

Due date for submission of Tender: **23.01.2023** Date of Opening of Technical Bid: **24.01.2023**

The Raman Research Institute invites sealed Tenders for supply of **Supply, Installation, Testing and Commissioning of Live-Streaming hardware for Auditorium** directly from the manufacturers or their authorized agents adhering to the terms and conditions given below:

1. HDMI Matrix Switcher:

Description	8 x 8 HDMI Matrix Switch
Input Interface	HDMI Type A Female
Output Interface	HDMI Type A Female
Max Data Rate	18Gbps (6 Gbps Per Lane)
HDCP	2.2 Compatible
Impedance	100 Ω
Max Pixel Clock	600 MHz
Input Port	8
Output Port	8
Max. Resolution	Up to 4096 x 2160 / 3840 x 2160 @ 60Hz (4:4:4)
Audio	HDMI
Control	Multiple Control Methods – system management via front-panel pushbuttons, IR remote, RS-232 control, Web GUI, Telnet via Ethernet connections
EDID Support	Should have the feature to selects optimum EDID settings for smooth power-up, high-quality display and use of the best video resolution across different screens
Switching Feature	Should have the capable Power-on Detection – switches to the next powered-on source when one source is powered off
Signal Rate	Should have Signaling rates up to 6 Gbits for flawless true 4K output
Warranty	5 years



2. PTZ Camera for presenter and audience

Sl. No.	Feature / Specification
1	4K @ 30fps & Full HD 1080p @ 60fps PTZ Camera
2	Sensor: 1/2.5" 8.57MP CMOS or better
3	Minimum 30X Optical Zoom
4	Minimum 100 Presets
5	Focus System: Auto / Manual / Smart AF
6	Video Formats: 2160p: 29.97 / 25; 1080p: 59.94 / 50 / 29.97 / 25; 1080i: 59.94 / 50; 720p: 59.94 / 50 / 29.97 / 25
7	IP Compression: HEVC(H.265) / H.264
8	Ethernet Out, HDMI Out, 3G-SDI Out, Audio In, RS232/422 Controls
9	-170° ~ +170° Panning angle, -30° ~ +90° Tilting angle
10	Should support PoE; PoE+ (IEEE802.3at)
11	Control Protocol: VISCA / VISCAIP / PELCO D / ONVIF
12	IP Protocol: RTSP / RTMP / RTMPS / MPEG-TS / SRT
13	White Balance: Auto/Manual; Exposure Control: Auto/Manual; Gain Control: Auto/Manual; Image Processing: 3DNR & WDR; Image Flip: Yes
14	Virtual USB Driver and should be NDI compatible
15	Should be CE, FCC, RoHS & BIS Certified
16	Should include all mounting accessories
17	5 years comprehensive OEM Warranty

3. Recording and Streaming device:

Sl. No.	Feature / Specification
1	Recording, Streaming & Webcasting Hardware simultaneously
2	Built-in 4x HDMI & IP Inputs, 2x HDMI Outputs, 3 H.264/AVC digital video over Ethernet; Frame rate: 30/60 fps
3	Can record upto any four inputs simultaneously in a single frame and as well as individual sources simultaneously



4	Should have time and date stamp feature on the recordings
5	Should have minimum 2TB inbuilt storage; File type: MP4 (H.264), JPEG
6	Streaming Protocol: Pull: RTSP; Push: RTMP / RTMPS / MPEG-TS; TCP, UDP, HTTP; DHCP Client
7	Scenes Switch: Preset for layout, background, and overlay
8	Layout Switch: Single, PIP, PBP, 3 and 4 windows layouts
9	Should be able to support minimum 3 unicast streams
10	USB: 2 rear panel USB 2.0 type A; Support USB mouse, keyboard, HID touch display
11	Serial Control: RS-232 / RS-485 port
12	Should be CE, FCC, RoHS & BIS Certified
13	5 years comprehensive OEM Warranty

4. Joystick Camera Controller:

Sl. No.	Feature / Specification
1	IP+RS 232/VISCA based Joystick Controller
2	4 axis Joystick for Pan / Tilt / Zoom
3	Quick access control of exposure, white balance, focus, PTZ speed and 6 user-assignable keys
4	IP & RS232C/RS455 Communication Interfaces
5	High Brightness OLED Display
6	Auto Backlit Keys
7	Should be able to control minimum 100 Cameras on IP & 10 Cameras through RS232/422
8	Should support PoE
9	5 years comprehensive OEM Warranty



5. 2m HDMI Cables:

Description	2meters High Speed HDMI Cable with Ethernet
Input Port	HDMI Type-A Male
Output Port	HDMI Type-A Male
Max. Resolution	True 4K (Up to 4096 x 2160@60HZ)
Max. Distance	2M / 6ft
Audio	HDMI (3D, Deep Color, 4K); HDCP 2.2 compliant
Cable Type	Tined Copper
Cable Outer Dimension	6.0 ± 0.20mm
Connector Plating	Gold
Cable Shield Type	Aluminum Foil
Cable Jacket Type	PVC
Max Data Rate	18 Gbps
Max. Pixel Clock	600Mhz
HDCP version	2.2
Video Signal	TMDS / HDCP 2.2 / EDID / CEC
Operating Temperature	0°C to 80°C
Flame Rating	UL VW-1 (Flame rate), CSA

6. 20m HDMI Cables:

Description	20meters 4K HDMI Active Optical Cable
Input Port	HDMI Type-A Male
Output Port	HDMI Type-A Male
Max. Resolution	True 4K (Up to 4096 x 2160@60HZ)
Max. Length	20M / 65.61ft
Audio	HDMI (3D, Deep Color, 4K); HDCP 2.2 compliant



Cable Type and Conductor	Hybrid cable with optical fiber and copper wire; 7 x Tinned Copper Wire, 4 x OM3 Optical Fiber (50/125um)
Cable Outer Dimension	5.0 ± 0.20mm
Connector Plating	Gold
Cable Shield Type	Aluminum Foil
Cable Jacket Type	UL Plenum (CMP-OF)
Max Data Rate	18 Gbps
Max. Pixel Clock	600Mhz
HDCP version	2.2
Video Signal	TMDS / HDCP 2.2 / EDID / CEC
Flame Rating	UL VW-1 (Flame rate), CSA

7. Multihead Connector Cable:

Sl. No.	Feature / Specification
1	3 meters Eisconnect/Aten Multihead Connector Cable HDMI-Multi-Head USBC / HDMI / Mini DP
2	HDMI Type A connector, male, HDMI 2.0 / DisplayPort connector, male, DisplayPort 1.2 input
3	Mini DisplayPort connector, male, DisplayPort 1.2 input
4	USB Type-C connector, male, DisplayPort Alternate Mode on USB Type-C input
5	Connection of a single video source via any one of the three inputs; automatically selects the active connection and outputs an HDMI signal
6	Supported Resolutions: Up to 4096 x 2160 @60Hz



8. 10-Port PoE Switch:

Sl. No.	Feature / Specification
1	10-Port Gigabit Smart Managed PoE switch (TP-Link Jetstream SG2210MP -10 POE Switch or similar)
2	8×802.3at/af-compliant PoE+ ports with a total power supply of 150 W
3	2 × Gigabit SFP Slots
4	Zero-Touch Provisioning (ZTP), Centralized Cloud Management, and Intelligent Monitoring
5	IP-MAC-Port Binding, ACL, Port Security, DoS Defend, Storm Control, DHCP Snooping, 802.1X, Radius Authentication
6	IPv6 support
7	Optimized for Voice and Video Applications: L2/L3/L4 QoS and IGMP snooping

Bill Of Materials:

Sl. No.	Item	Quantity
1	8x8 HDMI Matrix Switcher	1
2	PTZ Camera	2
3	Recording and Streaming Device	1
4	Joystick Camera Controller	1
5	2m HDMI Cable	6
6	20m HDMI Cable	2
7	3m Multihead Connector Cable	1
8	10-Port PoE Switch	1
9	L shaped clamp mounts for mounting PTZ cameras	2
10	Necessary cables, connectors, accessories to complete the installation	1 lot
11	5 years Comprehensive onsite OEM Warranty	1



Mandatory technical requirements, scope of work:

1. Supply, Installation, Testing and Commissioning of the entire system should be carried out in the RRI main building auditorium.
2. The 'Bill Of Materials' mentioned above is not complete and exhaustive. All required accessories and licenses, including the ones mentioned in the above 'Bill Of Materials' and specifications, to complete the installation should be accounted for and included in the bid.
3. Upon supply, a document made on the letter head of the OEM stating that the OEM shall undertake to provide five year back-to-back comprehensive, on-site warranty support, software updates and firmware updates, access to the support portal for all the products, with serial number of each component, sold through the bidder.
4. Make, model number, configuration of the quoted products should be listed in the technical bid.
5. Datasheet of all the quoted products should be included in the technical bid.
6. Detailed BOM/BOQ and Compliance statement for all the products should be included in the technical bid.

Eligibility Criteria:

1. The bidder should have experience in the IT Infrastructure services or similar business in India for a minimum period of 5 years. A proof should be attached.
2. A letter stating that the vendor is an authorized channel partner, reseller of the principal should be attached.
3. Manufacturer's Authorisation Form (MAF) for the quoted products should be included with the technical bid.
4. Details with contact information and telephone numbers for service support of the products should be provided. Escalation matrix with contact information and telephone numbers should also be provided.
5. The bidder must not be blacklisted by Central Government, State Government or any Organization in India. A certificate or undertaking to this effect must be submitted.
6. I) As per the Government of India, Ministry of Commerce and Industry and Department for Promotion of Industry and Internal Trade (Public Procurement Section) Order No. P-45021/2/2017-PP (BE-II) dated 04 June 2020
 - a) The Bidder shall produce a certificate whether he/she belong to "Class – I' and 'Class – II supplier' and Non – Local suppliers.
 - b) Class – I' and 'Class – II supplier' and Non – Local suppliers as classified under above mentioned Order are eligible to submit the offer. While finalising the quotation, the instructions given in the above order shall prevail.



- II) As per the Government of India, Ministry of Finance and Department of Expenditure, Public Procurement Division – Office Memorandum No. F.No.6/18/2019-PPD dated 23.07.2020, the Institute reserves the right by order in writing, impose restrictions, including prior registration and/or screening, on procurement from bidders from a country or countries, or a class of countries, on grounds of defence of India, or matters directly or indirectly related thereto including national security; no procurement shall be made in violation of such restrictions.

EVALUATION OF BIDS:

- The bids conforming to the eligibility criteria will be considered for further evaluation.
- The bids will be shortlisted on the basis of technical parameters, features, standards compliance of all materials and equipments used, etc.
- For Technical evaluation, bidders have to ensure the availability of appropriate expert, along with every type of documentation from their organization for interacting with the Institute

OTHER TERMS AND CONDITIONS:

The Institute is eligible to issue Central Excise Duty Exemption Certificate or Customs Duty Concession Certificate. The Institute is not eligible to issue State Goods and Service Tax/ Central Goods and Service Tax Concession Certificate.

The quotation shall be divided into two parts:

- I) The first part should be “Technical” Bid containing only detailed specifications for tendered **Supply, Installation, Testing and Commissioning of Live-Streaming hardware for Auditorium** The details include:
- a) Detailed literature including Data Sheets of quoted products
 - b) Supporting Documents as per the Eligibility Criteria.
 - c) The first part (Technical Bid) shall not contain any financial aspects of the offer. It shall contain only a cross reference to the second part (Financial Bid).
- II) The Second part (Financial Bid) shall contain detailed financial outlay with List of deliverables / Bill of materials / Bill of Quantities and services, unit price of items as in the technical bid (i.e., First Part).
2. The quotations should be complete in all respects and the details specified in this request should be adhered to and **submitted on or before 23.01.2023** and the Technical Bid will be opened on **24.01.2023 at 4:00 P.M.**
 3. Quotations should be valid for **180** days from the due date.
 4. EMD of **Rs. 50,000.00** should accompany the tender enclosed along with the technical bid (envelope). Payment should be by way of DD / Banker’s cheque only, drawn in favour of **“Raman Research Institute, Bengaluru”**. No other form of payment will be accepted. The Tenders without the EMD will be rejected.



5. The MSME Units/Enterprises claiming exemption of EMD should submit MSME UDYOG AADHAAR MEMORANDUM or registration certificate issued by District Industries Centre (DIC) / Khadi & Industries board (KVIB) / Coir board / National Small Industries Corporation (NSIC) / Directorate of Handicrafts and handlooms or any other body specified by Ministry of MSME. The memorandum / certificate submitted should be for the scheduled item of this tender and shall be valid as on due date /extended due date of the Tender. However, MSME Unit/Enterprises must submit a duly signed Bid Security Declaration in lieu of EMD as per the Form of Bid-Security Declaration.
6. EMD of successful tenderer will be returned / adjusted on satisfactory completion of order.
7. The refund of EMD for unsuccessful tenderers will be made through Cheque or Electronic mode within a month after expiration of the Bid Validity period or any extension to it.
8. The Financial Bids will be opened only for those technical bids found suitable and approved by our technical evaluation committee.
9. Unit price should be mentioned, which is inclusive of all applicable discounts. Taxes and other levies should be indicated separately.
10. The Institute reserves the right to modify the technical specification or the required quantity at any time but within one week before the due date and will be notified in the Institute website
11. **Security Deposit:** On award of the work, the bidder shall provide **3%** (Three percent) of the order value as Security Deposit in the form of a Bank Guarantee towards satisfactory performance. The PBG should be valid through-out the period of completion of work and the warranty period plus six months as claim period. The said Security Deposit shall be refunded to the vendor after satisfactory completion of the purchase order placed as well as warranty period as per the terms of Purchase Order. In case of failure to render the contracted service, either at the time of execution or during the warranty period or non-compliance of due performance of contract, the Security Deposit will be forfeited.
12. **Warranty:** The Charges for Five (5) years back-to-back Comprehensive on-site warranty, software support and firmware updates, access to the support portal for all the products, with serial number of each component supplied, with Next Business Day response time, including the Standard Warranty should be indicated.
13. **Test Certificates:** On completion of installation test certificates are to be provided by the Vendor, countersigned by the certified supervisor under whose direct supervision the installation was carried out.
14. The Institute reserves the right to reject any or all of the quotations received without assigning any reason. It also reserves the right to accept an offer other than the lowest.
15. The final order quantity can be lower or higher than that mentioned in the request.
16. The Institute reserves the right to postpone/extend the due date for submission of the quotation without assigning any reason.
17. All deliveries should be completed within the stipulated delivery time of the purchase order due date. While the Institute reserves the right not to accept delivery in part or full, beyond the due date of delivery, liquidated damages at 0.5% per every week of delay will be levied. Exceptions: Force Majeure.
18. Delivery of goods should be made at our stores located on campus near Mekhri Circle,



Bengaluru – 560 080, at suppliers cost and risk.

19. The Institute reserves the right to call potential suppliers for technical discussions and product demonstrations.
20. Any Technical clarification required towards submission of offer may please be mailed to purchase@rri.res.in
21. All disputes, arbitration, if any are subject to jurisdiction of courts in Bengaluru only.



CHECKLIST

SELF ATTESTED COPIES OF THE FOLLOWING DOCUMENTS SHOULD BE SUBMITTED ALONG WITH TECHNICAL BID, FAILING WHICH THE TENDERS ARE LIABLE TO BE REJECTED

SL. NO	CRITERIA / SPECIFICATION / CONDITION	YES / NO
1.	The bidder should have experience in the IT Infrastructure services or similar business in India for a minimum period of 5 years. A proof should be attached.	
2.	A letter stating that the vendor is an authorized channel partner, reseller of the principal should be attached.	
3.	Manufacturer's Authorisation Form (MAF) for the quoted products included with the technical bid.	
4.	Details with contact information and telephone numbers for service support of the products should be provided. Escalation matrix with contact information and telephone numbers provided.	
5.	The bidder must not be blacklisted by Central Government, State Government or any Organization in India. A certificate or undertaking to this effect submitted.	
6.	EMD of Rs. 50,000.00 should accompany the tender enclosed along with the technical bid (envelope). Payment should be by way of DD / Banker's cheque only, drawn in favour of " Raman Research Institute, Bengaluru ". No other form of payment will be accepted. The Tenders without the EMD amount will rejected.	
7.	Quotations valid for 180 days from the date of opening.	
8.	<p>(I) As per the Government of India, Ministry of Commerce and Industry and Department for Promotion of Industry and Internal Trade (Public Procurement Section) Order No. P-45021/2/2017-PP (BE-II) dated 04 June 2020</p> <p>a. The Bidder shall produce a certificate whether he/she belong to "Class – I' and 'Class – II supplier' and Non – Local suppliers.</p> <p>b. Class – I' and 'Class – II supplier' and Non – Local suppliers as classified under above mentioned Order are eligible to submit the offer. While finalising the quotation, the instructions given in the above order shall prevail.</p> <p>(II) As per the Government of India, Ministry of Finance and Department of Expenditure, Public Procurement Division – Office Memorandum No. F.No.6/18/2019-PPD dated 23.07.2020, the Institute reserves the right by order in writing, impose restrictions, including prior registration and/or screening, on procurement from bidders from a country or countries, or a class of countries, on grounds of defence of India, or matters directly or indirectly related thereto including national security; no procurement shall be made in violation of such restrictions</p>	



FORM OF BID-SECURITY DECLARATION

[The Bidder should fill in this Form on Letter Head in accordance with the instructions indicated]

To

The Administrative Officer (i/c)
Raman Research Institute
C.V. Raman Avenue, Sadashivanagar,
Bangalore – 560 080.

Ref: Tender document No. **NIT – PR – 221847 dated 02.01.2023**

We, the undersigned declare that:

We know that the bid should be supported by a Bid Security Declaration in accordance with your conditions.

We hereby declare that the prices offered by us against RRI Tender Document No **NIT – PR – 221847 dated 02.01.2023** for **Supply, Installation, Testing and Commissioning of Live-Streaming hardware for Auditorium** will be firm for a period of **180 days** or the date when the tenders are finalised, whichever is earlier.

We accept to automatically be suspended from being eligible for bidding in any contract in RRI for a period of 3 years from the date of opening of Bid. If we are in breach of our obligation(s) under the bid conditions, because we:

After having been notified of the acceptance of our bid by the Contracting Authority within the period of bid validity:

1) We failed or refused to furnish a Performance Security in accordance with the Condition of the Tender Document No. **NIT – PR – 221847 dated 02.01.2023**

OR

2) We failed or refused to sign the contract.

We know that this Bid – Security Declaration will expire, if contract is not awarded to us, upon:

1) Our receipt of your notification to us of the name of the successful bidder or

2) Twenty – eight days after the expiration of our Bid or any extension to it

Dated this _____ day of _____

For and on behalf of M/s. _____

Address:

Signature

Name

In the capacity of

