EMERGING TECHNOLOGIES LAB

Request for Proposal (RFP)

For

Procurement of

Quantum Hardware Equipment

EMERGING TECHNOLOGIES LAB

Government of Pakistan

Web: www.quantum.gov.pk

Email: procurement@quantum.gov.pk

March 2026

Emerging Technologies Lab, Office No. 107, 1st Floor, Evacuee Trust Complex,
F-5/1, Agha Khan Road, Islamabad

REQUEST FOR PROPOSAL (RFP)
CORRIGENDUM

With reference to PPRA Tender No's. **F-26021754961** & **EPADs No. TS0000001447E** advertised in newspaper on **15 February 2026** as well as on Emerging Technologies Lab and PPRA Websites for procurement of followings:

"Request for Proposal (RFP) For Procurement of Quantum Hardware Equipment"

Activity	Date & Time
RFP Released	15 Feb 2026
RFP Bid Submission Date and Time **(Old)**	16 Mar 2026, 1030 hrs
RFP Bid Submission (New)	**03 Apr 2026, 1030 hrs**
Opening of Technical Bids	**03 Apr 2026, 1100 hrs**
Opening of Financial Bids	**13 Apr 2026, 1100 hrs**

It is intimated that the last date of submission of bids has been **extended** with defined quantum hardware equipment and additional specifications.

Bids shall be submitted on **EPADS online system** available on PPRA Website else bidder shall be disqualified on spot.

Haseeb Akbar
Procurement Manager
Emerging Technologies Lab
Phone # 03219112230
Email: procurement@quantum.gov.pk

EMERGING TECHNOLOGIES LAB

INVITATION TO BIDS

1. Emerging Technologies Lab, a PSDP project of Ministry of Defence, Government of Pakistan, invites sealed bids from the firms/ general order supplier/ companies registered with Income Tax, Sales Tax Departments and who are on FBR's Active Taxpayer's List (ATL) for **Procurement of Quantum Hardware Equipment** to Emerging Technologies Lab, Islamabad through EPADS.
2. Bidding documents containing detailed terms and conditions, method of procurement, etc may be obtained from the Office of the undersigned on payment of **Rs.2000/- (Rupees Two Thousand only)** non-refundable. Bidding documents can also be downloaded from ETL's website www.quantum.gov.pk and EPADS/PPRA (Pay order of Rs.2000/- may be attached in case downloaded from website).
3. The bid prepared in accordance with instructions in the bidding documents, along with **Bid Security/ Earnest money of 2% of the total bid value in the shape of Bank draft/ Pay order** drawn in favour of Emerging Technologies Lab may reach Office of the undersigned by **03 April 2026, 1030 hrs via EPADS.** Technical bids will be opened on the **April 03, 2026, 1100 hrs** in the presence of representatives of the bidders and financial bids will be opened on **April 13, 2026 at 11:00 hours.**
4. As per PPRA Rules 33(1), 2004, Emerging Technologies Lab, Government of Pakistan, has the right to reject any or all bids/ proposals at any time prior to the acceptance of a bid/ proposal.
5. Bids shall only be submitted on EPADS online system available on PPRA Website else bidder shall be disqualified on spot.

Haseeb Akbar
Procurement Manager
Emerging Technologies Lab
Office No. 107, 1st Floor, Evacuee Trust Complex,
F-5/1, Agha Khan Road, Islamabad
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1. Executive Summary

Emerging Technologies Lab (ETL) is a PSDP funded project focused on Quantum Technologies. The core objective of this project is to **establish capability to initiate indigenous design and development** of specialized hardware, software and new cyber security **solutions to counter Quantum computing threats**. The lab will undertake **innovative** initiatives in **cryptographic, communication, computing and other domains**.

This Request for Proposal (RFP) solicits proposals from companies, service providers & vendors who can provide Quantum related hardware and equipment. This information should include, but not limited to, the history of the organization, its experience, financials, technical capabilities, and experience for providing similar success stories.

2. Mandatory Terms & Conditions

Following are the General Terms of References for collaborative proposal of Quantum hardware and equipment:-

General terms and conditions compliance	Yes/No
The RO must be **registered in SECP**, incorporation certificate should be provided.	
RO must be registered with the **FBR sales tax** and should have a valid **NTN** number. Copies of the certificates must be provided with the bid.	
A bid bond, in the shape of a **Bank Draft/Pay Order** in the name of the **"Project Director, Emerging Technologies Lab"**, for an amount of **2% of bidding amount**/-.	
RO shall submit an affidavit on stamp paper of **PKR 100/-,** that the company/ individual is not blacklisted by any federal, provincial public sector organization	
RO and its **employees** involved in the execution of this contract must obtain and **maintain security clearance from relevant Law Enforcement Agencies (LEAs).** The company must possess **valid clearance certificates** for itself **and its designated employees**.	
Bidder must provide Certificate that the **bidder will ensure** detailed **hardware designs handover** (where necessary). (Certificate has to be attached)	
Detailed documentation should be provided, including user manuals, technical guides, and troubleshooting procedures etc.	
RO must provide an undertaking that the proposed solution (including its components): • Does not contain any back-doors or any hidden elements. • Is free from any vulnerability at the date of submission of proposal and subsequently at the time of delivery. • Is customizable according to the requirements.	

3. Scope of Work, Timeframe & Penalties

The scope of this RFP includes the supply, delivery, installation, configuration and testing of all **hardware and equipment specified at Annexure-I**, ensuring functionality and compliance with the required technical specifications. The vendor shall provide the necessary documentation, user manuals, and initial training to the concerned staff. Moreover, Vendor is bound to provide the required equipment within 30 days from the issuance of purchase order. Delays, non-compliance, or failure to

meet agreed deliverables will attract penalties as defined in the contract, including but not limited to liquidate damages, withholding of payments, or termination of the agreement.

4. Timeframe

Milestone	Date & Time
RFP Released	15 Feb 2026
RFP Bid Submission Date and Time **(Old)**	16 Mar 2026, 1030 hrs
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As a result of this Request for Proposal, ETL may do one of the following at its discretion:

- Award a contract for this Request for Proposal on the basis of prescribed technical evaluation criteria and financial comparison (lowest bidder).
- Cancel the whole process.

5. Proposal

This is **"SINGLE STAGE TWO ENVELOPE BIDDING PROCEDURE"** as per PPRA rules. The bidders shall submit their proposals in one sealed envelope containing two different separate sealed envelopes marked as **"Technical Proposal"** and "**Financial Proposal".** Only Technical envelope will be opened in the presence of bidders and financial proposal envelops will stay in ETL custody till the opening of financial bids. After Technical scrutiny, bidders may be asked for revised technical and supplementary financial proposals. Financial proposals from bidders that met the technical qualification score will be opened in front of bidders. Final date of opening of Financial Bids which will be communicated to all the bidders in advance. Further final evaluation reports containing technical and financial evaluation will be published on ETL website and PPRA as well. After the finalization of evaluation, the successful bidder will be issued "**Letter of Intent"** which will be followed by the Service agreement and Service order.

6. Preparation of Bids

6.1. The bid bond is to be enclosed in a separate envelope, labelled as "**Bid Bond**" and should be sealed. It must be ensured that the bid bond should be in the same envelope as the "**Technical Proposal**".

6.2. The envelope for financial proposals should be marked "**Financial Proposal**" and submitted according to **Annexure-II**. Two hard copies of the technical proposal and financial proposal are required. Soft copies (in USB) of both the technical proposal and financial proposal must be provided along with their respective envelopes.

6.3. There will be **02 envelopes** marked as **"Original Technical Proposal"** and "**Copy of Technical Proposa**l" respectively, soft copy should be part of the original technical proposal.

6.4. RO should duly fill in and submit all the attached bid forms stamped and signed. **In case of any discrepancy or absence** of any sort of information ETL has the right to disqualify the RO immediately.

6.5. A bid bond, in the shape of a **bank draft/Pay Order** in the name of the "Project Director, Emerging Technologies Lab, for an amount of **2% of bidding amount**/-.

6.6. RO shall submit an affidavit on stamp paper of **PKR 100/-,** that the company is not blacklisted by any federal, provincial public sector organization.

6.7. All proposals and prices shall remain valid for **120 days** from the closing date of the submission of the proposal.

6.8. RO shall provide prices in PKR.

6.9. Hardware equipment should have **1x year local warranty**, including parts and labor with onsite support including patch updates and bug fixes.

6.10. The end-user licenses, end-user warranties and end-user contracting support services will be in the name of the ETL, for all the equipment and software loaded on the equipment delivered during the project.

6.11. RO should supply the equipment in the given time mentioned in "**Clause 3**" of this RFP.

7. Pre-Bid Meeting

A pre-bid meeting will be held in the premises of the ETL, below mentioned address "Emerging Technologies Lab, Office No. 107, 1st Floor, Evacuee Trust Complex, F-5/1 Agha Khan Road, Islamabad on **26 Mar 2026, 1400 hrs.** All queries relating to RFP should be emailed to procurement@quantum.gov.pk as per given timelines. Answers to the submitted queries shall be given in the pre-bid meeting and will be emailed to all the participants of the pre-bid meeting (if-required). Queries raised in pre-bid meetings will be answered through email to all the participants within 24 - 48 hours of the pre-bid meeting.

You may contact following person, if you have any questions or require clarification on any topics covered in this request for proposal.

Haseeb Akbar
Designation: Procurement Manager
Email: haseeb@quantum.gov.pk
Phone Number: 03219112230
Address: Emerging Technologies Lab,
Office No. 107, 1st Floor, Evacuee Trust Complex, F-5/1, Agha Khan Road, Islamabad

8. Submission of Bids

Proposals shall be delivered by hand or courier to the address given below "Emerging Technologies Lab, Office No. 107, 1st Floor, Evacuee Trust Complex, F-5/1, Agha Khan Road, Islamabad" before the date and time i.e. **03 Apr 2026, 1030 hrs**. RO must also ensure uploading of bids on **EPADS** system. Technical bids will be opened on the same day i.e. **03 Apr 2026, 1100 hrs**. Proposals received by fax or email shall not be accepted. The proposal should be addressed to **"Project Director, Emerging Technologies Lab**".

9. Technical Bid Evaluation

There will be a two-stage technical evaluation. **Preliminary evaluation** (Initial Screening) of technical bids will be done on the basis of following criteria:-

9.1. Preference will be given to RO with max number of hardware/software of Chinese origin.

9.2. RO must provide the name of the organization, details of offices, workplace, working facility, etc. across Pakistan and the location of the head office, if any, the size of the company (number of employees) etc.

9.3. RO shall comply with all PPRA requirements.

9.4. The RO must be registered with **FBR for sales tax** and should have a **valid NTN number**. Copies of the certificates must be provided with the bid.

9.5. RO is to provide information as per the template available at **Annexures I** & **II**.

9.6. RO should not propose any kind of refurbished, used, end-of-life, or near-end-of-life equipment in their proposals.

9.7. RO shall be responsible for payment of any **duties/taxes etc**. that are applicable during the tenure of the project. The bid price must be inclusive of all taxes. The RO is hereby informed that the government shall deduct tax at the rate prescribed under the tax laws of Pakistan, from all payments for services rendered by any RO that signs a contract with the government.

9.8. On-site **installation** & **relevant services** are to be provided by the vendor.

9.9. RO may provide completed and ongoing projects in the form of a completion certificate or list or a purchase order document.

9.10. The following documents/evidence should be attached in support of the Technical Proposal Evaluation as per the above criteria:

- Copies of NTN Registration with Income Tax, Sales Tax Departments and who are on FBR's Active Taxpayer's List (ATL).
- Experience Certificates
- Authorized Partner/OEM Certificates, where applicable.
- Detailed Product Specifications

9.11. Support center/staff should be available locally with respect to the quoted item.

Detailed technical evaluation will be done for firms who qualify the preliminary evaluation mentioned above. In detailed technical evaluation the Evaluation & Award Committee will verify the compliance with specifications mentioned in Annexure-I. Any bid containing less specifications will be rejected.

10. Financial Bid Evaluation

Financial bids of the technically qualified RO will be opened before the representatives who wish to attend the tender opening. Financial bids will be opened only for those vendors only who qualify (meet the specifications) in technical and detailed technical evaluation.

11. Notification of Award

The procuring agency will notify the successful bidder in writing that the bid has been accepted. The notification of award shall constitute the formation of the "Contract" between the procuring agency and the successful bidder. The enforcement of the contract shall be governed by Rule 44 of the PPRA.

12. Signing of Contract

After the notification of the award, the procuring agency shall send the successful bidder the contract form/document. The contract shall become effective upon affixation of the signature of the procuring agency and the successful bidder on the contract document. If the successful bidder, after completion of all codal formalities, shows an inability to sign the contract then bid security shall stand forfeited and the bidder's organization may be blacklisted and de-barred from future participation.

13. Performance Security

The successful bidder should provide a performance security or performance insurance security upon execution of the contract, a sum equivalent to **Two percent (2%)** of the contract value, this security shall be issued from a scheduled bank/insurance company operating in Pakistan and shall be kept valid from the date of issue, and should cover the warranty period after all contractual obligations have been fulfilled. The bid security submitted by the successful bidder shall be returned upon submitting the performance security. Failed to provide performance security by the successful bidder, is sufficient ground for annulment of the award and forfeiture of bid security.

14. Penalty Clause

The RO is bound to make delivery of proposed solution within the delivery timelines mentioned in “Clause 03” of this RFP. In case of failure then the procuring agency may cancel the contract and forfeit its performance security. The RO is bound to ensure the proposed solution is in line with the technical specifications mentioned in the bidding document, while technical inspection will be carried out by the technical team, on the premises of the procuring agency.

15. Redressed of Grievances by the Procuring Agency

15.1. ETL has constituted a committee comprising of odd number of persons, with proper powers and authorizations, to address the complaints of bidder that may occur prior to the entry into force of the procurement contract.

15.2. Any Redressal of grievances and settlement of disputes shall be done according to Section 48 of Public Procurement Rules, 2004.

15.3. Mere fact of lodging of a complaint shall not warrant suspension of the procurement process

16. Corrupt or Fraudulent Practices

16.1. Definition of the terms set forth below for the purposes of this bidding document, shall be according to Public Procurement Rules, 2004.

16.2. PPRA 2004 Rule 2(1) f: "corrupt and fraudulent practices" in respect of procurement process, shall be either one or any combination of the practices including:

16.2.1. "**Coercive Practices**" which means any impairing or harming or threatening to impair orharm, directly or indirectly, any party or the property of the party to influence the actions of a party to achieve a wrongful gain or to cause a wrongful loss to another party;

16.2.2. "**Collusive Practices**" which means any arrangement between two or more parties to the procurement process designed to stifle open competition for any wrongful gain, and to establish prices at artificial, non-competitive levels;

16.2.3. "**Corrupt Practices**" which means the offering, giving, receiving or soliciting, directly orindirectly, of anything of value to influence the acts of another party for wrongful gain;

16.2.4. "**Fraudulent Practices**" which means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation; and

16.2.5. "**Obstructive Practices**" which means harming or threatening to harm, directly or indirectly, persons to influence their participation in a procurement process, or affectthe execution of a contract.

17. Implementation & Payment Schedule

Payment plan with percentages include Govt or other taxes as per government rules at the time of payment. All payments shall be made through cross cheque in Pak Rupees.

Ser	Milestone	Period	Payment
1.	Supply of all Hardware and Software components	Within **12 weeks** from the date of signing of contract/issuance of purchase order	40%
2.	Installation, Configuration Commissioning, Training	Within **2x week** after delivery	30%
3.	Final Acceptance	**4x Weeks** after delivery	20%
4.	After sales support	Warranty and perpetual license for software components of each item should be offered by vendor for **1x year**	10%

Transactions will be structured in instalments. **Multiple purchase orders** may be issued **as per Annexure-I.**

18. Procurement terms and Discretionary Rights

18.1. **Quantity Flexibility:** ETL reserves the right to increase or decrease the quantity of items to be procured at its sole discretion.

18.2. **Right to Cancellation:** ETL may cancel any or all items at any time without prior notice.

18.3. **Budget-Based Procurement:** Purchase Orders (POs) will be issued subject to the availability of budget.

18.4. The date for opening the financial bids is subject to change depending on the completion of the technical evaluation and the resolution of any related grievances or clarifications.

18.5. **Item Pricing Option:** The Supplier may offer items either on a cost-per-item basis or as standalone units. ETL reserves the right to evaluate and select items individually or collectively, based on cost-effectiveness, technical suitability and project needs & requirements.

18.6. **OEM Preference with Right to Cancel:** Priority/Preference shall be given to Chinese OEM equipment. In the absence thereof, other compliant OEMs may be considered subject to ETL needs and requirements.

Annexure-I

19. Technical Specification (Minimum)

Ser	Equipment/Component Name	Specs	Qty
1.	Polarization-Maintaining (PM) Fiber Optic Coupler	1x2 PM Coupler Wavelength 1550nm, 90:10 splitting ratio, BW ±15nm, Return Loss >50dB, APC	2
2.	Fused Fiber Polarization Combiner/Splitter	2x1 Fused Fiber Polarization Combiner/Splitter 1550 ± 15 nm, FC/PC	2
3.	PM Coupler	1x2 PM Coupler 1550 ± 15 nm 99:1 Split ≥20 dB PER FC/APC Connectors	2
4.	PM Fiber Optical Circulator	3 ports 1520 - 1580 nm PM Fiber Isolation > 40dB Return Loss ≥ 50dB APC	3
5.	InGaAs FC/PC-Coupled Photodetector	Wavelength range 800-1700nm, RF Bandwidth 5Ghz SMA connector FC/PC-Couple Photodetector, M4 Tap	2
6.	Compact Fiber Photodiode Power Sensor	InGaAs, Wavelength range 800 - 1700 nm, Power handling 1 nW - 20 mW	1
7.	Polarimeter	Polarimeter, Free Space and Fiber Coupled, 900 - 1700 nm Dynamic Range >50dB FC/PC FreeSpace Aperture 3mm Metric Threading USB Interface	1
8.	Compact Power and Energy Meter Console	Digital 4" LCD, Display Format Numerical, Bar graph, Statistics Current Measurement Range 50nA to 5mA Accuracy >0.5% Voltage Measurement Range 1mV to 1V for thermopile sensor Voltage Measurement Range 100mV to 100V for Pyro Sensor type Accuracy 0.5% Analog Output 0-2V, up to 100KHz SMA connector Temperature Measurement Range - 10C to 80C Built-in Speaker, USB Interface, with Utility Software for automation, statistics, SD card Rechargeable Battery for Stand-alone operation	1
9.	200MHz TTL - Analog Photodetector	Wavelength Range 900nm to 1700nm Optical Input Power 0 to 2mA FC connector Analog BW 200MHz, TTL Output SMA Connector 50 Ohm High Transimpedence gain DC Operated Module	2

10.	100MHz Balance Photodetector	Wavelength Range 900nm to 1700nm Optical Input Power 0 to 1.5mA FC connector Analog BW 100MHz, TTL Output SMA Connector 50 Ohm High Transimpedence gain DC Operated Module	2
11.	Fiber Polarization Controller	Fiber Polarization Controller, 3 Ø56 mm Paddles, SMF-28e+, FC/PC Connectors	3
12.	Electronic Polarization Controller	Phoenix Electronic Polarization Controller, Module	2
13.	Phoenix Photonics PCI Controller	Phoenix Photonics Polarization Controller, FC/APC	2
14.	Inline Faraday Rotator Mirror	Inline Faraday Rotator Mirror for 1550 nm, FC/APC Connector	4
15.	Electronic Variable Attenuator	Wavelength range 1250 to 1650 nm Attenuation >25dB FC/PC	2
16.	Multimode Variable Fiber Optic Attenuator	Attenuation >20dB Wavelength Independent Achievable Movement < 0.1dB FC/PC Multimode Patch Cables,2.2mm Wide Key	4
17.	Compact Fiber Photodiode Power Sensor	Compact Fiber Photodiode Power Sensor, InGaAs, 800 - 1700 nm Optical Power 100 pW - 3 mW In built Cooling with FC fiber adapter accessory	1
18.	Polarization Beam Splitter	3 Ports, 1 SM & 2 PM Ports,1550nm, FC/APC	1
19.	Circulator	3Ports SM Cables, Wavelength 1550 nm, FC/APC	1
20.	Polarization Beam Splitter	4 Ports, 1 SM & 3 PM Ports,1550nm, FC/PC	3
21.	Polarization Beam Splitter	4 Ports, 1 SM & 3 PM Ports,1550nm, FC/APC	3
22.	Coupler	2 SM Ports Input, 2 SM Ports Output, 1550nm, 50:50, 1550 nm,FC/APC	2
23.	Polarization Beam Splitter	4 Ports, 3 SM & 1 PM Port, 1550nm, FC/APC	3
24.	Phase Modulator	Titanium In-Diffused, Input: SM, Output: PM, Wavlength: 1550nm, RF Bandwidth: 300MHz FC/APC	1
25.	Phase Modulator	Input: PM, Output: SM, Wavelength: 1550nm, RF Bandwidth 300MHz FC/APC	1
26.	Phase Modulator	Input: PM, Output: PM, Wavelength: 1550nm, RF Bandwidth: 300MHz FC/APC	1
27.	Phase Modulator	Input: SM, Output: SM, Wavelength: 1550nm, RF Bandwidth 300MHz FC/APC	1
28.	Phase Modulator	PM Cables, Wavelength: 1550nm, RF Bandwidth: 300MHz FC/APC	1
29.	Phase Modulator	Annealed Proton Exchange (APE) PM Cables,	1

		Wavelength: 1550nm, RF Bandwidth: 300MHz FC/APC	
30.	In-Line Isolator	1550nm In-Line Isolator SM Fiber FC/APC	1
31.	Polarization Beam Splitter	Wavelength: 1550nm 3 Ports, 1 x Input: PM, 2 x Outputs: PM, Slow Axis Working	3
32.	Coupler	2 PM Ports Input, 2 PM Ports Output, 1550nm, 50:50, 1550 nm,FC/UPC	4
33.	45° Spliced Cable	PM Patch Cord FC/APC-FC/APC-SX- LSZH 3.0mm-30cm, 1550 nm	2
34.	Inline Linear Polarizer (ILP)	1550 nm, 900 µm, PM Port, FC/APC	2
35.	Digital Variable Attenuator	Wavelength 1300 and 1550nm 9/125 microns SMF Attenuation range 60dB USB Interface 220VAC and 12V DC adapter Rechargeable Battery	2
36.	Fixed Fiber Optic Attenuator/Terminator Kit FC/APC	Fixed Fiber Optic Attenuator/Terminator Kit, FC/APC Connectors	1
37.	Mating Connector	FC/PC to FC/PC Mating Sleeve, Wide Key (2.2 mm), Square Flange	8
38.	Mating Connector	FC/APC to FC/APC Mating Sleeve, Narrow Key (2.0 mm), Square Flange	8
39.	Fiber Adapter	FC PC Male to FC APC Female Hybrid SM Simplex Fiber Adapter	10
40.	Fiber Adapter	FC PC Female to FC APC Male Hybrid SM Simplex Fiber Adapter	10
41.	SM Fiber Spool	500m, 1330/1550nm, FC/APC- FC/APC	1
42.	Bracket	Quadruple L-Bracket for Square Flange FC Mating Sleeves	4
43.	Function Generator	2 Channel arbitrary waveform generator BW: 1µHz to 200MHz 1mvpk-pk to 20Vpk-pk USB Interface with Software and accessories	1
44.	Digital Oscilloscope	500 MHz Analog Bandwidth, 10GSa/s Sample Rate,4 Analog channels USB Interface with Software and Accessories	1
45.	M6 HARDWARE KIT	Screw and Hardware kit	1
46.	Laser Safety Glasses (Universal or Goggle Style)	800 - 2000nm,OD 6+ Visible Light Transmission 30%	6
47.	ESD Table Mats	ESD Static Control Table Mat, 2' x 4' x 3/32"	2
48.	Grounding Wires and Wrist Straps	-	4
49.	ESD Gloves	-	4
50.	Human Body Electrostatic Eliminator (Wall Mount)	-	2
51.	Fiber Optic Cleaning Kits and Pens	-	2
52.	DC Power Supply	4 Channel ,30V/5A per channel Resolution 1mA, 1mV USB Interface, RS232 Interface	2
53.	Digital Multimeter and EDA2 Accessories Kit	DC Voltgae 0.1mV-1000V AC Voltage 0.1mA - 1000V DC Current 0.01mA - 10A AC Current 0.01mA - 10A	3

		Resistance upto 50M Ohm Capacitance 1nF - 10,000uF Frequency 0.01Hz - 100KHz Temperature -40-400C Safety EN 61010-1 to 1000V Cat III with Accessories Kit	
54.	PM Patch Cable	PANDA, 1550nm, FC/APC, Dia 900 micrometer Jacket, 2m	4
55.	PM Patch Cable	PM FC/APC, 1440-1625nm, 5m, Dia 0125 micrometer, 0.125, Panda	2
56.	Single Mode Patch Cable	FC/PC, 1460-1620nm, FT030-Y, 1m, Dia 125 micrometer, 0.13	2
57.	Single Mode Patch Cable	FC/PC, 1460-1620nm, FT030-Y, 2m, Dia 125 micrometer, 0.13	2
58.	Single Mode Patch Cable	FC/PC, 1460-1620nm, FT030-Y, 10m, Dia 125 micrometer, 0.13	2
59.	PM Patch Cable	FC/PC, 1440-1625nm, FT030- BLUE,1m , Dia 125micrometer, 0.13,Panda	3
60.	PM Patch Cable	FC/PC, 1440-1625nm, FT030- BLUE, 2m , Dia 125micrometer, Panda	3
61.	PM Patch Cable	FC/PC, 1440-1625nm, FT030- BLUE, 5m , Dia 125micrometer, 0.13, Panda	3
62.	Rework Station	140 W desoldering gun, M-type soldering iron and 670W hot air	1
63.	3D digital microscope	-	1
64.	Fiber Fusion Splicer	-	1
65.	SMA to SMA Cable	1 meter	8
66.	SMA to BNC Cable	1 meter	8
67.	BNC to BNC Cable	1 meter	8
68.	Free space Laser Diode Module	Wavelength: 650 nm, Output Power ≤1 mW, TTL-modulated, 5 V	10
69.	Neutral Density Filter	OD 1.0, Ø25 mm	2
70.	Iris Diaphragm	Manual iris, Ø50 mm	3
71.	Beam Splitter	50/50 non-polarizing cube, 650 nm, Ø20-25 mm	4
72.	Mirrors	K9 Glass Dielectric mirrors @650 nm, Ø25 mm, λ/10, Dual-band (650nm & 1064nm)	10
73.	EO Phase Modulator	Bulk Free space Resonant Electro- Optic Phase Modulator Wavelength 370-650nm Large Aperture 3x3mm2 Optical Intensity 0.5W/mm2 AR Coated 360-650nm	2
74.	HV Amplifier	0–5 V input, up to 20 V output, BW ≥1 MHz	2
75.	Beam Dump	Absorptive beam dump, Ø25 mm Wavelength 400 – 2000nm CW and Pulsed LASER M4 8-32 taps	2
76.	Two-Lens Telescope	Wavelength 530-1100 nm 20x Beam Expansion Lenses: f = 25 mm & 125 mm, Ø25 mm, Minimum apertures	2
77.	Beam Profiler	Spectral Detection Range 190 – 1100nm Beam spot Measurement Range	1

		34.5um – 7.1mm Dynamic Range 73.9dB Free space USB interface with software (optional)	
78.	Fast Photodiodes	Silicon photodiodes Cutoff Frequency ≥100 MHz Wavelength 400 – 1100 nm	4
79.	Trans-impedance / OP Amplifier modules	High Gain Linear BW ≥100 MHz TIA module	2
80.	Oscilloscope	200 MHz Analog Bandwidth, >2GSa/s Sample Rate, 2 Analog channels USB Interface with Software With accessories	1
81.	Logic Analyzer	USB logic analyzer ≥24 MHz, 16 Channels USB Interface with Software	1
82.	ESP32-CAM Module Development Board	ESP32 with Camera Module OV2640 2MP	6
83.	ESP32-CAM-MB Programming Adapter Board	ESP32-CAM-MB Programming Adapter Board CH340 Serial To USB for ESP32-CAM Module	6
84.	Nanosecond Laser Diode Module	1560nm, Pulse duration Tunable 1–100 ns TTL LASER Triggering Fiber Coupled USB Interface with GUI control	1
85.	Linear temperature controller	Adjustment range 40C to 10C Temperature Coefficient 0.002 C/C 5v, 1.15a	1
86.	Thermoelectric Cooler	Multistage TEC, Delta T max 120C Qc max 1.1W Hot side Temperature approx. 27C Operating Temperature >80C	1
87.	Cooled Single Photon Avalanche Diode	Wavelength 1550nm, Breakdown Voltage max 90V, TEC integrated DCR <10KHz 62.5/125um Multimode Fiber Pigtail with FC/UPC Connector	3
88.	DC POWER SUPPLY	0-110V DC power supply 0 – 1.3A Output Power 80W Ripple: < 6mV, <2Ma	1
89.	1550nm Laser Module (LD+driver) 4GHz	Direct Modulation Laser (DML), PM fiber, FC/APC up to 4 GHz Modulation Integrated DFB laser with driver bias circuit, 50 Ω Impedance Built in TEC Temperature Stabilization SMA RF input connector USB / RS232 / RS485 interface for computer control +12V DC power supply included	1
90.	1550nm Directly Modulated Laser (DML)	14-pin butterfly, 1550nm PM fiber coupled, FC/APC Direct current modulation: upto 4GHz 10-20mW output, Low RIN noise Built in TEC & Thermistor	1
91.	Optical Spectrum Analyzer	Wavelength range : 400 to 1750 nm Wavelength accuracy : ±0.2 nm typ. Wavelength resolution : 0.05 nm	1

		Close-in Dynamic range : 60 dB typ. Level range : +20 to -80 dBm Up to 2x faster measurement: SMSR mode Sharper spectrum measurement: HCDR mode LCD Display USB Interface with Software MATLAB, Labview control Necessary Accessories	
92.	Electrical Spectrum Analyzer	Bandwidth: approx. 10 GHz Waveforms per second : 1 million 9.4 ENOB for ultimate signal integrity Input Channels: 4 Min memory: 2 Gpoints USB Interface with Software MATLAB, Labview control Necessary Accessories	1
93.	Digital Oscilloscope	Resolution: 12-bit Analog bandwidth: DC -10 GHz Analog channels : 4 Standard 16 digital channels (optional) 200 MHz PLA2216 logic analyzer probe Real-time sample rate: >25 GSa/s Max. memory depth of 1 Gpts Vertical sensitivity 200 µV/div to 10 V/div USB Interface with Software Necessary Accessories	1
94.	Desoldering Station / Rework Station	2Channel Power: 250 W (300 W), Capacity (l/min) 18 l/min, Maximum Hot Air Flow Rate l/min (Depends on Tool) 10 l/min Temperature Range °C 50 – 550°C Supply 220VAC	1
95.	All in one Soldering Station	Power 300 W, Temperature Accuracy °C ± 9°C Temperature Accuracy °F ± 17°F Temperature Range °C 100 - 450 (550) °C Temperature Range °F 200 - 850 (950) °F Temperature Stability °C ± 2°C Temperature Stability °F ± 4°F Supply 220VAC	1
96.	Power Supply	3/4 Output Channels Per channel 30V/3A Total Output Power > 360W Voltage ripple 20 Hz to 20 MHz < 1.5 mV (RMS) Programming Resolution 1mV, 1mA Load Regulation < 0.01 % + 2 mV Read Back Accuracy < 0.05% + 5 mV, USB interface with Software	2
97.	Function Generator	Tunable Frequency KHz- 6Ghz rise/fall time < 100psJitter < 2ps RMS Noise < -120dbc/hz Frequency Resolution 1 Hz frequency and output sweep include USB interface with Software	1
98.	Multimeter	DC Voltgae 0.1mV-1000V AC Voltage 0.1mA - 1000V DC Current 0.01mA - 10A AC Current	2

		0.01mA - 10A Resistance upto 50M Ohm Capacitance 1nF - 10,000uF Frequency 0.01Hz - 100KHz Temperature -40-400C Safety EN 61010-1 to 1000V Cat III with Accessories Kit	
99.	FPGA Kit	FPGA Evaluation kit ZC702 with all accessories With Breakout Prototyping Board for LPC FMC	1
100.	FPGA Kit	ADS7-V2EBZ with accessories	1
101.	ADC Kit	AD9680-1000EBZ with accessories	1
102.	High-Precision Rotation Mount	Optics Size: Ø1" (Ø25.4 mm) Optics Thickness: 0.50" (12.7 mm) Thick 360° Continuous Coarse Rotation M4 taps	10
103.	Zero-Order Quarter-Wave Plate	Optics Size: Ø1" (Ø25.4 mm) Center Wavelength 1550 nm, λ/4	2
104.	Zero-Order Quarter-Wave Plate	Optics Size: Ø1" (Ø25.4 mm) Center Wavelength 532 nm, λ/4	2
105.	Zero-Order Half-Wave Plate	Optics Size: Ø1" (Ø25.4 mm) Center Wavelength 532 nm, λ/2	2
106.	Zero-Order Half-Wave Plate	Optics Size: Ø1" (Ø25.4 mm) Center Wavelength 1550 nm, λ/2	2
107.	Faraday Rotator	Faradays Rotator with 45° Rotation Aperture size: Ø5 mm Center Wavelength: 1550 nm Pre-Mounted	4
108.	Faraday Rotator	Faradays Rotator with 45° Rotation Aperture size: Ø5 mm Center Wavelength: 532 nm Pre-Mounted	4
109.	Linear Polarizer	Ø1", N-BK7 Windows, 400-700 nm	4
110.	Linear Polarizer	Ø1", N-BK7 Windows, 1050-1700nm	4
111.	Fiber Collimation Package	Center Wavelength: 1550nm Focal Length: 11.32 mm Numerical Apperture: 0.24 Beam Waist dia: 2.15 mm FC/APC	2
112.	Fiber Collimation Package	Center Wavelength: 1550nm Focal Length: 6.37 mm Numerical Apperture: 0.37 Beam Waist dia: 1.21 mm FC/APC	2
113.	Fiber Collimation Package	Center Wavelength: 532nm Focal Length: 10.90 mm Numerical Apperture: 0.25 Beam Waist dia: 2.1 mm FC/APC	2
114.	Fiber Collimation Package	wavelength: 532nm Focal Length: 6.09 mm Numerical Apperture: 0.38 Beam Waist dia: 1.14 mm FC/APC	2
115.	Fiber Collimator Mount	Kinematic Mount with 3 adjusters for Ø0.5"(12.7mm)Optics, M4 Taps	4
116.	Fiber Collimator Adapter	Ø1/2" Unthreaded Adapter for Ø11 mm Cylindrical Components	4
117.	Compact Fiber Collimator	Pigtailed Collimators, Polarization Maintaining fiber, FC/APC (2mm) 1550 nm ± 30 nm Beam dia: 0.4 mm Fiber type = PM1550-XP; Length 1m Fiber mode filed dia = 10.1 µm	2

		Waist distance: 2.01 mm	
118.	V-Clamp for compact Collimator	Miniature v-clamp. 0.75'' long, with clamping arm having nylon tipped screw M4 Tap, mountable on 1/2'' posts.	2
119.	SM1 Lens Tube (Optical Guide)	Lens Depth: 2.50" Thread Type: SM1 One Retaining Ring : Included Mount is inclusive with Lens Guide	2
120.	Translating Post Holder	Ø12.7 mm Translating Post Holder, Min Height L1=75.2 mm Max Height L2=91.6 mm	8
121.	Translating Post Holder	Ø12.7 mm Translating Post Holder, Min Height L1=60.5 mm, Max Height L2=71.9 mm	8
122.	Mounting Base	2" x 3" x 3/8" Imperial Slots or similar Size may vary	8
123.	Pedestal Base Adapter	Ø1.25'' (31.8 mm) Studded Pedestal Base Adapter, M6 Threads	5
124.	Clamping Fork	Clamping Fork for Ø1.25" Pedestal Bases, 31.5 mm Counterbored Slot, M6 x 1.0 Captive Screw	5
125.	Optical Post	Thread Length : Ø12.7 mm, Length of mount: L=40 mm, Thread Type M4/M6 Thread	14
126.	VIS/IR Detector Card	VIS/NIR Detec Card: 400 to 640 nm and 800 to 1700 nm Active Region 2.10" x 1.20" (53.3 mm x 30.5 mm) Overall 2.10" x 3.40" (53.3 mm x 86.4 mm)	2
127.	Kinematic Pellicle Mount	Kinematic Pellicle Mount for 1 inch Pellicel optics	4
128.	Mounting Fork	Mounting Fork for Ø1" Pellicle Beamsplitters	6
129.	Pellicle Beam Splitter	Ø1" Pellicle Beamsplitter Coated for 45:55 (R:T) Split Ratio for 400-700nm	2
130.	Pellicle Beam Splitter	Ø1" Pellicle Beamsplitter Coated for 45:55 (R:T) Split Ratio for 1-2 µm	4
131.	Lens Mount	Lens Mount with Retaining Ring for Ø1" Optics M4 Tap	6
132.	Spanner Wrenches for Retaining Rings	Spanner Wrench for SM1-Threaded Retaining Rings, Length = 1.00"	2
133.	Mirror Mount	Ø1" Clear-Edge Precision Kinematic Mirror Mount 3 Adjusters	8
134.	Plano-Convex Lens	Ø1" Magnesium Fluoride f=50 mm	2
135.	Plano-Convex Lens	Ø1" Magnesium Fluoride , f=75 mm	2
136.	Achromatic Lens	f = 125 mm, Ø1" , ARC: 400 – 700 nm	2
137.	Achromatic Lens	f = 75 mm, Ø1" , ARC: 1050 – 1700 nm	2
138.	Coupling Prisms	Rutile Coupling Prism, L = 6 mm	1
139.	Polarizing Beamsplitter Cube	1" Polarizing Beamsplitter Cube, 1200 - 1600 nm	1
140.	Polarizing Beamsplitter Cube	1"Polarizing Beamsplitter Cube, 400- 700 nm	1
141.	Mirrors	Ø1" Protected Silver Mirror Wavelength Range: 450nm-20um	8
142.	ND Filter	Ø25 mm NIR Absorptive ND Filter SM1-Threaded Mount OD: 0.3 (50% Transmission)	1

143.	ND Filter	Ø25 mm NIR Absorptive ND Filter SM1-Threaded Mount OD: 0.6 (26% Transmission)	1
144.	ND Filter	Ø25 mm NIR Absorptive ND Filter SM1-Threaded Mount OD: 2.0 (1% Transmission)	1
145.	Pedestal Pillar Post	Pedestal Post Dia : Ø25mm; Length of Post : L=100mm; Material : Solid Steel, High rigidity.	4
146.	Fork pedestal pillar post	Clamping Fork for Ø1.25" Pedestal Bases, 1.24" Counterbored Slot M6 captive screw	4
147.	Variable Beam Splitter	Design Wavelengths: 1550 nm Beamsplitter Extinction Ratio of > 3000:1 Damage Threshold > 100W/cm Antireflective (AR) Coated for Rabs < 0.25% @ 0° AOI Integrated Zero-Order Half-Wave Plates Waveplate Transmitted Wavefront Error < λ/8 Assembly Transmitted Deviation < ±10 arcmin Cage With All Necessary Accessories	2
148.	Optical Power meter Console and Sensor	Digital 3.5" LCD, Display Format Numerical, Bargraph, Statistics Current Measurement Range 2nA to 10mA Accuracy >0.5% Voltage Measurement Range 1mV to 1V for thermopile sensor Voltage Measurement Range 20mV to 200V for Pyro Sensor type Accurace 0.5% Analog Output 0-2V, upto 100KHz SMA connector Temperature Measurement Range - 10C to 80C Buuiltin Speaker, USB Interface, with Utility Software for automation, satistics, SD card Rechargable Battery for Stand alone operation	1
149.	Optical Power meter Console and Sensor	Standard Photodiode Power Sensor, Ge, 700 - 1800 nm, 50 nW - 40mW	2
150.	Optical Power meter Console and Sensor	Standard Photodiode Power Sensor, Si, 400 - 1100 nm, 500 nW – 500 mW	2
151.	Optical Power meter Console and Sensor	Slim Photodiode Power Sensor, Ge, 700 - 1800 nm, 5 nW - 5 mW, with Filter	1
152.	Variable Beam Splitter	Design Wavelengths: 532 nm Beamsplitter Extinction Ratio of > 3000:1 Damage Threshold > 100W/cm Antireflective (AR) Coated for Rabs < 0.25% @ 0° AOI Integrated Zero-Order Half-Wave Plates Waveplate Transmitted Wavefront Error < λ/8 Assembly Transmitted Deviation < ±10 arcmin Cage With All Necessary Accessories	2

153.	1550 nm DFB Laser Diode Butterfly Packaged	Operating Current : 0-100mA Center Wavelength: 1550 nm Linewidth: < 100 KHz output power over C Band: >25mW and <50mw TEC Current/Voltage: 1.5A/5V max Thermistor resistance: >10 kOhm PM Fiber, APC	1
154.	Laser Driver (Butterfly Mount)	LASER Driver with PCB board mount of Butterfly packaged LASER as above, Integrated temperature control, Current and Voltage Control USB / RS232 / RS485 Interface with Computer Software based Control	1
155.	Variable Attenuator	PM Variable Attenuator, FC/APC, 1m length per side 1310 & 1550 nm ± 40nm Attenuation Range: 0.9 - 50dB ; resolution: 0.15dB Return loss: >50 dB; Insertion loss:< 0.9dB Fiber: SM13-PS-U25D Length 1m at both ends Max power: 300 mW FC/APC Connector	4
156.	Fiber Coupled Inline Polarizor	Wavelength 1550nm ± 40 nm, Insertion Loss < 0.6dB, Extinction ratio >26dB Optical Power Handling > 300mW, Return Loss > 45Db PM Pigtail FC/APC	2
157.	Fiber Coupled Photodetector	InGaAs APD Dark Current < 10nA Wavelength Range: 1100-1650nm Approx. RF Bandwidth ≥ 5 GHz Optical Power ≤ 10mW PCB Mount PM Fiber Pigtail FC/APC connector	2
158.	Balanced APD	Wavelength Range: 1300 nm & 1200 - 1700 nm Detector Bandwidth: 30 kHz - 1.6 GHz Input Coupling :FC/APC connector Optical Power handling ≤ 10mW Output Impedance: 50 Ω, 200 Ω (Monitor) Conversion Gain: 14400 V/W (1550 nm) Input Coupling: FC/APC connector RF output Connector: SMA	1
159.	Fiber Coupled Polarization Controller	Wavelength range approx. 1100- 1700nm Center wavelength: 1550nm (C Band) 3 Paddles Independently Rotatable Wave Plates FC/APC-Terminated Fiber Low Bend Loss fiber	2
160.	Fiber Coupled Polarization Maintaining Splitter	99:1 splitter 1550nm Wavelength Bandwidth: < ±20nm Insertion Loss <3.5dB Excess Loss <0.3dB PM fiber, FC/APC	2
161.	PANDA PM FC/APC Patch Cables	Alignment Wavelength : 1550 nm Fiber Type: PM1550-XP (PANDA) Operating WaveLength : 1440 - 1625 nm Cutoff Wavelength: 1380 ± 60 nm Mode Field Diameter: 10.1 ± 0.4 µm @ 1550 nm Fiber Length: 1m Ø900 µm Jacket	5

162.	PANDA PM FC/APC Patch Cables	Alignment Wavelength : 1550 nm Fiber Type: PM1550-XP (PANDA) Operating WaveLength : 1440 - 1625 nm Cutoff Wavelength: 1380 ± 60 nm Mode Field Diameter: 10.1 ± 0.4 µm @ 1550 nm Fiber Length: 2m Ø900 µm Jacket	5
163.	Fiber Adapter Cap	FC/APC Fiber Adapter Cap with Internal SM1 (1.035"-40) Threads, Narrow Key (2.0 mm)	2
164.	IR Detector Adapter	SM1 Thread Adapter for Slim Photodiode Sensors 10mm Aperture Pocket 21.5mm	1
165.	Fiber Stripping Tool	Adjustable Stripping Tool for Fiber Buffers, Fiber Jackets, and Wire	2
166.	Fiber Stripping Kit	Fiber Stripping Kit Jackets up to Ø3.0 mm Cladding: Ø125 - Ø680 µm Coating/Buffer: Ø250 - Ø1016 µm	1
167.	Avalanche Photdiode (APD)	To-18, 900-1700nm, Cutoff Freq: >1GHz, active area = 0.2mm diameter, terminal capacitance: 1.5pF	2
168.	Circulator	Center Wavelength 1550nm, PM fiber, FC/APC 3 Ports Isolation >40dB insertion loss ≤0.9 dB Return loss ≥50 dB; Directivity ≥50 dB Extinction ratio ≥22 dB;	2
169.	50:50 fiber Coupler (1x2)	Bare end for fusion splicing, 1550nm, 50/50 Coupling Ratio tolerance ±1.5%; BW ±15 nm; Extinctio ratio ≥25.0 dB; Insertion loss ≤3.5 dB; Optical Return loss ≥60 dB; Panda fiber (Equivalent to PM 15- U25D); length 0.8 m, Jacket Ø900 µm Hytrel® Loose Tube if FC/APC then narrow 2mm key ;	2
170.	Inline Faraday Rotator Mirror	Faraday rotation 45 ±1 degrees centered @ 1550 ± 15nm Insertion loss <0.5dB return loss >55 dB Pigtail Fiber FC/APC	2
171.	Photoreceivers	Single Mode Ultrafast Receiver with Integrated Amplifier (TIA + PIN) InGaAs preferred 1550nm BW: 40 kHz - 10 GHz Responsivity: 0.9 A/W Optical Return loss: -25 dB Optical power > 2mW FC/APC RF Output Connector SMA	2

***Special Instructions:**

Preference will be given to Chinese OEM equipment; however, in case such equipment is not available, alternative equivalent may be considered.

Annexure-II

20. Format for Financial Proposal

Ser	Item	Specifications	Qty	**Unit Price** (Inclusive of all applicable taxes)	Tax Amount	**Total Cost** (Inclusive of all applicable taxes)

BID FORM-01

Bid Ref No. _____
Date of the Opening of Technical Bid

Letter of Intent

Name of the Tender: { }

To: [The Project Director, Emerging Technologies Lab, Islamabad]

Dear Sir

Having examined the bidding documents, we offer to supply and deliver the goods under the above-named contract in full conformity with the said bidding documents and at the rates/unit prices described in the price schedule provided in the financial bid or such other sums as may be determined by the terms and conditions of the contract. The above amounts are by the Price Schedules attached herewith and are made part of this bid.

We undertake, if our financial bid is accepted, to deliver the goods following the delivery schedule specified in the schedule of requirements.

If our financial bid is accepted, we undertake to provide a performance security/guarantee in the form, in the amounts, and within the times specified in the bidding documents.

We agree to abide by this bid, for the bid validity period specified in the bidding documents and it shall remain binding upon us and may be accepted by you at any time before the expiration of that period.

Until the formal final contract is prepared and executed between us, this bid, together with your written acceptance of the bid and your notification of award, shall constitute a binding contract between us.

We understand that you are not bound to accept the lowest or any financial Bid you may receive. We undertake that, in competing for (and, if the award is made to us, in executing) the above contract, we will strictly observe the laws against fraud and corruption in force in Pakistan.

Dated this [insert: number] day of [insert: month], [insert: year].

Signed:

In the capacity of [insert: title or position]

Duly authorized to sign this bid for and on behalf of [insert: name of Bidder]

BID FORM-02

Name of the Firm
Bid Reference No: _____
Date of opening of Bid. _____

Documentary Evidence for Determining Eligibility of the Bidders & Evaluation of Bids. Bidders should only initial against those requirements that they are attaching with the form. Bidders are required to mention the exact page number of relevant documents placed in the Bid. Bidders are advised to attach all Supporting documents with this form in the order of the requirement as mentioned in column 1.

Required Documentation	Signature of Bidder	Supporting Document's Name	Page Number in the Bid
SECP Registration			
NTN Certificate			
GST Certificate			
On Active Tax Payers List of FBR			
Incorporation Certificate			
Complete Company profile			
Operational Office in Islamabad			
Affidavit: bidder is not blacklisted by any federal, provincial public sector organization.			
MAL certificate (Verifiable)			
The bid validity period of 120 days			
Compliance with a schedule of requirements			
Submission of the required amount of bid security along with technical bid			
Compliance with technical specifications			
OEM warranty: 01-year & onsite support			
Technical brochures/data sheets			
Original bidding documents duly signed/stamped			

BID FORM-03

MANUFACTURER'S AUTHORIZATION*

To: [Project Director, Emerging Technologies Lab, Islamabad]

WHEREAS [name of the Manufacturer] who are established and reputable Manufacturers of [name and/or description of the goods] having factories at [address of factory] do hereby authorize [name and address of Supplier/Agent] to submit a bid, and subsequently sign the Contract with you against the Invitation for Bids (IFB) No._____for the goods manufactured by us.

We hereby extend our full guarantee and warranty as demanded for the goods offered for supply by the above firm against this Invitation for Bids.

Signature: ----------
Designation: ----------
Official Stamp: ----------

*This letter of authority should be on the letterhead of the manufacturer and should be signed by a person competent and having the power of attorney to bind the manufacturer. It should be included by the bidder in its bid.

BID FORM-04

Firm's Past Performance.

Name of the Firm: _____
Bid Reference No: _____
Date of opening of Bid:

Name of the Client/Institution	Purchase Order No.	Description Of Order	Value of Order	Date of Completion	Work Completion Certificate by

Bidders may use additional Sheets if required.
All certificates are to be attached to this form.