



National Defence

Défense nationale

National Defence Headquarters
Ottawa, Ontario
K1A 0K2

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

**SOLICITATION AMENDMENT
MODIFICATION DE L'INVITATION**

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

By e-mail to:

Natalie.Provost@forces.gc.ca

Director Services Contracting
(D Svcs C) 3-3-4
Attention: Natalie Provost

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

At / à : 14 :00 Eastern Standard Time /
14 h, heure normale de l'Est

On / le : 16 December 2020 /
16 décembre 2020

Title/Titre Handheld Ultrasound Machine / Échographe portatif	
Solicitation No – N° de l'invitation W6369-21-A063	Amendment No. – N° modif. 001
Date of Solicitation – Date de l'invitation 02 December 2020 / 02 décembre 2020	
Address Enquiries to – Adresser toutes questions à Natalie Provost	
Telephone No. – N° de téléphone	Email - Courriel Natalie.Provost@forces.gc.ca
Destination See herein. Voir ci-après	
Vendor 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 (type or print) Nom et titre de la personne autorisée à signer au nom du fournisseur (taper ou écrire en caractère d'imprimerie)	
Name/Nom : _____	
Title/Titre : _____	
Signature : _____	
Date : _____	



AMENDMENT 001 TO SOLICIATION NUMBER W6369-21-A063:

1. This amendment 001 is raised in order to respond and publish the following questions and answers;
2. Extend the solicitation closing date from 09 December 2020 to 16 December 2020; and
3. Update Appendix 1 to Annex A – Description and Specifications.

QUESTIONS AND ANSWERS:

Question 1	Are the following features mandatory or can they be desired? 4.2. Doppler Types: 4.2.2. Tissue Doppler. 4.2.3. Power Doppler. 4.2.4. Pulse (Spectral) Wave Doppler
Answer 1	Yes, these three (3) features mentioned under Appendix 1 to Annex A, 4.2 can be desired. However, the 4.2.1 Color Doppler is a Mandatory requirement.

Question 2	M.8 - software must operate and perform software updates without the wireless function and allows updates using a USB stick. Clarius is a wireless ultrasound company that does not have a USB outlet. Images can be saved and exported via the Clarius Cloud or Cloud can be shut off and DICOM can be utilized.
Answer 2	Unfortunately, the Department of National Defence has a firewall and security that are very strict; which prevents us from using wireless equipment. Therefore, we will not be able to accept wireless functions.

Question 3	Under Appendix 1 to Annex A, 9 – Accessories, 9.6 System AC power cord: Our scanners are wireless and the lithium rechargeable batteries are charger on a separate charger. There is no cables attached to the scanner itself.
Answer 3	Unfortunately, we cannot accept wireless functions, as per response to Question 2 above.



Question 4	<p>You are requesting 3 transducers:</p> <p>With New “piezoelectric” technologies in our case silicon instead of regular crystals used in the probe, we can modify and switch the shape of the transmitted image from convex to linear to sector without changing the transducer. Therefore, the need for multiple transducers on the same machine is no longer needed at least for our technology.</p> <p>Would you consider an ultrasound unit with only one transducer instead of 3 this will reduce the cost and potential unnecessary damage from having to use and transport 3 transducers?</p>
Answer 4	<p>Yes, we would accept silicon technology, and one transducer <u>HOWEVER</u>, that single probe <u>must be able to emulate any transducers</u>. Meaning, being able to switch from <u>convex</u> to <u>linear</u> to <u>sector</u>.</p>

Question 5	<p>You are requesting Tissue Doppler function. To our knowledge no handheld ultrasound unit have this function that is usually used on larger echo units.</p> <p>Can you let us know if this is a must and if this function is really needed for this type of usage?</p> <p>If so can you confirm the reason of wanting this function?</p>
Answer 5	<p>The Tissue Doppler is not mandatory, as per above response to Question 1.</p>

SOLICITATION NUMBER W6369-21-A063 IS HEREBY AMENDED AS FOLLOWS:

- 1.1 **DELETE** from Page 1, “09 December 2020” and **REPLACE** with “16 December 2020”.
- 1.2 **DELETE** APPENDIX 1 to ANNEX A – DESCRIPTION AND SPECIFICATIONS in its entirety, and **REPLACE** with the following:



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APPENDIX 1 to ANNEX A – DESCRIPTION AND SPECIFICATIONS (AMENDMENT No 001)

1. SCOPE

The HUM will be utilized to provide two-dimensional (2-D) images of soft tissue and moving structures for a variety of general-purpose applications, such as foreign body detection, intrauterine pregnancy assessment, abdominal, vascular and cardiac examinations.

2. GENERAL PHYSICAL CHARACTERISTICS

The Handheld Ultrasound Machine must:

- 2.1. Be its own handheld operating system device.
- 2.2. The handheld operating system must come with a touch screen interface, multi touch gestures to operate system controls and image acquisition keys capable of at least:
 - 2.2.1. Review image.
 - 2.2.2. Save image.
 - 2.2.3. System menu settings.
 - 2.2.4. Input of patient information.
 - 2.2.5. Create Report.
- 2.3. Minimum screen resolution of 1920 x 1080 pixels.
- 2.4. Minimum screen size of 7 inches +/- 0.4 in to a maximum of 10 inches +/- 0.4 in when measured diagonally.
- 2.5. Minimum dynamic range of 165 Decibel (dB).
- 2.6. Minimum gray scale of 256 shades.
- 2.7. Maximum weight, including battery but excluding transducers, docking station, carrying and protective case, of two (2) pounds (lbs).
- 2.8. The device must operate at a minimum between 10 and 40° C.
- 2.9. The device must be able to withstand a minimum 90 centimeter drop onto a hard surface.
- 2.10. Transducers must be wired.
- 2.11. Transducers must be able to withstand a minimum 90 centimeter drop onto a hard surface.



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- 2.12. Transducers must meet or exceed IPX-7 waterproof standard.
- 2.13. Transducers may use one of the following technologies:
 - 2.13.1. Piezoelectric crystal, or
 - 2.13.2. Silicon chip
- 2.14. Include an auto-switching power supply capable of accepting voltages ranging from 110 to 240 volts of alternating current at 50 and 60 Hertz.
- 2.15. Include an internal, rechargeable, battery capable of providing a minimum of 60 minutes of continuous imaging capability.
- 2.16. Rechargeable Battery chemistry is limited to:
 - 2.16.1. Lithium Ion.
 - 2.16.2. Lithium Polymer.

3. SOFTWARE SECURITY REQUIREMENT

To safeguard patient secured information and to comply with DND regulations, the software application must be/have:

- 3.1. Factory configured and tested.
- 3.2. Locked down at factory level preventing any addition, modification, or updating of installed applications, unless by unauthorized users.
- 3.3. Capability to operate and perform software updates without the wireless function.
- 3.4. Capacity to transfer data via a mean other than by a wireless network (e.g. via a UBS memory stick).
- 3.5. Technical safeguards:
 - 3.5.1. Access control with a PIN or password.
 - 3.5.2. Auto log-off to prevent inadvertent access.
 - 3.5.3. Ability to remove identifying patient information for images and clips.
 - 3.5.4. Operating system and application hardening.
 - 3.5.5. Integrity controls and transmission security.

4. IMAGING

The Handheld Ultrasound Machine must be capable, as a minimum, of the following:



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4.1. Scan Modes:

4.1.1. 2D

4.1.2. M-Mode.

4.2. Doppler Types:

Mandatory:

4.2.1. Color Doppler.

Desired:

4.2.2. Tissue Doppler;

4.2.3. Power Doppler; and

4.2.4. Pulse (Spectral) Wave Doppler.

5. **EXAM TYPES**

The Handheld Ultrasound Machine must be capable, as a minimum, of the following exams:

5.1. Abdomen.

5.2. Breast.

5.3. Lung.

5.4. Nerve.

5.5. Arterial.

5.6. Venous.

5.7. Musculoskeletal (MSK).

5.8. Superficial/small parts.

5.9. Gynecological.

5.10. Obstetric.

5.11. Ophthalmic.

5.12. Cardiac

6. **SOFTWARE FEATURES**

The Handheld Ultrasound Machine's software must, as a minimum, include the following capabilities:



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6.1. 2D Measurements:

6.1.1. Distance in centimeters.

6.1.2. Area in centimeters squared.

6.1.3. Circumference in centimeters

6.1.4. Volume in cubic centimetre (cc) or millimetre (ml)

6.2. M-Mode Measurements:

6.2.1. Distance in centimeters.

6.2.2. Time in seconds

6.2.3. Heart Rate in beats per minute

7. **IMAGE MANIPULATION**

The Handheld Ultrasound Machine must include, as a minimum, the following image manipulation capabilities:

7.1. Zoom.

7.2. Depth.

7.3. Gain.

7.4. Freeze.

8. **DATA STORAGE AND TRANSMISSION**

The Handheld Ultrasound Machine must include, as a minimum, the following capabilities:

8.1. Internal storage capacity of at least 50 gigabytes (GB).

8.2. Automatic and/or manual storage of Raw Data on internal memory with user configurable compression.

8.3. As a minimum, exporting information in Digital Imaging and Communications in Medicine (DICOM) format for reading with a DICOM viewer.

8.4. Support external Universal Serial Bus (USB) type to store and transfer information.

9. **ACCESSORIES - TO BE INCLUDED WITH EACH HUM**

9.1. Transducers:



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9.1.1. Linear Array, Phased Array and Curved Array minimally covering together an operating frequency range of 2 to 10MHz if using piezoelectric crystal technology, or

9.1.2. Single transducer minimally covering the operating frequency range of 2 to 10MHz if using silicon chip technology.

9.2. Battery

9.3. Spare batteries (minimum of 2)

9.4. Battery charger if applicable

9.5. Power supply

9.6. System AC power cord

9.7. Protective case

9.8. Carry case

9.9. One (1) operating manual (hard copy or electronic PDF), in English and French

9.10. One (1) service manual (electronic PDF preferred)

10. **REFERENCE MATERIALS**

10.1 Within 20 calendar days of contract award, the Contractor must provide the Technical Authority with the following information:

10.1.1. Detailed list of the equipment to be shipped. The list must include all part numbers, descriptions and quantities.

10.1.2. Detailed list off all consumables, including part numbers and unit of issue, that are used with the HUM.

11. **DELIVERY LOCATION AND SCHEDULE**

11.1. For the CF H Svcs Gp, the HUM units must be delivered to the following address:

Central Medical Equipment Depot (CMED)
105 Montgomery Road, Building BB104A
Garrison Petawawa
Petawawa, ON
K8H 2X3

ALL OTHER TERMS AND CONDITIONS REMAIN UNCHANGED.