

물 품 규 격 서

- ☐ 입찰공고번호 : (학)일송학원 관리국 제2025-231호
- ☐ 입찰건명 : 외과(외래) Ultrasound Scanner(초음파 영상진단기) 구매
- ☐ 수요기관 : 한림대학교 동탄성심병원
- ☐ 납품장소 : 수요기관 희망장소 입고도
- ☐ 물품내역 등

품명(영문, 국문)	규격 및 사양	총 구매예정수량 (Q'TY)	1회 최대 발주수량	WARRANTY 기간
Ultrasound Scanner (초음파 영상진단기)	A or B	1 Set	1 Set	검수(합격)일로부터 3년 종료월 말일 까지

☐ 공통사항

1. 장비의 설치와 작동 및 교육은 무상으로 제공한다.
2. 수요기관 담당자 입회 하에 계약상대자는 제품의 설치 테스트 및 시험작동을 실시하여야 한다.
3. 무상 하자담보 책임기간은 물품 검수(합격)완료일로부터 3년 종료월 말일 까지를 기본 원칙으로 하며 계약상대자의 추가 제안에 따라 3년을 초과하여 설정할 수 있다.
4. 무상 하자담보 책임기간 중 수요기관의 사정으로 인하여 부서 및 장비의 위치가 불가피하게 이동을 필요로 할 경우 설치 시 협의 하에 무상 또는 부득이한 경우 실비 기준으로 이루어진다.
5. 무상 하자담보 책임기간 중 중 공급된 장비의 부속품이 단종된 경우 수요기관이 인정하는 동등이상의 장비로 무상교체가 이루어져야한다.
6. 계약상대자는 어떠한 상황에서도 애프터서비스를 위하여 전문서비스 인력을 제공하여야 하며 애프터서비스를 위하여 교체 부품을 보관하여야 한다.
7. 계약상대자는 장비 납품 시 납품일을 기준하여 제품 제조년월이 6개월 이내인 장비를 납품 하고 납품장비에 해당 제조년월이 명시되어야 한다.
8. 기존 사용 중인 의료장비 철거 및 회수 또는 보상판매 조건으로 제안할 수 있다.

<규격서 A>

A. Features

Ultrasound imaging system designed for a wide range of exams, including liver, cardiac, OB/GYN, vascular, breast, thyroid, musculoskeletal, urologic and pediatric studies.

With probes, powerful high fidelity and broad bandwidth produce high resolution images whether scanning superficial or deep targets -or at any point in between.

This system brings you advanced ways to increase everyday efficiency - tools and functions you can customize to your own preferences so exams flow easily, your way.

The system shall support the following DICOM3.0 service classes.

B. Specifications

- 1 . **Basic Console System**
 - 1) XDclear Technology
 - 2) 23.8 inch Bezel-less LCD LED backlight monitor
 - 3) 10.4 inch wide LCD touch screen
 - 4) 4 active probe ports(3 x RS and 1 x DLP)
 - 5) Digital TGC and digital A/N keyboard
 - 6) Integrated 500 GB hard drive
 - 7) Integrated multiple USB port
 - 8) Integrated speakers with sub-woofer for premium sound
 - 9) 776 MB of Cine memory
 - 10) Export JPEG, JPEG2000,WMV, MPEG 4 and AVIformats
- 2 . **Operating Mode**
 - 1) B-mode
 - 2) M-mode
 - 3) Color Flow Mode
 - 4) Extended Field of View
 - 5) Power Doppler Imaging
 - 6) Volume Modes
 - 7) Anatomical M-mode
 - 8) Coded Harmonic Imaging
- 3 . **CrossXBeam**
 - 1) Provides 3, 5, 7 or 9 angles of spatial compounding
 - 2) Live side-by-side DualView display
 - 3) Compatible with Color Mode, PW, SRI-HD, Coded harmonic imaging, Virtual convex
- 4 . **Speckle Reduction Imaging (SRI-HD)**
 - 1) Speckle Reduction Imaging
 - 2) Provide multiple levels of speckle reduction
 - 3) Compatible with Side by Side DualView Display
 - 4) Compatible with all linear, convex, and sector transducers

- 5) Compatible with B-Mode, color, contrast agent and 3D imaging
- 5 . **Raw Data Analysis**
 - 1) Complete image flexibility allows stored image optimization and measurements such as B-mode, Doppler mode and Anatomical M mode or Provides for Voice control of scanner.
- 6 . **Virtual Convex**
 - 1) Provides a convex Field of View
 - 2) Compatible with CrossXBeam
- 7 . **Coded Harmonic Imaging (CHI)**
 - 1) Enhances near-field resolution for improved small parts imaging as well as far-field penetration compared with typical harmonic imaging
- 8 . **Automatic Optimization (AO)**
 - 1) Optimize B-Mode image to improve contrast resolution
 - 2) Selectable amount of contrast resolution improvement (low, medium, high)
 - 3) Auto TGC
- 9 . **Anatomical M-Mode**
 - 1) M-Mode cursor adjustable at any plane
 - 2) Can be activated from a Cine loop from a live or stored image
 - 3) M and A capability
 - 4) Available with Color Flow Mode
 - 5) Curved Anatomical M-Mode
- 10 . **Measurements & Calculations Package**
 - 1) Real-time Doppler Auto Measurements / Calculations
 - 2) OB Measurements / Calculations
 - 3) GYN Measurements / Calculation
 - 4) Vascular Measurements / Calculations
 - 5) Urological Calculations
- 11 . **DICOM 3.0 Connectivity**
 - 1) Supporting DICOM service classes
 - Verify (SCU/SCP)
 - Print (SCU)
 - Store (SCU)
 - Basic Modality Workist (SCU)
- 12 . **LOGIQ View**
 - 1) Extended Field of View imaging
 - 2) For use in B-Mode
 - 3) Auto detection of scan direction
 - 4) Pre or post-process zoom
 - 5) CrossXBeam is available on linear probes

- 13 . **B-Flow/B-Flow Color**
 - 1) Provides the high resolution and high frame rate of B-mode imaging with the ability to detect and display real-time homodynamic simultaneously, not overlay color flow image.
 - 2) Accumulation mode and period
- 14 . **B-Steer+**
 - 1) B-Steer+ enables enhanced visualization of the needles structure during interventional procedures, helping improve user confidence and exam accuracy.
- 15 . **Battery Option for power assistant & scanning**
 - 1) Power Assistant is an innovative solution that provides the system battery power during transport to help decrease system shut-down and reboot time.
 - 2) 20 min offline scanning is available
- 16 . **C1-6-D XDclear Convex Probe**
 - 1) Applications: Abdomen, OB/GYN, Pediatric, Peripheral Vascular, Musculoskeletal
 - 2) Frequency(MHz): 1-6
- 17 . **L3-12-RS Linear Probe**
 - 1) Applications: Small Parts, Vascular, Pediatrics, Neonatal, Musculoskeletal
 - 2) Frequency(MHz): 2-11
- 18 . **IC9-RS Micro Convex Probe**
 - 1) Applications: OB/GYN, Urology, Transrectal
 - 2) Frequency(MHz): 2.9-9.7
- 19 . **Gel Warmer**
- 20 . **Rear Handle**
- 21 . **WLAN**
- 22 . **Operating Manual**

C. Consist of(per 1 Set)

1	. Main Unit	1 Set
2	. Operating Mode	1 ea
3	. CrossXBeam	1 ea
4	. Speckle Reduction Imaging (SRI-HD)	1 ea
5	. Raw Data Analysis	1 ea
6	. Virtual Convex	1 ea
7	. Coded Harmonic Imaging (CHI)	1 ea
8	. Automatic Optimization (AO)	1 ea
9	. Anatomical M-Mode	1 ea
10	. Measurements & Calculations Package	1 ea

11	. DICOM 3.0 Connectivity	1 ea
12	. LOGIQ View	1 ea
13	. B-Flow/B-Flow Color	1 ea
14	. B-Steer+	1 ea
15	. Battery Option for power assistant & scanning	1 ea
16	. C1-6-D XDclear Convex Probe	1 ea
17	. L3-12-RS Linear Probe	1 ea
18	. IC9-RS Micro-Convex Probe	1 ea
19	. Gel Warmer	1 ea
20	. Rear Handle	1 ea
21	. WLAN	1 ea
22	. Operating Manual	1 ea

D. Remarks

1. 장비의 운송, 설치, 교육은 공급자가 책임진다.
2. 제품 하자에 관하여 검수합격일로부터 3년 종료월 말일까지 보증(Warranty)기간으로 한다.

<규격서 B>

A. Features

- It is the top model
- This system achieves high sensitivity and high quality by using state-of-the-art digital technology in the T/R section, which is the core of a ultrasound system.
- This system features advanced algorithms that run on cir-cuits that incorporate the latest circuit technology, semi conductor technology and surface-mount technology.
- High-speed, extremely flexible beamforming provides images with superior spatial resolution at higher temporal resolution
- Optimal parameters for the patient's body size and the objective of the examination can be selected as a set by a single operation
- Up to four transducers can be connected at the same time
- Easy identification of the selected transducer on the TCS
- The switches on the operating panel and touch screen can be customized

B. Specifications

1. Main System - General Information

- High image quality made possible by a new image engine
- Optimal parameters for the patient's body size and the objective of the examination resolution Outstanding operability thanks to the iStyle+advanced ergonomics concept
- Monitor : High-definition 21.5-inch LED monitor
- Touch command screen : 12.1 inch
- Resolution : 1,920 × 1,080 Full HD
- Viewing angle : 178 degrees
- Response time (ms): typ. 14
- Contrast ratio: typ. 1,000 : 1
- HDD 500GB
- DVD/CD drive (CD-R/DVD+R)
- USB flash drive
- Network : DICOM 3.0 Capacity

2. Imaging Modes

- High image quality made possible by a new image engine, a-BeamForming
- Unique Precision Imaging and Differential THI improve spatial resolution and tissue visualization
- ApliPure Plus multiple compounding technology increases contrast resolution
- M-mode
- Color Doppler
 - Flow velocity
 - Flow velocity/variance
 - Power
- Power Angio Mode
- Trapezoid scan
- M-mode

3. Precision Imaging

- Enhances ultrasound beam data by including information from adjacent scan lines
- It increases Natural structure enhancement

4. Differential Tissue Harmonic Imaging

- Simultaneous Transmission of 2 pulses at different frequencies
- It improves the frequency matching, beam density and focusing giving improved spatial and contrast resolution and Uniformity

5. ApliPure Plus

- Multiple compounding technology increases contrast resolution
- It increased contrast and reduced speckle noise improve visualization

6. Advanced Dynamic Flow

- High Spatial resolution in color with flow uniformity
- Improves diagnostic confidence in areas of high or low flow, in vascular abnormalities and detection of feeding vessels and plaque

7. Quick Scan

- Optimizes 2D-mode image quality or Spectrum Doppler waveforms with one-touch operation

8. Tissue Specific Optimization

- It Increases the lateral resolution by adjusting parameters based on the speed of sound in tissues

9. BEAM

10. Vascularity Index

- This software calculates the display area and ratio of the Power Doppler Image

11. Superb Micro-vascular Imaging (iSMI)

- It is based on powerful intelligent algorithm applying similar concept to that used for ultrasonic doppler signals
- iSMI effectively separates flow signals from overlaying tissue motion artifacts, preserving even the subtlest low-flow components with unmatched detail and definition
- Visualizes low-velocity blood flow at a high frame rate

12. Panoramic View

- B/W images can be obtained with a wider field of view by moving the transducer in the lateral direction

13. Verza bracket onlykit(PVT-475BT)

14. Battery Unit

15. DICOM 3.0 Capacity

16. Gel Warmer

17. Transducers

- PVT-475BT/FS Convex Array Transducer
 - Frequency Range : 1.8 ~ 6.4MHz
- PLT-1204BT/FS Linear Array Transducer

- Frequency Range : 4.5 ~ 18.0MHz
- PVT-781VTE Endo-rectal Transducer
- Frequency Range : 3.6 - 11.0 MHz

18. Operating & Service Manual

C. Consist of(per 1Set)

1. Main Unit	1 set
2. Imaging Modes	1 ea
3. Precision Imaging	1 ea
4. Differential Tissue Harmonic Imaging	1 ea
5. ApliPure Plus	1 ea
6. Advanced Dynamic Flow	1 ea
7. Quick Scan	1 ea
8. Tissue Specific Optimazation	1 ea
9. BEAM	1 ea
10. Vascularity Index	1 ea
11. Superb Micro-vascular Imaging (iSMI)	1 ea
12. Panoramic View	1 ea
13. Verza bracket onlykit(PVT-475BT)	1 ea
14. Battery Unit	1 ea
15. DICOM 3.0 Capacity	1 ea
16. Gel Warmer	1 ea
17. Transducers	
- PVT-475BT/FS Convex Array Transducer	1 ea
- PLT-1204BT/FS Linear Array Transducer	1 ea
- PVT-781VTE Endo-rectal Transducer	1 ea
18. Operating & Service Manual	1 ea

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