidential Information strictly confidential, including, without limitation, taking the measures set out in Clause 5;

(b) use the other Party's Confidential Information exclusively for the Purpose;

(c)   not disclose the other Party's Confidential Information to any person, and prevent any such disclosure, except as expressly permitted by the terms of this Agreement; and

(d)   keep the fact of the existence of this Agreement, the circumstances surrounding its creation, and the transaction contemplated by it confidential and not disclose same in any way whatever, whether by way of public announcement, individually to any third party, or otherwise, without the prior written approval of the other Party.

3.2   Parties acknowledge and agree that:

(a)   nothing in this Agreement shall be construed as a waiver by either Party of its proprietary rights in any of the Confidential Information it discloses hereunder;

(b)   no warranty is given by either Party that the Confidential Information supplied by it will be complete and accurate and fit for any particular purpose, including the Purpose;

(c)   nothing in this Agreement shall be construed as a grant by one Party to the other of any form of licence to use any of the Confidential Information it discloses hereunder other than for the Purpose, or to deal in any way with any of the intellectual property rights therein; and

3.3   The Disclosing Party warrants that it has the right to disclose the Confidential Information to the Receiving Party and to authorise the Receiving Party to use the Confidential Information for the Purpose.

4.   Exceptions

4.1   The restrictions on the Parties under Clause 3.1 shall not apply to Confidential Information that:

(a)   is or becomes generally available to the public through no act of default on the part of the Receiving Party or any of its Representatives; provided that, for the avoidance of doubt, disclosure to a governmental entity, domestic or foreign, shall not be considered to be "generally available to the public"; or

(b)   the Receiving Party can prove by documentary evidence produced to the Disclosing Party that the Confidential information was already in the Receiving Party's possession and at its free disposal before the disclosure made pursuant to this Agreement; or

(c)   is independently developed by the Receiving Party; its officers, employees, agents or contractors, without reference to the Disclosing Party's Confidential Information; and/or

(d)   is subsequently disclosed to the Receiving Party without any obligations of confidence by a third party who has not derived it directly or indirectly from either Party to this Agreement.

4.2   The Receiving Party may disclose Confidential Information that it is required to disclose by law, by any governmental or other regulatory authority or by a court or other authority of competent jurisdiction provided that, to the extent it is legally permitted to do so, it gives the Disclosing Party as much notice of this disclosure as possible.

5.   Confidentiality Measures:

5.1   In order to secure the confidentiality attaching to the Confidential Information, each Party shall:
(a) subject to Clause 5.2, ensure that access to the other Party's Confidential Information is allowed exclusively to those of its Representatives who are under a written agreement (which may be as part of their employment or contract for work) to preserve as confidential any information and knowledge which is entrusted to their employer or, in the case of a contractor, their client;

(b)   keep separate all of the other Party's Confidential Information and all information generated by it based thereon from all of its other documents and records;

(c)   not make or retain any copies of the other Party's Confidential Information or create any documents or other material of whatever nature containing or reflecting any of the other Party's Confidential Information except as necessary for the Purpose;

(d)   use the same security measures and degree of care to preserve and safeguard the other Party's Confidential Information as they use to preserve and safeguard their own Confidential Information and in any case no less than reasonable care; and

(e)   comply with all other reasonable requirements imposed by the Disclosing Party in relation to the protection of its Confidential Information.

5.2   For the avoidance of doubt, each Party further acknowledges and agrees that it shall be wholly responsible for breaches of this Agreement arising from the acts and/or omissions of its respective Representatives.

6.   General:

6.1   The Parties acknowledge and agree that the Confidential Information is of significant commercial value to the relevant owners and that any breach by one Party of the terms of this Agreement could cause irreparable damage to the other Party's business. Accordingly, without prejudice to any other rights or remedies available to either Party, whether at law or in equity, each Party acknowledges and agrees that damages alone may not be an adequate remedy for a breach of this Agreement and that each Party shall be entitled to seek the remedy of injunction in the event of any actual, threatened or anticipated breach by the other of any of the terms of this Agreement.

6.2   This Agreement is personal to the Parties and shall not be assigned or otherwise transferred, in whole or in part, by either Party without the prior written consent of the other.

6.3   Neither Party shall describe itself or hold itself out as an agent of the other and nothing in this Agreement shall be construed as creating the relationship of partnership or principal and agent between the Parties.

6.4   This Agreement constitutes the entire understanding and agreement between the Parties relating to the protection and use of Confidential Information disclosed hereunder and supersedes any and all prior agreements (whether written or oral) or understandings relating thereto. No Party shall be bound by any additional or other representation, condition or promise unless expressly agreed in writing and signed by a duly authorized representative of that Party.

6.5   All non-legal notices, approvals, consents and other communications required or permitted under this Agreement will be in writing and delivered by email with confirmation of delivery, by courier or reputable international delivery service with written verification of receipt, or by registered mail, return receipt requested, postage prepaid, and in each instance will be deemed given upon receipt. All such notices, approvals, consents and other communications will be addressed to the address set forth in this Agreement or to such other address as may be specified by either Party to the other in accordance with this Clause.

6.6   All legal notices under this Agreement will be in writing and delivered by courier or reputable international delivery service with written verification of receipt, or by registered mail, return receipt requested, postage prepaid, and in each instance will be deemed given upon receipt. All legal notices will be addressed to the address set forth in this Agreement or to such other address as may be specified in writing by either Party to the other from time to time

6.7   If any provision of this Agreement is found to be unenforceable, the remainder shall be enforced as fully as possible and the unenforceable provision shall be deemed modified to the limited extent required to permit its enforcement in a manner most closely representing the intention of the Parties as expressed herein.

6.8   This Agreement may be executed in counterparts, each of which will be deemed an original, but all of which together will constitute one and the same instrument. Transmission of the executed signature page of a counterpart to this Agreement by email or other electronic means shall take effect as delivery of an executed counterpart of this Agreement.

6.9   The construction, validity and performance of this Agreement and all matters arising from or connected with it shall be governed in all respects by Laws of Republic of India.

6.10 Save for any application for injunctive relief made by either Party pursuant to Clause 6 herein (which may be made in any court of competent jurisdiction), each Party irrevocably agrees that any dispute or claim of any kind whatever arising under, out of, or in connection with this Agreement shall be subject to the exclusive jurisdiction of the courts at Bangalore.

6.11 Any claims, differences or disputes under or in relation to this Agreement shall be resolved amicably by mutual discussion failing which the same shall be referred to the Sole Arbitrator appointed by consent of both the parties. Any claims, differences or disputes under or in relation to this Agreement will be referred to Arbitration in accordance with Arbitration and Conciliation Act 1996 and the venue of arbitration will be Bangalore. The language of the arbitration shall be English. The decision/award of such an arbitrator shall be binding on the parties hereto and enforceable in any court of competent jurisdiction.

Signed by a duly authorised representative of the Parties

Signature: Signature:

Name: Name:

Title: Title:

Date: Date:

Requirement Specifications for Data Acquisition, Analysis and Online Display System

1.0 Introduction

During flight of the aircraft, onboard flight computers like Digital Flight Control Computer (DFCC), Auxiliary Computer (AC), Mission Management and Display Computer (MMDC) etc., transmit huge amount of data to various data recording LRUs. After landing of aircraft, the data is downloaded to data processing stations for post flight analysis. The data consists of analog, discrete, digital, audio and video data acquired by various data receiving LRUs. In the Ironbird environment, the above mentioned data is recorded in various Data Acquisition Systems and used for the evaluation of IFCS. The requirement specifications of Data Acquisition, Analysis and Online Display Systems are provided in this document.

2.0 Objective

This document presents the details of the top level functional requirements of Data Acquisition, Analysis and Online Display Systems for extensive evaluation at various stages of integration of LCA AF Mk2 IFCS.

3.0 Background

The Iron bird facility is hardware-in-loop facility for testing LCA AF Mk2 IFCS. The Iron bird is configured with cockpits & projection systems. It shall have a single IB structure with sets of plumbings & LRUs mounted as per aircraft. A Hydraulic source is available for driving the hydraulic systems dependence on hydraulic power requirement.

4.0 Scope:

Minimum hardware and software requirement specifications of Data Acquisition, Analysis and Online Display Systems are provided in this section. This system is required to acquire data from various interfaces of DFCC and AC LRUs at Ironbird. The scope of the system shall be limited to all development activities for IFCS and the rig shall not be deliverable to squadron activities. However all quality assurance norms have to be followed for development of test rigs/facilities. No qualification and ESS test shall be applicable for rig. The test facility shall be designed and developed as Type-1 test rig as per IMTAR 21 (DDPMAS V1.0) subpart–T. The software shall be developed i.a.w IMTAR-21, subpart – C6, section 21.C6.3.2 and firmware shall be developed as per section 21.C6.2 as applicable. The software shall be developed as per DO-178B/C Level-A/equivalent as

applicable. The software shall be accepted by IV&V and approved by RCMA. The software shall be accepted by IV&V and approved by RCMA. This requirement is tracebale to section 6.12S of Top Level Functional Requirement Specifications Of Advanced Iron Bird For Single Engine & Twin Engine - Hils Test Rig Facility [1].

The vendor shall design, develop and integrate Data Acquisition, Analysis and Online Display System which can acquire and store various types of data in Real-Time. The system shall also have a separate module to fetch this data and display on a set of LED Screens in real time. Requirement specifications of this Real-Time Data Display System are also provided. Vendor shall provide required cable looms, cable trays, system mounting trays, etc., and interface this system with other systems of the Advanced Ironbird. These systems shall acquire, segregate and store various data from different flight computers in predefined data files without data dropout. The Vendor shall also develop data handling Application Software with the capability to retrieve the data, convert it in to pre-specified engineering units, verify data integrity, system integrity, analyze the data and plot pre-defined parameters in a specified manner. The application software shall have easy to use GUI. Vendor shall finalize application software and GUI specifications in consultation with ADA.

The system shall have capability of real time data acquisition and storage of data in respective data files. The hardware used for the aforementioned system shall be a common hardware. This rig will be used in permanent fixed building in a controlled environment for development activities.

5.0 Overview of Data Acquisition, Analysis and Online Display System

The proposed system shall be configured with PXI chassis with required number of slots to accommodate PXI/PXIe controller and PXI/PXIe add-on cards to acquire data sent by DFCC, AC and MMDCin real time. The acquired data shall be processed and presented to the user. A set of data acquisition systems is required to acquire data sent by DFCC, AC and MMDC in real time. The following section gives brief explanation of the PXI based Data Acquisition System (DAS).

i. The DAS shall have three separate modules namely DAS1, DAS2, DAS3 and DAS4 to acquire various types of data from DFCC, AC and MMDC and also a module for Online Data Display. Each module shall have a single PXI chassis with required number of slots to accommodate PXI/PXIe controller and PXI/PXIe add-on cards to

acquire various types of data sent by DFCC, AC, MMDC, etc.without any data dropout. Schematic representation of the DAS with interconnecting subsystems is shown in Figure 1.0.

ii.   The existing application software available with ADA shall be updated in a required development environment. The updated application software shall acquire data without any data dropout and store the data in the required format for post data analysis.

iii.   The application software shall also have a provision to select and display RS422 and/or analog and/or discrete data/and/or MIL-1553B data online in real time during the data acquisition. If the existing application software does not have these features, vendor to update the application software.

iv.   The application software shall maintain a data base for RS422 signals, analog signals, discrete signals along with scale factors and MIL-1553B ICD data base along with scale factors based on the DFCC, AC, MMDC OFP so that user can upgrade/modify the data base without changing the application software.If the existing application software does not have these features, vendor to update the application software.

v.   The vendor shall develop required device driver software and carry out required software updates to the existing application software (GUI, data acquisisiton, configuration, storage etc.) available with the end user.

vi.   The following types of data acquisition modules are required to acquire data transmitted by DFCC, AC and MMDC. The DAS system shall be interfaced with DFCC, AC, MMDC, etc. like that on the aircraft.

a) **DAS1:** DFCC-CCDL, DFCC-FTI-Analog, AC-FTI-Analog, DFCC-FTI-Discrete, AC-FTI-Discrete, DFCC-FTI-RS422, DFCC-BDU-RS422and DFCC-MIL-1553BData Acquisition System

b) **DAS2:** DFCC-FTI-RS422Data Acquisition System

c) **DAS3:** DFCC-CDR-Analog, AC-CDR-Analog, DFCC-CDR-Discrete, AC-CDR-Discrete, DFCC-CDR-RS422 and CDR-MIL-1553BRT simulation and Data Acquisition System

d) **DAS4:** AC-CCDL, AC-FTI-RS422, AC-DFCC-RS422, DFCC-AC-RS422 and AC-MIL-1553BData Acquisition System
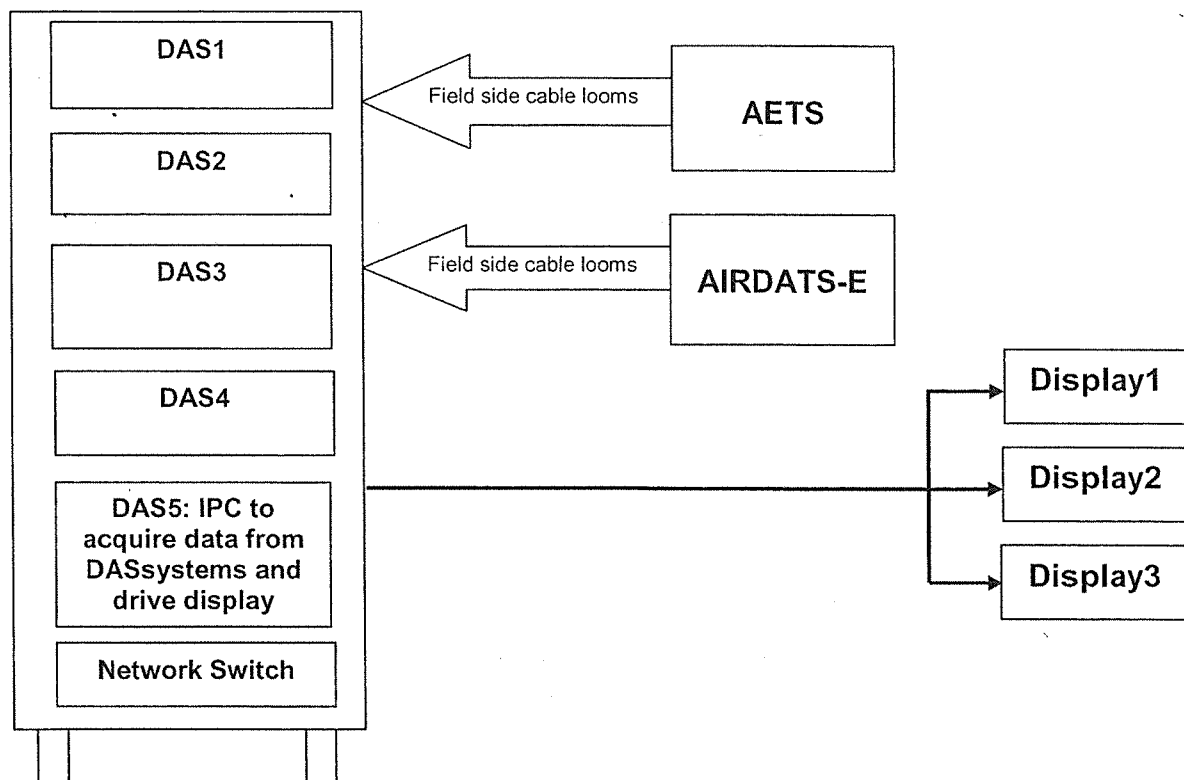
e) **DAS5:** Online Data Display System

Figure 1.0: Schematic of Data Acquisition, Analysis and Online Display System

5.1 DAS1: DFCC-CCDL, DFCC-FTI-Analog, AC-FTI-Analog, DFCC-FTI-Discrete, AC-FTI-Discrete, DFCC-FTI-RS422, DFCC-BDU-RS422 and DFCC-MIL-1553B Data Acquisition System

The minimum requirement specifications of PXI based Data Acquisition and Analysis systems are provided in this write-up. This system is required to acquire the data sent from DFCC – AC based configuration.

The system shall have capability of acquiring data without data dropouts and storage of data in respective data files. The hardware used for the aforementioned system shall be a common hardware. Application software feature to be provided to select and configure the system based on aforementioned configurations.This rig will be used in permanent fixed building in a controlled environment for development activities.

The DFCC-CCDL interface comprises four (4) channel high speed bi-phase Manchester encoded signal of 2 Mbps/1 Mbps with electrical levels compatible with RS422 signal.The DFCC-FTI and AC-FTI interface link also has 30 hardwired analog signals (signals of ±10 VDC type and 0 to -5VDC type), 10 hardwired discrete signals (6 signals of ±15 VDC type & 4 signals open/ground type). The DFCC-FTI-RS422 interface comprises four (4) channel

high speed RS422 serial data transmission with non-standard baud rate of 312500 bps. The DFCC-BDU RS422 interface comprises four (4) channel high speed RS422 serial data transmission with standard and non-standard baud rate.The baud rate shall be software configurable.The data acquisition system shall have required number of PXI add-on cards and application software developed in LabView platform to acquire the DFCC-CCDL, DFCC-FTI-Analog signals, AC-FTI-Analog signals, DFCC-FTI-Discrete signals, AC-FTI-Discrete signals, DFCC-FTI-RS422, DFCC-BDU-RS422 and DFCC-MIL-1553B monitoring on MIL-1553B BUS1 and MIL-1553B BUS2 without any data loss/drop out and store the data in the required format for post data analysis. The application software shall also have a provision to select and display minimum number of CCDL and/or Analog and/or Discrete and/or RS422 and/or MIL-1553B data online in real time during the data acquisition. The application software shall maintain a data base for CCDL signals, analog signals, discrete signals, RS422signals along with scale factors and MIL-1553B ICD data base along with scale factors based on the DFCC and AC OFP so that user can upgrade/modify the data base without changing the application software. The vendor shall develop required device driver software and application layer software as per the end-user requirement to interface the system with DFCC, AC and MMDC. The baud rate shall be software configurable.The vendor shall carry out required software updates to the existing application software (GUI, data acquisisiton, configuration, storage etc.) available with the end user. If the existing application software does not have these features, vendor to update the existing application software.

Details of DFCC-MIL-1553B Interface:

The system shall use 2-node MIL 1553B single-function card along with bus couplers. The software shall have the following minimum features.

1. The software shall be configured for Bus monitoring (MTs) on the MIL-1553B Bus as per the LCA avionics MIL-BUS architecture. The required details will be provided by the user

2. Provision to store the MIL-BUS MT in the format defined by the user.

3. Data acquisition in real time and store raw data and engineering data inseparate file channel wise.

4. Data analysis software to convert the hex data to engineering value by applying corresponding scale factors and storing the time history of the acquired parameter along with time stamp. Details of the data structure will be given by the user.

5. Error log file for any data drop out to be recorded with all details.

CHASSIS

PROCESSOR BOARD

DFCC-CCDL Card

FTI-Analog Input Card

FTI-Discrete Input Card

FTI-RS422 Card

DFCC-BDU-RS422 Card

DFCC-MIL-1553B Card

AETS

DFCC

AIRDATS-E

AC

Figure 2.0: Block Representation of DAS1

5.2 DAS2: DFCC-FTI-RS422 Data Acquisition System

The minimum requirement specifications of PXI based Data Acquisition and Analysis systems are provided in this write-up. This system is required to acquire the data sent from DFCC FTI-RS422 interface.

The system shall have capability of acquiring data without data dropouts and storage of data in respective data files. The hardware used for the aforementioned system shall be PXI based with PXI controller and add-on cards housed in a PXI chassis. Application software feature to be provided to select and configure the system based on aforementioned configurations. This rig will be used in permanent fixed building in a controlled environment for development activities.

The DFCC-FTI-RS422 interface comprises four (4) channel high speed RS422 serial data transmission with non-standard baud rate of 312500 bps. The baud rate shall be software configurable.The data acquisition system shall have required number of PXI add-on cards and

existing application software supplied developed in LabView platform to acquire DFCC-FTI-RS422 without any data loss/drop out and store the data in the required format for post data analysis. The application software shall also have a provision to select and display minimum number of RS422 data online in real time during the data acquisition. The application software shall maintain a data base for RS422 signals along with scale factors so that user can upgrade/modify the data base without changing the application software. The vendor shall develop required device driver software and application layer software as per the end-user requirement to interface the system with DFCC. This system will acquire DFCC FTI-RS422 data in parallel with DFCC FTI-RS422 data acquired in DAS1 system. Existing application software supplied by ADA to be ported to current hardware and software framework. If the existing application software does not have these features, vendor to update the application software and demonstrate working of the application software as per user requirements.
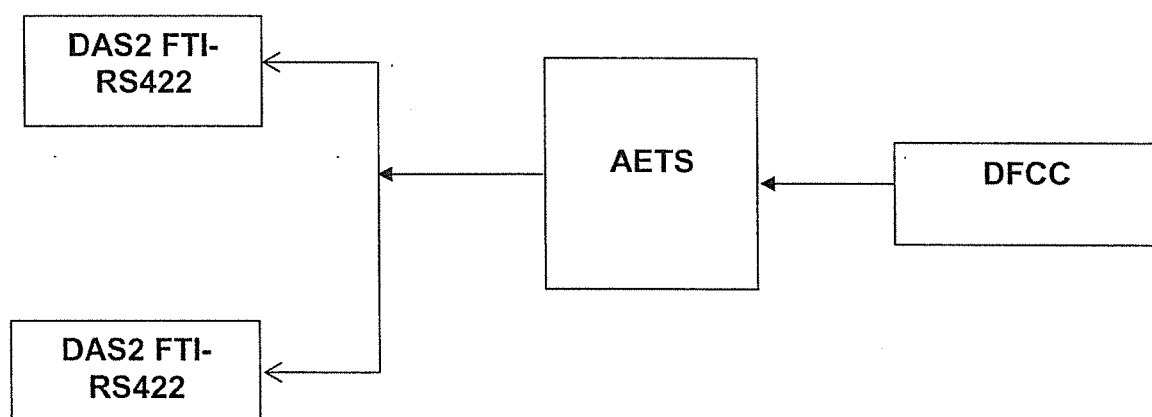
Figure 2.0: Block Representation of DAS2

5.3 DAS3: DFCC-CDR-Analog, AC-CDR-Analog, DFCC-CDR-Discrete, AC-CDR-Discrete, DFCC-CDR-RS422 and CDR-MIL-1553B Data Acquisition System

The system shall have capability of real time data acquisition and storage of data in respective data files. The hardware used for the aforementioned system shall be a common hardware. Application software feature to be provided to select and configure the system based on aforementioned configurations, This rig will be used in permanent fixed building in a controlled environment for development activities.

The DFCC-CDR and AC-CDR interface link has 30 hardwired analog signals (signals of ±10 VDC type and 0 to -5VDC type), 10 hardwired discrete signals (6 signals of ±15 VDC

type). The DFCC-CDR-RS422 interface comprises four (4) channel high speed RS422 serial data transmission with standard/non-standard baud rate. Additionally, the data acquisition system shall have required number of PXI add-on cards and application software developed in LabView platform to acquire the DFCC-CDR-Analog signals, DFCC-CDR-Discrete signals, AC-CDR Analog signals, AC-CDR Discrete Signals, DFCC-CDR-RS422 and CDR-MIL-1553B monitoring on MIL-1553B BUS1 and MIL-1553B BUS2 without any data loss/drop out and store the data in the required format for post data analysis. The application software shall also have a provision to select and display minimum number of analog and/or discrete data RS422 and/or MIL-1553B data online without any data dropout during the data acquisition. The application software shall maintain a data base for analog signals, discrete signals, RS422 signals along with scale factors and MIL-1553B ICD data base along with scale factors based on the DFCC and AC OFP so that user can upgrade/modify the data base without changing the application software. The vendor shall develop required device driver software and application layer software as per the end-user requirement to interface the system with DFCC, AC and MMDC. The baud rate shall be software configurable. Existing application software supplied by ADA to be ported to current hardware and software framework. If the existing application software does not have these features, vendor to update the application software and demonstrate working of the application software as per user requirements.

Details of CDR-MIL-1553B Interface:

The system shall use 2-node MIL 1553B multi-function card along with bus couplers. The software shall have the following minimum features.

1. The software shall simulate the Bus controller (BC), Multi RTs and Bus monitoring (MTs) on the MIL-1553B Bus as per the LCA avionics MIL-BUS architecture. The required details will be provided by the user
2. Provision to store/update the CDR RT database by the user.
3. Provision to set the database parameter values locally.
4. Provision to prepare the BC scheduler as per LCA 1553B OAC-BC scheduler definition, key-in parameters as per BC/RT 1553B ICD database and simulate the data transaction in real time between BC and RT, RT and BC, RT to RT etc. as per the bus controller scheduler definition.
5. Data acquisition in real time and store raw data and engineering data in separate file channel wise.

6. Data analysis software to convert the hex data to engineering value by applying corresponding scale factors and storing the time history of the acquired parameter along with time stamp. Details of the data structure will be given by the user.

7. Error log file for any data drop out to be recorded with all details.

8. Existing application software supplied by ADA to be ported to current hardware and software framework. If the existing application software does not have these features, vendor to update the application software and demonstrate working of the application software as per user requirements.

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┌─────────────────────────┐          ┌──────────────┐        ┌──────────────┐
│  ┌───────────────────┐  │          │              │        │              │
│  │ PROCESSOR         │◄─┼──┐       │              │        │    DFCC      │
│  │ BOARD             │  │  │       │     AETS     │◄───────│              │
│  └───────────────────┘  │  │       │              │        │              │
│  ┌───────────────────┐  │  │       │              │        └──────────────┘
│  │ CDR-Analog        │◄─┼──┤       │              │
│  │ Input Card        │  │  │       └──────────────┘
│  └───────────────────┘  │  │
│  ┌───────────────────┐  │  │       ┌──────────────┐        ┌──────────────┐
│  │ CDR-Discrete      │◄─┼──┤       │              │        │     AC       │
│  │ Input Card        │  │  │       │  AIRDATS-E   │◄───────│              │
│  └───────────────────┘  │  │       │              │        └──────────────┘
│  ┌───────────────────┐  │  │       │              │
│  │ CDR-RS422         │◄─┼──┤       └──────────────┘
│  │ Card              │  │  │
│  └───────────────────┘  │  │
│  ┌───────────────────┐  │  │
│  │ CDR-MIL-          │◄─┼──┘
│  │ 1553B             │  │
│  │ CARD              │  │
│  └───────────────────┘  │
└─────────────────────────┘
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Figure 3: Block Representation of DAS3

5.4 <u>DAS4:</u> AC-CCDL, AC-FTI-RS422, AC-DFCC-RS422, DFCC-AC-RS422 and AC-MIL-1553B DAS

The system shall have capability of real time data acquisition and storage of data in respective data files. The hardware used for the aforementioned system shall be a common hardware. Application software feature to be provided to select and configure the system based on aforementioned configurations, This rig will be used in permanent fixed building in a controlled environment for development activities.

The AC-CCDL interface comprises four (4) channel high speed bi-phase Manchester encoded signal of 2 Mbps/1 Mbps with electrical levels compatible with RS422 signal.The AC-DFCC-RS422 interface comprises four (4) channel high speed RS422 serial data transmission with standard and non-standard baud rate. The DFCC-AC-RS422 interface comprises four (4) channel high speed RS422 serial data transmission with standard and non-standard baud rate.The AC-FTI-RS422 interface comprises four (4) channel high speed RS422 serial data transmission with standard and non-standard baud rate.The data acquisition system shall have required number of PXI/PXIe add-on cards and application software developed in LabView platform to acquire four channels of data, AC-CCDL, AC-DFCC-RS422, DFCC-AC-RS422 and AC-FTI-RS422 data without any data loss/drop out and store the data in the required format for post data analysis. The application software shall also have a provision to select and display minimum number of CCDL and/or RS422 data online in real time during the data acquisition. The application software shall maintain a data base for CCDL signals and RS422 signals, along with scale factors based on the AC and DFCC OFP so that user can upgrade/modify the data base without changing the application software. The vendor shall develop required device driver software and application layer software as per the end-user requirement to interface the system with AC and DFCC LRUs.Existing application software supplied by ADA to be ported to current hardware and software framework. If the existing application software does not have these features, vendor to update the application software and demonstrate working of the application software as per user requirements.
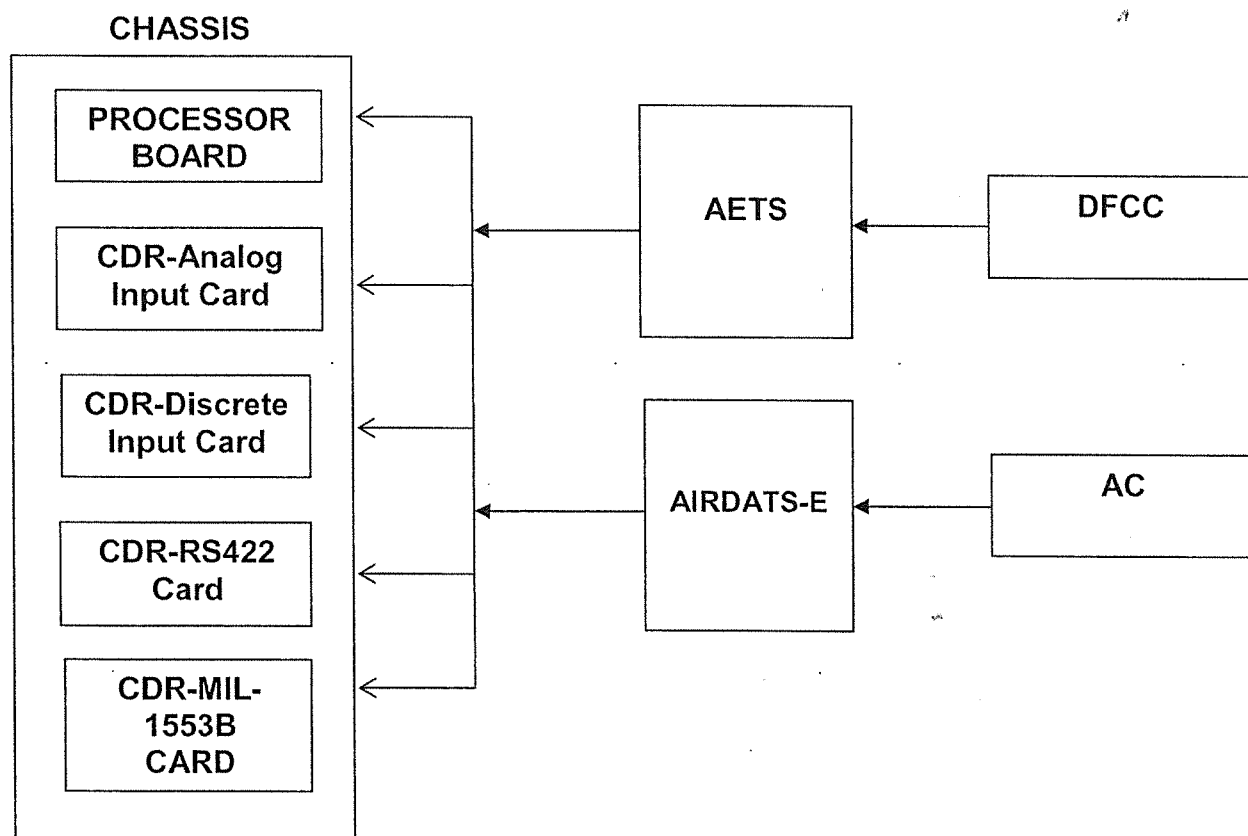
AC-MIL-1553B Interface:

The system shall use 2-node MIL 1553B single-function card along with bus couplers. The software shall have the following minimum features.

1. The software shall be configured for Bus monitoring (MTs) on the MIL-1553B Bus as per the LCA avionics MIL-BUS architecture for acquiring AC local MIL-1553B data. The required details will be provided by the user.

2. Provision to storethe MIL-BUS MT in the format defined by the user.

3. Data acquisition in real time and store raw data and engineering data inseparate file channel wise.

4. Data analysis software to convert the hex data to engineering value by applying corresponding scale factors and storing the time history of the acquired parameter along with time stamp. Details of the data structure will be given by the user.

5. Error log file for any data drop out to be recorded with all details.

6. Existing application software supplied by ADA to be ported to current hardware and software framework. If the existing application software does not have these features, vendor to update the application software and demonstrate working of the application software as per user requirements.

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┌──────────────────────────┐
│  ┌────────────────────┐  │       ┌────────────────┐       ┌────────────────┐
│  │   PROCESSOR        │  │ ◄──   │                │  ◄──  │                │
│  │   BOARD            │  │       │     AETS       │       │     DFCC       │
│  └────────────────────┘  │       │                │       │                │
│  ┌────────────────────┐  │       └────────────────┘       └────────────────┘
│  │   AC-CCDL          │  │ ◄──
│  │   Card             │  │
│  └────────────────────┘  │
│  ┌────────────────────┐  │
│  │   AC-DFCC          │  │
│  │   RS422 Card       │  │ ◄──
│  └────────────────────┘  │       ┌────────────────┐       ┌────────────────┐
│  ┌────────────────────┐  │       │                │       │                │
│  │   DFCC-AC          │  │ ◄──   │   AIRDATS-E    │  ◄──  │      AC        │
│  │   RS422 Card       │  │       │                │       │                │
│  └────────────────────┘  │       └────────────────┘       └────────────────┘
│  ┌────────────────────┐  │ ◄──
│  │   AC-FTI-          │  │
│  │   RS422 Card       │  │
│  └────────────────────┘  │ ◄──
│  ┌────────────────────┐  │
│  │   AC-MIL-          │  │
│  │   1553B            │  │
│  │   CARD             │  │
│  └────────────────────┘  │
└──────────────────────────┘
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Figure 4: Block Representation of DAS4

5.5 DAS5: Online Display System:

The online display system shall be industrial PC based system with graphics card to drive minimum three TV monitors (minimum 65 inch). The system shall acquire data transmitted by individual data acquisition systems over Ethernet and display the required parameters as per the user configuration. Additionally, receive and acquire the FDS Ethernet data and display the same.Existing application software supplied by ADA to be ported to current hardware and software framework. If the existing application software does not have these features, vendor to update the application

software and demonstrate working of the application software as per user requirements.
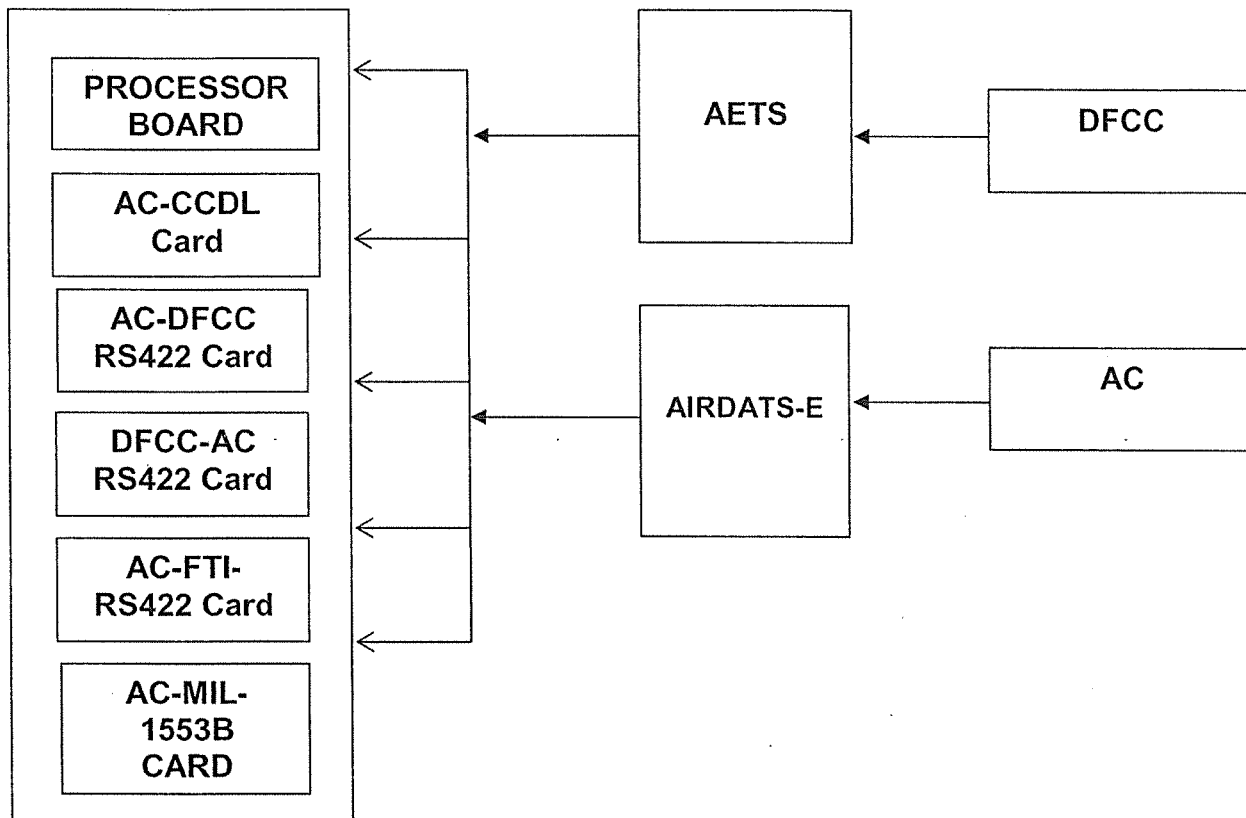
6.0 Cable loom requirements:

Cable loom with connector accessories as per requirements to interface DAQ systems with AETS (RADIALL connector) and AIRDATS-E (D-Type 50 pin connector). The length of cable loom from DAQ system to external system interface should be sufficient to interface with AETS and AIRDATS-E systems at Ironbird Rig. All the cable looms used shall be twisted shielded pair. The cable loom shall be covered with copper braid & heat shrinkable sleeves. The end connectors shall be covered with heat shrinkable boot. The looms should be coloured at the connector ends and numbered for proper identification. Insulation between the connector pins shall be greater than 50 MΩ at 500 VDC. The electrical cable looms shall be of industrial grade and LCSO approved. The looms should be tested & delivered for connectivity with the assigned pins as well as for insulation. The looms should be harnessed between the connecting locations as well as on the respective cabinets/racks with appropriate cable straps. Following table gives the details of cable looms required to interface the data acquisition systems with AETS and AIRDATS-E test equipments.

SI. No.	Cable looms and Connector Details	Quantity/ System
A.	**DAS1:DFCC-CCDL, DFCC-FTI-Analog, AC-FTI-Analog, DFCC-FTI-Discrete, AC-FTI-Discrete, DFCC-FTI-RS422, DFCC-BDU-RS422, DFCC-BCCIU-RS422 and DFCC-MIL-1553B Data Acquisition System**	
1	**DFCC-CCDL Interface:** Cable Loom of 10 meters length with four (4) numbers of D-9 male connectors with hood to interface with AETS	1 set
2	**DFCC-FTI-Analog, Discrete and RS422 Interface:** Cable Loom of 10 meters length with one (1) number of 104 pin RADIALL male connector with hood to interface with AETS	1 set
3	**AC-FTI-Analog and Discrete Interface:** Cable Loom 10 meters length with one (1) number of D-50 pinmale connector to interface with AIRDATS-E	1 set
4	**DFCC-BDU-RS422 and DFCC-BCCIU-RS422Interface:** Cable Loom of 10 meters length with one (1) number of 104 pin RADIALL male connector with hood to interface with AETS	1 set
4	**DFCC MIL-1553B:** MIL-1553B cable looms: 16 numbers of MIL-cable looms with PL-75 connectors to extend bus of 10 meters length to interface the system from rack installed MIL-1553B couplers to field side MIL-1553B couplers	1 set

B.	DAS2:DFCC-FTI-RS422	
1	**DFCC FTI RS422 Interface:** Cable Loom of 10 meters length with one (1) number of 104 pin RADIALL male connector with hood to interface with AETS and cable loom to interface and acquire DFCC FTI-RS422 data in parallel in DAS1 and DAS2 Note: RS422 cards installed in this FTI DAQ system will acquire data in parallel from DFCC-FTI RS422 interface installed in DAS1. Accordingly cable loom to be fabricated to interface DAS1 and DAS2	1 set
3.	**DAS3:DFCC-CDR-Analog, AC-CDR-Analog, DFCC-CDR-Discrete, AC-CDR-Discrete, DFCC-CDR-RS422 and CDR-MIL-1553B Data Acquisition System**	
1	**DFCC-CDR- Analog, Discrete and RS422 interface:** Cable Loom of 10 meters length with one (1) number of 104 pin RADIALL male connector with hood to interface with AETS	1 set
2	**AC-CDR-Analog and Discrete Interface:** Cable Loom 10 meters length with one (1) number of D-50 pin male connector to interface with AIRDATS-E	1 set
3	**CDR-MIL-1553B:** MIL-1553B cable looms: 16 numbers of MIL-cable looms with PL-75 connectors to extend bus of 10 meters length to interface the system from rack installed MIL-1553B couplers to field side MIL-1553B couplers	1 set
D.	**DAS4: AC-CCDL, AC-DFCC RS422, DFCC-AC RS422 and AC-FTI-RS422 DAS**	
1	**AC-CCDL interface:** Cable Loom of 10 meters length with one D-50 male connector with hood to interface with AIRDATS-E	1 set
2	**AC-DFCC-RS422, DFCC-AC-RS422 and AC-FTI-RS422 interface:** Cable Loom of 10 meters length with two numbers of D-50 male connector with hood to interface with AIRDATS-E	1 set
3	**AC MIL-1553B:** MIL-1553B cable looms: 16 numbers of MIL-cable looms with PL-75 connectors to extend bus of 10 meters length to interface the system from rack installed MIL-1553B couplers to field side MIL-1553B couplers	1 set
E.	**DAS5: Online Display Data Acquisition System**	
1	Ethernet cables: standard Ethernet cables of 10 meters (5 nos.) length	1 set
2	Graphics card cable loom of required length to drive TV screens	1 set

Note: All cable looms shall use PTFE 22/24 AWG Twisted Shielded pair with Connector and connector back shell, Boot, Heat shrinkable sleeves etc. All the signal wires and cable looms should be labeled at both the ends which should be documented in cable loom document. Insulation between the connector pins shall be greater than 50 MΩ at 500 VDC. The electrical cable looms shall be of industrial grade and LCSO approved.

7.0 General Hardware Requirements

All the data acquisition systems and online display system shall be installed in a standard 19" Rack of required height. Additionally, the Ethernet switch, MIL-1553B couplers to be installed in the rack on a suitable panel with an access to connect and disconnect the MIL-1553B cable looms. All the looms should have proper identification and should be neatly routed in the rack. The cable looms with connectors to be fabricated by the vendor to interface with field side systems available at various test facilities as shown in Fig. 1.0.

8.0 Software Requirements:

The software development shall be Graphical User Interface (GUI) based with data acquisition at backend. The application software shall be developed in LabView platform to acquire the DFCC FTI-RS422, FTI-Analog, FTI-Discrete data and MIL-1553B (bus monitoring) without any data loss/drop out and store the data in the required format for post data analysis. The application software shall also have a provision to select and display minimum number of RS422 and/or analog and/or discrete data and/or MIL-1553B data online during the data acquisition. The application software shall maintain a data base for RS422 signals, analog signals and discrete signals, MIL-1553B ICD database based on the DFCC, AC, SSCDR OFPs so that user can upgrade/modify the data base without changing the application software. The vendor shall develop required device driver software and application layer software as per the end-user requirement to interface the system with DFCC. The baud rate shall be software configurable.The vendor shall demonstrate the working of all the modes by carrying out the ATP. Also, the vendor is responsible to software upgrade if any additional requirement arises during the stage of integrated ATP with FCS LRUs. The Device Driver software API's for all installed PXI hardware with source code shall be provided to the user to configure the I/O channels as per the requirement. Provision to be made to select the spare channels for future use. All the spare channels to be wired and made available panel. The vendor should develop and provide ATP software to carry out standalone ATP of the system in end-to-end manner. GUI software with source code with minimum features like detecting the health of all the PXI hardware, configuring the database file along with scale factors which will be read by the application software, start/stop of the execution sequence based on the user input display of time elapsed etc. The vendor will be responsible for supplying hardware, licensed software (Windows OS), device driver software and GUI based application software as per user requirement. In addition, the vendor will be responsible to carry out standalone ATP and Integrated ATP of the system.

Data Analysis software should have easy to operate GUI with the following inbuilt functionalities
1. Database for the all the DAQ interfaces
2. Data Integrity verification
3. System Integrity verification
4. Binary Data to Engineering conversion

5. Ease of update for any data structure change without changing the core software

6. User defined Pass/Fail criteria for all the acquired parameters and report generation

The application software for online display shall execute on an industrial PC. The system shall receive data from various data acquisition including from Flight Dynamics Simulator system on ethernet and display the data on multiple TV screens. The parameters acquired from the data acquisition systems and FDS shall be displayed on different screen. If more parameters are to be displayed on a screen, multiple windows shall be created. A user configurable database shall be maintained in the online display system which shall be used to display the parameters online. Data acquisition application software and online display application software clearance should be carried out with the concurrence of the user.Software source code for all the DAQ application software, ATP software etc., shall be given along with the deliverables.Software Design Document, Software Requirements Specification Document, Acceptance Test Plan and related documents needs to be provided. Also, the post data analysis application software to be provided by the vendor for all the data acquired by various data acquisition systems. Based on post data analysis software, a softcopy of report to be generated in Microsoft word and in pdf format and pass/fail to be declared based on the pass/fail criteria. Existing application software supplied by ADA to be ported to current hardware and software framework. If the existing application software does not have these features, vendor to update the application software and demonstrate working of the application software as per user requirements.

9.0 System Documentation

The following documents needs to be generated by the vendor for all the data acquisition and online display systems

Sl. No.	Documentation
Complete details of the system including	
1	System Requirement Specification Document
2	Hardware Design Document
3	Cable Loom Specification and wiring schematic document (This document should cover wiring details from NI cards to SCBs to Signal Conditioning cards to Field side).
4	Signal Conditioning subsystem specification document which should include, detailed signal conditioning schematic, bill of material, gerber files, data sheet for the components used in the card
5	System Master Document Index
6	Cable loom document with continuity and megger checks

7	Signal conditioning subsystem card level ATP and ATR document
8	Certificate of Conformance for add-on cards chassis & controller
9	User Manuals for Add On cards, Controller and chassis
10	Document which compiles the data sheet for all the hardware components, cards, 19" Rack etc used to realize the system
11	Software Requirement Specification Document
12	Software design document
13	Software Test Document and Test report document
14	Software and hardware limitations document
15	System level ATP and ATR reports
16	System Operational Manual, User guide with system details and user instructions shall be provided

10.0 Hardware Requirements of the System

10.1 Hardware deliverables of DAS1:

Sl. No	Hardware Description	MODULE	SPECIFICATION	QTY/ System
1	PXIe-Controller	PXIe-8861 Make: National Instruments	2.8 GHz Xenon Quad Core Controller, Hard drive Memory Size:512 GB (or greater) Win 10 64-bit (Multilanguage) or latest	1
2	PXIe-Digital Input /Output Module	PXI-6528 Make: National Instruments	Number of I/p Channels : 24 Number of O/p Channels : 24 Digital Input voltage – Min - 60 VDC- Max 60 VDC Output voltage – Min - 60 VDC- Max 60 VDC	1
3	PXI- Serial Interface Module	PXI-8433/4 Make: National Instruments	Bus Connector: PXI Hybrid Number of Serial Channels:4 Interface Prot ocols: RS422 and RS 485 Isolation Type: Port –PC Isolation	2
4	Cable for Serial Card	-	RS485 Null-Modem Cable, DB-9 Female to DB-9 Female, 1m	1 set each for cards used in sl.no.3
5	Analog Input Module	PXIe 4303 Make: National Instruments	24-Bit, 32-Channel, 51.2 kS/s, ±10 V PXI Analog Input Module	1
6	Terminal Block for above	TB-4302 Make: National Instruments	Front mount terminal block for PXIe-4302/3	1 set
7	PXI MIL-1553B Interface Module with cable looms to interface with couplers	MIL-STD-1553 - 2 Channel Make: Ballard	Number of MIL Channels – 2 Bus Function – Single-Function (only MT function – Bus monitoring only)	1

8	PXI Multifunction Reconfigurable I/O Module	PXIe-7972R Make: National Instruments	K325T FPGA, 1.7 GB/s, 2 GB DRAM PXI FPGA Module for FlexRIO—The PXIe-7972 provides flexible, customizable I/O for LabVIEW FPGA. It includes 132 single-ended I/O lines configurable as 66 differential pairs	1
		NI-6584 and cable loom accessories	16 Mbit/s, 16-Channel Digital I/O Adapter Module for FlexRIO—The NI-6584 is a digital I/O adapter module that, when combined with a PXI FPGA Module for FlexRIO or the Controller for FlexRIO, creates a digital instrument for interfacing with 16 RX and TX pairs of RS485 or RS422. This digital I/O adapter module for FlexRIO can be used to do real-time interfacing and analysis of RS485 and RS422 as well as other electrically compatible interfaces.	1 set
9	PXIe Chassis	PXIe-1092 Make: National Instruments	PXIe, 10-Slot (7 Hybrid Slots, 1 PXI Express System Timing Slot, 1 Peripheral Expansion Slot),	1
10	Portable Customized PMA (Monitor, keyboard and mouse integrated with PXI chassis for system portability)	Reputed Make	Ruggedized System with display to hold the above modules along with suitable connectors for field connection and display	1
11	Cable Loom Interface with AETS and AIRDATS-E	Reputed Make	As per section 7.0	1 set
12	Adequate MIL-1553B Cable	Reputed Make	As per section 7.0	1set
13	MIL-1553B four stub Couplers	Reputed Make	MIL-1553B couplers: 4 stub couplers with terminating resistors both ends	8
14	FTI DAS Application Software	-	FTI DAS Software with Documentation, Installation and Commissioning to clear ATR, ATP	1 set
15	Documentation	-	As per section 10.0	1 set

10.2 Hardware deliverables of DAS2:

Sl. No.	Hardware Description	MODULE	SPECIFICATION	QTY/ System
1	PXIe-Controller	PXIe-8861 Make: National Instruments	2.8 GHz Xenon Quad Core Controller, Hard drive Memory Size:512 GB (or greater) Win 10 64-bit (Multilanguage) or latest	1
2	PXI- Serial Interface Module	PXI-8433/4 Make: National Instruments	Bus Connector: PXI Hybrid Number of Serial Channels:4 Interface Protocols: RS422 and RS 485 Isolation Type: Port –PC Isolation	1
3	Cable for Serial Card	-	RS485 Null-Modem Cable, DB-9 Female to DB-9 Female, 1m	1 set each for cards used in sl.no.3
4	PXIe Chassis	PXIe-1071 Make: National Instruments	NI PXIe-1071, 4-Slot 3U PXI Express Chassis	1
5	Portable Customized PMA (Monitor, keyboard and mouse integrated with PXI chassis for system portability)	Reputed Make	Ruggedized System with display to hold the above modules along with suitable connectors for field connection and display	1
5	Cable Loom Interface with AETS and AIRDATS-E	Reputed Make	As per section 7.0	1 set
6	Additional accessories	-	Additional cable loom and hardware accessories to acquire RS422 data along with FTI-Data Acquisition system mentioned in Table 10.1 in parallel	1 set
7	Documentation	-	As per section 10.0	1 set

10.3 Hardware deliverables of DAS3:

Sl. No.	Item	MODULE	Description	QTY/ System
1	PXIe Controller	PXIe-8861 Make: National Instruments	2.8 GHz Xenon Quad Core Controller, Hard drive Memory Size:512 GB (or greater) Win 10 64-bit (Multilanguage) or latest	1
2	Digital Input /Output Module	PXI-6528 Make: National Instruments	Number of I/p Channels : 24 Number of O/p Channels : 24 Digital Input voltage – Min - 60 VDC- Max 60 VDC Output voltage – Min - 60 VDC- Max 60 VDC	1
3	Analog Input Module	PXIe 4303 Make: National Instruments	24-Bit, 32-Channel, 51.2 kS/s, ±10 V PXI Analog Input Module	1
4	Terminal Block for above	Make: National Instruments	TB-4302, Front mount terminal block for PXIe-4302/3	1
5	PXI- Serial Interface Module	PXI-8433/4 Make: National Instruments	Bus Connector: PXI Hybrid Number of Serial Channels:4 Interface Protocols: RS422 and RS 485 Isolation Type: Port -PC Isolation	1
6	Cable for Serial Card	-	RS485 Null-Modem Cable, DB-9 Female to DB-9 Female, 1m	1
7	PXI Ballard Interface Module	MIL-STD-1553 - 2 Channel	Number of MIL Channels – 2 Bus Function – Multi-Function (Simultaneous BC, RT and MT) Make: Ballard	1
8	Cable for MIL-1553B card to interface with couplers	-	LFH Connector to Four MIL-STD-1553 Twinax and One D-Sub, 3'	1
9	PXI Express Chassis	PXIe-1092 Make: National Instruments	PXIe, 10-Slot (7 Hybrid Slots, 1 PXI Express System Timing Slot, 1 Peripheral Expansion Slot),	1
10	Portable Customized PMA (Monitor, keyboard and mouse integrated with PXI chassis for system portability)	-	Reputed Make	1

11	Cable Loom Interface with AETS and AIRDATS-E	-	As per section 7.0	1 set
12	Adequate MIL Cable with MIL Couplers	-	As per section 7.0	1 set
13	Crash Data Recorder Software	-	Crash Data Recorder Software with Documentation, Installation and Commissioning to clear ATR, ATP	1 set
14	Documentation	-	As per section 10.0	1 set

10.4 Hardware deliverables of DAS4:

Sl.No.	Item	Description	QTY
1	PXIe Controller	PXIe-8861, 2.8 GHz Xenon Quad Core Controller, Hard drive Memory Size:512 GB (or greater) Win 10 64-bit (Multilanguage) or latest Make: National Instruments	1
2	PXI- Serial Interface Module	PXI-8431/16, RS422/485, 16 Port Serial Interface Make: National Instruments	1
3	Cable for above	RS485 Null-Modem Cable, DB-9 Female to DB-9 Female, 1m	1
4	PXIe-1092	PXIe, 10-Slot (7 Hybrid Slots, 1 PXI Express System Timing Slot, 1 Peripheral Expansion Slot) or latest Make: National Instruments	1
5	PXI Multifunction Reconfigurable I/O Module	PXIe7972R K325T FPGA, 1.7 GB/s, 2 GB DRAM PXI FPGA Module for FlexRIO—The PXIe-7972 provides flexible, customizable I/O for LabVIEW FPGA. It includes 132 single-ended I/O lines configurable as 66 differential pairs	1
	6584 and adapter cable loom	16 Mbit/s, 16-Channel Digital I/O Adapter Module for FlexRIO—The NI-6584 is a digital I/O adapter module that, when combined with a PXI FPGA Module for FlexRIO or the Controller for FlexRIO, creates a digital instrument for interfacing with 16 RX and TX pairs of RS485 or RS422. This digital I/O adapter module for FlexRIO can be used to do real-time interfacing and analysis of RS485 and RS422 as well as other electrically compatible interfaces.	1
6	PXI MIL-1553B Interface Module with cable looms to interface with couplers	MIL-STD-1553 - 2 Channel Make: Ballard Number of MIL Channels – 2 Bus Function – Single-Function (only MT function – Bus monitoring only)	1
7	Portable Customized PMA (Monitor, keyboard and mouse integrated with PXI	Reputed Make	1

	chassis for system portability)		
8	Cable Loom Interface with AETS and AIRDATS-E	As per section 7.0	1 set
9	AC RS422 Acquisition application software	AC RS422 Acquisition application software with Documentation, Installation and Commissioning to clear ATR, ATP	1 set
10	Documentation	As per section 10.0	1 set

11.0 Other Miscellaneous Requirements

Sl No	Item	Description	QTY/ System
1	Rack	19" Rack of suitable height to house all the above PXI Data Acquisition Modules and other Electrical Accessories.	1
2	Ethernet Switch	16-Port Gigabit Desktop Ethernet Switch	1
3	Industrial PC	Industrial PC with i7 processor, 8 GB RAM, 500 GB HDD, DVD Drive, latest Windows OS, 1U Monitor, Keyboard & Mouse or latest	1
4	65" inch Monitors	65 inch Curved LED Backlit Computer Monitor - Full HD, VA Panel with VGA, HDMI, Audio Ports	3

12.0 Acceptance Criteria:

i. Vendor shall prepare Standalone Acceptance Test Procedure (ATP) and Integrated ATP documents and obtain clearance of the certification agencies.

ii. Vendor shall carryout ATP at his premises in the presence of QA, RD-AQA and representatives from end user of ADA, hereafter called as ADA. Vendor shall submit the ATP Results document (ATR) duly coordinated by QA, RD-AQA and representatives from ADA along with delivery of the equipment to Stores.

Vendor shall integrate the system with Advanced Ironbird sub-systems like FDS, AETS, AIRDATS-E, Cockpit etc. The Integrated mode ATP shall be carried out by the vendor at Ironbird Facility in the presence of QA, RD-AQA and representatives from ADA.Vendor shall submit the Integrated ATP Results document duly coordinated by QA, RD-AQA and representatives from ADA.

13.0 Time Schedule:

The table below gives milestone details and time required for completion of each milestone

Sl. No.	Item Descriptions	Tentative schedule (weeks)	
		Start	End
1.	Placement of PO	To	
2.	Detailed HW Req. Capturing + Hardware Design + clearance	To	To+4 Weeks
3.	Hardware Procurement	To+4 Weeks	To+28 Weeks
4.	Software Discussion	To+2 Weeks	To+6 Weeks
5.	MDI Document (GA,ED,BOM)	To+8 Weeks	To+16 Weeks
6.	SRS SDD Release	To+6 Weeks	To+16 Weeks
7.	Software Development	To+8 Weeks	To+36 Weeks
8.	Vendor SW IV&V	To+24 Weeks	To+36 Weeks
9.	Cable loom Wiring Work	To+28 Weeks	To+36 Weeks
10.	Vendor QA SATP	To+36 Weeks	To+40 Weeks
11.	ADA QA SATP and clearance	To+40 Weeks	To+41 Weeks
12.	IATP at ADA and clearance	To+42 Weeks	To+52 Weeks
Total Duration: Approxmitalely 12 months from the date of placement of purchase order			

14.0 General Requirements:

i.   Vendor shall use all hardware subsystems manufactured by National Instruments (NI) only. Original copies of all Device Drivers supplied by NI shall be provided. The vendor shall provide NI conformance certificate for all sub systems. Authority letter from NI shall be submitted for the same mentioning tender number.

ii. Power supply, Grounding, Environmental working condition, etc shall be compatible with aircraft industry requirements.

iii. The system along with the accessories to have end-to-end compatibility with existing test equipment installed at Iron Bird.

iv. Standalone Acceptance Test Procedure (ATP) shall be carried out by the vendors at his premises in the presence of QA-ADA and IFCS-ADA representative (ADA). The required documents shall be prepared by the vendor in co-ordination with ADA. Vendor shall submit the ATP Results document (ATR) duly coordinated by ADA along with delivery of the equipment to Stores.

v.   The Integrated mode ATP shall be carried out by the vendor at Iron bird Facilities in the presence of ADA. The required documents shall be prepared by the vendor in co-ordination with ADA. Vendor shall submit the Integrated ATP Results document duly coordinated by ADA. The system GRAN will be cleared only after successful completion of the Integrated ATP and clearance from certification agencies of ADA.

vi.   Source code of the application software and ATP software should be provided as part of the deliverables

vii. The system shall be operational in closed environment at room temperature from 0° C to 50°C and Humidity range of 20% to 90% RH non-condensing.

viii. Power and signal cable looms shall be of aircraft standard. Cable loom construction details will be provided by the user.

ix.   The list of deliverable is as listed in Tables. For further information, the vendor shall contact the user and obtain the required information. No assumption shall be made by the vendor. The system shall be covered for minimum of three years warranty period.

15.0 Vendor Qualification Criteria:

a. The vendor shall supply only those hardware modules that are well proven and has at least two installations of same standard.

b. Vendor must provide manufacturer authorization letter referring to this tender reference number from the original manufactures for National Instruments (NI) products.

c. The vendor should have executed at least 5 similar DAS installations.

d. The vendor must have at least 10 years of development experience using LabVIEW and specially in Defence & Aerospace industry. Vendor shall have experience in implementing ATE and HILS SYSTEM facilities for development, integration, testing, and evaluation of mission systems using LabVIEW.

e. Vendor shall have prior experience in LabVIEW, LabVIEW FPGA, LabVIEW RT, VC++.

f. Vendor shall be well experienced in designing and implementing PXI and PXIe based system, peer-to-peer programming using LabVIEW FPGA,

g. Vendor shall be prior experience in programming RS422, MIL-1553B interfaces etc. using LabVIEW.

h. Vendor shall depute developers who are certified in LabVIEW/C and shall enclose the certificate of relevant competency acquired through National Instruments certification program, failing which the vendor shall be rejected.

i. The vendor shall be an Authorized Alliance Partner from National Instruments for at least continuous past 5years and an Authorized Supplier of NI's Hardware and software with capability to develop systems based on the National Instruments platform. Vendor shall

produce the certificates of the same, failing which the vendor shall be rejected. The vendor should furnish an OEM Authorization letter from their OEM's India office to participate in tendering confirmation of their technical support during the development and post installation phase. Vendor, in technical proposal during bid, should also provide authentication letter from OEM of all LabVIEW and its Add-Ons and perpetual licenses proposed by vendor for realization of facility, mentioning the Tender Enquire Number in the authorization letter for this exclusive tender case, without which the bids will not be considered for further processing.

j. Vendor shall submit a detailed software development plan after placement of supply order.

k. Vendor shall provide the developed source code to ADA in a digital storage media after the completion of the software development.

l. The bidder should have demonstrable Quality Systems and should have ISO 9001-2015/AS9100/CSIA or their equivalent Certifications. Proof must be attached.

m. Vendor shall depute dedicatedpersonnel for this activity with necessary expertiseon the job defined and shall give monthly progress report including names of the personnel working in the project. The vendor/contractor shall ensure continuity of personnel throughout the execution of the project. If any person leaves the job/shifted to any other job the contractor shall explicitly mention the same and ensure the same level of expertise for replacement. Obtaining all the security clearances for the vendor staff is vendor responsibility.

n. Bidders should be familiar with CEMILAC/DGAQA Documentation processes. Proof must be attached as process of documentation followed as per DGAQA/CEMILAC references in other projects.

o. Software should be designed by the Certified LabVIEW Architect and Software should be developed by Certified LabVIEW Developer. The bidder must have Certified LabVIEW/C Architects and Certified LabVIEW/C Developers as full time employees of the company. Certificate shall be enclosed at the time of submission of quote otherwise vendor shall be rejected

p. While the vendor is submitting the technical bid, he shall bring out all the technical details to show the compliance of each requirement and if any alternative is proposed it shall be explained as in what way it meets the requirements.

q. The vendor shall bring out clearly if there is any noncompliance to the requirement.The vendor shall quote for the entire system as a whole. The cost breakup for each item shall be shown for clarity.

16.0 Document References:

1. "TOP LEVEL FUNCTIONAL REQUIREMENT SPECIFICATIONS OF ADVANCED IRON BIRD FOR SINGLE ENGINE & TWIN ENGINE - HILS TEST RIG FACILITY", Doc. No.: ADA/IFCS/SAE/AIB/001, Dated: 25/01/2023

2. "FRAMEWORK AND PROCEDURE FOR DESIGN, DEVELOPMENT AND PRODUCTION OF MILITARY AIR SYSTEMS AND AIRBORNE STORES", DDPMAS Version 1.0, FEBRUARY 2021

3. "DESIGN, DEVELOPMENT AND PRODUCTION OF MILITARY AIR SYSTEMS AND AIRBORNE STORES", DDPMAS INDIAN MILITARY TECHNICAL AIRWORTHINESS REGULATIONS, IMTAR-21 Verison 1.0, FEBRUARY 2021