CSIR-CSIO

सी.एस.आई.आर - केन्द्रीय वैज्ञानिक उपकरण संगठन

CSIR-CENTRAL SCIENTIFIC INSTRUMENTS ORGANISATION

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CPPP / CSIR-CSIO Website

No. CSIO/7(431)2025-PUR Dated: 28.02.2026

EXPRESSION OF INTEREST (EOI)

Expression of Interest is invited on behalf of Director, CSIR-CSIO, Chandigarh for supply of VNA Base Unit from reputed OEMs / Authorised Resellers etc. The tentative technical specifications of the proposed VNA Base Unit are placed below.

To better understand the applications of required VNA Base Unit, a technical meeting is scheduled with prospective OEMs / Authorised resellers etc. in CSIR-CSIO as per below details. Interested firms may go through the specifications and submit their query, if any through email at **spo.csio@csir.res.in** and **so.purchase.csio@csir.res.in**, so that same can be discussed during the technical discussion meet.

Critical Dates:

S.No.	Description	Date	Time
1	EOI Publishing Date and time	28.02.2026	15.00 PM
2	EOI Document Download Start Date & Time	28.02.2026	15.00 PM
3	Clarification Submission Start Date &Time	28.02.2026	15.00 PM
4	Clarification Submission End Date &Time	09.03.2026	15.00 PM
5	**Technical Meeting Date and Time**	**10.03.2026**	**11.00AM to 1.00 PM**
		CSIR-CSIO, Sector 30 C, Chandigarh	
6	Venue of Meeting		

Sd/-

(Stores and Purchase Officer)

Specifications VNA Base Unit (1-50 GHz)

S.No.	Parameter	Requirement
1.	Frequency Range	• Base unit with lower frequency band ≤ 10 MHz and higher frequency band ≥ 50 GHz. Along with suitable launchers (Upgradable till at least 1100GHz or more in the future) • The base unit of the VNA must be compatible with the 6dBm output power VNA extender module for the 140-220 GHz frequency range for full two-port S-parameter measurement. (During operation with the extender module, A minimum drive level of 10 dBm must be ensured, and must not exceed 16 dBm when in operation) • The system shall provide a matched IF interface between the extender and the VNA base unit, ensuring proper down-conversion and compatibility required to achieve the dynamic-range performance ≥ 100 dBm for 140-220 GHz. All the required interfaces between the VNA base unit and the extender should be provided with the required interconnect kit , cables and call kits
2.	Frequency Resolution	1 Hz or better
3.	Frequency Stability	Within ±0.5 ppm/year or better
4.	No of Test Ports	2 Ports extendable to 4 ports later through the controller unit or any other suitable process
5.	Internal sources	1 Source or more
6.	Number of Sweep Points	100000 or more
7.	IF Bandwidth	1 Hz to 1 MHz or better
8.	System dynamic range (at test port) at 10 Hz IF bandwidth	500MHz to 40GHz: > 117 dB or better 40 GHz to 50GHz: > 106 dB or better
9.	Maximum output Power	10MHz to 40 GHz: ≥ +6 dBm
		40 GHz to 50 GHz: ≥ -5 dBm
10.	Minimum output Power	≤ -30 dBm
11.	Power resolution	0.01 dB
12.	Corrected System Performance (with quoted Cal kit, Full frequency range of the base unit)	
	Directivity	≥ 32 dB
	Source & Load Match	≥ 27 dB
	Reflection & Transmission Tracking	≤ ±0.2 dB
13.	Phase Noise @ 10 kHz Offset	< -125 dBc/Hz @ 1 GHz

		< -107 dBc/Hz @ 10 GHz
		< -100 dBc/Hz @ 20 GHz
14.	Measurement capabilities	S parameters i.e. S11, S12, S22, S21 (Mag. and phase)
15.	Display capabilities	Log Mag, Lin Mag, Phase, Delay, Smith, Polar, SWR, Real, Imaginary, Unwrapped Phase, Positive Phase, Inverted Smith.
16.	Input damage power level for test ports (at all the ports)	> +27 dBm RF, 30 VDC or higher (the vendor may provide a suitable external DC block to comply)
17.	Display	At least 10 to 12-inch or higher diagonal color active-matrix LCD 1280 (horizontal) X 800 (vertical) resolution
18.	Number of Channels	More than 16 channels must be provided for multiple displays on the screen
19.	Sweep Type	CW, Linear, Log, Power, Segment
20.	Time Domain Analysis	Time domain analysis should be available to view reflection and transmission responses in time or distance. Time Gating feature should be available.
21.	Connectivity	LAN, USB , GPIB interface
22.	Data Storage	Internal drive with minimum 80 GB storage capacity
23.	VNA cables	2.4 mm (compatible to test port) to 2.4 mm (male); 1 nos. 2.4 mm (compatible to test port) to 2.4 mm (female); 1 nos. • Cables must be Phase Stable • Cable Length at least 1 metre
24.	Calibration kits	1. 2.4 mm Electronic Calibration kit or the Auto Cal Kit (As per the base-unit frequency range) 2. 2.4 mm Mechanical Calibration kit (As per the base unit frequency range), with both female and male standards (open, short, load, thru) with a Torque wrench or any other applicable accessories
25.	Supporting Connectors (each 2 Nos)	2.4 mm (female) to 2.4 mm (female) 2.4 mm (male) to 2.4 mm (male) 2.4 mm (female) to 2.92 mm (female) 2.4 mm (female) to 2.92 mm (male) 2.4 mm (male) to 2.92 mm (female) 2.4 mm (male) to 2.92 mm (male) 2.4 mm (female) to N-type (male) 2.4 mm (male) to N-type (male) 2.92 mm (female) to 2.92 mm (female) 2.92 mm (male) to 2.92 mm (male) N-type (female) to N-type (female) 2.4 mm (female) to SMA 3.5 (female) 2.4 mm (female) to 3.5 (male) 2.4 mm (male) to 3.5 (female) 2.4 mm (male) to 3.5 (male)
26.	Back-up Power Supply	A suitable power backup is to be supplied with the module with at least 30 minutes of backup.

Future Upgradability		
27.	Frequency	The system should be upgradable to at least 1100 GHz frequency range
28.	Material Measurement Software	Material measurement software compatibility required to measure εr', εr", tan δ, μr', μr", tan δ and Cole-Cole up to 1100GHz or more
29.	Application Software upgrade	1. The instrument should be compatible with Frequency translating devices like mixer, receiver. 2. Pulsed S-parameters measurement 3. Automatic Fixture Removal or any other suitable method to ensure on-wafer measurement for future
30.	Optical measurement	Must be upgradable to Optical measurement with the provided base unit remaining the same.
Warranty /Earlier installations/Service		
31.	Warranty	At least 3 years of warranty over Base Unit
32.	Earlier Installations	Vendor Must submit installation certificates/ proof of a minimum 2 successfully executed orders of Sub THz / THz Range VNA (i.e., 100 GHz or above) in other Government Institutions or institutions of Repute in India. Certificates of installations must be submitted as a proof of compliance. The vendor must also show the compatibility with 6dB, 140-220 GHz extender unit.
33.	Service and Training	Service must be available in India. A minimum of three-day training sessions is to be provided at CSIR-CSIO during the installation

Note: The vendor must provide documented proof from the OEM, in the form of company brochures/ certified letterhead, or other relevant materials, to ensure compliance with the above specifications.

Government ePublishing System

ePublishing System, Government of India

Tender Details

Date : 28-Feb-2026 12:06 PM

Print

Basic Details

Organisation Chain	Council of Scientific and Industrial Research||CSIO Chandigarh||Purchase-CSIO-CSIR		
Tender Reference Number	CSIO/7(431)2025-PUR		
Tender ID	2026_CSIR_830917_1		
Tender Type	EOI	**Form of contract**	EOI
Tender Category	Goods	**No. of Covers**	2
Payment Mode	Not Applicable	**Is Multi Currency Allowed For BOQ**	No
Is Multi Currency Allowed For Fee	No		

Cover Details, No. Of Covers - 2

Cover No	Cover	Document Type	Description
1	Fee/PreQual/Technical	.pdf	EOI
2	Finance	.xls	VNA Base Unit

Tender Fee Details, [Total Fee in ₹ * - 0.00]

Tender Fee in ₹	0.00		
Fee Payable To	NA	**Fee Payable At**	NA
Tender Fee Exemption Allowed	NA		

EMD Fee Details

EMD Amount in ₹	0.00	**EMD Exemption Allowed**	NA
EMD Fee Type	NA	**EMD Percentage**	NA
EMD Payable To	NA	**EMD Payable At**	NA

Work /Item(s)

Title	CSIO/7(431)2025-PUR				
Work Description	Expression of Interest for Purchase of VNA Base Unit				
Pre Qualification Details	As per EOI				
Tender Value in ₹		**Product Category**	Electronics Equipment	**Sub category**	VNA Base Unit
Contract Type	Tender	**Bid Validity(Days)**	120	**Period Of Work(Days)**	90
Location	CSIR-CSIO	**Pincode**	160030	**Pre Bid Meeting Place**	CSIR-CSIO
Pre Bid Meeting Address	Room No. 1 Technology Block, CSIR-CSIO, Chandigarh	**Pre Bid Meeting Date**	10-Mar-2026 11:00 AM	**Bid Opening Place**	Purchase Section, CSIR-CSIO

Critical Dates

Publish Date	28-Feb-2026 03:00 PM	**Bid Opening Date**	18-Mar-2026 03:30 PM
Document Download / Sale Start Date	28-Feb-2026 03:00 PM	**Document Download / Sale End Date**	17-Mar-2026 03:00 PM
Clarification Start Date	28-Feb-2026 03:00 PM	**Clarification End Date**	09-Mar-2026 11:00 AM
Bid Submission Start Date	28-Feb-2026 03:00 PM	**Bid Submission End Date**	17-Mar-2026 03:00 PM

Tender Documents

NIT Document

S.No	Document Name	Description	Document Size (in KB)
1	Tendernotice_1.pdf	EOI	1180.87

Work Item Documents

S.No	Document Type	Document Name	Description	Document Size (in KB)
1	Tender Documents	EOI.pdf	EOI	1180.87

Tender Inviting Authority	
Name	STORES AND PURCHASE OFFICER
Address	CSIR-CSIO, Sector 30 C, Chandigarh

Tender Creator Details	
Created By	Parveen Kumar
Designation	Section Officer
Created Date	28-Feb-2026 11:34 AM