



National Defence

Défense nationale

National Defence Headquarters
Ottawa, Ontario
K1A 0K2

Quartier général de la Défense nationale
Ottawa (Ontario)
K1A 0K2

**REQUEST FOR PROPOSAL
DEMANDE DE PROPOSITION**

**RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À :**

Sarah Gale
DLP 7-2-5-4
sarah.gale-mouldey@forces.gc.ca

Proposal To: National Defence Canada

We hereby offer to sell to Her Majesty the Queen in right of Canada, in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the goods and services listed herein and on any attached sheets at the price(s) set out therefore.

Proposition à : Défense nationale Canada

Nous offrons par la présente de vendre à Sa Majesté la Reine du chef du Canada, aux conditions énoncées ou incluses par référence dans la présente et aux annexes ci-jointes, les biens et services énumérés ici et sur toute feuille ci-annexée, au(x) prix indique(s).

**Solicitation Closes –
L’invitation prend fin**

At – à : 14 :00 Eastern Standard Time

On - le : April 13, 2022

Title/Titre Data Acquisition Units	Solicitation No – N° de l’invitation W8486-228331/A
Date of Solicitation – Date de l’invitation March 4, 2022	
Address Enquiries to – Adresser toutes questions à Sarah Gale DLP 7-2-5-4 sarah.gale-mouldey@forces.gc.ca	
Telephone No. – N° de téléphone 613-324-7736	FAX No – N° de fax N/A
Destination	

Instructions:

Municipal taxes are not applicable. Unless otherwise specified herein all prices quoted must include all applicable Canadian customs duties, GST/HST, excise taxes and are to be delivered Delivery Duty Paid including all delivery charges to destination(s) as indicated. The amount of the Goods and Services Tax/Harmonized Sales Tax is to be shown as a separate item.

Instructions: Les taxes municipales ne s’appliquent pas. Sauf indication contraire, les prix indiqués doivent comprendre les droits de douane canadiens, la TPS/TVH et la taxe d’accise. Les biens doivent être livrés « rendu droits acquittés », tous frais de livraison compris, à la ou aux destinations indiquées. Le montant de la taxe sur les produits et services/taxe de vente harmonisée doit être indiqué séparément.

Delivery required - Livraison exigée	Delivery offered - Livraison proposée
Vendor Name and Address - Raison sociale et adresse du fournisseur	
Name and title of person authorized to sign on behalf of vendor (type or print) - Nom et titre de la personne autorisée à signer au nom du fournisseur (caractère d’imprimerie)	
Name/Nom _____	Title/Titre _____
Signature _____	Date _____



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PART 1 - GENERAL INFORMATION

1.1 Security Requirements

There is no security requirement applicable to this Solicitation.

1.2 Statement of Work

The requirement is detailed in Annex "A", Statement of Work.

1.3 Debriefings

Bidders may request a debriefing on the results of the bid solicitation process. Bidders should make the request to the Contracting Authority within 15 working days from receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

1.4 Trade Agreements

The requirement is subject to the provisions of the World Trade Organization Agreement on Government Procurement (WTO-AGP), the Canada-Chile Free Trade Agreement (CCFTA), the Canadian Free Trade Agreement (CFTA), the Canada-Peru Free Trade Agreement (CPFTA), the Canada-Columbia Free Trade Agreement (CCoIFTA), the Canada-Panama Free Trade Agreement (CPanFTA), the Canada-Honduras Free Trade Agreement (CHFTA), the Canada-Korea Free Trade Agreement (CKFTA) and the Canada-European Union Comprehensive Economic and Trade Agreement (CETA).

PART 2 - BIDDER INSTRUCTIONS

2.1 Standard Instructions, Clauses and Conditions

All instructions, clauses and conditions identified in the bid solicitation by number, date and title are set out in the Standard Acquisition Clauses and Conditions Manual (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

Bidders who submit a bid agree to be bound by the instructions, clauses and conditions of the bid solicitation and accept the clauses and conditions of the resulting contract.

The 2003 (2020-05-28) Standard Instructions – Goods and Services – Competitive Requirements, are incorporated by reference into and form part of the bid solicitation, with the following modifications:

- a) Section 02, Procurement Business Number is deleted in its entirety.
- b) Section 20(2), Further Information is deleted in its entirety.
- c) Subsection 2.d. of Section 05, Submission of Bids, is deleted in its entirety and replaced with the following:

Send its bid only to the address specified in the bid solicitation.

- d) Section 06, Late Bids, Is deleted in its entirety;
- e) The text under Section 07, Delayed Bids, is deleted in its entirety and replaced with the following:

It is the Bidder's responsibility to ensure that the Contracting Authority has received the entire submission. Misrouting or other electronic delivery issues resulting in late submission of bids will not be accepted.

- f) Subsection 1 of Section 08, Transmission by Facsimile or by epost Connect, is deleted in its entirety.

2.1.1 SACC Manual Clauses

SACC *Manual Clause* [B4052T](#) (2014-06-26) Recommended Spare Parts List

2.2 Electronic Submission of Bids

- a) Bids must be submitted only to the Department of National Defence by the date, time and place indicated on page 1 of the bid solicitation. Bids must be received electronically as noted in subparagraph b).
- b) **Electronic Submissions: Individual e-mails exceeding five (5) megabytes, or that includes other factors such as embedded macros and/or links, may be rejected by the DND e-mail system and/or firewall(s) without notice to the Bidder or Contracting Authority.** Larger bids may be submitted through more than one e-mail. The Contracting Authority will confirm receipt of documents. It is the Bidder's responsibility to ensure that the Contracting Authority has received the entire submission. Bidders should not assume that all documents have been received unless the Contracting Authority confirms receipt of each document. In order to minimize the potential for technical issues, Bidders are requested to allow sufficient time before the closing time and date to confirm receipt. Technical and financial documents received after the closing time and date will not be accepted.

Due to the nature of the bid solicitation, bids transmitted by facsimile will not be accepted.

2.3 Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than ten (10) calendar days before the bid closing date. Enquiries received after that time may not be answered.

Bidders should reference as accurately as possible the numbered item of the bid solicitation to which the enquiry relates. Care should be taken by Bidders to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a proprietary nature must be clearly marked "proprietary" at each relevant item. Items identified as "proprietary" will be treated as such except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the question(s) or may request that the Bidder do so, so that the proprietary nature of the question(s) is eliminated, and the enquiry can be answered to all Bidders. Enquiries not submitted in a form that can be distributed to all Bidders may not be answered by Canada.

2.4 Applicable Law

Any resulting contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario.

Bidders may, at their discretion, substitute the applicable laws of a Canadian province or territory of their choice without affecting the validity of their bid, by deleting the name of the Canadian province or territory specified and inserting the name of the Canadian province or territory of their choice. If no change is made, it acknowledges that the applicable laws specified are acceptable to the Bidders.

PART 3 - BID PREPARATION INSTRUCTIONS

3.1 Bid Preparation Instructions

Canada requests that Bidders provide their bid in separately bound sections as follows:

Section I: Technical Bid, one (1) soft copy in PDF
Section II: Financial Bid, one (1) soft copy in PDF
Section III: Certifications, one (1) soft copy in PDF

Prices must appear in the financial bid only. No prices must be indicated in any other section of the bid.

Bidders may use Annex "B" to indicate their prices. If Bidders choose to use Annex "B" to indicate their prices, Bidders must include Annex "B" in their financial bid.

Canada requests that Bidders follow the format instructions described below in the preparation of their bid:

- (a) use 8.5 x 11 inch (216 mm x 279 mm) format;
- (b) use a numbering system that corresponds to the bid solicitation.

Section I: Technical Bid

In their technical bid, Bidders should explain and demonstrate how they propose to meet the requirements and how they will carry out the Work.

Section II: Financial Bid

Bidders must submit their financial bid as follows:

Bidders must submit firm prices, Delivered Duty Paid (DDP) at (DND, QETE Supply, NPB Building, 45 Blvd Sacré Coeur, Room C1113, Ramp 7, Gatineau, QC, J8X 1C6) Incoterms 2010, Applicable Taxes excluded. The total amount of Applicable Taxes must be shown separately.

3.1.1 Electronic Payment of Invoices

If you are willing to accept payment of invoices by Electronic Payment Instruments, complete Annex "C" Electronic Payment Instruments, to identify which ones are accepted.

If Annex "C" Electronic Payment Instruments is not completed, it will be considered as if Electronic Payment Instruments are not being accepted for payment of invoices.

Acceptance of Electronic Payment Instruments will not be considered as an evaluation criterion.

3.1.2 Exchange Rate Fluctuation

SACC Manual Clause [C3011T](#) (2013-11-06), Exchange Rate Fluctuation

Section III: Certifications

Bidders must submit the certifications and additional information required under Part 5.

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

4.1 Evaluation Procedures

- (a) Bids will be assessed in accordance with the entire requirement of the bid solicitation including the technical and financial evaluation criteria.
- (b) An evaluation team composed of representatives of Canada will evaluate the bids.

4.1.1 Technical Evaluation

4.1.1.1 Mandatory Technical Criteria

The Mandatory Technical Criteria can be found in Annex "E".

4.1.2 Financial Evaluation

The price of the bid will be evaluated in Canadian dollars, Delivered Duty Paid (DDP) at DND, QETE Supply, NPB Building, 45 Blvd Sacré Coeur, Room C1113, Ramp 7, Gatineau, QC, J8X 1C6 Incoterms 2010, Canadian customs duties and excise taxes included, Applicable Taxes excluded

4.2 Basis of Selection

A bid must comply with the requirements of the bid solicitation and meet all mandatory technical evaluation criteria to be declared responsive. The responsive bid with the lowest evaluated price on an aggregate basis will be recommended for award of a contract.

PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION

Bidders must provide the required certifications and additional information to be awarded a contract.

The certifications provided by Bidders to Canada are subject to verification by Canada at all times. Unless otherwise specified, Canada will declare a bid non-responsive, or will declare a contractor in default if any certification made by the Bidder is found to be untrue whether made knowingly or unknowingly, during the bid evaluation period or during the contract period.

The Contracting Authority will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply and to cooperate with any request or requirement imposed by the Contracting Authority will render the bid non-responsive or constitute a default under the Contract.

5.1 Certifications Required with the Bid

Bidders must submit the following duly completed certifications as part of their bid.

5.1.1 Integrity Provisions - Declaration of Convicted Offences

In accordance with the Integrity Provisions of the Standard Instructions, all bidders must provide with their bid, **if applicable**, the declaration form available on the [Forms for the Integrity Regime](http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html) website (<http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html>), to be given further consideration in the procurement process.

5.2 Certifications Precedent to Contract Award and Additional Information

The certifications and additional information listed below should be submitted with the bid, but may be submitted afterwards. If any of these required certifications or additional information is not completed and submitted as requested, the Contracting Authority will inform the Bidder of a time frame within which to provide the information. Failure to provide the certifications or the additional information listed below within the time frame provided will render the bid non-responsive.

5.2.1 Integrity Provisions – Required Documentation

In accordance with the [Ineligibility and Suspension Policy](http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Bidder must provide the required documentation, as applicable, to be given further consideration in the procurement process.

5.2.2 Federal Contractors Program for Employment Equity - Bid Certification

By submitting a bid, the Bidder certifies that the Bidder, and any of the Bidder's members if the Bidder is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "FCP Limited Eligibility to Bid" list available at the bottom of the page of the [Employment and Social Development Canada \(ESDC\) - Labour's](http://www.esdc.gc.ca/en/jobs/workplace/human_rights/employment_equity/federal_contractor_program.page?&_ga=1.229006812.1158694905.1413548969#afed) website (http://www.esdc.gc.ca/en/jobs/workplace/human_rights/employment_equity/federal_contractor_program.page?&_ga=1.229006812.1158694905.1413548969#afed).

Canada will have the right to declare a bid non-responsive if the Bidder, or any member of the Bidder if the Bidder is a Joint Venture, appears on the "FCP Limited Eligibility to Bid" list at the time of contract award.

5.2.3 Additional Certifications Precedent to Contract Award

Contractor must provide certification as per Annex "D".

PART 6 - RESULTING CONTRACT CLAUSES

The following clauses and conditions apply to and form part of any contract resulting from the bid solicitation.

6.1 Security Requirements

6.1.1 There is no security requirement applicable to this Contract.

6.2 Statement of Work

The Contractor must perform the Work in accordance with the Statement of Work at Annex "A".

6.3 Standard Clauses and Conditions

All clauses and conditions identified in the Contract by number, date and title are set out in the [Standard Acquisition Clauses and Conditions Manual](https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

6.3.1 General Conditions

2010A (2021-12-02), General Conditions - Goods (Medium Complexity), apply to and form part of the Contract, with the following modifications:

a. Definition of Minister is modified as follows:

"Canada", "Crown", "Her Majesty" or "the Government" means Her Majesty the Queen in right of Canada as represented by the Minister of National Defence and any other person duly authorized to act on behalf of that minister or, if applicable, an appropriate minister to whom the Minister of National Defence has delegated his or her powers, duties or functions and any other person duly authorized to act on behalf of that minister.

6.3.2 Supplemental General Conditions

SACC Manual clause **4003** (2010-08-16) Licensed Software with the following modification:

- (i) Section 4003 15 para 1 Warranty, period of (90) days is to be deleted and replaced with (12) months.

SACC Manual clause **4004** (2013-04-25) Maintenance and Support Services for Licensed Software

6.3.3 Technical Publications: Manuals

Bilingual Publications

The Contractor must provide the following publications in the SOW para 3.2.3.1 as existing commercial or foreign government off-the-shelf manuals, in both English and French, in side-by-side format, in full compliance with the latest issue of C-01-100-100/AG-005, Specification Acceptance of Commercial and Foreign Government Publications as Adopted Publications. The Contractor must deliver the existing manuals to the Technical Authority on or before May 20, 2022.

Unilingual Publications

The Contractor must provide the following publications in the SOW para 3.2.3.1 as existing commercial or foreign government off-the-shelf manuals, in full compliance with the latest issue of C-01-100-100/AG-005, Specification Acceptance of Commercial and Foreign Government Publications as Adopted Publications. The Contractor must deliver the existing manuals to the Technical Authority on or before May 20, 2022.

Right to Translate and Reproduce

The Contractor gives Canada the right to translate and reproduce, for government purposes, any or part of any publication provided under the Contract as existing unilingual commercial manuals.

6.4 Term of Contract

6.4.1 Period of the Contract

Period of the contract is from date of contract award to _____ (*To be inserted at contract award – ten year period*)

6.4.2 Initial Delivery

All initial deliverables must be received on or before May 20 2022.

6.4.3 Shipping Instructions

Goods must be consigned and delivered to the destination specified in the contract:

Incoterms 2010 "DDP Delivered Duty Paid" DND, QETE Supply, NPB Building, 45 Blvd Sacré
Coeur, Room C1113, Ramp 7, Gatineau, QC, J8X 1C6

6.5 Authorities

6.5.1 Contracting Authority

The Contracting Authority for the Contract is:

Name: Sarah Gale DLP 7-2-5-4
Title: Materiel Acquisition and Support Officer
Department of National Defence
Directorate: Directorate of Land Procurement
Telephone: 613-324-7736
E-mail address: sarah.gale-mouldey@forces.gc.ca

The Contracting Authority is responsible for the management of the Contract and any changes to the Contract must be authorized in writing by the Contracting Authority. The Contractor must not perform work in excess of or outside the scope of the Contract based on verbal or written requests or instructions from anybody other than the Contracting Authority.

6.5.2 Technical Authority

To be inserted after contract award

The Technical Authority for the Contract is:

Name: _____
Title: _____
Organization: _____
Address: _____
Telephone : ____ _
E-mail address: _____

The Technical Authority is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be discussed with the Project Authority, however the Project Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.

6.5.3 Contractor's Representative

Name: _____
Title: _____
Organization: _____
Address: _____
Telephone : ____ _
E-mail address: _____

6.6 Payment

6.6.1 Basis of Payment

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid a firm unit price(s), as specified in Annex "B" for a cost of \$ _____ (**insert the amount at contract award**). Customs duties are included and Applicable Taxes are extra.

Canada will not pay the Contractor for any design changes, modifications or interpretations of the Work, unless they have been approved, in writing, by the Contracting Authority before their incorporation into the Work.

6.6.2 Limitation of Price

SACC Manual clause [C6000C](#) (2017-08-17) Limitation of Price

6.6.3 Multiple Payments

SACC Manual clause [H1001C](#) (2008-05-12) Multiple Payments

6.6.4 SACC Manual Clauses

SACC Manual clause [B1501C](#) (2018-06-21) Electrical Equipment

SACC Manual clause [B4061C](#) (2008-05-12) North Atlantic Treaty Organization Codification – Data Requirements

SACC Manual clause [B7500C](#) (2006-06-16) Excess Goods

SACC Manual clause [D9002C](#) (2007-11-30) Incomplete Assemblies

6.6.5 Electronic Payment of Invoices

The Contractor accepts to be paid using any of the following Electronic Payment Instrument(s):

- a. Direct Deposit (Domestic and International);
- b. Electronic Data Interchange (EDI);
- c. Wire Transfer (International Only);

6.7 Invoicing Instructions

Invoices must be distributed as follows:

- a. One (1) copy must be forwarded to the Contracting Authority identified under the section entitled "Authorities" of the Contract.

6.8 Recommended Spare Parts List

1. The Contractor must, within 30 days after contract award, provide to the Procurement Authority a Recommended Spare Parts List (RSPL) prepared in accordance with the current issue of Canadian Forces Specification D-01-100-214/SF-000. The RSPL must contain the Contractor's recommendation for spares required to maintain the equipment for a 24-month period, and must provide the basis for the spares selection to be made by Department of National Defence. Upon request from the Contractor, the specification will be provided by the Contracting Authority.
2. Supplementary Provisioning Technical Documentation (SPTD), as prepared by the actual manufacturer of the item, is required for the codification and cataloguing of all items listed in the RSPL. The SPTD called up in the above specification must accompany the RSPL as detailed in the specification. Specific details of the data elements required must be listed on a Provisioning

Documentation Selection Sheet, prepared in accordance with the above specification, and be submitted in electronic ASCII text format.

3. Questions regarding the preparation, format or contents of the above provisioning documentation must be directed to the Procurement Authority.

6.9 Certifications

6.9.1 Compliance

Unless specified otherwise, the continuous compliance with the certifications provided by the Contractor in its bid or precedent to contract award, and the ongoing cooperation in providing additional information are conditions of the Contract and failure to comply will constitute the Contractor in default. Certifications are subject to verification by Canada during the entire period of the Contract.

6.10 Applicable Laws

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario.

6.11 Priority of Documents

If there is a discrepancy between the wording of any documents that appear on the list, the wording of the document that first appears on the list has priority over the wording of any document that subsequently appears on the list.

- (a) the Articles of Agreement;
- (b) the supplemental general conditions;
 - a. 4003 (2010-08-16) Licensed Software;
 - b. 4004 (2013-04-25) Maintenance and Support Services for Licensed Software;
- (c) the general conditions 2010A (2021-12-02), General Conditions - Goods (Medium Complexity);
- (d) Annex A, Statement of Work;
- (e) Annex B, Pricing Schedule

6.12 Defence Contract

SACC *Manual* clause A9006C (2012-07-16) Defence Contract

6.13 Insurance

SACC *Manual* clause G1005C (2016-01-28) Insurance – No Specific Requirement

6.14 Packaging Requirement

The Contractor must prepare item number(s) _____ integrity for delivery in accordance with the latest issue of the Canadian Forces Packaging Specification *D-LM-008-036/SF-000*, DND Minimum Requirements for Manufacturer's Standard Pack.

The Contractor must package item number(s) 1 (one) in quantities of 1 (one) by package.

SACC Manual clause [D2000C](#) (2007-11-30), Markings

SACC Manual clause [D2001C](#) (2007-11-30), Labelling

SACC Manual clause [D2025C](#) (2017-08-17), Wood Packing Materials

SACC Manual clause [D6010C](#) (2007-11-30), Palletization

6.15 Quality Assurance

SACC Manual clause [D5545C](#) (2019-05-30), ISO 9001:2008 – Quality Management Systems Requirement (Quality Assurance Code C)

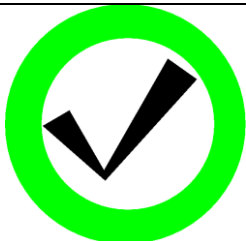
ANNEX "A"

STATEMENT OF WORK

Data Acquisition Units

Prepared by:

QETE 2-4
Department of National Defence
Quality Engineering Test Establishment
NPB, 45 blvd Sacré Cœur
Gatineau, QC J8X 1C6



NOTICE

This documentation has been reviewed by the Technical Authority and does not contain controlled goods.

AVIS

Cette documentation a été révisée par l'Autorité technique et ne contient pas de marchandises contrôlées.

1. SCOPE

1.1. Objective

- 1.1.1. The purpose of this Statement of Work (SOW) is to define the technical requirements for the delivery of Data Acquisition (DAQ) Units to the Department of National Defence.

1.2. Background

- 1.2.1 The Quality Engineering Test Establishment (QETE) is a field unit within the Canadian Armed Forces (CAF) with the mandate to provide the DND/CAF with specialized, technology-based test and investigative services required to support engineering decisions throughout all phases of materiel acquisition and support. QETE provides technical advice and consultation, material evaluation, investigation and analysis, calibration and measurement, in the domains of mechanical and materials engineering, applied science, electrical engineering, measurement science and imagery.

1.3. Terminology

AC	Alternating Current
AES	Advanced Encryption Standard
BIN	Binary (file format)
CAF	Canadian Armed Forces
°C	Degrees Celsius
CAN	Controller Area Network
CAN FD	Controller Area Network Flexible Data-Rate
CD/DVD	Compact Disc / Digital Versatile Disc
CSV	Comma Separated Values (file format)
DAQ	Digital Acquisition Units
DND	Department of National Defence (Canada)
CSA	Canadian Standards Association
Hz	Hertz
ICP	Integrated Circuit Piezoelectric
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers
IEPE	Integrated Electronics Piezo-Electric
IP	Ingress Protection
ISO	International Organization for Standardization
KG	Kilograms
LVDT	Linear Variable Differential Transformer
mA	milliampere(s)
MB	megabyte(s)
Mb/s	megabits per second
MIL STD	Military Standard (U.S. Department of Defense)
mm	millimetre(s)
ms	millisecond(s)
mV	millivolt(s)
NPB	National Printing Bureau
OEM	Original Equipment Manufacturer
PDF	Portable Document Format (file format)
QETE	Quality Engineering Test Establishment
s	second(s)
SIE	Standard Import and Export (file format)

Table 1-1 Acronyms and Abbreviations	
SIF	Setup Installation File (file format)
SMA	Sub-Miniature version A
SOW	Statement of Work
TEDS	Transducer Electronic Data Sheets
TKIP	Temporal Key Integrity Protocol
USB	Universal Serial Bus
V	Volt(s)
VAC	Volts Alternating Current
VDC	Volts Direct Current
WEP	Wired Equivalent Privacy
Wi-Fi	Wireless Fidelity
WPA	Wireless Protected Access

2. REFERENCE DOCUMENTS

- 2.1. The latest version of the following standards, references and documents apply to this SOW, unless otherwise specified:
- (a) Canadian Electrical Code.
 - (b) ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories.
 - (c) MIL-STD-202-G Department of Defense Test Method Standard: Electronic and Electrical Component Parts.
 - (d) MIL-STD-810-H Department of Defense Test Method Standard: Environmental Engineering Considerations and Laboratory Tests.

3. REQUIREMENTS

3.1. Scope of Work

- 3.1.1. QETE has a requirement for a quantity of up to 10 Data Acquisition Units and optional sparing for the purpose of collecting sensor data during field trials of military equipment. The DAQs will be used to record a wide variety of inputs ranging from acceleration, temperature, strain, and pressure to vehicle bus data and other logic voltage inputs. The scope of work includes the delivery of the equipment to QETE's facilities in Gatineau, Quebec.
- 3.1.2. General Requirements:
- 3.1.2.1. All electrical components of the equipment must be certified or approved for use in accordance with the Canadian Electrical Code, Part 1, before delivery, by a certification organization accredited by the Standards Council of Canada.
 - 3.1.2.2. The DAQ unit dimensions (not including cabling or power adapters) must not exceed 405 mm x 210 mm x 145 mm (height, width, depth).
 - 3.1.2.3. The DAQ unit must not weigh more than 12 KG.
 - 3.1.2.4. Cabling, power switches, laptop connections and/or flash memory cards, and any components that may require frequent access for operation, data transfer, or rudimentary troubleshooting must be easily accessible, and must not require dismantling with tools for such purposes.
 - 3.1.2.5. The DAQ input must accept and process sensor data transmitted through QETE's custom built cables wired with 6-pin Turck M8 Male cable connectors via

integrated ports. A DAQ unit designed to accept other cable connectors may be provided, if the Contractor provides at least one adaptor for each integrated port on the unit to connect to a 6-pin Turck M8 Male cable connector.

- 3.1.2.6. The DAQ must functionally address each of the pins of a 6-pin Turck M8 Male cable connector in the DAQ programming software.

3.1.3. Environmental Requirements

- 3.1.3.1. Temperature: The DAQ must withstand being stored, transported and operate without physical damage and without degradation of performance down to a temperature of -40 °C.
- 3.1.3.2. Temperature: The DAQ must withstand being stored, transported and operate without physical damage and without degradation of performance up to a temperature +71 °C.
- 3.1.3.3. Water and dust proofing: The DAQ must meet IP54 (protection against dust penetration and water spray).
- 3.1.3.4. Vibration: The DAQ must operate with full functionality and without damage or degradation while installed in a vehicle as described by MIL-STD-202G, method 204D, test condition C (acceleration 100 m/s², duration 450 minutes, frequency range 5-2000 Hz)
- 3.1.3.5. Shock: The DAQ must operate with full functionality and without damage or degradation while exposed to shock experienced in a vehicle as described by MIL-STD-202G, method 213B, test condition B (acceleration 750 m/s², duration 6 ms, 18 impacts)
- 3.1.3.6. Handling: The DAQ, while powered off, must withstand bench handling shock without damage or degradation as described by MIL-STD-810H, 516.8 Procedure VI – Bench Handling.

3.1.4. Operational Requirements

- 3.1.4.1. The DAQ must have a physical power switch on the exterior casing.
- 3.1.4.2. The DAQ must have the capability to automatically begin executing a pre-programmed data collection routine when powered on.
- 3.1.4.3. The DAQ must operate autonomously without requiring connection to an external computer after being programmed to execute data recording functions.
- 3.1.4.4. The DAQ must collect and store data on-board.
- 3.1.4.5. The DAQ must allow operator control of the data collection from an external computer connected to the DAQ through a wireless connection while actively executing a data collection program.
- 3.1.4.6. The DAQ must allow operator control of the data collection from an external computer connected to the DAQ through a wired connection while actively executing a data collection program.
- 3.1.4.7. All data stored on-board the DAQ must be downloadable to a connected computer.

3.1.5. Power Requirements

- 3.1.5.1. The DAQ must operate with full functionality from a standard 120 VAC / 60 Hz power supply outlet.
- 3.1.5.2. Power conditioning must be employed to filter out any AC supply line noise.

- 3.1.5.3. The DAQ must operate with full functionality from a 12 VDC vehicle power supply.
- 3.1.5.4. The DAQ must operate with full functionality from a 24 VDC vehicle power supply
- 3.1.5.5. When power is interrupted during data collection, the DAQ must shut down without loss in data integrity or corruption of the data already collected. When power is restored the DAQ must return to the operational state without damage or degradation to the system.

3.1.6. Hardware Requirements

- 3.1.6.1. The DAQ must provide a wired Ethernet connection to an external network with WEP, WPA, WPA2, TKIP, and AES security protocols.
- 3.1.6.2. The DAQ must provide a wireless connection to an external network with WEP, WPA, WPA2, TKIP, and AES security protocols.
- 3.1.6.3. The DAQ must include an on-board memory capacity of at least 180 GB dedicated for storage of collected data.
- 3.1.6.4. The DAQ must not utilize a fan for ventilation or cooling.
- 3.1.6.5. The DAQ must have a minimum of 28 individually configurable input channels, including:
 - a. 16 input channels for voltage ($\pm 100\text{mV}$, $\pm 10\text{V}$, $\pm 60\text{V}$), current (20mA), and current fed piezoelectric transducers (IEPE/ICP) – all 16 channels operating simultaneously from 0.1 to 20 kilosamples per second;
 - b. 8 input channels for operating strain-gage full and half bridge, inductive full and half bridge, peizoresistive full bridge sensors, current-fed piezoelectric transducers (IEPE/ICP), potentiometric transducers (LVDT), voltage ($\pm 100\text{mV}$, $\pm 10\text{V}$, $\pm 60\text{V}$), current (20mA), resistor, resistance thermometer, and thermocouples (type K) – all 8 channels operating simultaneously from 0.1 to 40 kilosamples per second;
 - c. 4 input channels for strain-gage full and half bridge, inductive full and half bridge, peizoresistive full bridge sensors, current-fed piezoelectric transducers (IEPE/ICP), potentiometric transducers (LVDT), voltage ($\pm 100\text{mV}$, $\pm 10\text{V}$, $\pm 60\text{V}$), current (20mA) – all 4 channels operating simultaneously from 0.1 to 100 kilosamples per second; and
 - d. All 28 channels must operate simultaneously at required sample rates as specified.
- 3.1.6.6. The DAQ must have a minimum of 4 individually configurable CAN channels supporting CAN FD (ISO 11898-1:2015), and CAN 2.0 Part A and Part B.
- 3.1.6.7. The DAQ must include the following external interfaces:
 - a. Ethernet;
 - b. SMA Wi-Fi antenna connector;
 - c. Two (2) USB 2.0 ports;
 - d. AC power connector; and
 - e. Status indicators for power on, data capturing, error/fault, and trigger capture armed.
- 3.1.6.8. The DAQ must download data at a rate of at least 60 Megabits/s (USB 2.0 transfer speed).

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- 3.1.6.9. Each input channel must provide adjustable sensor excitation ranging from 5V to 24V on at least 20 individual channels.
 - 3.1.6.10. Each input channel must have 24 bit data resolution minimum.
 - 3.1.6.11. Each input channel must support Transducer Electronic Data Sheets (TEDS).
 - 3.1.6.12. Each input channel must employ signal conditioning, including:
 - a. Anti-alias filtering;
 - b. Active low-pass filtering; and
 - c. Software configurable pre-amplifier for signal input ranges less than 10V.
 - 3.1.6.13. The DAQ must collect GPS positional data at a rate of 5 Hz and record that time-stamped data with all programmed inputs.
- 3.1.7. Software Requirements:
- 3.1.7.1. The equipment must include the latest version of the manufacturer's software designed for data acquisition, processing and reporting.
 - 3.1.7.2. DAQ control software functionality:
 - a. The DAQ must be configured using an external laptop computer.
 - b. Saved configurations must be recalled and uploaded to the data collector.
 - c. The DAQ software must include management tools for firmware updates, memory management, operating system configuration, and collected data management.
 - d. DAQ data must be downloaded to an external computer via Wi-Fi.
 - e. DAQ must display live data in an external source (i.e. laptop) in order to read and validate the data as it is being recorded in real time.
 - f. Live DAQ data values must be displayed on any selected channel while connected to an active data acquisition session.
 - g. DAQ data must be exported in non-proprietary formats (e.g. *.csv).
 - h. Math functions must be applied to any data channel.
 - i. The DAQ software must include user-help for configuration functions.
 - 3.1.7.3. The native file format output of the DAQ must be one of the following:
 - a. BIN – Catman
 - b. SIE – Somat
 - c. SIF – Somat
 - d. A format that is fully readable and provides full meta-data detail using nCode Glyphworks® 2020 data analysis software.
 - 3.1.7.4. The DAQ Control software must receive raw and decoded *.dbc files to allow custom CAN database configuration.
 - 3.1.7.5. The DAQ must be controlled from, and be programmable by the DAQ OEM software loaded on a Windows 10-based personal computer with:
 - a. No license servers,
 - b. No license keys,
 - c. No USB license dongles,

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- d. No timed license expiration, and
 - e. No internet or phone based licensing restrictions preventing the system from operating while deployed in the field in a communications black-out environment.
- 3.1.7.6. The DAQ software must import video and synchronize the time-indexed frames to the DAQ's collected data.
 - 3.1.7.7. The DAQ software must visualize collected GPS data on maps.
 - 3.1.8. Accessories:
 - 3.1.8.1. One tool kit that includes all tools required for equipment assembly and operator maintenance must be provided (if required by the DAQ hardware).
 - 3.1.8.2. All cables, connectors and OEM-defined equipment specific accessories required for a fully functional system must be provided.

3.2. Tasks

3.2.1. Technical Service Support

- 3.2.1.1. A support service desk function must be provided to help Canada in answering questions with respect to the equipment that includes telephone technical support during the Contractor's normal business hours and e-mail technical support with a response within 48 hours excluding weekends and public holidays.
- 3.2.1.2. Canada must be advised in writing as soon as reasonably possible in the event of safety-related product recalls or advisories, component defects, security vulnerabilities and other events that may adversely affect product performance and/or functionality.
- 3.2.1.3. All provided proprietary software must be of the most current version and must be provided with a full end-user licence not limited in time, and provided with a backup CD/DVD disk(s)/USB.
- 3.2.1.4. Software Support must be provided for a period of no less than ten years.

3.2.2. Equipment Certifications

- 3.2.2.1. Certificate of Calibration – The Contractor must provide a Certificate of Calibration for a traceable calibration for the equipment performed in a laboratory having a quality management system compliant with ISO/IEC 17025.
- 3.2.2.2. Certificate of Conformance – The Contractor must provide a Certificate of Conformance to attest that the delivered equipment has been manufactured according to the manufacturer's published specifications and has been verified to function as designed. The Certificate must identify the location and date of completion of manufacturing and must be signed by an authorized representative of the manufacturer.
- 3.2.2.3. Statement of Compliance – The Contractor must provide a Statement of Compliance to attest that the delivered equipment meets the requirements of the Contract. The Statement of Compliance may be provided within the Certificate of Conformance or as a separate document.
- 3.2.2.4. Statement of Continued Production and Support – The Contractor must provide a Statement of Continued Production to attest that the equipment is neither manufacturer-discontinued nor is there an intent by the manufacturer to discontinue the manufacturing of the equipment within two years. The Statement of Continued Production and Support must also state that spare parts will be made available for purchase for a period of three years.

3.2.3. Equipment Documentation:

- 3.2.3.1. A User Operations Manual must be provided with the equipment. The User Operations Manual must provide detailed information about the functionality and operation of the equipment and the care, maintenance and calibration/verification steps of the equipment that is normally performed by the user.

3.2.4. Sparing

- 3.2.4.1. A Recommended Spare Parts List (RSPL) must be provided with the first delivery. The RSPL must contain all spare parts that can be replaced on the DAQ unit and the number of spares that should be held by DND to support the DAQ.

4. DELIVERABLES

4.1 Deliverables are listed in Table 4-1.

Table 4-1 List of Required Deliverables			
No.	Deliverable Item	Qty	Notes
1	Data Acquisition Units including software and all accessories required to assemble and operate the equipment.	10	
2	Certificate of Calibration	10	one certificate for each DAQ Unit
3	Certificate of Conformance	1	electronic copy by email
4	Statement of Compliance	1	electronic copy by email
5	Statement of Continued Production and Support	1	electronic copy by email
6	User Operations Manual	1	electronic copy by email
7	Recommended Spare Parts List	1	electronic copy by email
	Optional quantities		
8	Data Acquisition Units including software and all accessories required to assemble and operate the equipment.	up to 5	Optional quantities ordered must include items 2 through 7.
9	Spare Parts based on Recommended Spare Parts List	as required	

4.2 Format for Documentation

- 4.2.1 Equipment documentation, reports, certificates and compliance statements must be provided in English or French.
- 4.2.2 Equipment documentation and reports may be provided in the Contractor's format.
- 4.2.3 Unless otherwise specified, certificates and compliance statements may be provided in the Contractor's format.

- 4.2.4 Document files provided in electronic format must be supplied in searchable PDF file format, unless stated otherwise.
- 4.2.5 Electronic document files must be functional without the requirement for a password, an auto-run installation procedure or an Internet connection.
- 4.2.6 The size of the files submitted via email must not exceed the limit of 10 MB.
- 4.2.7 If the size of the files submitted via email exceed 10 MB, the Contractor must divide the document content in sections, in such a way that each file size is below 10 MB, without restricting the quality/clarity of the document.

ANNEX "B"
PRICING SCHEDULE

Bidders are required to provide a price for each line item indicated. If a price is left blank it will be interpreted as an offered price of \$0.00. If a price of an item is included in another item, this should be indicated by noting, "Price of this item is included in item xx (Insert item number)". If there is not an applicable price for an item, this should be indicated as "N/A". The prices must be indicated in compliance with Basis of Payment in para 6.6.1.

Table 1 – Pricing Schedule

Description	Quantity	Unit Price	Total Cost
Data Acquisition Units including software and all accessories required to assemble and operate the equipment.	10		
Certificate of Calibration	10		
Certificate of Conformance	1		
Statement of Compliance	1		
Statement of Continued Production and Support	1		
User Operations Manual	1		
		Subtotal:	
		Applicable Tax:	
		Total:	

Optional Quantities

The vendor must provide optional quantities for up to five Data Acquisition Units including software and all accessories required to assemble and operate the equipment. Options are to be exercised through a contractual amendment authorized by the Contracting Authority.

Economic Price Adjustment

The firm price of the initial Data Acquisition Unit identified in table 1 – Pricing Schedule will be adjusted on the anniversary of each year of the contract based on the average percentage change in the monthly index of the Consumer Price Index, over the previous calendar year, published in Statistics Canada Table 18-10-0004-13 Consumer Price Index by product group, monthly, not seasonally adjusted, Canada, provinces, Whitehorse, Yellowknife and Iqaluit, for the 12 months ending two (2) months preceding the start of the new year of the contract or option year.

Example: In Contract Year 2 of a contract commencing April 1, 2015, the Contract Year 2 rates would be increased by 0.42% from the firm prices in effect until March 31, 2015, based on the information below using the following formula rounded to the nearest two decimal places.
Adjustment = (A/B) x 100, where: A = sum of the 12 months ending two (2) months preceding the start date of the second year of the contract. B = sum of the indices for the 12 months ending fourteen (14) months preceding the start date of the second year of the contract.

Table 2 – Index example calculation

Month	A = 2014/2015 CPI	B = 2013/2014 CPI	Percentage Change
February	118.0	117.5	0.43%
March	118.9	118.4	0.42%
April	119.3	119.0	0.25%
May	119.5	119.0	0.42%
June	120.2	119.5	0.59%
July	119.9	119.5	0.33%
August	123.2	122.0	0.98%
September	124.3	124.0	0.24%
October	123.3	123.1	0.16%
November	124.3	124.0	0.24%
December	123.1	123.0	0.08%
January	123.1	122.0	0.90%
		Average % change:	0.42%

The indexes included at Table are fictitious and are used as an example only.

Sparing

Bidder to provide Recommended Spare Parts List (RSPL). The RSPL must include all replaceable items that can be procured for the Data Acquisition unit. The RSPL must have a separate price for each item. The RSPL will be included in the contract as options that may be exercised throughout the contract. DND will be under no obligation to exercise the option as a whole and may choose to request individual part numbers within the RSPL.

Part No.	Description	Approx. number of spares per year	Unit Price

The RSPL will not be used in the bid evaluation process.

Sparing will be adjusted using the Economic Price Adjustment formula, as indicated above.

ANNEX "C"

ELECTRONIC PAYMENT INSTRUMENTS

The Bidder accepts any of the following Electronic Payment Instrument(s):

- Direct Deposit (Domestic and International);
- Electronic Data Interchange (EDI);
- Wire Transfer (International Only);

ANNEX "D"

OEM CERTIFICATION FORM

OEM Certification Form	
This confirms that the original equipment manufacturer (OEM) identified below has authorized the Bidder named below to provide and maintain its products under any contract resulting from the bid solicitation identified below:	
Name of OEM:	
Signature of authorized signatory of OEM:	
Print Name of authorized signatory of OEM:	
Print Title of authorized signatory of OEM:	
Address for authorized signatory of OEM:	
Telephone no. for authorized signatory of OEM:	
Fax no. for authorized signatory of OEM:	
Date signed:	
Solicitation Number:	
Name of Bidder:	

ANNEX “E”

MANDATORY TECHNICAL EVALUATION CRITERIA

Data Acquisition Units

The Bid must meet the mandatory requirements specified below. Bidders must provide the necessary documentation to support compliance with the requirements, including technical data sheets, specifications, brochures and/or other relevant technical documentation describing the equipment offered and demonstrating compliancy. Each mandatory technical criterion should be addressed separately and in the order presented below.

Bidders must either provide a reference to their technical proposal where information can be found that clearly shows how the requirement is met by the proposed solution, or provide a description of how the requirement is met. **Where the Bidder’s technical documentation does not clearly demonstrate that the equipment offered will meet a specific requirement, the Bidder’s proposal must provide additional descriptions of how the requirement will be met by the proposed solution.**

No.	Mandatory Technical Criteria	Proposal Reference or Description
M1	<p>Bidders must propose equipment that must not be a prototype or test unit, but standard proven equipment of the manufacturer and contains reliable state-of-the-art technology. In order to demonstrate this requirement, Bidders must provide with their bid, a list of valid projects identifying customers who have purchased equipment that meet the requirements specified in the Statement of Work within the past three (3) years as of the solicitation closing date for a minimum of three (3) projects.</p> <p>Bidders must submit with their bid, the following information for each project:</p> <ul style="list-style-type: none"> a) the brand name and model of the equipment sold; b) the date of sale; c) technical details of the equipment sold; and d) customer contact information, which should include organization name, organization address, contact name, contact telephone number, and contact e-mail address. <p>The provided information may be verified with the Bidder’s customer to confirm its accuracy. If the information verification does not match the requirements, then the Bid may be declared non responsive.</p>	

No.	Mandatory Technical Criteria	Proposal Reference or Description
M2	Bidders must provide supporting evidence in their proposal to demonstrate that their proposed solution meets the following technical requirements from the Statement of Work.	
3.	REQUIREMENTS	
3.1.2.	General Requirements:	
3.1.2.2.	The DAQ unit dimensions (not including cabling or power adapters) must not exceed 405 mm x 210 mm x 145 mm (height, width, depth).	
3.1.2.3.	The DAQ unit must not weigh more than 12 KG.	
3.1.2.5.	The DAQ input must accept and process sensor data transmitted through QETE's custom built cables wired with 6-pin Turck M8 Male cable connectors via integrated ports. A DAQ unit designed to accept other cable connectors may be provided, if the Contractor provides at least one adaptor for each integrated port on the unit to connect to a 6-pin Turck M8 Male cable connector.	
3.1.2.6.	The DAQ must functionally address each of the pins of a 6-pin Turck M8 Male cable connector in the DAQ programming software.	
3.1.3.	Environmental Requirements	
3.1.3.1.	Temperature: The DAQ must withstand being stored, transported and operate without physical damage and without degradation of performance down to a temperature of -40 °C.	
3.1.3.2.	Temperature: The DAQ must withstand being stored, transported and operate without physical damage and without degradation of performance up to a temperature +71 °C.	
3.1.3.3.	Water and dust proofing: The DAQ must meet IP54 (protection against dust penetration and water spray).	
3.1.3.4.	Vibration: The DAQ must operate with full functionality and without damage or degradation while installed in a vehicle as described by MIL-STD-202G, method 204D, test condition C (acceleration 100 m/s ² , duration 450 minutes, frequency range 5-2000 Hz)	

No.	Mandatory Technical Criteria	Proposal Reference or Description
3.1.3.5.	Shock: The DAQ must operate with full functionality and without damage or degradation while exposed to shock experienced in a vehicle as described by MIL-STD-202G, method 213B, test condition B (acceleration 750 m/s ² , duration 6 ms, 18 impacts)	
3.1.4.	Operational Requirements	
3.1.4.1.	The DAQ must have a physical power switch on the exterior casing.	
3.1.4.2.	The DAQ must have the capability to automatically begin executing a pre-programmed data collection routine when powered on.	
3.1.4.3.	The DAQ must operate autonomously without requiring connection to an external computer after being programmed to execute data recording functions.	
3.1.4.4.	The DAQ must collect and store data on-board.	
3.1.4.5.	The DAQ must allow operator control of the data collection from an external computer connected to the DAQ through a wireless connection while actively executing a data collection program.	
3.1.4.6.	The DAQ must allow operator control of the data collection from an external computer connected to the DAQ through a wired connection while actively executing a data collection program.	
3.1.4.7.	All data stored on-board the DAQ must be downloadable to a connected computer.	
3.1.5.	Power Requirements	
3.1.5.1.	The DAQ must operate with full functionality from a standard 120 VAC / 60 Hz power supply outlet.	
3.1.5.3.	The DAQ must operate with full functionality from a 12 VDC vehicle power supply.	
3.1.5.4.	The DAQ must operate with full functionality from a 24 VDC vehicle power supply	
3.1.5.5.	When power is interrupted during data collection, the DAQ must shut down without loss in data integrity or corruption of the data already collected. When power is restored the DAQ must return to the operational state without damage or degradation to the system.	
3.1.6.	Hardware Requirements	
3.1.6.1.	The DAQ must provide a wired Ethernet connection to an external network with WEP, WPA, WPA2, TKIP, and AES security protocols.	

No.	Mandatory Technical Criteria	Proposal Reference or Description
3.1.6.2.	The DAQ must provide a wireless connection to an external network with WEP, WPA, WPA2, TKIP, and AES security protocols.	
3.1.6.3.	The DAQ must include an on-board memory capacity of at least 180 GB dedicated for storage of collected data.	
3.1.6.4.	The DAQ must not utilize a fan for ventilation or cooling.	
3.1.6.5.	The DAQ must have a minimum of 28 individually configurable input channels, including:	
a.	16 input channels for voltage ($\pm 100\text{mV}$, $\pm 10\text{V}$, $\pm 60\text{V}$), current (20mA), and current fed piezoelectric transducers (IEPE/ICP) – all 16 channels operating simultaneously from 0.1 to 20 kilosamples per second;	
b.	8 input channels for operating strain-gage full and half bridge, inductive full and half bridge, peizoresistive full bridge sensors, current-fed piezoelectric transducers (IEPE/ICP), potentiometric transducers (LVDT), voltage ($\pm 100\text{mV}$, $\pm 10\text{V}$, $\pm 60\text{V}$), current (20mA), resistor, resistance thermometer, and thermocouples (type K) – all 8 channels operating simultaneously from 0.1 to 40 kilosamples per second;	
c.	4 input channels for strain-gage full and half bridge, inductive full and half bridge, peizoresistive full bridge sensors, current-fed piezoelectric transducers (IEPE/ICP), potentiometric transducers (LVDT), voltage ($\pm 100\text{mV}$, $\pm 10\text{V}$, $\pm 60\text{V}$), current (20mA) – all 4 channels operating simultaneously from 0.1 to 100 kilosamples per second; and	
d.	All 28 channels must operate simultaneously at required sample rates as specified.	
3.1.6.6.	The DAQ must have a minimum of 4 individually configurable CAN channels supporting CAN FD (ISO 11898-1:2015), and CAN 2.0 Part A and Part B.	
3.1.6.7.	The DAQ must include the following external interfaces:	
a.	Ethernet;	
b.	SMA Wi-Fi antenna connector;	
c.	Two (2) USB 2.0 ports;	
d.	AC power connector; and	
e.	Status indicators for power on, data capturing, error/fault, and trigger capture armed.	

No.	Mandatory Technical Criteria	Proposal Reference or Description
3.1.6.9.	Each input channel must provide adjustable sensor excitation ranging from 5V to 24V on at least 20 individual channels.	
3.1.6.10.	Each input channel must have 24 bit data resolution minimum.	
3.1.6.11.	Each input channel must support Transducer Electronic Data Sheets (TEDS).	
3.1.6.12.	Each input channel must employ signal conditioning, including:	
a.	Anti-alias filtering;	
b.	Active low-pass filtering; and	
c.	Software configurable pre-amplifier for signal input ranges less than 10V.	
3.1.6.13	The DAQ must collect GPS positional data at a rate of 5 Hz and record that time-stamped data with all programmed inputs.	
3.1.7.	Software Requirements:	
3.1.7.3.	The native file format output of the DAQ must be one of the following: a. BIN – Catman b. SIE – Somat c. SIF – Somat d. A format that is fully readable and provides full meta-data detail using nCode Glyphworks® 2020 data analysis software.	
3.1.7.4.	The DAQ Control software must receive raw and decoded *.dbc files to allow custom CAN database configuration.	
3.1.7.5.	The DAQ must be controlled from, and be programmable by the DAQ OEM software loaded on a Windows 10-based personal computer with: a. No license servers, b. No license keys, c. No USB license dongles, d. No timed license expiration, and e. No internet or phone based licensing restrictions preventing the system from operating while deployed in the field in a communications black-out environment.	
3.1.7.6.	The DAQ software must import video and synchronize the time-indexed frames to the DAQ's collected data.	
3.1.7.7	The DAQ software must visualize collected GPS data on maps.	