



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

## BID SOLICITATION DEMANDE DE SOUMISSIONS

The Bidder offers to provide to Canada the goods, services or both listed in the bid solicitation in accordance with the conditions set out in the bid solicitation and at the prices set out in the bid.

This bid solicitation is issued in accordance with the conditions of Supply Arrangement No. . Only suppliers who are pre-qualified and have been issued a supply arrangement at the time this bid solicitation is issued are eligible to bid.

Le soumissionnaire offre de fournir au Canada les biens, services ou les deux énumérés dans la demande de soumissions aux conditions prévues dans la demande de soumissions et aux prix indiqués dans la soumission.

Cette demande de soumissions est émise conformément aux conditions de l'arrangement en matière d'approvisionnement numéro

. Seuls les fournisseurs qui sont pré-qualifiés et auxquels un arrangement en matière d'approvisionnement a été émis au moment où cette demande de soumissions est émise peuvent présenter une soumission.

Solicitation No. - N° de la demande	Amendment No. - N° de modification
Solicitation closes - La demande prend fin at - à on - le	File No. - N° de dossier

Date of Solicitation - Date de la demande	
Address inquiries to - Adresser toute demande de renseignements à :	
Area code and Telephone No. Code régional et N° de téléphone	Facsimile No. N° de télécopieur
Destination	

**Instructions:  
Municipal taxes are not applicable.**

**Unless otherwise specified in the bid solicitation, all prices quoted must be net prices in Canadian funds including Canadian customs duties, excise taxes, and must be FOB, including all delivery charges to destination(s) as indicated. The amount for Applicable Taxes is to be shown as a separate item.**

**Instructions:  
Les taxes municipales ne s'appliquent pas.**

**Sauf indication contraire dans la demande de soumissions, tous les prix indiqués doivent être des prix nets, en dollars canadiens, comprenant les droits de douane canadiens, la taxe d'accise et doivent être FAB, y compris tous frais de livraison à la (aux) destination(s) indiquée(s). Le montant des taxes applicables doit apparaître séparément.**

Delivery required - Livraison exigée	Delivery offered - Livraison proposée
Supplier Name and Address - Nom et adresse du fournisseur	
Telephone No. - N° de téléphone Facsimile No. - N° de télécopieur	
Name and title of person authorized to sign on behalf of supplier (type or print) Nom et titre de la personne autorisée à signer au nom du fournisseur (caractère d'impression)	
Signature	Date

## **PART 1 - SOLICITATION**

### **1. Requirement**

This solicitation and resulting contract are issued against the Supply Arrangement (SA) series E60HN-16ELEC and all terms and conditions of the SA apply.

Vendor is requested to submit a bid for all items listed at Annex "A" attached.

#### **1.1 Equivalent Products (B3000T)**

Products that are equivalent in form, fit, function and quality to the item(s) specified in the bid solicitation will be considered.

#### **1.2 Destination**

3701 Carling Avenue  
Ottawa, Ontario  
K1A 0Z4  
Canada

#### **1.3 Delivery**

Delivery is requested to be completed by no later than August 30, 2024.

### **2. Submission of Bids**

Bids must be submitted no later than 12h00 on July 8, 2024.

### **3. Integrity Provisions - Declaration of Convicted Offences**

As per terms and conditions of the Supply Arrangement (SA) series E60HN-16ELEC.

### **4. Bid Evaluation**

Technical compliance to the requirement presented in Annex "A" and Annex "B".

Technical compliance of equivalent (substitute) product(s) offered (as per Equivalent Products, B3000T).

The bidder must quote firm prices in Canadian dollars, DDP (destination) with freight charges included.

Goods and Services Tax (GST) and/or the Harmonized Sales Tax (HST) not included for evaluation purposes.

The Total Evaluated Bid Price is the sum of all items at Annex "A".

### **5. Basis of Selection**

A bid must comply with the requirements of the bid solicitation and meet all evaluation criteria to be declared responsive (compliant). The lowest priced responsive bid on an aggregate basis will be recommended for award of a contract.

## **PART 2 - RESULTING CONTRACT CLAUSES**

### **1. Requirement**

The contractor must provide the goods in accordance with the requirements stated herein and at Annex "A" attached.

### **2. Delivery Date**

Delivery to (destination) by no later than August 30, 2024.

### **3. Integrity Provisions - Declaration of Convicted Offences**

As per terms and conditions of the Supply Arrangement (SA) series E60HN-16ELEC.

### **4. Standard Instructions, Clauses and Conditions**

As per terms and conditions of the Supply Arrangement (SA) series E60HN-16ELEC.

### **5. Basis of Payment**

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid the firm prices as specified in the contract. Firm prices in Canadian dollars, DDP (destination) with Freight charges included. Goods and Services Tax (GST) and/or the Harmonized Sales

## ANNEX A STATEMENT OF REQUIREMENT

### 1. TITLE

EXPERIMENTATION LAB - VECTOR SIGNAL GENERATOR AND ANALYZER SYSTEMS

### 2. BACKGROUND

Defence Research and Development Canada (DRDC) Ottawa Research Centre has requirements for a vector signal generator (VSG) and a vector signal analyser (VSA) to provide support to research and development (R&D) activities in a laboratory environment.

### 3. ACRONYMS

ARB	Arbitrary waveform generator
dB	Decibel
dBc	Decibels relative to carrier
dBm	Decibel milliwatts
DRDC	Defence Research and Development Canada
GHz	Gigahertz
Hz	Hertz
IoT	Internet of Things
kHz	Kilohertz
MHz	Megahertz
MSa	MegaSample
R&D	Research and development
RF	Radio frequency
SOR	Statement of Requirement
VSA	Vector signal analyzer
VSG	Vector signal generator

### 4. APPLICABLE DOCUMENTS & REFERENCES

None

### 5. REQUIREMENTS

#### 5.1 Vector Signal Generator

The Contractor must provide one (1) VSG with the following specifications:

Specifications	Value
Frequency range	9 kHz - 6 GHz
ARB baseband generator RF bandwidth	80 MHz
ARB baseband generator memory	32 MSa
Output power at 1 GHz	+ 27 dBm
Bandwidth (vector)	160 MHz
Phase noise at 1 GHz, 20 kHz offset	-146 dBc/Hz

Spurious at 1 GHz (nonharmonics)	-96 dBc
Signal generation for IoT, waveform playback with node-locked perpetual license	Conform to 802.15.4g Wi-SUN, 802.15.4 ZigBee and ITU-T G.9959 Z-Wave standards
Software support	At least the first year

## **5.2 Vector Signal Analyzer**

The Contractor must provide one (1) VSA with the following specifications:

<b>Specifications</b>	<b>Value</b>
Frequency range	10 Hz - 6 GHz
Analysis bandwidth	40 MHz
Overall Amplitude Accuracy	±0.27 dB
Phase Noise @1 GHz (10 kHz offset)	-109 dBc / Hz
Displayed Average Noise Level (DANL) at 1 GHz	-146 dBm
Third-order intercept (TOI) at 1 GHz	+18 dBm
Input extension selection	Microwave preselector bypass
Instrument display and user interface	Multi-touch screen
Calibration plan	3 years

## **6. Deliverables**

<b>Number</b>	<b>Requirement Reference</b>	<b>Description of the Deliverables</b>	<b>Quantity and Format</b>
<b>6.1</b>	5.1	Vector Signal Generator	1
<b>6.2</b>	5.2	Vector Signal Analyzer	1

## **7. DATE OF DELIVERY**

**Deliverable 6.1:** On or before 2024-08-30.

**Deliverable 6.2:** On or before 2024-08-30.

## **8. Language of Work**

English

## **9. DELIVERY LOCATION**

Defence Research and Development Canada – Ottawa Research Centre  
 Building 29  
 3701 Carling Avenue  
 Ottawa, Ontario  
 K1A 0Z4  
 Canada

**ANNEX B      EQUIPMENT LIST**

<b>Example Part Number</b>	<b>Proposed Part Number</b>	<b>Description</b>	<b>Quantity</b>	<b>Unit Price</b>	<b>Total</b>
<b>N5182B- N5182B</b>		<b>MXG X-Series RF Vector Signal Generator KeysightCare first year support</b>	<b>1</b>		
<b>N5182B- N5182B-506</b>		<b>Frequency range, 9 kHz to 6 GHz</b>	<b>1</b>		
<b>N5182B- N5182B-656</b>		<b>ARB baseband generator (80 MHz RF bandwidth, 32 MSa)</b>	<b>1</b>		
<b>N7610EMBC</b>		<b>Signal Studio for IoT, waveform playback 12 months software support subscription, nodelocked</b>	<b>1</b>		
<b>N9010B- N9010B</b>		<b>EXA Signal Analyzer, Multi- touch KeysightCare Assured First Year Support</b>	<b>1</b>		
<b>N9010B- N9010B-507</b>		<b>Frequency range, 10 Hz to 7 GHz</b>	<b>1</b>		
<b>N9010B-R- 50C-011-3</b>		<b>Calibration Plan - Return to Keysight – 3 Years</b>	<b>1</b>		
<b>N9010B- N9010B-B40</b>		<b>Analysis bandwidth, 40 MHz; Enhanced phase noise performance II (standard)</b>	<b>1</b>		
<b>B9010B- N9010B- MPB</b>		<b>Microwave preselector bypass</b>	<b>1</b>		
<b>Total bid price (excluding tax)</b>			<b>\$</b>		