



भारतीय प्रौद्योगिकीसंस्थानमद्रासचेन्ने 600 036
INDIAN INSTITUTE OF TECHNOLOGY MADRAS
Chennai 600 036
भंडार एवं क्रय अनुभाग
STORES & PURCHASE SECTION
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G. Chitrapavai
Deputy Registrar (Stores & Purchase)

Dated : 01.01.2019

Tender No. IITM/SPS /CCE/VC Studios /006/2018-19

Due Date: 21.01.2019
before 03.00 pm

Dear Sirs,

On behalf of the Indian Institute of Technology Madras, Tenders are invited for the

Supply and installation of “Multi-Point Control Unit- MCU”

confirming to the specifications enclosed.

Tender Documents may be downloaded from Central Public Procurement Portal <https://etenders.gov.in/e procure/app>
Aspiring Bidders who have not enrolled / registered in e-procurement should enroll / register before participating through the website <https://etenders.gov.in/e procure/app>. The portal enrolment is free of cost. Bidders are advised to go through instructions provided at “**Help for contractors**”. [Special Instructions to the Contractors/Bidders for the e-submission of the bids online through this e-procurement Portal”].

Tenderers can access tender documents on the website (For searching in the NIC site, kindly go to Tender Search option and type ‘IIT’. Thereafter, Click on “GO” button to view all IIT Madras tenders). Select the appropriate tender and fill them with all relevant information and submit the completed tender document online on the website <https://etenders.gov.in/e procure/app> as per the schedule attached.

No manual bids will be accepted. All quotations both Technical bid and price bid should be submitted in the E-procurement portal.

1	LAST DATE for receipt of Tender	:	21.01.2019 before 03.00 p.m
	Date & Time of opening of Tender	:	22.01.2019 before 03.00 p.m
	Pre bid meeting :		Date and time : 09.01.2019 @ 04.30 pm Venue : 3rd floor, Conference Room, Administration Building, IIT Madras Doubts if any on the specifications, tender conditions etc. may be raised and get clarified during the pre-bid meeting for the above tender
A	Submission of Tender	:	As per the directives of Department of Expenditure, this tender document has been published on the Central Public Procurement Portal URL: https://etenders.gov.in/e procure/app The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The

		<p>instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal.</p> <p>More information useful for submitting online bids on the CPP Portal may be obtained at: https://etenders.gov.in/eprocure/app</p> <p>Both Technical Bid & Price Bid should be submitted separately in online CPP portal as per the specified format only. Right is reserved to ignore any tender which fails to comply with the above instructions.</p> <p>No manual bid submission is entertained.</p>
B	Instructions for online bid submission	<p>REGISTRATION</p> <ol style="list-style-type: none"> i. Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal <u>URL:https://etenders.gov.in/eprocure/app</u> by clicking on "Online Bidder Enrollment". Enrolment on the CPP Portal is free of charge. ii. As part of the enrolment process, the bidders will be required to choose a unique user name and assign a password for their accounts. iii. Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal. iv. Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / TCS / nCode / eMudhra etc.) v. https://etenders.gov.in/eprocure/app?component=%24DirectLink&page=DSCInfo&service=direct&session=T with their profile. vi. Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSCs to others which may lead to misuse. vii. Bidder then logs in to the site through the secured log-in by entering their user ID / password and the password of the DSC / eToken.
Guidelines, Terms and Conditions of Tender		
C	Searching for tender documents	<ol style="list-style-type: none"> i. There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, organization name, location, date, value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as organization name, form of contract, location, date, other keywords etc. to search for a tender published on the CPP Portal. ii. Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules.

		<p>These tenders can be moved to the respective “My Tender” folder. This would enable the CPP Portal to intimate the bidders through SMS / email in case there is any corrigendum issued to the tender document.</p> <p>iii. The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.</p>
D	Preparation of bids	<p>i. Bidder should take into account any corrigendum published on the tender document before submitting their bids.</p> <p>ii. Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.</p> <p>iii. Bidder, in advance, should prepare the bid documents to be submitted as indicated in the tender document / schedule and generally shall be in PDF / XLS formats as the case may be. Bid documents may be scanned with 100 dpi with black and white option.</p> <p>iv. To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, GSTIN Details, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use “My Documents” area available to them to upload such documents. These documents may be directly submitted from the “My Documents” area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.</p>
E	Submission of bids	<p>i. Bidder should log into the site well in advance for bid submission so that he/she upload the bid in time i.e. on or before the bid submission date and time. Bidder will be responsible for any delay due to other issues.</p> <p>ii. The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.</p> <p>iii. Bidder has to select the payment option as “Off-line” to pay the EMD as applicable. The original EMD in the form of DD has to reach IIT Madras on or before the closure date and time of the tender. If the DD is not received before the closure date and time the tender will be summarily rejected. The EMD document submitted physically to IIT Madras and the scanned copies furnished at the time of bid submission online should be the same otherwise the tender will be summarily rejected.</p> <p>iv. A standard BOQ format has been provided with the tender document to be filled by all the bidders. Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. Bidders are</p>

			<p>required to download the BOQ file, open it and complete the detail with their respective financial quotes and other details (such as name of the bidder). If the BOQ file is found to be modified by the bidder, the bid will be rejected.</p> <p>v. The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.</p> <p>vi. The Tender Inviting Authority (TIA) will not be held responsible for any sort of delay or the difficulties faced during the submission of bids online by the bidders due to local issues.</p> <p>vii. The uploaded tender documents become readable only after the tender opening by the authorized bid openers.</p> <p>viii. Upon the successful and timely submission of bids, the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.</p> <p>ix. Kindly add scanned PDF of all relevant documents in a single PDF file of compliance sheet.</p>
F	Assistance to bidders	:	<p>i. Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.</p> <p>ii. Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk. The contact number for the helpdesk is [0120-4200462, 0120-4001002, 0120-4001005]</p>
G	General Instructions to the Bidders	:	<p>i. The tenders will be received online through portal https://etenders.gov.in/eprocure/app. In the Technical Bids, the bidders are required to upload all the documents in pdf format.</p> <p>ii. Possession of a Valid Class II/III Digital Signature Certificate (DSC) in the form of smart card/e-token in the company's name is a prerequisite for registration and participating in the bid submission activities through https://etenders.gov.in/eprocure/app</p> <p>iii. Digital Signature Certificates can be obtained from the authorized certifying agencies, details of which are available in the web site https://etenders.gov.in/eprocure/app under the "Information about DSC".</p>
H	Opening of the tender	:	<p>The online bid will be opened by a committee duly constituted for this purpose. Online bids (complete in all respect) received along with scanned copy of EMD (if any) will be opened as mentioned at "Annexure: Schedule". Bid received without EMD (if present) will be rejected straight way. The technical bid will be opened online first and it will be examined by a technical committee (as per the eligibility criteria, specification and requirement). The financial</p>

			offer/bid will be opened only for the offer/bid which technically meets all requirements as per the specification.
I	Earnest Money Deposit (EMD)	:	<p>i. EMD for Rs. 60,000/- has to be paid by means of DD only. The scanned copy of DD to be uploaded in the online portal and the original DD should reach us on or before the due date and time.</p> <p>ii. The original EMD in the form of DD should be sent either by REGISTERED POST ACKNOWLEDGEMENT DUE OR THROUGH MESSENGER. If the original EMD DD is sent through Messenger, the same has to be dropped in the TENDER BOX marked Stores & Purchase kept for this purpose in the REGISTRAR’S OFFICE (1st Floor of Administrative Building) on or before due date 21.01.2019 not later than 03.00 p.m.</p> <p>iii. If it is by post (Registered Post or Speed post only) the same should reach on or before due date 21.01.2019 not later than 03.00 p.m. otherwise it will be summarily rejected even if the scanned copy of the DD is enclosed in e-bid.</p> <p>iv. Demand Draft may be drawn in favour of “The Registrar, IIT Madras” payable at Chennai. The original EMD should be sent to:</p> <p style="text-align: center;">THE REGISTRAR INDIAN INSTITUTE OF TECHNOLOGY MADRAS CHENNAI- 600 036</p> <p>v. Performance guarantee @ 5% of the item value quoted has to be submitted by way of DD/ bank guarantee by the successful bidder only.</p> <p>vi. Non submission of original EMD DD on or before the due date and time will result in rejection of the e-bid even if the proof of the DD attached in the e-bids submitted by the vendor.</p> <p>vii. The EMD will be returned to unsuccessful tenderer only after the tenders are finalized.</p>
J	Marking on Technical Bid	:	<p>i. The technical Specification for this tender is given in Annexure A. The tenderer shall go through the specification and submit the technical bid in Annexure B.</p> <p>ii. The Technical bid should be submitted in the proforma given as per Annexure B in pdf format only through online (e-tender). No manual submission of bid is entertained.</p> <p>iii. All technical bid pages should have the page-wise heading as “Technical Bid” and page no. in all pages with seal and signature of authorized signatory. The total no. of pages should be mentioned at the last page of the documents.</p> <p>iv. The technical bid should consist of all technical details along with catalogue/brochure and other technical, commercial terms and conditions.</p>
K	Marking on Price Bid	:	<p>i. Price bid should be submitted in the prescribed proforma as per BOQ in pdf format as per Annexure C through e-tender only. No manual submission of bid is entertained.</p>

		<p>ii. The price bid should clearly indicate the item-wise list of the hardware items, software items & licenses and their validity period which are mentioned in the technical bid. The price bid should also clearly indicate the total price of all the above items.</p>
<p>2</p>	<p>Preparation of Tender:</p> <p>a) You should quote your product as per our specification requirements by mentioning our requirements and your offer side by side and the rate should be in total as per our requirements. We will not make any calculation if you have mentioned the rates of items separately.</p> <p>b) The offer/bids should be submitted through online only in two bid system i.e. Technical Bid and Price Bid separately.</p> <p>c) The online technical bid will be first opened and evaluated. In the primary screening, technical bid of only those who satisfy the Vendor Eligibility Criteria and technical evaluations as per ANNEXURE – A will be evaluated and those who qualify in both will alone be called for demonstration. The Price bid of only those bidders whose vendor eligibility criteria, technical bid and demonstration are found to be qualified alone will be opened by the Committee.</p>	
<p>3</p>	<p>Signing of Tender:</p> <p>The Tender is liable to be rejected if complete information is not given therein or if the particulars and date (if any) asked for in the schedule to the Tender are not fully filled in or not duly signed/authenticated. Specific attention is drawn to the delivery dates and terms and conditions enclosed herewith. Each page of the bids required to be signed and bears the official seal of the tenderers.</p> <p>If the application is made by a firm in partnership, it shall be signed (with seal) by all the partners of the firm above their full typewritten names and current addresses or alternatively by a partner holding power of attorney for the firm in which case a certified copy of the power of attorney shall accompany the application. A certified copy of the partnership deed along with current addresses of all the partners of the firm shall also accompany the application.</p> <p>If a limited company or a corporation makes the application, it shall be signed by a duly authorized person holding power of attorney for signing the application, in which case a certified copy of the power of attorney shall accompany the application. Such limited company or corporation may be required to furnish satisfactory evidence of its existence. The applicant shall also furnish a copy of the Memorandum of Articles of association duly attested by a Public notary.</p>	
<p>4</p>	<p>Period for which the offer will remain open:</p> <p>i. Firms tendering should note the period for which it is desired that their offers should remain open for acceptance. If the firms are unable to keep their offers open for the specified period they should specifically state the period for which their offers are being provided, however, the day up to which the offer is to remain open being declared closed holiday for the Indian Institute of Technology Madras, the offer shall remain open for acceptance till the next working day.</p> <p>ii. Quotations qualified by such vague and indefinite expressions such as 'subject to immediate acceptance', 'subject to prior sale' will not be considered.</p> <p>iii. The Tender shall remain open for acceptance/validity till: 120 days from the date of opening of the tender</p>	
<p>5</p>	<p>Prices:</p> <p>i. The prices quoted must be nett. per unit as per the technical specification mentioned in Annexure A and must include all packing, delivery and installation charges and other statutory levies. The prices quoted by the Tenderer should be inclusive of GST and other statutory levies (and should be clearly stated to be so) which will be paid by the Purchaser/if legally leviable at the rate ruling on the date of supply as specified in the Acceptance of Tender. The percentage of tax etc. included in the price should be indicated in clear terms. If the inclusive price is not given, we will treat your offered rate as inclusive rate and comparison be made with others. If at the time</p>	

	<p>of comparison of your offer without taxes etc. is happen to be lowest, you are bound to supply as per the offered rate, i.e. without taxes etc.</p> <p>ii. In case of imports, the price should be quoted on CIF/FOB/FCA/Ex-works: Under special circumstances (eg. perishable chemicals), when the item is imported on CIF/CIP, please indicate CIF/CIP charges separately upto IIT Madras indicating the mode of shipment. IIT Madras will make necessary arrangements for the clearance of imported goods at the Airport/Seaport. Hence the price should not include the above charges. At any circumstances, it is the responsibility of the foreign supplier to handover the material to our forwarder at the origin airport after completing all the inland clearing.</p> <p>iii. “In case of CIF/CIP shipments, kindly provide the shipment information at least 2 days in advance before landing the shipment along with the documents i.e. invoice, packing list, forwarder Name, address, contact No. in India to save penalty/demurrage charges (imposed by Indian Customs) . Otherwise these charges will be recovered from the supplier/Indian Agent.”</p> <p>iv. Hence you are requested to be careful while quoting for tender. The price should be without customs duty. The customs duty will be payable / reimbursable by us at the time of clearance on production of necessary proof. Hence these duties need not be included in the price while quoting. Necessary document will be provided at appropriate time. No price revision, changes in the specification already given or changes in the terms and conditions etc. during the period is acceptable.</p> <p>v. Discount, if any, should be indicated prominently.</p>
6	<p>No Advance Payment will be made for Indigenous purchase.</p> <p>Import Payment : Normally for more than USD 2001, payment will be made by Letter of Credit only. 90% payment will be made initially by Letter of Credit and balance 10% will be paid only after satisfactory installation and commissioning on the same LC. Demurrage charges (if any) will be deducted from the balance 10%. Initial opening of Letter of Credit charges will be borne by us. If any amendment is requested for, the charges for the amendment will be borne by the supplier only. Hence, care should be taken in all respects before opening of Letter of Credit.</p>
7	<p>Terms and conditions :</p> <p>Failure to comply with any of the instructions stated in this document or offering unsatisfactory explanations for noncompliance will likely to lead to rejection of offers.</p>
8	<p>Award of Contract :</p> <p>(i) The technical bid of the tenderers will be opened first and the vendor eligibility criteria and technical supporting documents submitted in support of technical bid will be evaluated.</p> <p>(ii) The bidder(s) who have qualified in both vendor eligibility criteria and technical submission will alone be called for demonstration.</p> <p>(iii) Demonstration will be a part of technical bid and the bid(s) of the tenderers who have qualified on vendor eligibility criteria, technical evaluation and demonstration will alone be considered for opening of price bid</p> <p>(iv) The L1 among the technically qualified tenderers will be awarded with the contract.</p>
9	<p>Right of Acceptance:</p> <p>IIT MADRAS reserves the right to reject the whole or any part of the Tender without assigning any reason or to accept them in part or full.</p>
10	<p>Communication of Acceptance:</p> <p>Acceptance by the Purchaser will be communicated by Post, if required, and the Company's acceptance communicated to us formally in writing.</p>
11	<p>Warranty: Warranty should be in clear terms. Indicate price change (if any) for extra year warranty. Type of warranty without indication of commercial terms should also be mentioned in the technical bid.</p>

	<p>1.0. Onsite Warranty: The Supplier should confirm that the Products supplied under the tender are new, unused, of the most recent or current models and that they incorporate all recent improvements in design and materials unless provided otherwise in the Tender.</p> <p>Warranty for the supplied product should remain valid for a minimum period of 36 months after installation. In case of failure in functionality of the supplied equipment the warranty should ensure that alternate equipment is made available by the supplier at no cost within one working day of notification if the existing supplied equipment requires warehouse service.</p> <p>In addition upon receipt of registering a complaint, the Supplier should with all reasonable speed, repair or replace the defective Product or parts thereof, without any additional costs within 7days of notification.</p> <p>2.0. Installation: The equipment has to be installed or commissioned by the successful bidder within 20 days from the date of receipt of the item at site of IIT Madras.</p>
12	<p>Delivery Period: The item should be delivery within 30 days from the date of Purchase Order. Please indicate the actual delivery period clearly. In case there is any deviation in the delivery schedule, liquidated damages clause will be enforced or penalty for the delayed supply period will be levied.</p> <p>Non delivery of items will lead to cancellation of Purchase Order without any notice. In addition, action may be taken for removing them from our mailing list.</p>
13	In terms of Rule 173 (iv) of General Financial Rules, 2017 the bidder shall be at liberty to question the bidding conditions, bidding process and/or rejection of its bid.
14	<p>Conditions of contract:</p> <p>Tenderer should quote on the basis of the conditions referred to in Para of the invitation to tender and tender papers. In case these terms and conditions are not acceptable to the tenderer, he should specifically state the deviation(s) there from in the body of the tender.</p>
15	Transit Insurance: The Purchaser will not pay separately for Transit Insurance.
16	Tenderer shall submit along with his Tender: Name and full address of the Banker and their swift code and PAN No. and GSTIN number.
17	<p>GUARANTEE:</p> <p>The tenderer has to declare that the goods sold to the buyer under this contract shall be of the best quality and workmanship and shall be strictly in accordance with the specifications. Tenderer should indicate the period for which the said goods/articles would continue to confirm to the specifications.</p>
18	<p>Jurisdiction:</p> <p>All questions, disputes, or differences arising under, out of or in connection with the contract, if concluded, shall be subject to the exclusive jurisdiction at the place from which the acceptance of Tender is issued.</p>
19	<p>Force Majeure: The Supplier shall not be liable for forfeiture of its performance security, liquidated damages or termination for default, if and to the extent that, it's delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.</p> <ul style="list-style-type: none"> • For purposes of this Clause, "Force Majeure" means an event beyond the control of the Supplier and not involving the Supplier's fault or negligence and not foreseeable. Such events may include, but are not limited to, acts of the Purchaser either in its sovereign or contractual capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes. • If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such conditions and the cause thereof. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.
20	Risk Purchase Clause: In event of failure of supply of the item/equipment within the stipulated delivery schedule, the purchaser has all the right to purchase the item/equipment from the other source on the total risk of the supplier under risk purchase clause.
21	The bidder shall visit the site to understand the requirements of the project. The bidder shall study the scope in detail before submitting bid.

22	<p>Vendor Eligibility Criteria:</p> <p>The bidder shall furnish a covering page indicating item wise compliance to all the Prequalification criteria. Bidder Prequalification Criteria are as given below:</p> <ol style="list-style-type: none"> 1. Experience of having sold and installed at least three units of the same make matching the specifications called for now in this tender in the last five financial years. (As mentioned in the vendor eligibility criteria, copies of purchase/work order, completion certificate from end user and successful operation certificate from the end user to be attached). In case the same specification has not been sold in the last five years the specification of the equipment of the same make that was sold should be enclosed to indicate that it is equivalent/higher specification as called for in the current technical bid. 2. The bidder should be an OEM or authorized dealer of the OEM and necessary authorization letter in this regard should be submitted. 3. The authorized dealer should provide service support in Chennai. Details of registered office in Chennai should be provided. 4. Technical datasheet of the proposed equipment with make and model.
23	<p>Deviations: Any deviations in terms of payment terms, delivery period, warranty etc should be mentioned clearly with suitable justification by the vendor in a separate sheet under the heading 'Deviations'. This sheet should be included in the technical proposal. If no deviations are mentioned, then it will be assumed that the vendor has accepted entirety as mentioned in the tender document and is bound to deliver the same.</p>
24	<p>Demonstration: All the bidders who qualify in both vendor eligibility criteria and technical submission will alone be called for demonstration and should provide a fully integrated demo of the equipment (same make and model) that is being offered and also show the capability of their equipment to integrate and function properly with our existing Polycom VC systems and other systems. If the bidder fails to provide successful demo or fails to participate in the demo, the technical bid of that bidder(s) will be rejected/disqualified for technical noncompliance.</p> <p>The Date and venue for the demo will be intimated on a later date. Time slots for each bidder will be given to provide demo.</p>

Yours Faithfully,

**sd/-
Deputy Registrar
(Stores & Purchase Section)**

ACKNOWLEDGEMENT

It is hereby acknowledged that I/We have gone through all the points listed under “Specification, Guidelines, Terms and Conditions” of tender document. I/We totally understand the terms and conditions and agree to abide by the same.

**SIGNATURE OF TENDERER ALONG WITH
SEAL OF THE COMPANY WITH DATE**

ANNEXURE A

TECHNICAL SPECIFICATIONS

Specification of the Multi-point Control Unit (MCU):

TECHNICAL SPECIFICATIONS	
I. MCU System Specifications	
1.	The MCU should be dedicated standalone hardware equipment . The hardware and all required software should be supplied and supported by the bidder from day one.
2.	The entire hardware to support the required capacity and specifications should be supplied as one unit.
3.	The MCU should support 15 calls (ports) at HD 1080p30fps (transmit and receive) at 4 Mbps or more .The Same MCU should be capable of working with a resolution of 720p 30fps (transmit and receive) under which condition it should support a minimum of 30 calls. Option should be available to increase the number of calls (ports) up to 50 under HD (1080p30fps) resolution at a later stage with no additional hardware but only a software upgrade. These calls (ports) should also be able to support equivalent SD ports based on their resolution. MCU should Support 15 shared concurrent conferences with 15 calls @1080p or 30 calls @ 720p simultaneously in any manner. For example @720p: Eg 1: 10 calls in conf 1 and 10 calls in conf 2 and 10 calls in conf 3, Eg 2: 5 simultaneous conferences each with 6 calls Eg 3: 10 simultaneous conferences each with 3 calls. Eg 4: 30 Calls in Single conference.
4.	The MCU should support flexible resource allocation so that if SD calls (ports) join a conference then it should consume a SD port and not a HD 720p or 1080p calls (ports).
5.	All necessary hardware and software to support the above capacity needs to be supplied and functional from day one.
6.	The Proposed MCU should be able to combine Full HD and SD in the same conference without degrading the full HD resolution, from and to the full HD endpoints. The MCU should interoperate with other OEM product endpoints and MCUs.
7.	The MCU should support calls from room based video conferencing endpoints, desktop, laptops, ipads present on the internal/external network of the IIT Madras . The MCU should interoperate with endpoints of all standards based OEMs.
II. Video /content Standards and Resolution	
8.	It must be possible to see at least 16 sites simultaneously in a single layout on the display . The MCU should support a minimum of 10 such preset layouts.
9.	The MCU should Support H.323 and SIP standards for communication The MCU should support H.261, H.263, H.263+/ H.263++, H.264, and H.264 SVC/H.264 High Profile. H.239 and BFCP Protocols for content sharing over H.323 and SIP calls to up to 1080p30 resolution. The MCU should support 1080p30fps, 720p 60fps,720p 30fps The MCU should support H.239 and encryption in, SIP & H.323 modes The MCU should be able to integrate with call control system using SIP.
III. Audio standard and features	
10.	Audio 1.G.711,G.722,64 kbps MPEG 4 and /or G.722.1 2.Echo cancellation 3.Automation noise suppression 4. Automatic gain control. 5.Adaptive post filtering /standard based packet loss recovery

IV. IP Protocols	
11.	The MCU solution should support H.323 and SIP calls on 4 Mbps The MCU must have 2 dedicated full duplex manual and auto sensing Ethernet interfaces for diverse IP communication and also should support up to 1000 Mbps. Dedicated serial/USB connection for maintenance /upgrade.
V. MCU Features	
12.	Any endpoint need not be registered in the MCU to Join the Conference (Registered and unregistered endpoints should be able to join the conference)
13.	The Endpoint should not be a host at any point of time.
14.	The MCU should also support scheduling of conferences.
15.	The MCU should support 16:9 and 4:3 aspect ratio.
16.	Internet protocol versions IPv4 and IPv6 should be supported.
17.	The MCU should support a mix of resolutions in both voice Activated mode and continuous presence mode.

Special Terms & Conditions:

1. All the hardware and software licenses that are provided along with the equipment should be clearly specified in the technical bid along with their validity which should be up to the life of the equipment in the **format given in Table - 3**. No additional licenses/hardware should be required to meet the specifications given in the tender for the entire life of the equipment.
2. **The commercial bid should clearly indicate item wise list of the hardware items and software items. The items wise list mentioned for hardware and software licenses in technical bid should be clearly given in price bid as line items.**
3. Do not quote for any optional items or additional items.

Annexure – B

Vendor eligibility criteria and Technical bid submission format

Table - 1

VENDOR ELIGIBILITY				
S.No.	Description	Comply Yes/ No.	Page No. of the document	Remarks
1	Experience of having sold and installed at least three units of the same make matching the specifications called for now in this tender in the last five financial years. (As mentioned in the vendor eligibility criteria, copies of purchase/work order, completion certificate from end user and successful operation certificate from the end user to be attached). In case the same specification has not been sold in the last five years the specification of the equipment of the same make that was sold should be enclosed to indicate that it is equivalent/higher specification as called for in the current technical bid.			
2	The bidder should be an OEM or authorized dealer of an OEM and necessary authorization letter from the concerned OEM in this regard should be submitted.			
3	The authorized dealer should provide service support in Chennai. Details of registered office in Chennai should be provided.			
4	Technical datasheet of the proposed equipment with make and model should be submitted.			
5	The compliance sheet (Table - 2) should be filled and enclosed along with the technical bid.			

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Table – 2

Technical Specification compliance statement				
S.No.	Technical Specification	Compliance Yes/ No.	Page No. of the necessary supporting document	Remarks (If any to be filled by the vendor)
I. MCU system Capacity				
1.	The MCU should be dedicated standalone hardware equipment . The hardware and all required software should be supplied and supported by the bidder from day one.			
2.	The entire hardware to support the required capacity and specifications should be supplied as one unit.			
3.	The MCU should support 15 calls (ports) at HD 1080p30fps (transmit and receive) at 4 Mbps or more .The Same MCU should be capable of working with a resolution of 720p 30fps (transmit and receive) under which condition it should support a minimum of 30 calls. Option should be available to increase the number of calls (ports) up to 50 under HD (1080p30fps) resolution at a later stage with no additional hardware but only a software upgrade. These calls (ports) should also be able to support equivalent SD ports based on their resolution. MCU should Support 15 shared concurrent conferences with 15 calls @1080p or 30 calls @ 720p simultaneously in any manner. For example @720p: Eg 1: 10 calls in conf 1 and 10 calls in conf 2 and 10 calls in conf 3, Eg 2: 5 simultaneous conferences each with 6 calls Eg 3: 10 simultaneous conferences each with 3 calls. Eg 4: 30 Calls in Single conference.			
4.	The MCU should support flexible resource allocation so that if SD calls (ports) join a conference then it should consume a SD port and not a HD 720p or 1080p calls (ports).			
5.	All necessary hardware and software to support the above capacity needs to be supplied and functional from day one.			
6.	The Proposed MCU should be able to combine Full HD and SD in the same conference without degrading the full HD resolution, from and to the full HD endpoints. The MCU should interoperate with other OEM product endpoints and MCUs.			
7.	The MCU should support calls from room based video conferencing endpoints, desktop, laptops, ipads present on the internal/external network of the IIT Madras . The MCU should interoperate with endpoints of all standards based OEMs.			
II. Video /content Standards and Resolution				
8.	It must be possible to see at least 16 sites simultaneously in a single layout on the display . The MCU should support a minimum of 10 such preset layouts.			

9.	<p>The MCU should Support H.323 and SIP standards for communication</p> <p>The MCU should support H.261, H.263, H.263+/ H.263++, H.264, and H.264 SVC/H.264 High Profile.</p> <p>H.239 and BFCP Protocols for content sharing over H.323 and SIP calls to up to 1080p30 resolution.</p> <p>The MCU should support 1080p30fps, 720p 60fps,720p 30fps</p> <p>The MCU should support H.239 and encryption in, SIP & H.323 modes</p> <p>The MCU should be able to integrate with call control system using SIP.</p>			
III. Audio standard and features				
10.	<p>Audio</p> <p>1.G.711,G.722,64 kbps MPEG 4 and /or G.722.1</p> <p>2.Echo cancellation</p> <p>3.Automation noise suppression</p> <p>4. Automatic gain control.</p> <p>5.Adaptive post filtering /standard based packet loss recovery</p>			
IV. IP Protocols				
11.	<p>The MCU solution should support H.323 and SIP calls on 4 Mbps</p> <p>The MCU must have 2 dedicated full duplex manual and auto sensing Ethernet interfaces for diverse IP communication and also should support up to 1000 Mbps. Dedicated serial/USB connection for maintenance /upgrade.</p>			
V. MCU Features				
12.	Any endpoint need not be registered in the MCU to Join the Conference (Registered and unregistered endpoints should be able to join the conference)			
13.	The Endpoint should not be a host at any point of time.			
14.	The MCU should also support scheduling of conferences.			
15.	The MCU should support 16:9 and 4:3 aspect ratio.			
16.	Internet protocol versions IPv4 and IPv6 should be supported.			
17.	The MCU should support a mix of resolutions in both voice Activated mode and continuous presence mode.			

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List of Hardware/Software items

All the hardware and software licenses that are provided along with the equipment should be clearly specified in the technical bid along with their validity which should be up to the life of the equipment in the **format given in Table - 3**. No additional licenses/hardware should be required to meet the specifications given in the tender for the entire life of the equipment.

Table - 3

S.No	Name of Hardware/Software item	Whether License is required? (Yes/No)	Validity period of the License

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SCHEDULE

Name of Organization	Indian Institute of Technology Madras
Tender Type (Open/Limited/EOI/Auction/Single)	OPEN
Tender Category (Services/Goods/works)	Goods/Services
Type/Form of Contract (Work/Supply/ Auction/ Service/ Buy/ Empanelment/ Sell)	Supply
Product Category (Civil Works/Electrical Works/Fleet Management/ Computer Systems)	Supply of Multi-Point Control Unit- MCU
Source of Fund (Institute/Project)	IIT Madras
Is Multi Currency Allowed	No
Date of Issue/Publishing	01.01.2019
Document Download/Sale Start Date	01.01.2019
Document Download/Sale End Date	21.01.2019
Pre – bid Meeting Date and Time	09.01.2019 at 04.30 pm
Last Date and Time for Uploading of Bids	21.01.2019 before 03.00 pm
Date and Time of Opening of Technical Bid	22.01.2019 at 03.00 pm
EMD	Rs.60,000 /-
No. of Covers (1/2/3/4)	2
Bid Validity days (180/120/90/60/30)	120 Days
Address for Communication	The Chairman, Centre for Continuing Education, 3 rd Floor, IC & SR Building, Indian Institute of Technology Madras, Chennai – 600 036
Contact No.	For Queries : 044- 22574900, 4904, 5903.
Email Address	adstores@iitm.ac.in ; cceoffice@iitm.ac.in

Annexure – C

BOQ

PRICE BID FORMAT

Tender No.	IITM/SPS /CCE/VC Studios /006/2018-19
Name of the Item	Multi Conference Unit (MCU)
Name of the Bidder	

Sl.No.	Description	Qty	Unit cost
1.	Multi-point Control Unit (MCU)	1 No.	
Packing, forwarding and other charges whichever applicable			
Taxes applicable			
Total Amount			

Note:-

The price bid should clearly indicate the item-wise list of the hardware items, software items & licenses and their validity period which are mentioned in the technical bid. The price bid should also clearly indicate the total price of all the above items.

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