

**Acquisition Directorate**

tiziana.pezzi@ncia.nato.int

Telephone: +32 (0)2 707 8472

Fax: +32 (0)2 707 8770

NCIA/ACQ/2020/6724

26 May 2020

## Market Survey - Request for Information

**Project “Provide SATCOM Ground Segment Baseband Systems”  
 Project Serial Number 2016/0CM03119  
 Capability Package (CP) 9A0130 “Provide Satellite Communications (SATCOM)  
 Transmission Services”**

### **NCI Agency Reference: MS-CO-115171-SATCOM-GSBS**

NCI Agency is seeking information from Nations and their Industry regarding the availability of Commercial-Off-The-Shelf (COTS) and Government-Off-The-Shelf (GOTS) SATCOM Modems

#### **NCI Agency Points of Contact**

**Principal Contracting Officer (PCO): Mrs. Tiziana Pezzi**

E-mail: tiziana.pezzi@ncia.nato.int

**Action Officer: Mrs. Irina Barabancea**

E-mail: irina.barabancea@ncia.nato.int

To: Distribution List (Annex A)

Subject: **NCI Agency Market Survey  
 Request for Information MS-CO-115171-SATCOM-GSBS**

1. NCI Agency requests the assistance of the Nations and their Industry to identify COTS/GOTS solutions available to provide SATCOM modems that can meet or exceed



NATO Communications  
 and Information Agency  
 Agence OTAN d'information  
 et de communication

[www.ncia.nato.int](http://www.ncia.nato.int)

NATO's future requirements as identified under Capability Package CP 9A0130 project OCM03119 "Provide SATCOM Ground Segment Baseband Systems".

2. NCI Agency requests the broadest possible dissemination by Nations of this Market Survey Request to their qualified and interested industrial base.

3. A summary of the requirements is set forth in the Annex B attached hereto. Respondents are requested to reply via the questionnaire at Annex C. Other supporting information and documentation (technical data sheets, manuals, marketing brochures, catalogue price lists, descriptions of existing installations, manuals, etc.) are also desired.

4. The NCI Agency reference for this Market Survey Request is **MS-CO-115171-SATCOM-GSBS**, and all correspondence and submissions concerning this matter must reference this number.

5. Responses may be issued to the NCI Agency directly from Nations or from their Industry (to the Point of Contact indicated at Paragraph 8 of this Market Survey Request). Respondents are invited to carefully review the requirements in Annex B.

6. Responses shall in all cases include the name of the firm, telephone number, e-mail address, designated Point of Contact, and a NATO UNCLASSIFIED description of the capability available and its functionalities. This shall include any restrictions (e.g. export controls) for direct procurement of the various capabilities by the NCI Agency. Non-binding product pricing information is also requested as called out in Annex C.

7. Responses are due back to the NCI Agency no later than **17:00 Brussels time 19 June 2020**.

8. Please send all responses via e-mail to the following NCI Agency contact:  
Mrs. Irina Barabancea, Contracting Officer  
E-mail: [irina.barabancea@ncia.nato.int](mailto:irina.barabancea@ncia.nato.int)

9. Product demonstrations or face-to-face briefings/meetings with industry are not foreseen during this initial stage. Respondents are requested to await further instructions after their submissions and are requested not to contact directly any NCI Agency staff other than the POC identified above in Paragraph 8.

10. Any response to this request shall be provided on a voluntary basis. Negative responses shall not prejudice or cause the exclusion of companies from any future procurement that may arise from this Market Survey. Responses to this request, and any information provided within the context of this survey, including but not limited to pricing, quantities, capabilities, functionalities and requirements will be considered as information only and will not be construed as binding on NATO for any future acquisition.

11. All responses received related to this Market Survey will be treated as commercial-in-confidence information.

12. The NCI Agency is not liable for any expenses incurred by firms in conjunction with their responses to this Market Survey and this Survey shall not be regarded as a commitment of any kind concerning future procurement of the items described.

13. Your assistance in this Market Survey request is greatly appreciated.

FOR THE DIRECTOR OF ACQUISITION:

**Pezzi**  
**Tiziana**  
Tiziana Pezzi  
Principal Contracting Officer

Digitally signed by  
Pezzi Tiziana  
Date: 2020.05.26  
11:09:53 +02'00'



Enclosures:

Annex A (Distribution List)

Annex B (Market Survey Request - Summary of Requirements)

Annex C (Market Survey Request - Questionnaire)

**ANNEX A**  
**Distribution List for Market Survey Request for Information**  
**MS-CO-115171-SATCOM-GSBS**

Potential Industrial Suppliers (NCI Agency BOA Holders) 1

**NATO Delegations** (Attn: Investment Adviser):

Albania	1
Belgium	1
Bulgaria	1
Canada	1
Croatia	1
Czech Republic	1
Denmark	1
Estonia	1
France	1
Germany	1
Greece	1
Hungary	1
Iceland	1
Italy	1
Latvia	1
Lithuania	1
Luxembourg	1
Montenegro	1
Netherlands	1
North Macedonia	1
Norway	1
Poland	1
Portugal	1
Romania	1
Slovakia	1
Slovenia	1
Spain	1
Turkey	1
The United Kingdom	1
The United States of America	1

**Belgian Ministry of Economic Affairs** 1

**Embassies in Brussels** (Attn: Commercial Attaché):

Albania	1
Belgium	1
Bulgaria	1
Canada	1
Croatia	1
Czech Republic	1
Denmark	1
Estonia	1
France	1
Germany	1
Greece	1
Hungary	1
Iceland	1
Italy	1
Latvia	1
Lithuania	1
Luxembourg	1
Montenegro	1
Netherlands	1
North Macedonia	1
Norway	1
Poland	1
Portugal	1
Romania	1
Slovakia	1
Slovenia	1
Spain	1
Turkey	1
The United Kingdom	1
The United States of America	1

***Distribution for information (Blind to Potential Industrial Suppliers):***

**NATO International Staff**

NATO Office of Resources

Management and Implementation Branch

Attn: Deputy Branch Chief 1

Director, NATO HQ C3 Staff

Attn: Executive Co-ordinator 1

SACTREPEUR

Attn: Infrastructure Assistant 1

**Strategic Commands** *(as applicable to funding source)*

SACT Attn: ACOS C4ISR 1

ACO Attn: SPT CIS Director 1

**NATEXs**

All NATEXs 1

**NCI Agency (Internal distribution)**

**ANNEX B****Summary of Requirements  
Project ID 2016/OCM03119, CP9A0130**

Under CP9A0130 project OCM03119, NATO is procuring SATCOM modems. These new modems and appropriate variants will be installed across the fleet of NATO static, transportable and deployable (VSAT, fly-away, man-pack) ground terminals.

The new modems will be used for the following purposes and in support of the associated SATCOM network architectures:

- Trunk-based reach-back links, high capacity, with fixed or adaptive rate, point to point (Single-channel per Carrier, SCPC);
- Trunk-based intra-theatre backbone links, high capacity, with fixed or adaptive rate, point to multipoint (Multi-channel per Carrier, MCPC), enabling partial or full mesh connectivity.

In operational terms, and in support of the above listed functions, NATO will pursue:

- Spectral efficiency improvement features, e.g. reduced roll-offs, advanced filtering, bandwidth cancellation, Ethernet header compression, etc.;
- Simplicity of installation, configuration; operation; and maintenance;
- Minimum physical footprint, through high density of hardware integration, ultimately enabling multiple modem functions to run on the same platform;
- Upgradability through re-programmability (i.e. ability to incorporate new or upgrade existing waveforms as they emerge or evolve);
- Low lifecycle support costs;
- Increased security through the use of TRANSEC.

A quantity of **135 modems** is currently foreseen to be procured under this project, but the requirement may increase, pending other changes to modem lifecycle-replacement and modem lifecycle-uplift efforts of similar projects.

The expected contract award for this project is **Q2 2021**.

## **ANNEX C**

### **Questionnaire**

Organisation name:

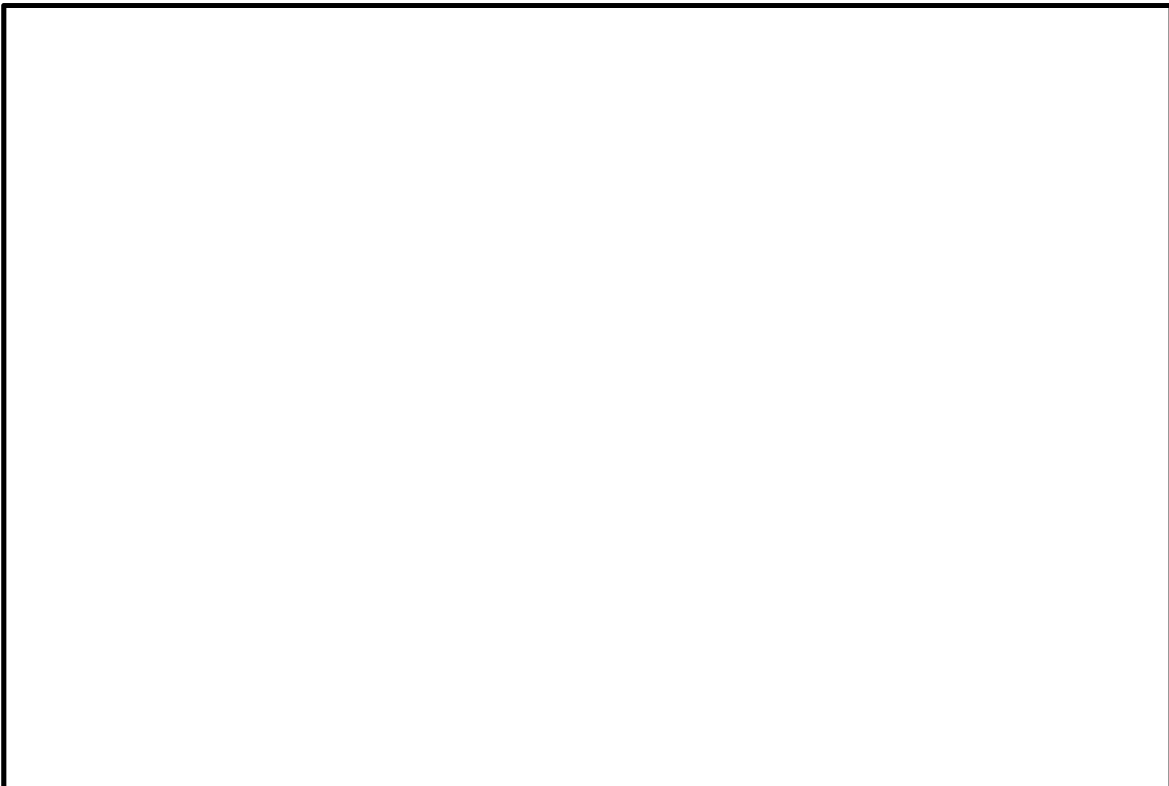
Contact name & details within organisation:

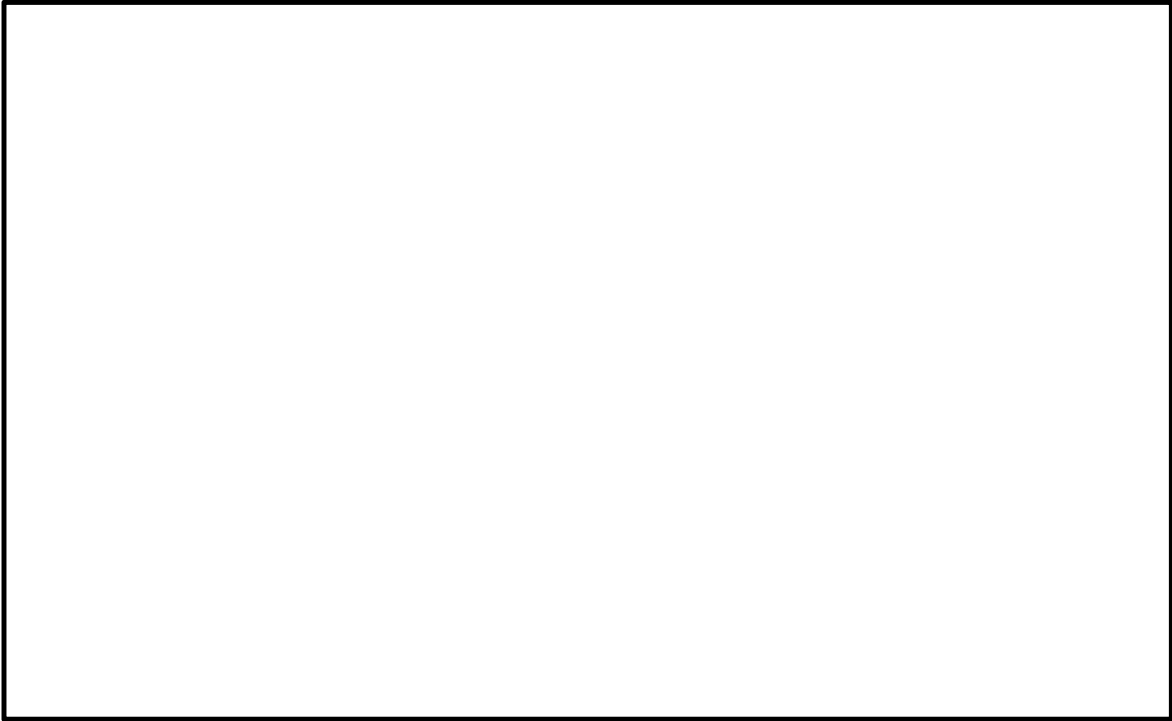
#### **Notes**

- Please **DO NOT** alter the formatting. If you need additional space to complete your text then please use the 'Continuation Sheet' at the end of this Annex and reference the question to which the text relates to.
- Please feel free to make assumptions, *HOWEVER* you must list your assumptions in the spaces provided.
- Please **DO NOT** enter any company marketing or sales material as part of your answers within this market survey. But please submit such material as enclosures with the appropriate references within your replies. If you need additional space, please use the sheet at the end of this Annex.
- Please **DO** try and answer the relevant questions as comprehensively as possible.
- All questions within this document should be answered in conjunction with the summary of requirements in Annex B.
- All questions apply to Commercial or Government respondees as appropriate to their Commercial off the Shelf (COTS) or Government off the Shelf (GOTS) products.
- Cost details required in the questions refer to Rough Order of Magnitude (ROM) Procurement & Life Cycle cost, including all assumptions the estimate is based upon:
  - Advantages & disadvantages of your product/solution/organisation,
  - Any other supporting information you may deem necessary including any assumptions relied upon.

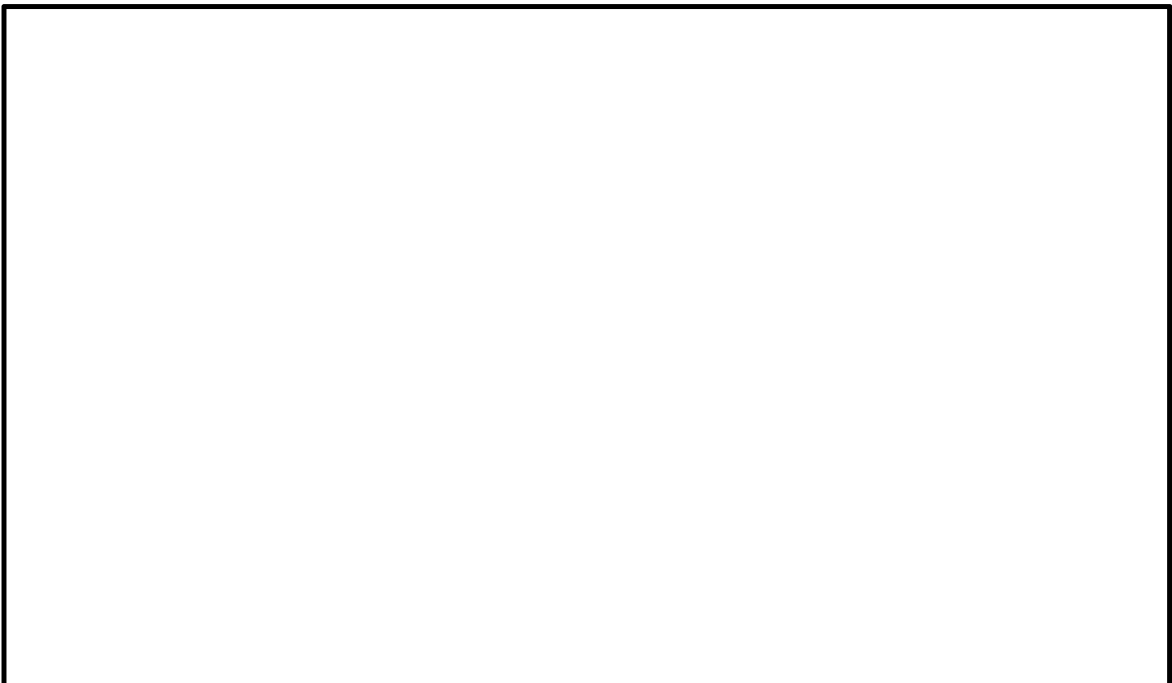


1. Can your company provide a SATCOM L-band FDMA modem in a 19-inch 1RU tall form factor with the following features:
  - a) Reprogrammable platform that supports multiple waveforms including but not limited to the DVB-S2X that conforms to ETSI EN 302 307-2;
  - b) Standard Generic Stream Encapsulation (GSE) on forward and return links that complies with ETSI TS 102 606-1;
  - c) Ability to transparently transport Ethernet frames (L2 bridging)? If so, what is the Ethernet MTU supported;
  - d) Ability to support Ethernet VLANs (IEEE 802.1q). If so, is this supported in a VCM/ACM multi-stream configuration? If so, indicate how many streams are supported?
  - e) TRANSEC that provides encryption and obfuscation of all user data, traffic activity patterns, management and control information and link-establishment data transmitted via the RF interface. If yes, please describe how TRANSEC is implemented and certified;
  - f) The ability to demodulate multiple DVB-S2X carriers simultaneously (at least four), and the expansion capabilities if any;
  - g) If your modem is not available in a single 1 RU tall form factor, would this modem be available in a 2RU tall form factor?
  - h) Can you provide a compatible (1a to 1e) modem in a small embeddable card form factor and featuring a single demodulator? If yes, please provide the dimensions?
  - i) Can you provide a compatible (1a to 1e) modem with a single demodulator in a small rugged weatherproof housing for outdoor use?

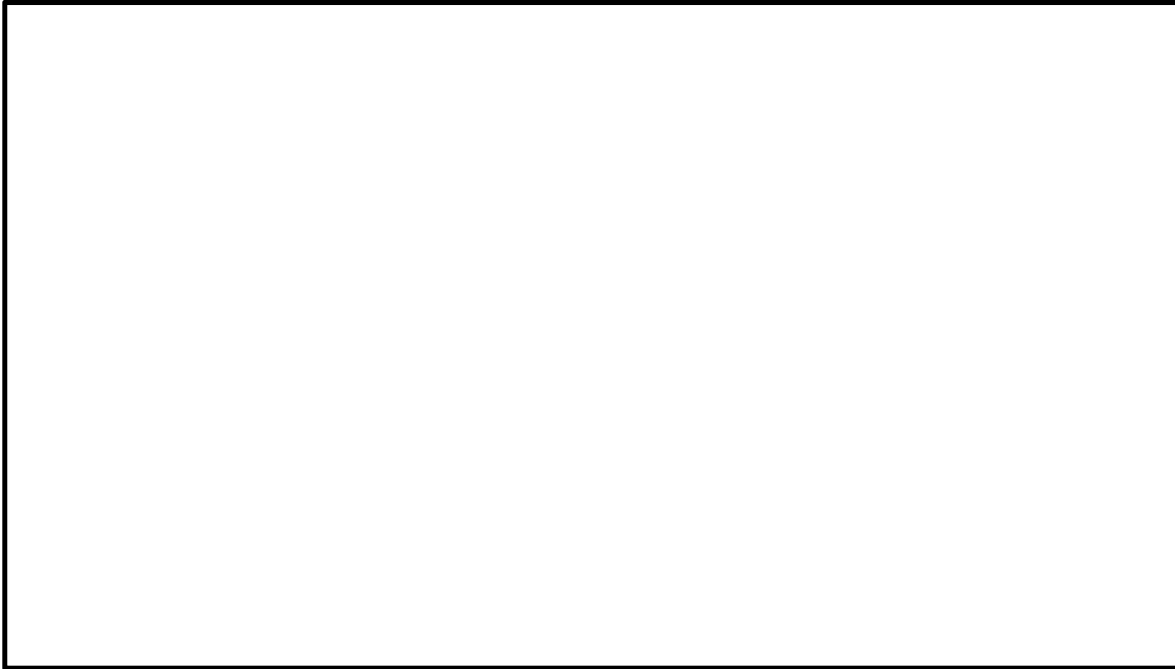




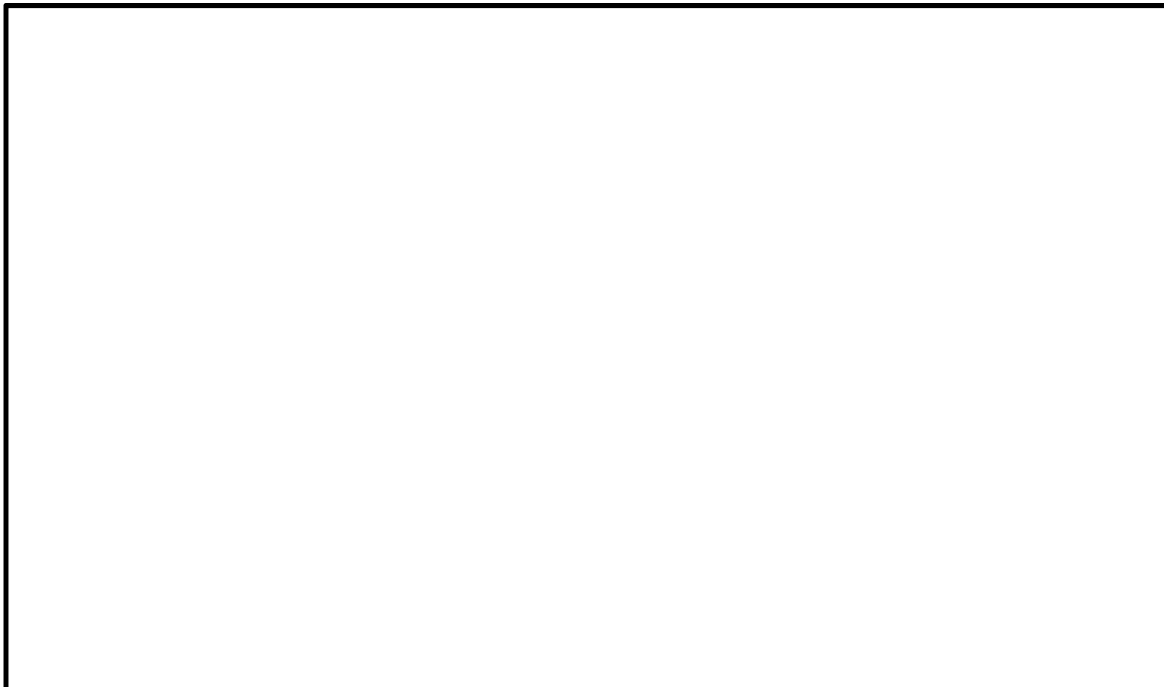
- 2. Does your M&C architecture support the configuration and monitoring of modems operating in the same network, and the means to transport and protect M&C information over the air?**



- 3. How is the allocation of bandwidth to different traffic flows and their mapping to MODCODs using VCM and GSE performed?**



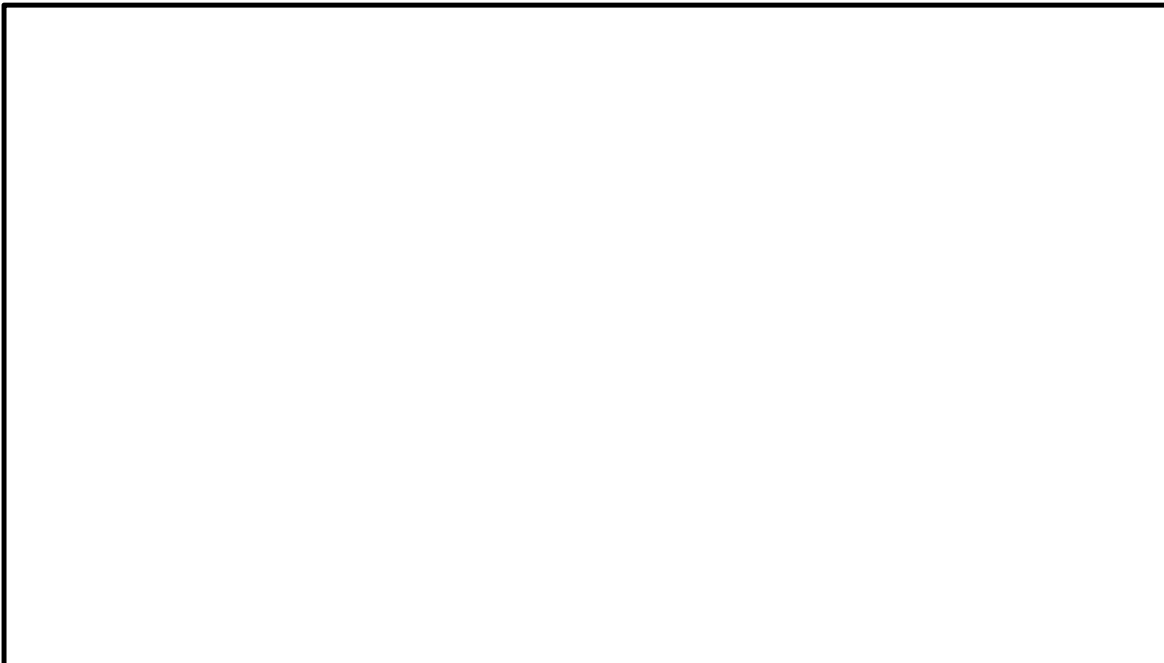
- 4. Can you provide a 1:1 and N:1 redundancy solutions? Please describe how redundancy is implemented. If any, please describe (incl. physical dimensions) the additional components required.**



5. Please confirm whether the proposed modem is currently: available as a COTS/GOTS, a prototype or under development. If it is under development when will it be available?



6. Does your company intend to develop a family of products that conform to the NATO STANAG 5646 (currently under development)?




7. If the answer to the above is yes, but full compliance is not achievable in the initial offering would your company be able to deliver a modem that is only partially compliant, would your company be able to achieve compliance based on the initial offering, through hardware and software field upgrades that do not require specialized equipment, soldering or direct factory support?



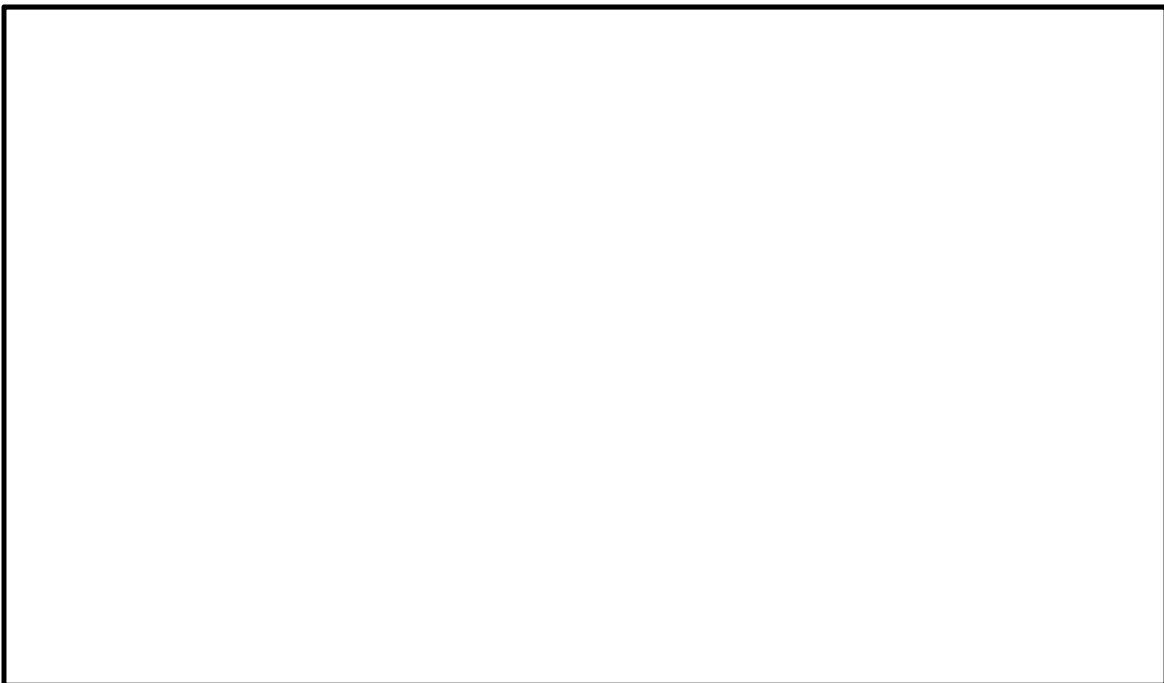
8. Please provide the Modem Model and Spec Sheet for each question answered positively.



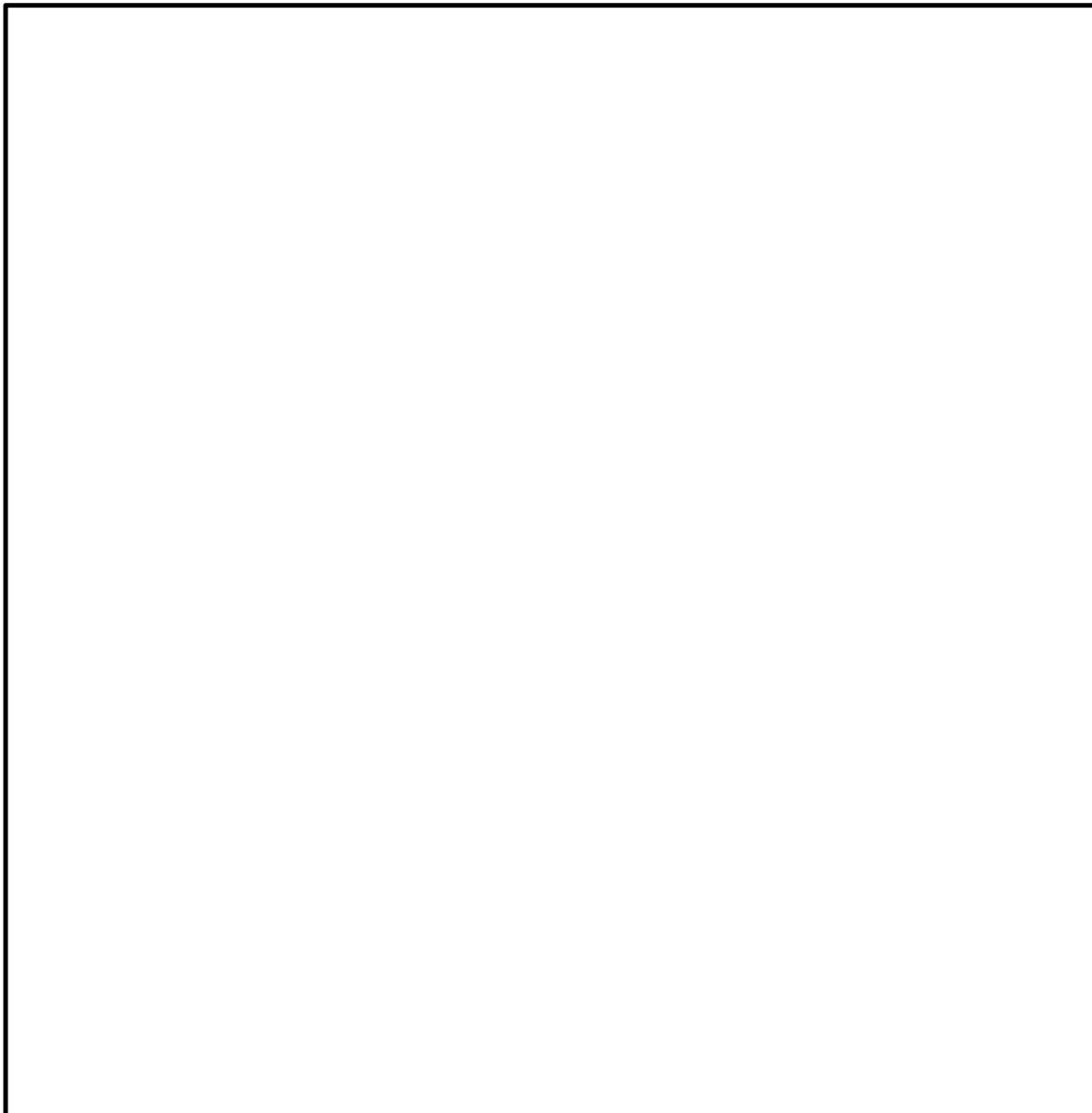
9. Please provide a Rough Order of Magnitude (ROM) pricing for the Modem product(s), including any modem controller capability and network planning software.



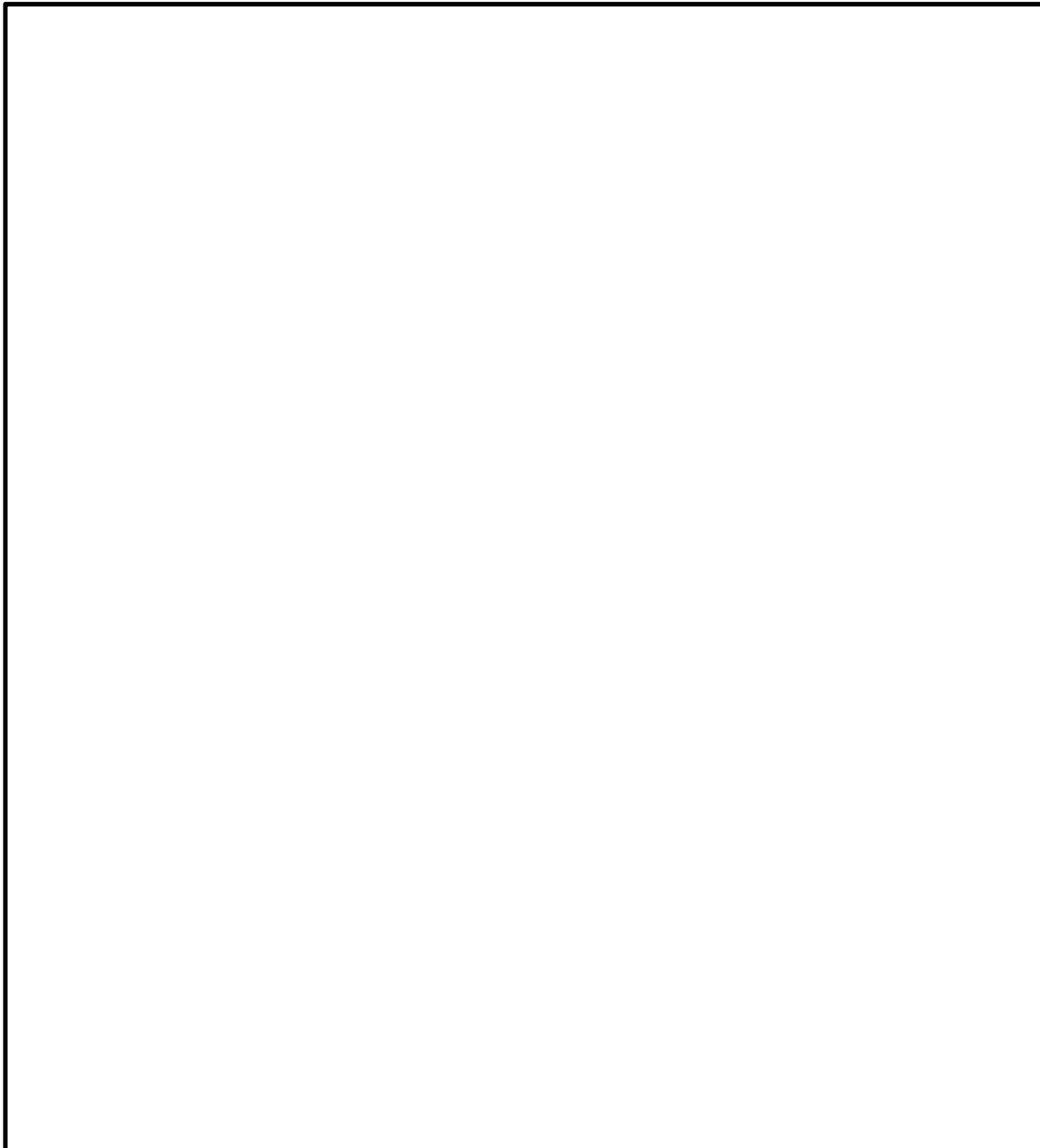
10. Do you provide a Service Level Support to perform level 3 maintenance for at least 10 years after delivery? If so, please provide a ROM cost estimate.



11. Can your company describe the following System Engineering design approach including reference to standards that have been used for the proposed solution:
- a) Predicted and actual/record for MTBF/MTBCF and MTTR/MTTRS figures in different operating conditions (e.g.: severe environment, duration) and the maintenance levels apportionment;
  - b) Effect of failure modes in terms of testability fault detection and isolation;
  - c) Logistics Support Database (e.g.: ASD S3000L or MIS-STD-1388-2B);
  - d) Technical Manuals (e.g.: ASD S1000D and relevant issue);
  - e) Training (e.g.: SCORM based training);
  - f) Resiliency in terms of obsolescence management including monitoring and resolution (e.g.: detailing the process to minimize the product's Life Cycle Costs).



- 12. Can your company provide ROM cost estimate for third level of maintenance (both HW and SW) for at least 10 years after delivery AND describe the Contractor Logistics Support approach for the proposed solution (warranty and post-warranty phase) covering the following:**
- a) Engineering Support (e.g.: failure reporting analysis, corrective actions, engineering change, obsolescence);**
  - b) Material Management (e.g.: spare parts procurement lead time, repair time, optimization of stocks);**
  - c) Field Engineering (e.g.: preventative and corrective maintenance, on the job training).**





<b>Continuation Sheet</b>	Page
<p>Please feel free to add any information you may think that may be of value to NCI Agency in the space provided below. Should you need additional space, please copy this page and continue with the appropriate page numbers.</p>	— Of —