

## i- CALL FOR TENDERS

**Call for Tenders No.:** 20-220345-A

**Title:** GNSS Receiver Interference Testing

**General:** EUROCONTROL\* is an intergovernmental organisation with 41 Member and 2 Comprehensive Agreement States. We are committed to building, together with our partners, a Single European Sky that will deliver the air traffic management (ATM) performance required for the twenty-first century and beyond.

**Technical subject matter:** This study aims therefore to provide a deep understanding of GNSS aviation receivers' behaviour under degraded conditions, especially when subject to RF interference. The objective of this study is twofold:

- Quantify the impact of RFI on operational GNSS receiver observables, including a distinction between RFI and non-RFI impact, while quantifying the RFI impact for a large variety of RFI signal waveforms
- Based on the quantification of RFI impact, make recommendations on how to improve RFI testing standards for next generation GNSS receivers, taking into account a larger variety of different types of GNSS signals

**Main selection, assessment and award criteria:**

### TECHNICAL CAPACITY CRITERIA

Criteria	Subject	Pass/Fail
1	Appropriate technical resources	Have the required equipment to perform aviation receivers testing for the whole duration of the project: - As minimum, 3 certified aviation ABAS/RAIM receivers representing major aviation market segments, a GNSS satellite constellation signal generator and a GNSS interference threat generator will be needed. Interference threats should include both clean laboratory signals,

\* EUROCONTROL – European Organisation for the Safety of Air Navigation  
SUPPORTING EUROPEAN AVIATION

**Member States:** Albania, Armenia, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Moldova, Monaco, Montenegro, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom.



			<p>plus additional noise to simulate real signal in space environments.</p> <ul style="list-style-type: none"> <li>- Capability to carry out RTCA DO208 / DO316 Interference MOPS test (using PRN06 Doppler tracking)</li> <li>- Capability to simulate different types of interference (CW, swept CW, noise-like, pulsed, ...), including arbitrary waveforms from actually experienced RFI cases, as well as other relevant propagation effects.</li> </ul>
	2	Appropriate experience	<p>Have relevant publications or work experience within the last three years demonstrating:</p> <ul style="list-style-type: none"> <li>- a relevant experience in GNSS aviation receivers testing</li> <li>- a relevant experience in GNSS RFI</li> </ul>
	3	Appropriate prerequisite knowledge	<p>Have relevant publications or work experience within the last three years demonstrating:</p> <ul style="list-style-type: none"> <li>- a good understanding of GNSS receiver and antenna functionalities and performances</li> <li>- a good knowledge of aviation standards (ICAO, RTCA, EUROCAE) for GNSS</li> </ul>
	4	Appropriate human resources	<p>Have the appropriate human resources to carry out the required tasks: As minimum 1,5 FTE (Full-time equivalent) shall be available for the whole duration of the project.</p>

#### TECHNICAL ASSESSMENT CRITERIA

	Subject	Mandatory / Desirable	Points Available	<u>Minimum Threshold Score</u>
1	The understanding of the needs	[M]	[20] points	[12] points
2	The work planning	[M]	[10] points	[6] points
3	The quality of the testing capabilities to be allocated to the project	[M]	[10] points	[6] points

4	The references for similar achieved work (receiver testing and performances assessment, GNSS RFI studies, ...)	[M]	[20] points	[12] points
5	The relevance of the proposed testing scenarios and their representativeness of real-world conditions	[M]	[20] points	[12] points
6	The relevance of the proposed approach for threats characterization	[M]	[20] points	[12] points
			[100]	TOTAL: [60] points

The economically most advantageous offer will be established in accordance with the following:

For the Technical tender, a weighting of 60% is applied, for the Financial tender, a weighting of 40%.

08-10-2020 at 15:00 CET

**Tender closing date:**  
**Point of Contact:**

If you wish to receive the Call for Tenders please see the “Important Notice” below and if you have any other related questions, please contact:

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**If this Call for Tenders should interest you, please read the important information below:**

### **IMPORTANT NOTICE**

The full i-Call for Tenders documentation is in electronic format (.pdf).

If you wish to obtain the i-Call for Tenders documentation please read and follow carefully the instructions below:

1. If you are already registered in the EUROCONTROL Supplier Portal, please send an e-mail to the Point of Contact mentioned above to get access to the documentation.
2. If you are not yet registered as a EUROCONTROL supplier, please follow the 3-step process described on the following link: <https://www.eurocontrol.int/portal/supplier-portal>
3. EUROCONTROL accepts no responsibility whatsoever for the completeness, accuracy and/or timeliness of the transmission of the electronic documents (nor for the electronic documents themselves).
4. Submission of tenders shall be made electronically and shall be exclusively made in strict accordance with the instructions given in the tendering documentation.
5. You may:
  - a) print out the documents;
  - b) forward the documents further on a strictly need to know basis (always fully acknowledging the source, i.e. EUROCONTROL), and
  - c) use print-outs of the electronic i-Call for Tenders documents for the submission of tenders (especially the Price Offer Form ref: I-TSF-E).
6. You may not:
  - a) modify, edit and/or change the electronic documents other than to submit the required info and to sign/stamp where required;
  - b) transmit such documents to any third person who has no need to know them;
  - c) post such documents on any private or public website;
  - d) alter the originating source (EUROCONTROL) and or copyright signs etc., and
  - e) transmit the documents without indication of the source.

**An environmental notice:**

With a view to reduce the exponential growth of paper consumption, we would invite you only to print out electronic documents received and/or request paper copies of the price enquiry documentation if you are actually considering to submit a tender.