

Interactive Display 75 inch with Trolley			
S.NO	Parameter	Specifications	Compliance
1	Display technology	OD18	
2	Display Panel Diagonal size	1905	
3	Width of The Effective	1651.2	
4	Height of The Effective	928.8	
5	Display Ratio	16:09	
6	Resolution	3840 x 2160	
7	Display Colour	1.07 Billion	
8	Brightness	≥450 cd/m <sup>2</sup>	
9	Screen Orientation	Landscape	
10	Viewing Angle	178 ° or better viewing angle	
11	Response Time	Not more than 8 ms	
12	Lifetime	50,000 hours or more	
<b>Touch Interactive Display - Audio System</b>			
13	Speakers	Should be seamlessly build-in the display	
14	No. Of speakers and	Touch Interactive Display shall have minimum of 2	
15	Speaker Position	Seamlessly mounted in lower side of the display.	
<b>Touch Interactive Display - Touch Technology</b>			
16	Deployment of Touch	Advanced Infrared	
17	Thickness of the touch glass	4mm Toughened Glass	
18	Surface technology	Anti-Glare	
19	Touch accuracy	1mm	
20	Touch Sensor	Infrared or Capacitive	
21	Touch Points in Windows	Must have a touch capability of minimum 20 points	
22	Writing Tool	Shall use with stylus pen or finger	
<b>Touch Interactive Display - Connectivity Ports</b>			
23	Front Interface	HDMI in*1, USB touch*1, USB3.0*3 (all systems	
24	Inputs	HDMI in*2, DP in*1, Type C*1, VGA*1, VGA audio	
25	Outputs	SPDIF out*1,LAN out*1,(HDMI out is optional)	
26	Other	RS232*1	
<b>Smart System(Android)</b>			
27	Chips	Hisi810	
28	CPU	Quad-core A73+A53 1.5GHz	
29	GPU	Quad-Core MaliG51	
30	Android version	Android8.0	
31	Inbuilt WIFI	Dual WIFI (5G & 2.4G ), Dual Hotspot (5G & 2.4G )	
32	RAM	4G	
33	ROM	32G, with TF card slot available	
34	Built-in Software:	Whiteboard, File manager, Screen mirroring,	
35	Object Regonisation	This product supports object recognition and	
<b>Touch Interactive Display - System Safety</b>			
36	Mounting Capabilities	Display must have facility to mount on floor stand	
37	Certification	Proposed Product must have BIS certification. And	
38	Provision of OPS slot	Interactive display must have OPS slot for PC	

39	Suitable wall mount kit with	Equipment has to be supplied with suitable wall	
40	Storage	-10°C ~ 45°C / 5% ~ 90%	
41	Power consumption	≤300W	
42	Shipping Weight	79kg	
43	Installation	Horizontal/ Vertical installation	
<b>Additional Specification Parameters - Interactive Display</b>			
<b>S.NO</b>	<b>Specification Parameter Name</b>	<b>Bid Requirement(Allowed Values)</b>	<b>Compliance Yes / No</b>
1	Panel type	IPS Ultra HD	
2	Display Colors	1.07 Billion	
3	Glass Transmission	>92%	
5	Touch Accuracy	±1mm	

OPS			
S.NO	Parameter	Specifications	Compliance
1	OPS	Interactive display must have 80 Pin OPS slot	
2	Processor	It should have Intel i5 processor or more	
3	RAM	It should have RAM of 8GB	
4	ROM / Storage memory	It should have memory storage of 256GB SSD or higher	
5	Interface	It should have USB2.0 x 2 ports, USB3.0x 4 ports, DP outx1 port, HDMI out x1 port.	
6	Network	It should have RJ45 LAN port x 1	
7	WiFi	It should have inbuilt WiFi with two antennas.	
8	Bluetooth	It should have Bluetooth version 4.0 or above	
9	Audio ports	It should have 3.5mm with Mic/Line-inx1 port, Line-out 3.5mmx 1 port.	

PTZ Camera with 12X zoom			
S.NO	Parameter	Specifications	Compliance
1	Sensor	The camera sensor should be 1/2.7 inch high quality 2.07MP 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	
8	Interface	The camera should have a standard Video Output and should support USB 3.0 or better	
9	Signal Support	The camera should support 1080p@60fps	
10	Control Port	The camera should have an RS 232 port for Communication	
11	Presets	The camera should have at least 128 Position Presets	
12	Field Of View	The camera should have 72.5 Degree or better field of view	
13	Pan Range	The camera should have a Pan Rotation Angle of -170 degrees to +170 Degrees or better	
14	Accessory	The camera should be supplied with IR remote control as an included accessory. Along with ceiling mount kit.	
15	Certificate	It should be BIS, CE, FCC, RoHS Certified	
<b>Additional Specification Parameters - Video conferencing camera</b>			
S. No.	Specification Parameter Name	Bid Requirement (Allowed Values)	
1	Required FOV	The camera should have 72.5 Degree or better field of view	
2	Sensor	The camera sensor should be 1/2.7 inch high quality 2.07MP HD CMOS sensor or better.	
3	Presets	The camera should have at least 128 Position Presets	
4	Ports	1 xUSB 3.0,1 x DC Power,1 x RS 232	
5	Extension Cable	10meter USB extension cable should be supplied with camera & cable should be 4K optical cable from the same OEM.	

All in One DSP			
S.N O	Parameter	Specifications	Compliance
1	Digital Signal Processor	The DSP should have a 100% Full Duplex Echo Cancelling – no attenuation during full-duplex.	
2		The system should be Automatic echo cancellation(AEC).	
3		The system should be Automatic Gain Control (AGC).	
4		The system should be Dynamic Noise reduction.	
5		The should have frequency response between 20 Hz – 20 KHz	
6		The DSP should have USB port for integrating with Unified Software solutions like Skype, Lync, etc.	
6		DSP Should have dual capability of Local Sound Reinforcement and Far end Audio to be sent for Video conferencing at the same time without any Noise and Echo. Whatever teacher or student speaks through Collar or hand held microphone and Goosneck microphone all should be Going to Far end Location over Video Conference and also should comeout of Speakers for local Sound Reinforcement so that everyone present in class can also hear clearly.	
7		The DSP should have inbuilt Amplifier. It should come as one single unit as DSP-cum-Amplifier, from day 1. It should have inbuilt Receiver for Wireless Microphones from day 1.	
8	Wireless Microphone Features	2 no. of wireless Microphones should be supplied along with DSP from day one or more.	
9		The Microphone should have Frequency band of UHF 610MHz - 680MHz or better.	
10		The system should be Microphone Frequency Response- 80Hz~18KHz or better	
11		The system should have the facility to control the gain of microphone.	
12		The system should have LED indicator for status.	
13		Operating Range upto 100 Feet	
14			The system having inbuilt digital amplifier.
15	Amplifier Features	The Amplifier should consist of a 100 Watts ( 50 WattsX2) at 8 Ohms or more	
16		The Amplifier should have S/N Ratio of >80dB.	
17		The Amplifier should be inbuilt with DSP from day 1. Amplifier & DSP should come as single unit.	
18	I/O Ports	Built-In 1 x Handheld, 1 x Lapel Microphone	
19		Unbalanced MIC input ( 1x 6.5mm phono jack )with gain control	
20		Balanced 48v/12v phantom mic inputs (1x Phoenix ports) with separate gain controller	
21		Line input - 1 x 2RCA	
22		Line Output - 1 x 2RCA	
23		USB voice interface X 1 or more	
24		It should have 1 X RS232 port for controlling	
25	Form Factor	The system should be standard 19 inches Rack Mountable or better.	
	Speakers	One Pair 50W Wall mount Speakers should be supplied with unit.	
26	Certification	Proposed product must have CE, RoHS, FCC certification. Copy to be attached as proof.	

Color laser MFP with duplex scan facility			
S.NO	Parameter	Specifications	Compliance
1	Print technology	Laser Printer	
2	cartridge technology	Composite	
3	Print Speed	Normal:Up to 27 ppm; duplex: Up to 24 ipm;	
4	First page out	As fast as 9.8 seconds black; As fast as 11.5 seconds color	
5	Scan speed (Normal/duplex)	Normal(A4): Up to 29 ppm (b&w), up to 20 ppm (colour); Duplex (A4): Up to 46 ipm (b&w), up to 35 ipm (colour)	
6	Features	Scan to email with LDAP email address lookup, Scan to network folder, Scan to USB, Scan to Microsoft SharePoint®, Scan to computer with software, Fax archive to network folder, Fax archive to email, Fax to computer, Enable/disable fax	
7	Memory	512 MB	
8	Processor	1200 Mhz	
9	Duty cycle	50,000 pages/month	
10	Duplex print	Automatic	
11	Copy speed	Up to 27 cpm (mono & black)	
12	Input tray	50-sheet multipurpose tray, 250-sheet input tray, 50-sheet Automatic Document Feeder (ADF)	
13	Output tray	150 sheets	
14	Standard connectivity	1 Hi-Speed USB 2.0 port; 1 host USB ; Gigabit Ethernet 10/100/1000 Base-TX network port; Wireless 802.11b/g/n/2.4/5 Ghz Wi-Fi dual band	
15	Power consumption (printing)	less than 570 watt	
16	Starter toner yield	2400 pages black, 1200 pages CMY	
17	Warranty	3 year onsite warranty	

UPS 6 KVA ONLINE			
S.NO	Parameter	Specifications	Compliance
1	Capacity	6K VA / 4800 W	
2	Model	Liebert GXTMT+ 6KVA	
3	Design	True online double conversion design	
4	Nominal Input Voltage	208/220/230/240V	
5	Nominal Input Frequency	50Hz with range of 46 - 54Hz	
6	Input Power Factor	≥ 0.99 at 100% Load	
7	Type of Rectifier	IGBT based	
8	Nominal voltage regulation	1%	
9	Inbuilt OVCD	Yes	
10	Charging Method	Constant voltage constant current (CVCC)	
11	Charging current Capacity	26A max	
12	Number of Batteries	16 – 20 Blocks for Long run models.	
13	Type of Batteries	Depending on applications	
14	Back up	Max 10 hrs on full load with inbuilt charger.	
15	Load power factor	0.8	
16	Nominal Output voltage	208/220/230/240VAC	
17	Output Frequency	Frequency Range (Batt. Mode): 50 Hz ± 0.1 Hz ; Frequency Range (Synchronized Range): 46Hz ~ 54 Hz @ 50Hz system	
18	Output Waveform	Pure sine wave	
19	Total Harmonic distortion (THD)	<=3% for Linear load & <=7% for Non linear load	
20	Inverter	IGBT based PWM with Instantaneous Sine wave control	
21	Power Rating	6KVA / 4.8KW	
22	battery Type	Sealed, lead-acid, maintenance-free battery, li ion battery	
23	back up	16 Nos Exide 12V 26AH Battery	
24	Dynamic response	IEC62040-3 Classification 1	
25	Crest factor	3:1	
26	Duty.	Continuous duty	
27	Overload Capacity	AC mode:100%~110%: 10min、 110%~130%: 1min、 >130% : 1sec ; Battery mode: 100%~110%: 30sec、 110%~130%: 10sec、 >130% : 1sec	
28	Frequency synchronization Band for Static. Bypass	46 - 54Hz	
29	Transfer (Inverter to Bypass)	0 ms	
30	Retransfer ( Bypass to Inverter)	0 ms	
31	Manual bypass facility	No	
32	Change over from static bypass to manual bypass	No	
33	Automatic Bypass	Inbuilt	
34	Inverter Efficiency (DC to AC)	AC mode : > 93% ;	
35	Overall efficiency (AC to AC)	Upto 91%	
36	Acoustic Noise Level	Less than 58dB @ 1 Meter	
37	Ambient Temperature	0 - 40 Deg C	
38	Storage Temperature	-15°C~60°C	
39	Humidity	<95 % and non-condensing	
40	Altitude	<1000m	
41	Enclosure Protection Grade	IP 20	
42	Cooling	Forced Air	
43	Dimension (in mm) & Weight (in Kg)	H = 318mm,W = 190mm, D = 369mm & Weight of 21Kg for long run model .	
44			
45	<b>Metering (Digital display)</b>		
46	Input voltage	Indications are in the form of LED's- Battery LED, Inverter LED, Bypass LED, Line LED, Fault LED; ALSO 5 LED;s are for indicating the LOAD % during Mains mode, and Battery charge status during Battery Mode.	
47	Battery voltage		
48	Output voltage		
49	Output current		
50	Output frequency		
51	Input Frequency		
52	Heat sink temperature		
53	<b>Fault indicated on Digital Display Alarms</b>	LED indication display	
54	input fail		

55	Battery Low	Inbuilt and accessible on LCD Display.	
56	Transfer to bypass and system fault		
57	LED Indications		
58	Protection	Overload/Short Ckt/Battery Deep Discharge/Low Battery/Reverse Battery/Inverter Current Limitation/Over Temperature/Output Overvoltage.	
59	Optional features	RS 232 communication port for interfacing, Remote monitoring	
60	Testing standards	<b>Safety:</b> IEC/EN 62040-1-1	
61	Surge Protection standard	<b>SURGE :</b> IEC/EN 61000-4-5	
62	Noise standard	<b>EMI:</b> Conducted Emission (Category C3) IEC/EN 62040-2, Radiated Emission IEC/EN 62040-2	
63	Other Standards	<b>EMS :</b> (Level 4)	
64		ESD - IEC/EN 61000-4-2	
65		RS - IEC/EN 61000-4-3	
66		EFT - IEC/EN 61000-4-4	
67		CS - IEC/EN 61000-4-6	
68		Power-frequency Magnetic field - IEC/EN 61000-4-8	
69		Low Frequency Signals - IEC/EN 61000-2-2	
70	BIS	IS standard	
71	Quality standard	IS 9001-2015	
72	Environment standard	ISO 14001	
73	OSHAS	ISO 45001	
74	IT security management	ISO 27001	
75	NABL Approved test report	Yes	
76	Top 5 company in terms of revenue	Yes,Frost and sullivan report	