INDIAN INSTITUTE OF TECHNOLOGY PALAKKAD

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Tender No. TENDER/2026-27/PRJ_015
Date of Publication: 03-11-2026
Date/Time of Closing: 17-11-2026, 15:00 hours

Indian Institute of Technology Palakkad Invites Tender under Two-bid system for the:

SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF AN ELECTRO-MAGNETIC INTERFERENCE AND ELECTRO-MAGNETIC SUSCEPTIBILITY (EMI/EMS) TESTING FACILITY

Conforming to the specifications as in BoQ Technical.

Tender Documents may be downloaded from the e-Wizard Portal https://mhrd.ewizard.in/. Aspiring Bidders who have not enrolled / registered in e-Wizard should enroll / register before participating through the website https://mhrd.ewizard.in/. Bidders are advised to go through instructions provided at **"Procedure for Submission of E-tender".** [Special Instructions to the Contractors/Bidders for the e-submission of the bids online through this e-Wizard Portal"].
Bidders can access tender documents on the website. For searching in the site, kindly go to Live Tenders option, Click "Advance Search" and select the Department as 'IIT Palakkad'. Thereafter, Click on "Search" button to view all IIT Palakkad tenders. Select the appropriate tender and fill them with all relevant information and submit the completed tender document online on the website https://mhrd.ewizard.in/ as per the timeline below.

No manual bids will be accepted. All tender documents including Techno-Commercial, Technical and Financial bids should be submitted in the e-Wizard portal.

S. No.	Events	Date and Time
1	**Publication of the Tender Document**	**03-11-2026**
2	**Last Date/Time for submission of ONLINE Bids**	**17-11-2026, 15:00 hours**
3	**Opening of Technical Bids**	**17-11-2026, 15:15 hours**

Note:

1. The bidder should be a Class-I / Class-II Local Supplier meeting the requirement as per the Order No. P-45021/2/2017-PP (BE-II) issued by the Public Procurement Section, DPIIT, Ministry of Commerce and Industry, GOI dated 16-09-2020.

2. Bidders other than Class-I / Class-II Local Suppliers, who may participate in this tender, may be doing so at their own risk. Such bids would not be considered and rejected outright

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TERMS AND CONDITIONS

1	**GENERAL**	a) The responsibility of submission of the bids on or before the last date shall rest with the tenderer. The institute will hold no responsibility for the non-receipt of the bids or the bids received after the date/time specified. Any bid received by IITPKD after the bid submission deadline prescribed by IITPKD, shall be rejected and returned unopened to the Bidder. b) Canvassing or offer of an advantage or any other inducement by any person with a view to influencing acceptance of a bid is an offence under the Laws of India. Such action will result in the rejection of bid, in addition to other punitive measures. c) Each bidder shall submit only one bid, either by himself or as a partner in a joint venture or as a member of the consortium. If a bidder or if any of the partners in a joint venture or any one of the members of the consortium participate in more than one bid, the bids (of both the individual and the partnership/consortium/joint venture) are liable to be rejected. d) The bidder shall bear all costs associated with the preparation and submission of his bid and IITPKD shall in no case be responsible or liable for those costs, regardless of the conduct or outcome of the tender process. e) **IITPKD will respond to any request for clarification or modification of the Tender Document that are received up to TWO DAYS prior to the deadline for submission of bids prescribed by IITPKD. For this purpose, the prospective bidder(s) requiring clarification in the Tender Document shall notify IITPKD through the ONLINE Portal ONLY. Any such clarification, together with all the details on which the clarification had been sought, will be published in the ONLINE Portal ONLY. Deviations, if any, observed by the Institute in the submitted bids, from the Terms and Conditions of the Tender Document will not be accepted by the Institute.** f) Except for any such clarification by the Institute, which is expressly stated to be an addendum to the tender document issued by the Registrar, IIT Palakkad, no written or oral communication, presentation or explanation by any other employee of any of the Sections/Departments of the Institute, shall be taken to bind or fetter the Institute. g) The bidder is expected to examine all instructions, forms, terms and conditions in the Tender Document. In the event of discovery of any missing pages, the bidder shall inform the same to the Section/ Department concerned. Failure to furnish the information required by the Tender Document or submission of a tender not substantially responsive to the Tender Document in every respect will be at the bidder's risk and may result in rejection of the bid. h) The bidder shall not make or cause to be made any alteration, erasure or obliteration to the text of the Tender Document. i) The Supplier shall not, without the prior written consent of the IITPKD, assign to any third party, the Contract or any part thereof.
2	**COMPOSITION OF THE TENDER DOCUMENT**	(a) The Tender Document comprises of: Instruction to the bidders including terms and conditions 1. Technical Specifications (Annexure-I) 2. Undertaking by the Bidder (Annexure-II) 3. Fall Clause Notice Certificate (Annexure-III) 4. Annexure regarding Blacklisting/Debarment (Annexure-IV)

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3	**DOCUMENTS COMPRISING THE BID**	• **The Technical, Techno-commercial (Cover One), and Commercial Bid (Cover Two) shall be submitted ONLINE through the e-Wizard Portal.** • Bids submitted in any mode other than ONLINE will be rejected outright. • Documents establishing the conformity of the terms and conditions of the Tender Document shall be provided along with the bid. The offer/bids should be sent only for a system or that is available in the market and supplied to a number of customers. A list of customers in India and abroad with details must accompany the quotations. Quotations for a prototype machine will not be accepted. • Original catalogue (not any photocopy) of the quoted model duly signed by the principals must accompany the quotation in the Technical bid. No prices should ever be included in the Technical bid. • Compliance or Confirmation report with reference to the specifications and other terms and conditions should also be obtained from the principal. • Information related to the agency/bidder such as photocopies of the Registration/PAN/GST/TIN shall be furnished. • The technical bid should consist of all technical details along with commercial terms and conditions. **No prices should be included in the technical bid. Mentioning of Prices in the Technical Bid shall lead to DISQUALIFICATION.** • Bidders/OEM who are bidding for this tender, a) Should have implemented at least **TWO ORDERS** for an **Electro-Magnetic Interference and Electro-Magnetic Susceptibility (EMI/EMS) Testing Facility during the previous two financial years (2024-25 and 2025-26)** from Centrally Funded Technical Institutes (IITs, NITs, IISc, IISER), DRDO, ISRO, CSIR labs or Government Firms in India. Copies of the most recent purchase orders and user certificates of successful implementation must be included. Copies of financial statements or evidence of turnover must be furnished. b) Should have an **Average Annual Turnover of Rs.7,00,00,000/- (RUPEES SEVEN CRORE ONLY) during the last THREE financial years (2023-24, 2024-25, and 2025-26).** The bidder shall enclose the audited statements of the indicated financial years, which should have been certified by a Chartered Accountant or a Competent Authority. c) Should submit a Digitally signed Tender Document in Cover One.
4	**EARNEST MONEY DEPOSIT (EMD)**	• The bidder shall furnish EMD of **Rs.7,00,000/- (Rupees Seven Lakh Only)** through online payment gateway in the E-Wizard. • **Bids not accompanied by EMD shall be DISQUALIFIED.** • The firms who are registered with National Small Industries Corporation (NSIC) / or Small Scale Industrial (SSI)/ Micro & Small Enterprises (MSEs) are exempted from submitting the EMD. NSIC / MSME registered bidders must submit a copy of a valid NSIC / MSME Registration Certificate for exemption of EMD. It will be applicable for those bidders who shall produce their own goods or provide their own services, and not applicable for trading purposes.

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5	**PERFORMANCE SECURITY**	● The performance security shall be submitted within **FIFTEEN DAYS** of receipt of the material by the IITPKD. The successful bidder shall furnish the Performance Security equal to **5%** of the order / contract value (excluding the value of annual maintenance charges). The Performance Security shall be valid all along the warranty period and shall extend up to **SIXTY DAYS** after the date of completion of warranty period. It shall be ensured by the successful bidder that the validity of the Performance Security submitted is extended depending on the date of commencement of the Warranty. ● The performance security shall be a bank guarantee/E-Bank Guarantee (in the format as provided) issued by the Indian Scheduled bank acceptable to the IITPKD or a Demand Draft favoring, INDIAN INSTITUTE OF TECHNOLOGY PALAKKAD payable at PALAKKAD. ● The performance security shall automatically become null and void once all the obligations of the Supplier under the Contract have been fulfilled, including, but not limited to, any obligations during the Warranty Period and any extensions to the period. The performance security shall be returned to the Supplier not later than fifteen (15) days after its expiration. ● Failure of the successful Bidder to comply with the requirements shall constitute enough grounds for the annulment of the award and forfeiture of the EMD, in which event the IITPKD may make the award to the next lowest evaluated bid submitted by a qualified Bidder or call for new bids.
6	**BID PRICES**	● Prices must be quoted separately for each equipment/item identified. ● **Price quoted for equipment/items shall include all the costs associated with packing, local transportation from the point of clearance to IITPKD, insurance, loading, unloading and associated delivery charges. The delivery shall be on DOOR DELIVERY basis to the institute including its installation, commissioning, integration and validation. It is the sole responsibility of the supplier to ensure that the equipment is delivered on DDP mode to IIT Palakkad. An undertaking to this effect as in Annexure-II**. ● Prices quoted by the bidder shall be fixed during the validity of the bid. ● **Prices of the equipment/items shall be quoted in Indian Rupees (INR).**
7	**PERIOD OF VALIDITY OF BIDS**	● Bids shall remain valid for a period of **180 DAYS** after the date of the deadline for submission of bids prescribed by IITPKD. ● If the deadline is extended due to unforeseen circumstances, the bid validity shall be deemed to have extended accordingly.
8	**TIME FOR SUPPLY, INSTALLATION, COMMISSIONING AND VALIDATION OF THE EQUIPMENTS/ITEMS**	a. The Supplier shall supply the equipment/items within the period specified in the tender document i.e. within **12 WEEKS** of signing the purchase order or within the period mutually agreed between IITPKD and supplier. All the equipment and accessories should be delivered at **IIT Palakkad, Dr. APJ Abdul Kalam Block, Sahyadri Campus, IIT Palakkad, Kanjikode West, Palakkad, Kerala - 678623.** b. The Supplier shall thereafter proceed with the installation, commissioning, integration and validation and demonstrate operational acceptance of the equipment/items within the period specified. The equipment/items shall be installed and commissioned by the successful bidder within 20 to 25 days from the date of its receipt. c. The tenderer should indicate clearly the time required for delivery of the item. In case there is any deviation in the delivery schedule, liquidated damages clause will be enforced or penalty for the delayed supply period will be levied.

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		d. In the event of failure of supply of the item/equipment/items within the stipulated delivery schedule, IITPKD has all the right to purchase the item/equipment/items from other sources on the total risk of the Supplier under the risk purchase clause.
9	**PRODUCT UPGRADES**	The Supplier shall continue to support and maintain the version/model of the Equipment supplied by upgrading the software and the hardware as and when amendments are carried out in the existing version or the product is upgraded. Whereas upgrades to the software shall be supplied free of cost, the Supplier may charge for upgrade in hardware provided it is of major nature. An upgraded higher version of the instrument and software related with the instrument shall be supplied.
10	**PENALTIES**	If the Supplier fails to complete any of the activities in accordance with the time specified for it, or any extension of time granted by IITPKD, Liquidated Damages Clause shall be invoked.
11	**UP-TIME GUARANTEE/ DOWNTIME PENALTY CLAUSE**	a. The Supplier should provide up-time guarantee of 95% [24 (hours) X 7 (days) X 365 (days)] basis during the warranty period. b. The Supplier should provide up-time guarantee of 95% (24 hours/day basis) both during warranty. If downtime exceeds the 5% limit, extension of the warranty period will be twice the excess down time period.
12	**LIQUIDATED DAMAGES**	If a firm accepts an order and fails to execute the order, in full or part, as per the terms and conditions stipulated therein, it will be open to the Institute to recover liquidated damages from the firm at the rate of 1% of the value of the undelivered goods per month or part thereof, subject to a maximum of 5% of the value of the undelivered goods. It will also be open to the Institute alternatively, to arrange procurement of the required stores from any source, at the risk and expense of the firm, accepted and failed to execute the order according to stipulations agreed upon. This will also entail the removal of the defaulters' name from the approved/registered list of Suppliers.
13	**EFFECT OF FORCE MAJEURE**	(a) If the Supplier is prevented, hindered, or delayed from or in performing any of its obligations under the Contract by an event of Force Majeure, then it shall notify the IITPKD in writing of the occurrence of such event and the circumstances of the event of Force Majeure within **FIFTEEN DAYS** after the occurrence of such event. (b) The Supplier, when affected by the event of Force Majeure shall use reasonable efforts to mitigate the effect of the event of Force Majeure upon its performance of the Contract and to fulfill its obligations under the Contract, but without prejudice to IITPKD's right to terminate the Contract. (c) No delay or non-performance by the Supplier caused by the occurrence of any event of Force Majeure shall: ● Constitute a default or breach of the Contract; ● Give rise to any claim for damages or additional cost or expense occasioned by the delay or non-performance. (d) If the performance of the Contract is substantially prevented, hindered, or delayed for a single period of more than **THIRTY DAYS** or an aggregate period of more than **SIXTY DAYS** on account of one or more events of Force Majeure, the IITPKD shall have the right to terminate the Contract by giving a notice to the Supplier.
14	**EXTENSION OF TIME LIMITS FOR SUPPLY AND MAKING OPERATIONAL, THE EQUIPMENT**	● The time limit for supply, installation & commissioning, integration & validation shall be extended if the supply is delayed or impeded in the performance of any of its obligations under the Contract by reason of any of the following: ● Any occurrence of Force Majeure; ● Any other matter specifically mentioned in the Contract; ● By such period as shall be fair and reasonable in all the circumstances and as shall fairly reflect the delay or impediment sustained by the Supplier.

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15	**GOVERNING LAW AND SETTLEMENT OF DISPUTES**	(a) The Contract shall be governed by and interpreted in accordance with the laws of India. (b) Any dispute or claim arising out of/relating to this Contract of the breach, termination or the invalidity thereof, shall be settled by the Hon'ble Courts of Justice at Palakkad. **(c)** The page number should be marked in all pages serially (including all supporting documents enclosed with the tender document) and the declaration for the same shall be submitted by the bidder as in **Annexure-II.** (d) IITPKD reserves the right to accept or reject any or all the tenders in part or whole or may cancel the tender at its sole discretion without assigning any reason whatsoever. No further correspondence in this regard will be entertained.

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AWARD OF CONTRACT

1	**AWARD CRITERIA**	1. IITPKD will award the Contract to the Bidder whose bid has been determined to be substantially responsive and **as per the Order No. P-45021/2/2017-PP(BE-II) dated 16-09-2020 from Department for Promotion of Industry and Internal Trade (Public Procurement Section), Ministry of Commerce and Industry, Govt. of India.** 2. The bidder should be a Class-I / Class-II Local Supplier meeting the requirement of minimum 20% Local Content in line with the Public Procurement (Preference to Make in India) Order 2017 No. P-45021/2/2017-PP(BE-II) dated 16-09-2020. 3. The Institute reserves the right to buy different items/quantities from different bidders considering price of individual/group of equipment/items or any other factors as decided by the Committee.
2	**AWARD OF PURCHASE ORDER**	1. Prior to the expiration of the period of bid validity, IITPKD will issue the Letter of Intent / Purchase Order to the successful Bidder in writing. 2. Any amendment(s) in the Purchase Order will be permitted within **SEVEN DAYS** of its issuance. No amendments will be permitted beyond this period. 3. The Purchase Order will constitute the foundation of the Contract.
3	**CONTRACT AGREEMENT**	a. Within **SEVEN DAYS** of receipt of the Purchase Order, the successful Bidder shall sign and date its copy on each page and return it to the Purchaser. b. Copy of Purchase Order duly signed and dated by the successful Bidder on each page shall constitute the Contract Agreement.
4	**CONTRACT DOCUMENTS / AMENDMENT TO CONTRACT**	1. All documents forming part of the Contract (and all parts of these documents) are intended to be correlative, complementary and mutually explanatory. The Contract shall be read as a whole. 2. The order of precedence of the Contract documents shall be as follows: ● Contract Agreement/Purchase Order ● All Forms/Annexures ● equipment/items and their requirement ● Supplier's Bid ● Tender Document 3. No amendment or other variation of the Contract shall be effective unless it is in writing, is dated, expressly refers to the Contract and is signed by a duly authorized representative of each party to the Contract.

REGISTRAR

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ANNEXURE - I

Name of the Item	Electro-Magnetic Interference and Electro-Magnetic Susceptibility (EMI/EMS) Testing Facility		
	1	EMI Test Receiver:	QTY = 1
	2a	Commercial LISN (Single Phase)	QTY = 1
	2b	Commercial LISN (Three Phase)	QTY = 1
	3	Automotive LISN (100A)	QTY = 2
	4	Two Line Coupling Decoupling Network for Emissions	QTY = 1
	5	Three Line Coupling Decoupling Network for Emissions	QTY = 1
	6	Accessories for Conducted emission	QTY = 1
	7	EMC Software Conducted emission	QTY = 1
	8	Vector Signal Generator	QTY = 1
	9	Power Sensor	QTY = 3
	10	Broadband Power Amplifier with directional coupler	QTY = 1
	11	Coupling Decoupling Network (for Power Lines) (two/three line)	QTY = 1
	12	Coupling Decoupling Network (for Power Lines) (three phase)	QTY = 1
	13	Bulk Current Injection Probe	QTY = 1
	14	Calibration Fixture for Bulk Current Injection Probe	QTY = 1
	15	Current Monitoring Probe	QTY = 1
	16	Calibration Fixture for Current Monitoring Probe	QTY = 1
	17	EM Injection Clamp	QTY = 1
	18	Calibration Fixture for EM Injection Clamp	QTY = 1
	19	De-Coupling Network	QTY = 1
	20	Accessories for Conducted Immunity	QTY = 1
	21	EMC Software for Conducted immunity	QTY = 1
	22	ESD GUN 30KV	QTY = 1
	23	ESD Calibration setup	QTY = 1
	24	EMC Test tables and accessories	QTY = 1
Warranty Period	Minimum two-year comprehensive on-site warranty from the date of successful installation and acceptance. The warranty shall cover equipment, supplied accessories, software, controllers and interconnection components.		

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Technical Specifications

Sl. No.	Items	Feature	Specifications
1	EMI Test Receiver	Compliance	Fully compliant with CISPR 16-1-1, latest applicable edition over the quoted frequency range
		Frequency Range	5KHz-1GHz minimum
		Detectors	maximum peak, minimum peak, RMS, average, quasi-peak, CISPR-average, RMS-average
		Bandwidths	CISPR compliant -6dB IF Bandwidths: -200 Hz, 9 kHz, 120kHz, 1MHz (as per CISPR 16-1-1) e. Diagnostic Bandwidths: 10 Hz, 100 Hz, 1 kHz, 10 kHz, 100kHz for analysis and diagnostic purposes Video Bandwidth 1 Hz to 10 MHz (1/2/3/5 sequence preferred)
		1dB Compression Point	RF attenuation = 0 dB, preselection off, RF preamplifier/LNA off f ≤ 3 GHz +7 dBm (nom.)
		Measurement Modes	- Analyzer mode (Swept and FFT - based) - Receiver mode (stepped frequency scan)
		RF Input Characteristics	- Maximum RF Input Level (CW): 30 dBm (1 W) - Input Impedance: 50 Ω The receiver shall include input overload protection, selectable RF attenuation, suitable VSWR/return-loss performance, preselection/filtering, and clear overload/CISPR measurement indication.
		Frequency Resolution	≤ 0.01 Hz
		Additional Features	- Inbuilt Time Domain Scan capability - Inbuilt Click Rate Analysis (as per CISPR 14-1)
		Display Units	dBµV primary; dBµA, dBm, dBpW etc. through suitable correction/transducer factors.
		EMI Receiver Software	The receiver shall support full integration with EMC test software for automated measurements, data acquisition, report generation and correction factor Supports CISPR 11 / 32 / 25 measurement routines
		Calibration	Factory or Manufacturer Calibration Certificate required
		Performance Requirements	compliance to CISPR 16-1-1 for detector response, IF bandwidth, pulse response, sinusoidal voltage accuracy, overload behaviour and indication range.
2a)	Commercial LISN single phase	Compliance	Fully compliant with CISPR 16-1-2 latest applicable edition
		Frequency Range	9 kHz to 30 MHz
		Simulated Impedance	(50 µH + 5 Ω) ‖ 50 Ω
		Error Limits	±20% (magnitude), ±11.5° (phase) over the applicable frequency range and as per CISPR 16-1-2 limits
		Maximum Continuous Current	Single Phase, 16A minimum
		AC Voltage Range	300 V Phase - Neutral 50/60Hz minimum
		DC Voltage Range	DC operation up to 600 V DC minimum
		Supply Frequency Range	Suitable for DC and 50/60 Hz AC supply, as applicable
		RF Measurement port	50 Ω RF output connector, preferably N-type female.
		Mains Input Connector	Suitable input connections for rated voltage and current

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		Mains Output Connector	Suitable output connections for rated voltage and current
		RF Decoupling/Power line Filter	Shall provide RF decoupling between EUT and supply/AE port and shall maintain the specified CISPR impedance at the EUT port.
		Protective Earth	Suitable protective earth/ground connection shall be provided.
		Correction Factor	Insertion loss / correction factor data shall be supplied for use in EMI receiver software.
		Line Selection/Termination	Facility shall be provided for selection of the measurement line. Non-measured lines shall be suitably terminated with 50 Ω as per CISPR 16-1-2 requirements.
		Calibration	Factory calibration certificate shall be supplied, covering impedance magnitude/phase and RF correction data over the applicable frequency range.
2b)	Commercial LISN Three phase	Compliance	Fully compliant with CISPR 16-1-2 latest applicable edition
		Frequency Range	9 kHz to 30 MHz
		Simulated Impedance	(50 µH + 5 Ω) ‖ 50 Ω
		Error Limits	±20% (magnitude), ±11.5° (phase) over the applicable frequency range and as per CISPR 16-1-2 limits
		Maximum Continuous Current	32 A per phase, continuous
		AC Voltage Range	480 V AC line-to-line, 50/60 Hz., ±10%.
		Supply Frequency Range	Suitable for DC and 50/60 Hz AC supply, as applicable
		RF Measurement port	50 Ω RF output connector, preferably N-type female. BNC female connector shall also be acceptable, provided calibrated adapter/cable and correction factor data are supplied.
		Mains Input Connector	Suitable input connections for rated voltage and current
		Mains Output Connector	Suitable output connections for rated voltage and current
		RF Decoupling/Power line Filter	Shall provide RF decoupling between EUT and supply/AE port and shall maintain the specified CISPR impedance at the EUT port.
		Protective Earth	Suitable protective earth/ground connection shall be provided.
		Correction Factor	Insertion loss / correction factor data shall be supplied for use in EMI receiver software.
		Line Selection/Termination	Facility shall be provided for selection of the measurement line. Non-measured lines shall be suitably terminated with 50 Ω as per CISPR 16-1-2 requirements.
		Calibration	Factory calibration certificate shall be supplied, covering impedance magnitude/phase and RF correction data over the applicable frequency range.
3	Automotive LISN	Compliance	Fully compliant with CISPR 25 latest applicable edition.
		Frequency Range	100KHz to 150 MHz
		Simulated Impedance	(5 µH + 1 Ω) ‖ 50 Ω
		Impedance Tolerance	As per CISPR 25 requirements
		Maximum Continuous Current	100A Continous
		Peak Current	150A minimum
		DC Voltage Range	600 V DC
		Mains Frequency	DC to 440 Hz or better preferred.
		RF Output Connector	N-type Female, 50 Ω
		Input capacitor	Switchable input capacitor / standard selection network suitable for CISPR 25 operation shall be provided
		Isolation	Shall provide the required RF decoupling between EUT and supply in accordance with standard requirements

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4	Two Line Coupling Decoupling Network for Emission (CDNE)	Compliance	Suitable for the CDNE conducted-emission measurement method specified in CISPR 15
		Frequency Range	30 MHz to 300 MHz minimum
		EUT Connection Interface	Two-line connection interface suitable for rated voltage and current
		RF Measurement Port	50 Ω RF measurement port
		Maximum Line-to-Ground Voltage	400 V DC / 277 V AC, 50/60 Hz
		Maximum Continuous Current	16 A
		Common-Mode Impedance	150 Ω (+10 Ω / −20 Ω)
		Phase Response	0° ±25° or better.
		EUT RF Voltage	140 dBµV minimum
		Voltage Division Factor	20 dB ±1.5 Db
		Voltage Division Factor	VDF/correction factor data shall be supplied.
		Decoupling Performance	Shall meet appropriate decoupling between EUT and supply in accordance with applicable standards
5	Three Line Coupling Decoupling Network for Emissions (CDNE)	Compliance	Suitable for the CDNE conducted-emission measurement method specified in CISPR 15
		Frequency Range	30 MHz to 300 MHz minimum
		EUT Connection Interface	Three-line connection interface suitable for rated voltage and current
		RF Measurement Port	50 Ω RF measurement port
		Maximum Line-to-Ground Voltage	400 V DC / 277 V AC, 50/60 Hz
		Current Rating	16 A continous or Higher
		Common-Mode Impedance	150 Ω (+10 Ω / −20 Ω)
		Rated / Max EUT RF Voltage	140 dBµV minimum
		Voltage Division Factor	20 dB ±1.5 dB
		Phase Response	0° ±25° or better.
		VDF Calibration/ Verification	VDF/correction factor data shall be supplied
		Isolation / Decoupling Performance	Decoupling performance between EUT and supply shall meet applicable standard requirements.
6	Common Accessories for Conducted Emission Test	- 50 Ω pulse/transient limiter suitable for EMI receiver input protection - 50 Ω DC block for receiver input protection, if not integrated in the limiter - Low-loss 50 Ω RF cable suitable for the full operating frequency range (03 Nos) - 50 Ω RF adapter kit including suitable N-type/BNC/SMA adapters as required - 50 Ω terminations/loads, minimum 1 Watt rating (04 Nos) - 3dB 25W Attenuator for receiver Protection, - Suitable Calibration/Short Adapter to be supplied with CDNEs - Calibration adapter one set per LISN, - Any applicable accessories not mentioned above and required for the operation of conducted emission test shall also be supplied	
7	Conducted-emission software	Automatic frequency scanning, preview and final measurement, peak search, quasi-peak and average remeasurement, limit-line selection, transducer and cable correction factors, LISN line selection where supported, CDNE VDF correction, report generation, raw-data export and instrument-control capability.	

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8	Vector Signal Generator	Compliance	Suitable for use as the RF test generator in IEC 61000-4-6 and ISO 11452-4 test systems.
		Frequency Range	10 kHz to 3 GHz
		Output Level Setting Range	−110 dBm to +15 dBm minimum
		Output Level Accuracy	Output level setting accuracy ±0.5 dB or better.
		Setting Resolution	0.01 dB or better.
		Output Match	Output VSWR ≤ 2:1.
		Reverse Power Protection	Suitable reverse power protection shall be provided.
		Modulation Modes	AM/FM/PM
		RF Output Blanking / On-Off Control	Shall support RF output ON/OFF or blanking control. This may be implemented through an internal or external RF switch function.
		Output Impedance	Nominal RF output impedance shall be 50 Ω.
		AM Modulation Capability	80% AM with a 1 kHz sine-wave modulation signal, with adjustable modulation depth.
		Modulation Control	Shall provide manual and/or programmable control of frequency, amplitude and modulation index.
		Frequency Sweep Capability	Frequency step size shall be programmable and shall not exceed 1% of the preceding frequency for IEC 61000-4-6 testing. Dwell time shall be programmable from at least 0.5 s upward.
		Remote Control Interfaces	Ethernet/LAN 10/100/1000BASE-T, USB
		Harmonics / Spurious Performance	Within 150 kHz to 80 MHz, any spurious signal shall be at least 15 dB below the carrier level, measured directly at the output of the test generator.
9	Power Sensor	Compliance	Suitable for power measurement and level monitoring in IEC 61000-4-6 and ISO11452-4 conducted immunity test setup.
		Frequency Range	10 kHz to 3 GHz
		Power Range	–70 dBm to +23 dBm minimum
		Measurement Accuracy	±0.25 dB or better.
		Sensor Type	Broadband average RF power sensor suitable for average power measurement on CW and AM modulated signals
		Modulation Capability	Suitable for average power measurement of CW and 80% AM, 1 kHz-modulated RF signals used in IEC 61000-4-6 and ISO 11452-4 testing.
		Input VSWR	≤ 1.7:1 or better.
		Measurement Speed	Response speed suitable for automated level setting and forward-power monitoring.
		Remote Interface	Compatible with the supplied EMC control software / controller.
10	Broadband Power Amplifier with directional coupler	Compliance	Suitable for use in IEC 61000-4-6 and ISO 11452-4 conducted-immunity test systems.
		Frequency Range	10 kHz to 400 MHz.
		Rated RF Output Power	150W for Frequency >15KHz up to 400MHz@1dB Compression Point
		Gain	Minimum 45–50 dB or sufficient for operation with the supplied signal generator.
		Gain Flatness	Gain flatness shall be suitable for automated IEC 61000-4-6 and ISO11452-4 level setting and testing; < ±3 dB or better preferred
		Harmonics and Distortion	Ensure that the Harmonics / Spurious / Distortion in the RF test generator chain shall be at least 15 dB below the carrier level, in the 150 kHz - 80 MHz range
		Input Impedance	50 Ω nominal
		Output Impedance	50 Ω nominal
		Input VSWR	≤ 2:1

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		Linearity	shall operate linearly without saturation over the required IEC 61000-4-6 test level range and preserve 80% AM at 1 kHz without significant distortion.
		Protection	Protection: The amplifier shall include protection against RF input overdrive, thermal overload, fault/interlock conditions, output mismatch/high VSWR, and excessive reflected power. The bidder shall specify the protection features and operating limits.
		Remote Control Interface	Ethernet/LAN or equivalent for automated control
11	Coupling Decoupling Network (for Power Lines)	Compliance	Suitable for conducted immunity testing in accordance with IEC 61000-4-6.
		Type	M2
		Line Configuration	Switchable two line/three-line network
		Frequency Range	150 kHz to 230MHz
		Common-Mode Impedance	150 Ω ±20 Ω from 150 kHz to 24 MHz 150 Ω +60/−45 Ω from 24 MHz to 80 MHz. 150 Ω +60/−60 Ω from 80 MHz to 230 MHz.
		Rated Voltage	800 V DC(L-L) 500V AC(L-N)
		Rated Current	32 A Continous
		RF Input impedance	50 Ω
		Power Handling	The CDN shall be suitable for IEC 61000-4-6 Test Level 3 (10V), with the supplied RF amplifier system.
12	Three phase CDN	Compliance	according to IEC 61000-4-6 Latest applicable edition
		Type	M3
		Line Configuration	Three-phase, four-wire CDN suitable for L1, L2, L3 and neutral.
		Frequency Range	150 kHz to 80 MHz mandatory, 230MHz preferred
		Common-Mode Impedance	150 Ω ±20 Ω from 150 kHz to 24 MHz 150 Ω +60/−45 Ω from 24 MHz to 80 MHz. 150 Ω +60/−60 Ω from 80 MHz to 230 MHz.
		Rated Voltage	Suitable for three-phase, four-wire systems up to 480 V AC line-to-line, 50/60 Hz, with neutral.
		Rated Current	32A, continuous
		RF Input impedance	50 Ω
		Power Handling	The CDN shall be suitable for IEC 61000-4-6 Test Level 3, with the supplied RF amplifier system.
		Verification / Calibration	Common-mode impedance verification and calibration/traceability certificate shall be supplied.
13	Bulk Current Injection Probe	Compliance	Suitable for ISO 11452-4 BCI testing and for current-injection applications permitted by IEC 61000-4-6.
		Frequency Range	10 kHz to 400MHz
		Injection Capability	Suitable for calibrated bulk current injection into EUT cables.
		Input Power Handling	Minimum 200 W continuous or sufficient to achieve the specified BCI test current over the required frequency range, whichever is greater.
		RF Interface	50 Ω RF input, Type-N or equivalent.
		Coupling / Transfer Data	Vendor shall provide coupling factor / transfer impedance / conversion factor and insertion-loss data.
		Aperture Size	Minimum 40 mm inner diameter
		VSWR	Vendor shall specify input VSWR: ≤2:1 or better preferred.
		Thermal / Duty Rating	Vendor shall specify continuous-use rating, duty cycle and thermal limitations.
14	Calibration Fixture for Bulk Current Injection Probe	Compliance	Suitable for calibration / level-setting of current injection probes used for IEC 61000-4-6 and ISO11452-4conducted immunity testing.
		Frequency Range	10kHz to 400MHz
		RF Interface / Impedance	50 Ω nominal RF interface,
		Mechanical Compatibility	Shall be mechanically and electrically compatible with the supplied BCI probe

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15	Current Monitoring Probe	Compliance	Suitable for RF current monitoring during IEC 61000-4-6 and ISO11452-4 conducted immunity testing.
		Frequency Range	10 kHz to 400MHz
		Output Interface	50 Ω RF output interface, Type-N/BNC or equivalent; required adapters shall be supplied.
		Aperture	40 mm preferred
		Insertion Effect	Low insertion impedance / minimal disturbance to cable under test; vendor shall specify insertion impedance and shunt capacitance where applicable.
		Transfer Impedance	Calibrated transfer-impedance data, expressed in Ω or dBΩ, shall be supplied over the complete frequency range.
		Dynamic Range / Current Rating	Probe shall support expected IEC 61000-4-6 and ISO11452-4 monitoring current range without saturation; vendor shall specify maximum current and linear range.
		Field Immunity / Repeatability	Vendor shall specify influence of external electric/magnetic fields and orientation sensitivity.
16	Calibration Fixture for Current Monitoring Probe	Compliance	Suitable for calibration / verification of current monitoring probes used in IEC 61000-4-6 and ISO11452-4 conducted immunity testing.
		Frequency Range	10 kHz to 400MHz
		Characteristic Impedance	50 Ω nominal RF interface.
		Mechanical Compatibility	Compatible with the supplied current monitoring probe and suitable for repeatable probe positioning.
17	EM Injection Clamp	Compliance	EM Injection Clamp shall be suitable for conducted immunity testing in accordance with IEC 61000-4-6.
		Operating Frequency Range	150 kHz to 80 MHz mandatory; operation up to 230 MHz preferred. Extended manufacturer capability outside this range may be offered.
		Input Power Handling	Shall be suitable for achieving IEC 61000-4-6 test levels with the supplied RF amplifier system. Vendor shall specify maximum RF input power and duty/time limits.
		Clamp Length	Clamp length shall be 650 mm ± 50 mm, unless alternative dimensions are justified by equivalent electrical characteristics.
		Clamp Opening Height	Height of clamp opening centre above reference ground plane shall be 50 mm to 70 mm.
		Clamp Opening Diameter	Clamp opening diameter shall be 20 mm ± 2 mm. larger opening may be accepted only if the required electrical characteristics are demonstrated.
		Clamp Reference Point	Distance from the outer dimension to the first core shall be < 30 mm.
		RF Interface	Shall have 50 Ω nominal RF input
		Input Match / VSWR	Vendor shall specify input match / VSWR over the operating frequency range.
18	Calibration Fixture for EM Injection Clamp	Compliance	Suitable for calibration, level setting and characterisation of EM injection clamp in accordance with IEC 61000-4-6 Annex A.
		Frequency Range	150 kHz to 80 MHz mandatory; up to 230 MHz preferred or matching the supplied clamp's claimed calibrated range.
		Impedance / Decoupling Function	Fixture or associated kit shall support impedance and decoupling characterisation where applicable.
		Mechanical Compatibility	Shall be compatible with the supplied EM clamp and allow repeatable clamp positioning.
19	De-Coupling Network	Compliance	Suitable for use as a decoupling network / ferrite tube in IEC 61000-4-6 EM clamp conducted immunity testing.
		Frequency Range	150 kHz–80 MHz mandatory, extended capability up to 230 MHz preferred.
		Decoupling / Insertion Loss	Vendor shall provide insertion loss / decoupling factor data over the specified frequency range.
		Impedance Characteristics	Vendor shall provide impedance characteristics or equivalent verification data.
		Cable Accommodation	Usable aperture shall be compatible with the cable diameter accepted by the supplied EM clamp; approximately 22 mm or greater is preferred.

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		Mechanical Construction	Rugged ferrite tube / decoupling structure suitable for repeatable laboratory use with EM clamp setup.
20	Common Accessories for Conducted Immunity	-6 dB 200W attenuator in the entire frequency range, -20 dB 200W attenuator in the entire frequency range, -50 Ω, 200W RF terminations -150 Ω/50 Ω, 25W RF terminations/adapters shall be supplied as required for calibration and verification in the frequency range. -150 Ω/50 Ω, 50W RF terminations/adapters shall be supplied as required for calibration and verification in the frequency range. All accessories for calibration /verification/termination shall be in the frequency range 10Khz- to 400MHz grounding straps, safety covers and interconnection accessories shall be supplied.	
21	EMC Test Software for conducted Immunity	Software for automated conducted Immunity testing, instrument control, limit lines, correction factors, data logging and report generation. Shall support applicable Immunity test routines as per relevant standards	

22	ESD Gun	Equipment	Electrostatic Discharge Simulator / ESD Gun
		Quantity	1 No.
		Applicable Standards	Suitable for ESD immunity testing as per IEC 61000-4-2 / EN IEC 61000-4-2 and suitable for extended automotive / high-voltage ESD testing as per ISO 10605, wherever applicable
		Maximum Output Voltage	Minimum ±30 kV
		Discharge Modes	Contact discharge and air discharge
		Voltage Range	Adjustable from 0.2 kV or 0.5 kV up to at least ±30 kV.
		Discharge Networks	150 pF / 330 Ω, 150 pF/2kΩ, 330 pF / 330 Ω, 330 pF / 2kΩ
		Circuit Inductance	As per applicable standard requirement; preferably < 5 µH
		Polarity	Positive and negative polarity selection
		Discharge Counter	Programmable / pre-selectable counter, minimum up to 100 discharges
		Holding Time	Minimum 5 seconds or as per standard requirement
		Triggering	Manual and automatic triggering facility
		Display / Control	Digital display with setting of voltage, polarity, discharge mode, repetition rate and counter
		Accessories	Contact discharge tip, air discharge tip, Ground return cable, mains cable, interlock / safety accessories, carrying case and all standard accessories required for testing
23	ESD Calibration Setup		Calibration target as per IEC 61000-4-2.
		Target impedance	2 Ω for calibration / verification of ESD pulses.
			Calibrated attenuator chain suitable for the ESD waveform rise time, peak current and oscilloscope input. The total attenuation, bandwidth and maximum pulse rating shall be stated.
			50 Ω coaxial cable of the length and type required by the applicable calibration arrangement, with calibration data where required.
		Target Board	Aluminium board for mounting the ESD calibration target.
24	EMC Test Tables / Benches and Accessories	Conducted Emission Test Table	One dedicated wooden/non-conductive test table shall be supplied for conducted emission testing. Minimum size shall be approximately 2 m × 1 m × 0.8 m height, or as required by the applicable CISPR/EMC test setup.
		Conducted Immunity Test Table	One dedicated wooden/non-conductive test table shall be supplied for conducted immunity testing. Minimum size shall be approximately 2 m × 1 m × 0.8 m height, or as required by the applicable IEC 61000-4-6 test setup.
		ESD Test Table	One dedicated ESD test table arrangement shall be supplied. The table shall support a horizontal coupling plane of minimum 2 m × 0.8 m at approximately 0.8 m height, along with the required vertical coupling plane, insulating sheet/supports and

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			grounding/discharge arrangement as per applicable IEC 61000-4-2 test setup requirements.
		System Rack	One 19-inch system rack, minimum 28U, shall be supplied with master control panel, power distribution, emergency switch, RF/power/communication connectors, ventilation and cable management.
		RF Cable Set	Complete set of low-loss 50 Ω RF cables suitable for the conducted immunity setup shall be supplied. The cables shall support frequency range up to at least 1 GHz, with suitable connectors and cable loss/correction data.
		Ground Planes	Required ground planes shall be supplied for conducted emission, conducted immunity and ESD test setups as per applicable EMC standards.
		Horizontal / Vertical Ground Planes	Horizontal and vertical ground planes of suitable size, preferably 2 m × 2 m or as required by the applicable test setup, shall be supplied.
		Ground Plane Material	Ground planes shall be made of aluminium/copper/galvanized steel sheet of minimum 0.5 mm thickness or better, with suitable bonding and earthing provisions.
		Insulating Supports / Blocks	Required insulating blocks, spacers, EUT supports and non-conductive fixtures shall be supplied as per the applicable test setup requirements.
		Accessories and Interconnections	All required power cords, communication cables, RF adapters, terminations, rack-mounting accessories, interconnection items and installation accessories shall be supplied for complete system installation and commissioning.

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ANNEXURE - II

UNDERTAKING BY THE BIDDER
(TO BE SUBMITTED ONLY THROUGH ONLINE MODE IN APPROPRIATE FORMAT)

We here by accept all the Terms and Conditions of the Tender Document and strictly adhere to the same in the event of getting Purchase order. We also declare that the Technical and Financial Bids submitted by us has NO DEIVATION from the Tender Terms and Conditions.

We hereby accept that the PRICES OF THE EQUIPMENTS/ITEMS QUOTED ARE AS PER THE INCOTERMS 2022 - DDP MODE, IIT PALAKKAD AND CLAUSE NO.6 OF THE TENDER DOCUMENT.

We hereby undertake that there are _____ pages, serially numbered, in the submitted tender including the supporting documents. (Please serially number all the pages including blank page, if any).

We have submitted our principal's exclusive authorization letter which is specific for this tender No._____ dated _____.

Note: This letter should be on the letterhead of the quoting firm and should be signed by a Competent Authority.

ANNEXURE - III

FALL CLAUSE NOTICE CERTIFICATE
(TO BE SUBMITTED ONLY THROUGH ONLINE MODE IN APPROPRIATE FORMAT)

This is to certify that we have offered the maximum possible discount to you in our Quotation No. _____ dated _____ **(Please do not reveal the prices here, which will lead to outright rejection of your bid).**

The prices charged for the Stores supplied under tender should under no event be higher than the lowest prices at which the party sells the items of identical description to any other Govt. organization/PSU's/Central Govt., /State Govt. Autonomous bodies/Central/state Universities/Central/State Educational Institutions, failing which the "**FALL CLAUSE**" will be applicable. The institute will look into a reasonable past period to ensure this.

In case, if the price charged by our firm is found to be more, **IIT Palakkad** will have the right to recover the excess charged amount from the subsequent/unpaid bill of the supplier.

Note: This letter of authority should be on the letterhead of the quoting firm and should be signed by a Competent Authority and having the power of attorney.

ANNEXURE - IV

UNDERTAKING REGARDING BLACKLISTING / NON – DEBARMENT

Tender No. _____

To,
M/s. Indian Institute of Technology Palakkad
Kanjikode, Palakkad, Kerala 678623.

We hereby confirm and declare that we, M/s _____ are not blacklisted/ De-registered / debarred by any Government department/ Public Sector Undertaking/ Private Sector/ or any other agency for which we have Executed/ Undertaken the works/ Services.

For
Company Name and Seal
Authorised Signatory

Note:This letter should be on the letterhead of the quoting firm and should be signed by a Competent Authority.

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ANNEXURE - V

FORMAT FOR SELF-CERTIFICATION UNDER PREFERENCE TO MAKE IN INDIA
(TO BE SUBMITTED ONLY THROUGH ONLINE MODE IN APPROPRIATE FORMAT)

Format for Affidavit of Self-Certification regarding Minimum Local Content in line with "Make in India" Policy vide GoI Order no. P-45021/2/2017-PP (B.E.-II) dated 15.06.2017 (subsequently revised vide orders dated 28.05.2018, 29.05.2019 and 04.06.2020)

Date: _____
I/We _____ S/o, D/o, W/o, _____
Resident of
_____
Hereby solemnly affirm and declare as under:

That I will agree to abide by the terms and conditions of the Public Procurement (Preference to Make in India) Order, 2017 (hereinafter PPP-MII order) of Government of India issued vide Notification No:P-45021/2/2017 -BE-II dated 15/06/2017, its revision dated 28/05/2018 and any subsequent modifications/Amendments, if any and

That the local content for all inputs which constitute the said goods/services/works has been verified by me and I am responsible for the correctness of the claims made therein.

Tick (✓) and Fill the Appropriate Category	
☐	I/We _____ [name of the manufacturer] hereby confirm in respect of quoted items(s) that Local Content is equal to or more than 50% and come under **"Class-I Local Supplier"** category.
☐	I/We _____ [name of the manufacturer] hereby confirm in respect of quoted items(s) that Local Content is more than 20% but less than 50% and come under **"Class-II Local Supplier"** category.
☐	I/We _____[name of the manufacturer] hereby confirm in respect of quoted items(s) that Local Content is less than or equal to 20% come under "**Non-Local Supplier"** category.

For and on behalf of…… (Name of firm/entity)

Authorized signatory (To be duly authorized by the Board of Directors)
<Insert Name, Designation and Contact No.>

[Note: In case of procurement for a value in excess of Rs. 10 Crores, the bidders shall provide this certificate from statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.]

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