Under Technical Education Quality Improvement Programme
Phae-II of Government of India

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NATIONAL INSTITUTE OF TECHNOLOGY, TIRUCHIRAPPALLI-620 015

INVITATION FOR QUOTATION

TEQIP-II/2016/NITT/Shopping/283 **08-Dec-2016**

Sub: Invitation for Quotations for supply of Modernizing - Lecture Capture Software/Hardware and accessories.

Dear Sir,

1. You are invited to submit your most competitive quotation for the following goods with item wise detailed specifications given at Annexure I,

S. No	Brief Description	Quantity	Delivery Period (In days)	Place of Delivery	Installation Requirement (if any)
1	**Modernizing - Lecture Capture Software/Hardware and accessories**	1	20	National Institute of Technology, Tiruchirappalli	100% payment after delivery and successful installation at National Institute of Technology, Tiruchirappalli - 620 015.

2. Government of India has received a credit from the International Development Association (IDA) towards the cost of the **Technical Education Quality Improvement Programme [TEQIP]-Phase II** Project and intends to apply part of the proceeds of this credit to eligible payments under the contract for which this invitation for quotations is issued.
3. Quotation,
   - 3.1 The contract shall be for the full quantity as described above.
   - 3.2 Corrections, if any, shall be made by crossing out, initialing, dating and re writing.
   - 3.3 All duties and other levies payable by the supplier under the contract shall be included in the unit price.

3.4 Applicable taxes shall be quoted separately for all items.

3.5 The prices quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.

3.6 The Prices should be quoted in **Indian Rupees only**.

4. Each bidder shall submit only one quotation.
5. Quotation shall remain valid for a period not less than **45** days after the last date of quotation submission.
6. Evaluation of Quotations,

   The Purchaser will evaluate and compare the quotations determined to be substantially responsive i.e. which

   6.1 are **properly signed** ; and

   6.2 confirm to the terms and conditions, and specifications.

7. The Quotations would be evaluated for all items together.
8. Award of contract:

   The Purchaser will award the contract to the bidder whose quotation has been determined to be substantially responsive and who has offered the lowest evaluated quotation price.

   8.1 Notwithstanding the above, the Purchaser reserves the right to accept or reject any quotations and to cancel the bidding process and reject all quotations at any time prior to the award of contract.

   8.2 The bidder whose bid is accepted will be notified of the award of contract by the Purchaser prior to expiration of the quotation validity period. The terms of the accepted offer shall be incorporated in the purchase order.

9. Payment shall be made in Indian Rupees as follows:

   Delivery, installation & Satisfactory Acceptance – 100% of total cost

10. All supplied items are under warranty of **12** months from the date of successful acceptance of items.

11. You are requested to provide your offer latest by **3.00 p.m.** on **23-Dec-2016 .**

12. Detailed specifications of the items are at Annexure I.

13. Training Clause (if any) **One day onsite training and demo**

14. Testing/Installation Clause (if any) **100% payment after delivery and successful installation to be done as per the Institute requirements.**

15. Information brochures/ Product catalogue, if any must be accompanied with the quotation clearly indicating the model quoted for.

16. **Sealed quotation to be submitted at the following address:**

The TEQIP Office
Administrative Block
National Institute of Technology,
Tiruchirappalli – 620 015.

Attn: Dr.B.Venkataramani

17. The cover should be superscripted with "Quotation for **TEQIP–II/2016/NITT/283 - Modernizing - Lecture Capture Software/Hardware and accessories"**

Opening date: 23-Dec-2016 **Time: 3.30 p.m.**

18. We look forward to receiving your quotation and thank you for your interest in this project.

Note: The cover should be duly superscripted with the following details:
(1)Quotation Reference Number (2) Quotation for the supply of.....
(3)Date of Opening .....

Dr.S.R.Balasundaram
Associate Dean (R & C), NITT

Dr.B.Venkataramani
Convener – TLC, NITT

Annexure I

Lecture capture software/hardware and accessories

S. No	Item Name	Quantity
1	H/W based Lecture capture system	1 No
2	Full High Definition PTZ Camera with Ceiling Mounting Kit	1 No
3	Workstation for class rooms	1 No
4	Display System : LCD Projector with Ceiling Mounting Kit	1 No
5	Motorized Projector Screen	1 No
6	Ceramic White Board	1 No
7	Two Way Speakers	4 Nos
8	Wireless Handheld Microphone	1 No
9	Wireless Lapel Microphone	1 No
10	Wireless Microphone for Lecturer	1 No
11	Audio Mixer	1 No
12	Amplifier	1 No
13	UPS	1 No
14	Racks	1 No
15	16 port Switch	1 No

Equipment	Requirements
Lecture capture software/hardware and accessories	1. H/W based lecture capture (LC) software using software which runs on an embedded hardware at the class room 2. The bidder should have supplied all the items in the list to at least one organization in the last two year and the supplied items should be in working condition. 3. Bidder should give the details of the organization where it has been supplied earlier and give the contact details (phone no/email ids) of the persons with whom its performance status can be ascertained. 4. Manufacturing & Authorization form signed by the OEM should be enclosed for the parts quoted

TECHNICAL SPECIFICATIONS

1. H/W based Lecture capture system:

Equipment	Specification
H/W based LC to be deployed in class room	1. One box solution for capture, encode, record, archive and stream. 2. Raw Content captured directly from multiple Video / data sources formats (at least 5 inputs) selectable and swappable on the fly from a web based interface or from a control software application on a touch screen / tablet 3. Multiple layout templates of the video sources with Image / Text overlays available ready, selectable on the fly. 4. Recording with video/data inputs at up to 1080 P of streams into local Hard disk of Minimum 120Gb or more 5. Live streaming at up to 1080 p streams over unicast or multicast networks 6. Audio and video synchronization using Audio stereo Line in and external mic in ports. 7. Internal streaming server supporting live streaming through multiple platforms like Mac, Windows 8. Local viewing and monitoring using a HDMI and VGA port out. 9. Auto scheduling for automation of Streaming and Recording using a Google calendar or a calendar or from the central Streaming server. 10. Auto-upload simultaneously up to two destinations including CMS / Streaming server / external USB drive or any FTP server. Can also upload manually to you tube and other streaming servers. 11. Search and sorting options in archives from end user interface. 12. Playback of video content from SDP file or VLC/ Quicktime player. 13. User rights authorization, TLS/SSL and HTTPS Support, Web based control, mail notification and automatic backup and file management for security and management 14. Network connectivity - One port of 10/100 Mbps and 2 or more USB ports.

2. Full High Definition PTZ Camera:

S. No	Parameter	Specification
1	Camera Sensor	1/2.8" High quality HD CMOS
2	Effective Pixel	16: 9 2 Megapixel
3	Video Format	1080P60/50/30/25, 720P60/50/30/25
4	Optical Zoom	12X optical zoom
5	View Angle	6.3°（tele）--72.5°（wide）
6	Digital Zoom	10×
7	White Balance	Auto / Manual/ One Push/ 3000K/ 4000K
8	Focus	Auto/Manual
9	Aperture	Auto/Manual
10	Preset Number	Minimum 100 presets
11	Pan Rotation	±170°
12	Tilt Rotation	-30° ~ +90°
13	Control and Remote Management	LAN, RS 232, IR Remote Control
14	Interfaces	DVI/HDMI, USB 3.0 Simultaneous output on both Interfaces

3. Workstation for class rooms:

S. No	Parameter	Specification
1	Processor	Intel Core I7 Processor
2	Chipset	Intel Chipset board
3	RAM	8 GB DDR4-2133 SDRAM
4	Hard disk	500Gb SATA 7200 RPM hard disk
5	HDD Type	Slim SATA SuperMulti DVD-RW
6	Graphics	Integrated Intel® HD Graphics
7	Monitor	Minimum 18 inches
8	OS	Windows 10

4. Display System: LCD Projector with Ceiling Mounting Kit :

S. No	Parameter	Specification
1	Projection System	3LCD Technology, RGB liquid crystal shutter
2	Colour Light Output	5,000lm
3	White Light Output	5,000lm
4	Resolution	WXGA
5	Aspect Ratio	Aspect Ratio: 16:10
6	Contrast Ratio	3,000 : 1
7	Lamp	Life (Normal/Eco) 2,500 hours / 4,000 hours
8	Keystone Correction	± 30° / ± 30° Zoom: Tele
9	Interfaces	Composite in, VGA out, VGA in (2x), Stereo mini jack audio in (2x), Stereo mini jack audio out, RGB out, HDMI in, USB 2.0 Type A, USB 2.0 Type B
10	Focal Distance	18 mm - 29 mm
11	Features	AV Mute Slide, Automatic input selection, Automatic keystone correction, Direct Power on/off, Document Camera Compatible, Instant on/off, JPEG Viewer, Network administration.

5. Motorized Projector Screen:

S. No	Parameter	Specification
1	Size and Aspect Ratio	90" Diagonal Viewing Size (76.0"W x 47.5"H), 16:10 Aspect Ratio
2	Screen Material	MaxWhite 1.1 Gain Screen Material is durable and easy to clean.160 degree wide viewing angle for commercial and residential presentations. Black backed screen material eliminates light penetration for superior color reproduction. Black masking enhances picture contrast.
3	Casing & Installation	Durable metal casing - White, Suitable for wall/ceiling installations, Ships fully assembled with 3-prong power connection ready to Plug & Play
4	Control System	Infrared remote and wall switch, Internal IR/RF low voltage receivers, 3 way wall switch, 5-12 volt trigger synchronizes with projector, In-Wall up/down switch and 5-12V controls available

6. Ceramic White Board:

S. No	Parameter	Specification
1	Size	8 x 4 Size with Wall Mountable white magnetic Ceramic board
2	Material Type	Shall be made of green Framed in double sided curved anodized aluminum section and Chromium plated plastic corners with good aesthetics Chromium plated metal
3	Surface Type	The surface should be scratch, chemical and stain resistant
4	Features	For both Writing and Projection

7. Two Way Speakers:

S. No	Parameter	Specification
1	Enclosure	2-way bass reflex type
2	Rated Input	30 w
3	Impedance	8Ω 100V line; 330Ω (30W), 500Ω (20W), 670Ω (15W), 1kΩ (10W), 2kΩ (5W) 70V line; 170Ω (30W), 250Ω (20W), 330Ω (15W), 500Ω (10W), 1kΩ (5W)
4	Sensitivity	90dB (1W/1m, in anechoic chamber)
5	Frequency Response	80 – 20,000Hz
6	Speaker Components	12 cm dynamic cone-type speaker 2.5cm balanced dome tweeter
7	Operating Temperature	–10°C to +50°C
8	Water Resistance	IP-X4

8. Wireless Handheld Microphone:

S. No	Parameter	Specification
Wireless Handheld microphone		
1	Frequency Range	UHF band 506.000 - 865.000 MHz
2	Number of Channels	16 total
3	Modulation Mode	FM
4	Normal Deviation	±40 kHz
5	Operating Range	100 m typical
6	Frequency Response	65 Hz to 15 kHz
Receiver Specification		
7	Receiving System	True diversity Receiver (UHF)
8	Signal-to-noise Ratio	>110 dB
9	Total Harmonic Distortion	<=0.5% (at 1 kHz)
10	Sensitivity	2 µV
11	Output Level	1.2 v
12	Output Connectors	AF output, 3-pin XLR, balanced

		AF output, 1/4" jack (6.35 mm), unbalanced
Transmitter Specification		
13	Radiated Tx Power	10 mW
14	Transducer type	Dynamic
15	Polar Pattern	Super cardioids
16	Batteries	Two 1.5V AA alkaline
17	OEM Authorization	OEM Authorization Letter mandatory specific to this enquiry

9. Wireless Lapel Microphone:

S. No	Parameter	Specification
Microphone Specification		
1	Frequency Range	UHF band 506.000 - 865.000 MHz
2	Number of Channels	16 total
3	Modulation Mode	FM
4	Normal Deviation	±40 kHz
5	Frequency Response	20 Hz to 20 kHz
Receiver Specification		
6	Receiving System	True diversity Receiver (UHF)
7	Signal-to-noise Ratio	>110 dB
8	Total Harmonic Distortion	<=0.5% (at 1 kHz)
9	Sensitivity	2 µV
10	Output Level	1.2 v
11	Output Connectors	AF output, 3-pin XLR, balanced AF output, 1/4" jack (6.35 mm), unbalanced
Body Pack Transmitter Specification		
12	Radiated Tx Power	20 mW
13	Transducer type	Condenser
14	Polar Pattern	Omni Directional
15	Batteries	Two 1.5V AA alkaline (not included)

10. Wireless Microphone for Lecturer:

S. No	Parameter	Specification
Microphone Specification		
1	Operating range	The microphone should be light weight wearable over neck with range of pick up Min 50 ft.
2	Wireless Frequency	1.9GHz or higher

3	Audio Frequency Response	100 Hz ~ 10K Hz
4	Battery	Wireless Rechargeable Microphone & adaptor should provide Up to 8 hours talk time for classroom application. Power supply should be included.
5	Control Button	Mic: Power / Paring/Volume UP & Down
Receiver Specification		
6	Indication	LED indicators, Pairing Push Buttons.
7	Receiver Audio	Noise Reduction
8	Receiver I / O	line Out & Micro USB
9	Mic I / O	High Sensitive Microphone & Mic input
10	Receiver Audio	Noise Reduction
11	Power	Power supply to be included

11. Audio Mixer:

S. No	Parameter	Specification
	Mono Input	
1	Microphone input Type	XLR, electronically balanced, discrete input circuit
2	Frequency Response	-10 HZ – 200 KHz (-1db)
3	Gain range	+10 to +60 db
4	Impedance	Approx. 2.6 kohm balanced
5	Distortion (THD+N)	0.005% /0.003% A- weighted
6	Line Input type	¼” TRS connector, electronically balanced
7	Impedance	Approx. 20 kohm balanced, 10Kohm unbalanced
8	Gain range	+10 to +40 db
9	Stereo input type	¼” TRS connector, electronically balanced
10	Impedance	Approx. 20 kohm balanced, 10Kohm unbalanced
11	Max input level	+22 dBU
12	Audio output FX send type	¼” TRS connector, unbalanced
13	Impedance	Approx 120 ohm
14	Max input level	+22 dBU
15	Main output type	¼” TRS connector, unbalanced
16	Impedance	Approx 120 ohm
17	Max input level	+22 dBU
18	Number of Channel	8-ch Analog Mixer

12. Amplifier :

S. No	Parameter	Specification
1	Rated Output	240 w
2	Power consumption	238 w, 520 w (AC operation at rated output)
3	Frequency Response	50-20000 HZ (±3 dB)
4	Distortion	1% or less at 1 kHz, 1/3 rated power
5	Phantom Power	DC +21 V (MIC 1)
6	Input	MIC 1: -60 dB, 600 ohms, balanced, DIN type (5 pins) MIC 2, 3: -60 dB, 600 ohms, balanced, phone jack AUX 1, 2: -20 dB, 10k ohms, unbalanced, RCA pin jack Mute: Contact pin 4 - 5 closure input
7	Output	Speaker out: Balanced (floating), M3.5 screw terminal distance between barriers: 8.3 mm (0.33") High impedance: 83 ohms (100 V), 42 ohms (70 V) Low impedance: 4 ohms (22 V) Rec out: 0 dB, 600 ohms, unbalanced, RCA pin jack
8	S/N Ratio	60 dB or more
9	Tone Control	Bass: ±10 dB at 100 Hz Treble: ±10 dB at 10 kHz

13. UPS :

S. No	Parameter	NITT Specification
1	Input Specifications	
a	Nominal Input Voltage	230 V
b	Input Frequency	40-70 Hz
c	Input Voltage	100-280V
d	Input Power Factor	$\geq$0.99
2	Output Specifications	
a	Output Power Capacity	2400 W / 3000 VA
b	Nominal Output Voltage	230 V
e	Waveform	Pure Sine wave
a	Supported Battery Types	SMF / Flooded
b	Battery Bank Voltage	192 V
c	Charger Power / Current	1500 W / 6.5 A max (selectable)

14. Racks:

Wall mounted, perforated, covered, metal racks with lock adequate to house the audio and networking Equipments

15. 16 Port Switch:

S. No	Parameter	NITT Specification
1	Num of Ports Available	16 - 10/100/1000 Ethernet
2	IEEE 802.1p QoS	Yes
3	IEEE 802.3x Flow Control	Yes
4	Standards	IEEE 802.3 10BASE-T Ethernet IEEE 802.3u 100BASE-TX Fast Ethernet, 802.3ab Gigabit Ethernet 802.3x Flow Control
5	Switch Fabric	32Gbps Forwarding Capacity
6	Data Transfer Rates	Ethernet: 10Mbps (half-duplex) 20Mbps (full-duplex) Fast Ethernet: 100Mbps (half-duplex) 200Mbps (full-duplex)
7	Transmission Method	Store-and-forward
8	Filtering Address Table	8K entries per device
9	Packet Buffer Memory	340Kbytes Buffer Memory per Device
10	RAM Buffer	512 KB per device
11	Other Features	1. Full/half duplex support for each port 2. RAM buffer dynamically allocated for each port 3. Flow control in full duplex mode for protection against data loss.

FORMAT FOR QUOTATION SUBMISSION

(In letterhead of the supplier with seal)

Date: _____

To:

_____

_____

S. No.	Description of goods (with full Specifications)	Qty.	Unit	Quoted Unit rate in Rs. (Including Ex Factory price, excise duty, packing and forwarding, transportation, insurance, other local costs incidental to delivery and warranty/ guaranty commitments)	Total Price (A)	Sales tax and other taxes payable	
						In %	In figures (B)
Total Cost							

Gross Total Cost (A+B): Rs. _____

We agree to supply the above goods in accordance with the technical specifications for a total contract price of Rs. _____ (Amount in figures) (Rupees _____amount in words) within the period specified in the Invitation for Quotations.

We confirm that the normal commercial warranty/ guarantee of _____ months shall apply to the offered items and we also confirm to agree with terms and conditions as mentioned in the Invitation Letter.

We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in bribery.

Signature of Supplier

Name: _____

Address: _____

Contact No: _____