



Running Contract Details	
Equipment Name	Ultrasound Machine ( 3D/4D ) High definition ( OBG )
Running Contract Valid Till	17-11-2025
Tender Ref No	KMSCL/EP/T500/132D/2023
Tendered Quantity	10
Supplier Name	M/s Samsung India Electronics Pvt. Ltd.
GST No	07AAACS5123K1ZF
Installation & Delivery Period	8 Week(s)
Up-time / PM vist	95% & 4 Visits per year
Warranty period	3 Years

Supplier`s Details		
Address	Contact Details	
6th Floor DLF Centre Sansad Marg New Delhi-110001	Contact Person	Ashish Chahal
	Phone	+91-124-4881526
	Mobile No	9818580421
	Email	a.chahal@samsung.com

Item-wise Price Details				
#	Item Details	Unit Rate (Incl.all taxes & charges)	Service Charges (Through KMSCL)	Grand Total
1	<b>Ultrasound Machine ( 3D/4D ) High definition ( OBG )</b> <i>Model &amp; Make : V7/Samsung Medison</i>	2788800 Incl.GST :12%	205674	2994474
2	<b>Cost of Multifrequency 2-5MHz 2D convex transducer for obstetrics and gynecology applications &amp; biopsy needle guide with kit - C 1-6 D CONVEX PROBE</b>	317712.64 Incl.GST :12%	23431.31	341143.95
3	<b>Broadband 4D convex probe with 2-5 Mhz small and lightweight - RAB6-D VOLUME CONVEX PROBE</b>	387016 Incl.GST :12%	28542.43	415558.43
4	<b>Cost of Broad band endocavity 4D probe 5 to 9 mhz for transvaginal examination with reusable biopsy guide -RIC5-9-D VOLUME TV/TR PROBE</b>	327540.64 Incl.GST :12%	24156.12	351696.76

Item-wise Price Details							
5	Cost of Broad band endocavity 2D probe 5 to 9 mhz for transvaginal examination with reusable biopsy guide - IC5-9D 2D TV/TR PROBE			227967.04 Incl.GST :12%	16812.57	244779.61	
6	Cost of B/W Thermal printer of latest model for image printouts			39555.04 Incl.GST :12%	2917.18	42472.22	
7	Cost of Colour laser printer for direct printing of images from the system minimum dpi of 1200			24640 Incl.GST :12%	1817.2	26457.2	
8	PC with latest i5 processor or above, 1 TB HDD or above, licensed preloaded windows 10 or latest OS including software and hardware for frame grabbing and image display / storage and printing option. - PC + SONOCARE SOFTWARE			99680 Incl.GST :12%	7351.4	107031.4	
9	Cost of online UPS as per specification - 3 KVA UPS			39999.68 Incl.GST :12%	2949.98	42949.66	
10	Cost of Ergonomically designated chair for the operator as per specification			35000 Incl.GST :12%	2581.25	37581.25	
11	Cost of Hydraulic foldable patient couch as per specification			49280 Incl.GST :12%	3634.4	52914.4	
12	Cost of Needle guide for 2D vaginal probe			28560 Incl.GST :12%	2106.3	30666.3	
13	Cost of Linear Array probe of 6-12 MHZ - ML6-15-D LINEAR PROBE			200480 Incl.GST :12%	14785.4	215265.4	
				<b>4566231.04</b>	<b>336759.54</b>	<b>4902990.58</b>	
Annual / Comprehensive Maintenance Charges (Exl.Tax)							
Rate	4 <sup>th</sup> Year	5 <sup>th</sup> Year	6 <sup>th</sup> Year	7 <sup>th</sup> Year	8 <sup>th</sup> Year	9 <sup>th</sup> Year	10 <sup>th</sup> Year
<b>Ultrasound Machine ( 3D/4D ) High definition ( OBG )</b>							
Labour	1,50,000.00	1,50,000.00	1,50,000.00	1,50,000.00	1,50,000.00	1,50,000.00	1,50,000.00
Comprehensive	2,54,237.29	2,54,237.29	2,54,237.29	2,54,237.29	2,54,237.29	2,54,237.29	2,54,237.29

### Other terms & conditions

1. The supplier shall execute an agreement with the purchaser as per tender conditions (agreement format is given in the tender document).
2. The supplier shall submit performance security amounting to 5.00% of the value of the supply order.
3. The labour & comprehensive charges of equipment after the completion of warranty period is finalized by KMSCL as mentioned

above.

4. Since discount rate is not applicable for equipment under Running Contract of KMSCL, purchase/supply order can be issued directly to supplier at the given rate with tax & other charges (exclusive of KMSCL service charges).

5. If purchase/supply order is issued directly to the supplier, KMSCL service charge need not be paid. But the copy of the said order may be forwarded to KMSCL for information.

### **Technical Specification**

#### **Equipment :Ultrasound Machine ( 3D/4D ) High definition ( OBG )**

Sl. No.	Technical Specification
1	System should be the latest "State of the Art" fully digital ultrasound equipment capable of performing OBS-GYN, intra cavitory (vaginal)
2	The system should have the following modes : B-Mode (2D), Conventional M-Mode with varying sweep rates, anatomical M-Mode, PW doppler with high PRF (PW), High PRF Doppler Mode, colour flow doppler mode (CFM), Power Doppler Mode(PD), Directional power Doppler, HD-Flow Doppler Mode (HD-Flow) and B/Colour/FW
3	Power doppler angio imaging for perfusion studies for visualization of flow im small vessels and should be supported by all transducers
4	Volume imaging, multislice imaging with variable slice thickness and multiplanar imaging on all types of 3D and 4D modes
5	System should have facility for volume 3D/4D with convex and EV probe (on both gray scale and colour doppler modes)
6	Should be capable of performing live 4D imaging with volume transducers. 4D imaging should be possible in gray scale, colour mode, harmonic mode and with contrast agent imaging. Instant rendering of MPR images should be possible that rival acquired 2D resolution
7	Elastography should be available into the elastography mode. System should have indicator for compression level with side-by side display of 2D image and 2D with elastogram images.
8	System should have facility for dynamic range selections, dynamic resolution selection and different optimization for settings for different tissue compositions, colour coded display with parametric imaging
9	Dynamic range should be 180dB or more with range adjustability by selecting different dynamic contrast curves. Higher dynamic range will be preferred
10	A 2D imaging depth of at least 30cms
11	256 (8 bits) discrete gray levels
12	2D acquisition frame rate more than 500 frames/sec, colour doppler frame rate more than 300/S
13	Multiple focal imaging
14	Real time compounding with colour or power doppler imaging
15	Multiple frequency selection for better penetration and resolution for better tissue differentiation and better contrast resolution
16	Post processing tools for annotation, measurement, correction of angle, baseline, sweep speed should be possible on stored images

- 17 System should have multivariate Tissue Harmonic Imaging including pulse inversion phase cancellation technology and coded harmonics on all transducers
- 18 It should be able to operate with compound imaging and speckle reduction algorithm
- 19 System should have on touch tissue contrast resolution adjustment without altering the set presets levels
- 20 System should have real time compounding imaging technology with multiple transmitted lines of sight
- 21 Real time compound imaging should operate in conjunction with Tissue Harmonic imaging, volume modes, panoramic imaging, and duplex doppler and in conjunction with speckle reduction imaging
- 22 High resolution algorithms for advanced speckle noise reduction, refined tissue pattern displays and fine border definition.
- 23 Should operate in 2D and 2D/CH/Doppler mixed modes (up to 150 frames per second) and with 3D and contrast agent imaging.
- 24 Should have operator selectable settings and should be capable of displaying in side by side mode with non speckle reduced image
- 25 Should have trapezoidal imaging and steerable imaging for 2D, colour and doppler with linear probe
- 26 Beam steering should be possible with angles up to 30 deg. On linear probe
- 27 Panoramic / extended field of view imaging should be available on 2D as well as colour mode on convex and linear transducers.
- 28 This mode should build the extended field of view in a real time manner, showing the image as it builds
- 29 One button automatic adjustment / optimization for 2D mode, colour mode and doppler mode with auto correction of relevant fields of the mode used
- 30 Incorporates advanced pulse shaping, coding excitation and coded harmonics mode for imaging deeper areas and obese patients.
- 31 The system should have a fast boot up time less than 200 seconds, when switch ON from OFF position and also less than 60 second from STANDBY position. Specify the system booting time less will be preferred
- 32 System controls
- 33 System should have at least 45 automated and user programmable presets (output power signal processing and calculations)

- 34 System should have facility to adjust 2D performance instantly for different patient types (thin, average, obese)
- 35 The system shall display thumbnails on a clipboard with live gray mode while scanning to facilitate examine
- 36 Pan and zoom facility with high resolution results in both live and frozen images
- 37 Should have HD zoom / magnification functionality 16X or more.
- 38 Cine loop review facility in individual and mixed modes (frame by frame and in video mode), 2D : up to 10 min (depending on B-Image size and FPS); typical; about 3 min/4000 images (with curved array : 15 cm depth,
- 39 Post processing in freeze mode (dynamic Range adjustment, colour display on / off, colour / doppler invert, colour / doppler baseline adjustment, swept speed, measurement, annotation and pictogram). Post processing of B-Mode images with Speckle Reduction Algorithm
- 40 Real time automatic doppler calculations on touch of a button. Should provide facility to apply automatic doppler analysis retrospectively to frozen spectral data or data retrieved from doppler scrolling. Possibility of manual doppler trace
- 41 System should have at least 8 calipers with depth information and extensive, customizable measurement and report packages including vascular, abdominal, small parts, urology, pediatrics, ortho, neurology, complete obstetrics, multigestational calculations, gynecology, and fetal heart report packages
- 42 Calipers should have minimum precision of 0.1mm , small size calipers for measuring < 5mm
- 43 Calipers of dynamically varying contrast compared to background. Delete last measurement option, curved linear distance measurement
- 44 Measurement (Distance and areas) should be possible in real time ( non frozen) frozen and on saved images as well
- 45 Facility to save reports along with patient data which can be retrieved later. Measured parameters must be printed directly in from of a report through laser printer
- 46 System should have facility of electronic biopsy guide and algorithm for clear needle visualization. The system should be capable of displaying biopsy lines (for all transducers) while performing a fusion of B mode and colour mode

- 47 3D / 4D MODE
- 48 Speed adjustment on volume imaging
- 49 different render direction to view the volume image
- 50 Advanced tool for accurate quantification of irregular regions in 3D and automatically calculates the number and volume of hypoechoic structures to speed follicular assessments
- 51 Ability to restrict firing of the probe to a particular slice thickness of the region of interest
- 52 Advanced tool for selection of slice thickness out of complete volume dataset
- 53 4D fetal echo - 2D + colour + B Flow, STIC + Power doppler mode
- 54 STIC for fetal Echo with Colour, Doppler facility and enhancement features like Tissue Harmonic and speckle noise reduction for obtaining better image quality should be offered standard.
- 55 STIC + multislice mode with cine movement
- 56 Advanced imaging mode for visualization of hypoechoic areas and get automatic precise volume
- 57 Simultaneous visualization of 3 planes and 3D to guide the needle to the lesion (Optional)
- 58 Should have automated measurement of Antral Follicular Count with colour differentiation
- 59 Should have auto 3D/4D rendering as well to get the best of 3D in fraction of second with one touch
- 60 Advanced Spatio temporal image correlation with STIC anatomical M Mode
- 61 Automated/ semi automated tool to provide quantifiable NT measurements
- 62 Automated sonography based technology helps streamline the acquisition of volumetric images of the fetal heart, displaying all recommended views with the push on one button
- 63 Physical Spec
- 64 The equipment should be a room based wheeled unit with integrated brake, foot rest, transducer, cable and gel bottle holder and with electronic height adjustment facility for control panel and monitor independently. Transducer and gel bottle holders should be removable
- 65 The monitor should be at least a 23" LED/ LCD monitor with articulating arms with resolution of up to 1280x1024 pixel.
- 66 Monitor should have tilt and rotate facility.
- 67 There should be a digital brightness and contrast adjustment with preferable three default setting (dark room, semi dark room)

- 68 The system shall include a touch screen LCD with context sensitive menus to facilitate productivity as well as minimize training requirements. The touch screen LCD should be at least 10" for ease of use
- 69 System should have a full size alphanumeric key board with interactive back - lighting.
- 70 Integrated recording keys for remote control of up to 4 peripherals or DICOM devices one dedicated DVD recording key
- 71 The system shall have 4 universal probe ports in a convenient ( 3 active at a time) easy to access location with electronic switching facility
- 72 Integrated A/C line conditioning and battery back up system
- 73 IMAGE STORAGE, DOCUMENTATION DEVICES AND CONNECTIVITY ISSUES
- 74 Must allow digital storage of gray scale as well as colour images (both frozen and cine loops)
- 75 Facility of reviewing and exporting in different formats
- 76 System shall support the ability to store digital raw data that allows optimizing imaging parameters such as B Gain, TGC, Colour gain, dynamic range, speckle reduction levels, doppler gain, doppler base line on image recalled from the image archive
- 77 The system should have on board storage facility for at least 160 GB.
- 78 The hard drive should be inbuilt.
- 79 The system shall provide the ability to sort images stored on board based on patient name, exam date, patient id and exam types, patient directly should show network status as print status, archive status, commit status and export to DVD status
- 80 Possibility to modify / edit patient data.
- 81 Must have integrated CD/DVD writing - burning facility and it could be viewed on any ordinary PC.
- 82 Machine must have capability to write CD/DVD separately of a previous patient during scanning to save time
- 83 Should be able to archive data from previously stored CD/DVD
- 84 DVD /CD drive to store / retrieve images in different formats (TIFF / JPF / AVI / DICOM) / patient reports
- 85 System should be DICOM 3.0 (or higher version) ready (Storing, transfer, print record on CD/DVD, DICOM structured reporting for OS and uro gynecology) including modality work list enabled and also to permit communication between devices of various manufacturer (existing in the department) and a facility of connectivity through Web (minimum network connection speed to 100 Mbits/s) Details to be provided
- 86 USB PORT : Minimum 4 USB ports in machine and must be providing with USB memory stick to transfer images
- 87 System should be easily integrated in hospital PACS without any extra costs
- 88 Connectivity to dry film laser printer available in the department.
- 89 Images must be printed on laser printer in format of 4-15 spots per page (without using another computer in

between). It should send images after each acquire and after end of exam (batch send)

## 99 TRANSDUCERS AND BIOPSY ATTACHMENTS

91 Biopsy guides should allow various size needles (24-16 G)

92 Multifrequency 2-5MHz 2D convex transducer for obstetrics and gynecology applications, biopsy needle guide with kit. (Rate should be offered separately and taken for evaluation)

93 Broadband 4D convex probe with 2-5 Mhz small and light weight (Rate should be offered separately and taken for evaluation)

94 Broad band endocavity 4D probe 5 to 9 mhz for trans vaginal examination with reusable biopsy guide (Rate should be offered separately and taken for evaluation)

95 Broad band endocavity 2D probe 5 to 9 mhz for transvaginal examination with reusable biopsy guide (Rate should be offered separately and taken for evaluation)

## 96 ACCESSORIES

97 B/W Thermal printer of latest model for image printouts. (Rate should be offered separately and taken for evaluation)

98 Colour laser printer for direct printing of images from the system minimum dpi of 1200 (Rate should be offered separately and taken for evaluation)

99 PC with latest i5 processor or above, 1 TB HDD or above, licensed preloaded windows 10 or latest OS including software and hardware for frame grabbing and image display / storage and printing option. (Rate should be offered separately and taken for evaluation)

100 The unit shall have a gel warmer for the comfort of the patient (integrated gel warmer will be preferred) Cost should be included in the main machine.

104 Online UPS with voltage correction and maintenance free batteries of a reputed brand, to support all functions of the equipment and accessories. At least 30 min backup. Please specify the brand, model and details in the technical bid. (Rate should be offered separately and taken for evaluation)

105 Durable machine cover and transducer sheaths for protecting transducer cables. Cost should be included in the main machine.

106 Sterilized probe cover for transducers to be used during interventional procedures / infected patients. Cost should be included in the main machine.

107 Ergonomically designated chair for the operator (Rate should be offered separately and taken for evaluation)

108 Hydraulic foldable patient couch with height adjustable facility and brakes (Rate should be offered separately and taken for evaluation)

109 Extra gel bottles (100 Nos), printing rolls (50 Nos), CD (50 Nos), DVD (50 Nos). Cost should be included in the main machine.

110 Needle guide for 2D vaginal probe – 2(Rate for one should be offered separately and taken for evaluation).

## II GENERAL INSTRUCTION TO VENDORS

1 Supplier must ensure availability of expertise service and maintenance at Trivandrum

2 Supplier must ensure availability of spare parts and repair for next 10 years must be assured

3 All information in the tender document must be supported in the product data sheet

4 Compliance statement sheet must quote page number/s as it appears in the product data sheet enclosed by the



vendor

- 5 supplier should be able to demonstrate its quoted model when and where required along with quality control program for system performance with phantom
- 6 Supplier must attach the list of quoted model installation in reputed government institutions inside India ( at least 2)
- 7 Supplier must attach individual performance report of its quoted model from reputed government institutions mentioned in the list
- 8 Supplier should provide two sets of each operating, training, service manual and CD/DVD in English. Please provide original manufacturer specification data sheet and catalogue
- 9 System should be ISO, CE and FDA certified

Note:

1. If CDSCO (Central Drugs Standard Control Organization) certification is required for the import and marketing of the equipment, then the same shall be submitted along with the technical bid
2. Warranty exclusions if any shall be discussed at the time of prebid meeting else the tender condition as per clause 6.31.20 shall prevail