

**Questions and Answers  
To  
Request for Quote  
Equipped RADAR anechoic test chamber**

**RFQ No.: 001/MG/0714**

This purchase is a part of a project for which Miranda Sp. z o.o has been granted a subsidy by the European Union.

Customer Name:

**Miranda Sp. z o.o.**

Customer Address:

**ul. Jedwabnicza 1**

**62-700 Turek**

**Poland**

Customer contact:

**Name: Martin Gwizd**

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**Email: [mgwizd@miranda.pl](mailto:mgwizd@miranda.pl)**

Closing date:

14-08-2014

**Q1.**

In reference to the a/m RFQ please clarify the difference between point 1.1 Plan of action and point 2.3 Questions of mentioned RFQ

In point 1.1 is written that questions/answers should be to 08-08-2014 but in point 2.3 is written that eventual questions should be submitted till 14.07.2014 before 12.00 noon.

**Answer:**

After reviewing the schedule it has been determined that final date for questions will be set to 06-08-2014 12:00 GMT and Final answers will be given on the 07-08-2014.

**Q2.**

In point 2.8 Quoted price should include VAT is written. Bidder who has foreign place of incorporation is quoting net prices.

**Answer:**

In point 2.8 it is stated" The Vendor shall include all applicable sales consumer, use, and other similar taxes"

If the Vendor is a foreign entity then VAT is not applicable and as such it is permissible to quote Net prices.

**Q3.**

Are the weights of our new absorbers acceptable for Miranda Military or should you request that we deliver our old absorbers? We strongly recommend supplying the new absorbers because the electromagnetic properties are identical or better compared to the old absorbers while the overall outlook/appearance is better

**Answer:**

Please refer to Addendum 1, after careful consideration the specifications for absorber requirements have been revised.

**Q4.**

Can Miranda military agree that we supply our (brand name removed) flat absorbers for covering the corners of the anechoic chamber or should we supply, instead of flat foam absorbers, small pyramidal foam absorbers in order to obtain – 30 dB reflectivity in the corners of the chamber? We strongly recommend using (brand name removed) because it has been proven many times that it works perfectly.

**Answer:**

Please refer to Addendum 1, after careful consideration the specifications for absorber requirements have been revised.

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**Q5.**

Please specify which pyramidal absorber (1 or 2) is to be placed on the walls of the chamber, and which on the floor

**Answer:**

We will cover the entire receive end-wall of the chamber (end-wall behind the Quiet Zone) as well as the critical areas on both sidewalls , ceiling and floor with:

**Absorber 1.** Estimated quantity required is 370pcs.

The complete transmit end-wall (end-wall behind the transmit antenna) as well as the less-critical areas on sidewalls, ceiling and floor are foreseen to be covered with:

**Absorber 2.** Estimated quantity required is 335 pcs

All corners in the chamber will be covered with:

**Absorber 3.** Estimated required quantity is 200 pcs

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**Q6.**

Please specify which connector (type and Sex) is to be ended each of the required cables

**Answer:**

The connection is to be between the antennae and network analyzer for each of the cables, please provide appropriate terminations to suit.

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**Q7.**

Please define what is to be the maximum attenuation of cables offered (dB/m)

**Answer:**

Please provide a preferred cable type and options, we will select the cable according to specifications and price.

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**Q8.**

Does the customer require that the cables be offered be flexible? If so, please specify what is to be a minimum bending radius of the cable

**Answer:**

Yes the cables are to be flexible; the minimum bend radius shall be no less than 10 times the diameter of the cable.

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**Q9.**

Please specify whether you are required to present the theoretical parameters of absorbers or measured results?

**Answer:**

We require measured (guaranteed) results. Please include measured results with your proposal.

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**Q10.**

Does the customer require the Millimeter-wave converter 75 - 110 GHz, to have the option to measure the full scattering matrix S?

**Answer:**

Measurements will be performed in cross and co-polarizations of reflectance, transmission and scattering, the Millimeter-wave converter is to be compatible with these measurements.

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**Q11.**

Does the Customer allow to offer network analyzer with technical parameters described in Table no. 1?

Table 1

Nr.	Parameter	Minimum Requirement
1	Configuration	The minimum configuration is: - Four port device - Two built-in generators - Possibility to connect 75-110GHz converters without the need to expand the analyzer hardware
2	Frequency range	10MHz - 50GHz
3	Frequency resolution	$\leq 1\text{Hz}$
4	Measurement Bandwidth	1Hz ÷ 1MHz
5	Adjustable output level at all ports (with installed option direct access to generators and receivers)	From -30dBm to: 10MHz to 50MHz: +12dBm 50MHz to 16GHz: +13dBm 16GHz to 26,5GHz: +13dBm 26,5GHz to 30GHz: +12dBm 30GHz to 32GHz: +11dBm 32GHz to 35GHz: +12dBm 35GHz to 43,5GHz: +9dBm 43,5GHz to 47GHz: +5dBm 47GHz to 50GHz: -5dBm

6	Dynamics ( IF 10Hz with installed option direct access to generators and receivers)	10MHz to 50MHz: 82dB 50MHz to 100MHz: 98dB 100MHz to 250MHz: 108dB 250MHz to 500MHz: 115dB 500MHz to 1GHz: 118dB 1GHz to 26,5GHz: 127dB 26,5GHz to 30GHz: 122dB 30GHz to 32GHz: 121dB 32GHz to 35GHz: 122dB 35GHz to 43,5GHz: 117dB 43,5GHz to 47GHz: 114dB 47GHz to 50GHz: 104dB
7	Connections	50Ω, 2,4mm type, male with an additional flange reinforced mechanically
8	Measurement speed at (IF 1MHz, CW)	3,17μs
9	Control Interface	LAN, GPIB
10	Other requirements	Calibration Kit female, male - 50GHz

**Answer:**

Yes, this is acceptable

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**Q12.**

Does the Customer allow to offer network analyzer which meet technical requirements only by typical values which are not covered by the product warranty ?

**Answer:**

Both Typical and guaranteed values are to be shown, both typical and guaranteed values will be taken into consideration. It should also be stated which values are the basis for the product warranty.

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**Q13.**

Does the Customer allow to offer following absorber materials:

First material: EHP 18 PCL with Black tip (4.6kg/block)

Second material: EHP 12 PCL with Black tip (3.8kg/block)

Third material: LFB.

**Answer:**

Please refer to addendum 1

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**Q14.**

Does the Customer requires to offer network analyzer with option

“Time Domain”?

**Answer:**

No

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**Q15.**

Does the Customer allow offering Millimeter-wave converters 75-110GHz with parameters described in Table no. 2?

No.	Parameter	Minimum requirement
1	Configuration	Set of two converters 75-110GHz Frequency range with electronic level control, necessary connecting cables to the network analyzer L=1.2m
2	Frequency Range	75GHz – 110GHz
3	Output level	+3dBm
4	Output attenuation adjustment	0dB ÷ 25dB

5	System Dynamics (IF=10Hz)	$\geq 95\text{dB}$
6	Other Requirements	Calibration kit, Millimeter wave

**Answer:**

Yes providing the following requirements are met:

- 1) The necessary cables to the network analyzer are  $L=1,5\text{m}$
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