

## Specification Sheet

### 1. VIRTUAL CLASS ROOM/VIDEO CONFERENCE SOLUTION

Sl. No	Name of Item	Required Technical Specification and Standards	Qty
(i)	Video conferencing unit		01 no
02	Video Standards	H.261 , H.263, H263+, H.263++ , H.264 High Profile, H.264 Baseline Profile	
03	Video Frame Rate	Should support 60 fps with 1080p resolution from day one	
04	Video Features	Ability to send and receive two live simultaneous video sources in a single call, so that the image from the main camera and PC or document camera can be seen simultaneously.	
		Should support H.239 and BFCP protocols with 1080p resolution	
05	Multi-Point Feature	Should have 4 way SIP/H.323 in 1080p/60fps Multipoint video conference feature enabled from day one.	
06	Video	Should support 2 monitors for Self View, Remote View and Content all in separate Monitors.	
07	Video Output	Should have at least 2 nos. of HDMI / or equivalent ( High Definition Multimedia Interface) output to connect Full High Definition display devices such as plasma and projectors for both Video and Content.(Dual Monitor Support)	
		Should support 2 monitors for Self View, Remote View and Content all in separate Monitors	
08	Video Input	Should have at least 2 HD video Input to connect full HD cameras.	
		Should have at least one additional video Input to connect auxiliary full HD camera.	
		Should have VGA/DVI/HDMI port to connect PC/ Laptop directly to the Video conferencing system and display resolutions upto 1080p	
09	Audio : Audio standards supported	G.711, G.722,G.722.1, 64 kbps MPEG-4 AAC-LD or equivalent standard must be supported.	
10	Other Desirable features	Noise Reduction, Automatic Gain control, Acoustic Echo Canceller,	
11	Audio Inputs	Should support 4 Microphone inputs from day one	

		Bidder should supply 1 tabletop microphone.	
		The microphones must be standard based microphones.	
		The pick up of the microphones should be at least 6 feet from the microphone	
		Echo Cancellation for every input must be available	
12	External devices	Should have USB port	
13	Network Interfaces	1 LAN /Ethernet-10/100/1000 Mbps full duplex. Should have support for IPV4 networks	
14	Bandwidth	IP at least 6 Mbps and upto 18 Mbps	
15	Security : Menu Control	Password protected system menu	
16	Encryption of video call	<ul style="list-style-type: none"> <li>• ITU-T standards based Encryption of the video call</li> <li>• Call should be encrypted end-to-end on IP</li> <li>• Should support Standards-based: SRTP (AES 128 bit), H.235 (AES 128 bit)</li> </ul>	
17	Camera	3x optical zoom cameras with 1920x1080p 60 frames per second.	
18	Specifications:	Pan range: +/-100 degrees, Tilt range: +/-20 degrees	

(ii)	75 Inch Diagonal Monitor	<p>Screen Size: 75 Inch Diagonal  Panel Type: E LED/IPS  Aspect Ratio: 16:9  Resolution: 1920X1080  Brightness 400 cd/m<sup>2</sup> or better  Panel Lifetime: 50,000 Hrs or better Inputs  Video In X 1  DVI-D X 1  HDMI X 2  PC In X 1 (on HD 15 Pin)  LAN X 1  Serial Port X 1  IR in/out: Required  Audio : 10W  Digital Zoom: Required  Auto Set Up: Required  HDMI Power Management: Required  USB Media Player: Required  Control Through LAN: Required  Certification: UL &amp; FCC</p>	1 No.
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(iii)	<b>DIGITAL PODIUM</b>	Motorized System for Monitor, 19" Finger Touch LED Monitor, Ergonomic Stylus with Laser Pointer, Full Featured Touch Control Panel for Volume Control, Source Selection, Lighting Control etc. Fiber Top with Centralized Locking System, Cold Rolled Steel Cabinet with 9U Standard Rack and Centralized Locking System, Access doors from both sides for quick service, Industrial Standard Castor Wheels with Quick Lock Pad Full fledged Sound System with Multiple Inputs and Outputs Gooseneck Mic, W/L Handheld Mics (2) with Rack Mountable Receiver, Full Featured Professional Amplifier with independent controls Internal Speakers Space to keep other devices such as PC, Laptop, Visualizer Cooling Fan and External Power Source	01 no
(iv)	<b>Computer</b>	One computer set core i3 5 <sup>th</sup> Gen or higher/4 GB DDR3L RAM/ Min 500 GB HDD/ DVD RW/ wifi with original windows	01no
Acoustic Solution			
(i)	Acoustic job	Acoustic solution including Ceiling with all 15 mm glass wool, putting & painting including all fitting & treatment for Video conference room	Per sqmtr

## **2 DIGITAL SMART CLASSROOM SOLUTION (option: 1)**

<b>Sl. No:</b>	<b>Item</b>	<b>Details</b>	<b>Qty.</b>
(i)	<b>Multimedia Projector</b>	Brightness: 3000 ANSI Lumens Panel type: 14 mm ( 0.55 inches) DLP Tm chip x 1 Aspect Ratio: 4:3 Lamp: 190W HUM Lens throw Ratio: F2.41-2.53, F21.8-24mm (1.95-2.15:1) Contrast Ratio: 4000:1 Resolution: XGA (1024 x 768)/UXGA( 1600 x 1200) Screen size (diagonal): 0.76-7.62m (30-300 inches) Lens Shift: 10:-1.5 (fixed)	<b>01 no</b>

		Built in speaker: 2.0W ( Monaural)	
(ii)	<b>Interactive White Board</b>	<b>Diagonal Size:</b> 78 Inch or higher <b>Aspect Ratio:</b> 4:3 <b>Surface Type:</b> Dry Erase <b>Touch Technology:</b> Infrared <b>Surface Area Resolution:</b> 30Dpi or better <b>Touch Resolution:</b> with Driver 32767 x 32767 px or better <b>Touch Refresh Rate:</b> ≥100Hz or better <b>Object Size Resolution:</b> 4mm Diameter <b>Multi Touch:</b> 10 Points or higher <b>Position Accuracy:</b> 2mm or better <b>Connectivity:</b> USB2.0 <b>Regulation:</b> CE, FCC, IC, UL/CUL, CB, CQC	<b>01 no</b>
(iii)	<b>Document Scanner</b>	<b>Product Type:</b> CMOS Sensor Scanner <b>Sensor Parameter:</b> 5 MP CMOS Active Pixel Digital Image Sensor: <b>Optical Format:</b> 1/2.5 inch <b>Active Pixel Maximum:</b> 2592X1944 <b>Shooting Area:</b> Max A3 <b>Light Source:</b> Natural or LED Viewing Angle: 80° <b>Response:</b> 0.53 V/Lux Sec <b>SNR:</b> 40.5 dB <b>Dynamic Range:</b> 68dB <b>Communication Interface:</b> USB 2.0 with UVC <b>AGC/AEC/White Balance:</b> Auto	<b>01 no</b>
(iv)	<b>Projector Mount and VGA Cable</b>	Ceiling Mounting Kit for Projector 3 Ft Column Telescopic Type Universal Mounting Support 15 Mtrs VGA Cable with both end moulded HD15 Pin Connectors	<b>Per Set</b>
(v)	<b>AUDIO SET-UP</b>		
	<b>Mixing Amplifier</b>	<b>Amplifier Output (Max/Rated):</b> 180 W / 120 W <b>Inrush Current:</b> 10A <b>Power Consumption:</b> 400VA <b>Frequency Response (Line Inputs):</b> 60 Hz to 20 kHz (+1/-3 dB @ -10 dB ref. rated output) <b>Frequency Response (Mic Inputs):</b> 70 Hz to 20 kHz (+1/-3 dB @ -10 dB ref. rated output) <b>Distortion:</b> <1% @ rated output power, 1 kHz <b>Bass Control:</b> Max. ± 8 dB <b>Treble Control:</b> Max. ± 8 dB <b>Mic./Line input:</b> 4 Nos with Phantom Power	<b>01 no</b>

		<b>Sensitivity:</b> 1 mV (mic.); 300 mV (line) <b>Impedance:</b> >1 kohm (mic.); >5 kohm (line) <b>Dynamic range:</b> 93 dB <b>CMRR (mic.):</b> >40 dB (50 Hz to 20 kHz) <b>Headroom (Music/Mic):</b> >25 dB <b>Speech filter:</b> -3 dB @ 315 Hz, high-pass, 6 dB/oct <b>Phantom power supply:</b> 16 V via 1.2 kohm (mic.)	
	<b>Wall Mount Speaker</b>	<b>Peak Power:</b> 100W or higher <b>Power Handling:</b> 50W or better <b>Type:</b> Bass Reflex <b>Nominal Impedance:</b> 8 Ohms <b>Transformer Tapping:</b> 25W/20W/15W/10W <b>Component LF:</b> 4" Poly Propylene Cone, Rubber Surround, 25 mm Voice Coil <b>Component HF:</b> Dome Tweeter, PEI Diaphragm <b>Angle of Coverage:</b> 90° X 90° <b>Max Spl:</b> 108 dB <b>Frequency Response:</b> 80 Hz-20 Khz <b>Crossover Frequency:</b> 3000 Hz <b>Crossover:</b> 12 dB	<b>04 no</b>
	<b>Dual Wireless Microphone</b>	<b>Carrier frequency range:</b> 660 to 865 MHz <b>Modulation:</b> FM <b>Audio bandwidth:</b> 40 to 20,000 Hz <b>Frequency stability (-10°C to +50°C):</b> ±15 kHz <b>T.H.D. at 1 kHz typ.:</b> 0.8% Compander integrated <b>Signal/noise ratio typ.:</b> 105 dB(A) <b>RF output typ.:</b> Max. 10 mW <b>Power requirement single:</b> 1.5-V AA size battery <b>Battery life:</b> >30 hours <b>Required Item:</b> One Receiver, One Hand Held Transmitter, One Body Pack Transmitter with Collar Microphone.	<b>Per Unit</b>
	<b>Equipment Rack</b>	<b>Rack Size:</b> 19 inch Universal <b>Rack Space:</b> 6U Accessories: Power Strip, Mounting Hardware	<b>Per Unit</b>

## 2 DIGITAL SMART CLASSROOM SOLUTION (Option:2)

Sl. No:	Item	Details	Qty.
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		Lens Shift: 10:-1.5 (fixed) Built in speaker: 2.0W ( Monaural)	
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(iv)	<b>Projector Mount and VGA Cable</b>	Ceiling Mounting Kit for Projector 3 Ft Column Telescopic Type Universal Mounting Support 15 Mtrs VGA Cable with both end moulded HD15 Pin Connectors	<b>Per Set</b>

### **Terms and Conditions:-**

1. Sealed Bids affixing Court Stamp of Rs 8.25(Rupees eight and paisa twenty five only) are invited from Registered and Reputed Contractors, Dealers, Firms and Companies
2. The Bid must be submitted in two parts, Technical Bid and Financial Bid. As per proforma enclosed herewith. Each part should be submitted in separate sealed envelope.
2. The College reserves the right to accept or reject any or all the quotations without assigning any reason.
3. The Bidder must have prior experience of executive of Virtual class room/ video conferencing solution and smart class room installation at least 10 or more in any Government/Educational sector. And bidder must provide details of PO copies.
4. Payment will be made only after the successful receipt of the materials in good condition.
5. The Bidder must have proper GST, PAN, TIN /VAT, Trade License, and Service Tax Registration Number and the same shall have to be enclosed along with the quotations.
6. The Bidder must have average financial turnover 1.50 crores (Rupees One Crore & Fifty Lakhs) during the immediate last three consecutive financial years. Duly audited signed & stumped by a Chartered Accountant.
7. The Bidder must have submit OEM Certificate (Original Equipment manufacturer) for these Tender and address to The Principal, Jorhat College, Dist: Jorhat, Assam.

8. In the event of any kind of holiday, the quotations shall be opened on the next working day.
9. The tendering firm must have a permanent establishment in Assam State.

**Sd/-**  
**Principal**  
**Jorhat College**  
**Dist: Jorhat, Assam.**