



**Minutes of the Meeting of Pre-bid Conference**

<b>Open Tender #:</b>	005/PO/ECED/Arbitrary Wave Generator/Pattern Generator/2020-21 dt. 24.08.2020
<b>For:</b>	Arbitrary Wave Generator/Pattern Generator
<b>Pre Bid Conference:</b>	04/09/2020 (1430 Hrs.)
<b>Bid opening on:</b>	22/09/2020 (1530 Hrs.)
<b>Venue</b>	Room No. 203 Conference Hall (Purchase Office) MNNIT Allahabad

The Pre-bid Conference for the above tender was held as per above schedule.

Among those in attendance included:

(i) Dean (R&C)	Chairperson
(ii) Prof. Vijaya Bhadauria, Core Committee Member	Member
(iii) Dr. Arun Prakash	Member
(iv) Dr. Y. K. Prajapati	Member
(v) Dr. Shwetank Parihar, Assistant Registrar (Accounts-I)	Member

Representative of prospective Bidders:

Sl.	Name of Firm	Represented by
1.	M/s Convergent Technologies India Pvt. Ltd., New Delhi	Sri Sandeep Yadav-Manager Sales Sri Vipul Vaibhav Mishra-Sr. Sales Engineer
2.	M/s Agmatel India Pvt. Ltd., New Delhi	Sri Manoj Yadav-Area Sales Manager
3.	M/s Tektronix India Pvt. Ltd., New Delhi	Sri Rohit Kumar Singh-Account Manager
4.	M/s Keysight Technologies Pvt. Ltd.	Sri Pradeep Singh-Area Sales Manager (Telephonic)

- The Committee extended a warm welcome to the representative present in the meeting.
- Works and contents of the tender document were briefed to the prospective bidders and various associated important provisions of the tender document were also explained.
- The persons representing the above firms were requested to furnish queries (if any), in writing latest by 07.09.2020 so that the replies to the same may be provided by the Institute.
- It was resolved that no query from any prospective bidder shall be entertained after 07.09.2020.
- Resolution on the point of clarification may be seen at **ANNEXURE-A**.

Meeting concluded with thanks to the Chair.

10.09.2020  
[Y. K. Prajapati]

10.09.2020  
[Arun Prakash]

10/9/2020  
[Vijaya Bhadauria]

10.9.2020  
[Shwetank Parihar]

10/9/2020  
[Dean (R&C)]

Approved/Returned for Review

11/09  
Director





क्रय कार्यालय  
मोतीलाल नेहरू राष्ट्रीय प्रौद्योगिकी संस्थान इलाहाबाद,  
प्रयागराज-211004 (भारत)  
Purchase Office  
Motilal Nehru National Institute of Technology Allahabad,  
Prayagraj-211004 (India)



ANNEXURE-A

Sl.	Firm	Open Tender Reference(s) (Section, Page)	Existing Entry in NIT Document		Point of Clarification Required / Query	Resolution
1.	M/s Agmatel India Pvt. Ltd., New Delhi (received through email dated 06.09.2020)	Sl. # 3 under Technical Compliance of Goods at Page # 12/16	Sample clock generator	1.5 kSample/s or lower to 25 GSample/s or higher	Change sample rate from 25 GSamples/s to 50 GSa/s and remove lower sampling rate 1.5 kSamples/s to quote.	The Nyquist sampling theorem stipulates that the sampling rate or clock rate must be at least twice the highest spectral component of the generated signal, thus, accurate reproduction of the original signal can be guaranteed. But in practical applications, more than twice is often used. We need to generate the frequencies starting as low as 10Hz to 10GHz. For generating lower frequency ends up using large memory if we sample at Higher Sample Rate like 25 GSa/s or higher. For example, Waveform Memory needed = Sample Rate × Total Time of Waveform. With this to generate 10Hz signal needed memory is 2.5GSamples. This is too high and exceeding what we asked in Specification no. 6. Now same signal to sample with lower Sample Rate

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10/09/20

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*[Signature]* (2 of 4)  
10/9/2020

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10.9.20

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10/9/20



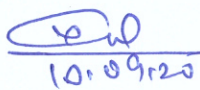
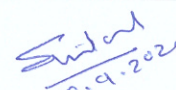
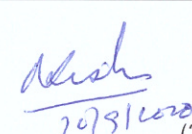
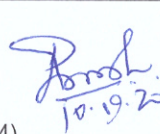
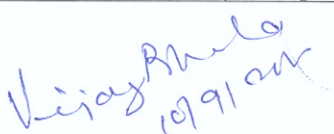


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						<p>10MSa/s then memory needed is 1MSamples only. So, we need lower Sample Rate also to generate these signals. Hence, we will not be able to remove it. That is the reason we need sample rate tunability wide. Which as per our requirement. Hence, no change</p>
		<p>SI. # 4 under Technical Compliance of Goods at Page # 12/16</p>	<p>DAC Resolution per channel</p>	<p>10 bits or better</p>	<p>Change to 8 bits or better to quote</p>	<p>Higher the Resolution of DAC better the Signal Purity. The resolution defines the smallest voltage change that can be measured by the DAC. The resolution is the same as the smallest step size, and can be calculated by dividing the reference voltage by the number of possible conversion values. In nutshell, DAC resolution will finally be going to decide the generated or synthesized waveform signal purity. Hence, no change</p>

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		SI. # 5 under Technical Compliance of Goods at Page # 12/16	Analog Bandwidth (-3dB)	$\geq 12.5$ GHz or better	Add that instrument should be upgradable upto 25 GHz or better	No change
		SI. # 7 under Technical Compliance of Goods at Page # 12/16	SFDR	Output frequency (f <sub>out</sub> )= DC to 6GHz; SFDR<-51dBc f <sub>out</sub> = 6GHz to 20GHz <-25dBc	AWG is required for 12.5 GHz, however tender specification for SFDR is defined at 20 GHz	Output frequency (f <sub>out</sub> )= DC to 6GHz; SFDR<-51dBc or better f <sub>out</sub> = 6GHz to 10GHz <-25dBc or better
		SI. # 15 under Technical Compliance of Goods at Page # 12/16	Operating Temp.	0-50 degree	Change Operating Temperature range from 0-40 degree or better	Normally, the temperature in Prayagraj reaches up to 47-48 degree in summer.  Hence, no change
2.	M/s Convergent Technologies India Pvt. Ltd., New Delhi (received through email dated 07.09.2020)	Para # 9 under GCC at Page # 7/16	<b>Payment Condition :</b> 100% Payment shall be released only after delivery, Installation & Satisfactory acceptance of goods.		90% Payment shall be released after delivery of material and rest of 10% shall be released after Installation of goods.	No change
3.	-	SI. # 4 under Brief Description of the items/equipment at page # 1/16	DAC Resolution per channel	08 bits or better	-	10 bits or better

[Y. K. Prajapati]

[Arun Prakash]

[Vijaya Bhaduria]

[Shwetank Parihar]

[Dean (R&C)]