		Dispay Specification		
S.NO	**Parameter**	**Specifications**	**Compliance**	**Deviations, if Any**
1	Display Panel Diagonal size	75"		
2	Software	The touch interactive display shall have inbuilt onboard writing software. Thus, this software shall has the capability to write something on the display and store in on-board system even WITHOUT any PC/Laptop/External or Internal add on devices.		
		The display must have the facility of send the written contents by mail without using any external devices.		
		The display must have the facility of store written contents in the pen drive.		
		This software which is embedded in the On-Board system shall have capability to write(Annotate) on top the contents that are shown from Pen drive direct / External PC / Any such sources.		
		To achieve those functions, The touch interactive display shall have inbuilt onboard smart android 8.0 or better.		
3	Internet access	The touch interactive display mush have inbuilt WiFi. So that the presenter shall visit the internet to show/access the content/information even without PC/LAPTOP		
3	Display technology	Direct Backlit LED- IPS Panel		
4	Display Ratio	16:09		
5	Resolution	3840 x 2160		
6	Display Colour	1.07 Billion		
7	Brightness	450Cd/m2		
8	Viewing Angle	178 ° or better viewing angle		
9	Response Time	Not more than 5 ms		
10	Lifetime	30,000 hours or more		
	Touch Interactive Display - Audio System			
11	Speakers	Should be Seamlessly built-in the display		
12	No. of speakers and Max.Power Output	Touch Interactive Display shall have minimum of 2 speakers with the power of each speaker at 20 Watts or above		
13	Speaker Position	Seamlessly mounted in lower side of the display. Front facing, Forward through		
	Touch Interactive Display - Touch Technology			
14	Deployment of Touch Technology	Advanced Infrared		
15	Thickness of the touch glass	4mm Toughened Glass		
16	Surface technology	Anti-Glare		
	Touch accuracy	1mm		
17	Touch Sensor	Infrared or Capacitive		
18	Touch Points in Windows	Must have a touch capability of minimum 20 points		
19	Writing Tool	Shall use with stylus pen or finger		
20	Number of Stylus supplied with Int. Display	3		
	Touch Interactive Display - Connectivity Ports			
21	Ports	USB2.0 *1, USB3.0 *4, HDMI IN 2.0 *2, OPS (Optional) *1, LAN RJ45*2, RS232 IN *1, Audio OUT *1, PC-Audio IN *1, VGA *1,		

		Touch Interactive Display - Handheld Remote Control		
22	Technology	Infrared		
23	Battery Type	AAA Cell		
24	On Board Operating System	Touch Interactive Display shall have better Operating System which shall be coded with any latest programs like Android 8.0 or better		
25	Onboard System's CPU	ARM A73+A53 Quad Core 1.5GHz or higher,		
26	Onboard System's RAM	2GB /3GB		
27	Onboard System's ROM	16GB /32GB		
28	Onboard system Android(Or equivalent) Version support	8.0 or anything Latest		
29	Multimedia File Formats Supported	Support all major commonly used types of multi-media files		
30	GUI - Graphic User Interface	The display must have GUI for ease access of resources, functions and shortcuts. This GUI shall be any proprietary OS but shall be compatible with Android coding. Or any such OS		
31	White Board feature	The touch interactive display shall have white board function for seamless writing without any connectivity of computing devices. This white board function shall have minimum features of selecting different colors of pen, highlighter and sizes. The redo and undo function also shall add additional comfort to the presenter with eraser function. Preferably gesture action for eraser shall enhance the convenient of presentation.		
		OPS in slot		
32	OPS	Interactive display must have OPS in slot		
		Touch Interactive Display - System Safety		
33	Mounting Capabilities	Display must have facility to mount on floor stand or wall brackets		
34	BIS and CE Approval	Proposed Product must have BIS and CE certification. And Attach the copy as proof.		
35	Suitable wall mount kit with accessories	Equipment has to be supplied with suitable wall mount kit and accessories		
36	Installation	Horizontal/ Vertical installation		
		Additional Specification Parameters - Interactive Display		
S.NO	**Specification Parameter Name**	**Bid Requirement(Allowed Values)**	**Compliance Yes / No**	**Deviations, if Any**
1	Panel type	IPS Ultra HD		
2	Touch Precision and Writing experience	Should Support: ≥2mm(Single touch ≥2mm), ≥3mm(Multiple touch ≥3mm)		
3	Touch Accuracy	±1mm		
4	Screen Orientation	Landscape / Potrait		
5	BIS and CE Approval	Proposed Product must have BIS and CE certification. And Attach the copy as proof.		
6	Trolley	For mounting the display		

PTZ camera 12X				
S.No.	**Parameter**	**Specifications**	**Compliance Yes / No**	**Deviations, if Any**
1	Sensor	The camera sensor should be 1/2.7 inch high quality 2MP HD CMOS sensor or better.		
2	White Balance	The camera should have an Option of Auto or Manual White Balance.		
3	Gain	The camera should have an auto Gain Control		
4	Back Light Compensation	The camera should have a selectable Back-light compensation		
5	Noise Reduction	2D & 3D or better		
6	S/N ratio	The camera should have a S/N Ratio of >55db.		
7	Zoom	The camera should have a 12x optical zoom and 16xdigital zoom or better		
8	Interface	The camera should have a standard Video Output and should support HDMI/DVI Ports so that Camera can be integrated with standard End Points. Apart from that , It should be supplied with USB 3.0 based Capture card or should have native USB 3.0 support along with HDMI/DVI support so that it can also be connected with Software based VC Solution.		
9	RJ-45	It should have atleast 1 RJ-45 Port for IP Camera functions.		
10	Signal Support	The camera should support 1080p@60fps		

11	Control Port	The camera should have an RS 232 port for Communication		
12	Presets	The camera should have at least 150 Position Presets		
13	Field Of View	The camera should have 72.5 Degree or better field of view		
14	Pan Range	The camera should have a Pan Rotation Angle of -170 degrees to +170 Degrees or better		
15	Tilt Range	The camera should have a Tilt Rotation Angle of -30 degrees to + 90 degrees or better		
16	Accessory	The camera should be supplied with IR remote control as an included accessory. Along with celling mount kit.		
17	Recording	It shall support direct recording on USB devices withour NVR requirement.		
18	Certifications	It should have CE & latest CB Certification and also CB Test Reports to be submitted.		

Additional Specification Parameters - Video conferencing camera

S. No.	Specification Parameter Name	Bid Requirement (Allowed Values)	Compliance Yes / No	Deviations, if Any
1	Required FOV	The camera should have 72.5 Degree or better field of view		
2	RJ 45	It should have atleast 1 RJ-45 Port for IP Camera functions.		
4	Recording	It shall support direct recording on USB devices with USB 2.0		
5	Certifications	It should have CE & LATEST CB Certification and also CB Test Reports to be submitted.		

Wired Microphone with exetension and speaker

S.N	Parameter	Specifications	Compliance Yes / No	Deviations, if Any
1	Audio Technology	The system should have a DSP based Echo Cancellation>-65dB with echo tail of 500ms or better and bi Directional noise suppression of >-18dB or better		
2	Audio	It should have a frequency response of 20Hz-16KHz or better with a Microphone coverage of 3m, 360 degrees or better with 4 Integrated microphones. It should cover upto 5m or more with the help of 2 external microphones which can be extended with cables for larger room coverage.		
3	Audio Output	The Speaker volume should be 90dB or better.		
4	Audio For USB VoIP Network	It should have a Microphone and Speaker frequency band of 100Hz to 16KHz or better		
5	Ports	It should have USB port for Skype calling.		
6	Buttons	It should have Mute Indicator and Numbers, Mute Mic, Mute Speaker, Vol Up/Down or more.		
7	Features	It should support AEC, AGC, NLP, Noise reduction or better.		
8	Certifications	It should have CE & latest CB Certification and also CB Test Reports to be submitted.		
9	OEM Critiria	**OEM should be into business minmum 10years in Video conferecence Business for the products quoted by the bidder**		

Additional Specification Parameters - speakerphone Video Conferencing System

S. No.	Specification Parameter Name	Bid Requirement (Allowed Values)	Compliance Yes / No	Deviations, if Any
1	Audio For USB VoIP Network	It should have a Microphone and Speaker frequency band of 100Hz to 16KHz or better		
2	Ports	It should have USB port for Skype calling.		
3	Features	It should support AEC, AGC, NLP, Noise reduction or better.		
4	Certifications	It should have CE & LATEST CB Certification and also CB Test Reports to be submitted.		
5	Cables	Inbuilt cable length should be 7.5meter long with powercable & USB cable		