

**TECHNICAL BID PROFORMA**

Tender No.EE/ARUN/25/IOE23/1GHZ4CHANNEL

Item Name: 1 GHz 4 Channel Oscilloscope with compatible isolated Differential Voltage

## 1.0 Bidder Eligibility Criteria:

I	Bidder Eligibility Criteria-I (Public Procurement – Preference to Make in India)	Class I / Class II	Local Content value	Reference, Page No.
I	Only 'Class-I local suppliers' and 'Class-II local suppliers', as defined under DIPP, MoCI Order No. P-45021/2/2017-PP (BE II) dated 16 <sup>th</sup> September 2020 and other subsequent orders issued therein.			
2.0	<b>Bidder Eligibility Criteria-II</b>	<b>Compliance (Yes/No)</b>	<b>Reference Page No.</b>	<b>Remarks, If any</b>
1	The bidder/OEM should have supplied at least 3 similar items to IITs, NITs, IISERS, CSIR Labs or other Govt. R&D organizations in the last 5 years, PO copies or installation certificates along with contact details of end user need to be submitted as the proof of supply. IIT Madras reserves its right to verify the claims submitted by the bidder and the feedback from the previous customers will be part of technical evaluation.			

## 3.0 Technical Compliance:

Sr. No.	Parameter	Specifications	Complied or Not Complied	Ref.Page.NO
1	Number of Channels	4 Analog Channels		
2	Bandwidth	1 GHz on all Channels or better		
3	Digital Channel	Each should support 8-Digital Channel.Upto 32-Digital Channels fo all 4-Channels should be available as option		
3	Sample Rate	Up to 6.25 GSa/s on all Channels		
4	Rise time	≤ 450 ps or better		
5	Record Length	≥ 30 MPoints on all channels or better		
6	ADC/Vertical Resolution @ 3GSa/s	12 Bits, 16 Bits with High Resolution Mode or better		
7	Input Coupling & Impedance	DC (50 Ω), 50Ω, 1 MΩ		
8	DC Gain Accuracy	≤ ±1%of full scale		
9	Time base range	200 ps/div to 1000 s/div		
10	Waveform Capture Rate	500,000 wfm/sec in Real Time capture mode		
11	Trigger types	Auto, Normal, Single Edge, Glitch, Width, Runt, Window		

		zone trigger on all Channels simultaneously		
12	Trigger Rate in Segmented Mode	200 ns or better		
13	Vertical sensitivity	1 M $\Omega$ : 500 $\mu$ V/div to 10 V/div in a 1-2-5 sequence 50 $\Omega$ : 500 $\mu$ V /div to 1 V/div in a 1-2-5 sequence		
14	Acquisition mode	Sample, Peak Detect, High Resolution, Faster Acquisition, Envelope, Averaging		
15	Spectrum Analysis	It should have DDC based Spectrum Analysis on all channels Simultaneous time and frequency domain analysis Each Channels spectrum or time domain signal can be individually configured to turn ON & turn OFF.		
16	DDC Span	1 KHz to 300 MHz.		
17	RBW Setting	1mHz to 15MHz		
18	Measurements	Rise/Fall Time, Skew, Period/Frequency, Data Rate, Positive/Negative Width, Positive/Negative Overshoot, With least 32 measurements simultaneously		
19	Measurement Analysis	Histogram, Time trend, Spectrum Plots		
20	Search & Mark	It should be available and should be to find min & max for debug.		
21	Result Table	Search Result table & Measurement Result Table		
22	Report Generation	It should be available.		
23	Trigger Frequency Counter	With 8 Digit resolution or better		
24	Digital Voltmeter	4 Digit Resolution or better		
25	Display type & interfaces	HD 1920 x 1080, minimum 13 inch with Multi-touch capacitive display, LAN Port, USB ports		
26	Temperature Range	Operating: +5°C to 50°C		
27	Standard accessories	Compatible 1 GHz Passive probes per Channels with better than 4pF loading		
28	AC Input	230 V, 50 Hz		
29	Warranty	3 Years Warranty		

**Isolated Differential voltage probe specification**

No	Parameter	Specification		
1	Bandwidth	500MHz		
2	Differential voltage range	±2.5 kV		
3	Common mode voltage range	60 kV peak		
4	Input capacitance	<2pF		
5	CMRR at 200MHz	90 dB		
6	Cable Length	2 metres		
7	Rise time	850ps		
8	Compatibility with equivalent oscilloscope	Probe supplied should be compatible with an equivalent oscilloscope as mentioned in the Oscilloscope requirement		

**SIGNATURE OF BIDDER ALONG WITH  
SEAL OF THE COMPANY WITH DATE**