



70 -- WINDOWS BASED DATA ACQUISITION AND CONTROL SYSTEM FOR SHIP USE

- [Combine Synopsis/Solicitation](#) - Posted on Mar 17, 2006
- [Amendment to Combined Synopsis/Solicitation 01](#) - Posted on Mar 31, 2006
- [Amendment to Combined Synopsis/Solicitation 03](#) - Posted on Apr 07, 2006

General Information

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Contracting Office Address

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Description

The purpose of this amendment is to answer questions posed by potential offerors and to provide

for an extension in the due date for the receipt of proposals. The questions and answers are as follows:

1. Paragraph 3.1.3 (c) of the specifications indicates that data resolution shall be adjustable in the 12 bit to 32 bit range. What do you anticipate the mix of channels to be among 12 and 32 bit signals? Specifically, do you anticipate a high number of 32 bit signals being monitored?

Clock resolution should be 32 bit. Instrumentation signal input should be in the 12 to 24 bit range.

2. The specification does not specify the quantity of specific channel types that are required in each Node Room. For example, Node Room 1 needs 100 channels. For example, is that (30) +/- 5mVDC channels and (30) +/- 30 VDC and (40) 0-20mA channels?

70% of each node room capacity must be dissimilar metal thermocouple compatible (Type K). The remaining 30% should be capable of handling copper/copper instrumentation wiring with output voltages in the +/- 5m VDC and +/- 30 VDC range.

3. Paragraph 3.1.3 (e) of the specifications requires built in conversion circuitry. What part of this application requires 32-bit analog to digital conversion (ADC)?

a. Typical applications for industrial controls utilize 12-bit ADCs quite adequately. This is roughly 3 5 digits of resolution in decimal representation. Sensitive measurements often require 16-bit resolution, or 5 digits, to more accurately represent measured voltages. Laboratory grade measurements sometimes need 24 bits of resolution to sample voltages with 7.5 digits of accuracy. Is there really a need to sample voltages with 9.5 digits of resolution with a 32 bit ADC stage for this procurement?

b. Is this a misprint?

The synchronization clock requires 32-bit resolution. Signal inputs from instrumentation require A/D conversion resolution in the 12-bit to 24-bit range.

4. Software - What is the requirement for Data Acquisition Software? Please detail. Is custom data acquisition and software interfaces required? If custom software is not required, how will acceptance testing be performed? Can you please describe further the requirements under licensed software, ii, iii, iv? What are remote module data acquisition software requirements? What data acquisition capabilities on server and remote real time system?

Data acquisition software should be of the same type and capability as found in Labview. The Labview package is acceptable. By licensed software, NRL means licensed copies of all software such that the software manufacturers will provide technical support if needed.

5. For clarification, should each remote data acquisition module include a UPS backup? What is the housing / cabinet requirements for the remote modules and UPS if required?

Sufficient UPS back-up capability, for each node room, for however many remote acquisition modules are proposed per node room is required to supply at least 30 minutes of emergency power. If this can be achieved with one UPS unit per node room, that is acceptable. Offerors may propose their own cabinet architecture, but should keep in mind that the UPS units may perform in node rooms that are non-airconditioned, humid, and possibly dirty.

6. Please clarify ? do you really mean a 32-bit data acquisition resolution.

This far exceeds most commercial and Department of Defense standards? If not, please state what is required resolution.

See above answer. The synchronization clock requires 32-bit resolution. Signal inputs from instrumentation require A/D conversion resolution in the 12-bit to 24-bit range.

7. NRL's Specification states that un-airconditioned spaces can reach temperatures in excess of 100°C, how much in excess?

Temperatures in the un-airconditioned node rooms can get up to 120 degrees F in the summer. The equipment must perform accurately under those conditions.

8. Installation to ship power? We plan to provide commercial A/C power connections that will be integrated into ship power by purchaser. Is this correct? If not, please clarify.

Offerors are expected to provide standard commercial A/C power connections. NRL will integrate the system into the ship's power.

9. Field wiring and transducers to data acquisition systems are to be installed by NRL, correct? If not, please clarify.

NRL will integrate all instrumentation and transducers into the system.

10. If the remote units operate on 24 VDC, what would be the power requirement? 1500 VA seems excessive for this type of application. 5-7 Amp-Hour is more of an industry norm for DC powered devices of this type. If a cabinet is required for the remote UPS, this will be a more easily integrated form factor. Please comment and clarify.

The remote data acquisition and control modules will operate on 110/120 VAC power on a maximum 15 amp circuit. The remote units operate on A/C power. The output of our instrumentation is D/C voltage in the +/- 5mVDC to 30 VDC range. NRL requires sufficient UPS back-up to provide power to each node room for 30 minutes. Cabinet mounted UPS is fine.

11. We are very interested in pursuing this opportunity but need to request an extension of 2 weeks. Is that a possibility?

NRL will extend the due date for the receipt of proposals until 4:00 p.m. on April 20, 2006.

12. Will NRL be able to issue a letter of delegation to allow the successful offeror to purchase items from the GSA Schedule.

No. Such delegation is only permitted in special circumstances outlined in FAR Part 51. In this instance, a commercial item type contract is anticipated, which does not permit the Government to issue such a letter.

13. With respect to the operating system: Windows 2003 Standard Edition will only address 4 GB of RAM. (8 GB is specified). Is it OK to propose Windows 2003 Server Enterprise Edition which can address up to 32 GB of RAM?

Windows 2003 Server Enterprise Edition is acceptable.

14. With respect to the CPU spec: Is one dual core CPU sufficient or are two dual core

CPU's required?

One dual core is sufficient.

15. With respect to the RAID functionality: Does the RAID need to be built onto (On-Board) the system board or can it reside in one of the expansion slots?

It is not necessary that the raid be on-board.

16. With respect to the Video spec: Our suppliers have a PCI e Video card capable of 4 simultaneous outputs. In order to meet the 5 simultaneous outputs spec we need to use an 8 port card which is a PCI card; not PCI e. Is it ok to use the 8 port PCI card in place of a PCI e card?

We want the ability for digital output to all 5 monitors. If this can be achieved with one 8-slot PCI card then that is fine. If digital output to all 5 monitors requires two 4-slot PCIe cards then that is what we require.

17. With respect to the riser card spec: our system probably won't have a riser card. Is that ok?

If the server case is tall enough then a riser card is not needed.

18. With respect to the expansion slots: what size of PCI-E slots are required (x1,x4,x8,x16,etc.)

X16.

19. What are the intended use of the 4 PCI slots and 3 PCI e slots? How many of these slots need to be occupied?

There is no specific need in the near term. We need to have the ability for future expansion.

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