



**Jharkhand Agency for Promotion of Information Technology**

(An Autonomous body under Department of Information Technology, Govt. of Jharkhand)

Ground Floor, Engineer's Hostel – I, Near Golchakkar, Dhurwa, Ranchi, Jharkhand

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**Expression of Interest (EoI)**

**(Ref. No. JAPIT/EOI/MCU/01)**

**Techno-Commercial proposal for 10, 20, 60 and 80 port High Definition (HD) MCU for Inter Jail Video Conferencing.**

JAP-IT Intends to call Techno-Commercial proposal for Supply Installation and Commissioning of 10, 20, 60 and 80 port, High Definition MCU which would be used for Inter Jail Video Conferencing across Jharkhand. Complete EoI can be downloaded from the website [www.jharkhand.gov.in](http://www.jharkhand.gov.in).

The proposals or any other related documents, in accordance to the terms and condition of this NIT should reach to JAP IT, latest by **25.07.2014 by 5:00 PM.**

Sd/-  
Officer on Special Duty,  
JAP-IT



प्रज्ञा केन्द्र

सेवा और सूचना का खजाना,  
अपने गाँव के प्रज्ञा केन्द्र पर है पाना

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**Expression of Interest (EoI)**

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**Techno-Commercial proposal for 10, 20, 60 and 80 port High Definition (HD) MCU for Inter Jail Video Conferencing.**

1. JAP-IT Intends to call Techno-Commercial proposal for Supply Installation and Commissioning of 10, 20, 60 and 80 port, High Definition MCU which would be used for Inter Jail Video Conferencing across Jharkhand. The bidders need to ensure that they comply strictly with Eligibility Criteria as specified in this EoI.
2. The Bidders shall seal the envelope No.1 Technical envelope and envelope No.2 Commercial envelope in separate inner envelopes, duly marking the envelopes as “envelope No.1, Technical Envelope” and “envelope No.2 Commercial Envelope”. These two envelopes should be placed in an outer envelope. All required documents, should be placed in the envelope No.1, Technical Envelope” whereas commercial proposal should be placed in the “envelope No.2 Commercial Envelope”. Both the inner envelopes and the outer envelope should be addressed to:

**The CEO, JAP IT, Engineers Hostel No. 1, Near Golchakkar, Dhurwa, Ranchi-4, Jharkhand.**

3. The proposals or any other related documents, in accordance to the terms and condition of this NIT should reach to JAP IT, latest by **25.07.2014 by 5:00 PM**. The proposal received after due date will neither be opened nor entertained.

**Terms and Conditions**

1. Bidders need to ensure that they strictly adhere to following terms and conditions while quoting the commercial.
  - i. This EoI is not structured around any particular manufacturer or product line, except in cases where unique capabilities or components are required.
  - ii. The quoted rate must be valid for 180 days from opening of EoI.
  - iii. JAP IT reserves the right to reject any or all respondent without assigning any reason whatsoever.
  - iv. Bidder can submit the proposal for any one, two or all port capacities.
  - v. All legal disputes are subject to the jurisdiction of Ranchi, Jharkhand Courts only.
  - vi. Conditional bids shall be summarily rejected.

2. JAP IT reserves the right to procure any one or more MCU as per the requirement. The bidder should be in a condition to fulfill the repeat orders, if asked to do so, at the quoted rate, during the validity of the bid i.e 180 days.
3. In case of complaint reported or any assistance required, the bidder should respond within 12 working hours resolve within next 24 hours. In case of hardware failure, the stand by facility has to be arranged by the bidder within the stipulated time of 48 hours from the time of reporting of the problem. Failing to meet this stipulation will invite penalty @ Rs 500/- per hours for each device (in case of more than one MCU). The bidder must enclose the signed declaration of this in the letter head of the firm.

### **Eligibility of the Bidder**

1. The bidder submitting the offers should be a Registered Company/Firm in India under the Companies Act, 1956/Partnership Act having an INR 10 crore or more turnover per year averaged over the last three financial years i.e. 2011-2012, 2012-2013 and 2013-2014. This must be the bidder Company's turnover and not that of any group Company or Companies. Copy of the certificate of incorporation should be enclosed as documentary proof.
2. The bidder company should have made profits in the last three financial years i.e. 2011-2012, 2012-2013 and 2013-2014. A copy of last three financial years' relevant audited balance sheets should be submitted with the offer. If the audit of 2013-2014 year is not completed then provisional balance sheet signed by Chartered Accountant & CEO/CFO should be enclosed.
3. The original manufacturer (OEM) should have ISO 9000 / ISO 9001 certification for Design & Manufacturing. The bidder should have ISO 9000 / ISO 9001 certification for services. Necessary certificate be enclosed.
4. The bidder should have support centers either of its own or through franchisee. List of such support centers with contact persons, telephone numbers and addresses should be enclosed.

5. The bidder should have executed two orders for supply of video conferencing solution to Central Govt./State Govt./Defense/PSU's/Nationalised banks in India during last five financial years ending 31-03-2014. The minimum setup of 40 HD ports hardware based MCU with 40 endpoints. Minimum one year satisfactory service certificates from client should be attached.
6. Bidder shall ensure that the products / models offered are proven products in Indian environmental conditions and not reaching end of life / support in next 6 years. (Bidder should submit details of previous installations where by Govt. of Jharkhand may verify the genuineness during the technical scrutiny).
7. The bidder should not have been blacklisted by any government organization / banks, Self-declaration to that effect should be submitted along with the technical bid.

### **OEM Criteria**

In case bidder is not the OEM, then

- a) OEM should be present in India for last 5 years
- b) The OEM should have a Technical Assistance Centre in India, so that Jharkhand Govt. can get support as and when required from the OEM.

The relevant documents with regard to the above have to be enclosed.

### **Mandatory Features of the Solution**

The offered solutions must provide the following features:-

1. Complete reservation/scheduling/management of infrastructure resources.
2. 5 years of warranty of the MCU.
3. Double LAN network port for public and private network connection must be available.
4. The IPV6 and dual stack features should be supported.
5. The Multipoint Control Unit (MCU) will be centrally located at Ranchi, NOC or data center or deployed in a distributed model throughout the enterprise IP network. The MCU device provided will be a dedicated hardware appliance with a hardened real-time operating system (RTOS).

### **Commercial Terms and Conditions:**

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- No other charges/taxes/duties in any form will be paid by the JAP-IT other than mentioned in the Price Format.
- The Service tax mentioned and calculated in the price format should be the prevailing service tax in India and any increase/decrease in the taxes by Government of India should be applied accordingly.
- The technical specifications are the minimum configuration required. Higher specifications may be considered but no price weight-age for higher specifications shall be considered.

### Technical Specifications:

Specifications for Multipoint Control Unit (MCU): 60/ 80 PORTS HD			
Sl. No.	Feature	Specifications	Compliance Yes/No
1	General	The MCU should be hardware based slot based MCU with redundant power supply and redundant power source which can be mounted in 3U Rack and above.	
		The MCU blades should be hot swappable.	
		The MCU must be a secure Non-PC Hardware with a strong operating system.	
2	Capacity	Should have the ability to connect 60 Video sites @1280x720p resolution for 60 ports and connect 80 Video sites @1280x720p resolution for 80 ports from the Day One. The same capacity should be scalable to 60 port and 80 port respectively 1080p 30fps resolution No fork lifting of the hardware would be acceptable.	
		The MCU should be able to scale the capacity without losing any of the features and functionalities.	
		The MCU should support multiple number of concurrent conferences.	
		The MCU should be able to connect Minimum 20 Audio Participants over and above Video ports without losing required Video Ports From Day One.	
3	Video quality performance	Should support 30 fps @ 1080p and 720p resolution.	
		Should support H.264 in Continuous presence mode	

		It should be possible for the internet user to connect to an on going conference in the MCU. This functionality is acceptable if provided using external or internal hardware	
4	Video Standards (ITU-T)	The MCU shall support video codecs: H.261 (for legacy interoperability) and H.263, H.263++, H.264, H.264 Video Algorithms.	
5	Video Resolution	The MCU shall support HD 720p @30fps, 60fps & HD 1080p @ 30fps from the day one. It should be possible to achieve HD720p,60 fps at a bandwidth of at least less than 1Mbps from day Should support video resolution from QCIF to 1080p without losing ports with bandwidth per MCU port being 4Mbps.	
6	Audio Standards	Along with the Support for basic algorithms like G.711 and G.722.1 .The MCU should also support wideband Audio protocols like MPEG 4 AAC - LC ,MPEG 4 AAC - LD or equivalent or better	
7	IP protocols	The MCU should support H.323 and SIP protocols	
8	Transcoding & Rate Matching	The system should support universal transcoding combining SD and HD with in the same Conference	
		The MCU should support transcoding of different Audio/video Protocols.	
		Any bandwidth, any resolution, any video or audio codec can be used on any Video call within the same Conference.	
		The MCU should have an video encode resource per port.	
9	Dual Video	The MCU should support H.239 and BFCP for sending and receiving dual video streams (Presenter + Presentation)	
10	Conference Features	The MCU Should allow to easily initiate unscheduled conference.	
		The MCU should allow conferences to be scheduled through scheduling applications installed inside the MCU	
		The MCU should allow active speaker selection using remote control or voice activated.	
		The MCU should allow Far End Camera Control Tunnelling using Endpoint remote control or from the Web.	



		The MCU allow continuous presence conferences displaying 16 or more participants at one time on a single screen.	
		The MCU offer more than 30 or more screen layout options	
10	Conference Features	The MCU using the Web interface, gives the conference moderator full control of participant location in the screen layout.	
		The MCU provide a self-see window in the screen layout that can be turned off.	
		The MCU allow administrative control of layouts and conferencing views	
		The MCU provide auto layout selection depending on the number of participants	
		Providing a unique and optimized view for each participant (without the participant in the layout)	
		The MCU should support conferences on adhoc/on the fly basis.	
11	Network Resilience	The MCU shall support down-speeding and packet error/loss concealment methods to ensure optimum video and audio quality. The MCU should be IPV4 and IPV6 from day one.	
12	Security	The MCU shall support various user privileges from administrator to simple guest.	
		Password-protected Conferences	
		128 bit key, AES encryption for calls, H.235 for authentication	
		Secure non-PC hardware and operating system	
13	Network Interface	The MCU should have 2X 10/100/1000 Mbps Ethernet interfaces. The MCU must support ability to terminate two different networks, so that video calls from either network can be connected into a single conference such as intranet and internet.	
14	Interoperability	The MCU should be interoperable with other OEM VC solutions without the need for any external Gateway.	
15	Warranty	The product should be supplied with 5 year warranty.	

**Multi Conferencing Unit (MCU) - 10 Ports**

Sl. No.	Feature	Specifications	Compliance Yes/No
1	General	The MCU must be a hardware based MCU providing at least 10 ports of 1080p 30 fps or 20 ports HD720P30fps in a single chassis	
		Ability of the 10 ports to send and receive 1080p 30 fps in symmetric continuous presence	
		The MCU should have 10 additional voice ports in addition to 20 HD720p Video ports	
2	Capacity	The MCU should have the capability to bridge 20 ports @ 720p participants as part of the single conference as well as support multiple conferences. Additionally, advanced features such as Continuous Presence of all participants should be available so that any 16 sites can be selected to appear on the screen in CP mode.	
		Should support H.264 even in Continuous presence	
		The MCU shall support video codecs: H.261 (for legacy interoperability) and H.263, H.263++, H.264 video algorithms	
3	Video Resolution	Should support video resolution from QCIF to 1080p without losing ports	
4	Audio Standards	Along with the capability for basic algorithms like G.711 and G.722.1 the MCU should also have wideband Audio protocols to provide HD quality audio during video meetings using protocols such as MPEG 4 AAC -LC and MPEG 4 AAC -LD or equivalent	
5	IP Protocols	It must be possible to have both SIP and H323 devices in the same conference call	
6	Transcoding and Rate Matching	The MCU should have transcoding of different Audio/video Protocols.	
7		MCU should be able to combine HD and SD in the same conference without degrading the HD resolution from and to the HD endpoints.	
8		The MCU should have an video encode resource per participant	
9	Dual Video	The MCU should have H.239 and BFCP protocol for sending and receiving dual video streams (Presenter + Presentation). This should be available for all the ports.	



10	Conference Features	The MCU should allow active speaker selection using an endpoint's remote control or voice activated.	
		The MCU Should allow to easily initiate unscheduled conference.	
		The MCU should allow conferences to be scheduled through scheduling applications installed inside the MCU.	
		The MCU must have the ability to view at least 16 sites simultaneously on the screen.	
		The MCU should allow Far End Camera Control Tunnelling using Endpoint remote control or from the Web.	
		The MCU using the Web interface, gives the conference moderator full control of participant location in the screen layout.	
		The MCU provide a self-see window in the screen layout that can be turned off.	
		The MCU allow administrative control of layouts and conferencing views	
		The MCU provide auto layout selection depending on the number of participants	
		Providing a unique and optimized view for each participant (without the participant in the layout)	
		The MCU should support conferences on adhoc/on the fly basis.	
11	Bandwidth	Should have ability to connect each site @ 4 Mbps	
12	Network Features	The MCU shall support down-speeding and packet error/loss concealment methods to ensure optimum video and audio quality.	
		Should have 2x 10/100/1000Mbps Ethernet Ports , which should work to have both Internet and Intranet networks	

		Should have the ability to work on both IPV4 and IPV6 without any degradation of performance from day one.	
13	Security Features	The MCU must be a secure Non-PC Hardware with a strong operating system	
		The MCU should have 128 Bit strong AES encryption for calls and H.235 for authentication	
		The MCU must have encryption for calls on SIP.	
14	Down speeding	MCU should be equipped with packet loss handling algorithm for video and audio	
15	Interoperability	The MCU should be interoperable with other OEM VC solutions without the need for any external Gateway	
16	Warranty	The product should be supplied with 5 year warranty	
		<b>Multi Conferencing Unit (MCU) - 20 Ports</b>	
		<b>Specifications</b>	
1	General	The MCU must be a hardware based MCU providing at least 20 ports of 1080p 30 fps or 40 ports HD720P30fps in a single chassis	
		Ability of the 20 ports to send and receive 1080p 30 fps in symmetric continuous presence	
		The MCU should have 20 additional voice ports in addition to 40 HD720p Video ports	
2	Capacity	The MCU should have the capability to bridge 40 ports @ 720p participants as part of the single conference as well as support multiple conferences. Additionally, advanced features such as Continuous Presence of all participants should be available so that any 16 sites can be selected to appear on the screen in CP mode.	
	Video Standard	Should support H.264 even in Continuous presence	
		The MCU shall support video codecs: H.261 (for legacy interoperability) and H.263, H.263++, H.264 video algorithms.	
4	Video Resolution	Should support video resolution from QCIF to 1080p without losing ports	

5	Audio Standards	Along with the capability for basic algorithms like G.711 and G.722.1 the MCU should also have wideband Audio protocols to provide HD quality audio during video meetings using protocols such as MPEG 4 AAC -LC and MPEG 4 AAC -LD or equivalent.	
6	IP Protocols	It must be possible to have both SIP and H323 devices in the same conference call	
7	Transcoding and Rate Matching	The MCU should have transcoding of different Audio/video Protocols.	
		MCU should be able to combine HD and SD in the same conference without degrading the HD resolution from and to the HD endpoints.	
		The MCU should have a video encode resource per port.	
8	Dual Video	The MCU should have H.239 and BFCP protocol for sending and receiving dual video streams (Presenter + Presentation). This should be available for all the ports.	
9	Conference Features	The MCU should allow active speaker selection using an endpoint's remote control or voice activated.	
		The MCU Should allow to easily initiate unscheduled conference.	
		The MCU should allow conferences to be scheduled through scheduling applications installed inside the MCU.	
		The MCU must have the ability to view at least 16 sites simultaneously on the screen.	
		The MCU should allow Far End Camera Control Tunnelling using Endpoint remote control or from the Web.	
		The MCU using the Web interface, gives the conference moderator full control of participant location in the screen layout.	
		The MCU provide a self-see window in the screen layout that can be turned off.	
		The MCU allow administrative control of layouts and conferencing views	

		The MCU provide auto layout selection depending on the number of participants	
		Providing a unique and optimized view for each participant (without the participant in the layout)	
		The MCU should support conferences on adhoc/on the fly basis.	
10	Bandwidth	Should have ability to connect each site @ 4 Mbps	
11	Network Features	The MCU shall support down-speeding and packet error/loss concealment methods to ensure optimum video and audio quality.	
		Should have 2x 10/100/1000Mbps Ethernet Ports , which should work to have both Internet and Intranet networks	
		Should have the ability to work on both IPV4 and IPV6 without any degradation of performance from day one.	
12	Security Features	The MCU must be a secure Non-PC Hardware with a strong operating system	
		The MCU should have 128 Bit strong AES encryption for calls and H.235 for authentication	
13	Down speeding	MCU should be equipped with packet loss handling algorithm for video and audio	
14	Firewall Traversal	The MCU should support H.460.18 and H.460.19 firewall traversal standards	
15	Interoperability	The MCU should be interoperable with other OEM VC solutions without the need for any external Gateway	
16	Warranty	The product should be supplied with 5 year warranty	

## Price Format:

Price Format				
Sl. No.	Item Description	Cost (A)	Taxes /VAT(B)	Total Charges inclusive of taxes (C)=(A+B)
1	80 port HD MCU as per the specification given above with 5 Year comprehensive Warranty.			



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2	60 port HD MCU as per the specification given above with 5 Years comprehensive Warranty.			
3	20 port full HD MCU as per the specification given above with 5 Years comprehensive Warranty.			
4	10 port full HD MCU as per the specification given above with 5 Year Warranty.			

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