

RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:
Bid Receiving - PWGSC / Réception des soumissions
-TPSGC
11 Laurier St. / 11, rue Laurier
Place du Portage, Phase III
Core 0A1 / Noyau 0A1
Gatineau
Québec
Core 0A1

SOLICITATION AMENDMENT
MODIFICATION DE L'INVITATION

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

Comments - Commentaires

Vendor/Firm Name and Address
Raison sociale et adresse du
fournisseur/de l'entrepreneur

Issuing Office - Bureau de distribution
Tactical Armoured Patrol Vehicle Project/Projet du
véhicule blindé tactique de patrouille.
105 Hotel de Ville, 3rd Floor
Gatineau
Quebec
K1A 0S5

Title - Sujet Rugged Processors & Displays		
Solicitation No. - N° de l'invitation W847L-140063/A		Amendment No. - N° modif. 001
Client Reference No. - N° de référence du client W847L-140063		Date 2013-07-29
GETS Reference No. - N° de référence de SEAG PW-\$TAP-004-23919		
File No. - N° de dossier 004tap.W847L-140063	CCC No./N° CCC - FMS No./N° VME	
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2013-09-13		Time Zone Fuseau horaire Eastern Daylight Saving Time EDT
F.O.B. - F.A.B. Specified Herein - Précisé dans les présentes		
Plant-Usine: <input type="checkbox"/> Destination: <input type="checkbox"/> Other-Autre: <input checked="" type="checkbox"/>		
Address Enquiries to: - Adresser toutes questions à: Vallee, Jackie		Buyer Id - Id de l'acheteur 004tap
Telephone No. - N° de téléphone (819) 997-1709 ()		FAX No. - N° de FAX (819) 997-0786
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction:		

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée	Delivery Offered - Livraison proposée
Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur	
Telephone No. - N° de téléphone Facsimile No. - N° de télécopieur	
Name and title of person authorized to sign on behalf of Vendor/Firm (type or print) Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)	
Signature	Date

Solicitation No. - N° de l'invitation

W847L-140063/A

Amd. No. - N° de la modif.

001

Buyer ID - Id de l'acheteur

004tap

Client Ref. No. - N° de réf. du client

W847L-140063

File No. - N° du dossier

004tapW847L-140063

CCC No./N° CCC - FMS No/ N° VME

Amendment 001 is raised to correct technical issues and attach solicitation documents.

All other terms and conditions remain unchanged.

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PART 1 - GENERAL INFORMATION

1. Security Requirement

There is no security requirement associated with this bid solicitation.

2. Requirement

The Department of National Defence (DND) has a requirement for the provision of 500 sets of Rugged Processors and Rugged Displays (RP-T and RD-T respectively) for use in the Tactical Armoured Patrol Vehicle (TAPV) platform currently in contract, and for the performance of the Work detailed in the Statement of Work at Annex A. This requirement includes technical support, maintenance training, technical documentation, and the option to purchase additional sets, spares, and extended warranty.

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 of receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

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PART 2 - BIDDER INSTRUCTIONS

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 (2013-06-01) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

The mandatory requirements of this solicitation are signified by the words “must”, “shall” or “mandatory”, or by the phrase “Canada requires”.

The desirable requirements of this solicitation are signified by the word “should” or by the phrase “Canada requests”. Desirable criteria are when it is preferred but not mandatory for the bidders to comply with the requirements/instructions provided. The desirable requirements will not be assessed or taken into consideration during the evaluation process, unless they are identified as “point rated requirements”.

1.1 SACC Manual Clauses

B1000T Condition of Material (2007-11-30)

2. Submission of Bids

Bids must be submitted only to Public Works and Government Services Canada (PWGSC) Bid Receiving Unit by the date, time and place indicated on page 1 of the bid solicitation.

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

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 questions or may request that the Bidder do so, so that the proprietary nature of the question is eliminated, and the enquiry can be answered with copies to all bidders. Enquiries not submitted in a form that can be distributed to all bidders may not be answered by Canada.

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Bidders should make enquiries as early as possible and should not make assumptions regarding the nature of the requirements of this solicitation. Bidders who do not raise issues or questions they may have during the solicitation period do so at their own risk. Bids will be declared non-responsive when bidders deviate from the mandatory requirements of this solicitation instead of raising issues during the solicitation period.

4. Applicable Laws

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.

5. Bid Sample for Evaluation

5.1 Bidders are required to provide one (1) Bid Sample (one RP-T and one RD-T) as part of their bid submission for evaluation purposes as described in Part 3, Article 2. The Bid Sample should be delivered to the address below by the date and time indicated on the cover page of the bid solicitation. If the complete Bid Sample is not submitted by the date and time indicated on page 1 of the bid solicitation, the Contracting Authority (CA) will so inform the Bidder and provide the Bidder with a time frame within which to meet the requirement. Failure to submit the complete Bid Sample within the specified time will result in the bid being declared non-responsive.

Department of National Defence
DLCSPM 3-3-5
555 boul. de la Carrière
Gatineau, QC
K1A 0K2

Attn: Claude Robitaille, 819-661-0146

5.2 Bidders must provide the Bid Sample at no cost to Canada and the equipment will be returned upon completion of the evaluation. Bidders are responsible for the delivery to the test site and for the return of the Bid Sample.

6. Improvement of Requirement During Solicitation Period

Should bidders consider that the specifications or Statement of Work contained in the bid solicitation could be improved technically or technologically, bidders are invited to make suggestions, in writing, to the Contracting Authority named in the bid solicitation. Bidders must clearly outline the suggested improvement as well as the reason for the suggestion. Suggestions that do not restrict the level of competition nor favour a particular bidder will be given consideration provided they are submitted to the Contracting Authority at least ten (10) days before the bid closing date. Canada will have the right to accept or reject any or all suggestions.

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7. **Electronic Media**

In order to maintain the confidentiality of information that may be recorded on electronic media incorporated into a product requiring Hardware Maintenance Services, the electronic media in all components requiring replacement (or the entire product if the media is not removable) must remain in the possession of Canada. Faulty discs and hard drives will not be returned to the manufacturer and bidders need to factor that into their cost.

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PART 3 - BID PREPARATION INSTRUCTIONS

1. Bid Preparation Instructions

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

Section I: Technical Bid (4 hard copies and 4 soft copies on CD/DVD)

Section II: Contractual and Financial Bid (2 hard copies and 2 soft copies on CD/DVD)

If there is a discrepancy between the wording of the soft copy and the hard copy, the wording of the hard copy will have priority over the wording of the soft copy.

Prices should appear in the financial bid only. No prices should be indicated in any other section of the 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) paper;
- (b) use a numbering system that corresponds to the bid solicitation.

In April 2006, Canada issued a policy directing federal departments and agencies to take the necessary steps to incorporate environmental considerations into the procurement process [Policy on Green Procurement](http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html>). To assist Canada in reaching its objectives, bidders should:

- 1) use 8.5 x 11 inch (216 mm x 279 mm) paper containing fibre certified as originating from a sustainably-managed forest and containing minimum 30% recycled content; and
- 2) use an environmentally-preferable format including black and white printing instead of colour printing, printing double sided/duplex, using staples or clips instead of cerlox, duotangs or binders.

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. Bidders shall describe the equipment being proposed.

Bidders must demonstrate compliance in accordance with the **"Instruction to Bidders"** provided in Appendices C1, C2, C3 and C4. Bidders are required to provide one of the following three **"Means of Compliance"** as proof of compliance:

- 1. Compliance Statement: Bidders must provide a completed Certificate of Compliance (Annex E) in their bid.
- 2. Supporting Data: Bidders must provide documentation or data in their bid to demonstrate compliance. Bidders must provide sufficient details to allow the evaluation team to verify the Bidder's compliance.

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3. Bid Sample: Bidders must provide a functioning Bid Sample representative of the equipment being offered (in accordance with Article 2 below).

Section II: Contractual and Financial Bid

Bidders must provide the following information as part of this section, or upon request from the Contracting Authority (CA):

- (a) the Bidder's name and their Procurement Business Number (ref. 2003, section 2);
- (b) a signed bid (ref. 2003, section 5);
- (c) the certifications required under Part 5; and
- (d) the identity of the person that will be the Contractor's Representative under Part 6, Article 5.4.

Bidders must submit their financial bid in accordance with Annex B, Deliverables and the Basis of Payment. The following terms apply:

Incoterms 2000:	Delivered Duty Paid (DDP)
	Ottawa, Ontario and Edmonton, Alberta.
Transportation and Shipping Charges:	Included.
Canadian Customs/Duties:	Included.
Applicable Taxes:	Excluded
Currency:	Canadian dollars

1.1 Exchange Rate Fluctuation

C3011T (2010-01-11), Exchange Rate Fluctuation

2. Bid Sample

To conduct the evaluation, a functional representative sample of the equipment offered to meet the RP-T and the RD-T specification shall be required as part of the bid submission. One rugged processor and one rugged display shall be provided. Each Bidder shall also supply a cable set providing at least the connectivity defined in Table 1 below to support the evaluation.

The RP-T Bid Sample shall be delivered ready to run with a bootable installation of Microsoft® Windows 7 Professional – 64 bit, including all drivers and libraries required to utilize all of the interfaces and functions offered in the bid.

The Bid Sample (RP-T and RD-T) must be functional and representative of the equipment bid for the requirement; however, they can differ in minor configuration details. Specifically, the RD-T supplied as a bid sample may include fewer or more inputs than those that are bid for delivery under the contract as long as the evaluation tests can be completed with the interface types proposed for production. The RP-T supplied as a bid sample may include fewer or more interfaces than those that are bid for delivery under the contract, or the interfaces may be allocated to connectors in a different manner, as long as the connection requirements identified below are met.

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Table 1: Minimum Connectivity for Cable Set Used During Technical Evaluation

RP-T Connection / Interface	Termination	Minimum Cable Length	Notes
Domain 1 Ethernet port	In line connector allowing connection of a cable terminated with a commercial Ethernet (RJ 45) connector	2 m	Cabling for either 1000/100 is acceptable.
Domain 1 USB port	In line connector allowing connection of a cable terminated with a USB Type A plug	2 m	
Domain 2 video interface port	Offered RD-T	3 m	
Domain 2 USB or RS232 port	Offered RD-T	3 m	Supporting touchscreen interface
Domain 3 Ethernet port	In line connector allowing connection of a cable terminated with a commercial Ethernet (RJ 45) connector	2 m	Cabling for 1000baseT is required
Domain 3 USB ports (2 minimum)	In line connector allowing connection of a cable terminated with a USB Type A plug	2 m	If a USB V3.0 port is offered, the cable should support it
Domain 3 Video Inputs (2 minimum)	In line BNC connectors	2 m	
Power (RP-T and RD-T)	Bare leads	5 m	Flex cable with wire diameter less than or equal to 12 AWG

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PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

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.
- (c) The onus is on the Bidder to provide information and data in sufficient detail to demonstrate compliance. The documentation and data must be suitable for its intended purpose and should include all information, methodology and assumptions required for independent verification.
- (d) Bidders are cautioned that the delivery schedule described at Annex B, Deliverables, is firm and that it is mandatory for bidders to accept this schedule. A bid containing delivery dates that are later from the dates outlined at Annex B will be declared non-responsive.

1.1 Technical Evaluation

The technical criteria for evaluation are either mandatory or point rated.

1.1.1 Mandatory Technical Criteria

The mandatory technical criteria are included at Appendices C1 and C3. In the case where a mandatory item cannot be or is not complied with, the bid will receive no further consideration.

1.1.2 Point Rated Technical Criteria

Bids that meet all mandatory technical evaluation criteria will be evaluated further against the point rated technical evaluation criteria at Appendices C2 and C4 (partial points will not be awarded). Rated criteria are used to assess various elements of the technical bid so that relative merits of each bid can be used to distinguish one bid from another, partial points will not be awarded. The total score for all rated technical criteria will be used in the selection process.

1.1.3 Evaluation Method

The technical bids will be evaluated as follows:

- (a) Where a Compliance Statement is required, the evaluated item will be considered compliant if the Bidder provides a completed and signed Certificate of Compliance (Annex E);
- (b) Where Supporting Data is required, the evaluation team will assess the information using the following word picture: "Does the information provided in the response clearly demonstrate compliance with the requirement?". The onus is on the Bidder to provide information and data in sufficient detail to demonstrate compliance. The documentation and data must be suitable for its intended purpose and should include all information, methodology and assumptions required for independent verification; and
- (c) Where a Bid Sample is required, the evaluation team will inspect the sample to support proof of compliance, and perform the "Bid Sample Test Procedure" detailed in Appendices C1, C2, C3 and C4.

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Note that many of the bid sample evaluation requirements for the RP-T and the RD-T are identical between the RP-T and RD-T and wherever feasible and appropriate they will be tested simultaneously while interconnected to each other. For the purposes of all tests requiring equipment operation, including the electromagnetic interference and compatibility testing, the RP-T and RD-T will be interconnected, supplied with power, and connected to support apparatus through the Bidder supplied cable set.

1.2 Financial and Contractual Evaluation

Compliance with all mandatory provisions of the bid solicitation will be verified.

The prices of the responsive bids will be evaluated in Canadian dollars, Applicable Taxes excluded, Delivered Duty Paid (DDP) to destination, Canadian customs duties and excise taxes included. The bid price for the purpose of evaluation will be the sum of all items in Tables B-1 (contract deliverables) and B-2 (optional deliverables) of Annex B. To determine the total value of Table B-2, the unit price used will be the average of the two (2) unit prices requested, and the quantity used will be the maximum quantity identified in the table.

2. Basis of Selection

1. To be declared responsive, a bid must:
 - a. comply with all the requirements of the bid solicitation; and
 - b. meet all mandatory criteria
2. Bids not meeting (a) or (b) will be declared non-responsive.
3. The selection will be based on the highest responsive combined rating of technical merit and price. The ratio will be 12% for the technical merit and 88% for the price.
4. To establish the technical merit score, the overall technical score for each responsive bid will be determined as follows: total number of points obtained / maximum number of points available multiplied by the ratio of 12%.
5. To establish the pricing score, each responsive bid will be prorated against the lowest evaluated price and the ratio of 88%.
6. For each responsive bid, the technical merit score and the pricing score will be added to determine its combined rating.
7. Neither the responsive bid obtaining the highest technical score nor the one with the lowest evaluated price will necessarily be accepted. The responsive bid with the highest combined rating of technical merit and price will be recommended for award of a contract.

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The table below illustrates an example where three bids are responsive and the selection of the contractor is determined by a 60/40 ratio of technical merit and price, respectively. The total available points equals 135 and the lowest evaluated price is \$45,000 (45).

Example - Basis of Selection - Highest Combined Rating Technical Merit (60%) and Price (40%)

		Bidder 1	Bidder 2	Bidder 3
Overall Technical Score		115/135	89/135	92/135
Bid Evaluated Price		\$55,000.00	\$50,000.00	\$45,000.00
Calculations	Technical Merit Score	$115/135 \times 60 = 51.11$	$89/135 \times 60 = 39.56$	$92/135 \times 60 = 40.89$
	Pricing Score	$45/55 \times 40 = 32.73$	$45/50 \times 40 = 36.00$	$45/45 \times 40 = 40.00$
Combined Rating		83.84	75.56	80.89
Overall Rating		1 st	2 nd	3rd

3. Modifications of the Resulting Contract Clauses Prior to Contract Award

Before issuance of the Contract, the resulting Contract clauses will be updated if necessary as follows:

- (a) the point-rated criteria achieved by the winning proposal will be incorporated as follows: the desirable requirement will be changed to a mandatory requirement by changing the “should” into a “shall”.

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PART 5 – CERTIFICATIONS

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

The certifications provided by bidders to Canada are subject to verification by Canada at all times. 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 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 with this request will also render the bid non-responsive or will constitute a default under the Contract.

1. Mandatory Certifications Required Precedent to Contract Award

1.1 Code of Conduct and Certifications - Related documentation

By submitting a bid, the Bidder certifies that the Bidder and its affiliates are in compliance with the provisions as stated in Section 01 Code of Conduct and Certifications - Bid of Standard Instructions 2003. The related documentation therein required will assist Canada in confirming that the certifications are true.

1.2 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 (http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml) available from Human Resources and Skills Development Canada (HRSDC) - Labour's website (http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/index.shtml).

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.

Canada will also have the right to terminate the Contract for default if a Contractor, or any member of the Contractor if the Contractor is a Joint Venture, appears on the "FCP Limited Eligibility to Bid" list during the period of the Contract.

The Bidder must provide the Contracting Authority with a completed Annex D, Federal Contractors Program for Employment Equity - Certification, before contract award. If the Bidder is a Joint Venture, the Bidder must provide the Contracting Authority with a completed Annex D for each member of the Joint Venture.

2. Additional Certifications Precedent to Contract Award

The certifications listed below should be completed and submitted with the bid, but may be submitted afterwards. If any of these required certifications is not completed and submitted as requested, the Contracting Authority will so inform the Bidder and provide the Bidder with a time frame within which to meet the requirement. Failure to comply with the request of the Contracting Authority and meet the requirement within that time period will render the bid non-responsive.

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2.1 Certificate of Compliance

2.1.1 The Certificate of Compliance must be signed and submitted to signify compliance with technical mandatory requirements where only a compliance statement is required. The certificate is included as Annex E.

2.1.2 It is mandatory that the bidders not alter the wording of the Certificate of Compliance provided at Annex E prior to submitting it.

2.2 Bidder Certifies that all Equipment and Software is “Off-the-Shelf”

Any equipment and software offered to meet this requirement must be “off-the-shelf” (unless otherwise stated in this bid solicitation), meaning that each item of equipment and software is commercially available and requires no further research or development and is part of an existing product line with a field-proven operational history (that is, it has not simply been tested in a laboratory or experimental environment). If any of the equipment or software offered is a fully compatible extension of a field-proven product line, it must have been publicly announced on or before the solicitation closing date. By submitting a bid, the Bidder is certifying that all the equipment and software offered is off-the-shelf.

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PART 6 - RESULTING CONTRACT CLAUSES

1. Security Requirement

There is no security requirement applicable to this Contract.

2. Requirement

This Contract is issued on behalf of the Department of National Defence (DND) for the provision of 500 sets of Rugged Processors and Rugged Displays (RP-T and RD-T respectively) for use in the Tactical Armoured Patrol Vehicle (TAPV) platform currently in contract, and for the performance of the Work detailed in the Statement of Work at Annex A. This requirement includes technical support, maintenance training, technical documentation, and the option to purchase additional sets, spares, and extended warranty.

The Contractor must:

- a. Perform the Work in accordance with the Statement of Work (SOW) at Annex A; and
- b. Provide the deliverable items listed at Annex B, Deliverables, at the location and time designated in the Delivery Schedule.

2.1 Optional Goods and Services

The Contractor grants to Canada the irrevocable option to acquire the goods, services or both described at Annexes A and B of the Contract under the same conditions and at the prices and/or rates stated in the Contract. The option may only be exercised by the Contracting Authority and will be evidenced, for administrative purposes only, through a contract amendment. The Contracting Authority may exercise the option at any time before the expiry of the Contract by sending a written notice to the Contractor.

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>) issued by Public Works and Government Services Canada.

3.1 General Conditions

2010A (2013-04-25), General Conditions - Goods (Medium Complexity), apply to and form part of the Contract.

3.2 Supplemental General Conditions

3.2.1 4001 (2013-01-28), Hardware Purchase, Lease and Maintenance, applies to and forms part of the Contract, as modified below:

- (a) At Article 05, Installation, Integration and Configuration
Delete in its entirety.
- (b) At Article 14, Warranty for Purchased Hardware, sub-article 1:
Delete: for twelve (12) months
Insert in Lieu: for twenty-four (24) months

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- (c) At Part IV - Additional Conditions: Lease
Delete in its entirety

3.2.2 4003 (2010-08-16), Licensed Software, applies to and forms part of the Contract

4. Term of Contract

4.1 Delivery Date

All the deliverables must be received in accordance with the Contract list of deliverables and delivery schedule at Annex B.

Canada and the Contractor will agree on a delivery date for the options exercised by Canada.

5. Authorities

5.1 Contracting Authority

The Contracting Authority (CA) for the Contract is:

Jackie Vallée
Supply Specialist
Public Works and Government Services Canada
Acquisitions Branch
Major Projects Directorate - Land
105 Hotel de Ville, Gatineau, QC K1A 0S5

Telephone: 819-997-1709
Facsimile: 819-997-0786
E-mail address: Jackie.vallee@tpsgc-pwgsc.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.

5.2 Technical Authority

The Technical Authority (TA) for the Contract will be identified at Contract award.

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 Technical Authority; however the Technical 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.

5.3 Procurement Authority

The Procurement Authority (PA) for the Contract will be identified at Contract award

The Procurement Authority is a representative of the department or agency for whom the Work is being carried out under the Contract. The Procurement Authority is responsible for the implementation of tools and processes required for the administration of the Contract. The Contractor may discuss administrative matters identified in the Contract with the Procurement Authority however the Procurement Authority has no authority to authorize changes to the

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scope of the Work. Changes to the scope of Work can only be made through a contract amendment issued by the Contracting Authority.

5.4 Contractor's Representative

Name: _____
Title: _____
Telephone: _____
Facsimile: _____
E-mail: _____

6. Payment

6.1 Basis of Payment

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid firm unit or lot prices as specified in Annex B for a cost of \$ _____ *(to be inserted at contract award)* in Canadian dollars. Customs duties are included and Applicable Taxes are extra.

6.2 Limitation of Price

SACC Manual clause C6000C (2011-05-16) Limitation of Price

6.3 Method of Payment

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

6.4 SACC Manual Clause

C2000C Taxes - Foreign-based Contractor (2007-11-30)
G1005C Insurance (2008-05-12)
C2611C Customs Duties - Contractor Importer (2007-11-30)

7. Invoicing Instructions

1. The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" of the general conditions. Invoices cannot be submitted until all work identified in the invoice is completed.

2. Invoices must be distributed as follows:

- (a) The original and one (1) copy must be forwarded to the Procurement Authority identified under the section entitled "Authorities" of the Contract, for certification and payment.
- (b) One (1) copy must be forwarded to the Contracting Authority identified under the section entitled "Authorities" of the Contract.
- (c) one (1) copy must be forwarded to the consignee.

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8. Certifications

8.1 Compliance

Compliance with the certifications and related documentation provided by the Contractor in its bid is a condition of the Contract and subject to verification by Canada during the term of the Contract. If the Contractor does not comply with any certification, provide the related documentation or if it is determined that any certification made by the Contractor in its bid is untrue, whether made knowingly or unknowingly, Canada has the right, pursuant to the default provision of the Contract, to terminate the Contract for default.

8.2 Federal Contractors Program for Employment Equity - Default by the Contractor

The Contractor understands and agrees that, when an Agreement to Implement Employment Equity (AIEE) exists between the Contractor and HRSDC-Labour, the AIEE must remain valid during the entire period of the Contract. If the AIEE becomes invalid, the name of the Contractor will be added to the "FCP Limited Eligibility to Bid" list (http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml). The imposition of such a sanction by HRSDC will constitute the Contractor in default as per the terms of the Contract.

9. Applicable Laws

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in _____. *(to be inserted at contract award)*

10. 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 and Annex B, Deliverables;
- (b) the supplemental general conditions 4001 (2013-01-28), Hardware Purchase, Lease and Maintenance;
- (c) the supplemental general conditions 4003 (2010-08-16), Licensed Software;
- (d) the general conditions 2010A (2013-04-25), General Conditions - Goods (Medium Complexity);
- (e) Annex A, Statement of Work and its appendices;
- (f) the Contractor's bid dated _____ *(insert date at contract award)* *(If the bid was clarified, insert at the time of contract award: “, as clarified on _____” and insert date(s) of clarification(s))*

11. Defence Contract

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

12. SACC Manual Clauses

A9062C Canadian Forces Site Regulations (2011-05-16)
B7500C Excess Goods (2006-06-16)
D6010C Palletization (2007-11-30)
D2025C Wood Packaging Materials (2008-12-12)
D5328C Inspection and Acceptance (2007-11-30)

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D5545C ISO 9001:2008 - Quality Management Systems - Requirements (Quality Assurance Code C) (2010-08-16)

13. Shipping Instructions

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

Delivered Duty Paid (DDP) Edmonton, Alberta and Ottawa, Ontario, Incoterms 2000 for shipments from a commercial contractor.

Unless otherwise directed, delivery must be made by the most economical means. The Contractor is responsible for all delivery charges, administration, costs and risks of transport and customs clearance, including the payment of customs duties and Applicable Taxes.

The Contractor must deliver the goods to Canadian Forces (CF) Supply Depots by appointment only. The Contractor or its carrier must arrange delivery appointments by contacting the Depot Traffic Section at the appropriate location shown below. The consignee may refuse shipments when prior arrangements have not been made.

7 CF Supply Depot Lancaster Park
Edmonton, Alta
Telephone: 780-973-4011, ext. 4524

14. Consignees

1. For the Equipment Sets for System Integration Testing:

Ottawa, Ontario (*detailed address to be provided at contract award*)

2. For the Vehicle Equipment Sets:

7 CF Supply Depot Lancaster Park
Edmonton, Alberta
Telephone: 780-973-4011, ext. 4524

15. Conduct of the Work

1. The Contractor represents and warrants that:

- a. it is competent to perform the Work;
- b. it has everything necessary to perform the Work, including the resources, facilities, labour, technology, equipment, and materials; and
- c. it has the necessary qualifications, including knowledge, skill, know-how and experience, and the ability to use them effectively to perform the Work.

2. The Contractor must:

- a. perform the Work diligently and efficiently;

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- b. except for Government Property, supply everything necessary to perform the Work;
- c. use, as a minimum, quality assurance procedures, inspections and controls generally used and recognized by the industry to ensure the degree of quality required by the Contract;
- d. select and employ a sufficient number of qualified people;
- e. perform the Work in accordance with standards of quality acceptable to Canada and in full conformity with the specifications and all the requirements of the Contract;
- f. provide effective and efficient supervision to ensure that the quality of workmanship meets the requirements of the Contract.

16. Subcontracts

The Contractor may subcontract the supply of goods or services that are customarily subcontracted by the Contractor. Subcontracting does not relieve the Contractor from any of its obligations under the Contract or impose any liability upon Canada to a subcontractor. In any subcontract, the Contractor agrees to bind the subcontractor by the same conditions by which the Contractor is bound under the Contract, unless the Contracting Authority agrees otherwise, with the exception of requirements under the Federal Contractors Program for employment equity which only apply to the Contractor.

17. Confidentiality

1. The Contractor must keep confidential all information provided to the Contractor by or on behalf of Canada in connection with the Work and all information conceived, developed or produced by the Contractor as part of the Work. Information provided to the Contractor by or on behalf of Canada must be used solely for the purpose of the Contract and remains the property of Canada.
2. Subject to the Access to Information Act , R.S.C. 1985, c. A-1, and to any right of Canada under the Contract to release or disclose, Canada agrees not to release or disclose outside the Government of Canada any information delivered to Canada under the Contract that is proprietary to the Contractor or a subcontractor.
3. The obligations of the Parties set out in this section do not apply to any information where the same information:
 - a. is publicly available from a source other than the other Party; or
 - b. is or becomes known to a Party from a source other than the other Party, except any source that is known to be under an obligation to the other Party not to disclose the information, or
 - c. is developed by a Party without use of the information of the other Party.

18. Copyright

1. Anything that is created or developed by the Contractor as part of the Work under the Contract in which copyright subsists belongs to Canada. The Contractor must incorporate the

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copyright symbol and either of the following notices, as appropriate: © Her Majesty the Queen in right of Canada (year) or © Sa Majesté la Reine du chef du Canada (année).

2. At the request of the Contracting Authority, the Contractor must provide to Canada, at the completion of the Work or at such other time as the Contracting Authority may require, a written permanent waiver of moral rights as defined in the Copyright Act, R.S., 1985, c. C-42, in a form acceptable to the Contracting Authority, from every author that contributed to the Work. If the Contractor is an author, the Contractor permanently waives the Contractor's moral rights.

19. Suspension of the Work

The Contracting Authority may at any time, by written notice, order the Contractor to suspend or stop the Work or part of the Work under the Contract. The Contractor must immediately comply with any such order in a way that minimizes the cost of doing so.

20. Harassment in the Workplace

1. The Contractor acknowledges the responsibility of Canada to ensure, for its employees, a healthy work environment, free of harassment. A copy of the Policy on Harassment Prevention and Resolution, which is also applicable to the Contractor, is available on the Treasury Board Web site.

2. The Contractor must not, either as an individual, or as a corporate or unincorporated entity, through its employees or subcontractors, harass, abuse, threaten, discriminate against or intimidate any employee, contractor or other individual employed by, or under contract with Canada. The Contractor will be advised in writing of any complaint and will have the right to respond in writing. Upon receipt of the Contractor's response, the Contracting Authority will, at its entire discretion, determine if the complaint is founded and decide on any action to be taken.

21. Use and Translation of Written Material

1. Unless provided otherwise in the Contract, copyright in any written material used, produced or delivered under the Contract belongs to its author or rightful owner. Canada has the right to use, copy and disclose, for government purposes, the written material related to the Work that is delivered to Canada.

2. If the Contract does not require the delivery of any written material in both of Canada's official languages, Canada may translate the written material into the other official language. The Contractor acknowledges that Canada owns the rights on the translation and that Canada is under no obligation to provide the translation to the Contractor. Canada agrees that any translation must include any copyright and any proprietary right notice that was part of the original. Canada acknowledges that the Contractor is not responsible for any technical errors or other problems that may arise as a result of the translation.

22. Intellectual Property Infringement and Royalties

1. The Contractor represents and warrants that, to the best of its knowledge, neither it nor Canada will infringe any third party's intellectual property rights in performing or using the Work, and that Canada will have no obligation to pay royalties of any kind to anyone in connection with the Work.

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2. If anyone makes a claim against Canada or the Contractor concerning intellectual property infringement or royalties related to the Work, that Party agrees to notify the other Party in writing immediately. If anyone brings a claim against Canada, according to Department of Justice Act (<http://laws-lois.justice.gc.ca/eng/acts/J-2/>), R.S. 1985, c. J-2, the Attorney General of Canada must have the regulation and conduct of all litigation for or against Canada, but the Attorney General may request that the Contractor defend Canada against the claim. In either case, the Contractor agrees to participate fully in the defence and any settlement negotiations and to pay all costs, damages and legal costs incurred or payable as a result of the claim, including the amount of any settlement. Both Parties agree not to settle any claim unless the other Party first approves the settlement in writing.

3. The Contractor has no obligation regarding claims that were only made because:

- (a) Canada modified the Work or part of the Work without the Contractor's consent or used the Work or part of the Work without following a requirement of the Contract; or
- (b) Canada used the Work or part of the Work with a product that the Contractor did not supply under the Contract (unless that use is described in the Contract or the manufacturer's specifications); or
- (c) the Contractor used equipment, drawings, specifications or other information supplied to the Contractor by Canada (or by someone authorized by Canada); or
- (d) the Contractor used a specific item of equipment or software that it obtained because of specific instructions from the Contracting Authority; however, this exception only applies if the Contractor has included the following language in its own contract with the supplier of that equipment or software: "[Supplier name] acknowledges that the purchased items will be used by the Government of Canada. If a third party claims that equipment or software supplied under this contract infringes any intellectual property right, [supplier name], if requested to do so by either [Contractor name] or Canada, will defend both [Contractor name] and Canada against that claim at its own expense and will pay all costs, damages and legal fees payable as a result of that infringement." Obtaining this protection from the supplier is the Contractor's responsibility and, if the Contractor does not do so, it will be responsible to Canada for the claim.

4. If anyone claims that, as a result of the Work, the Contractor or Canada is infringing its intellectual property rights, the Contractor must immediately do one of the following:

- (a) take whatever steps are necessary to allow Canada to continue to use the allegedly infringing part of the Work; or
- (b) modify or replace the Work to avoid intellectual property infringement, while ensuring that the Work continues to meet all the requirements of the Contract; or
- (c) take back the Work and refund any part of the Contract Price that Canada has already paid.

If the Contractor determines that none of these alternatives can reasonably be achieved, or if the Contractor fails to take any of these steps within a reasonable amount of time, Canada may choose either to require the Contractor to do (c), or to take whatever steps are necessary to acquire the rights to use the allegedly infringing part(s) of the Work itself, in which case the Contractor must reimburse Canada for all the costs it incurs to do so.

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23. Electronic Media

In order to maintain the confidentiality of information that may be recorded on electronic media incorporated into a product requiring Hardware Maintenance Services, the electronic media in all components requiring replacement (or the entire product if the media is not removable) must remain in the possession of Canada. Faulty discs and hard drives will not be returned to the Contractor.

24. Loss or Damage to Electronic Records or Documentation

If, in the course of transit from the Contractor's site to the specified delivery site or while otherwise in the Contractor's care, electronically recorded information and/or documentation becomes damaged or lost, including accidental erasure, it must be replaced at the Contractor's expense.

25. Safeguarding Electronic Media

Before using them on Canada's equipment or sending them to Canada, the Contractor must use a regularly updated product to scan electronically all electronic media used to perform the Work for computer viruses and other coding intended to cause malfunctions. The Contractor must notify Canada if any electronic media used for the Work are found to contain computer viruses or other coding intended to cause malfunctions.

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ANNEX A

Statement of Work

Rugged Processor and Rugged Display (RP-T and RD-T)

for the

Tactical Armoured Patrol Vehicle (TAPV) Project

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1 Scope of Work

1.1 Purpose

This Statement of Work (SOW) details the requirement for a set of rugged processors and rugged displays for the Tactical Armoured Patrol Vehicle (TAPV) fleet (RP-T and RD-T respectively), capable of operating while the vehicle is moving, to host and provide access to the Land Command Support System (LCSS) software for crew within the TAPV platform. This SOW details the equipment requirements, compliance constraints and work requirements for the Contractor to provide and support sets of RP-T and RD-T equipment for the TAPV fleet being acquired.

1.2 Background

The Land Command Support System (LCSS) is the command and control system of the Canadian Army. The Department of National Defence (DND) has a requirement to provide rugged processors to host the LCSS and related software at selected crew seating positions in Canadian Army tactical vehicles. The Tactical Armoured Patrol Vehicle (TAPV) is one such vehicle. TAPV is under contract for initial production delivery in 2014 and DND requires processors and displays to transfer to the vehicle original equipment manufacturer (OEM) for integration into the vehicles during production.

TAPV requires three crew members to have access to LCSS software at a total of four seating positions. Two of these seating positions are common to all roles (those for the gunner and the vehicle commander); the third varies with the role that the vehicle is configured to support. Space, sight line constraints and the layout of existing vehicle / weapon displays in the TAPV at the commander and gunner seats do not permit the installation of an additional display. To resolve this challenge, the LCSS software will share a vehicle status display, as an alternate input to that display, with the software hosted on a physically independent processor mounted elsewhere in the vehicle – in a manner similar to a conventional desktop PC with a separate monitor and display. The third crew position will be met in a similar manner with a rugged display that can be re-mounted at two positions within the vehicle – driven by a remotely mounted rugged processor. Each TAPV vehicle will require a set of three rugged processors, and one rugged display. Each vehicle set supports installation of command and control capabilities in a single vehicle. A high level concept diagram of this design is included as Figure 1.

1.3 Outline of Work

Five hundred (500) TAPV vehicles are under contract with an option to extend production by up to one hundred (100) additional vehicles. This requirement is for sets of rugged processors and displays to equip each vehicle, three additional sets for system integration laboratories and installation in qualification vehicles, spares to support a maintenance inventory and replace equipment that is damaged beyond economic repair, and support to fielding including: documentation, engineering advice, provision of training materials and initial training for equipment maintenance instructors.

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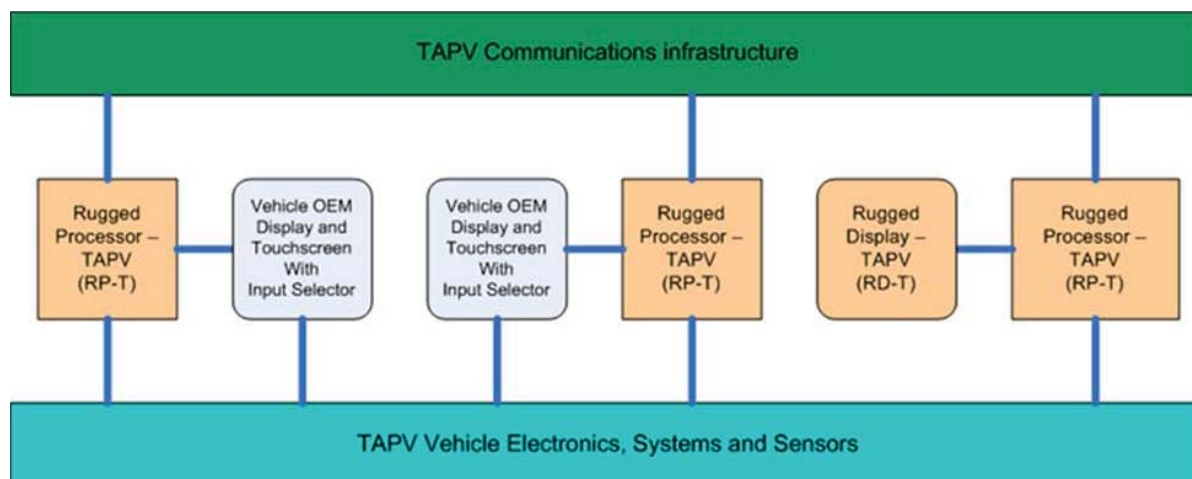


Figure 1: Concept Diagram for Rugged Processor and Display Utilization in TAPV

An outline of the work and services that the Contractor will be required to provide under the proposed contract is provided as follows:

- a. Equipment Sets for TAPVs;
- b. Equipment Sets for System Integration Testing;
- c. Technical Documentation;
- d. Maintenance Training Material;
- e. Initial Maintenance Training;
- f. Initial Technical Support;
- g. Hardware Maintenance Support (Web-based and E-mail Support) and Warranty;
- h. Options for additional equipment.
- i. Option for additional 1-year Hardware Maintenance Support and Warranty

2 Applicable Documents

Documents listed below form part of this Work to the extent specified herein, and are supportive of the requirement when referenced in Section 3 – Equipment Requirements and the related Appendices A1 and A2. All other document references are to be considered supplemental information only. Unless otherwise specified, the issue or amendment of documents effective for this requirement shall be those in effect on the date of Request for Proposal release. In the event of a conflict between the documents referenced herein and the contents of the requirement, then the contents of the requirement shall take precedence.

- ACPI, Advanced Configuration & Power Interface, Version 2.0c (or later), (www.acpi.info);
- ANSI/TIA/EIA-422-B Electrical Characteristics of Balanced Voltage Differential Interface Circuits (RS 422);

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- C-02-008-001/TS-000; General Safety Lithium Batteries Handling, Storage Preservation and Disposal Instructions;
- Canadian Environmental Protection Act, 1999
- Chemicals Management Plan - List of Challenge Substances (<http://www.chemicalsubstanceschimiques.gc.ca>)
- CID/09/15A, Compromising Emanations Laboratory Test Requirements Electromagnetics, Communications Security Establishment Canada, (www.cse-cst.gc.ca);
- DAOD 3010-0, Marking of Material;
- DAOD 3010-1, UID, Unique Identification and Standardization of Marking of Materiel;
- Digital Visual Interface (DVI), Revision 1.0, April 1999 (available www.webcitation.org/6ES9y2FuQ);
- EIA standard RS-232-F: Interface between Data Terminal Equipment and Data Communication Equipment Employing Serial Binary Data Interchange (RS 232);
- High Definition Multimedia Interface (HDMI) v1.3a (www.hdmi.org);
- IEEE 802.3™-2008 Ethernet, (www.ieee.org);
- ISO/IEC IS 10918-1:1994 Information technology -- Digital compression and coding of continuous-tone still images: Requirements and guidelines (JPEG standard);
- ISO 14001 Environmental Management Systems; Specification with Guidance for Use;
- ISO/IEC 15444-1:2004 Information technology -- JPEG 2000 image coding system: Core coding system;
- ITU-T H.264 Edition 8 (04/2013) – International Telecommunication Union Standard on Advanced video coding for generic audiovisual services;
- Mil-DTL-38999 Revision L, Detail Specification: CONNECTORS;
- MIL-DTL-53039 Revision D, Detail Specification: COATING, ALIPHATIC POLYURETHANE, SINGLE COMPONENT, CHEMICAL AGENT RESISTANT;
- MIL-DTL-64159 Revision B, Detail Specification: COATING, WATER DISPERSIBLE ALIPHATIC POLYURETHANE, CHEMICAL AGENT RESISTANT
- MIL-STD 461F Requirements for the Control of Electromagnetic Interference (EMI) Characteristics of Subsystems and Equipment, dated 10 Dec 2007;
- MIL-STD-810G Environmental Engineering Considerations and Laboratory Tests, dated 31 Oct 2008;
- MIL-STD-1275B Characteristics of 28 Volt DC Electrical Systems in Military Vehicles dated 20 Nov 1997;
- National Pollutant Release Inventory (<http://www.ec.gc.ca/inrp-npri/>);
- NATO STANAG 2290 (Edition 2) NATO UNIQUE IDENTIFICATION OF ITEMS;
- OHSAS 18001 Occupational Health and Safety Management;
- Serial ATA Revision 2.6 Specification (released February 2007 – latest version of SATA 2 series), (www.sata-io.org);
- Serial ATA Revision 3.0 Specification (released June 2009), (www.sata-io.org);
- Serial ATA Revision 3.1 Specification (released July 2011), (www.sata-io.org);
- SMPTE ST 170M-2004 Composite Analog Video Signal — NTSC for Studio Applications (www.smpte.org);
- Unified Extensible Firmware Interface (UEFI) specification 2.3 (www.uefi.org);

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- Universal Serial Bus Revision 2.0 specification including errata and engineering changes notices up to 4 April 2013, (www.usb.org);
- Universal Serial Bus Revision 3.0 Specification including errata and engineering changes notices up to 3 April 2013, (www.usb.org);
- Trusted Platform Module, TPM Main Specification Level 2 Version 1.2, Revision 116, Trusted Computing Group (www.trustedcomputinggroup.org); and,
- Video Electronics Standards Association (VESA®) DisplayPort Standard v1.2 (www.vesa.org).

3 Equipment Requirements

3.1 Vehicle Equipment Sets

The Contractor shall deliver 500 vehicle equipment sets comprised of three (3) rugged processors (RP-T) and one (1) rugged display (RD-T) in accordance with the delivery schedule at Annex B. The RP-Ts and RD-T shall meet the technical specifications identified in Appendix A1 and A2, respectively.

3.1.1 Disk Image and Software Licensing

3.1.1.1 RP-T Disk Image

The Contractor shall pre-install a government furnished disk image on the Solid State Drives included with the RP-Ts.

3.1.1.2 RP-T Operating System Licensing

The RP-T shall include a license to install the Microsoft® Windows 8 Professional 64 bit operating system. The license must allow for the installation of the Microsoft® Windows 7 Professional 64 bit operating system as an alternative or interim measure (downgrade rights).

3.1.1.3 RP-T Software Licensing

The RP-T shall include licenses for all required drivers and software libraries to provide application programming interfaces to configure, access and use (in normal operation) all devices included in the RP-T. All licenses shall be valid whether the operating system installed is Windows 7 or Windows 8.

3.1.1.4 RD-T Software Licensing

The RD-T shall include licenses for all required drivers and software libraries to provide application programming interfaces to configure, access and use (in normal operation) all devices (for example the touchscreen and bezel buttons) included in the RD-T when used in conjunction with the RP-T. All licenses shall be valid whether the operating system installed is Windows 7 or Windows 8.

3.2 Equipment Sets for System Integration Testing

The Contractor shall deliver three (3) equipment sets comprised of three (3) rugged processors (RP-T) and one (1) rugged display (RD-T) within 90 days of contract award for software development, system integration testing and in-vehicle qualification. The RP-Ts and RD-T shall meet the technical specifications identified in Appendix A1 and A2, respectively.

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3.2.1 Disk Image and Software Licensing

This initial shipment of RP-Ts for system integration testing, shall be delivered ready to run with a bootable installation of Microsoft® Windows 7 Professional – 64 bit, including all device drivers and software libraries required to utilize all of the interfaces and functions bid.

3.3 Optional Vehicle Equipment Sets

The Contractor shall grant to Canada the option to purchase up to 100 additional vehicle equipment sets, with a 2-year warranty and hardware maintenance support.

3.4 Spares

3.4.1 Initial Spares

The Contractor shall provide an initial set of spares to support field exchange of equipment requiring repair. The Contractor shall provide the following equipment as initial spares:

- Six (6) RP-Ts excluding the SSD;
- Six (6) RD-Ts; and
- Six (6) SSDs pre-loaded with government furnished disk image.

The RP-Ts supplied as spares shall not include the SSD. The SSDs provided individually as spares, shall be pre-programmed to the government furnished disk image.

3.4.2 Optional Spares

The Contractor shall grant to Canada the option to purchase additional individual components to replace equipment damaged beyond economic repair. The Contractor shall provide the following options:

- Up to 180 RP-Ts, excluding the SSD;
- Up to 120 RD-Ts; and
- Up to 180 SSDs pre-loaded with government furnished disk image.

3.5 Environmental, Health and Safety

3.5.1 General

The Contractor shall incorporate and document Environmental Health and Safety (EHS) considerations into the decision making process for the Work performed under this Contract.

The Contractor shall comply and ensure its employees and subcontractor comply with Department of National Defence (DND) policies, orders, directives, instructions and best practices when accessing DND owned or controlled lands, buildings or equipment.

The Contractor shall ensure that all contract support documentation is reviewed for EHS risk and appropriate warnings and instructions in direct relation to the EHS risks are included.

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3.5.2 Compliance

The Contractor and its subcontractors shall comply in all respects with all Canadian Environmental, Health and Safety legislation, and their regulations in force in relation to the provision of Goods and Services. The Contractor shall provide evidence of compliance with such laws to Canada, such as applicable environmental permits, licences, regulatory approvals and certificates required to perform the Work at such times as Canada may reasonably request.

3.5.3 Controlled Products

3.5.3.1 Definition

For the purposes of the Contract, controlled products are defined as those that contain substances:

- a) Regulated and proposed to be regulated under the Canadian Environmental Protection Act (CEPA);
- b) Targeted in Schedule I, Toxic Substances List under the CEPA;
- c) Subject to the reporting requirements under the National Pollutant Release Inventory (NPRI); or,
- d) Targeted by the Chemicals Management Plan - List of Challenge Substances.

3.5.3.2 Restrictions

The Contractor and any subcontractor(s) shall avoid the use of any controlled products/substances, as part of the Work under this Contract, where feasible and as dictated by regulatory requirements.

Asbestos, Halocarbons and Polychlorinated Biphenyls (PCBs) must not be incorporated into the design, operation or maintenance of equipment, products, or support services.

Mercury and its compounds are listed as a toxic substance in Schedule 1 to the *Canadian Environmental Protection Act, 1999*. Consequently, the Contractor shall comply with the following requirements:

- a. All Goods sold to the Crown shall not contain mercury or its compounds, where technically feasible (*i.e.* fit, form and function requirements are met). The Contractor shall not replace an existing component or add a new equipment component containing mercury, when a mercury-free alternative exists.
- b. For each case where Goods must contain mercury or its compounds, the Contractor shall submit a statement that it is not technically feasible to use a mercury-free Goods in its place, and explain why;
- c. Goods containing mercury or its compounds shall comply with mercury content limits specified in any relevant standard;
- d. Where the Goods contain mercury or its compounds, in any shape or form, or where its operation or maintenance requires the use of mercury or its compounds, the Contractor shall provide in tabular format, to the Technical Authority (TA), the following for each occurrence of mercury or its compounds:
 - i. Identification of the Goods as containing mercury or its compounds;
 - ii. NATO Stock Number of the Goods, if available;
 - iii. Description of the Goods:
 - Manufacturer of the item or part containing mercury or its compounds;

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- Manufacturer part number of the item or part containing mercury or its compounds;
 - National Supply Code for Manufacturers (NSCM) / Commercial and Government Entity (CAGE) Code of the item or part containing mercury or its compounds;
 - Description of the mercury or its compounds of the item or part containing mercury or its compounds;
 - The form of mercury or its compounds (e.g. liquid, vapour, amalgam, metal halide);
 - The location of the mercury or its compounds on or in the item or part containing mercury or its compounds; and
 - iv. Material Safety Data Sheet, where possible.
- e. The Contractor is responsible to ensure that Goods containing mercury or its compounds are labelled in a readily visible location identifying that the item contains mercury or its compounds. The label shall be bilingual and in accordance with the following standard:
 - i. The information must be in characters that are at least 3 mm in height, legible and indelible and that are impressed, embossed or in a colour that contrasts with the label's background or the colour of the product as applicable.
 - ii. The label must be enclosed by a borderline and easily distinguishable from other graphic material on the product or its package.
 - iii. The label must be bilingual and shall include following contents:
 1. A statement "CAUTION/MISE EN GARDE" in characters that are at least 4 mm in height;
 2. A statement that the product contains mercury and the content of mercury in the product in milligrams;
 3. Information on the action to be taken in case of accidental breakage and a description of the risks associated with the use of the product, the address of a website that contains the information, or contact information for a person who can provide that information;
 4. Information on the options available for proper disposal and recycling in accordance with the laws of jurisdiction where the disposal or recycling to take place, the address of a website that contains the information, or contact information for a person who can provide that information;
 5. A warning that the product should be managed in accordance with the applicable disposal or recycling laws;
 6. The "Hg" symbol encircled by a line on a readily visible location on the product where the characters are at least 3 mm in height which are impressed, embossed or in a colour that contrasts with the label's background or the colour of the product as applicable;

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7. If the product is not large enough to accommodate the information, the information must be:
 - a. In a notice attached to the product or in a manual that accompanies the product, if there is no package, or if the package is not large enough to accommodate the information; and,
 - b. In both official languages.
- f. Technical documentation provided by the Contractor shall contain:
 - i. Product warning to provide information on the mercury content and other relevant information. The technical document shall also include information on part numbers containing mercury, location, type of mercury, manufacturer's information, mercury content, and MSDS information.
 - ii. A written work procedure for processes involving the safe handling of mercury-containing equipment, components and materials, shall be included. It shall identify procedures for mercury spills clean ups and disposal procedures. The work procedure shall identify proper Personal Protective Equipment (PPE) in the case of a spill. A warning indicating that the product should be disposed of or recycled in accordance with the applicable laws shall also be included.

3.5.4 Lithium Batteries

If any Lithium or Lithium-polymer batteries are used, then the procedures in C-02-008-001/TS-000, General Safety Lithium Batteries Handling, Storage Preservation and Disposal Instructions shall be used.

3.5.5 Environmental Management Systems (EMS) and Occupational Health and Safety Management System (OHSMS) Requirement

The Contractor shall have a management system in place to control environmental impacts resulting from their activities, products or services. ISO 14001 - Environmental Management Systems; Specification with Guidance for Use - is a benchmark for an effective environmental management system (EMS) applicable to all types and sizes of organizations. Certification to this standard is preferred but not necessary. The Contractor shall, however, have a formalized set of procedures and control measures in place to achieve conformance with the requirements of this Work, while ensuring environmental protection and pollution prevention.

The Contractor shall have an Occupational Health and Safety Management System (OHSMS) consistent with the principles presented in OHSAS 18001.

The EMS and OHSMS requirement is applicable to the Contractor. The Contractor shall monitor and ensure that all subcontractors are in compliance with the applicable environmental laws and regulations.

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The Contractor shall keep accurate and complete EHS records, which shall be made available to the Technical Authority only, upon request. During the performance of the Contract and for any period of time thereafter provided in the Contract, request for copies of any document shall be made formally to the Contractor, if required.

3.5.6 Equipment Environmental Assessment

The Contractor should make available to the TA relevant information regarding the environmental impact of the equipment and all subcomponents during all life cycle phases such as design, engineering and manufacturing, test and evaluation, operation and maintenance, storage and demilitarization and disposal that has been prepared for the equipment offered. While a formal Equipment Environmental Assessment (EEA) analyzing these topics is not a condition of this requirement, this class of information, where available, will support the TA in responsible use and disposal of the equipment. Note: Any proprietary information will be treated with confidentiality.

4 Support Requirements

4.1 Warranty

The Contractor shall provide as a minimum a two year warranty on each RP-T and the RD-T, from the date of delivery and acceptance. The warranty shall cover all failures that are not a result of damaged sustained in combat operations, vehicle accidents, or as a result of deliberate operator abuse.

4.1.1 Warranty Maintenance Concept

The intended maintenance concept for the RP-T and the RD-T is first or second line replacement at the line-replaceable unit (LRU) level by DND technical staff. The RD-T is considered a stand-alone LRU, and the RP-T is considered to comprise two LRUs including the processor unit itself and the removable SSD. During the warranty period, any LRU replaced (with the exception of the SSD) will be sent to the Contractor for assessment and repair.

Due to the nature of the data saved on the RP-T SSD, the Crown will not return the defective SSDs to the Contractor as per the normal warranty process. The Crown instead will provide the Contractor with a certification of destruction.

4.1.2 Warranty Performance Standard

The Contractor shall assess, repair or replace, and ship all equipment returned for warranty repair within 60 days of receipt of the returned equipment (or certificate of destruction in the case of an SSD).

4.1.3 Option for Additional Warranty

The Contractor shall grant to Canada the option to purchase an additional 1-year period of Hardware Maintenance Support and Warranty (for a resulting 3-year warranty).

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4.2 Technical Documentation

Technical Documentation for this Contract includes interface control documentation and service and operations manuals for the equipment. Except as noted otherwise, all technical documentation delivered under the Contract shall be delivered by electronic means in the portable document format (PDF).

4.2.1 Mounting and Installation Documentation

Within 30 days of contract award the Contractor shall provide mounting and installation documentation. The documentation shall include, at a minimum:

- a. a computer aided design model of the exterior surfaces of the equipment , including detail on all mounting points, mounting surfaces, connector locations and connector orientations; and,
- b. written directions that detail constraints on installation such as maximum forces that may be applied to mounting points, fastener torque and depth limits, and clearance requirements for airflow and operator access.

The computer aided design model shall be delivered to the TA by electronic means in a Drawing Exchange Format (DXF) format (or alternate format with the agreement of the TA).

The delivery of this documentation shall be in either English or French as may be considered most current and complete by the Contractor.

4.2.2 External Interface Control Documentations

Within 30 days of contract award the Contractor shall provide complete interface control documentation (ICD) for all external interfaces on the RP-T and RD-T. This documentation shall detail the connectors that are externally accessible for both the RP-T and RD-T and the function of all pins of these connectors. Where applicable, the ICDs shall include full documentation of communication protocols used by the external interfaces exposed on the RP-T and RD-T. Where the documentation is publically available, this may be provided by reference to an ICD published on the Internet.

The delivery of external ICDs shall be in either English or French as may be considered most current and complete by the Contractor.

4.2.3 Software Interface Control Documentation

Within 30 days of contract award the Contractor shall provide complete interface control documentation (ICDs) for all software drivers and application programming interfaces (APIs) that are required to exploit capabilities of external interfaces on the RP-T and the RD-T, wherever these drivers and APIs are not integral to a default installation of the operating system environment specified.

The delivery of software ICDs shall be in either English or French as may be considered most current and complete by the Contractor.

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4.2.4 Service and Operator Manuals

Within four months of contract award the Contractor shall provide draft versions of a service manual and an operator's manual to the TA. The service manual shall provide enough information to support warranty repair. The operator's manual shall contain an accurate description of all connections and external controls and include instructions on use for all features accessed by the controls. A combined service/operator manual is acceptable. Separate manuals for the RD-T and RP-T are acceptable. Electronic delivery of a PDF format version of the manual is acceptable.

All manuals shall be available in both English and French.

The TA will review the draft manuals for coverage and completeness and provide comments identifying required changes and potential improvements within four weeks. The TA will request assignment of National Defence Indexing of Documentation (NDID) Numbers for the manuals delivered and provide these to the Contractor in conjunction with the review comments.

The manuals shall be revised to include appropriate changes and to incorporate the reference numbers provided. The revised version shall be formally delivered to the TA through electronic means no later than 6 months after contract award and made available for access on the maintenance support website

All service and operator manuals for this equipment will be delivered electronically through internet access.

4.3 Maintenance Training and Training Material

4.3.1 Design and Development of Training Package

Within four months of contract award, the Contractor shall deliver a draft maintenance training package sufficient to train DND technical staff to diagnose failures in the supplied equipment. The final version of the training package, including revisions suggested by the TA and feedback from the initial training, shall be delivered one month after the completion of the initial training.

The topics of instruction shall include, at a minimum, the following:

- a. RP-T diagnostic procedures;
- b. RD-T diagnostic procedures;
- c. Solid state drive replacement;
- d. RP-T SSD re-imaging from the GFE software image on DVD(s);
- e. RP-T SSD re-imaging from the GFE recovery image on a USB memory device (based on either flash storage or a USB connected hard disk drive); and
- f. Return authorization procedures.

4.3.1.1 Language of Training Material

The final version of the training package shall be provided in both English and French.

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4.3.2 Initial Training

The contractor shall provide training to familiarize DND training staff, engaged in training LCSS maintenance personnel, with the equipment diagnostic and repair procedures and with the design and content of the training package supplied. The training shall be provided by an instructor, or group of instructors, capable of interacting with the course attendees to adapt the diagnostic and repair procedures to the in-service tools and equipment that the LCSS maintenance personnel will have available. The training will be provided for four (4) students. The training will be scheduled at the discretion of the TA, no earlier than 6 months after contract award and no later than 8 months after contract award, unless mutually agreed by the TA and the Contractor. Training shall be scheduled on consecutive days. The duration of the course is at the Contractor's discretion, but shall not exceed five (5) days.

4.3.2.1 Training Location and Language

The training shall be provided at a facility coordinated by the Contractor within Canada and may be on the Contractor's premises. Instructors shall be able to provide training in English.

4.4 Technical Support

4.4.1 Initial On-Site Technical Support

The contractor shall provide three days of on-site technical support to assist in the configuration of one set of vehicle equipment into the DND systems integration laboratory and to familiarize DND technical personnel (and supporting contractors) with the features, and capabilities of the equipment to support the customization of LCSS software to exploit the hardware and software provided. The support shall be provided by a minimum of two (2) senior software specialists who are collectively familiar with the following topics:

- a. boot management software configuration;
- b. installation and configuration of all supplied software (OS, drivers, and any software libraries to implement equipment features); and,
- c. content of the external and software ICD deliverables.

4.4.1.1 On-Site Technical Support Location and Language

The on-site technical support shall be provided at a site in Ottawa, Ontario. Technical support personnel shall be able to provide support in English.

4.4.2 Hardware Maintenance Support (Web and Email Technical Support)

The Contractor shall offer a bilingual internet web site providing access to manuals, drivers and technical support as required. The web-site shall provide e-mail contact information or web-based e-mail contact mechanisms to access technical support. The internet accessible web site shall be available no later than the first vehicle equipment deliveries for technical support and the download of the maintenance training package, operator & service manuals, firmware, software libraries and device drivers.

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The Contractor shall provide DND technical staff email access to Contractor technical support to address vehicle equipment maintenance questions. The Contractor shall respond in the language of the email received (i.e. English or French) within 72 hours of receipt. Receipt of all emails for maintenance support shall be acknowledged automatically as received.

4.4.2.1 Duration of Web and Email Technical Support

Web and email technical support shall be maintained until the last shipment of vehicle equipment is out of warranty.

4.4.2.2 Language of Web Technical Support

The web site provided shall be bilingual in English and French, with the exception of archived questions and answers that may be retained in the language of the original correspondence.

4.5 Packaging

4.5.1 Individual Unit Packaging

Packaging used for individual RP-Ts or RD-Ts, delivered as spares or other than as sets for initial installation in a vehicle, shall be robust enough to support original shipment, warehousing, and at least one transfer shipment, while retaining the ability to re-use the shipping materials to ship equipment removed from service back to the Contractor for assessment and repair.

4.5.2 Vehicle Set Packaging

Packaging used for sets of RP-Ts and RD-Ts intended for installation in an individual vehicle, may differ from that used for individual items, at the Contractor's discretion; however, it shall still be robust enough to support original shipment, warehousing, and a transfer shipment to the location of the vendor performing system integration.

4.5.3 Warranty Return Packaging

Packaging for equipment returned to DND after warranty repair shall conform to the same standard as that for shipment of new equipment.

5 Government Furnished Information (GFI)

5.1 Disk Image

The Technical Authority will supply a disk image for installation on all SSDs.

The Crown reserves the right to update the disk image as systems are delivered until 60 days prior to the scheduled shipping date for any delivery.

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Appendix A1

Technical Specification

Rugged Processor – TAPV (RP-T)

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1 Introduction

This Appendix details the technical specifications of the rugged processor for the TAPV platform (RP-T) that will host the Land Command Support System (LCSS) software. The RP-T must be capable of processing and displaying input from the TAPV vehicle information system, the LCSS network, and from platform payloads / sensors that will be directly connected to the LCSS processor. It must be capable of running the LCSS software baseline in a highly responsive manner and be suitable for projected upgrades in the LCSS software that may be deployed in the next few (5 to 7) years.

The TAPV platform will be expected to operate in a diverse range of climates and environments around the world. The RP-T must be sufficiently robust and well designed to maintain command, control and communications operations wherever the vehicle is deployed. As a result the RP-T must meet a number of stringent performance criteria, demonstrated by testing against a range of Military Standards (MIL-STD) that will be outlined below.

1.1 Scope

The scope of this document includes all technical specifications and military standards that the RP-T will be required to meet in order to support current and anticipated future LCSS requirements. The technical specifications are listed in section 2.1 below. It should be noted that the technical specifications reference specific military standards for performance as detailed below and in the bid evaluation methodology.

1.2 Terminology

The term “operate normally” is used within this document to describe an ability for the offered RP-T to run the specified operating system, respond to operator interaction and load (from the included solid state disk drive) and execute programs; as evidenced, where required, by an ability to load and execute the Passmark® composite computational performance benchmark.

References to Passmark® performance benchmarks refer to values obtained when running version 8.0 of the Passmark® Performance Test benchmark suite on a system with an installation of the Microsoft® Windows 7 64 bit operating system.

2 Rugged Processor Requirements

The RP-T will be a rugged personal computer (PC) processor unit. The RP-T has the following requirements:

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2.1 Technical Specifications:

2.1.1 Central Processing Unit (CPU) and Processor Chipset

- 2.1.1.1 The CPU shall be an Intel® 64 bit series processor
- 2.1.1.2 The RP-T chipset shall be compatible with the RP-T CPU
- 2.1.1.3 The RP-T shall support the use of Error Correcting Code (ECC) compliant memory
- 2.1.1.4 The RP-T shall support Intel® Virtualization Technology (VT-x)
- 2.1.1.5 The RP-T shall support Intel® Virtual Technology for Directed Input/Output (VT-d)
- 2.1.1.6 The RP-T shall support Intel® Trusted Execution Technology (TxT)

2.1.2 Random Access Memory (RAM)

- 2.1.2.1 The RP-T shall have a minimum of 16.0 Gigabytes (GB) RAM, supporting Error Correction Coding (ECC)
- 2.1.2.2 The RP-T memory shall be installed in replaceable modules with a minimum of two module slots
- 2.1.2.3 The RP-T RAM should be expandable to a total of 32.0 GB of RAM
- 2.1.2.4 All RAM supplied shall be manufactured by an International Standards Organization (ISO) 9001 certified manufacturer.
- 2.1.2.5 All RAM modules supplied shall be assembled by an International Standards Organization (ISO) 9001 certified manufacturer.

2.1.3 Removable Solid State Drive (SSD) and Controller

- 2.1.3.1 The RP-T shall be equipped with a solid state disk drive (SSD) with a storage capacity of at least 200 gigabytes (GB)
- 2.1.3.2 The SSD shall be installed into the RP-T via an access door
- 2.1.3.3 The SSD shall be removable by the end user without need for tools, including operation of the access door
- 2.1.3.4 The SSD and controller shall conform to the Serial Advanced Technology Attachment (SATA) revision 2.6, 3.0, or 3.1 standard
- 2.1.3.5 The SSD and controller should conform to the Serial Advanced Technology Attachment (SATA) revision 3.0 or 3.1 standard

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2.1.3.6 The SSD and controller shall be Advanced Host Controller Interface (AHCI) compliant

2.1.3.7 The SSD and controller shall support TRIM commands

2.1.3.8 The SSD shall have a minimum Mean Time Between Failure (MTBF) rating of 1.2 million hours

2.1.4 Display Processor

2.1.4.1 The RP-T shall include a display processor capable of supporting two simultaneous displays with different content on each display

2.1.4.2 The RP-T display processor shall be capable of supporting different display resolutions on each display

2.1.4.3 The RP-T display processor shall be capable, at a minimum, of simultaneously supporting display resolutions of 1200 by 800 pixels on an interface compatible with an analogue VGA (video graphics adapter) monitor and 1280 by 1024 pixels on a secondary display, with both displays operating at a colour depth of 32 bits (Windows True Color).

2.1.4.4 The RP-T display processor should be capable of supporting one display at a resolution of 1200 by 800 pixels on an interface compatible with an analogue VGA monitor (with a colour depth of 32 bits), while simultaneously supporting on a second display, common display resolutions up to 1920 by 1200 pixels at a colour depth of 32 bits; specifically including intermediate resolutions of 1680 by 1050, 1600 by 1200 and 1920 by 1080 pixels

2.1.5 Video Acquisition System

2.1.5.1 The RT-P shall include a video acquisition system to support the digitizing, encoding and recording of full motion video from at least four (4) SMPTE 170 analogue video inputs (commonly referred to as RS 170 and RS 170A)

2.1.5.2 The video acquisition system shall support simultaneous digitization, encoding and recording of full motion video at NTSC (National Television System Committee) frame rates (nominally 29.97 Hz)

2.1.5.3 The video acquisition system shall support simultaneous digitization, encoding and recording of full motion video at selectable resolutions including, at a minimum those of 640 by 480 pixels and 320 by 240 pixels

2.1.5.4 The video acquisition system shall support simultaneous digitization, encoding and recording of full motion video (at full NTSC frame rates and a minimum resolution of 640 by 480 pixels) from two (2) video sources selected from any combination of video inputs

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- 2.1.5.5 The video acquisition system should support simultaneous digitization, encoding and recording of full motion video (at full NTSC frame rates and a minimum resolution of 640 by 480 pixels) from four (4) video sources
- 2.1.5.6 The video acquisition system shall support full motion video encoding in at least the H.264 (MPEG4 – part 10) format.
- 2.1.5.7 The video acquisition system should support the embedding of KLV (Key-Length-Value) metadata (computed and supplied by an external process) into the encoded video stream consistent with the formats and complexity specified within Motion Imagery Standards Board (MISB) standard 0604.5
- 2.1.5.8 The video acquisition system shall support simultaneous digitization and encoding of still images from two video sources selected from any combination of video inputs
- 2.1.5.9 The video acquisition system shall support still image video encoding in at least the JPEG (ISO/IEC 10918) and JPEG2000 (ISO/IEC 15444) formats
- 2.1.5.10 The video acquisition system shall support all required functionality, and any desirable functionality offered, under the specified operating system environment

2.1.6 Real Time Clock

- 2.1.6.1 The RP-T shall include a real time clock (time, day & date) compatible with the specified operating systems
- 2.1.6.2 The Real Time Clock (RTC) functions shall be battery-backed by an internal hold up battery
- 2.1.6.3 The RTC battery shall have a nominal life expectancy of greater than five (5) years at 20C.

2.1.7 Unified Extensible Firmware Interface – Basic Input/Output System

- 2.1.7.1 The RP-T boot management firmware shall comply with the Unified Extensible Firmware Interface (UEFI) specification 2.3 or later
- 2.1.7.2 The RP-T boot management firmware shall be stored in non-volatile memory
- 2.1.7.3 The RP-T boot management firmware shall be reprogrammable in-circuit through a software program compatible with the specified operating systems
- 2.1.7.4 The RP-T boot management firmware shall implement a password based protection scheme for accessing and making changes to the firmware settings
- 2.1.7.5 The RP-T boot management firmware should have a default password that is unique for each hardware unit

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2.1.7.6 The RP-T boot management firmware shall allow the option to boot from Universal Serial Bus (USB) devices

2.1.7.7 The RP-T boot management firmware shall be configured on shipment to boot from the included SSD prior to booting from an attached USB device

2.1.8 Operating System and Software

2.1.8.1 The RP-T shall be capable of installing and running the Microsoft® Windows 7 Professional 64 bit operating system as its native operating system.

2.1.8.2 The RP-T shall have available all required drivers and software libraries to provide application programming interfaces to configure, access and use (in normal operation) all functionality required for the RP-T under this requirement when the operating system installed is Windows 7 Professional (64 bit).

2.1.9 Information Assurance

2.1.9.1 The RP-T shall have an integrated Trusted Platform Module (TPM) conforming to the v1.2 (or newer) specification published by the Trusted Computing Group (TCG).

2.1.9.2 The RP-T shall support three security domains

2.1.9.3 Host controllers for external interfaces implemented on the RP-T shall not be shared between security domains.

2.1.10 External Interface Requirements by Security Domain

2.1.10.1 External Interface requirements for Domain 1 (Communications):

2.1.10.1.1 Within Domain 1 the RP-T shall include one Gigabit Ethernet (IEEE 802-3) port supporting auto-negotiation to lower speeds

2.1.10.1.2 Within Domain 1 the RP-T shall include at least two ports compliant with the electrical and electronic requirements of the USB v2.0 or v3.0 specification (excluding the connector type limitations)

2.1.10.2 External Interface requirements for Domain 2 (User):

2.1.10.2.1 Within Domain 2 the RP-T shall include one video graphics array (VGA) compatible analog video output

2.1.10.2.2 Within Domain 2 the RP-T shall include at least one additional video output conforming to the specifications of one of the VGA, DVI-I, DisplayPort v1.2, or HDMI standards

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- 2.1.10.2.3 Within Domain 2 the RP-T shall include at least two ports compliant with the electrical and electronic requirements of the USB v2.0 or v3.0 specification (excluding the connector type limitations)
- 2.1.10.2.4 Within Domain 2 the RP-T should include at least three ports compliant with the electrical and electronic requirements of the USB v2.0 or v3.0 specification (excluding the connector type limitations)
- 2.1.10.2.5 Within Domain 2 the RP-T shall include at least one RS 232 port
- 2.1.10.3 External Interface requirements for Domain 3 (Vehicle):
 - 2.1.10.3.1 Within Domain 3 the RP-T shall include at least two Gigabit Ethernet ports (IEEE 802-3) supporting auto-negotiation to lower speeds. These ports may be achieved through independent Ethernet controllers or through an Ethernet switch connected to a single Ethernet Port
 - 2.1.10.3.2 Within Domain 3 the RP-T should include at least two independent Gigabit Ethernet (IEEE 802-3) ports supporting auto-negotiation to lower speeds
 - 2.1.10.3.3 Within Domain 3 the RP-T shall include at least two ports compliant with the electrical and electronic requirements of the USB v2.0 or v3.0 specification (excluding the connector type limitations)
 - 2.1.10.3.4 Within Domain 3 the RP-T should include at least three ports compliant with the electrical and electronic requirements of the USB v2.0 or v3.0 specification (excluding the connector type limitations)
 - 2.1.10.3.5 Within Domain 3 the RP-T should include at least one ports compliant with the electrical and electronic requirements of the USB v3.0 specification (excluding the connector type limitations)
 - 2.1.10.3.6 Within Domain 3 the RP-T shall include at least four (4) SMPTE 170 analogue video inputs and the associated controllers to implement the required video acquisition system capabilities
 - 2.1.10.3.7 Within Domain 3 the RP-T shall include at least one serial data ports conforming to the RS 232 standard
 - 2.1.10.3.8 Within Domain 3 the RP-T shall include at least one serial data ports conforming to the RS 422 standard
 - 2.1.10.3.9 Within Domain 3 the RP-T should include at least one additional serial data port conforming to either the RS 422 or RS 232 standards

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2.1.10.3.10 Within Domain 3 the RP-T should support software configuration of all serial data ports between the RS 232 and RS 422 standard

2.1.10.3.11 Within Domain 3 the RP-T should include at least one stereo audio output capable of driving headphones and at least one microphone input

2.1.11 External Interface and Power Connectors

2.1.11.1 The power and external interface ports of the RP-T shall use sealed military standard connectors of the MIL-DTL-38999 series

2.1.11.2 The RP-T external interface connectors should not intermix connections associated with security Domain 3 with those of security Domains 1 and 2

2.1.12 System Performance

2.1.12.1 The RP-T shall provide a start up time of less than forty-five (45) seconds from application of power to the appearance of the Windows 7 login screen (when configured to require a login), when restarted after a full system shutdown.

2.1.12.2 The RP-T shall achieve a minimum composite computational performance score (CPU Mark) on the PassMark® benchmark of six thousand (6,000)

2.1.12.3 The RP-T shall achieve a minimum composite computational performance score (CPU Mark) on the PassMark® benchmark of four thousand five hundred (4,500) while the video acquisition system is digitizing, encoding and recording full motion video (at full NTSC frame rates and a resolution of 640 by 480 pixels) from two (2) video sources

2.1.12.4 The RP-T shall achieve a minimum composite 2D graphics performance score (2D Graphics Mark) on the PassMark® benchmark of four hundred (400)

2.1.12.5 The RP-T shall achieve a minimum composite 3D graphics performance score (3D Graphics Mark) on the PassMark® benchmark of three hundred and fifty (350)

2.1.12.6 The RP-T shall achieve a minimum speed of three hundred and fifty (350) megabytes per second (MB/s) on the Disk - Sequential Read performance test of the PassMark® benchmark

2.1.12.7 The RP-T shall achieve a minimum speed of one hundred (100) megabytes per second (MB/s) on the Disk - Sequential Write performance test of the PassMark® benchmark

2.1.12.8 The RP-T shall achieve a minimum speed of seven (7) megabytes per second (MB/s) on the Disk - Random Seek +RW performance test of the PassMark® benchmark

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2.1.13 Input Power and Power Management

- 2.1.13.1 The RP-T shall operate normally when receiving direct current (DC) power from a MIL-STD-1275D-compliant power source installed in the vehicle.
- 2.1.13.2 The RP-T shall not exceed a current draw of 4.0 Amperes (at 28.0 Volts DC(VDC)) if connected to power and operating normally
- 2.1.13.3 The RP-T should support version 2.0c (or more current) of the Advanced Configuration Power Interface (ACPI)
- 2.1.13.4 The RP-T should support a low latency ACPI sleep state (mode S1 or S2). If offered, the RP-T must not exceed a current draw of 0.75 Amperes (at 28.0 VDC) if connected to power and in a low latency sleep mode to be considered compliant
- 2.1.13.5 The RP-T should support a low power ACPI sleep state (mode S3 or S4). If offered, the RP-T must not exceed a current draw of 0.100 Amperes (at 28.0 VDC) if connected to power and in a low power sleep mode to be considered compliant
- 2.1.13.6 The RP-T should support return to the operating state (wake) from the low power ACPI state upon use of the bezel keys or touchscreen on the offered rugged display (RD-T) when connected in a mode that supports all other required functionality
- 2.1.13.7 The RP-T should support return to the operating state (wake) from the low latency sleep state upon use of the bezel keys or touchscreen on the offered rugged display (RD-T) when connected in a mode that supports all other required functionality
- 2.1.13.8 The RP-T should support return to the operating state (wake) from the low latency sleep state upon receipt of characters (touchscreen input) on the RS 232 interface included in domain 2
- 2.1.13.9 The RP-T should support return to the operating state (wake) from the low power sleep state upon receipt of characters (touchscreen input) on the RS 232 interface included in domain 2

2.1.14 Environmental Conditions

- 2.1.14.1 The RP-T shall operate normally after exposure to an altitude of up to 4572 m (15,000 feet) feet in accordance with: MIL-STD-810G, Method 500.5, Low Pressure (Altitude) Procedure I - Storage/Air Transport
- 2.1.14.2 The RP-T shall operate normally during and after exposure to an altitude of up to 4572 m (15,000 feet) in accordance with: MIL-STD-810G, Method 500.5 – Low Pressure (Altitude), Procedure II – Operation/Air Carriage

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- 2.1.14.3 The RP-T shall operate normally after exposure to a non-operational (storage) temperature range of -40C to +71C in accordance with: MIL-STD-810G, Method 501.5 – High Temperature, Procedure I – Storage, and Method 502.5 – Low Temperature, Procedure I – Storage
- 2.1.14.4 The RP-T shall commence operation within 15 minutes, during and after exposure to an operating ambient air temperature range of -40C in accordance with: MIL-STD-810G Method 502.5 – Low Temperature, Procedure II – Operation
- 2.1.14.5 The RP-T shall operate normally and sustain its rated computational throughput during and after exposure to an operating ambient air temperature of +52C in accordance with: MIL-STD-810G Method 501.5 – High Temperature, Procedure II – Operation
- 2.1.14.6 The RP-T should operate normally and sustain at least one-half of its rated computational throughput during and after exposure to an operating ambient air temperature of +60C in accordance with: MIL-STD-810G Method 501.5 – High Temperature, Procedure II – Operation.
- 2.1.14.7 The RP-T shall operate normally after a 15 minute exposure to dripping water in accordance with: MIL-STD-810G, Method 506.5 – Rain, Procedure III – Drip
- 2.1.14.8 The RP-T shall operate normally after exposure to temperature cycles of +30 °C to +60 °C at 95% RH in accordance with: MIL-STD-810G, Method 507.5 – Humidity, Procedure II - Aggravated Cycle
- 2.1.14.9 The RP-T shall operate normally during and after exposure to sand and dust in accordance with: MIL-STD-810G, Method 510.5 – Sand and Dust, Procedure I – Blowing Dust, and Procedure II – Blowing Sand
- 2.1.14.10 The RP-T shall operate normally during and after exposure to a vibration (operational) test environment in accordance with: MIL-STD-810G Method 514.6 – Vibration, Procedure I – General Vibration, Category 20 – Ground Vehicle – ground mobile, Figure 514.5C-3 – Composite wheeled vehicle vibration exposure
- 2.1.14.11 The RP-T shall operate normally during and after exposure to functional shock for ground equipment in accordance with: MIL-STD-810G Method 516.6 – Shock, Procedure I – Functional (in accordance with table 516.6-II)
- 2.1.14.12 The RP-T (same unit) shall operate normally after 26 drops of 122 cm in height on a 5 cm plywood sheet backed by concrete in accordance with: MIL-STD-810G, Method 516.6 Shock, Procedure IV – Transit Drop

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2.1.14.13 The RP-T shall not be damaged in any way and shall operate normally after exposure to a ballistic shock in accordance with: MIL-STD 810G Method 522.1 – Ballistic Shock, Procedure I – Ballistic Hull and Turret, Full Spectrum, Ballistic Shock Qualification

2.1.14.14 The RP-T shall operate normally during and after a freeze / thaw cycle including condensation in accordance with: MIL-STD-810G Method 524 – Freeze-Thaw, Procedure III - Rapid Temperature Change

2.1.14.15 The RP-T should operate normally after salt fog exposure in accordance with: MIL-STD-810G Method 509.5 – Salt Fog, Procedure I

2.1.15 Excluded Wireless Interfaces

2.1.15.1 The RP-T shall not include any wireless interfaces, including, but not limited to Bluetooth®, and IEEE 802.11 wireless LAN interfaces.

2.1.16 Dimensions

2.1.16.1 The space claim for the RP-T as defined by the sum of the length, height and depth of a flat sided, rectangular box shall not exceed nine hundred (900) mm

2.1.16.2 The space claim for the RP-T shall not require any single dimension of the length, height and depth of the bounding box defining the space claim to exceed five hundred and fifty (550) mm

2.1.16.3 The RP-T space claim shall include all clearances required to remove connectors

2.1.16.4 The RP-T space claim shall include all clearances required to allow the opening of the SSD access door sufficiently to remove the SSD

2.1.16.5 The RP-T space claim shall include all clearances required to allow for sufficient airflow

2.1.17 Case Characteristics

2.1.17.1 The RP-T case shall be finished with a chemical agent resistant coating (CARC – complying to MIL-DTL-53039D or MIL-DTL-64159B) and all production shall be finished with the same colour

2.1.17.2 The RP-T case colour shall be one chosen from the options of white, non-reflective tan, non-reflective olive drab green, or black

2.1.17.3 The RP-T case shall come with dust covers that seal the external interface connectors that are unused when a cable set with equivalent functionality to that defined for the bid sample is connected

2.1.17.4 The RP-T dust covers shall be attached to the RP-T with retention devices

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2.1.17.5 The RP-T dust cover retention devices should include provision for removal and re-installation through the use of a split-ring (or equivalent mechanism that does not require the use of tools)

2.1.18 Electromagnetic Interference and Compatibility

2.1.18.1 The RP-T shall not exceed the specified levels for conducted emissions via power input leads in accordance with MIL-STD-461F test procedure CE102 (Conducted Emissions, power leads, 10 kHz to 10 MHz) while operating normally

2.1.18.2 The RP-T shall operate normally and withstand signals coupled onto input power leads in accordance with MIL-STD-461F test procedure CS101 (Conducted Susceptibility, power leads, 30Hz-150kHz)

2.1.18.3 The RP-T shall operate normally and withstand RF signals coupled onto the RD-T associated cabling in accordance with MIL-STD-461F test procedure CS114 (Conducted Susceptibility, bulk cable injection, 10kHz-200MHz)

2.1.18.4 The RP-T shall operate normally and withstand RF signals coupled onto the RD-T associated cabling in accordance with MIL-STD-461F test procedure CS115 (Conducted Susceptibility, bulk cable injection, 30 Nanosecond Duration 5 AMP Peak Pulse, 30Hz)

2.1.18.5 The RP-T shall operate normally and withstand damped sinusoidal transients coupled onto the RD-T associated cables and power leads in accordance with MIL-STD-461F test procedure CS116 (Conducted Susceptibility, damped sinusoidal transients, cables and power leads, 10kHz-100MHz)

2.1.18.6 The RP-T shall not exceed the specified levels for electric field emissions from the RD-T and its supplied test cabling in accordance with MIL-STD-461F test procedure RE102 (Radiated Emissions, electrical field, 2MHz-18 GHz) as limited to an upper frequency limit of 10 GHz for Land Army applications

2.1.18.7 The RP-T with its supplied test cabling shall be able to withstand electric fields in accordance with MIL-STD-461F test procedure RS103 (Radiated Susceptibility, electric field, 2MHz–18GHz) for Land Army applications

2.1.19 Labels and Markings

2.1.19.1 The RP-T shall incorporate a descriptive label attached to the exterior surface of the unit

2.1.19.2 The RP-T label shall be designed to maintain readability over the service life of the item

2.1.19.3 The RP-T label shall contain, at a minimum, the following, Human Readable, information fields:

- a. Item Name (Computer, Digital)

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- b. NSN (NATO Stock Number) as assigned
- c. Contractor Code
- d. Contractor Part Number
- e. Serial Number

2.1.19.4 The RP-T label should include machine and human readable markings conforming to DAOD 3010-0, DAOD 3010-1 and NATO STANAG 2290

2.1.20 Emissions Security

2.1.20.1 The RD-T should meet TEMPEST requirements in accordance with CID/09/15A, with the RD-T operating in standalone mode for Level II electric-field radiated (ER) and Level I BLACK Line Conduction (BLC).

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Appendix A2

Technical Specification

Rugged Display – TAPV (RD-T)

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1 Introduction

This Appendix details the technical specifications of the rugged display for the TAPV platform (RD-T) that will allow one of the crew in the TAPV platform to interact with the Land Command Support System (LCSS) software. The RD-T will be positioned at one of two positions in the vehicle, depending on the role the vehicle is configured to support. At least one of the positions requires the display to be mounted on a movable mount so that the display can be “stowed” when not in use – allowing ingress and egress of other crew members through the space claim for the display when deployed. Available mounting positions are also relatively distant from the seating positions. These two constraints motivate having a large screen area while still maintaining a “compact” size and weight footprint. Primary user interaction is expected to be through the use of a touchscreen integrated into the display.

The TAPV platform will be expected to operate in a diverse range of climates and environments around the world. The RD-T must be sufficiently robust and well designed to maintain command, control and communications operations wherever the vehicle is deployed. As a result the RD-T must meet a number of stringent performance criteria, demonstrated by testing against a range of Military Standards (MIL-STD) that will be outlined below.

1.1 Scope

The scope of this document includes all technical specifications that the RD-T will be required to meet in order to support current and anticipated future LCSS requirements. The technical specifications are listed in section 2.1 below. It should be noted that the technical specifications reference specific military standards for performance as detailed below and in the bid evaluation methodology.

1.2 Terminology

The term “commence operation” is used within this document to describe the ability of the offered RD-T to:

- display an image from the selected video display input; as evidenced, where required, by the ability for a test observer to resolve at least eight (8) shades of gray in a test pattern providing thirty two (32) shades of gray (International Committee for Display Metrology SSW32 test pattern)
- exhibit normal functioning of the touchscreen, as evidenced by the ability of a test operator to open and close applications; and,
- exhibit normal functioning of the bezel buttons, as evidenced by generation of the appropriate key codes at the external interface when the associated button is depressed.

The term “operate normally” is used within this document to describe the ability of the offered RD-T to:

- display an image from the selected video display input, as evidenced, where required by the ability for a test observer to resolve at least 24 (24) shades of gray in a test pattern providing

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thirty two (32) shades of gray (International Committee for Display Metrology SSW32 test pattern);

- b. exhibit normal functioning of the touchscreen, as evidenced by the ability of a test operator to open and close applications; and,
- c. exhibit normal functioning of the bezel buttons, as evidenced by generation of the appropriate key codes at the external interface when the associated button is depressed.

2 Rugged Display Requirements

The RD-T will be a rugged computer display incorporating an integrated touchscreen for user interaction. The RD-T has the following requirements:

2.1 Technical Specifications:

2.1.1 Orientation

- 2.1.1.1 The RD-T shall be capable of being installed in a landscape orientation (where the display axis with the highest resolution is horizontal relative to the user sightline)
- 2.1.1.2 All integrated display functionality available in the RD-T (including, but not limited to, on-screen displays for display set-up) shall be configured for operation in the landscape orientation

2.1.2 Screen

- 2.1.2.1 The diagonal dimension of the viewable area of the RD-T screen shall be a minimum of 330 mm
- 2.1.2.2 The resolution of the RD-T display in the vertical dimension shall be not less than 768 pixels
- 2.1.2.3 The resolution of the RD-T display in the vertical dimension should be not less than 1024 pixels
- 2.1.2.4 The aspect ratio (ratio of the number of pixels in the horizontal dimension to the number in the vertical dimension, expressed as H:V) of the RD-T shall be one of 3:2, 5:4, 4:3, 16:10 or 16:9
- 2.1.2.5 The proportion of viewable to non-viewable area on the display, as expressed by the ratio of the display viewable area to the product of the case horizontal and vertical dimension shall be greater than 0.50

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2.1.3 Display Controls

- 2.1.3.1 The RD-T shall provide control capabilities to increase or decrease screen brightness that are continuously available through controls on the front face of the display
- 2.1.3.2 The RD-T shall provide a power control to enable and disable operation of the display. This may be a mechanical switch or a low power, electronically monitored (“soft”) power switch at the discretion of the Contractor
- 2.1.3.3 The RD-T power control shall be continuously available on the front face of the display
- 2.1.3.4 The RD-T shall provide control capabilities to select the input source to be displayed that are continuously available through controls on the front face of the display

2.1.4 User Interaction Capabilities

- 2.1.4.1 The RD-T shall integrate a pressure-sensitive touch screen overlay on the viewable display surface functioning as a human computer interface device
- 2.1.4.2 The RD-T touchscreen and associated drivers and software shall support functionality equivalent to emulation of a two button mouse including, at a minimum, cursor position selection, cursor movement, and functions equivalent to both left and right single click mouse actions; or, support multi-touch functionality through the Microsoft Windows WM_TOUCH application programming interface (API)(or alternate API with equivalent functionality)
- 2.1.4.3 The RD-T touchscreen and associated drivers and software should support multi-touch functionality through the Microsoft Windows WM_TOUCH API (or alternate API with equivalent functionality)
- 2.1.4.4 The RD-T shall provide capabilities to calibrate the touchscreen
- 2.1.4.5 The RD-T calibration procedure shall not require more than sixty(60) seconds to complete allowing two (2) seconds for each operator action required
- 2.1.4.6 The RD-T shall provide at least eight (8) front panel controls (bezel buttons) that generate key codes or key code sequences that can be interpreted by application software in the manner of function keys on a PC keyboard

2.1.5 Display Brightness, Contrast and Image Fidelity

- 2.1.5.1 The RD-T display panel shall be capable of a display luminance (brightness) of at least 500 nits
- 2.1.5.2 The RD-T shall be capable of a contrast ratio of at least 50:1 while adjusted to meet or exceed a white luminance of 500 nits

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- 2.1.5.3 The RD-T display panel shall be designed to support not less than 18 bit video data (corresponding to 262,144 colours)
- 2.1.5.4 The RD-T display shall support a refresh rate of 60 Hz or greater
- 2.1.5.5 The RD-T should support selection of a night vision (NVIS) mode in which the maximum display brightness is limited to a value less than 6 nits. To qualify the RD-T must maintain an ability for a test observer to resolve at least eight (8) shades of gray in a test pattern providing thirty two (32) shades of gray (International Committee for Display Metrology SSW32 test pattern) when the NVIS mode is enabled

2.1.6 Display Start Up Time

- 2.1.6.1 The RD-T shall not require more than 30 seconds to commence operation from power application at required temperature ranges above 0C
- 2.1.6.2 The RD-T should not require more than five (5) minutes to commence operation from power application at required temperature ranges above -20C

2.1.7 Operating System Compatibility

- 2.1.7.1 The RD-T software shall include support for all required functionality in both the Microsoft® Windows 8 Professional 64 bit or Microsoft® Windows 7 Professional 64 bit operating system environments

2.1.8 External Interfaces

- 2.1.8.1 The RD-T shall implement a minimum of two selectable display interfaces, each conforming to one of the VGA, DVI-I, DisplayPort v1.2, or HDMI standards
- 2.1.8.2 The RD-T should implement at least one SMPTE 170 video input as a selectable display source
- 2.1.8.3 The RD-T shall include a digital data interface and support touchscreen and front panel control (bezel/function button) interaction over that interface
- 2.1.8.4 The RD-T should support a minimum of two digital data interfaces supporting touchscreen and front panel control (bezel/function button) interaction with activation linked to the selection of the selectable display interface – in the manner of a keyboard, video and mouse (KVM) switch
- 2.1.8.5 The RD-T digital data interfaces (supporting user interaction) shall conform to one of the RS 232, USB V2.0, or USB V3.0 standards
- 2.1.8.6 The RD-T shall implement a display interface and digital data interface that is compatible with the RP-T offered by the Contractor

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2.1.9 Input Power

- 2.1.9.1 The RD-T shall operate normally when receiving direct current (DC) power from a MIL-STD-1275D-compliant power source installed in the vehicle.
- 2.1.9.2 The RD-T shall not draw more than 0.020 Amperes (20 mA) of current at 28 Volts DC (VDC) when the display operation is disabled

2.1.10 External Interface and Power Connectors

- 2.1.10.1 The power and external interface ports of the RD-T shall use sealed military standard connectors of the MIL-DTL-38999 series

2.1.11 Environmental Conditions

- 2.1.11.1 The RD-T shall operate normally after exposure to an altitude of up to 4572 m (15,000 feet) in accordance with: MIL-STD-810G, Method 500.5, Low Pressure (Altitude) Procedure I - Storage/Air Transport
- 2.1.11.2 The RD-T shall operate normally during and after exposure to an altitude of up to 4572 m (15,000 feet) in accordance with: MIL-STD-810G, Method 500.5 – Low Pressure (Altitude), Procedure II – Operation/Air Carriage
- 2.1.11.3 The RD-T shall operate normally after exposure to a non-operational (storage) temperature range of -40C to +71C in accordance with: MIL-STD-810G, Method 501.5 – High Temperature, Procedure I – Storage, and Method 502.5 – Low Temperature, Procedure I – Storage
- 2.1.11.4 The RD-T shall commence operation within fifteen (15) minutes, during and after exposure to an operating ambient air temperature range of -40C in accordance with: MIL-STD-810G Method 502.5 – Low Temperature, Procedure II – Operation
- 2.1.11.5 The RD-T shall operate normally during and after exposure to an operating ambient air temperature of +52C in accordance with: MIL-STD-810G Method 501.5 – High Temperature, Procedure II – Operation
- 2.1.11.6 The RD-T should operate normally during and after exposure to an operating ambient air temperature of +60C in accordance with: MIL-STD-810G Method 501.5 – High Temperature, Procedure II – Operation
- 2.1.11.7 The RD-T shall operate normally after a 15 minute exposure to dripping water in accordance with: MIL-STD-810G, Method 506.5 – Rain, Procedure III – Drip

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2.1.11.8 The RD-T shall operate normally after exposure to temperature cycles of +30 °C to +60 °C at 95% RH in accordance with: MIL-STD-810G, Method 507.5 – Humidity, Procedure II - Aggravated Cycle

2.1.11.9 The RD-T shall operate normally during and after exposure to sand and dust in accordance with: MIL-STD-810G, Method 510.5 – Sand and Dust, Procedure I – Blowing Dust, and Procedure II – Blowing Sand

2.1.11.10 The RD-T shall operate normally during and after exposure to a vibration (operational) test environment in accordance with: MIL-STD-810G Method 514.6 – Vibration, Procedure I – General Vibration, Category 20 – Ground Vehicle – ground mobile, Figure 514.5C-3 – Composite wheeled vehicle vibration exposure

2.1.11.11 The RD-T shall operate normally during and after exposure to functional shock for ground equipment in accordance with: MIL-STD-810G Method 516.6 – Shock, Procedure I – Functional (in accordance with table 516.6-II)

2.1.11.12 The RD-T (same unit) shall operate normally after 26 drops of 122 cm in height onto a 5 cm plywood sheet backed by concrete in accordance with: MIL-STD-810G, Method 516.6 Shock, Procedure IV – Transit Drop

2.1.11.13 The RD-T shall not be damaged in any way and shall operate normally after exposure to a ballistic shock in accordance with: MIL-STD 810G Method 522.1 – Ballistic Shock, Procedure I – Ballistic Hull and Turret , Full Spectrum, Ballistic Shock Qualification

2.1.11.14 The RD-T shall operate normally during and after a freeze / thaw cycle including condensation in accordance with: MIL-STD-810G Method 524 – Freeze-Thaw, Procedure III - Rapid Temperature Change

2.1.11.15 The RD-T should operate normally after salt fog exposure in accordance with: MIL-STD-810G Method 509.5 – Salt Fog, Procedure I

2.1.12 Excluded Wireless Interfaces

2.1.12.1 The RD-T shall not include any wireless interfaces, including, but not limited to Bluetooth®, and IEEE 802.11 wireless local area network (LAN) interfaces.

2.1.13 Dimensions and Weight

2.1.13.1 The space claim for the RD-T shall not exceed a width of 425 mm, a height of 320 mm, and a depth of 155 mm with all connectors and cabling attached that are required to connect the RD-T with the RP-T offered by the Contractor

2.1.13.2 No additional space shall be required at the rear or sides of the display to provide for sufficient airflow for cooling

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2.1.13.3 The RD-T shall weigh less than 8.0 Kg

2.1.14 Case Characteristics

2.1.14.1 The RD-T case shall be finished with a chemical agent resistant coating (CARC– complying to MIL-DTL-53039D or MIL-DTL-64159B) and all production shall be finished with the same colour

2.1.14.2 The RD-T case finish shall be non-reflective

2.1.14.3 The RD-T case finish colour shall be one chosen from the options of tan, olive-drab green, or black

2.1.14.4 The RD-T case shall come with dust covers that seal external interface connectors that are unused when the RD-T is connected to the RP-T offered by the Contractor

2.1.14.5 The RD-T dust covers shall be attached to the RD-T with retention devices

2.1.14.6 The RD-T dust cover retention devices should include provision for removal and re-installation through the use of a split-ring (or equivalent mechanism that does not require the use of tools)

2.1.15 Electromagnetic Interference and Compatibility

2.1.15.1 The RD-T shall not exceed the specified levels for conducted emissions via power input leads in accordance with MIL-STD-461F test procedure CE102 (Conducted Emissions, power leads, 10 kHz to 10 MHz) while operating normally

2.1.15.2 The RD-T shall operate normally and withstand signals coupled onto input power leads in accordance with MIL-STD-461F test procedure CS101 (Conducted Susceptibility, power leads, 30Hz-150kHz)

2.1.15.3 The RD-T shall operate normally and withstand RF signals coupled onto the RD-T associated cabling in accordance with MIL-STD-461F test procedure CS114 (Conducted Susceptibility, bulk cable injection, 10kHz-200MHz)

2.1.15.4 The RD-T shall operate normally and withstand RF signals coupled onto the RD-T associated cabling in accordance with MIL-STD-461F test procedure CS115 (Conducted Susceptibility, bulk cable injection, 30 Nanosecond Duration 5 AMP Peak Pulse, 30Hz)

2.1.15.5 The RD-T shall operate normally and withstand damped sinusoidal transients coupled onto the RD-T associated cables and power leads in accordance with MIL-STD-461F test procedure CS116 (Conducted Susceptibility, damped sinusoidal transients, cables and power leads, 10kHz-100MHz)

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2.1.15.6 The RD-T shall not exceed the specified levels for electric field emissions from the RD-T and its supplied test cabling in accordance with MIL-STD-461F test procedure RE102 (Radiated Emissions, electrical field, 2MHz-18 GHz) as limited to an upper frequency limit of 10 GHz for Land Army applications

2.1.15.7 The RD-T with its supplied test cabling shall be able to withstand electric fields in accordance with MIL-STD-461F test procedure RS103 (Radiated Susceptibility, electric field, 2MHz–18GHz) for Land Army applications

2.1.16 Labels and Markings

2.1.16.1 The RD-T shall incorporate a descriptive label attached to an exterior surface of the unit, on one of the rear or side surfaces

2.1.16.2 The RD-T label shall be designed to maintain readability over the service life of the item

2.1.16.3 The RD-T label shall contain, at a minimum, the following, Human Readable, information fields:

- a. Item Name
- b. NSN (NATO Stock Number) as assigned
- c. Contractor Code
- d. Contractor Part Number
- e. Serial Number

2.1.16.4 The RD-T label should include machine and human readable markings conforming to DAOD 3010-0, DAOD 3010-1 and NATO STANAG 2290

2.1.17 Emissions Security

2.1.17.1 The RD-T should meet TEMPEST requirements in accordance with CID/09/15A, with the RD-T operating in standalone mode under Electric Field Radiated - Level III and Black Line Conduction - Level I requirements.

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Appendix A3

Acronyms and Terminology

Rugged Processor and Rugged Display (RP-T and RD-T)

for the

Tactical Armoured Patrol Vehicle Project (TAPV)

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ACPI	Advanced Configuration Power Interface
AHCI	Advanced Host Controller Interface
AMP	Ampere
API	Application Programming Interface
AWG	American Wire Gauge
BFC	Base des Forces canadiennes
CFB	Canadian Forces Base
C	Celsius (temperature)
CA	Contract Award
CAGE	Commercial and Government Entity
CARC	Chemical Agent Resistant Coating
CDRL	Contract Data Requirements List
CEPA	Canadian Environmental Protection Act
CID	Canadian Interdepartmental Document
CPU	Central Processing Unit
DAOD	Defence Administrative Orders and Directives
DC	Direct Current
DID	Data Item Descriptions
DLCSPM	Directorate of Land Command Support Project Management
DND	Department of National Defence
DVD	Digital Versatile Disc
DVI-I	Digital Visual Interface - Integrated
ECC	Error Correcting Code
EEA	Equipment Environmental Assessment
EMI	Electromagnetic Interference
EMS	Environmental Management System
GB	Gigabyte
GHz	Gigahertz
HDMI	High-Definition Multimedia Interface
Hz	Hertz
ICD	Interface Control Document
ICDM	International Committee for Display Metrology
ICES	Interference-Causing Equipment Standard
IDMS	Information Display Measurement Standards
IEEE	Institute of Electrical and Electronics Engineers
ISO	International Standards Organization
JPEG	Joint Photographic Experts Group
Kg	kilogram
kHz	kilohertz
KVM	Keyboard Video Mouse
LAN	Local Area Network

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LCSS	Land Command Support System
LRU	Line replaceable unit
m	metre
mA	milliampere
MB	Megabyte
MDS	Master Delivery Summary
MHz	Megahertz
MIL-STD	Military Standard
MJPEG	Motion JPEG
mm	millimetre
MPEG	Moving Picture Experts Group
MTBF	Mean Time Between Failure
NATO	North Atlantic Treaty Organization
NSA	National Security Agency
NSCM	National Supply Code for Manufacturers
NSN	NATO Stock Number
NTSC	National Television System Committee
NVIS	Night Vision Imaging Spectrometer
OEM	Original Equipment Manufacturer
OHSAS	Occupational Health and Safety Advisory Services
OHSMS	Occupational Health and Safety Management System
OPI	Office of Principal Interest
OS	Operating System
PC	Personal Computer
PCBs	Polychlorinated Biphenyls
PDF	Portable Document Format
PPE	Personal Protective Equipment
RAM	Random Access Memory
RD-T	Rugged Display - TAPV
RJ	Registered Jack
RP-T	Rugged Processor - TAPV
RS	Recommended Standard (Electronic Industries Association)
RTC	Real Time Clock
SATA	Serial Advanced Technology Attachment
SID	Society for Information Display
SMPTE	Society of Motion Picture and Television Engineers
SOW	Statement of Work
STANAG	Standardization Agreement
SSD	Solid State Drive
TA	Technical Authority
TAPV	Tactical Armoured Patrol Vehicle

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TCG	Trusted Computing Group
TPM	Trusted Platform Module
TS	Technical Specification
TxT	Trusted Execution Technology
UEFI	Unified Extensible Firmware Interface
USB	Universal Serial Bus
v, V	Version
VDC	Volts Direct Current
VGA	Video Graphics Adapter
VT-d	Virtual Technology for Directed Input/Output
VT-x	Virtualization Technology

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Annex B Deliverables

List of Contract Deliverables
Table B-1

Line Item No.	Description	Ref.	Qty	Unit of Issue	Delivery Location	Delivery Date (no later than)	Unit / Lot Price	Extended Price
1	Mounting and Installation Documentation for the RP-T and RD-T	SOW, Para. 4.2.1	1	Lot	TA, CA	1 Month After Contract Award (MACA)		
2	External Interface Control Documentations (ICDs) for the RP-T and RD-T	SOW, Para. 4.2.2	1	Lot	TA, CA	1 MACA		
3	Software Interface Control Documentations (ICDs) for the RP-T and RD-T	SOW, Para. 4.2.3	1	Lot	TA, CA	1 MACA		
4	Equipment Set for System Integration Testing: <ul style="list-style-type: none"> Three (3) RP-Ts including SSDs pre-loaded with OS and drivers; One (1) RD-T. 	SOW, Para. 3.2	3	Each	Ottawa, ON	3 MACA		
5	Service and Operator Manuals for the RP-T and RD-T	SOW, Para. 4.2.4	1	Lot	TA, CA	Draft – 4 MACA Final – 6 MACA		
6	Initial On-Site Technical Support <ul style="list-style-type: none"> Two (2) senior software specialists for three (3) days 	SOW, Para. 4.4.1	1	Lot	Ottawa, ON	4 MACA		
7	Maintenance Training Material	SOW, Para. 4.3.1	1	Lot	TA, CA	Draft – 4 MACA Final – 9 MACA		
8	Maintenance Training	SOW, Para. 4.3.2	1	Each	Contractor facility	8 MACA		

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Line Item No.	Description	Ref.	Qty	Unit of Issue	Delivery Location	Delivery Date (no later than)	Unit / Lot Price	Extended Price
9	Vehicle Equipment Set for the TAPVs: <ul style="list-style-type: none"> Three (3) RP-Ts including SSDs pre-loaded with government furnished disk image; and One (1) RD-T. 	SOW, Para. 3.1	500	Each	Edmonton AB	See delivery schedule below (Table B-3)		
10	Initial Spares Inventory: <ul style="list-style-type: none"> Six (6) RP-Ts excluding the SSD; Six (6) RD-Ts; and Six (6) SSDs pre-loaded with government furnished disk image. 	SOW, Para. 3.4.1	1	Lot	Edmonton AB	30 September 2014		
							TOTAL	

List of Optional Deliverables
Table B-2

Line Item No.	Description	Ref.	Qty	Unit of Issue	Delivery Location	Delivery Date	Unit Price or Lot Price	
							Contract Award – 31 March 2015	1 April 2015 – 31 March 2016
1	Vehicle Equipment Set: <ul style="list-style-type: none"> Three (3) RP-Ts including SSDs pre-loaded with government furnished disk image; and One (1) RD-T. 	SOW, Para. 3.3	1 to 100	Each	Edmonton, AB	TBD		
2	Spare RP-T (excluding the SSD)	SOW, Para. 3.4.2	1 to 180	Each	Edmonton, AB	TBD		
3	Spare RD-T	SOW, Para. 3.4.2	1 to 120	Each	Edmonton, AB	TBD		
4	Spare SSD pre-loaded with government furnished disk image	SOW, Para. 3.4.2	1 to 180	Each	Edmonton, AB	TBD		

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5	Additional 1-year Hardware Maintenance Support and Warranty for the 500 Vehicle Equipment Sets	SOW, Para 4.1.3	1	Lot	N/A	TBD		
6	Additional 1-year Hardware Maintenance Support and Warranty for up to 100 optional Vehicle Equipment Sets	SOW, Para 4.1.3	1 to 100	Each	N/A	TBD		

Vehicle Equipment Set Delivery Schedule
Table B-3

Shipment	Qty	Delivery Location	Scheduled Delivery
1	30	Edmonton, AB	30 June 2014
2	30	Edmonton, AB	31 July 2014
3	30	Edmonton, AB	31 August 2014
4	30	Edmonton, AB	30 September 2014
5	30	Edmonton, AB	31 October 2014
6	30	Edmonton, AB	30 December 2014
7	30	Edmonton, AB	31 January 2015
8	30	Edmonton, AB	28 February 2015
9	30	Edmonton, AB	31 March 2015
10	30	Edmonton, AB	30 April 2015
11	30	Edmonton, AB	31 May 2015
12	30	Edmonton, AB	30 June 2015
13	30	Edmonton, AB	31 July 2015
14	30	Edmonton, AB	31 August 2015
15	30	Edmonton, AB	30 September 2015
16	30	Edmonton, AB	31 October 2015
17	20	Edmonton, AB	30 November 2015

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Annex C

Technical Evaluation

of the
Rugged Processor and Rugged Display (RP-T ad RD-T)
for the
Tactical Armoured Patrol Vehicle (TAPV)

Appendix C1: Rugged Processor (RP-T) Mandatory Requirements

Reference	Descriptions	Means of Compliance	Instruction to bidders	Bid Sample Test Procedure
Appendix A1	Technical Specifications			
2.1	Central Processing Unit (CPU) and Processor Chipset			
2.1.1				
2.1.1.1	The CPU shall be an Intel® 64 bit series processor	Bid Sample	Bidders shall provide a bid sample representative of the equipment offered	DND will confirm processor type by use of operating system application
2.1.1.2	The RP-T chipset shall be compatible with the RP-T CPU	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.1.3	The RP-T shall support the use of Error Correcting Code (ECC) compliant memory	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.1.4	The RP-T shall support Intel® Virtualization Technology (VT-x)	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.1.5	The RP-T shall support Intel® Virtual Technology for Directed Input/Output (VT-d)	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.1.6	The RP-T shall support Intel® Trusted Execution Technology (TxT)	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.2	Random Access Memory (RAM)			
2.1.2.1	The RP-T shall have a minimum of 16.0 Gigabytes (GB) RAM, supporting Error Correction Coding (ECC)	Bid Sample	Bidders shall provide a bid sample representative of the equipment offered	DND will confirm reported memory by use of operating system application
2.1.2.2	The RP-T memory shall be installed in replaceable modules with a minimum of two module slots	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.2.4	All RAM supplied shall be manufactured by an International Standards Organization (ISO) 9001 certified manufacturer.	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.2.5	All RAM modules supplied shall be assembled by an International Standards Organization (ISO) 9001 certified manufacturer.	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.3	Removable Solid State Drive (SSD) and Controller			
2.1.3.1	The RP-T shall be equipped with a solid state disk drive (SSD) with a storage capacity of at least 200 gigabytes (GB)	Bid Sample	Bidders shall provide a bid sample representative of the equipment offered	DND will confirm reported disk space by use of operating system application
2.1.3.2	The SSD shall be installed into the RP-T via an access door	Bid Sample	Bidders shall provide a bid sample representative of the equipment offered	DND will confirm compliance through disk removal and replacement exercise
2.1.3.3	The SSD shall be removable by the end user without need for tools, including operation of the access door	Bid Sample	Bidders shall provide a bid sample representative of the equipment offered	DND will confirm compliance through disk removal and replacement exercise
2.1.3.4	The SSD and controller shall conform to the Serial Advanced Technology Attachment (SATA) revision 2.6, 3.0, or 3.1 standard	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.3.6	The SSD and controller shall be Advanced Host Controller Interface (AHCI) compliant	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.3.7	The SSD and controller shall support TRIM commands	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.3.8	The SSD shall have a minimum Mean Time Between Failure (MTBF) of 1.2 million hours	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.4	Display Processor			
2.1.4.1	The RP-T shall include a display processor capable of providing two simultaneous displays with different content on each display	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.4.2	The RP-T display processor shall be capable of supporting different display resolutions on each display	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A

Reference	Descriptions	Means of Compliance	Instruction to bidders	Bid Sample Test Procedure
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2.1.4.3	The RP-T display processor shall be capable, at a minimum, of simultaneously supporting display resolutions of 1200 by 800 pixels on an interface compatible with an analogue VGA (video graphics adapter) monitor and 1280 by 1024 pixels on a secondary display, with both displays operating at a colour depth of 32 bits (Windows True Color).	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.5	Video Acquisition System			
2.1.5.1	The RP-T shall include a video acquisition system to support the digitizing, encoding and recording of full motion video from at least four (4) SMPTE 170 analogue video inputs (commonly referred to as RS 170 and RS 170A)	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.5.2	The video acquisition system shall support simultaneous digitization, encoding and recording of full motion video at NTSC (National Television System Committee) frame rates (nominally 29.97 Hz)	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.5.3	The video acquisition system shall support simultaneous digitization, encoding and recording of full motion video at selectable resolutions including, at a minimum those of 640 by 480 pixels and 320 by 240 pixels	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.5.4	The video acquisition system shall support simultaneous digitization, encoding and recording of full motion video (at full NTSC frame rates and a minimum resolution of 640 by 480 pixels) from two (2) video sources selected from any combination of video inputs	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.5.6	The video acquisition system shall support full motion video encoding in at least the H.264 (MPEG4 – part 10) format.	Bid Sample	Bidders shall provide a bid sample representative of the equipment offered. Bid sample shall include a software utility to digitize and record video in the H.264 format at a resolution of 640 by 480 pixels from two RS170 sources simultaneously at NTSC frame rates (nominally 29.97 Hz). Documentation sufficient to execute the utility shall be provided.	DND will confirm compliance by execution of supplied utility and inspection of resulting files for conformance to specification.
2.1.5.8	The video acquisition system shall support simultaneous digitization and encoding of still images from two video sources selected from any combination of video inputs	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.5.9	The video acquisition system shall support still image video encoding in at least the JPEG (ISO/IEC 10918) and JPEG2000 (ISO/IEC 15444) formats	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.5.10	The video acquisition system shall support all required functionality under the specified operating system environment	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.6	Real Time Clock			
2.1.6.1	The RP-T shall include a real time clock (time, day & date) compatible with the specified operating systems	Bid Sample	Bidders shall provide a bid sample representative of the equipment offered	DND will confirm real time clock functionality by using operating system utilities validating time holdover while the system is disconnected from power

Reference	Descriptions	Means of Compliance	Instruction to bidders	Bid Sample Test Procedure
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2.1.6.2	The Real Time Clock (RTC) functions shall be battery-backed by an internal hold up battery.	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.6.3	The RTC battery shall have a nominal life expectancy of greater than five (5) years at 20C.	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.7	Unified Extensible Firmware Interface – Basic Input/Output System			
2.1.7.1	The RP-T boot management firmware shall comply with the Unified Extensible Firmware Interface (UEFI) specification 2.3 or later	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.7.2	The RP-T boot management firmware shall be stored in non-volatile memory	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.7.3	The RP-T boot management firmware shall be reprogrammable in-circuit through a software program compatible with the specified operating systems	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.7.4	The RP-T boot management firmware shall implement a password based protection scheme for accessing and making changes to the BIOS settings	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.7.6	The RP-T boot management firmware shall allow the option to boot from Universal Serial Bus (USB) devices	Bid Sample	Bidders shall provide a bid sample representative of the equipment offered	DND will confirm functionality by successful boot from USB connected hard disk drive conforming to USB v2.0 specification containing a bootable image.
2.1.7.7	The RP-T boot management firmware shall be configured on shipment to boot from the included SSD prior to booting from an attached USB device	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.8	Operating System and Software			
2.1.8.1	The RP-T shall be capable of installing and running the Microsoft® Windows 7 Professional 64 bit operating system as its native operating system.	Bid Sample	Bidders shall provide a bid sample representative of the equipment offered	N/A
2.1.8.2	The RP-T shall have available all required drivers and software libraries to provide application programming interfaces to configure, access and use (in normal operation) all functionality required for the RP-T under this requirement when the operating system installed is Windows 7 Professional (64 bit).	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.9	Information Assurance			
2.1.9.1	The RP-T shall have an integrated Trusted Platform Module (TPM) conforming to the v1.2 (or newer) specification published by the Trusted Computing Group (TCG).	Bid Sample	Bidders shall provide a bid sample representative of the equipment offered	DND will confirm presence and version by use of the operating system device manager utility
2.1.9.2	The RP-T shall support three security domains	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.9.3	Host controllers for external interfaces implemented on the RP-T shall not be shared between security domains.	Supporting Data	Bidders shall provide documentation/data to demonstrate compliance with this requirement. Bidder shall provide design documentation (detailed block diagram, or equivalent) showing interface controllers included and their associated external connections. Documentation shall identify at least one controller allocation plan that complies with the requirement.	N/A

Reference Appendix A1	Descriptions	Means of Compliance	Instruction to bidders	Bid Sample Test Procedure
2.1.10	External Interface Requirements by Security Domain			
2.1.10.1.1	Within Domain 1 the RP-T shall include one Gigabit Ethernet (IEEE 802-3) port supporting auto-negotiation to lower speeds	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.10.1.2	Within Domain 1 the RP-T shall include at least two ports compliant with the electrical and electronic requirements of the USB v2.0 or v3.0 specification (excluding the connector type limitations)	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.10.2.1	Within Domain 2 the RP-T shall include one video graphics array (VGA) compatible analog video output	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.10.2.2	Within Domain 2 the RP-T shall include at least one additional video output conforming to the specifications of one of the VGA, DVI-I, DisplayPort v1.2, or HDMI standards	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.10.2.3	Within Domain 2 the RP-T shall include at least two ports compliant with the electrical and electronic requirements of the USB v2.0 or v3.0 specification (excluding the connector type limitations)	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.10.2.5	Within Domain 2 the RP-T shall at least include one RS 232 port	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.10.3.1	2.1.10.3.1 Within Domain 3 the RP-T shall include at least two Gigabit Ethernet ports (IEEE 802-3) supporting auto-negotiation to lower speeds. These ports may be achieved through independent Ethernet controllers or through an Ethernet switch connected to a single Ethernet Port	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.10.3.3	Within Domain 3 the RP-T shall include at least two ports compliant with the electrical and electronic requirements of the USB v2.0 or v3.0 specification (excluding the connector type limitations)	Bid Sample	Bidders shall provide a bid sample representative of the equipment offered	DND will confirm functionality by successful file access from a USB connected hard disk drive conforming to USB v2.0 specification on one port while a second port is simultaneously connected to a USB2.0 compliant hub connected to a keyboard and mouse. USB drive and hub will be powered solely from the ports
2.1.10.3.6	Within Domain 3 the RP-T shall include at least four (4) SMPTE 170 analogue video inputs and the associated controllers to implement the required video acquisition system capabilities	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.10.3.7	Within Domain 3 the RP-T shall include at least one serial data ports conforming to the RS 232 standard	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.10.3.8	2.1.10.3.8 Within Domain 3 the RP-T shall include at least one serial data ports conforming to the RS 422 standard	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.11	External Interface and Power Connectors			
2.1.11.1	The power and external interface ports of the RP-T shall use sealed military standard connectors of the MIL-DTL-38999 series	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A

Reference	Descriptions	Means of Compliance	Instruction to bidders	Bid Sample Test Procedure
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2.1.12	System Performance			
2.1.12.1	The RP- T shall provide a start up time of less than 45 seconds from application of power to the appearance of the Windows 7 login screen (when configured to require a login), when restarted after a full system shutdown.	Bid Sample	Bidders shall provide a bid sample representative of the equipment offered	DND will repeat timed measurements three times with results averaged.
2.1.12.2	The RP- T shall achieve a minimum composite computational performance score (CPU Mark) on the PassMark® benchmark of six thousand (6,000)	Bid Sample	Bidders shall provide a bid sample representative of the equipment offered	DND will repeat Benchmark measurement three times with results averaged.
2.1.12.3	The RP- T shall achieve a minimum composite computational performance score (CPU Mark) on the PassMark® benchmark of four thousand five hundred (4,500) while the video acquisition system is digitizing, encoding and recording full motion video (at full NTSC frame rates and a resolution of 640 by 480 pixels) from two (2) video sources	Bid Sample	Bidders shall provide a bid sample representative of the equipment offered	DND will repeat Benchmark measurement three times with results averaged. DND will conduct Benchmark measurement simultaneously with execution of the video acquisition utility noted in clause 2.1.5.6
2.1.12.4	The RP- T shall achieve a minimum composite 2D graphics performance score (2D Graphics Mark) on the PassMark® benchmark of four hundred (400)	Bid Sample	Bidders shall provide a bid sample representative of the equipment offered	DND will repeat Benchmark measurement three times with results averaged.
2.1.12.5	The RP- T shall achieve a minimum composite 3D graphics performance score (3D Graphics Mark) on the PassMark® benchmark of three hundred and fifty (350)	Bid Sample	Bidders shall provide a bid sample representative of the equipment offered	DND will repeat Benchmark measurement three times with results averaged.
2.1.12.6	The RP- T shall achieve a minimum speed of three hundred and fifty (350) megabytes per second (MB/s) on the Disk - Sequential Read performance test of the PassMark® benchmark	Bid Sample	Bidders shall provide a bid sample representative of the equipment offered	DND will repeat Benchmark measurement three times with results averaged.
2.1.12.7	The RP- T shall achieve a minimum speed of one hundred (100) megabytes per second (MB/s) on the Disk - Sequential Write performance test of the PassMark® benchmark	Bid Sample	Bidders shall provide a bid sample representative of the equipment offered	DND will repeat Benchmark measurement three times with results averaged.
2.1.12.8	The RP- T shall achieve a minimum speed of seven (7) megabytes per second (MB/s) on the Disk - Random Seek +RW performance test of the PassMark® benchmark	Bid Sample	Bidders shall provide a bid sample representative of the equipment offered	DND will repeat Benchmark measurement three time with results averaged.
2.1.13	Input Power and Power Management			
2.1.13.1	The RP- T shall operate normally when receiving direct current (DC) power from a MIL-STD-1275D-compliant power source installed in the vehicle.	Bid Sample	Bidders shall provide a bid sample representative of the equipment offered	DND testing will verify the ability of the bid sample to operate normally for a five (5) minute test period at the high and low voltage limit ranges of MIL STD 1275 para 5.1.4.1
2.1.13.2	The RP- T shall not exceed a current draw of 4.0 Amperes(at 28.0 Volts DC(VDC)) if connected to power and operating normally	Bid Sample	Bidders shall provide a bid sample representative of the equipment offered	Current will be measured while operating at nominal room temperature
2.1.14	Environmental Conditions			
2.1.14.1	The RP- T shall operate normally after exposure to an altitude of up to 4572 m (15,000 feet) in accordance with: MIL-STD-810G, Method 500.5, Low Pressure (Altitude) Procedure I - Storage/Air Transport	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.14.2	The RP- T shall operate normally during and after exposure to an altitude of up to 4572 m (15,000 feet) in accordance with: MIL-STD-810G, Method 500.5 – Low Pressure (Altitude), Procedure II – Operation/Air Carriage	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A

Reference	Descriptions	Means of Compliance	Instruction to bidders	Bid Sample Test Procedure
Appendix A1 2.1.14.3	The RP-T shall operate normally after exposure to a non-operational (storage) temperature range of -40C to +71C in accordance with: MIL-STD-810G, Method 501.5 – High Temperature, Procedure I – Storage, and Method 502.5 – Low Temperature, Procedure I – Storage	Bid Sample	Bidders shall provide a bid sample representative of the equipment offered	DND will assess equipment for normal operation after four (4) temperature cycles. Each cycle will start at ambient temperature (between 20 - 25 C), transition to the maximum air temperature; maintain maximum for 90 minutes; transition to minimum air temperature; maintain minimum for 90 minutes; then transition to ambient and maintain ambient for 30 minutes. All air temperature changes will be conducted at 1C / minute. Equipment will be maintained at ambient temperature for at least 60 minutes before technical inspection to confirm the ability of the bid sample to operate normally.
2.1.14.4	The RP-T shall commence operation within 15 minutes, during and after exposure to an operating ambient air temperature range of -40C in accordance with: MIL-STD-810G Method 502.5 – Low Temperature, Procedure II – Operation	Bid Sample	Bidders shall provide a bid sample representative of the equipment offered	DND will assess equipment for an ability to operate normally while at the air temperature specified. Air temperature prior to the test will be lowered from ambient at 1C per minute, and maintained at the minimum for at least 120 minutes. Test duration for normal operation will be 60 minutes for this test.
2.1.14.5	The RP-T shall operate normally and sustain its rated computational throughput during and after exposure to an operating ambient air temperature of +52C in accordance with: MIL-STD-810G Method 501.5 – High Temperature, Procedure II – Operation	Bid Sample	Bidders shall provide a bid sample representative of the equipment offered and must specify any airflow clearance requirements that must be observed for test conduct	DND will assess equipment for an ability to operate normally while at the air temperature specified. Air temperature prior to the test will be raised from ambient at 1C per minute, and maintained at the maximum for at least 120 minutes. Test duration for normal operation will be 60 minutes for this test.
2.1.14.7	The RP-T shall operate normally after a 15 minute exposure to dripping water in accordance with: MIL-STD-810G, Method 506.5 – Rain, Procedure III – Drip	Bid Sample	Bidders shall provide a bid sample representative of the equipment offered	DND will install equipment with the disk access door exposed to the rain at 45 degrees from the vertical during the rain exposure.
2.1.14.8	The RP-T shall operate normally after exposure to temperature cycles of +30 °C to +60 °C at 95% RH in accordance with: MIL-STD-810G, Method 507.5 – Humidity, Procedure II – Aggravated Cycle	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.14.9	The RP-T shall operate normally during and after exposure to sand and dust in accordance with: MIL-STD-810G, Method 510.5 – Sand and Dust, Procedure I – Blowing Dust, and Procedure II – Blowing Sand	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.14.10	The RP-T shall operate normally during and after exposure to a vibration (operational) test environment in accordance with: MIL-STD-810G Method 514.6 – Vibration, Procedure I – General Vibration, Category 20 – Ground Vehicle – ground mobile, Figure 514.5C-3 – Composite wheeled vehicle vibration exposure	Bid Sample	Bidders shall provide a bid sample representative of the equipment offered	DND will hard mount the Bid Sample to the vibration table in a convenient (unspecified) orientation.
2.1.14.11	The RP-T shall operate normally during and after exposure to functional shock for ground equipment in accordance with: MIL-STD-810G Method 516.6 – Shock, Procedure I – Functional (in accordance with table 516.6-II)	Bid Sample	Bidders shall provide a bid sample representative of the equipment offered	DND will hard mount the equipment to the shock platform in a convenient (unspecified) orientation. The test will include three positive and three negative shocks per axis. The validation of operation during the test will be limited to visual inspection of continued display performance. Full confirmation of normal operation will be conducted post test. The shock peak amplitude will be nominally 40 g (between 40 and 48) with a nominal duration of 6 milliseconds (between 6 and 9)

Reference	Descriptions	Means of Compliance	Instruction to bidders	Bid Sample Test Procedure
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2.1.14.12	The RP-T (same unit) shall operate normally after 26 drops of 122 cm in height on a 5 cm plywood sheet backed by concrete in accordance with: MIL-STD-810G, Method 516.6 Shock, Procedure IV – Transit Drop	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.14.13	The RP-T shall not be damaged in any way and shall operate normally after exposure to a ballistic shock in accordance with: MIL-STD 810G Method 522.1 – Ballistic Shock, Procedure I – Ballistic Hull and Turret, Full Spectrum, Ballistic Shock Qualification	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.14.14	The RP-T shall operate normally during and after a freeze / thaw cycle including condensation in accordance with: MIL-STD-810G Method 524 – Freeze-Thaw, Procedure III - Rapid Temperature Change	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.15	Excluded Wireless Interfaces			
2.1.15.1	The RP-T shall not include any wireless interfaces, including, but not limited to Bluetooth®, and IEEE 802.11 wireless LAN interfaces.	Contractor certification	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.16	Dimensions			
2.1.16.1	The space claim for the RP-T as defined by the sum of the length, height and depth of a flat sided, rectangular box shall not exceed nine hundred (900) mm	Bid Sample	Bidders shall provide a bid sample representative of the equipment offered	DND will confirm compliance through measurements of the result of constructing a rectangular bounding box that allows test team members to remove and replace the disk drive and all connectors, and provides any airflow clearance specified by the Bidder (reference 2.1.14.5)
2.1.16.2	The space claim for the RP-T shall not require any single dimension of the length, height and depth of the bounding box defining the space claim to exceed five hundred and fifty (550) mm	Bid Sample	Bidders shall provide a bid sample representative of the equipment offered	DND will confirm compliance through measurements of the result of constructing a rectangular bounding box that allows test team members to remove and replace the disk drive and all connectors, and provides any airflow clearance specified by the Bidder (reference 2.1.14.5)
2.1.16.3	The RP-T space claim shall include all clearances required to remove connectors	Bid Sample	Bidders shall provide a bid sample representative of the equipment offered	DND will confirm compliance through measurements of the result of constructing a rectangular bounding box that allows test team members to remove and replace the disk drive and all connectors, and provides any airflow clearance specified by the Bidder (reference 2.1.14.5)
2.1.16.4	The RP-T space claim shall include all clearances required to allow the opening of the SSD access door sufficiently to remove the SSD	Bid Sample	Bidders shall provide a bid sample representative of the equipment offered	DND will confirm compliance through measurements of the result of constructing a rectangular bounding box that allows test team members to remove and replace the disk drive and all connectors, and provides any airflow clearance specified by the Bidder (reference 2.1.14.5)
2.1.16.5	The RP-T space claim shall include all clearances required to allow for sufficient airflow	Bid Sample	Bidders shall provide a bid sample representative of the equipment offered	DND will confirm compliance through measurements of the result of constructing a rectangular bounding box that allows test team members to remove and replace the disk drive and all connectors, and provides any airflow clearance specified by the Bidder (reference 2.1.14.5)

Reference	Descriptions	Means of Compliance	Instruction to bidders	Bid Sample Test Procedure
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2.1.17	Case Characteristics			
2.1.17.1	The RP-T case shall be finished with a chemical agent resistant coating (CARC – complying to MIL-DTL-53039D or MIL-DTL-64159B) and all production shall be finished with the same colour	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.17.2	The RP-T case colour shall be one chosen from the options of white, non-reflective tan, non-reflective olive drab green, or black	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.17.3	The RP-T case shall come with dust covers that seal the external interface connectors that are unused when a cable set with equivalent functionality to that defined in Table 1 is connected	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.17.4	The RP-T dust covers shall be attached to the RP-T with retention devices	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.18	Electromagnetic Interference and Compatibility			
2.1.18.1	The RD-T shall not exceed the specified levels for conducted emissions via power input leads in accordance with MIL-STD-461F test procedure CE102 (Conducted Emissions, power leads, 10 kHz to 10 MHz) while operating normally	Bid Sample	Bidders shall provide a bid sample representative of the equipment offered	DND will test as per referenced standard and limits
2.1.18.2	The RD-T shall operate normally and withstand signals coupled onto input power leads in accordance with MIL-STD-461F test procedure CS101 (Conducted Susceptibility, power leads, 30Hz-150kHz)	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.18.3	The RD-T shall operate normally and withstand RF signals coupled onto the RD-T associated cabling in accordance with MIL-STD-461F test procedure CS114 (Conducted Susceptibility, bulk cable injection, 10kHz-200MHz)	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.18.4	The RD-T shall operate normally and withstand RF signals coupled onto the RD-T associated cabling in accordance with MIL-STD-461F test procedure CS115 (Conducted Susceptibility, bulk cable injection, 30 Nanosecond Duration 5 AMP Peak Pulse, 30Hz)	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.18.5	The RD-T shall operate normally and withstand damped sinusoidal transients coupled onto the RD-T associated cables and power leads in accordance with MIL-STD-461F test procedure CS116 (Conducted Susceptibility, damped sinusoidal transients, cables and power leads, 10kHz-100MHz)	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.18.6	The RP-T shall not exceed the specified levels for electric field emissions from the RD-T and its supplied test cabling in accordance with MIL-STD-461F test procedure RE102 (Radiated Emissions, electrical field, 2MHz-18 GHz) as limited to an upper frequency limit of 10 GHz for Land Army applications	Bid Sample	Bidders shall provide a bid sample representative of the equipment offered	DND will test as per referenced standard and limits
2.1.18.7	The RD-T with is supplied test cabling shall be able to withstand electric fields in accordance with MIL-STD-461F test procedure RS103 (Radiated Susceptibility, electric field, 2MHz-18GHz) for Land Army applications	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A

Reference	Descriptions	Means of Compliance	Instruction to bidders	Bid Sample Test Procedure
Appendix A1				
2.1.19	Labels and Markings			
2.1.19.1	The RD-T shall incorporate a descriptive label attached to an exterior surface of the unit, on one of the rear or side surfaces	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.19.2	The RD-T label shall be designed to maintain readability over the service life of the item	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.19.3	The RD-T label shall contain, at a minimum, the following, Human Readable, information fields: a. Item Name (Computer, Digital), b. NSN as assigned, c. Contractor Code, d. Contractor Part Number, e. Serial Number	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A

Appendix C2: Rugged Processor (RP-T) Rated Requirements

Reference Appendix A1	Descriptions	Points	Means of Compliance	Instruction to Bidders	Bid Sample Test Procedure
2.1	Technical Specifications				
2.1.2	Random Access Memory (RAM)				
2.1.2.3	The RP-T RAM should be expandable to a total of 32.0 GB of RAM	2	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.3	Removable Solid State Drive (SSD) and Controller				
2.1.3.5	The SSD and controller should conform to the Serial Advanced Technology Attachment (SATA) revision 3.0 or 3.1 standard	2	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.4	Display Processor				
2.1.4.4	The RP-T display processor should be capable of supporting one display at a resolution of 1200 by 800 pixels on a VGA capable interface (with a colour depth of 32 bits), while simultaneously supporting on a second display, common display resolutions up to 1920 by 1200 pixels at a colour depth of 32 bits; specifically including intermediate resolutions of 1680 by 1050, 1600 by 1200 and 1920 by 1080 pixels	3	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.5	Video Acquisition System				
2.1.5.5	The video acquisition system should support simultaneous digitization, encoding and recording of full motion video (at full NTSC frame rates and a minimum resolution of 640 by 480 pixels) from four (4) video sources	2	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.5.7	The video acquisition system should support the embedding of KLV (Key-Length-Value) metadata (computed and supplied by an external process) into the encoded video stream consistent with the formats and complexity specified within Motion Imagery Standards Board (MISB) standard 0604.5	6	Supporting Data	Bidders shall provide documentation/data to demonstrate compliance with this requirement. Bidders shall provide summary description of Application Programming Interface implementing capability.	N/A
2.1.7	Unified Extensible Firmware Interface – Basic				
Input/Output System					
2.1.7.5	The RP-T boot management firmware should have a default password that is unique for each hardware unit	1	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.10	External Interface Requirements by Security Domain				
2.1.10.2.4	Within Domain 2 the RP-T should include at least three ports compliant with the electrical and electronic requirements of the USB v2.0 or v3.0 specification (excluding the connector type limitations)	3	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.10.3.2	Within Domain 3 the RP-T should include at least two independent Gigabit Ethernet (IEEE 802-3) ports supporting auto-negotiation to lower speeds	8	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.10.3.4	Within Domain 3 the RP-T should include at least three ports compliant with the electrical and electronic requirements of the USB v2.0 or v3.0 specification (excluding the connector type limitations)	3	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A

Reference Appendix A1	Descriptions	Points	Means of Compliance	Instruction to Bidders	Bid Sample Test Procedure
2.1.10.3.5	Within Domain 3 the RP-T should include at least one ports compliant with the electrical and electronic requirements of the USB v3.0 specification (excluding the connector type limitations)	3	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.10.3.9	Within Domain 3 the RP-T should include at least one additional serial data port conforming to either the RS 422 or RS 232 standards	2	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.10.3.10	Within Domain 3 the RP-T should support software configuration of all serial data ports between the RS 232 and RS 422 standard	3	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.10.3.11	Within Domain 3 the RP-T should include at least one stereo audio output capable of driving headphones and at least one microphone input	2	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.11	External Interface and Power Connectors				
2.1.11.2	The RP-T external interface connectors should not intermix connections associated with security Domain 3 with those of security Domains 1 and 2	6	Supporting Data	Bidders shall provide documentation/data to demonstrate compliance with this requirement. Contractor shall provide design and interface control documentation (detailed block diagram, or equivalent) showing interface controllers included and their associated external connectors including their assignment to connectors as proposed for equipment delivered.	N/A
2.1.13	Input Power and Power Management				
2.1.13.3	The RP-T should support version 2.0c (or more current) of the Advanced Configuration Power Interface (ACPI)	1	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.13.4	The RP-T should support a low latency ACPI sleep state (mode S1 or S2). If offered, the RP-T must not exceed a current draw of 0.75 Amperes (at 28.0 VDC) if connected to power and in a low latency sleep mode to be considered compliant	3	Bid Sample	Bidders shall provide a bid sample representative of the equipment offered	DND will evaluate using OS functions to enter sleep state and subsequent measurement of current draw
2.1.13.5	The RP-T should support a low power ACPI sleep state (mode S3 or S4). If offered, the RP-T must not exceed a current draw of 0.100 Amperes (at 28.0 VDC) if connected to power and in a low power sleep mode to be considered compliant	1	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.13.6	The RP-T should support return to the operating state (wake) from the low power ACPI state upon use of the bezel keys or touchscreen on the offered rugged display (RD-T) when connected in a mode that supports all other required functionality	1	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.13.7	The RP-T should support return to the operating state (wake) from the low latency sleep state upon use of the bezel keys or touchscreen on the offered rugged display (RD-T) when connected in a mode that supports all other required functionality	3	Bid Sample	Bidders shall provide a bid sample representative of the equipment offered	DND will evaluate by system response to both touchscreen and bezel buttons while in sleep state

Reference Appendix A1	Descriptions	Points	Means of Compliance	Instruction to Bidders	Bid Sample Test Procedure
2.1.13.8	The RP-T should support return to the operating state (wake) from the low latency sleep state upon receipt of characters (touchscreen input) on the RS 232 interface included in domain 2	3	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.13.9	The RP-T should support return to the operating state (wake) from the low power sleep state upon receipt of characters (touchscreen input) on the RS 232 interface included in domain 2	1	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.14	Environmental Conditions				
2.14.6	The RP-T should operate normally and sustain at least one-half of its rated computational throughput during and after exposure to an operating ambient air temperature of +60°C in accordance with: MIL-STD-810G Method 501.5 – High Temperature, Procedure II – Operation.	5	Bid Sample	Bidders shall provide a bid sample representative of the equipment offered and must specify any airflow clearance requirements that must be observed for test conduct	DND will assess the equipment for an ability to operate normally while at the air temperature specified. Air temperature prior to the test will be raised from ambient at 1°C per minute, and maintained at the maximum for at least 120 minutes. A computational benchmark measurement, started after 50 minutes of operation at the maximum temperature will be repeated three times with results averaged.
2.1.17	Case Characteristics				
2.1.17.5	The RP-T dust cover retention devices should include provision for removal and re-installation through the use of a split-ring (or equivalent mechanism that does not require the use of tools)	1	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.19	Labels and Markings				
2.1.19.4	The RD-T label should include machine and human readable markings conforming to DAOD 3010-0, DAOD 3010-1 and NATO STANAG 2290	2	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.20	Emissions Security				
2.1.20.1	The RD-T should meet TEMPEST requirements in accordance with CID/09/15A, with the RD-T operating in standalone mode for Level II electric-field radiated (ER) and Level I BLACK Line Conduction (BLC).	8	Supporting Data	Bidders shall provide documentation/data to demonstrate compliance with this requirement. The contractor shall provide test results demonstrating compliance from an independent third party test laboratory for the equipment offered, or for a previous generation of the same equipment. Testing must have been completed within 3 years of the submission date to be considered.	N/A
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Appendix C3: Rugged Display (RD-T) Mandatory Requirements

Reference Appendix A2	Descriptions	Means of Compliance	Instruction to bidders	Bid Sample Test Procedure
2.1	Technical Specifications			
2.1.1	Orientation			
2.1.1.1	The RD-T shall be capable of being installed in a landscape orientation	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	
2.1.1.2	All integrated display functionality available in the RD-T (including, but not limited to, on-screen displays for display set-up) shall be configured for operation in the landscape orientation	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	
2.1.2	Screen			
2.1.2.1	The diagonal dimension of the viewable area of the RD-T screen shall be a minimum of 330 mm	Bid sample	Bidders shall provide a bid sample representative of the equipment offered	DND will confirm compliance by physical measurement
2.1.2.2	The resolution of the RD-T display in the vertical dimension shall be not less than 768 pixels	Bid sample	Bidders shall provide a bid sample representative of the equipment offered	DND will confirm compliance by physical measurement (using pixel size and spacing)
2.1.2.4	The aspect ratio (ratio of the number of pixels in the horizontal dimension to the number in the vertical dimension, expressed as H:V) of the RD-T shall be one of 3:2, 5:4, 4:3, 16:10 or 16:9	Bid sample	Bidders shall provide a bid sample representative of the equipment offered	DND will confirm compliance by physical measurements
2.1.2.5	The proportion of viewable to non-viewable area on the display, as expressed by the ratio of the display viewable area to the product of the case horizontal and vertical dimension shall be greater than 0.50	Bid sample	Bidders shall provide a bid sample representative of the equipment offered	DND will confirm compliance by physical measurements
2.1.3	Display Controls			
2.1.3.1	The RD-T shall provide control capabilities to increase or decrease screen brightness that are continuously available through controls on the front face of the display	Bid sample	Bidders shall provide a bid sample representative of the equipment offered	DND will confirm compliance through observation and use by the test team
2.1.3.2	The RD-T shall provide a power control to enable and disable operation of the display. This may be a mechanical switch or a low power, electronically monitored ("soft") power switch at the discretion of the Contractor	Bid sample	Bidders shall provide a bid sample representative of the equipment offered	DND will confirm compliance through observation and use by the test team
2.1.3.3	The RD-T power control shall be continuously available on the front face of the display	Bid sample	Bidders shall provide a bid sample representative of the equipment offered	DND will confirm compliance through observation and use by the test team
2.1.3.4	The RD-T shall provide control capabilities to select the input source to be displayed that are continuously available through controls on the front face of the display	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	
2.1.4	User Interaction Capabilities			
2.1.4.1	The RD-T shall integrate a pressure-sensitive touch screen overlay on the viewable display surface functioning as a human computer interface device	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	
2.1.4.2	The RD-T touchscreen and associated drivers and software shall support functionality equivalent to emulation of a two button mouse including, at a minimum, cursor position selection, cursor movement, and functions equivalent to both left and right single click mouse actions; or, support multi-touch functionality through the Microsoft Windows WM_TOUCH application programming interface (API)(or alternate API with equivalent functionality)	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	

Reference Appendix A2	Descriptions	Means of Compliance	Instruction to bidders	Bid Sample Test Procedure
2.1.4.4	The RD-T shall provide capabilities to calibrate the touchscreen	Bid sample	Bidders shall provide a bid sample representative of the equipment offered. Bidders shall install required calibration support utilities on the RP-T bid sample, and provide documentation on the calibration method.	DND will confirm compliance through successful execution of the calibration method documented
2.1.4.5	The RD-T calibration procedure shall not require more than sixty (60) seconds to complete allowing two (2) seconds for each operator action required	Bid sample	Bidders shall provide a bid sample representative of the equipment offered.	DND will confirm compliance through time measurement to access, activate and complete the calibration method documented, normalized to account for 2 seconds for every touch action (single tap or double tap) required
2.1.4.6	The RD-T shall provide at least eight (8) front panel controls (bezel buttons) that generate key codes or key code sequences that can be interpreted by application software in the manner of function keys on a PC keyboard	Bid sample	Bidders shall provide a bid sample representative of the equipment offered. Bidders shall include a demonstration utility, or set of instructions to enable inspection of output from the bezel buttons.	DND will confirm compliance through successful execution of the utility or instructions provided
2.1.5	Display Brightness, Contrast and Image Fidelity			
2.1.5.1	The RD-T display panel shall be capable of a display luminance (brightness) of at least 500 nits	Bid sample	Bidders shall provide a bid sample representative of the equipment offered	DND will confirm compliance through technical measurement of white level brightness with display adjusted for maximum brightness
2.1.5.2	The RD-T shall be capable of a contrast ratio of at least 50:1 while adjusted to meet or exceed a white luminance of 500 nits	Bid sample	Bidders shall provide a bid sample representative of the equipment offered	DND will confirm compliance through technical measurement of average contrast measured with display adjusted to minimum brightness setting that provides a white luminance of 500 nits. The contrast measurement will conform to ICDM IDMS test 5.28 Contrast of Centred White Box
2.1.5.3	The RD-T display panel shall be designed to support not less than 18 bit video data (corresponding to 262,144 colours)	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	
2.1.5.4	The RD-T display shall support a refresh rate of 60 Hz or greater	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	
2.1.6	Display Startup Time			
2.1.6.1	The RD-T shall not require more than 30 seconds to commence operation from power application at required temperature ranges above 0C	Bid sample	Bidders shall provide a bid sample representative of the equipment offered	DND will confirm compliance through timed measurement after bid sample is stored at the test temperature (between 0 and 1C) for a minimum of 90 minutes
2.1.7	Operating System Compatibility			
2.1.7.1	The RD-T software shall include support for all required functionality in both the Microsoft® Windows 8 Professional 64 bit or Microsoft® Windows 7 Professional 64 bit operating system environments	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	
2.1.8	External Interfaces			
2.1.8.1	The RD-T shall implement a minimum of two selectable display interfaces, each conforming to one of the VGA, DVI-I, DisplayPort v1.2, or HDMI standards	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	
2.1.8.3	The RD-T shall include a digital data interface and support touchscreen and front panel control (bezel/function button) interaction over that interface	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	
2.1.8.5	The RD-T digital data interfaces (supporting user interaction) shall conform to one of the RS 232, USB V2.0, or USB V3.0 standards	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	

Reference Appendix A2	Descriptions	Means of Compliance	Instruction to bidders	Bid Sample Test Procedure
2.1.8.6	The RD-T shall implement a display interface and digital data interface that is compatible with the RP-T offered by the Contractor	Bid sample	Bidders shall provide a bid sample representative of the equipment offered	DND will confirm compliance through observation and use by the test team
2.1.9	Input Power			
2.1.9.1	The RD-T shall operate normally when receiving direct current (DC) power from a MIL-STD-1275D-compliant power source installed in the vehicle.	Bid sample	Bidders shall provide a bid sample representative of the equipment offered	DND testing will confirm compliance by verifying the ability of the bid sample to operate normally for a five (5) minute test period at the high and low voltage limit ranges of MIL STD 1275 para 5.1.4.1
2.1.9.2	The RD-T shall not draw more than 0.020 Amperes (20 mA) of current at 28 Volts DC (VDC) when the display operation is disabled	Bid sample	Bidders shall provide a bid sample representative of the equipment offered	DND will confirm compliance by Current measurement at nominal room temperature
2.1.10	External Interface and Power Connectors			
2.1.10.1	The power and external interface ports of the RD-T shall use sealed military standard connectors of the MIL-DTL-38999 series	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	
2.1.11	Environmental Conditions			
2.1.11.1	The RD-T shall operate normally after exposure to an altitude of up to 4572 m (15,000 feet) in accordance with: MIL-STD-810G, Method 500.5, Low Pressure (Altitude) Procedure I - Storage/Air Transport	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	
2.1.11.2	The RD-T shall operate normally during and after exposure to an altitude of up to 4572 m (15,000 feet) in accordance with: MIL-STD-810G, Method 500.5 – Low Pressure (Altitude), Procedure II – Operation/Air Carriage	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	
2.1.11.3	The RD-T shall operate normally after exposure to a non-operational (storage) temperature range of -40C to +71C in accordance with: MIL-STD-810G, Method 501.5 – High Temperature, Procedure I – Storage, and Method 502.5 – Low Temperature, Procedure I – Storage	Bid sample	Bidders shall provide a bid sample representative of the equipment offered	DND will confirm compliance by evaluating equipment for normal operation after four (4) temperature cycles. Each cycle will start at ambient temperature (between 20 - 25 C), ramp to the maximum air temperature; maintain maximum for 90 minutes; ramp to minimum air temperature; maintain minimum for 90 minutes; then ramp to ambient temperature and maintain ambient for 30 minutes. All air temperature changes will be conducted at 1C / minute. Equipment will be maintained at ambient temperature for at least 60 minutes before technical inspection to confirm the ability of the bid sample to operate normally.
2.1.11.4	The RD-T shall commence operation within 15 minutes, during and after exposure to an operating ambient air temperature range of -40°C in accordance with: MIL-STD-810G Method 502.5 – Low Temperature, Procedure II – Operation	Bid sample	Bidders shall provide a bid sample representative of the equipment offered	DND will confirm compliance by evaluating the ability of equipment to operate normally while at the air temperature specified. Air temperature prior to the test will be lowered from ambient at 1C per minute, and maintained at the minimum for at least 120 minutes. The test duration for normal operation will be 60 minutes for this test.

Reference Appendix A2	Descriptions	Means of Compliance	Instruction to bidders	Bid Sample Test Procedure
2.1.11.5	The RD-T shall operate normally during and after exposure to an operating ambient air temperature of +52 °C in accordance with: MIL-STD-810G Method 501.5 – High Temperature, Procedure II – Operation	Bid sample	Bidders shall provide a bid sample representative of the equipment offered	DND will confirm compliance by evaluating the ability of equipment to operate normally while at the air temperature specified. Air temperature prior to the test will be raised from ambient at 1C per minute, and maintained at the maximum for at least 120 minutes. The test duration for normal operation will be 60 minutes for this test. The test article will be surrounded by a bounding box, solely on the sides and rear of the bid sample, to limit the air flow on those sides to that required for any connectors and cables required for operation (Reference 2.1.13.2.)
2.1.11.7	The RD-T shall operate normally after a 15 minute exposure to dripping water in accordance with: MIL-STD-810G, Method 506.5 – Rain, Procedure III – Drip	Bid sample	Bidders shall provide a bid sample representative of the equipment offered	DND will confirm compliance by installing equipment with the display face exposed to the rain at 45 degrees from the vertical during the rain exposure.
2.1.11.8	The RD-T shall operate normally after exposure to temperature cycles of +30 °C to +60 °C at 95% RH in accordance with: MIL-STD-810G, Method 507.5 – Humidity, Procedure II – Aggravated Cycle	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.11.9	The RD-T shall operate normally during and after exposure to sand and dust in accordance with: MIL-STD-810G, Method 510.5 – Sand and Dust, Procedure I – Blowing Dust, and Procedure II – Blowing Sand	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.11.10	The RD-T shall operate normally during and after exposure to a vibration (operational) test environment in accordance with: MIL-STD-810G Method 514.6 – Vibration, Procedure I – General Vibration, Category 20 – Ground Vehicle – ground mobile, Figure 514.5C-3 – Composite wheeled vehicle vibration exposure	Bid sample	Bidders shall provide a bid sample representative of the equipment offered	DND will confirm compliance by hard mounting the Bid Sample to the vibration table in a convenient (unspecified) orientation.
2.1.11.11	The RD-T shall operate normally during and after exposure to functional shock for ground equipment in accordance with: MIL-STD-810G Method 516.6 – Shock, Procedure I – Functional	Bid sample	Bidders shall provide a bid sample representative of the equipment offered	DND will confirm compliance by hard mounting the Bid Sample to the shock platform in a convenient (unspecified) orientation. The test will include three positive and three negative shocks per axis. The validation of operation during the test will be limited to a visual inspection of continued display performance. Full confirmation of normal operation will be conducted post test. The shock peak amplitude will be nominally 40 g (between 40 and 48) with a nominal duration of 6 milliseconds (between 6 and 9)
2.1.11.12	The RD-T (same unit) shall operate normally after 26 drops of 122 cm in height on a 5 cm plywood sheet backed by concrete in accordance with: MIL-STD-810G, Method 516.6 Shock, Procedure IV – Transit Drop	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.11.13	The RD-T shall not be damaged in any way and shall operate normally after exposure to a ballistic shock in accordance with: MIL-STD 810G Method 522.1 – Ballistic Shock, Procedure I – Ballistic Hull and Turret (BH&T), Full Spectrum, Ballistic Shock Qualification	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.11.14	The RD-T shall operate normally during and after a freeze/thaw cycle including condensation in accordance with: MIL-STD-810G Method 524 – Freeze-Thaw, Procedure III – Rapid Temperature Change	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A

Reference Appendix A2	Descriptions	Means of Compliance	Instruction to bidders	Bid Sample Test Procedure
2.1.12	Excluded Wireless Interfaces			
2.1.12.1	The RD-T shall not include any wireless interfaces, including, but not limited to Bluetooth®, and IEEE 802.11 wireless LAN interfaces.	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.13	Dimensions and Weight			
2.1.13.1	The space claim for the RD-T shall not exceed a width of 425 mm, a height of 320 mm, and a depth of 155 mm with all connectors and cabling attached that are required to connect the RD-T with the RP-T offered by the Contractor	Bid sample	Bidders shall provide a bid sample representative of the equipment offered	DND will confirm compliance through measurements of the result of constructing a rectangular bounding box that encloses the display and attached cables.
2.1.13.2	No additional space shall be required at the rear or sides of the display to provide for sufficient airflow for cooling	Bid sample	Bidders shall provide a bid sample representative of the equipment offered	DND will confirm compliance through execution of temperature testing (2.1.11.5) within rectangular bounding box that encloses the display and attached cables solely on sides and rear
2.1.13.3	The RD-T shall weigh less than 8.0 Kg	Bid sample	Bidders shall provide a bid sample representative of the equipment offered	DND will confirm compliance by physical measurement
2.1.14	Case Characteristics			
2.1.14.1	The RD-T case shall be finished with a chemical agent resistant coating (CARC- complying to MIL-DTL-53039D or MIL-DTL-64159B) and all production shall be finished with the same colour	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.14.2	The RD-T case finish shall be non-reflective	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.14.3	The RD-T case finish colour shall be one chosen from the options of tan, olive-drab green, or black	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.14.4	The RD-T case shall come with dust covers that seal external interface connectors that are unused when the RD-T is connected to the RP-T offered by the Contractor	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.14.5	The RD-T dust covers shall be attached to the RD-T with retention devices	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.15	Electromagnetic Interference and Compatibility			
2.1.15.1	The RD-T shall not exceed the specified levels for conducted emissions via power input leads in accordance with MIL-STD-461F test procedure CE102 (Conducted Emissions, power leads, 10 kHz to 10 MHz) while operating normally	Bid sample	Bidders shall provide a bid sample representative of the equipment offered	DND will test as per referenced standard and limits
2.1.15.2	The RD-T shall operate normally and withstand signals coupled onto input power leads in accordance with MIL-STD-461F test procedure CS101 (Conducted Susceptibility, power leads, 30Hz-150kHz)	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.15.3	The RD-T shall operate normally and withstand RF signals coupled onto the RD-T associated cabling in accordance with MIL-STD-461F test procedure CS114 (Conducted Susceptibility, bulk cable injection, 10kHz-200MHz)	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.15.4	The RD-T shall operate normally and withstand RF signals coupled onto the RD-T associated cabling in accordance with MIL-STD-461F test procedure CS115 (Conducted Susceptibility, bulk cable injection, 30 Nanosecond Duration 5 AMP Peak Pulse, 30Hz)	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A

Reference Appendix A2	Descriptions	Means of Compliance	Instruction to bidders	Bid Sample Test Procedure
2.1.15.5	The RD-T shall operate normally and withstand damped sinusoidal transients coupled onto the RD-T associated cables and power leads in accordance with MIL-STD-461F test procedure CS116 (Conducted Susceptibility, damped sinusoidal transients, cables and power leads, 10kHz-100MHz)	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.15.6	The RD-T shall not exceed the specified levels for electric field emissions from the RD-T and its supplied test cabling in accordance with MIL-STD-461F test procedure RE102 (Radiated Emissions, electrical field, 2MHz-18 GHz) as limited to an upper frequency limit of 10 GHz for Land Army applications	Bid sample	Bidders shall provide a bid sample representative of the equipment offered	DND will test as per referenced standard and limits
2.1.15.7	The RD-T with its supplied test cabling shall be able to withstand electric fields in accordance with MIL-STD-461F test procedure RS103 (Radiated Susceptibility, electric field, 2MHz-18GHz) for Land Army applications	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.16	Labels and Markings			
2.1.16.1	The RD-T shall incorporate a descriptive label attached to an exterior surface of the unit, on one of the rear or side surfaces	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	
2.1.16.2	The RD-T label shall be designed to maintain readability over the service life of the item	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	
2.1.16.3	The RD-T label shall contain, at a minimum, the following, Human Readable, information fields: a. Item Name, b. NSN as assigned, c. Contractor Code, d. Contractor Part Number, e. Serial Number	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	

Appendix C4: Rugged Display (RD-T) Rated Requirements

Reference Appendix A2	Descriptions	Points	Means of Compliance	Instructions to Bidders	Bid Sample Test Procedure
2.1	Technical Specifications				
2.1.2	Screen				
2.1.2.3	The resolution of the RD-T display in the vertical dimension should be not less than 1024 pixels	4	Bid sample	Bidders shall provide a bid sample representative of the equipment offered.	DND will evaluate physical measurement (using pixel size and spacing)
2.1.4	User Interaction Capabilities				
2.1.4.3	The RD-T touchscreen and associated drivers and software should support multi-touch (minimum two point) functionality through the Microsoft Windows WM_TOUCH API (or alternate API with equivalent functionality)	4	Bid sample	Bidders shall provide a bid sample representative of the equipment offered. Bidders shall include a demonstration utility showing zoom (pinch open and pinch close) gesture support	DND will evaluate through successful execution of supplied utility
2.1.5	Display Brightness, Contrast and Image Fidelity				
2.1.5.5	The RD-T should support selection of a night vision (NVIS) mode in which the maximum display brightness is limited to a value less than 6 nits	3	Bid sample	Bidders shall provide a bid sample representative of the equipment offered. Bidders shall provide documentation on user control to select the NVIS mode.	DND evaluation includes testing NVIS mode selection followed by brightness measurement of white screen (ICDM FS7 test pattern) at screen centre, and inspection to resolve 8 shades of gray on the ICDM SSW32 test pattern
2.1.6	Display Startup Time				
2.1.6.2	The RD-T should not require more than five (5) minutes to commence operation from power application at required temperature ranges above -20C	2	Bid sample	Bidders shall provide a bid sample representative of the equipment offered.	DND will perform a timed measurement after the bid sample is stored at the test temperature (between -20 and -19C) for a minimum of 90 minutes
2.1.8	External Interfaces				
2.1.8.2	The RD-T should implement at least one SMPTE 170 video input as a selectable display source	2	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.8.4	The RD-T should support a minimum of two digital data interfaces supporting touchscreen and front panel control (bezel/function button) interaction with activation linked to the selection of the selectable display interface – in the manner of a keyboard, video and mouse (KVM) switch	2	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.11	Environmental Conditions				
2.1.11.6	The RD-T should operate normally during and after exposure to an operating ambient air temperature of +60C in accordance with: MIL-STD-810G Method 501.5 – High Temperature, Procedure II – Operation	3	Bid sample	Bidders shall provide a bid sample representative of the equipment offered.	DND will assess the equipment for an ability to operate normally while at the air temperature specified. Air temperature prior to the test will be raised from ambient at 1C per minute, and maintained at the maximum for at least 120 minutes. The test duration for normal operation will be 60 minutes for this test. The test article will be surrounded by a bounding box, solely on the sides and rear of the bid sample, to limit the air flow on those sides to that required for any connectors and cables required for operation (Reference 2.1.13.2.)
2.1.11.15	The RD-T should operate normally after salt fog exposure in accordance with: MIL-STD-810G Method 509.5 – Salt Fog, Procedure I	1	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A

Reference Appendix A2	Descriptions	Points	Means of Compliance	Instructions to Bidders	Bid Sample Test Procedure
2.1.14	Case Characteristics				
2.1.14.6	The RD-T dust cover retention devices should include provision for removal and re-installation through the use of a split-ring (or equivalent mechanism that does not require the use of tools)	1	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.16	Labels and Markings				
2.1.16.4	The RD-T label should include machine and human readable markings conforming to DAOD 3010-0; DAOD 3010-1 and NATO STANAG 2290	1	Compliance Statement	Bidders shall submit the completed Certificate of Compliance	N/A
2.1.17	Emissions Security				
2.1.17.1	The RD-T should meet TEMPEST requirements in accordance with CID/09/15A, with the RD-T operating in standalone mode for Level II electric-field radiated (ER) and Level I BLACK Line Conduction (BLC).	2	Supporting Data	Bidders shall provide documentation/data to demonstrate compliance with this requirement. The contractor shall provide test results demonstrating compliance from an independent third party test laboratory for the equipment offered, or for a previous generation of the same equipment. Testing must have been completed within 3 years of the submission date to be considered.	N/A
		25			

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Annex D

Federal Contractors Program for Employment Equity - Certification

I, the Bidder, by submitting the present information to the Contracting Authority, certify that the information provided is true as of the date indicated below. The certifications provided to Canada are subject to verification at all times. I understand that Canada will declare a bid non-responsive, or will declare a contractor in default, if a certification is found to be untrue, whether during the bid evaluation period or during the contract period. Canada will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply with such request by Canada will also render the bid non-responsive or will constitute a default under the Contract.

For further information on the Federal Contractors Program for Employment Equity visit [HRSDC-Labour's website](#).

Date: _____ (YYYY/MM/DD) (If left blank, the date will be deemed to be the bid solicitation closing date.)

Complete both A and B.

A. Check only one of the following:

- ☐ A1. The Bidder certifies having no work force in Canada.
- ☐ A2. The Bidder certifies being a public sector employer.
- ☐ A3. The Bidder certifies being a federally regulated employer being subject to the *Employment Equity Act*.
- ☐ A4. The Bidder certifies having a combined work force in Canada of less than 100 employees (combined work force includes: permanent full-time, permanent part-time and temporary employees [temporary employees only includes those who have worked 12 weeks or more during a calendar year and who are not full-time students]).

A5. The Bidder has a combined workforce in Canada of 100 or more employees; and

- ☐ A5.1. The Bidder certifies already having a valid and current Agreement to Implement Employment Equity (AIEE) in place with HRSDC-Labour.

OR

- ☐ A5.2. The Bidder certifies having submitted the Agreement to Implement Employment Equity (LAB1168) to HRSDC-Labour. As this is a condition to contract award, proceed to completing the form Agreement to Implement Employment Equity (LAB1168), duly signing it, and transmit it to HRSDC-Labour.

B. Check only one of the following:

- ☐ B1. The Bidder is not a Joint Venture.

OR

- ☐ B2. The Bidder is a Joint Venture and each member of the Joint Venture must provide the Contracting Authority with a completed annex Federal Contractors Program for Employment Equity - Certification. (Refer to the Joint Venture section of the Standard Instructions)

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Annex E Certificate of Compliance

We _____ (*insert company name and address*) have been given the opportunity to provide feedback on the content of the technical requirements for the Rugged Processor and Rugged Display (RP-T and RD-T) procurement.

We have also thoroughly reviewed and understood the requirements of the complete Solicitation.

By signing this “Certificate of Compliance”, we certify that we will satisfy the requirements for which this certificate was required as proof of compliance during the Request for Proposal stage, and that our products and services to be delivered against the contract will comply with these same requirements.

Signature of Bidders’ Designated Authority

Date