

TENDER NOTICE

Krishna Kanta Handiqui State Open University (KKHSOU), Guwahati
invites sealed Tender for

Supply, installation, testing and commissioning of Multimedia Studio

Tender enquiry No. KKHSOU/Multimedia/58/2010/248, Dated: 01-01-2025

Krishna Kanta Handiqui State Open University
H.O. Patgaon Rani Gate, Guwahati-781017
City Office: Resham Nagar, Khanapara, Guwahati-781022
Tel. 0361-2235971 Email. info@kkhsou.in

Krishna Kanta Handiqui State Open University

TENDER NOTICE

T. N. NO. KKHSOU/Multimedia/58/2010/248

Sr.No.	DETAILS	DATES / AMOUNT	
1.	Tender Publication	01-01-2025	
2.	Last date for Submission of Bid	29-01-2025 up to 04.30 PM	
3.	Opening of Bids	03-02-2025 at 2.30 PM	
4.	Tender Processing fee and EMD	Tender Cost	EMD
		Rs. 1000/-	Rs. 50000/-
6.	Validity	Bids shall remain valid for 180 days from the date of Tender opening.	
7.	Address for Communication and contact details	Registrar Krishna Kanta Handiqui State Open University Resham Nagar, Khanapara, Guwahati-22, Assam	

Sd/-
Registrar
Krishna Kanta Handiqui State
Open University
Guwahati

1. Introduction:

Krishna Kanta Handiqui State Open University a premier institution in the field of distance education in the state of Assam was established by the Government of Assam vide Krishna Kanta Handiqui State Open University, Act, 2005. The Head Office of the University is situated at Patgaon Rani, Guwahati-781017 and City Office at NH 37, Resham Nagar, Guwahati 781022. The university has more than 300 study centers spread out in the state of Assam. The university provides access of higher education to all segments of population, particularly the disadvantage groups i.e. those living in remote and rural areas and also includes working people, housewives, adults who wish to upgrade or acquire degree, diploma, certificate and degree of post-graduate level confers by the university.

2. Requirement:

- (A) Krishna Kanta Handiqui State Open University invites sealed Tenders for **Supply, Installation, Testing and Commissioning (SITC)** of Multimedia Studio along with a production Control Room as detailed out in the Scope of Work, from eligible, qualified firms with sound technical and financial capabilities based on the eligibility criteria and terms and conditions mentioned in the tender documents. All Installation Materials to complete the studio setup including Air-conditioning, Acoustic work, Electrifications along with cable, connectors etc. to be done by the firm (suppliers) as mentioned in the tender document. The invitation is open to all bidders meeting the minimum eligibility criteria as mentioned in the tender document and specific criteria and conditions given in the tender documents.
- (B) The tender is for turn-key comprehensive and optimum solution i.e. supply, installation, testing, commissioning, design, development of Multimedia Studio along with a production Control Room and training of all the equipment and services provided including Twelve months of warranty from the date of installation and commissioning.
- (C) Bidders' queries: Any clarification regarding the tender document and any other item related to this project can be submitted to KKHSOU in the email director.empc@kkhsou.in before the last date of the tender. Further, KKHSOU shall reserve the right to issue responses / clarifications/ corrigendum within the tender period, if required. The pre-bid queries should be submitted in the format as mentioned below, along with name and details of the Bidder submitting the queries.

#	Page No.	Section (Name & No.)	Statement as per Tender	Queries by Bidder	Justification for any Queries (If any)
1					
2					
3					

(D) Responses to Pre-Bid Queries and Issue of Corrigendum:

KKHSOU may organize a pre-Bid Conference, if required, and may respond to any request for clarifications on and/or modifications of this tender. Only persons, duly authorized by the Bidder, will be allowed to participate in the pre-bid meeting, if happens. The authorized representatives should carry a valid proof of identification for verification before the commencement of the pre-Bid Conference. Also, no separate conferences will be conducted for any organization which has shown interest for participation for the tender at date later than the dates when pre-bid meeting has already concluded. The KKHSOU will endeavor to provide timely response to all the queries. However, KKHSOU makes no representation or warranty as to the completeness or accuracy of any response made in good faith, nor does it undertake to answer all the queries that have been posed by the Bidders. Any modifications of this TENDER, which may be necessary as a result of the pre-Bid Conference or for any other reason, shall be made available by KKHSOU exclusively through a corrigendum. Any such corrigendum shall be deemed to be incorporated into this TENDER. However, in case of any such amendment of the TENDER, the Bid submission date may be extended by KKHSOU in the sole discretion of KKHSOU.

All clarifications and any other corrigendum/notification issued by KKHSOU subsequent to the issuance of this TENDER, shall be mailed to only those vendors who have downloaded the TENDER, through the email ids specified by the vendors while submitting the bid electronically.

3. Minimum Eligibility Criteria:

- i) Bidders have experience of at least 5 years of similar nature of works towards supplies and installation of Multimedia Studio Setups in State Government/Central Government/ PSU/ State or Central Universities/ Educational Institutions/Autonomous body/ reputed media houses. Documentary evident must be provided.
- ii) The firm must have secured at least one single supply order for similar nature of work from a State / Central Government /Universities/Educational Institutions/Autonomous body / reputed media house with a value not less than 2 Crores (Value of the order/ invoice /completion certificate solely comprising of multimedia studio implementation work only) in the last three Financial Years. Copy of Completion Certificate and Satisfactory report from Client of similar nature of work, duly attested by the bidder should be enclosed along with the Technical Bid.
- iii) Bidders shall bid for Supply, Installation, Testing, Commissioning & Training on Turnkey basis for the required Multimedia Studio & Post Production Setup including Acoustics, Lights, UPS, Electrical Works, Furniture & Aesthetics customized to available site conditions provided by KKHSOU. OEM of the offered equipment should be internationally reputed Branded Company and should be in this manufacturing business for minimum 10 years continuously.
- iv) The bidder should have average annual financial turnover of at least 5 Crores during the preceding last 3 consecutive financial years. Copies of the audited balance sheet

of the vendor/bidder for the last three financial years, details of Permanent Account Number and ITR (Income Tax Return) for last 3 financial years must be attached by the Bidder.

- v) The bidder will have to submit the turnover of the OEM of the concerned company which brand a quote in the tender. The average annual turnover of last three years shall be at least 50 Crores.
- vi) The bidder should be a single Company. No consortium is allowed.

4. Submission of Tender

The tender should be submitted under **Two bid system**, i.e. Technical Bid and Financial Bid. Both the 'Technical Bid' & 'Financial Bid' should be kept in two separate sealed envelopes and both these envelopes should be put again in a single sealed envelope super-scribed "Tender for Supply, installation and commissioning of Multimedia Studio addressed to Registrar, KKHSOU and it should be submitted to the office of the Registrar, KKHSOU.

a) Technical Bid

The Technical Bid shall contain the following documents:

- i) Documents Establishing Bidder's Eligibility as per **Annexure-II**.
- ii) EMD and Tender fee.
- iii) The compliance statement of technical specifications as per **Annexure- IV**.

b) Financial Bid:

The Financial Bid shall contain the following:

- i) Bidders shall strictly submit Financial Bid form as per **Annexure – III**
- ii) GST/Other Govt. Taxes: GST, other taxes, levies, etc., are to be indicated separately.
- iii) The price quoted by the bidder shall include one year warrant of entire system.

4.1 Earnest Money Deposit

- a) Bidders are required to deposit EMD amount in the form of Demand Draft / Pay Order drawn in favor of 'Registrar, Krishna Kanta Handiqui State Open University payable at Guwahati only. **The D.D. / Pay Order Receipt/BG** must be attached along with the Technical Bid, failing which their bids will not be considered valid. Offers, submitted without EMD, will be rejected. EMD of the unsuccessful Bidders will be returned after the finalization of the contract. EMD of the successful Bidders will be returned on executing the Contract and furnishing the Security Deposit.
- b) **Tender Fees:**

Non refundable fee of Rs.1000/- is to be paid in the form demand draft with technical bid.

5. Terms and Conditions of Tender

5.1 Submission of Bids

Bids shall be submitted on or before **29-01-2025** up to **04.30 PM**. Registrar, KKHSOU may, at his discretion, extend this deadline for submission of offers by amending the Tender Documents and same will be notified on website only.

5.2 Opening of Bids

The bids will be opened in the presence of representatives of bidders on **03-02-2025** at **2.30 PM**.

6.(a) Technical Evaluation

- i) Bidder not satisfying the eligibility criteria shall be rejected and no further evaluation of such bids will be done.
- ii) KKHSOU reserves the right **to waive any minor infirmity** or irregularity in a bid, if it is in the interest of the organization. The decision of KKHSOU in this regards shall be **final and binding** on all Bidders.
- iv) KKHSOU reserves the right to accept or reject any tender offer and to annul the tendering process and reject all tenders at any time prior to award of contract, without thereby incurring any liability towards the affected Bidder(s) or any obligation to inform the affected Bidder(s) of the grounds for the KKHSOU's action.
- v) KKHSOU at its discretion may visit the sites where the Agency presently has a contract/performed the work and obtain feedback. KKHSOU will have full liberty to reject any bid based on the feedback and Agency will have no claim, whatsoever, in this process. Agency will extend to KKHSOU all such co-operation as may be required for the site visit.
- vi) The technically qualified bidders will be considered for financial bid evaluation.

6.(b) Financial Bid Evaluation (FBE)

- i) Financial Bids of only the technically qualified bidders will be considered.
- ii) Financial bid if submitted along with the technical bid will be rejected.
- iii) If there is a discrepancy between words & figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (i) and (ii) above.
- iv) Where the price quoted on FOB/FCA and CIF/CIP basis are the same, the contract would be made on CIF/CIP basis only.

7. Award of contract:

- i) Selected bidder will be issued a letter of intent. Security deposit @10% of order value shall be deposited in the form of bank guarantee as per the format of **ANNEXURE-I** or Fixed deposit receipt within ten days. In case the selected

bidder does not respond or is unable to complete formalities the EMD will be forfeited.

- ii) Upon receipt of security deposit the work order will be released and the contractor must complete contract formalities within fifteen days.
- iii) The selected bidder should have entered an agreement.
- iv) In case, the Contractor fails to comply with any statutory/taxation liability under appropriate law and as a result thereof the KKHSOU is put to any loss/obligation, monetary or otherwise, the KKHSOU will be entitled to get itself reimbursed out of the outstanding bills/performance security to the extent of the loss or obligation in monetary terms.

8. Terms of Payment:

- (a) Payment will be made within 30 (thirty) days on submission of bill after successful Installation & commissioning and final acceptance of the system by the purchaser.
- (b) All payments to agency shall be made subject to deduction of TDS (Tax deduction at Source) as per the Income Tax Act, 1961 and other taxes if any as per Government of India rules.

9. Liquidated Damages (L.D):

- (a) If a firm fail to execute the order in time as per the terms and conditions stipulated therein, it will be open to this Institute to recover liquidated damages for delay in delivery and Installation from the firm at the rate 0.5% of the value of the stores per week subject to a maximum of 10% of the total order value. The L.D charges can be increased in case of gross violation of the Purchase Order terms as decided by the Vice Chancellor of the University.
- (b) It will also be open to this University alternatively, to arrange procurement of the required stores from any other source at the risk and expense of the firm, which accepted the order but failed to execute the order according to stipulated agreed upon.

10. Uptime Guarantee:

The bidder shall provide 95% uptime guarantee during the warranty period as well as during the service contract period. The system will be maintained in good working condition for a period of 300days out of a period of 365 days. The guaranteed uptime shall be calculated for each block of 365 days. The bidder will pay a penalty for every day of downtime beyond applicable 5% @ 0.1% per day of the total invoice value.

11. General Terms and Conditions:

- i) Any new taxes and duties liable on the subject contract due to change in legislation during the contract period shall be reimbursed subject to the applicability of the said

Act to the satisfaction of the buyer and the production of documentary evidence after availing of statutory concession, benefits etc.

- ii) The supplier shall pay and bear all other liabilities, taxes and duties not specifically agreed by the Buyer in the contract.
- iii) **The bids submitted without Tender Fee will be summarily rejected** and no further communications in this regard will be entertained. The university reserves the right to cancel/reject any or all bids without assigning any reason thereof.
- iv) The bidder must enclose a certificate that the Organization has not been black listed by any institution of the Central/ State / PSU/ University/ Institute etc. in the past five years.
- v) Bidder will have to provide training to concerned staff of KKHSOU free of cost for minimum two weeks about complete wiring, connections, operations and understanding of equipment. Bidder should ensure for recording sessions at KKHSOU by their team for two weeks and make sure KKHSOU staff become capable of shoot and recording using the supplied equipment.
- vi) Bidder should provide on-site service and support within 24 hours after logging the case.
- vii) Those Tenderers, who are not the manufacturer but are authorized by the original manufacturer to supply the goods, should establish their credentials by giving valid documentary evidences, Tender Specific OEM Authorization letter (where applicable), table of compliance by OEM for technical specifications of major products, table of compliance for General Terms & Conditions by bidder, unpriced bill of material, equipment specification sheets, etc. relevant for evaluating the technical bid, declaration, Other documents, if any, etc. as per formats provided and where ever applicable.
- viii) OEM Authorization Letters along with Table of Compliance for Technical Parameters, Duly Signed and Stamped by OEM for following major equipment have to be provided;
 - o Camera System
 - o Tripod
 - o Video Production Switchers
 - o Audio Mixer
 - o Microphones, Audio Monitor, Headphones, Intercom system
 - o Professional Video Monitor
 - o Video Recording Application
 - o Audio & Video Processing Converters
 - o Online Graphics Application
 - o Graphics and Post Production Software
 - o Centralized Storage System
 - o Network Switch
 - o Studio Light Systems

- o Online UPS System
 - o Professional Camcorder and Photography Camera System
-
- ix) Bids without above Authorization Letters & Table of Compliance for Technical Parameters from OEM will be Summarily Rejected.
 - x) Ink signed and stamped Table of Compliance for Technical Specifications of all equipment other than Major Equipment (as specified above), shall be provided by the bidder along with Technical Bid.
 - xi) Before the deadline for submission of the bid, the Institute reserves the right to modify the bidding document and to extend or not to extend the date of submission. Such amendment/modification will be notified to bidders receiving the bidding document in writing or by cable/fax/ email and will also be hosted on the Institute website.
 - xii) Conditional Tenders will be summarily rejected.
 - xiii) A bidder may withdraw, substitute, or modify its bid after it has been submitted by sending a written notice signed by the authorized signatory before the date of submission of the bid. Any re-submission or modification in the bid should be submitted before the date & time of submission of bid as originally conveyed in the invitation of bid.
 - xiv) No bid may be withdrawn, substituted or modified in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Bid Form or any extension thereof.
 - xv) Tender should be submitted in the Tender Box in the office of the Registrar. No tender is to be handed over to our staff personally unless otherwise specified. All communications are to be addressed to the undersigned only. In case due date happens to be holiday the tender will be accepted and opened on the next working day.
 - xvi) **Price quoted should be in Indian Currency, free delivery at University Campus at site (for Indigenous products only)**
 - xvii) **Quantity:** The quantity shown in the tender can be increased or decreased to any extent depending upon the actual requirement.
 - xviii) **Other Govt. Taxes:** GST, Other Govt. Taxes, levies, etc., are to be indicated separately. BIDDER should mention the GST Registration. PAN Number is to be necessarily indicated in the offer.
 - xix) **Delivery:** The successful BIDDER should deliver the material as per tender document/purchase order. The successful bidder should emboss stickers of Purchase Order number on the material. The BIDDER shall indicate the best and shortest possible delivery period for the supply of the complete machines/equipment from the date of placement of order. A bar chart indicating various activities from the placement of order to commissioning of the machine shall be furnished.

- xx) Indian Agent should submit the certificate from the Foreign Principal that they are the Authorized & Registered Indian Agent. Otherwise submit dealership certificate of the offered product.
- xxi) Optional items, if any, should be quoted in separate sheet otherwise your quote will be rejected.
- xxii) The University reserves the right at the time of contract award to increase or decrease the quantity of goods and services originally specified in the tender document without any change in unit price or other terms and conditions. Further, at the discretion of the University, the quantities in the contract may be enhanced by 30% within the delivery period.
- xxiii) The equipment shall be insured by the supplier to be covered upto the premises of the University.
- xxiv) **VALIDITY OF THE OFFER:** *180 Days* from the date of submission of offer.

11. Force Majeure

- (i) Force majeure clause shall mean and be limited to the following in the execution of the contract/purchase orders placed by KKHSOU
 - (a) War/Hostilities
 - (b) Riot or Civil commotion
 - (c) Earthquake, flood, tempest, lightning or other natural physical disaster
 - (d) Restriction imposed by the Government or other statutory bodies, which is beyond the control of the agencies, which prevent or delay the execution of the order by the agency.

ANNEXURE - I

FORM OF PERFORMANCE SECURITY - BANK GUARANTEE BOND (BG)

In consideration of the Registrar, KKHSOU, I having agreed under the terms and conditions of Letter of intents / Agreement No. Dated..... made between..... And.....(hereinafter called “ the said Contractors}⁶¹) for the work — (hereinafter called “ the said Letter of Intent / Agreement”) having agreed to production of a irrevocable bank Guarantee for Rs..... (Rupees ----- only), as a security / guarantee from the contractors) for compliance of his obligations In accordance with the terms and conditions in the said agreement, we(Indicate the name of the Bank) (hereinafter referred to as “the Bank”) hereby undertake to pay to the KKHSOU an amount not exceeding Rs. (Rs..... only) on demand by the KKHSOU

2. We (indicate the name of Bank) do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the KKHSOU stating that the amount claimed is required to meet the recoveries due or likely to be due from the said Contractors). Any such demand made on the bank shaft be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs.....(Rupees.....only).

3. We, the said bank, further undertake to pay to the KKHSOU any money so demanded notwithstanding any dispute or disputes raised by the Contractor(s) in any suit or proceeding pending before any Court or Tribunal relating hereto. our (lability under this present being absolute and unequivocal.

4......The payment so made by us under this bond shall be a valid discharge of our liability for payment thereunder and the Contractors shall have no claim against us for making such payment.

5......We (Indicate the name of Bank) further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that It shall continue to be enforceable till all the dues of the BCCI under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till Engineer-in-charge on behalf of the BCCI certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said Contractors) and accordingly discharges this guarantee.

6. We.... (indicate the name of Bank) further agree with that the KKHSOU shall have the fullest liberty without our consent and without affecting In any manner our obligations hereunder to vary any of the terms and conditions of the said Agreement ^r to extend time of performance by the said Contractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Registrar, KKHSOU against the said Contractors) and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Contractor(s) or for any forbearance, act of omission on the part of the KKHSOU or any Indulgence by the KKHSOU to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

7. This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractors).

8. We, (Indicate the name of Bank) lastly undertake not to revoke this guarantee except with the previous consent of the KKHSOU in writing.

9. This guarantee shall be valid up tounless extended on demand. Notwithstanding anything mentioned above, our liability against this guarantee is restricted to Rs. (Rupees..... only) and unless a claim in writing is lodged with us within six months of the date of expiry or the extended date of expiry of this guarantee, all our liabilities under this guarantee shall stand discharged.

Signed and sealed

Dated the _____ day of..... for.....(indicate the name of Bank)

ANNEXURE-II

Sr. No	<u>Important List of Documents supporting Eligibility Criteria:-</u>	Yes	No
1	Attested copy of Certificates of Incorporation issued by the respective registrar of Companies/.		
2	Attested Copy of Pan,GST Registration,		
3	Shop and Establishment Certificates/Certificate of Incorporation up to date.		
4	Attested Copy of Income Tax Returned for last three years		
5	Attested copy of bidder annual turnover certificate and OEM annual turnover certificate		
6	Attested copy of OEM Authorization letters		
7	Attested copies of experience certificates for completed or ongoing work/services issues by the concerned authority. The bidder has to submit the relevant work experience certificates as mentioned in the Eligibility Criteria.		
8	Attested copy of the Audit Report and Audited Balance Sheet for the completed three financial years		
9	An undertaking (self certificate) on a stamp paper that the bidder hasn't been blacklisted by a central/any state Government institution and there has been no litigation with any Government department on account of similar services		
10	EMD and Tender Fee		

For the bids to be considered, the Bidders are requested to furnish documents as per the above mentioned Annexures for each of the above clauses. The tender bid must be submitted containing an index of page numbers where the above information is furnished.

ANNEXURE-III

: Price Bid :

Sl. No.	Description	Qty	Offered Price (in Rs.)
1	HD STUDIO CAMERA SYSTEM		
1.01	4K PTZ Camera System: 1/2.5" Exmore R CMOS Sensor, 4K @60fps HDMI, IP, 3G-SDI-HDMI, IP Video, inbuilt AI & Tracking, 30x 4K & 40x HD Clear Image Zoom, PoE+, 70° Angle of View	3	
1.02	IP Remote Control Panel: PTZ Camera Remote Control System	1	
1.03	Tripod System with Dolly System: Professional Tripod with 75mm Ball , 4x4 Geared head , Counter Balance : 8 , Payload : 12KG , with Ground Spreader , Bubble with light , Head with Sliding Plate	3	
2	VIDEO & AUDIO SWITCHER SYSTEM		
2.01	Production Video Switcher: 1 M/E Live Production Video Switcher, 1080p@60fps, input 6 x SDI, 3 x HDMI, DVE, Outputs: 5 x SDI, 1 x HDMI, Control Surface, 1 x Full ME with 5 Keys, 2 x MiniME, Multiviewer, Frame Sync, Ultra Chrome Keyer, Integrated Control Surface, PTZ camera control, 10bit, 4 x Media Stores, redundant PSU	1	
2.02	Audio Mixer: 22-channel, 16 Mic Inputs, mic Pre-amp, EQ, 5 AUX Sends, USB port	1	
2.03	Audio Monitor: 5-inch 70W, 2-Way, Powered Studio XLR Monitor/Speakers	3	
2.04	Lavalier Microphone: Subminiature Pre-polarized Condenser Omnidirectional Lavalier Microphone with XLR Connector & Accessory Set	5	
2.05	Wireless Microphone: Wireless pre-polarized condense or Cardioid Lavalier Microphone System, Range: up to 100 meters, 120db SPL, UHF-upto 42MHz 1680 Frq	3	
2.06	Handhold Vocal Microphone: Dynamic Cardioid Mic with On/Off Switch, 80 Hz to 15 kHz Frq,	2	
2.07	Anchor Ear Piece: Ear set Kit for Telex IFB and Assisted Listening	3	
2.08	Professional Headphone: Professional Audio Wired Over Ear Headphones, 20 Hz to 20 kHz Frq	4	
2.09	Intercom System with Tally: 8way Talkback system (4 x Belt pack with tally lights, 1 x base Unit, 4 x 50m Communication Cable	1	
3	VIDEO MONITORING SYSTEMS		
3.01	PCR Multi viewer Monitor: 55" 4k-3,840 x 2,160 Commercial Television, HDR, HLG, USB, Ethernet, HDMI, Wifi5, Multi View, Viewing Angle (H/V) 178/178, 2 x 20W Audio out	1	
3.02	Studio Reference Talent Monitor with Floor stand: 32" Full HD Commercial Television, 400 nits, Contrast Ratio 5000:1, Response Time 8ms, Operation Hours 24/7, HDMI2.0, HDCP2.2, Speaker 2 x 10 W	2	
3.03	3G-SDI & HDMI Broadcast Monitor: 24" Full HD 8 Bit Professional Broadcast Monitor, 2 x 2k/3G/HD/SD-SDI in and Loop out, 3.5mm stereo audio out, 250 cd/m2 Luminance, 1000:1 Contrast,	1	

	16.7 million color, 2- 16ch audio meter, PBP/PIP, Waveform, Vector scope for HD -HDMI, Darkness Check		
4	VIDEO RECORDING SYSTEMS		
4.01	Video Recording Application: 1Ch Audio & Video Real Time Digital Recording, all file Format support, Full HD, 24/7 operation, MOV, MP4, MPEG-2, MPEG-4, DV, H.264, IMX, Capture and web streaming. Auto and manual clip naming, Local/Remote NAS Storage save recording clips, Recording Scheduling, Auto Split clips:	1	
4.02	System for Video Recording Application: I7 8700K CPU, 16 GB GDDR5, Nvidia Geforce Gtx 1650, 4 GB GDDR6, 1 x 512 GB, M.2 2230, PCIe NVMe, SSD, Class 35, 2TB 7.2K RPM 256 MB cache 3.5in NAS Hard Drive, Wired Keyboard & mouse, win10 Pro, 24" LED Monitor".	1	
4.03	SD/HD/3G/6G-SDI Video 4ch I/O Card	1	
5	AUDIO & VIDEO PROCESSING		
5.01	Up/Down Cross Converter: SD/HD/3G-SDI, HDMI, & VGA Inputs, 2x SD/HD/3G-SDI, HDMI Outputs	3	
5.02	Audio Delay Box for Chroma: Balanced/Unbalanced input Audio Delay Box. Up to 3secs audio delay calibration, Sound and Video Synchronization, High-Pass and Low-Pass Audio Filters, Compressor, Limiter, Expander & Gate FX	1	
5.03	Audio & Video Mux: 2-CH Audio and 3G/HD/SD-SDI Video Embedder, 3G/HD/SD-SDI x 2, Audio level adjustment	1	
5.04	Audio & Video DMux: 2-CH Audio and 3G/HD/SD-SDI Video deEmbedder	3	
5.05	HD/SD-SDI Distribution Amplifier: 2x6 3G HD/SD-SDI Distribution Amplifier	2	
5.06	HDMI Distribution Amplifier: 4K HDMI Distribution Amplifier 1x4	1	
5.07	Chroma Keyer Video Processor: 4K Real-Time Chroma Keyer with 10-Bit, 4:4:4 Video Processing	1	
5.08	SDI to HDMI Converter: 3G/HD/SD SDI to HDMI Converter, 1 x HD/SD-SDI Loop through in and HDMI out	2	
5.09	HD/SD Sync/Reference Generator: HD/SD/AES Sync Generator Multi-Format Tri-Level Sync, Black, 7 output, 2 Group	1	
5.10	System for Video Chroma Keyer: i5-13500, 16 GB: 2 x 8 GB, DDR5, 512 GB, M.2 2230, PCIe NVMe, SSD, Class 35, 1TB HDD, Wired Keyboard, Mouse, 22" LED HDMI Monitor.	2	
5.11	Video I/O for Video Chroma Keyer & Back Ground: SD/HD/3G/6G-SDI Video 4ch I/O Card	2	
5.12	SDI to USB 3.0 Capture Box: SDI to USB 3.0 Capture Device (for VC/Web Streaming application)	3	
6	ONLINE GRAPHICS SYSTEM		
6.01	Broadcast Online Graphics System: 1 ch 4K/HD/SD static and animated graphics and logos, 32 bit transparencies. Multiple animated logos PNG/TGA/BMP/TIFF/JPG/GIF/FLASH; Digital clocks, texts, crawls, rolls, tickers and RSS feeds; Fade, zoom, slide; Scheduler. Key & Fill out	1	

6.02	Hardware for Online Graphics System: i9-12900K,64 GB, 4 x 16 GB, DDR5, 4000 MHz, ECC, Nvidia Geforce Gtx 1650, 4 GB GDDR6, 1 x 512GB SSD, 8TB 7.2K RPM 256 MB cache 3.5in NAS Hard Drive, Wired Keyboard & mouse, Mini DisplayPort to DisplayPort, win10 Pro, 24" LED Monitor	1	
6.03	SD/HD/3G/6G-SDI Video 4ch I/O Card	1	
7	EDIT & POST PRODUCTION SYSTEM		
7.01	HD Editing System: Apple M4 chip with 10-core CPU, 10-core GPU, 16-core Neural Engine 32GB unified memory 1TB SSD storage 10 Gigabit Ethernet Three Thunderbolt 4 ports, HDMI port, two USB-C ports, headphone jack Peripherals 27" Full HD IPS monitor, HDMI, & Wired keyboard Mouse	3	
7.02	HD Video Editing Application: Apple Final Cut Pro	3	
7.03	HD Video Editing Application: Motion	3	
7.04	HD Video Editing Application: Filmora	3	
7.05	External Hard Drive: 4TB USB-C 3.2 Gen 1 External Hard Drive	3	
7.06	HD Video Editing Application: (Adobe) Graphic design, Video Editing, design motion graphics, Visual Effect	3	
7.07	Indian Language font: TTF & Unicode Bilingual Remington, Phonetic keyboard font	3	
7.08	Voice over Microphone: USB Condenser Microphone with Desktop Stand / Arm	1	
8	NAS STORAGE SYSTEM & NETWORKING		
8.01	Online NAS Storage: 240 TB raw, 16 x 18TB SATA 6Gb/s 3.5" HDD, High-Speed DAS +NAS Storage, High Scalability, Dual redundant, hot-swappable power supplies, Windows, mac OS, and Linux, Apple Final Cut Pro X, Adobe Premier Pro, DaVinci, Post Production Software Compatible	1	
8.02	52 Ports Managed Network Switch: Stackable Managed Switch with 48x1G and 2x10G ports Layer 3, redundant Hot-plug power supply, 2 x 10 Gigabit SFP+, 176Gbps non-blocking fabric across 28 ports, Full L3 feature set and non-stop forwarding (NSF) stacking	1	
8.03	Structured Network Cabling Work: System Networking Cat6 cable crimping with RJ45 modular plug with cap, network patch cord, gang box, patch panel, cable manager, and associated networking work.	1	
9	STUDIO LIGHT SYSTEM		
9.01	250w LED Panel: Real Set LED Panel 1/2 250W With Barn door & Medium Honeycomb Screen	20	
9.02	150w LED Panel: Chroma Set LED Panel 1/1 150W With Barn door & Medium Honeycomb Screen	14	
9.03	100w LED Fresnel: LED Fresnel 100W with Barn door	6	
9.04	Light Accessories: Accessories C Clamp Safety Bond & Identification Name Plate	40	

9.05	DIMMER CONTROL: Light Console	1	
9.06	Light DMX Network: DMX Network	1	
10	ONLINE UPS SYSTEM		
10.01	30KVA ONLINE UPS: three phase, 30KVA UPS, 320 - 480V input range, Input Power Factor: > 0.99, 12 V VRLA/Tubular battery support, Surge Protected, online UPS Battery for UPS: 100 Ah x 12V Battery x 20 Nos., 30 min backup for each battery bank, Parallel kits, Battery rack, Battery IRIT, Nyvin Cable	1	
11	OUTDOOR ONLINE PRODUCTION SETUP		
11.01	Professional ENG Video Camera: 4K (60p) 25x optical zoom, three 1/3" type CMOS sensors, low-light performance, face detection and object tracking, Hybrid Log-Gamma (HLG) and S-Log3, Duel SD card, Wireless, XDCAM Camcorder	2	
11.02	Additional Video Camera Battery & Charger: Additional Video Camera Battery & Charger:	2	
11.03	Camera Memory Card : Sony 128GB SF-G TOUGH Series UHS-II SDXC Memory Card	8	
11.04	Camera Card Reader: Sony MRW-G2 CFexpress Type A/SD Memory Card Reader	2	
11.05	Camera Bag :	2	
11.06	Professional Full Frame Mirrorless Camera: Mirrorless DSLR Camera with 28-70mm Zoom lens, 4K full frame 24.2MP, ISO range 100 to 51200, 1/8000 shutter speed	2	
11.07	ENG/Outdoor Tripod System: Professional Tripod with 75mm Ball Fluid head , Payload : 5KG , with Ground Spreader , Bubble with light	2	
11.08	ENG/Outdoor Camera Light with Battery: Bi-Color Dimmable LED Video Light,color temperature 3200k-5600k, with compatible battery and charger	4	
11.09	ENG/Outdoor Interview Mic: cardioid interview microphone	2	
11.10	ENG/Outdoor Wireless Mic System: Camera-Mount Wireless Combo Microphone, For Mobile Journalist, Videographer	2	
11.11	Laptop for Out Door Web Stream: Convertible 2 in 1 Laptop with Stylus, Intel Core i7 10Core Latest generation or better,16- inch or better 1920x1200 non-touchscreen,250nit or better, Intel Graphics, 16GB DDR5 RAM, 1TB NVMe SSD inbuilt, Windows 11, Backlite Keyboard with Numeric Keypad, Microsoft office latest version, ports-2 USB 3.2 Gen 1 (5 Gbps) ports, 1xUSB 3.2 Gen 2 (10 Gbps) Type-C® with Display Port TM Alt Mode, 1.4/Power Delivery port,1x Universal Audio jack,1x HDMI 1.4 port, 1x RJ45 Ethernet port,1 Power-adaptor port, Primary Battery-4 Cell, 54 Wh, integrated, Realtek Wi-Fi 6 RTL8852BE, 2x2, 802.11ax, MU-MIMO, Bluetooth wireless card.	2	
11.12	Laptop for Out Door Web Stream: Wireless Mouse	2	
11.13	Laptop for Out Door Web Stream: Mini power Extension Board	2	
11.14	Laptop for Out Door Web Stream: Headphone	2	
11.15	5G/4G Mobile Sim Based Router: 5G Sim based wify and Ethernet Internet Router,	2	

12	STUDIO & PCR ACOUSTIC AND CIVIL WORK		
12.01	Studio Real Set Design : Supply and installation of Real Set design and installation (as per Studio Room Measurements)	1 lot	
12.02	Studio Chroma Set Design : Fixed set 12 Feet wide, 10 Feet on Wall and at least 6 Feet on Floor with curved edge from Wall to floor. With Proper green fabric to provide rich Chroma key effect	1 lot	
13	STUDIO & TECHNICAL AREA - ACOUSTICS, FURNITURE AND AESTHETICS		
13.01	Acoustic Treatment on the Studio Walls, Ceiling, Door, Floor, Studio-PCR Glass observation window, Technical Furniture Studio, Electrical Work: Supply and installation of gripper system, 12mm Dry wall , FR 50mm 100kg/m ³ HD Geo wool, Perforated Board with paint finish with proper reverberations time (as per Studio Room Measurements)	1 lot	
13.02	Acoustic Treatment on the PCR Walls, Ceiling, Door, Floor, Technical Furniture Studio, Electrical Work : Supply and installation of gripper system, 12mm Drywall , FR 50mm 100kg/m ³ HD Geo wool, Perforated Board with paint finish with proper reverberations time (as per PCR Room Measurements)	1 lot	
14	AIR-CONDITIONING, UPS & ELECTRICAL WORK		
14.01	3.0 TR Inverter - Heat Pump Cassette AC STUDIO: Capacity: 3.0 TR / 37800 BTU / 11.0 KW, Sound Pressure Level (H/M/L/SL) - dB(A): 48/46/42/37, Air Flow (H/M/L) - CFM: 1118/941/794/618	4	
14.02	2.0 TR Inverter - Cooling Only Cassette AC PCR : Capacity: 2.0 TR / 24400 BTU / 7.15 KW, Sound Pressure Level (H/M/L/SL) - dB(A): 46/43/39/36, Air Flow (H/M/L) - CFM: 853/765/706/588	3	
14.03	STUDIO AND PCR AC INSTALLATION : Joints and installations points , Remote system integrations ac in/out, Panel for Cassette ac installation , Unit installation, integration	1 lot	
15	INSTALLATION MATERIALS		
15.01	PoE++ Switch For Camera: 8-port 10/100/1000BASE-T, Ultra90 PoE++ with 720W PoE budget, 2-port 10/100/1000BASE-T, 2-port 1000/10GBASE-X (SFP+), 60 Gbps	1	
15.02	CAT6 Ethernet Cable: 305M Low Skew Cat Cable	8	
15.03	HD Video Cable: HD Video cables @ 200m each roll	8	
15.04	HD Video Connectors & Boots: HD Video cable's Connector & Boot	500	
15.05	Analog Audio Cable: AUDIO Microphone cable, @500m each roll	8	
15.06	XLR Male Connector: XLR 3-pin Male Connectors	60	
15.07	XLR FeMale Connector: XLR 3-pin Female Connectors	60	
15.08	Stereo (TRS) 1/4" Phone Plug Connector: Stereo (TRS) 1/4" Phone Plug	30	
15.09	RCA Connectors - Male: RCA Connectors - Male	10	
15.10	EP Stereo MALE CONNECTOR 3.5 mm :	8	

	EP Stereo MALE CONNECTOR 3.5 mm		
15.11	IEC Male sockets C13 : IEC Male sockets C13	50	
15.12	IEC Female sockets C14 : IEC Female sockets C14	50	
15.13	IEC based Power Distribution Unit MDU : 14 female based MDU	2	
15.14	Analog Audio Connectors: XLR Male XLR Female Connectors, TRS, EP, Photo etc. Connectors	1	
15.15	2.5 Sqmm 3 Core Power Wire: 100m 2.5 Sqmm 3 Core Power Wire:	1	
15.16	1.5 Sqmm 3 Core Power Wire: 100m 1.5 Sqmm 3 Core Power Wire:	1	
15.17	42 Equipment Rack in PCR: 42U 800 x 1200mm Server Rack Cabinet	1	
15.18	Pins 9/15/25 (Male & Female) with metallic shell : (Qty-Lot Basis) Pins 9/15/25 (Male & Female) with metallic shell (Qty as per requirement basis)	1	
15.19	Alpha Numerical Ferrules (Qty-Lot Basis): Rubber Cable Marker Ferrules A-Z, 0-9 For Cable, Size as per cable diameter (Qty as per requirement basis)	1	
15.20	Cable ties-black/ White 12", 8", 6", 4" (100 PCs Packets each) (Qty-Lot Basis): Nylon Cable Ties (Qty as per requirement basis)	1	
15.21	Spiral Cable Wrap: Spiral Cable Wrap 4mm 25m Black (Qty as per requirement basis)	1	
16	SYSTEM COMMISSIONING, INSTALLATION, TRAINING and SUPPORT		
	INTEGRATION MATERIAL & ENGINEERING SERVICES System Commissioning, should be before the Project, during/running the project and at the time of dry run too. accordingly need to submit the Detailed Automation/Workflow/Installation Drawings, Systems Components Installation Report, Systems Components Testing Reports, Systems Commissioning Report. System Support During Dry Runs, Pre-Launch & Post Launch Report	1	

:Scope of Work and Technical Specifications:

SL. No.	ITEMS & FEATURES	SPECIFICATIONS
1. HD STUDIO PRODUCTION SYSTEM		
1. SITC of 4K PTZ Camera System:		
1	Image Sensor	½.5” CMOS sensor, 8.5MegaPixels or better
2	Zoom Ratio	30x (in DCI 4K) and 40x (in 1080p) or better
3	Optical Zoom	20x or high
4	Min. Illumination	1.6lux or better
5	Electronic Shutter	1/1 to 1/10000 sec (50Hz system) in Full Auto and Manual mode or
6	Bitrate Compression	CBR/VBR
7	Image Sta	Facility Should be available
8	Compression Format	H.264: High/Main/Baseline Profile, H.265: Main Profile
9	Video Output	2160/25p, 1080/50p, 25p, 1080/50i, 720/50p
10	White Balance	AWT-3200k, 5800k, Manual, One Push, outdoors
11	NDI HX	Yes, should be available
12	Gain Selection	Auto/ Manual, 0 dB to 48 dB
13	Field of View	Horizontal: 70°
14	Min. object distance	Wide: 3.1", Telephoto: 31.5"
15	Movement Range	Pan: -170 to 170°, Tilt: -20 to 90°
16	Panning / Tilting Speed	Pan: 0.5 to 300°/sec, Tilt: 0.5 to 126°/sec
17	Tally Light	Should be available
18	Preset	Min. 256
19	Focal length	4.4 - 88mm or better
20	Video Output	SDI, HDMI (4K), IP (4K)
21	Reference	Internal Sync
22	Control	Control on IP Web App PTZ Remote Control Panel
23	Control Interface	VISCA RS-422 RJ45(In/Out), VISCA over IP RJ45
24	Max. Aperture	F2.0 to F3.8
25	Mic. Input	Stereo Mini-phone(φ3.5mm) x1, (Mic/Line)
26	Power	PoE++ and DC input
27	Mirror / Flip Image	Should be available
28	Protocol	IPv4, IPv6, TCP, UDP, ARP, ICMP, HTTP, HTTPS, DHCP, DNS, RTP/RTCP, RTSP, VISCA over IP, SRT
29	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
2. SITC of IP Remote Control Panel:		
1	Type	Controller for PTZ Cameras (Should be Same Camera OEM and compatible with above PTZ camera)
2	Max Camera Control	112 or more Camera Control on IP Network on Direct Serial Connections 7 or More
3	Controller Extension	Up to 5 Controllers Can Operate on 1 LAN
4	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
3. SITC of Tripod System:		
1	Payload	12 Kg
2	Ball diameter	75mm

3	Features	Light, Bubble
4	Spreader	Ground with Compatible dolly system
5	Dolly	Compatible dolly system
6	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
2. VIDEO & AUDIO SWITCHER SYSTEM		
4. SITC of Production Video Switcher:		
1	Inputs	Minimum 13 or more Inputs with at least 12 or more 3G/HD/SD-SDI and 1 HDMI
2	Outputs	Minimum 6 outputs with 5 or more 3G/HD/SD-SDI and 1 HDMI
3	Video Input Interface	Video Input Interface: 3G/HD/SD-SDI BNC, 75 ohms, SMPTE 259M /292M/ 424M
4	Video Output Interface	Video Input Interface: 3G/HD/SD-SDI BNC, 75 ohms, SMPTE 259M /292M/ 424M
5	CG Software	CG Software: External / Inbuilt CG software to create still graphics and overlay on program Out
6	Signal Processing Standards	SD - 480i-4:3 and 16:9 576i/50 - 4:3 and 16:9, HD - 720p 50, 1080i 50/ 1080pSF, /25, 1080p 25 3G - 1080P 1080p 50
7	Hardware Control Panel	All in one electronic & hardware control panel surface
8	Software Control Panel	Should support Software Control Panel
9	Mix Effect Buses	1 ME with 4 full function keyers plus transition keyer or better
10	Chroma Key	Minimum 1 chroma keyer
11	DVE	2 (2D) floating DVES to be utilized in any keyer in the system
12	Wipe Generator	Built-in Wipe Generator for M/E
13	Pattern Generator	Minimum 2 Pattern Generators
14	Frame Syncs & Format Converters	6 or more freely-assignable Frame Syncs & Format Converters
15	Multiviewer	1 Built-in MultiViewer with tally, source names, and clock. Configurable
16	Custom Macros	72 Custom Control Macros to be available for direct usage from the control panel
17	Tallies	IP, Serial & Parallel Tallies
19	GPI/O	16 or more GPI/O Connections
20	Media Store	Min. 4 Channels of Media Store
21	Preview	Should provide preview all the sources and various effects created
5. SITC of Audio Mixer		
1	Mixing Channels	22 Channel or better Audio Mixer with Min. 16 Mic Pre amps on Balanced XLR
2	AUX	5 x Pre/Post or better
3	Subgroups	4 mono/2 stereo or better
4	Mic inputs	MIC: 16
5	Phantom Power	Phantom Power on all mic channels
6	Fader	100 mm
7	USB Interface	2-in/2-out
8	Bands	4-band
9	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system

6. SITC of Audio Monitor:		
1	Type	2 Way Active Studio Monitor
2	Frequency Range	50 Hz-19 kHz or better
3	Max Peak SPL	100 dB or better
4	LF Driver Size	Min. 5" to Max. 6.6
5	HF Driver Size	1" or better
6	Low-Frequency Amplifier Power	40 watts or better
7	High-Frequency Amplifier Power	40 watts or better
8	Total Power Output	80 Watt or Better
9	Input Types	1 x XLR, 1 x TRS Balanced
10	AC Input Voltage	100-240 VAC +/- 10% 50/60 Hz
11	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
7. SITC of Lavalier Microphone:		
1	Transducer Principle	Pre-polarized condenser
2	Frequency Range	40–20,000 Hz or better
3	Polar Pattern	Omni-directional
4	Sensitivity	Sensitivity at 1,000 Hz: 5 mV/Pa or better
5	Sound Pressure Level for 1% THD	142 dB or better
6	Equivalent noise level	39 dB CCIR-weighted or better
7	Power	18 k ohms /7.5
8	Nominal impedance	1 k ohms or better
9	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
8. SITC of Wireless Microphone:		
	Receiver	
1	RF Bandwidth	56 MHz or better
2	Sensitivity	40 mV/Pa at 1 kHz or better
3	Diversity System	True Diversity / Microprocessor-controlled diversity
4	Wireless Technology	Digital UHF
5	Frequency Response	20 – 19 000 Hz or better
6	Latency (ms)	1.9 ms or better
7	Max Operating Range	328.1' / 100 m (Line of Sight)
8	Audio outputs	1 x XLR sockets balanced, 1 x TS ¼" / 6.3 mm jack sockets unbalanced
	Transmitter (Battery Operated)	
9	Occupied bandwidth	200 MHz or better
10	RF output power	10 mW or better
11	Audio input	Standard 3.5mm (1/8") locking jack socket.
	Lapel Mic	
12	Condenser lavalier microphone	Cardioid Polar Pattern
13	Audio frequency bandwidth	50 - 18000 Hz
14	Sensitivity	40 mV/Pa or better
15	Max. SPL	120 dB or better
16	Frequency response	50 to 18,000 Hz
17	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
9. SITC of Handhold Vocal Microphone:		
	Receiver	

1	Microphone capsules	Dynamic (cardioid)
2	Frequency	80 - 15,000 Hz
3	Sensitivity	1,5 mV/Pa or better
4	Nominal impedance	350 Ω @ 1Khz
5	Connector	XLR -3
6	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
8	Silent ON/OFF switch	Should be available
10. SITC Anchor Ear Piece:		
1	Type	Anchor Ear Piece with acoustic Tube with 125 Ω , 5' (1.5M) cord, and ¼" plug
2	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
11. SITC of Professional Headphone:		
1	Headphone type	Closed-back
2	Wearing Style	On-ear
3	Audio frequency	20 - 20000 Hz or Better
4	Sensitivity	108 dB SPL or Better
5	Rated Impedance	32 Ohms or Better
6	Audio Interface	1x 1/8" / 3.5 mm TRS
7	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
12. SITC of Intercom System with Tally:		
1	No. User Connect	Min. 8 user / 8 Channel
2	Type	1 x Base Unit and 8 X Belt pack unit
3	Max. Distance	Min. 200 meters between base station and slave
4	Tally	Dual Color Tally integration should be available which could be integration with Video switcher
5	MIC / Headset	3.5 mm interface for Headphone / Microphone como Headset Impedance 8-600 Ohms 100 mW (min)
6	Headphone	¼" (6.3mm) Stereo Headphone Socket Headset Impedance 8-600 Ohms 100 mW (min)
7	Mic in Base Unit	3 PIN XLR / ¼" (6.3mm) Jack Microphone Socket Switchable Condenser / Dynamic Input Microphone Level -67 dB
8	Frequency Response	550-3.6 kHz, <+/- 3dB
9	T.H.D	< 3%
10	Signal to Noice	> 50dB
11	Built-in Speaker	Base Unit should be built-in-Speaker
3. VIDEO MONITORING SYSTEMS		
13. SITC of PCR Multi-viewer Monitor:		
1	Screen Size (Diagonal)	55" backlight LED
2	Resolution (H x V)	3840 x 2160 pixels
4	Brightness	300 nits to 500 nits or higher
5	Viewing Angle	178° / 178° (Horizontal/Vertical)
6	Inputs	HDMI with ARC x 2 USB, RF In, RJ12
7	Control/Others	Lan (RJ-45) Serial In (RS232C), Wireless (WiFi5)
8	Audio	2Ch, 20W RMS
9	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
14. SITC of Studio Reference Talent Monitor with Floor Stand:		

1	Screen Size (Diagonal)	32" 16:9 or better
2	Panel Type	New Edge, 60Hz or better
3	Resolution (H x V)	1,920 x 1,080 pixels
4	Brightness & Contrast Ratio	Min. 400 cd or better & 5,000:1
5	Viewing Angle	178° / 178° (Horizontal/Vertical)
6	Inputs	2 x HDMI, 1 x DPI, 2x USD, 1 x VGA Out, 1 x Stereo Mini jack Audio Out, 1xIR
7	Control/Others	Lan (RJ-45) Serial In (RS232C), Wireless (WiFi5)
8	Talent Monitor Stand:	55" Full HD Commercial Television Height Adjustable Floor Stand
9	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system

15. SITC of 3G-SDI & HDMI Broadcast Monitor:

1	Screen Size (Diagonal)	24" Diagonal (527 mm H x 296.5 mm V)
2	Panel Type & Resolution (H x V)	8 Bit backlight LED Panel or better & 1920(H) x 1080(V)
3	Luminance & Contrast	250 cd/m2 or better & 1000:1 or better
4	Video Inputs	2 x BNC 3G/HD/SD-SDI, 3 x BNC YPbPr/Video/Y/C, 1 x HDMI, 1 x
5	Video Outputs	2 x BNC looped 3G/HD/SD-SDI, 3 x YPbPr/Video/Y/C
6	Audio Outputs	1 x 3.5mm stereo headset jack
7	Color Depth	16.7 million
8	Features/Benefits	<ul style="list-style-type: none"> - 12 Bit Video Processing, no image delay - 3G-SDI 4:4:4 12bit signals (SMPTE 425M A/B) - 2x2K/3G-SDI inputs and outputs (2K/3G/HD/SD-SDI auto detect) - PBP/PIP(size/position adjustable) - Audio Level Meter, Blue/Mono Only - Waveform, Vectorscope for SDI1, SDI2, HDMI/DVI - Picture Flip, Focus Assist - False Color, Zebra, Part Zoom In, Pixel Measurement and Audio Phase - H/V Delay, Over Scan, Markers, Darkness Check - 3D LUT Color calibration with ColourSpace & CalMAN - Remote control: Ethernet/GPI, RS422 In/Out, Dynamic UMD(TSL3.1/4.0) - LED Tally Light and On-screen Tally display, - F-key configuration and Key Lock function - Built-in Speakers
9	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system

4. VIDEO RECORDING SYSTEMS

16. SITC of Video Recording Application with Hardware:

Ingest System		
1	No. Of Ingest/ Rec Channel	Currently 1 Chanel Required but that system should be expendable for max 4 Channel
2	Video Format	Variety of video and audio formats in real time 8K,4k, 2k, HD, SD
3	Video Codec Support	Apple ProRes 422(HQ), AVCINREA50, DNxHD120M MXF, DV, DVCPRO-HD, DVCPRO50, GFX, IMX50, H.264, PMEG2-TS, MPEG2-PS, XDCAM50
4	Audio Codec Support	WAV, MP2, MP3, AAC, ALAC
5	Codec Container	.MP4, .MXF
6	Quality Check	OSD vu-meters
7	Counter Meter	Ingest Clip Counters for total and segment monitoring facility, File code and Timecode based counters

8	Network Storage	Local and Remote Storage location Real time record should be available
9	GUI Features	<ul style="list-style-type: none"> •The multichannel recorder solutions should have compact with same • OEM software and hardware or 3rd party hardware which is should be certified by Ingest application OEM only. •User definable shortcuts, WEB GUI facility •User should change the Channel label name •The Ingest application should be re-Sizable GUI application •The ingest should be Real-time video preview facility •Average and instant data rate monitoring •Space and time left on disk real time calculation •NDI source selection on main GUI, OSD display for counters •Customizable 2-16 channel vu and peak meters
10	General Features	<ul style="list-style-type: none"> •The Ingest system should have below mentioned general features: •GPU accelerated capture with NVidia GTX or better and Intel quick sync •Customizable memory buffer for capture •Internal RTMP server for point-to-point connections over internet •Capture time limit or automatic file switch •Audio preview on sound card •Simultaneous PROXY file capture/ Record •Remote control TCPIP of Blackmagic Design ATEM, Videohub and NewTek TriCaster •SOAP & REST API •Watchdog service •Log Files •Accurate statistics of capture process •Seamless file switching during capture •Image grab with custom file syntax •Capture calendar scheduler for unattended capture •Volume adjustment with original volume simultaneous display •IP streaming encoder of live input in RTMP, UDP, RTSP, IIS, HLS, WMS.
11	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
17. SITC of Hardware for Video Recording Application:		
1	CPU	I7 8700K or better
2	Memory	Min 32GB DDR5 or better
3	Graphics Card	Nvidia Geforce Gtx 1650, 4 GB GDDR6
4	Storage	1 x 512 GB, M.2 2230, PCIe NVMe, SSD, Class 35, 2TB 7.2K RPM 256 MB
5	Network Interface	1x LAN connector (RJ-45 connector, 10/100/1000)
6	Keyboard & Mouse	Standard Wired keyboard and Wired Mouse
7	OS	Windows 11Pro
8	Display Monitor	24" LED HDMI monitor
9	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
18. SITC of I/O Card:		
1	In and out	4 channel Bi-Directional In/Out SD/HD/3G-SDI
2	Video In/Out	4 BNC SD/HD/3G-SDI
3	Reference Input	Tri-Sync or Black Burst BNC.
4	Computer Interface	PCIe 2.0 x4
5	Audio in/Out	4x SDI Audio, 2-16-channel, 24-bit embedded audio, 48 kHz

6	Video Conversion	Color space Conversion, HD Down Conversion, HD Up Conversion, Cross Conversion
7	Compatibility	The Video I/O card should be fully compatible with Supplied Video Recording Application
8	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
5. AUDIO & VIDEO PROCESSING		
19. SITC of Up/Down Cross Converter:		
1	Type	Up/Down/Cross Conversion
2	Input	VGA x 1, HDMI x 1, HD/SD-SDI x 1 or better
3	Output	SDI x 2, HDMI x 1, SDI Loop thru BNC or better
4	Supported video output formats:	1080p60/59.94/50, 1080p30/29.97/25/24/23.98, 1080i60/59.94/50, 720p60/59.94/50, 525i, 625i
5	Audio Format (Input):	Analog Audio L/R: stereo audio SDI / HDMI embedded audio
6	Audio Format (Output):	SDI embedded audio up to 8CH, 48KHz, PCM audio HDMI embedded audio up to 8CH, 48KHz, PCM audio
7	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
20. SITC of Audio Delay Box for Chroma:		
1	Type	2-Channel Audio Delay
2	Audio Input	3 x balanced stereo audio / Microphone (3 Pin XLR / 1/4" (6.3mm) Socket) 2 x unbalanced stereo audio, RCA sockets
3	Audio Output	2 x balanced stereo audio, XLR connectors 2 x unbalanced stereo audio, RCA sockets 1 x 3.5mm Stereo headphone
4	Audio Delay	Up to 3000ms
5	Audio Indicator	2" LCD screen
6	Feature	Compressor, Limiter, Gate, Expander, Filter
7	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
21. SITC of Audio & Video Mux:		
1	Conversion	1-Channel SDI Video and 2 Channel Analog Audio Embedder
2	Video In/Out	1x BNC (3G-SDI) Input, 2x BNC (3G-SDI) Output
3	Audio In/Out	2x Mini-XLR Input, 2x 2RCA Input
4	Audio Format Selection	SMPTE, EBU
5	Audio Gain	Yes, Selectable facility should available
6	Updates and Configuration	Through any USB or IP facility available
7	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
22. SITC of Audio & Video DeMux:		
1	Conversion	1-Channel SDI Video and 4 Channel Analog Audio DE Embedder
2	Video In/Out	1x BNC (3G-SDI) Input, 1x BNC (3G-SDI) Re-clocked Loop through
3	Audio Out	2x Mini-XLR (Balanced) output
4	Audio Format Selection	SMPTE, EBU
5	Updates and Configuration	Through any USB or IP facility available
6	Features	Audio indicator: Power LED x 1 Audio Level LED: 4 rows
23. SITC of HD/SD-SDI Distribution Amplifier:		
1	Conversion	2 Channel 3G/HD/SD SDI input and 6 x 3G/HD/SD-SDI distribution outputs
2	Video In/Out	Input: 2 x BNC, Output: 6 x BNC (Re-Clocking out)

3	Audio Format Selection	Support SDI embedded audio Up to 8 channels, 48KHz, PCM audio
4	Features	Two input video sources can be controlled by A/B switch or GPI
5	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
24. SITC of HDMI Distribution Amplifier:		
1	Conversion	HDMI Distribution Amplifier
2	Video In/Out	Input: 1 x HDMI, Output: 4 x HDMI
3	Video Format	HDMI Supported Resolutions 4096x2160p60/50 4096x2160p30/25 3840x2160p60/50 3840x2160p 25 1080p60/50, 1080p30/25 1080i60/50, 480p, 576p, 480i, 576i PC Supported Resolutions 640x480@60Hz, 800x600@60Hz, 1024x768@60Hz, 1280x720@60Hz, , 1280x768@60Hz, 1280x960@60Hz, 1280x1024@60Hz, 1360x768@ 60Hz, 1366x768@60Hz, 1400x1050@60Hz, 1680x1200@60Hz, 1920x1080@60Hz, 1920x1200@60Hz
4	Video Processing	HDR 4K2K@60 4:2:0 10bits 4K2K 60Hz YCbCr4:4:4 8bit/YCbCr4:2:0 10bit 4K2K 30Hz YCbCr4:4:4 8bit
5	Video bandwidth	Single-link 600MHz (18Gbps)
6	Audio Format	DTS-HD Master Audio, Dolby TrueHD, Dolby Digital, DTS, DVD-Audio, LPCM, SACD, MPCM
7	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
25. SITC of Chroma Keyer Video Processor:		
1	System	For UHD 4K Chroma Key Green/Blue Keying
2	Input Connectors	Foreground 12G/6G/3G: 1 x BNC Background HDMI 2.0: 1 x Type-A Auxiliary HDMI 1.4: 1 x Type-A (Lumakey Overlay/External Matte/Camera) Sync Tri-Sync or Blackburst: 1 x BNC
3	Output Connectors	Loop-Through 12G/6G/3G-SDI: 1 x BNC Program 12G/6G/3G-SDI: 2 x BNC HDMI 2.0: 1 x Type-A Preview 12G/6G/3G-SDI: 1 x BNC HDMI 2.0: 1 x Type-A Sync Tri-Sync or Blackburst: 1 x BNC
4	Video Format	3840 x 2160p: 60/50/25 1080p: 60/50/25 1080i: 60/50
5	Processing	Color Sampling Ratio: 4:4:4 Bit Depth: 10-Bit

6	Interface	Ethernet: RJ45 RS-232: DB-9 Firmware: USB Type-A
7	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
26. SITC of SDI to HDMI Converter:		
1	Input	1 x 3G/HD/SD-SDI, 2x SDI Audio embedded
2	Output	1 x HDMI, 1 x SDI (loop through), 2x RCA
3	Output Resolutions	Video output format is the same as the input format
4	Equalizer	Should be supported
5	Reclock	Should be supported
6	Firmware Upgradation	Feature Required
7	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
27. SITC of HD/SD Sync/Reference Generator:		
1	Sync	HD: tri-level SD: color black, 75% color bars
2	Outputs	AES-11: 1x BNC, 48 KHz, silent or 1 KHz tone (-20 dBFS for NTSC, -18 dBFS for PAL) Video: Assignable in two groups to either HD or SD -- 4x BNCs - outputs 1 to 4 2x BNCs - outputs 5 and 6
3	Formats	<ul style="list-style-type: none"> • 1080i 50, 59.94, 60 • 1080PsF 23.98, 24, 25, 29.97, 30 • 1080p 23.98, 24, 25, 29.97, 30 • 720p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60 • 625i, 525i
4	Accuracy	3 ppm
5	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
28. SITC of Hardware for Video Chroma Keyer:		
1	CPU	i5-13500 or better
2	Memory	2 x 8 GB, DDR5, 512 GB or better
3	Graphics Card	Intel
4	Storage	1 x 512 GB, M.2 2230, PCIe NVMe, SSD, Class 35, 1TB Hard Drive
5	Network Interface	1x LAN connector (RJ-45 connector, 10/100/1000)
6	Keyboard & Mouse	Standard Wired keyboard and Wired Mouse
7	OS	Windows 11Pro
8	Display Monitor	24" LED HDMI monitor
9	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
29. SITC of Video I/O for Video Chroma Keyer & Background:		
1	In and out	4 channel Bi-Directional In/Out SD/HD/3G-SDI
2	Video In/Out	4 BNC SD/HD/3G-SDI
3	Reference Input	Tri-Sync or Black Burst BNC.
4	Computer Interface	PCIe 2.0 x4
5	Audio in/Out	4x SDI Audio, 2-16-channel, 24-bit embedded audio, 48 kHz
6	Video Conversion	Color space Conversion, HD Down Conversion, HD Up Conversion,
7	Compatibility	The Video I/O card should be fully compatible with Supplied Video Recording Application

8	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
30. SITC of SDI to USB Capture Box:		
1	System Connection	USB-B 3.0 / 3.1/3.2 Gen 1
2	Video Inputs	1x BNC (3G-SDI) Female
3	Video Outputs	1x BNC (3G-SDI) Female (Loop Output)
4	Input Video Format	SDI 576i / 625 lines at 25/50 fps 1080i at 50/60 fps 1080p at 24/2550/60 fps
5	Input Audio Format	Analog: 48 kHz / 24-Bit
6	Output Video Format	USB-B 1080p at 25/50/59/60 fps 1024 x 576 at 15/25/50/60 fps 1440 x 1080 at 25/50/60 fps 960 x 540 at 25/50/60 fps 856 x 480 at 25/50/60 fps SVGA (800 x 600) at 25/50/60 fps 768 x 576 at 25/50/60 fps 720 x 576 at 25/50/60 fps 720 x 480 at 25/50/60 fps VGA (640 x 480) at 25/50/60 fps 640 x 360 at 25/50/60 fps 432 x 240 at 25/50/60 fps 352 x 288 at 2550/60 fps QVGA (320 x 240) at 25/50/60 fps 176 x 144 at 25/50/60 fps
7	Output Audio Format	Analog: 48 kHz / 16-Bit
8	Embedded Audio	SDI: 2-Channel
9	Video Standard Compliance	SMPTE 259M/292M/424M
10	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
6. <u>ONLINE GRAPHICS SYSTEM</u>		
31. SITC of Broadcast Online Graphics System:		

1	CG Application Features	<ul style="list-style-type: none"> • 4K/HD/SD static and animated graphics and logos layout. • Anti-aliased text with gradients, borders and shadow features. • Fully customizable Main GUI with sizeable/dock able panels for Video Preview, Video Program, Page buttons, Live data tags, Playlists, etc. • Multiple different layouts for engine control. • Clock, count up/down, date, crawl, ticker and roll layout. • CG Template editor with multiple layers facility. • Online Preview channel over VGA and SDI/NDI. • TGA, BMP, PNG, TIF, JPG bitmap sequences supported. • Smooth IN/OUT transition: fade, move, zoom supported. • 32 Bit image processing with alpha and transparencies. • Style templates for text, crawls and tickers. • Background rendering for Adobe After effects projects with live data tags. • MOS protocol for integration with NRCS – News Room Control Systems certified on most popular NRCS manufacturers. • GPI triggers facility. • REST API commands for complete remote control. • Effects: shadow, blur, motion blur, smooth edge (deflicker). • Internal key mode (video in – video out) or external key mode (Key and fill outputs) facility. • Audio output over SDI/NDI in external key mode. • Infinite layers on each page. • Social media integration (Future extension facility should be available). • On the fly text and media change from user lists. • UNICODE texts with double byte language support. • Right to left language support. • TTF fonts support. • Text foreground, border and background with 10 points colour and alpha gradients with custom angle. • Fade in/out, move left/right/top/bottom, squeeze X/Y/XY transitions. • Video file animations in bitmap sequences, GIF, quicktime ANIM and Prores 4:4:4:4. • Video files import in DV, HDV, DVCPRO, MJPEG, MPEG-2, TS, MPG, VOB, H.264, H.265, etc. • AV1, MP4, QuickTime, PRORES, DNxHD, AVI, WMV, ASF, MXF, XDCAM, IMX, GXF, LXF, FLV, MKV, WebM, HuffYUV, VP8, VC3, JPEG2000, DPX, etc; • Animations and video files in loop/stop at end/ stop at end and hide modes. • Automatic upscale/downscale of media as background. • Media on background outputs audio in external key mode. • Text, Crawl, roll and ticker data source from text, CSV, RSS and excel files. • Automatic update of graphics on data source change. • Excel file support of font, front/back color, alignment and hyperlinks to media. • Date and clock with customisable formatting. • Object layering with priority management. • As run logs database with queries. • Object grouping with timing for entry and duration.
2	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
32. SITC of Hardware for Online Graphics System:		
1	CPU	i9-12900K or better
2	Memory	64 GB, 4 x 16 GB, DDR5, 4000 MHz, ECC or better
3	Graphics Card	Nvidia Geforce Gtx 1650, 4 GB GDDR6
4	Storage	1 x 512GB SSD, 8TB 7.2K RPM 256 MB cache 3.5in Enterprise Hard Drive

5	Network Interface	1x LAN connector (RJ-45 connector, 10/100/1000)
6	Keyboard & Mouse	Standard Wired keyboard and Wired Mouse
7	OS	Windows 11Pro
8	Display Monitor	24" LED HDMI monitor
9	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
33. SITC of Video I/O for Online Graphics System:		
1	In and out	4 channel Bi-Directional In/Out SD/HD/3G-SDI
2	Video In/Out	4 BNC SD/HD/3G-SDI
3	Reference Input	Tri-Sync or Black Burst BNC.
4	Computer Interface	PCIe 2.0 x4
5	Audio in/Out	4x SDI Audio, 2-16-channel, 24-bit embedded audio, 48 kHz
6	Video Conversion	Color space Conversion, HD Down Conversion, HD Up Conversion, Cross
7	Compatibility	The Video I/O card should be fully compatible with Supplied Video Recording Application
8	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
7. <u>EDIT & POST PRODUCTION SYSTEM</u>		
34. SITC of HD Editing System:		
1	Processor	M4 chip with 10-core CPU, 10-core GPU, 16-core Neural Engine
2	RAM	32GB unified memory
3	HDD	1TB SSD storage
4	Network	10 Gigabit Ethernet
5	OS	Apple macOS Latest
7	Interface	Three Thunderbolt 4 ports, HDMI port, two USB-C ports, headphone jack
9	Peripherals	27" 4K LED Display, Keyboard and Mouse, USB 3.1 Gen 1 SDXC/SDHC UHS-I, microSDXC/SDHC UHS-I and CompactFlash Memory Cards Multi Card Reader USB Type-A
10	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
35. SITC of HD Video Editing Application: (Final Cut Pro 11)		
1	Supported OS	macOS Latest version
2	Features	Magnetic Timeline Advanced Video Editing Tools (Multicam Editing, 360° Video Editing) Motion Graphics and Effects Optimized for Apple Silicon ProRes and Codec Support Audio Editing and Effects Libraries and Collaboration Workflow Extensions Media Management Native Editing Support for: Monoscopic and stereoscopic 360° video Spatial video (MV-HEVC) MXF-wrapped media H.264 and HEVC from Apple Devices, DSLR, GoPro and iFrame cameras and drones DV, DVCAM, DVCPRO, DVCPRO 50 and DVCPRO HD HDV Supported Formats and I/O: MXF, HEVC

36. SITC of HD Video Editing Application: (Motion)		
1	Supported OS	macOS Latest version
2	Features	Real-Time Design Engine 2D and 3D Titles 360° Video Support Advanced Keyframing Behavior-Driven Animation Customizable Templates Integration with Final Cut Pro GPU Optimization Third-Party Plugin Support
37. SITC of HD Video Editing Application: (Filmora)		
1	Supported OS	macOS Latest version
2	Features	Advanced Color Correction Tools Motion Tracking Chroma Key (Green Screen) 4K Resolution Editing Support Audio Editing Options Text and Title Effects Split Screen and Picture-in-Picture (PIP) Speed Control Stabilization and Distortion Correction Integrated Stock Library
38. SITC of External Drive		
1	Capacity	4 TB
2	Interface	USB-C 3.2 Gen2
3	Read Speed	1000MB/s or better
4	Write Speed	1000 MB/s or better
5	Drive Type	SSD
6	Shock Resistant	Yes
7	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
39. SITC of HD Video Editing Application: (Adobe):		
1	Video Editing Application features	Supply & Installation of Adobe All App Yearly Subscription Plan for
2		Entire Collection of 20+ Applications Includes Desktop and Mobile Versions Includes 100GB of Cloud Storage Cloud-Based Design Syncs Settings/Files Photoshop, Lightroom, Illustrator InDesign, Acrobat Pro, InCopy, Typekit Dreamweaver, Spark, XD Premiere Pro, After Effects, Dimension Audition, Animate, Muse, Story
3	User License	3 User
4	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
40. SITC of Indian Language font:		
1	Type	TTF & Unicode Bilingual Remington, Phonetic keyboard font
41. SITC of Voiceover Microphone:		
1	Polar pattern	Cardioid or Super- Cardioid
2	Sensitivity gain	-10 dBFS at 80 dB SPL (maximum) and -50 dBFS at 80 dB SPL

		(minimum)
3	SPL	125 dB SPL (Minimum) and 85 dB SPL (maximum)
4	Frequency range	20 to 20,000 Hz or better
5	Equivalent noise level	34 dB(A) SPL (minimum) and 28 dB(A) SPL (maximum)
6	Headphone output	Yes 3.5mm TRS
7	Output impedance (Headphone out)	Min 16 Ohms
8	OS Interoperability	Windows 11, macOS 10.15 or latest, Android, iPadOS
9	Interface	USB-C
10	Control Interface	Headphone Volume control, Gain Control, Mute button, Mix Control
11	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
8. NAS STORAGE SYSTEM & NETWORKING		
42. SITC of 240TB RAW Online NAS Storage:		
1	Storage Type	Storage system should have Rack mountable & should support minimum 16x 2.5"/3.5" SATA HDD.
2	Processor	should have at least 1x Intel Core CPU 6 core or higher like Xenon
3	Memory	System should have minimum 64GB DDR4 memory & expandable up to 128GB
4	Host board port options	System should capable for having 2 x Thunderbolt 3 2 x 1 Gb/s RJ45 4 x 10 GbE-BaseT (RJ45) 2 x USB 2.0 4 x USB 3.2
5	Supported drives	Support drives including 3.5" & 2.5" (SAS 12Gb/s; SATA 6Gb/s) HDD/SSD in the same enclosure
6	Features	Proposed storage should have work in DAS and NAS mixed environment at a time storage architecture. Should support File and Block storage. All these protocols should be supported and licenses for full storage capacity should be quoted for the duration of the product lifecycle NFS, CIFS/SMB, AFP, FTP, SFTP, WebDAV, REST API,
8	RAID	RAID 0, 1, 5, 6, 10, 50, 60
9	Hot Swap	The Drive should be hot swappable
10	Expansion	Proposed storage Should support Scale up storage capacity with up to 6 expansion units with the Base unit via 12G SAS or similar.
11	Performance	Proposed Storage should work in medium to large editing team. Minimum twenty NAS user with 10G-baseT Network and Optimized minimum five 4K concurrent editors.
12	Hot spare drive	Should have one Hot spare drive every after 15 drives
13	Cloud Support	Proposed Storage System should have tool for syncing, backing up and archiving digital assets for users on Amazon S3, Google Cloud, Wasabi, Azure Blob and many other popular off-premise Cloud storage providers.
14	Compatibility	Apple Final Cut Pro X, Adobe Premier Pro, DaVinci, Post Production Software's
15	Accessories	Required SFP modules/Optical FC cables (If any)

16	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
43. SITC of 52 Ports Managed Network Switch:		
1	Type	52 Port Ethernet Switch
2	Layer	Layer 3 Switch
4	No of Ports	48x1G, 2x10GBASE-T and 2xSFP+
6	Feature Set	Layer 3 (static, policy-based and RIP OSPF VRRP PIM dynamic routing)
7	Feature Set	1G Ethernet service port for out-of-band management (OOB, RJ45) RS232 straight-through serial RJ45 for local management console Mini-USB port for local management console USB port for local storage, logs, configuration or image files Form Factor: Full width with dual, redundant modular PSUs for business continuity
8	High Availability (HA)	Non-stop forwarding (NSF) virtual chassis architectures with hitless failover across the stack
9	Switching Fabric	176 Gbps non-blocking fabric across 52 ports or better
10	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
44. SITC of Structured Network Cabling Work: (1 Lot Work)		
1	System Networking	Switch installation and configuration Switch to patch panel structured network cabling work. Patch panel to I/O Box network cable punching, crimping and cable installation work till I/O box. I/O Box installation I/O box o system network cabling including all cable numbering and labeling work.
2	CAT6 UTP Cable	Supply CAT6 UTP Cable,23 AWG Solid bare Copper (4 pair), High Density PVDF:- Per Reel-304.8m
3	Cat 6 UTP Modular Plug	Supply Cat 6 UTP Modular Plug 4 parts, RJ45 modular plug :4 twisted pairs, Polycarbonate material, IDC Termination Type
4	Network patch cord	Supply Twisted pair Network patch cord (Stright-through),2m,28 AWG
5	Gang Box	Supply Combo D-RJ45 CAT6E Lan I/O Network Keystone Jack, Gang Box, face plate, Single Port Face Plate
6	Patch Pannel	Supply Patch Pannel 48 Port/24 Port, ID plate, PVC, Transparent color with paper, SPCC, 1.5mm thickness with Black (RAL 9005) color painted
7	Silicone cap	Supply RJ 45 CONNECTOR Silicone cap
8	Horizontal Cable Manager	Supply 2U 22 Slot Rack Mount Horizontal Cable Manager Duct Raceway with cover for 19" Server Rack
9	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
9. STUDIO LIGHT SYSTEM		
45. SITC of 250w LED Panel Light: (Real Set):		
1	Type	250W SMD LED ARRAY LED light 3200K/5600K panel complete with 4 leafs barn door, 2 diffusers, normal opera ted yoke provided.

2	Lamp power	250W
3	Color Temperature	3200K/ 5600K
4	Lamp life	L70 >50000 Hours @55°C
5	Dimming	0-100% through manual and DMX
6	CRI	> 95, TLCI: > 95, R9 Value: > 95 or better
7	Beam Angle	100°
8	Protection Rating:	IP 20
9	Mounting Accessory	Die cast aluminium "C" clamps and Safety bond 1.5Mtr long with lock clip
10	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
46. SITC of 150w LED Panel: (Chroma Set):		
1	Type	150W SMD LED ARRAY LED light 3200K/5600K panel complete with 4 leafs barn door, 2 diffusers, normal operated yoke provided.
2	Lamp power	150W
3	Color Temperature	3200K/ 5600K
4	Lamp life	L70 >50000 Hours @55°C
5	Dimming	0-100% through manual and DMX
6	CRI	> 95, TLCI: > 95, R9 Value: > 95 or better
7	Beam Angle	100°
8	Protection Rating:	IP 20
9	Mounting Accessory	Die cast aluminium "C" clamps and Safety bond 1.5Mtr long with lock clip
10	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
47. SITC of 100w LED Fresnel:		
1	Type	100W COB LED 5600K panel complete with 4 leaf barn doors.
2	Lamp power	100W
3	Color Temperature	5600K
4	Lamp life	L70 >50000 Hours @55°C
5	Dimming	0-100% through DMX 512 / RDM / Manual
6	CRI & TLCI	>95 or better
7	Beam Angle	10° to 50° steeples linear zoom
	Fresnel lens diameter	200mm
	Lens Material	Annealed shock resistant borosilicate glass. (AUER German Made)
8	Protection Rating:	IP 20
9	Mounting Accessory	Die cast aluminum "C" clamps and Safety bond 1.5Mtr long with lock clip
10	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
48. SITC of Light Accessories: (1 Lot basis) & Installation:		
1	Systems	Required all Accessories C Clamp Safety Bond & Identification Name Plate
2	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
49. SITC of Professional 40-Channel DMX Lighting Console		
1	Type	Professional 40-Channel or better DMX Lighting Console
2	Feature Support	40 preset channels, assignable to 512 DMX channels
3	Feature Support	Dimmer control via DMX or analog output
4	Feature Support	Illuminated display/controls and Lamp socket for easy operation in dark

		stage environments
5	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
6	Type	Professional 40-Channel or better DMX Lighting Console
7	Feature Support	40 preset channels, assignable to 512 DMX channels
50. SITC of Light DMX Network:		
1	Systems	Lighting installation, and DMX networking, Light power installation, professional service work
10. ONLINE UPS SYSTEM		
51. SITC of 30KVA ONLINE UPS:		
1	UPS	30 KVA 3:1 (3 Phase In: 3 Phase Out) On-Line UPS System with 30min Backup True online double conversion VFI-SS-111, IGBT Rectifier
2	Batteries and Accessories	Suitable 200Ah x 12V VRLA Batteries to provide backup for 30 Mins or more along with Battery Rack, interlink battery cables
3	Architecture	Conventional UPS Parallelable up to 4 units.
4	Features	Uto 94% efficiency in double conversion mode 3:1 crest factor Inbuilt Touch Screen based LCD Display IEC 62040-1 Standard & Certifications IEC 62040-2 Standard & Certifications IEC 62040-3 Standard & Certifications 65dba or better Noise level
5	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
11. OUTDOOR ONLINE PRODUCTION SETUP		
52. SITC of Professional ENG Video Camera: (OUTDOOR ONLINE PRODUCTION SETUP):		
1	Camera	
1.1	Image sensor	1" CMOS sensor
1.2	Pixels	14 effective megapixels
1.3	Lens	Optical 20x Zoom and 40 x Digital zoom or better
1.4	Neutral Density filter	Linear variable ND (1/4 ND - 1/128 ND)
1.5	Optical Image stabilizer	Lens-shift mechanism and electronic Active / Standard / Off mode
1.6	Sensitivity	ISO 250-16000 equivalent (Using SDR Reset look), AUTO (ISO 250-16000, selectable lower limit and upper limit)
1.7	Resolution	3840 x 2160 (Using RTMP / RTMPS), 1920 x 1080, 1280 x 720
1.8	Shutter Speed:	1/8000 sec to 64F
1.9	Viewfinder	1.0 cm (0.39-type) electronic viewfinder (XGA OLED) 2 359 296 dots Approx. 1.07x with 50 mm lens at infinity, -1 m ⁻¹ (Magnification)
1.10	Monitor	8.8 cm (3.5-type) type TFT, 2 764 800 dots, Touch based panel
1.11	Illumination	1.2 lx minimum or better
1.12	Optical Low Pass Filter	Yes, should be available
1.13	Slow & Quick Motion (S&Q)	Yes, should be available
1.14	White Balance	At 2000 K - 15000 K
1.15	Gain	-3 to 36 dB (Every 1 dB)
1.16	Base Look	S-Cinetone, ITU709, 709tone, s709, 709(800%), S-Log3, HLG (Live / Mild / Natural)
1.17	Lens Compensation	Peripheral Shading, Chromatic Aberration, Distortion
1.18	Focus Recognition Target	Human
1.19	Proxy Recording	Yes, should be available

2	Video/Audio Recording	
2.1	Recording Media	Dual Slot: SD/SDHC/SDXC
2.2	Recording Format (Video)	XAVC S: MPEG-4 AVC / H.264 XAVC HS: MPEG-H HEVC / H.265
2.3	Live Streaming	Protocols: RTMP, RTMPS, SRT Video Data Format: MPEG-4 AVC / H.264, MPEG-H HEVC / H.265 Video Resolution: 3840 x 2160 (Using RTMP / RTMPS), 1920 x 1080, 1280 x 720
3	Interfaces	
3.1	Video Output:	BNC, 12G-SDI, 6G-SDI, 3G-SDI (Level A / B), HD-SDI
3.2	HDMI Out:	HDMI connector (Type A)
3.3	Audio Input:	3.5 mm Stereo minijack, XLR 3-pin (Female) x2
3.4	Audio Output:	Integrated into Multi/Micro USB jack(x1)
3.5	Built-In Speaker	Yes, should be available
3.6	Time Code	BNC, TC IN/OUT Switchable
3.7	USB	Yes (SuperSpeed USB 5 Gbps (USB 3.2) compatible)
3.8	Wired LAN	Yes (1000BASE-T, 100BASE-TX, 10BASE-T)
3.9	Wireless LAN (Built-In)	Yes (Wi-Fi Compatible, IEEE 802.11a / b / g / n / ac (2.4 GHz band / 5 GHz band))
3.10	Function for Media Transfer	FTP Transfer Func. (Wired LAN (USB-LAN), USB Tethering, Wi-Fi)
4	Accessories	AC adaptor, Power cord, Battery charger, Rechargeable Battery, LCD hood, Lens hood, Eyecup, Microphone holder, Cold shoe kit
4.1	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
53. SITC of Additional Video Camera Battery & Charger:		
1	Capacity	72 Wh Lithium-Ion Battery or better
2	Voltage	16.4 V DC/14.4 V DC
3	Charger	Single/ Dual Charge Should be compatible with 72 Wh Lithium-Ion Battery
4	Compatibility	Should be compatible with Professional ENG Video Camera (SL52)
5	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
54. SITC of Camera Memory Card:		
1	Capacity	128 or more or better
2	Transfer Speed	Up to 299 MB/s (HD312), Up to 90 MB/s (SDR104) (Write) Up to 300 MB/s (HD312), up to 95 MB/s (SDR104) (Read)
3	Class	Class 10 (SD Speed Class), Class 3 (UHS Speed Class), V90 (Video Speed Class)
4	Interface	UHS-II
5	Compatibility	The Memory card should be camera same OEM or reputed brand in India
55. SITC of Camera Card Reader:		
1	Interface	USB3.2 Gen2 x 1
2	Media Card Reader	CFexpress Type A and SD UHS-II/UHS-I memory cards
3	Compatibility	The Memory card reader should be camera same OEM or same brand of Memory card.

4	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
56. SITC of Camera Bag for Professional ENG Video Camera:		
1	Compatibility	Fully compatible of Professional Video camera and battery store.
2	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
57. SITC of Professional Full Frame Mirrorless Camera:		
1	Camera System	Mirrorless DSLR Camera with 28-70mm Zoom lens, 4K full frame 24.2MP, ISO range 100 to 51200, 1/8000 shutter speed
2	Lens	LENS MOUNT E-mount
3	Image Sensor	SENSOR TYPE 35 mm full frame (35.6 × 23.8 mm), Exmor R® CMOS sensor ASPECT RATIO 3 : 2 ANTI-DUST SYSTEM Charge protection coating on optical filter and image sensor shift mechanism NUMBER OF PIXELS (TOTAL) Approx. 25.3 megapixels NUMBER OF PIXELS (EFFECTIVE) Approx. 24.2 megapixels
4	Lens Kit	28-70 mm Zoom Lens
5	Noise Reduction	Long exposure NR: On/Off, available at shutter speeds longer than 1 sec., High ISO NR: Normal/Low/Off
6	Recording System	MEMORY CARD SLOT SLOT1: Slot for SD (UHS-I/II compliant) memory card, SLOT2: Multi slot for Memory Stick Duo™/SD (UHS-I compliant) memory card RECORDING MODE ON 2 MEMORY CARDS Simult. Rec (Still), Simult. Rec (Movie), Simult. Rec (Still/,Movie), Sort (JPEG/RAW), Sort (Still/Movie), Auto Switch Media (On/Off), Copy MEDIA Memory Stick PRO Duo, Memory Stick PRO-HG Duo, Memory Stick Micro (M2), SD memory card, SDHC memory card (UHS-I/II compliant), SDXC memory card (UHS-I/II compliant), microSD memory card, microSDHC memory card, microSDXC memory card LOCATION INFORMATION LINK FROM SMARTPHONE Required
7	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system

58. SITC of Camera Backpack for Professional Full Frame Mirrorless Camera:		
1	Compatibility	Fully compatible of Professional Video camera and battery store.
2	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
59. SITC of ENG/Outdoor Tripod System:		
1	Payload	5 Kg

2	Ball diameter	75mm
3	Features	Light, Bubble
4	Spreader	Ground
5	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
6	Payload	5 Kg
7	Ball diameter	75mm
8	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
60. SITC of ENG/Outdoor Camera Light with Battery:		
1	Video Light System	Professional Video Light & Compatible Li-ion Battery with & Micro USB Charging, Dimmable 3200k -5600k, Compatible with Tripods, Monopods, Cameras, Table stand & Camcorder
2	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
61. SITC of ENG/Outdoor Interview Mic:		
1	Polar Pattern	Cardioid
2	Element Type	Dynamic
3	Frequency Range	40 Hz to 18 kHz
4	Impedance	350 Ohms
5	Form Factor	Handheld
6	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
62. SITC of ENG/Outdoor Wireless Mic System:		
	System	
1	Wireless Technology	Digital UHF
2	Number of RF Channel	2240
3	Included Transmitters	1x Bodypack, 1x Plug-On
4	Diversity	Intelligent Switching Diversity
5	Audio frequency response	20 Hz - 20 kHz (-3 dB) @ 3 dBfs
6	Audio THD	≤ -60 dB for 1 kHz @ -3 dBfs input level
7	Dynamic range	134 dB
8	System latency	1.9 ms or better
	Receiver	
9	Transmit power (radiated)	BLE: max. 10 mW EIRP
10	Audio output power	< 2 dBV max. (high level) / < 4dBu max (high level)
11	Headphone Output	< 50 mW into 16 Ohms
	Plug-On Transmitter	
12	Transmit power	Audio link: 10 mW ERP BLE: max. 10 mW EIRP
13	Audio output power	< 2 dBV max. (high level) / < 4dBu max (high level)
14	Output power XLR	max. 10 mA
	Bodypack Transmitter	
15	Occupied bandwidth	200 kHz
16	Transmit power (radiated)	Audio link: 10 mW ERP (Range Y1-3: 12 mW ERP) BLE: max. 10 mW
	Lavalier Microphone	
17	Transducer principle	pre-polarized condenser microphone
18	Pick-up pattern	omni-directional
19	Sensitivity (free field, no load) (1	17 mV/Pa

	kHz)	
20	Max. SPL at 1 kHz	130 dB
21	Frequency response	50 to 18,000 Hz
22	Equivalent noise level A-weighted	32 dB
23	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
63. SITC of Laptop for Outdoor Web Stream:		
1	Type	
2	Processor	Intel Core i7 10Core Latest generation or better
3	Screen	16-inch or better 1920x1200 non-touchscreen,250nit or better
4	Graphics	Intel
5	RAM	16GB DDR5 RAM or Better
6	Media	1TB NVMe SSD inbuilt
7	OS	Windows 11 Pro
8	Features	Backlite Keyboard with Numeric Keypad
9	Additional Applications	Microsoft office latest version
10	Ports	2 USB 3.2 Gen 1 (5 Gbps) ports 1 USB 3.2 Gen 2 (10 Gbps) Type-C® with DisplayPort™ Alt Mode 1.4/Power Delivery port 1 Universal Audio jack 1 HDMI 1.4 port 1 RJ45 Ethernet port
11	Primary Battery	4 Cell, 54 Wh, integrated
12	Wireless Network	Realtek Wi-Fi 6 RTL8852BE, 2x2, 802.11ax, MU-MIMO, Bluetooth® wireless card
13	Accessories	Laptop carry bag, wireless Mouse, Mini Power Extension board, Headphone
14	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
64. Laptop for Outdoor Web Stream: 16-inch Laptop Carry Bag pack:		
1	Compatibility	Fully compatible of 16" Laptop carry.
65. Wireless Mouse:		
1	Sensor	Advanced Optical Tracking
2	Nominal value	400 DPI
3	Number of Buttons:	5 (Left/Right-click, Back/Forward, Scroll-wheel with middle click)
4	Battery type	1 x AA battery
5	Connection Type	USB Receiver Bluetooth Low Energy Technology
6	Wireless range	10 m approx.
66. SITC of Mini power Extension Board:		
1	Type	4-Socket Smart Extension Board, 16 Amp Power Socket
67. SITC of 5G/4G Mobile Sim Based Router:		
1	Wireless standard	Wireless AC Wave 2
2	Frequency band mode	Dual-band simultaneous
3	Wireless speed	1733 Mbps 5 GHz, 800 Mbps 2.4 GH
4	Antenna type	Embedded omni-directional antennas
5	Wired interface	1 x Gigabit Ethernet WAN, 4 x Gigabit Ethernet LAN
6	3G/4G LTE support	5G/4G LTE/3G via SIM

7	USB ports	1 x USB 2.0
8	Features	MU-MIMO
9	Security Protocol	WPA/WPA2
10	Firewall	DoS , Stateful Packet Inspection , Anti-spoofing Checking, IP/MAC Address Filtering , DMZ
11	Frequency Support	5G NR Sub 6Ghz n1/3/20/28/78 LTE FDD B1/B3/B7/B8/B20/B28 LTE Cat20 TDD B38 WCDMA B1, B8
12	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
12. STUDIO REAL SET AND CHROMA SET WORK		
68. SITC of Studio Real Set Design, [Studio Size: L: 34ft, B: 26ft, H: 21.3 ft + 1ft]:		
The vendor must visit "Present Studio Hall at HQ Building to physically ascertain customized requirements at site before quoting quantities and rates for various items under this head"		
1		Supply and installation of Real Set design and installation (as per Studio Room Measurements)
2		The bidder should submit the Real set design which occupied for Minimum 3 Guest and two anchor seating facilities submit the Real set design cad or any drawings with the detail's costs.
3	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
69. SITC of Studio Chroma Set Design: [Studio Size: L: 34ft, B: 26ft, H: 21.3 ft + 1ft] (STUDIO & PCR ACOUSTIC AND CIVIL WORK)		
The vendor must visit "Present Studio Hall at HQ Building to physically ascertain customized requirements at site before quoting quantities and rates for various items under this head"		
1	Fixed Chroma set	14 Feet wide, 10 Feet on Wall and at least 8 Feet on Floor with curved edge from Wall to floor. With Proper green fabric to provide rich Chroma key effect
2		The bidder should submit the fixed Chroma set design which occupied for Minimum 2 Guest and one anchor seating facilities submit the Real set design cad or any drawings with the detail's costs.
3	Supplied Accessories	All necessary cables and accessories should be supplied for completeness of the system
13. STUDIO & TECHNICAL AREA - ACOUSTICS, FURNITURE AND AESTHETICS		
70. SITC of Acoustic Treatment on the Studio Walls, Ceiling, Door, Floor, Studio-PCR Glass observation window, Technical Furniture Studio, Electrical Work: [Studio Size: L: 34ft, B: 26ft, H: 21.3 ft + 1ft]:		
The vendor must visit "Present Studio Hall at HQ Building to physically ascertain customized requirements at site before quoting quantities and rates for various items under this head"		
1	Studio Size (For reassurance of measurements, Bidders are suggested to do a site survey before bidding. Changes in cost due to measurements will not be accepted at a later stage)	Studio Wall 1 Studio Wall 2 Studio Wall 3 Studio Wall 4 Ceiling
2	Providing of Acoustic Treatment on the Studio Walls and Ceiling	
3	- Glass Wool of 32 kg density to be filled between wall and 12 mm thick ply which will be finished with Laminate (inside of the studio) cotton cloth can also be considered with good color combinations.	
4	- Rockwool of 40 kg density to be filled between Wall and the perforated Gypsum or a good sound absorbing material as being proposed for acoustic	

5	Ceiling shall also be acoustically treated with 50 mm thick layer of Rockwool of 40 kg density in a Grid of 2'x2' made up of wire mesh, which will be placed on the perforated Gypsum board, which will be further finished with the paint after jointing and taping
6	Providing and making 115mm thick brick work (If any Required)
7	Providing of 8 mm dual toughened Sand witted Glass Observation Window between Studio and PCR of size 1500x750mm minimum gap between two glasses will be 2". (Glass Size based on the actual (Request for Site Visit)
8	Providing and fixing of Chroma (14'*10') made up of ply and a carpet of green color to be pasted on
9	Providing and Installation of MS (Round Tube of 50mm dia) Studio Lighting grid of 4'x4' (Light Grid Size based on the actual (Request for Site Visit))
10	Providing and laying of 2mm thick PVC flooring in Studio area
11	Providing and fixing of designer Anchor Table of sizewith laminate finish and proper edge binding in suitable ply (Table Size based on the advisable studio set design (Request for Site Visit))
12	Studio Set with LED Back drop with graphic (25'*10") along with provisioning of fixing 75" interactive screen
13	Sufficient electrical points shall be provided (5 Amp) on UPS supply throughout the studio with good quality, standard make switches and sockets keeping matching the aesthetics of studio
14	The General lighting for the studio should be flicker free LED panel lights with 36 watts 6500k , Total of 6 number.
15	Electricals Work Studio: Supply and installation of materials total electrical wiring with fire resistance Grade 0, all required switch boards and set decorative lights and working lights will be provided.) 1.Provision of 5-amp socket and switches at all the sides of the wall for lighting mise works (based on / Inst. Of Engineer In charge) 2.seperate conducting for audio and video cables with proper distancing in studio and PCR both
16	Providing and fixing of 55mm thick single leaf Acoustic Door of size approx. 2100*1050 with vision panel of 300x300 and the door hardware including door closer, handle, lock and a door stopper (Numbers of Door and Size based on the Site Visit)
17	All necessary work should be supplied and done for completeness of the Studio acoustic work as per above mentioned instructions.

71. SITC OF Acoustic Treatment on the PCR Walls, Ceiling, Door, Floor, Technical Furniture Studio, Electrical Work:

[PCR / Production Control Room Size: L: 30ft, B: 19.75ft, H: 9.25 ft + 1ft]:

The vendor must visit "Present Studio Hall at HQ Building to physically ascertain customized requirements at site before

1	PCR Size (For reassurance of measurements, Bidders are suggested to do a site survey before bidding. Changes in cost due to measurements will not be accepted at a later stage)	PCR and Passage Wall 1 PCR Wall 2 PCR Wall 3 PCR Wall 4
2	Providing of Acoustic Treatment on the PCR Walls	
3	- Glass Wool of 32 kg density to be filled between wall and 12 mm thick ply which will be finished with Laminate inside of the PCR	
4	- Rockwool of 40 kg density to be filled between Wall and the perforated Gypsum as being proposed for acoustic	
5	Providing and Fixing of Acoustic Grid Ceiling (600x600x20) with 15 mm Superfine 32 WH grid system (NRC 0.7) and supports as required at the height as per the drawing/ Inst. Of Engineer In charge	
6	Providing and laying of 2mm thick PVC flooring	
7	Providing and Fixing of Technical Table at PCR of size with laminate finish and proper edge binding in suitable ply. (Table Size based on the advisable basic of PCR table design (Request for Site Visit))	

8	Providing and Fixing of Cabinets 2400x900mm & 450mm deep, made up of commercial board with Shutters in Prelam MDF
9	Electricals Work PCR: Supply and installation of materials total electrical wiring with fire resistance Grade 0, all required switch boards and set decorative lights and working lights will be provided.) 1.Provision of 5-amp socket and switches at all the sides of the wall for lighting mise works (based on / Inst. Of Engineer In charge) 2.seperate conduiting for audio and video cables with proper distancing in studio and PCR both
10	Providing and fixing of 55mm thick single leaf Acoustic Door of size Approx 2100*1050 with vision panel of 300x300 and the door hardware including door closer, handle, lock and a door stopper (Numbers of Door and Size based on the Site Visit)
14. AIR-CONDITIONING, UPS & ELECTRICAL WORK	
72. SITC of 3.0 TR Inverter - Heat Pump Cassette AC STUDIO:	
The vendor must visit "Present Studio Hall at HQ Building to physically ascertain customized requirements at site before quoting quantities and rates for item with modified specification according to site conditions under this head"	
1	Capacity:3.0 TR / 37800 BTU / 11.0 KW, Sound Pressure Level (H/M/L/SL) - dB(A):48/46/42/37, Air Flow (H/M/L) - CFM:1118/941/794/618
73. SITC of 2.0 TR Inverter - Cooling Only Cassette AC PCR:	
The vendor must visit "Present Studio Hall at HQ Building to physically ascertain customized requirements at site before quoting quantities and rates for item with modified specification according to site conditions under this head"	
1	Capacity: 2.0 TR / 24400 BTU / 7.15 KW, Sound Pressure Level (H/M/L/SL) - dB(A): 46/43/39/36, Air Flow (H/M/L) - CFM: 853/765/706/588
74. SITC of STUDIO AND PCR AC INSTALLATION:	
The vendor must visit "Present Studio Hall at HQ Building to physically ascertain customized requirements at site before quoting quantities and rates for item with modified specification according to site conditions under this head"	
1	Joints and installations points, Remote system integrations ac in/out, Panel for Cassette ac installation, Unit installation, integration
15. INSTALLATION MATERIALS	
SITC of Professional Grade Installation materials:	
All installation materials including racks, power cables, interconnection cables, connectors and other accessories (including nuts, bolts, screws etc.) required for installation of the complete system shall be quoted	
75.	SITC of PoE++ Switch: 8-port 10/100/1000BASE-T, Ultra90 PoE++ with 720W PoE budget,2-port 10/100/1000BASE-T, 2-port 1000/10GBASE-X (SFP+),60 Gbps
76.	SITC of CAT6 Ethernet Cable: 305M Low Skew Cat Cable
77.	SITC of HD Video Cable: 75 Ω, 23 AWG Coaxial Cable, 3G-SDI, Ultra Slim Multi-Layered, Highly-Foamed Insulation Different Foaming Ratio Per Layer Tinned Copper Braid and Foil Shielding Ideal for Internal Rack Wiring, SMPTE 259M/292M/424M supported HD Video Cable (each roll 200m) (Canare/ Beldan)
78.	SITC of HD Video Connectors & Boots As per Video Cable Compatible HD Video cable's Connector & Boot (Canare/ Beldan, neutrik)

79.	SITC of Analogue Audio Cable:	For Internal Rack Wiring 100% Aluminum Tape Shield Coverage Easy Assembly Nominal: 0.126' (3.2 m) 2 x Conductors Pitch Twist Quad:<0.99" (<25 mm) (Canare/ Beldan) (each roll 200m)
80.	SITC of XLR Male Connector:	XLR 3-pin Male Connectors (Percon/Neutrik)
81.	SITC of XLR Female Connector:	XLR 3-pin Female Connectors (Percon/ Neutrik)
82.	SITC of Stereo (TRS) 1/4" Phone Plug:	Stereo (TRS) 1/4" Phone Plug Connector (Percon/ Neutrik/ Canare)
83.	SITC of RCA Connectors – Male	RCA Connectors – Male (Percon/Neutrik/ Canare/MX)
84.	SITC of EP Stereo MALE CONNECTOR 3.5 mm (Percon/ Neutrik/ Canare/MX)	EP Stereo MALE CONNECTOR 3.5 mm
85.	SITC of IEC Male sockets C13	IEC Male sockets C13 (Elcom/ MX)
86.	SITC of IEC Female sockets C14	IEC Female sockets C14 (Elcom/ MX)
87.	SITC of IEC based Power Distribution	14IEC, 14 females based MDU
88.	SITC of 2.5 Sqmm 3 Core Power Wire: 100m.	2.5 Sqmm 3 Core Power Wire: 100m. (polycab/ havells /Reputed brand)
89.	SITC of 1.5 Sqmm 3 Core Power Wire: 100m	1.5 Sqmm 3 Core Power Wire: 100m. (polycab/ havells /Reputed brand)
90.	SITC of Analogue Audio Connectors:	XLR Male XLR Female Connectors, TRS, EP, Photo etc. Connectors (if any addition required based on Project installation basis) (qty-1Lot) (Percon/ Neutrik/ Canare)
91.	SITC of 42 Equipment Rack in PCR	42U 800 x 1200mm Server Rack Cabinet, without Front and Rear Door, 4 x Full Tray, 2 x vertical cable manager/Tray, No fan, no PDU (Netrack, valrack equivalent)
92.	SITC of Pins 9/15/25 (Male & Female)	Pins 9/15/25 (Male & Female) with metallic shell (Qty as per requirement basis) with metallic shell: Qty-Lot Basis
93.	SITC of Alpha Numerical Ferrules	Rubber Cable Marker Ferrules A-Z, 0-9 For Cable, Size as per cable diameter (Qty as per requirement basis) (Qty-Lot Basis)
94.	SITC of Cable ties:	Nylon Cable Ties (Qty as per requirement basis), (Qty-Lot Basis), black/ White 12", 8", 6", 4" (100 PCs Packets each)
95.	SITC of Spiral Black (Qty-Lot Basis):	Spiral Cable Wrap 4mm 25m Black (Qty as per requirement basis) Cable Wrap 4mm, 6mm 25m
16. SYSTEM COMMISSIONING, INSTALLATION, TRAINING and SUPPORT		
96. SITC OF INTEGRATION MATERIAL & ENGINEERING SERVICES		
All installation materials including racks, power cables, interconnection cables, connectors and other accessories (including nuts, bolts, screws etc.) required for installation of the complete system shall be quoted		
1	Cabling	It is required to set-up the facility for HD operation therefore all the cabling should support HD operations
2	Installation Material	All installation materials including racks, power cables, interconnection cables, connectors and other accessories (including nuts, bolts, screws etc.) required for installation of the complete system shall be quoted

3	System Completeness	Completeness of the system will be responsibility of the bidder The bidder will have to ensure for complete Installation, commissioning, testing and training to staff.
4	System Completeness	If any material is found short during installation because of which equipment is not functional; completion certificate may not be issued
5	Workflow Diagram	The bidder has to provide schematic diagram of the technical workflow to ensure the workability of the offered solution in all respects.
6	Misc. Sub-System	Additional converters, adapters, mounts or fixtures etc. have to be supplied by the bidder to complete the workflow, even if the same are not part of the bill of material.
7	System Commissioning	System Commissioning, should be before the Project, during/running the project and at the time of dry run too. Accordingly need to submit the Detailed Automation/Workflow/Installation Drawings, Systems Components Installation Report, Systems Components Testing Reports, Systems Commissioning Report. System Support During Dry Runs, Pre-Launch & Post Launch Report

Note:

Point number 1, 2, 3, 5 and 6 (PTZ Camera/IP Remote/ Video Recording Application/ Professional ENG Video Camera and Full Frame Mirrorless Camera may be of same standard or higher than the specifications.