



Stores & Purchase Department

Tender Notice No.:- NC-000163-PHY-17-18-LTN-55

Tender Date:- 16/08/2017 / Date of opening of Quotation:- 27/09/2017

Sealed Tenders are invited on behalf of the Director, National Institute of Science Education and Research, Bhubaneswar from the manufacturers (Indian or Foreign) and their authorized resellers/Indian agent only for supply and installation of the following item(s) :-

Sl. No.	Name of Items	Department	Indent No.	Quantity
1	<b>16 channel Fast Amplifier</b> Packaging : 1U wide NIM module Voltage gain : 10 +/-6% No. of input channels : 16 No. of output channels : 16 with fan-Out of two Output dynamics : +/- 2 V	Physical Sciences	NC-000163-PHY-17-18	1.0
2	<b>16 channel Leading Edge Discriminator</b> 1. One unit wide NIM module 2. 16 inputs, 50 Ohm impedance, negative polarity, DC coupling. Max input voltage -5V. 3. 16x3 NIM (1 pair bridged + 1 complementary) outputs 4. Threshold range: -1 mV to -255 mV individually specifiable. 5. VETO and test inputs	Physical Sciences	NC-000163-PHY-17-18	1.0
3	<b>Adapter for High Density Connector</b> The adapter should allow to adapt one 3M 30-pin P50E 068S (Robinson Nugent 68 pin type) high density flat connector into two 17+17-pin Header-type male connectors with locks through two 25 cm long flat cables.	Physical Sciences	NC-000163-PHY-17-18	4.0
4	<b>Triple 4-Fold Logic Unit/Majority with VETO</b> 1. One unit wide NIM module 2. Three independent sections with 4 standard NIM inputs each that can be used for majority or logic 3. Each input dip switch selectable 4. VETO, OUT, /OUT and LIN connections	Physical Sciences	NC-000163-PHY-17-18	2.0

Detail Tender Document can also be downloaded from the NISER web-site address: [www.niser.ac.in](http://www.niser.ac.in) directly.

NISER reserves the right to accept or reject any or all the Tenders without assigning any reason.

Terms & Conditions: -

As per attached sheet

for National Institute of Science Education and Research,  
Bhubaneswar

Deepak Srivastava  
(Store and Purchase Officer)

**PART – 1**  
**TERMS & CONDITIONS**  
**FOR SUPPLY AND INSTALLATION**  
**OF**  
**PHYSICS EQUIPMENTS**  
**FOR**  
**NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH, JATNI**  
**PART – 1**  
**TERMS & CONDITIONS**

1. Sealed tenders are invited for supply and installation of PHYSICS EQUIPMENTS in the National Institute of Science Education and Research. The tender document consists of the following two parts.

**Part-1: “TERMS & CONDITIONS” & “TECHNICAL BID” of the tender.**

**Part-2: “FINANCIAL BID” of the tender.**

2. The bidder must attach the at least 03 Purchase Order copy for Supply & Installation of above equipments during the last 01 financial years in State Government or Govt. of India Department(s) /Reputed Organisation(s) (in Nos. and Value). Please attach a list of clients.
3. The bids submitted by the vendors should be valid for a minimum period of 90 days from the date of the opening of tender and the prices should be valid till execution of purchase agreement.
4. The sealed envelope containing “The Bid” on prescribed tender document of the NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH should reach the Stores & Purchase Officer, National Institute of Science Education and Research, Jatni on or before **26.09.2017** up to **5:30 P.M.** otherwise the tender will not be accepted.
5. The sealed envelope of the bidders shall be opened on **27.09.2017** at **2:30 P.M.**
6. For further information/clarification in this respect, please contact Dr. V.K.S Kashyap on e-mail [vkashyap@niser.ac.in](mailto:vkashyap@niser.ac.in). Only e-mail inquiries will be entertained.
7. The supply and installation of the above equipments shall be made by the vendor within 4 -6 weeks from the date of issue of the purchase order.
8. All the items to be supplied should be new, of good quality and standard and as per the technical specifications mentioned in technical bid document.
9. Discount: Any conditional discount will lead to the rejection of your tender.
10. The vendor will provide operational manuals, documents for peripherals, set of diagnostics to test all the sub-systems etc. along with the systems.
11. The installation of above equipments will be at the National Institute of Science Education and Research, Jatni.
12. The vender has to give undertaking that he will reinstall the equipment supplied by him at our new campus at Jatni free of cost as and when the institute is shifted to Jatni campus.

13. The prices quoted in the technical/financial bid should be inclusive of power cables, interface cables, packing, forwarding, freight up to NISER, Jatni, transit insurance and installation charges at sites. Excise duty and GST if applicable should be quoted separately at the appropriate columns provided for them in the technical/financial bid (NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH is exempted from Excise Duty). In case of import the NISER will arrange the clearance from Kolkata Airport. All the expenses, like Import duty, insurance will be added in your cost to calculate landed cost. (NISER is exempted from Custom Duty. The present rate is approx. 5.15%).
14. In case, excise duty/custom duty and GST are reduced or increased subsequently by the Government at the time of placement of the purchase order or delivery, then the same will be adjusted by either party on production of requisite proof.
15. Payment for the items to be supplied by the vendor against the purchase order shall be made by NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH as follows:-  
  
100% payment will be made within 45 days from the date of submission of all relevant documents required to release the payment.  
  
**The tenderers who are not agreeing to above payment terms, are requested not to submit their tender.**
16. The equipments will carry one year on site comprehensive OEM warranty. Warranty period will start from the date of successful installation of all the items at site.
17. Parties should specify the make and model of each Item along with all other details.
18. The tender must be submitted on the prescribed tender document issued by the NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH. Any other technical details required to supplement the information quoted in the prescribed tender document may please be attached separately. The information asked in the tender document should be given at the place provided for it in the tender document. The tenders in which information is not given at the place provided for it or not in the similar format given in the tender document may be rejected.
19. Printed conditions of the vendor submitted with the tender will not be binding on NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH.
20. The documents containing bids shall be free from cutting and erasures. However, alterations, if any, in the tender should be attested properly by the bidder, failing which the tender is liable to be rejected.
21. The tenders submitted by telex/telegrams/fax/email will not be considered. No further correspondence will be entertained on this matter.
22. NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH will not be responsible for any delay in obtaining the tender document by the vendor from NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH or submission of the completed tender document to NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH.
23. The registration number of the firm along with the GST No. allotted by the GST authorities and I.T. registration number (P.A.N.) along with the place of registration should invariably be given along with the technical bid.

24. Tender not conforming to any or all the above terms and conditions will be rejected.
25. Incomplete tenders are liable to be rejected.
26. NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH reserves the right to increase/decrease the specified quantities of any item(s) given in the tender.
27. NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH reserves the right to reject any or all the tenders without assigning any reason whatsoever. NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH would not be under any obligation to give any clarifications to those vendors whose tenders have been rejected. The decision of Director, NISER is final and binding in case of any dispute arising out of this contract between both the parties.

(Deepak Srivastava)  
Stores & Purchase Officer

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#### DECLARATION BY THE VENDOR

It is hereby declared that I/We the undersigned, have read and examined all the terms and conditions etc. of the tender document for which I/We have signed and submitted the tender under proper lawful Power of Attorney. It is also certified that all the terms and conditions of the tender document are fully acceptable to me/us and I/We will abide by the conditions from serial no. 1 to 27. This is also certified that I/We/our principal manufacturing firm have no objection in signing the purchase contract if the opportunity for the supply of the items against this tender is given to me/us.

Date:

Signature:

Address:

Name:

Designation:

On behalf of:

(Company Seal)

**SUPPLY AND INSTALLATION  
OF  
PHYSICS EQUIPMENTS  
FOR  
NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH, JATNI  
TECHNICAL SPECIFICATION**

S. No.	Item Specification	Qty	Offered specification with Make & Model No. please specify any deviation if any. Please attach separate sheet if required
(1)	(2)	(3)	(4)
	<b>PHYSICS EQUIPMENTS (NC-000163-PHY-17-18-LTN-55)</b>		
	<b>Item Specification:</b>		
1	<b>16 channel Fast Amplifier</b>	1	
2	<b>16 channel Leading Edge Discriminator</b>	1	
3	<b>Adapter for High Density Connector</b>	4	
4	<b>Triple 4-Fold Logic Unit/Majority with VETO</b>	2	
	<b>Note:- Detailed technical specifications as per Annexure-I</b>		

**Note:** - Parties must mention make & model no. of the equipment offered by them, with detailed specification (on separate sheet). Otherwise their tender will not be accepted.

## ANNEXURE-I

### SPECIFICATIONS

#### **16 channel Fast Amplifier**

<b>Packaging</b>	1U-wide NIM unit
<b>Voltage gain</b>	$10 \pm 6\%$
<b>Rise time</b>	$\leq 1.5$ ns(with unipolar input, $\pm 25$ mV amplitude)
<b>Band width (gain: 10x)</b>	$\pm 25$ mV input signal: 0÷250 MHz
	$\pm 150$ mV input signal: 0÷130 MHz
<b>Output dynamics</b>	$\pm 2$ V
<b>Offset uniformity</b>	$\pm 4$ mV (typical) $\pm 12$ mV (maximum)
<b>Offset nulling range</b>	$\pm 30$ mV (measured with 0 Ohm termination on input)
<b>Inputs channels</b>	16, DC coupled, 50 $\Omega \pm 2\%$ impedance
<b>Output channels</b>	16 with Fan-Out of two, drive 50 Ohm load
<b>Interchannel insulation</b>	50 dB
<b>Input reflections</b>	$\leq 10\%$
<b>I/O Delay</b>	$\leq 3$ ns

#### **16 channel Leading Edge Discriminator**

<b>Packaging</b>	1U-wide NIM unit
<b>Inputs Channels</b>	16 inputs, 50 Ohm impedance, negative polarity, DC coupling
<b>Max Input voltage</b>	-5 V

<b>Max input frequency</b>	140 MHz (Updating mode); 80 MHz (Non Updating mode)
<b>Threshold range</b>	-1 mV to -255 mV (1 mV step) individually specifiable
<b>Double Pulse Resolution</b>	7 ns (Updating mode); 12 ns (Non Updating mode)
<b>Test Input</b>	NIM logic signal, high impedance Min. FWHM: 5 ns Max. frequency: 30 MHz
<b>Veto Input</b>	NIM logic signal, high impedance Min. FWHM: 15 ns
<b>Output Channels</b>	16x3 NIM (1 pair bridged + 1 complementary)
<b>Output Width</b>	$5 \pm 1$ ns to $40 \pm 5$ ns
<b>Output Rise/Fall Time</b>	<3 ns
<b>Input/output delay</b>	$15.5 \pm 1.5$ ns
<b>Or Output</b>	NIM logic signal
<b>Current Sum Output</b>	-1 mA $\pm$ 20% per hit
<b>Reflections</b>	<4% for input pulses of 2 ns rise time

### **Adapter for High Density Connector**

The adapter should allow to adapt one 3M – P50E – 068S (Robinson Nugent 68 pin type) high density flat connector into two 17+17pin Header-type male connectors with locks through two 25 cm long flat cables.



## Triple 4-Fold Logic Unit/Majority with VETO

<b>Features</b>	<ol style="list-style-type: none"> <li>1. One unit wide NIM module</li> <li>2. Three independent sections with 4 standard NIM inputs each that can be used for majority or logic</li> <li>3. Each input dip switch selectable</li> </ol>
<b>IN</b>	<ol style="list-style-type: none"> <li>1. Std. NIM level, 50 Ohm impedance</li> <li>2. Minimum pulse width: 3.5 ns (FWHM)</li> </ol>
<b>VETO</b>	<ol style="list-style-type: none"> <li>1. Std. NIM level, 50 Ohm impedance.</li> <li>2. Minimum width: 10 ns (FWHM).</li> </ol>
<b>OUT and /OUT</b>	<ol style="list-style-type: none"> <li>1. Std. NIM level on 50 Ohm impedance</li> <li>2. Width ranges: 6 ns to 100 ns or 20 ns to 800 ns selectable via internal jumpers</li> <li>3. Rise/Falltime: 2 ns (10% to 90%)</li> <li>4. Input/Output delay: 14 ns <math>\pm</math> 2 ns</li> </ol>
<b>LIN</b>	<ol style="list-style-type: none"> <li>1. Std. NIM level on 50 Ohm impedance.</li> <li>2. Width selectable by jumper to correspond to input coincidence duration</li> <li>3. Rise/Falltime: 2 ns (10% to 90%).</li> <li>4. Input/Output delay: 12 ns <math>\pm</math> 2 ns.</li> </ol>
<b>AND/OR logic unit mode</b>	<ol style="list-style-type: none"> <li>1. Double pulse resolution (OR): 4.5 ns</li> <li>2. Minimum coincidence overlap (AND): 3 ns</li> </ol>
<b>MAJORITY logic unit mode</b>	<p>If "n" are the connected input signals (<math>1 &lt; \text{or} = n &lt; \text{or} = 4</math>) it is possible to set any majority level "m" with <math>1 &lt; \text{or} = m &lt; \text{or} = n</math></p>

**FINANCIAL BID**  
**FOR SUPPLY AND INSTALLATION**  
**OF**  
**PHYSICS EQUIPMENTS**  
**FOR**  
**NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH,**  
**JATNI**

Sl. No.	Systems	Approx. Qty.	Unit Price Including (delivered at NISER, Jatni Campus) Service Charges, installation and warranty charges in INR
(1)	(2)	(3)	(4)
<b>1</b>	<b>16 Channel Fast Amplifier</b>	<b>1</b>	
<b>2</b>	<b>16 Channel Leading Edge Discriminator</b>	<b>1</b>	
<b>3</b>	<b>Adapter for High Density Connector</b>	<b>4</b>	
<b>4</b>	<b>Triple 4-Fold Logic Unit/Majority with VETO</b>	<b>2</b>	
	NC-000163-PHY-17-18-LTN-55 Detailed technical specification as per technical bid		
<b>5.</b>	GST	_____ %	
	<b>Above item should carry standard one year comprehensive OEM warranty. In case the tendered provide warranty less than 1 year then he has to give justification for lesser period of warranty. Without justification his tender is liable to be rejected.</b>		

**ALL ABOVE ITEMS ARE ON 1 YEAR ONSITE FULL COMPREHENSIVE OEM WARRANTY.**

**Note: Please mention GST Rate for the above mentioned item.**

Date:  
Address:  
  
(Company Seal)

Signature:  
Name:  
Designation:  
On behalf of:

**NATIONAL INSTITUTE OF SCIENCE EDUCATION & RESEARCH  
JATNI CAMPUS, P.O.: BHIMPUR-PADANPUR, VIA:-JATNI  
KHURDA-752 050**

**Tender Notice No. NIT Limited No. NC-000163-PHY-17-18-LTN-55**

**CHECK LIST**

Your bid should accompany with following documents. Please enclose the required document and put (√) mark in the check list where ever applicable.

<b>Sl. No.</b>	<b>Description of Documents</b>	<b>Enclosure</b>
1.	Acceptance of Declaration by the Vendor enclosed with terms & conditions	Yes / No
2.	At least 03 Purchase Order copy for Supply & Installation of above equipments during the last 01 financial years in State Government or Govt. of India Department(s) /Reputed Organisation(s) (in Nos. and Value). Please attach a list of clients.	Yes / No
3.	GST Registration no. with Place	Yes / No
4.	Income Tax Registration no. with place	Yes / No
5.	Detailed technical description of the item	Yes / No
6.	Detailed filled Financial Bid	Yes / No
7.	Authorisation letter in letter head duly signed by the authorised signatory for allowing your representative to attend the tender opening meeting.	Yes / No

Signature of the Authorised Signatory with Date  
(with Company Seal)