

पत्रांक संख्या / आपूर्ति / 95-1-7-2020) / 6.1.1.....
बिहार पुलिस मुख्यालय,
(आधुनिकीकरण, अपराध अभिलेख एवं प्रोविजन प्रभाग)

पटना, दिनांक- 24/08/20

सेवा में,

निदेशक,


सूचना एवं जनसम्पर्क विभाग,
बिहार, पटना।

विषय— निविदा आमंत्रण सूचना सं०-04/2020-21 के प्रकाशन के संबंध में।

निदेशानुसार उपर्युक्त विषय के संबंध में निविदा आमंत्रण सूचना सं०-04/2020-21 की प्रतियाँ भेजते हुए अनुरोध है कि इसे राज्य एवं राज्य से बाहर के प्रमुख समाचार पत्रों में (अंग्रेजी एवं हिन्दी) के अगले दो संस्करणों में प्रकाशित कराने की कृपा की जाय साथ ही पी०आर०डी० वेबसाइट पर भी प्रसारित करने की कृपा की जाय।

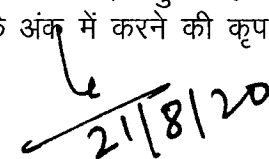
इस निविदा आमंत्रण सूचना का प्रकाशन किन-किन समाचार पत्रों में किया गया इसकी सूचना देने की कृपा की जाय।

अनु०—यथोपरि।


21/8/20
पुलिस महानिरीक्षक के सहायक (क्यू०),
बिहार, पटना

प्रतिलिपि:—

1. आई०टी० मैनेजर, पुलिस महानिदेशक का कार्यालय, बिहार, पटना को कृपया सूचनार्थ। कृपया इसे आज ही वेबसाइट पर अपलोड किया जाय। साथ ही Indian Trade Journal, Kolkata के अंक में प्रकाशन हेतु Government of India, the Controller of Publications, Civil Lines, Delhi : 110 054, (Tel No. 011-23812527, FAX : 011-23817846), Email Id-sk.mondal.dgcis@nic.in के पतेपर भी अनिवार्य रूप से भेजा जाय।
2. Government of India, the Controller of Publications, Civil Lines, Delhi : 110 054, (Tel No. 011-23812527, FAX : 011-23817846), Email Id- sk.mondal.dgcis @nic.in को कृपया सूचनार्थ एवं आवश्यक क्रियार्थ प्रेषित। अनुरोध है कि उक्त निविदा का प्रकाशन Indian Trade Journal, Kolkata के अंक में करने की कृपा की जाय।


21/8/20
पुलिस महानिरीक्षक के सहायक (क्यू०),
बिहार, पटना

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Police Headquarters, Bihar, Patna
Notice Inviting Tender No.-04/2020-21

1. Name of the Department: Office of Director General of Police, Bihar, Patna.
2. Last date & time for the acceptance of the tender : 16 /09 /2020, Till 02:00 PM
3. Date & time fixed for the opening of the tender : 16 /09 /2020, At 04:00 PM
4. Place fixed for receiving & opening the tender : Office of Director General of Police, Bihar, Patna.
5. Details of Job:

S.N.	Item name	Quantity
1	Projector	08
2	Audio Amplifier	08
3	Wall Mount Speaker	32
4	Wireless Microphone	08
5	Audio Mixer	08
6	Connectivity & Mounting	08
7	Laptop	08
8	Head Phone	08
9	Equipment Rack	08
10	1 KVA UPS with 30 Minutes Backup	08
11	e-Learning Centre Webex Media Collaboration Suit Pro for Remote Users	08
12	Webex Full HD Camera (Same Make)	08

Specifications and other terms & conditions of the tender may be obtained in person from this office or may be downloaded from the website www.prdbihar.gov.in or www.biharpolice.bih.nic.in.

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Bihar, Patna

Terms & Conditions of Tender No.-04/2020-21

1. The tender should be submitted in two parts: (i) Technical Bid and (ii) Financial Bid, duly sealed in two separate envelopes super-scribed as "Technical Bid" and "Financial Bid".
2. All relevant papers/ E.M.D./certificates/specifications etc. of items should be enclosed in the Technical Bid.
3. The rates of the items shall be quoted in the Financial Bid only.
4. All charges like IGST/CGST/SGST etc. shall be clearly mentioned in the Financial Bid and the net rate (in figures and words) including all taxes and duties must also be quoted. Vague offers like indicating taxes "as applicable" will not be accepted.
5. The rates of the items shall be quoted in the Financial Bid in two parts :
(i) With AMC (Annual Maintenance Contract) and (ii) Without AMC
6. There should be no cutting, over writing or correction on the rates.
7. The technical and financial bids for each item should be submitted separately in separate envelopes. The technical and financial bids for more than one items submitted together in the same envelope shall not be accepted.
8. If the financial bid is submitted in the same envelope containing the technical bid then also it shall be summarily rejected.
9. The technical and financial bids should be put in two separate sealed envelopes and the envelopes should be marked Tender No-04/2020-21 (Technical Bid) and Tender No-04/2020-21 (Financial Bid) along with the name and address of the firm. The sealed envelopes containing the technical and the financial bids should be sent in another sealed envelope which should be marked as Tender No-04/2020-21. This envelope should not bear the name and address of the firm.
10. Income Tax Returns of last three years, a photocopy of GST registration number of the participating firm and turn-over of any two of the previous three financial years should be submitted with the technical bid. It should be specifically mentioned whether IT return has been filed manually or electronically.
11. The turnover of the firm for the last reported financial year should be at least equal to the amount of the supply order which is being issued. A copy of the profit and loss Account of the firm for any two of the previous three financial years, certified by a Chartered Accountant should be submitted along with the tender. If the tenderer is authorized dealer or authorized supplier of manufacturing firm, then the certified details of the turnover of authorizing firm may be accepted. Tender specific authorization from the OEM must be submitted, but in certain cases where authorization from OEM is not required, the Technical-cum-User committee (T.U.C.) shall decide about exemption (if any) on a case-by-case basis; citing appropriate reasons for the same.
12. If there is some discount in the price of any item, it should be deducted from price itself and such discounts should not be quoted separately.
13. If the product is available on DGS & D rate contract, then a copy of the contract must be attached and pricing be done including all taxes.
14. A copy of the test report for the product issued by any established and recognized private Laboratory or by agency accredited by the Government should be attached with the technical bid. However if required, the Technical-cum-User committee (T.U.C.) can take decision regarding exemptions/relaxations (if any), citing appropriate reasons.
15. In case of Bullet Proof/Bullet Resistant items, test report of TBRL or any Government Approved/Recognized Laboratory is compulsory.



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16. Firms participating in this tender shall also submit duly sworn affidavit to the effect that " this firm has not been black listed/debarred by any Government or Semi Government or Private Agency and no sister concern of this firm is participating in this tender."
 17. Firms participating in this tender shall also submit the self attested list of users of its equipments.
 18. All items shall be received at Central Clothing Store, Patna; therefore price should be quoted FOR Central Clothing Store, Phulwari Sharif, Patna.
 19. Firms will have to deposit a sum of Rs. 50,000/- (Fifty Thousand) only as an earnest money deposit in the form of Bank Draft duly pledged in favor of the undersigned along with the quotations. The small scale units located in Bihar shall not be liable to deposit earnest money. Exemption from submitting E.M.D. will also be available to those who are registered with the Central Purchase Organization/State Purchase Organization and National Small Industries Corporation (NSIC).
 20. Technical Bids will be opened on scheduled date and time in the office chamber of Police Headquarter. Representatives of the firms competing in the tender may remain present at the time of opening of the technical bid.
 21. The technical bids will be opened first and placed before the Technical Committee of the Police Headquarters, Bihar. If the technical bids are found satisfactory as per tender conditions, it will be put before Central Purchase Committee of the Police Headquarters, Bihar. The firms may be required to participate in the demonstrations of the quoted product and discussions with this committee.
 22. Any paper/document will not be accepted after opening the tender.
 23. Successful firm will have to enter into an agreement after depositing a sum of 5% of the total value of the order as security money in the form of Bank Guarantee duly pledged in favor of undersigned.
 24. The firm will be required to provide satisfactory after-sales service after the delivery of the product.
 25. The firm will be required to supply all the items within the stipulated time frame as mentioned in the purchase order.
 26. Payment for the delivered items will be made only after the acceptance report of the Inspection Committee of the Police Headquarters, Bihar.
 27. The firm whose quotation is approved by the Central Purchase Committee of the Police Headquarters, Bihar, shall be invited to enter into an agreement with the undersigned.
 28. It is expected to submit the duly filled chart attached herewith, along with the technical bid if not the tender shall be summarily rejected.
 29. Indexing of the requisite documents must be done and submitted along with the technical bid.
 30. Hands on training for 3 weeks of the equipment must be imparted to the user group by the firm after successful installation.
 31. Director General of Police Bihar, Patna reserves the right to reject any or all the quotations partially or fully, without assigning any reason thereof.
 32. The Quantity indicated may increase or decrease at the time of issuing purchase order.
 33. The bids must be include the data sheet of individual item.

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Bihar, Police.

Technical Specification of the Products

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(1). Projector			
S.N.	Items Description		Remarks
1	Projection System	3LCD, 3-chip technology	
2	LCD Panel	0.59-inch with MLA	
OPTICAL			
3	Zoom	1-1.6 (Optical Zoom)	
4	Screen Size	29" to 280" [0.84 to 8.4 m] (Zoom: Wide)	
		29" to 280" [1.36 to 13.9 m] (Zoom: Tele)	
5	Projection Distance	60" screen 1.79 - 2.92 m	
6	Throw Ratio	1.38 (Zoom: Wide), 2.24 (Zoom: Tele)	
7	Projection Lens F Number	1.51-1.99	
8	Projection Lens Focal Length	18.2mm-29.2mm	
9	Focus Method	Manual Focus	
10	Offset	10:1	
IMAGE			
11	Colour Light Output	4,200 Lumens	
12	White Light Output	4,200 Lumens	
13	Resolution	WXGA	
14	Native Aspect Ratio	16:10	
15	Contrast Ratio	3,000:1	
16	Lamp Hours	Normal/Eco: 2,500/4,000 Hours	
17	Lamp Type	245 W UHE (E-TORL)	
18	Keystone Correction Vertical	-30 to +30 degrees	
19	Keystone Correction Horizontal:	-30 to +30 degrees	
20	1 x RCA (Yellow),		
21	2 x Component (via D-sub 15-pin)		
22	Input: Computer	2 x D-sub 15-Pin (RGB), 1 x USB 2.0 type B	
23	Input: USB Memory Device	1 x USB Type A Ver.2.0	
24	Input: Three-In-One USB Display	1 x USB 2.0 type B	
25	Input: Digital	1 x HDMI, 1 x DisplayPort	
26	Input: Audio	1 x RCA (Red/White), 2 x Stereo mini jack	
27	Input: Control	1 x USB 2.0 type B, 1 x RS232C	
28	Input: USB Document Camera	1 x USB 2.0 type B	
29	Network I/O	1 x RJ45 (100Mbps)	
30	Wireless Connectivity	Included	
31	Output: Video	1 x D-sub 15 pin (black moulding)	
32	Output: Audio	1 x Stereo mini jack	
33	Speaker Output	10W	
ADVANCED FEATURES			
34	Network & Control	Required	

35	Network Projection	Required	
36	PC Free Presentations	Required	
37	USB Plug 'n Play	Required	
38	AV Mute Slide	Required	
39	Instant Off	Required	
40	Direct Power On/Off	Required	
	Security		
41	Padlock & Security Cable Hole Kensington®-style lock provision Wireless LAN Unit Lock Password protect function		
42	Colour Modes	Dynamic, Presentation, Theatre, Photo, sRGB, Blackboard, Whiteboard, DICOM.SIM	
43	General		
44	Power Consumption: Lamp on	Normal/Eco: 377/250W	
45	Power Consumption: Standby	0.44W (communication off)	
46	Noise Level	Normal/Eco: 37/29dB	
47	Mounting Kit	The projector should be supplied complete mounting kit. Mounting kit should be as of same make of projector	

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(2). Audio Amplifier			
S.N.	Items Description		Remarks
1	Amplifier Power	1 x 90 W @ 70/100 V	
	Audio Performance Specifications		
2	Frequency Response	60 Hz - 20 kHz (+0/-3 dB, @ 1 W reference 1 kHz)	
3	THD+N	≤1 % (at full rated power)	
4	Channel Separation (Crosstalk)	≤-60 dBV (below rated power, 1 kHz)	
5	Dynamic Range	88 dB	
	Integrated DSP		
6	A/D and D/A Converters	24-bit / 48 kHz	
7	Processing Functions	Loudspeaker EQ, Opti-voice paging, Dynamic equalization.	
8	Loudspeaker Presets	FreeSpace DS 16 and DS 40 loudspeakers, High-Pass Filter (HPF)	
9	Audio Inputs :	Page Inputs	
10	Input Channels	1 Balanced Mic	
11	Connectors, Input	4-Pin Euroblock	
12	Input Range	-60 dBV - +10 dBV	
13	Adjustment Range	0 dB - +50 dB	
14	Input Impedance	2 kΩ	
15	Maximum Input Level	+10 dBV	
16	Sensitivity	N/A	

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17	Nominal Input Level	-40 dBV	
18	Audio Inputs :	Auxillary Input	
19	Input Channels	1 Unbalanced line	
20	Connectors, Input	1/8" (3.5mm) TRS	
21	Input Range	0 dBV - +10 Dbv	
22	Adjustment Range	Fixed	
23	Input Impedance	20 k Ω	
24	Maximum Input Level	+10 dBV	
25	Sensitivity	0 dBV	
26	Nominal Input Level	0 dBV	
27	Audio Outputs	Amplifier Output	
28	1	1	
29	3-pin inverted Euro block	3-pin inverted Euro block	
30	n/a	n/a	
31	1 x 90 W @ 70/100 V	1 x 90 W @ 70/100 V	
32	Audio Outputs	Auxiliary Output	
33	1	1 Unbalanced	
34	3-pin inverted Euro block	Stereo RCA	
35	n/a	400 Ω	
36	1 x 90 W @ 70/100 V	0 dBV (max)	
37	Indicators and Controls		
38	LED Status Indicators	Power - blue, Input clip - red (-3 dBFS)	
39	Controls, Front Panel	Power On/Off, Input Select (A/B), Tone Controls (Treble/Bass), Mic/Line Gain, Master Level	
40	Controls, Rear Panel	Amplifier Mode DIP switch, Loudspeaker EQ preset selector, Input Gain (A/B/Page mic), Output trim	
41	Electrical Specifications		
42	Mains Voltage	100 V AC - 240 V AC (+/- 10%, 50/60 Hz)	
43	AC Power Consumption	15 W (Idle), 105 W (Full)	
44	Mains Connector	Standard IEC (C14)	
45	Maximum Inrush Current	13.9 Amps (230 V / 50 Hz), 7.6 Amps (120 V / 60 Hz)	
46	Overload Protection	High temperature, short	

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(3). Wall Mount Speaker

S.N.	Items Description		Remarks
1	Parameters	Specification	
2	Type	Full Range Driver	
3	Driver compliment	One 2.25" (57mm) full-range driver	
4	Maximum acoustic output (pink noise)	96 dB-SPL @ 1m	
5		102 dB-SPL (peak) @ 1m	
6	Impedance	8½ (transformer bypass)	
7	Long-term power handling	16W	
8	Sensitivity (pink noise) SPL	84 dB-SPL, 1W @ 1m	
9	Frequency response (-/+3 dB)	95 Hz - 17 kHz	
10	Frequency range (-10 dB)	80 Hz - 19 kHz	
11	Nominal Dispersion	170°H x 160°V (loudspeaker mounted horizontally)	
12	Filter	80 Hz high pass filter	
13	Loudspeaker EQ	required	
14	Transformer Taps (70/100 V)	70 V: 1 W, 2 W, 4 W, 8 W, 16 W 100 V: 2 W, 4 W, 8 W, 16 W	
15	Construction features		
16	Enclosure	Injection-molded polypropylene enclosure	
17	Grille	Powder-coated steel	
18	Finish	Textured black or white finish with a contoured, powder-coated steel grille. Both the enclosure and grille can be painted.	
19	Connectors	The included mounting bracket features a three-terminal barrier strip. Optional junction boxes include a pre-wired ceramic connector and a thermal fuse for use when required.	
	Parameters	Specification	
20	Light weight, long range, rechargeable battery based wireless hand held microphone, complete with transmitter and receiver	Transmitter - Working Range- 91 m (300 ft) Line of Sight, 60Hz – 15kHz Non detachable (Fixed) Microphone handheld, up to 14 hours of continuous use, Sensitivity (1 kHz): -53 dBV/Pa / 2,2 mV/Pa, Audio Input Level: gain - 0dB: -20 dBV maximum & -10dB: -10 dBV maximum, Gain control should be adjustable – 10dB RF Transmitter output – 10mW Cartridge with a neodymium magnet, On/Off switch for onstage control, Integral "pop" filter for reducing explosive breath sounds and wind noise Pollar Pattern : Cardioid polar HandHeld Transducer Type : Dynamic Polar Pattern: Cardioid Frequency Response from: 60 Hz Frequency Response to: 15 KHz Sensitivity (dBV/Pa): -53 dBV/Pa Sensitivity (mV/Pa): 2.2 mV/Pa	

(4). Wireless Microphone

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S.N.	Parameters	Specification	
1	Light weight, long range, rechargeable battery based wireless hand held microphone, complete with transmitter and receiver	<p>Transmitter - Working Range- 91 m (300 ft) Line of Sight, 60Hz – 15kHz Non detachable (Fixed) Microphone handheld, up to 14 hours of continuous use, Sensitivity (1 kHz): -53 dBV/Pa / 2,2 mV/Pa, Audio Input Level: gain - 0dB: -20 dBV maximum & -10dB: -10 dBV maximum, Gain control should be adjustable – 10dB RF Transmitter output – 10mW Cartridge with a neodymium magnet, On/Off switch for onstage control, Integral "pop" filter for reducing explosive breath sounds and wind noise Pollar Pattern : Cardioid polar HandHeld Transducer Type : Dynamic Polar Pattern: Cardioid Frequency Response from: 60 Hz Frequency Response to: 15 KHz Sensitivity (dBV/Pa): -53 dBV/Pa Sensitivity (mV/Pa): 2.2 mV/Pa</p>	
2		<p>Receiver – Microprocessor-controlled internal antenna diversity, One-touch Quick Scan frequency selection quickly locates the best frequency, Two audio status indicator LED, Break-resistant Microphone Clip, Audio Output Impedance : XLR connector: 200 Ω / 6.35 mm (1/4") connector: 50 Ω Audio Output Level: XLR connector: -27 dBV (into 100 kΩ load) / 6.35 mm (1/4") connector: -13 dBV (into 100 kΩ load), (Ref. ±33 kHz deviation with 1 kHz tone) RF Sensitivity : -105 dBm for 12 dB SINAD, typical Image Rejection - >50 dB, typical</p>	

(5). Audio Mixer

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S.N.	Items Description	Remarks
1	4 mic/line inputs, 2 with Class A FET high impedance inputs	
2	Neutrik mic XLR	
3	Neutrik 1/4 inch jacks	
4	3 band EQ with MusiQ	
5	2 auxes	
6	Sound image pan	
7	Illuminated PFL indicator	
8	Stereo returns & playback	
9	All inputs with level control	
10	12 bar meters	
11	Responsive 3-band, swept mid EQ with MusiQ	
12	2 stereo sources with MP3 player compatibility	
13	Separate 2-track record outputs	
14	Stereo playback input for 2-track replay	
15	XLR main stereo outputs with inserts	
16	Comprehensive monitoring	
17	Configurable USB stereo audio in/out	
18	Stereo monitor outs	
19	48V microphone phantom power	
20	DI level switching for sub mixing	

(6). Laptop

Items Description	Remarks
Processor	
Processor Make	Intel
Processor Generation	10
Number of Cores per Processor	2
Processor Base Frequency (GHz)	2.1
Processor Description	Intel Core i3
Processor Number	Intel Core i3 10110U
Cache (MB)	4
Motherboard	
Expansion Slots (M Dot 2)	1
Graphics	
Graphics Type	Integrated
Graphic Card Description	INTEL 620
Operating System	
Operating System (Factory Pre-Loaded)	Windows 10 Professional
Recovery Image Media	NA
OS Certification	Windows
Memory	
Type of RAM	DDR4
RAM Size (GB)	4
RAM Speed (MHz)	2400
Total Numbers of DIMM Slots Available	2
Number of DIMM Slots populated	1

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RAM Expandability up to(using spare DIMM Slots in GB)	16	
Storage		
Type of Drives used to populate the Internal Bays	HDD	
Number of Internal Bays populated with HDD	1	
Capacity of each HDD (GB)	1000 @5400 rpm	
Total HDD Capacity (GB)	1000	
Connectivity		
Wireless Connectivity	Yes	
If Yes, Type of Wireless Connectivity	Wi-Fi 802.11ac	
Number of Ethernet Ports	1	
If available, Type of Ethernet Ports	10/100/1000 on board Integrated Gigabit Port	
Bluetooth Connectivity	Yes	
If Yes, Version of Bluetooth Available	4.1	
Ports		
Number of USB Version 2 Point 0 Ports	1	
Number of USB Version 3 point 0 / 3 point 1, Gen 1 Ports	2	
Number of VGA Ports	1	
Number of HDMI Ports	1	
Display		
Display Size (Inch)	14	
Display Type	Non Touch	
Display Technology	LED HD Backlit	
Panel Technology	TN	
Display Resolution (Pixels)	1366x768	
Availability of Webcam integrated with Display	Yes	
If Yes, Resolution of Webcam	HD	
Internal Speaker (Dual)	Yes	
Headphone out	Yes	
Microphone-in	Yes	
Type of Keyboard	Standard	
Spill Resistant Keyboard	Yes	
Pointing Device/Touchpad	Touchpad with multi-touch gestures enabled	
Finger Print Reader	Yes	
Hardware Trusted Platform Enabled	Yes	
Carry Case	Yes	
If Yes, Type of Carry Case	Back Pack	
Security Lock Slot	Yes	
Weight (Including Battery) (Kilogram)	1.9	
Power		
Battery Type	Integrated	
Battery Chemistry	Li - ion	
Battery Capacity (Watt Hour)	42	
Battery Backup Time (Hours)	6	
Certification		
BIS Registration under CRS of Meity	Yes	
BIS Registration Number and its validity	R-41000710	

BEE / Energy Star for the given Model	Yes	
RoHS Compliance	Yes	

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Equipment Rack

Items Description	Remarks
17 U Floor Mount with Front Glass Door with Lock + 1U Cable Manager-, Roof Mounted Fan Tray with 2 Fan , 230V AC, 3 Unit of 19" Mounted PDU with 4 Sockets of 5/15A Type 3 Pack of Hardware.	

1 KVA UPS with 30 Minutes Backup

Items Description	Remarks
Capacity (in kVA / kW)	1kVA/0.9kW 1-Phase Input / 1-Phase Output
Input Voltage Range	110-300VAC (load dependent) Range (Full Load) 160 ~300VAC Range for 60 % load - 110 ~160VAC
Nominal Input Frequency	50 or 60Hz
Nominal Output voltage	200/208/220/230/240 VAC
O/P Voltage	O/P Voltage at 200V also.
Charging Current	16 A
Efficiency	91%
Output Socket	Programmable Output Socket
Backup Required	936 VAH
Battery Bank Voltage	36 VDC
USB Port should be available	There should be provision for USB port also in the UPS.
RS232 Port should be available	There should be provision for RS232 port also in the UPS.
EPO Port should be available	There should be provision for EPO port also in the UPS.
Manufacturer	QMS: As per ISO 9001: 2008 EMS: As per ISO 14001: 2004 OSHAS: As per ISO 18001: 2007
Product Safety Certifications	BIS Certification

Media Collaboration Suit Pro with Full HD Camera

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Features	Specifications	Remarks
Video		
Unit to be supplied with:	Full HD Codec, full HD camera, 2 microphones, touch panel, cables and connectors	
Video Standards	Latest video standards H.264/H.265	
Video Frame Rate	Should support 60 fps with 1080p resolution.	
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	
	The system must have the ability to content sharing both wirelessly and through wired cables.	
	The system must have the ability to pair with laptop for sending content without any wires to the VC system.	
	In case the above feature is not available natively, then additional components can be provided to achieve this.	
Video Input	Should have at least 2 x HDMI inputs on the codec to connect two Full HD cameras.	
	Must have 1 x HDMI/DVI inputs to connect laptops/PC for presentations for presentation sharing	
	Should support the ability to view and share presentations at a resolution at minimum 1080p resolution	
	The system must have the ability to pair with laptop for sending content without any wires to the VC system	
Video Output	Should have at least 2 no.'s of HDMI output to connect Full High Definition display devices such as plasma and projectors for both Video and Content.	
Audio		
Audio standards supported	G.711, G.722, G.722.1, 64 kbps MPEG-4 AAC-LD standard must be supported.	
Audio Inputs	Should support 2 Microphone inputs to connect 2 microphones. Each microphone cable length should be minimum 10 mts.	
	The pickup of the microphones should be at least 10 feet from the microphone.	
	Echo Cancellation for every input must be available.	
Audio Outputs	Should support audio output	
Network Interfaces	1 LAN /Ethernet--10/100/1000 Mbps full duplex	
Bandwidth	H323/SIP upto 6 Mbps	
Network Capabilities	Packet Loss Based Down speeding	
H.323/ IP Features	QoS--DiffServe	
	Standards based- Packet Loss Recovery feature	
	System should support IPv4 and IPv6 from day one.	
	Should support URL Dialling	
Other Desirable features	Noise Reduction, Automatic Gain control, Acoustic Echo Canceller, Active Lip synchronization	
Security		
Menu Control	Password protected system menu	
Encryption of video call	ITU-T standards-based Encryption of the video call	

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	Should support Standards-based: H.235 v3 and AES Encryption via Automatic key generation and exchange. The same should be available in a call with Video with presentation (dual video)	
Management	System Management using HTTPS /SSH	
Cameras		
At Offices	The camera should be full HD 1080p @60fps with 10x or more optical zoom, PAN +/- 90 Deg, TILT +/-10 Deg	
	The cameras should have a wide-angle lens which is suitable for a room of about 40-50 Ft. and should be capable to handle a group of minimum 200 persons.	
	1920 x 1080 pixels progressive @ 60fps	
	The Camera, codec, touch panel, microphones should be from the same manufacturer.	
	Should have at least 80 degrees horizontal field of view.	
Other Features		
Directory services	Should support Local and Global directories	
	Should support LDAP and H.350 protocols for directory transfer.	
Multipoint Capability	The VC endpoint should be able to do point to point call without the need for an external bridge. All the multipoint meetings should be held through the digital cloud platform.	
User Interface	In order to provide a good user experience, the unit must be equipped with an intuitive Touch Screen/Panel for controlling the VC unit.	
	Must have ability to browse the directory, search a contact, Enable / disable speaker tracking, mute/ unmute, increase-decrease volume.	
Integration of the device using with the Digital Cloud platform	The department wants users to conduct their own meetings through the Internet bandwidth available at each location. Each location should be able to schedule their own meetings, invite participants into those meetings, control those meetings, share presentations etc. without any dependency on the core IT administration team for these activities. The cloud platform should give flexibility to the users to join the meeting from PC, laptop, desktop, android, iOS devices and PSTN/Mobile networks.	
	The Digital Cloud platform and hardware VC Endpoints should be from same OEM to ensure interoperability and smoother roll out.	
	Digital Cloud Platform must be a comprehensive hardware and app integrated service that provides a complete collaboration suite for users to schedule, meet, message, call, share content regardless of whether they're together or apart; in one continuous work stream before, during, and after Sessions.	
	Platform should be delivered from cloud in a secure manner with encryption of data / media while in motion and at rest.	
	Platform should provide Cloud architecture so that audio and video conferencing traffic can be switched	
	Platform should bring together physical and virtual meetings. Platform should be able to allow video devices to participate into the meeting as long as they operate on industry standard protocols. Platform should also allow third party participants using standards-based H.323, SIP and H.264 compliant video conference endpoints to join the meeting	

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	Digital Cloud Collaboration Platform should have capability to be accessed from Soft Client from PC/Laptop/iOS/android and from Hardware based VC unit	
	Platform should provide capability to create multiple virtual meeting rooms for Messaging, Calling, Meeting, Sharing and Collaborating	
	Each Virtual Room should have at least one admin who can add or remove participants from the Room, lock meetings, invite participants on audio/video/web, sent reminders to participants to join the meeting	
Messaging	Platform should provide one-to-one and team persistent messaging and content sharing capabilities.	
	Platform should have capability to organize Virtual rooms and participants into various groups.	
Meetings	The users participant should have a personal room with their own meeting URL and URI to make scheduling and joining meeting easy.	
	Each Virtual Room that is created should have its own Meeting URL for Meetings	
	Platform should have ability to schedule virtual sessions and re-schedule them on demand	
	The virtual meeting room should be accessible from any standard based third party Video System	
	Platform should have a capacity to host upto 500 participants in a single meeting with these participants joining for PC, laptop, mobile devices like android/iOS over an app and PSTN networks.	
	Each meeting should be able to accommodate all the rooms-based units in a single virtual meeting	
	Platform should not have any restriction on the Number of Simultaneous Meetings as long as the meeting licenses are available	
	It should be possible to share content from Laptop/PC during the Meetings	
	The platform should allow users to join the meeting over an audio connection over PSTN/Mobile networks	
Sharing and Collaborating	Platform should allow users to upload files to their Virtual Rooms which can be viewed by other users	
	The upload of files should be done via the digital cloud collaboration and communication platform	
Calling	Platform should allow One-to-One Calling (both video and VoIP)	
	Platform should allow multi party conferencing with participants joining from Digital collaboration units such as room-based endpoints, PC, Laptop, android/iOS devices. The platform should also give the flexibility to the user to call up the participants on PSTN network and connect participants on audio.	
Meeting Controls	The individual host of the meeting should have following in meeting controls which the host should be able to exercise from their own computer/laptop/desktop etc.	
	◦ Mute and unmute self	
	◦ Mute and unmute all	
	◦ Lock/unlock meeting	
	◦ Record meeting	
	◦ Change own video layout	
	◦ Dial out from the meeting control pane to invite and remind participants on audio/video	

	<ul style="list-style-type: none"> ◦ The meeting control pane should be able to show the meeting host and attendees the names of all the participants connected to the meeting along with their device type detail. 	
Management and Security	Single pane of window for all functions of the Platform - Meetings, Messaging, and Calling	
	Single pane of window for provisioning, administration, management, and reporting	
	The platform should provide capability for SSO implementation. The platform should be scalable and offer high availability. The Digital Cloud and collaboration platform should be ISO 27001.	
	Platform should encrypt messages, files, and space names before sending them to the cloud. Thus, content arrives in encrypted form and is processed (data in use) and stored (data at rest) in its encrypted state until it is decrypted on the intended recipients' devices.	
	Secure HTTP (HTTPS) to encrypt data in transit between users' device and digital collaboration platform	
	Identities of the senders and receivers of the encrypted content should be protected	
	Advanced Encryption Standard 128 AES or better for end-to-end content encryption and	
	HTTPS for transport encryption	
Recording	The Digital Cloud Platform should have 10GB storage space included for each user at HQ and District. The user should have the flexibility to store the recordings either on the Digital Cloud platform or on a on- premise server.	
Cloud Platform Certifications	The digital cloud collaboration and communication platform should be GDPR, ISO/IEC 270001 certified.	