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ACUSON S2000 Automated Breast Volume Scanner

All items listed below are included for this system: (See Detailed Technical Specifications at end of Proposal.)

Qty	Item Description
1	<p>ACUSON S2000 Mainframe</p> <p>The ACUSON S2000(tm) ultrasound system is a multi-speciality system designed to exceed your expectations - today and into the future. The unmatched ability to deliver comprehensive information to make a differential diagnosis even in the most challenging case makes this the system to have "when you need to know more." The industrial design is conducive to today's busy environments. The home base layout of controls and operator functions on the control panel supports the natural and extended reach of the user and greatly reduces keystrokes and repetitive movements. The 19" flat panel display with articulating arm, control panel height adjustment and side-to-side swivel allow for appropriate positioning and placement to accommodate tight and/or awkward scanning environments. A rear handle and extra transducer storage further extend the product offering into the high end arena. In addition to a lightweight system, the QuikStart standby mode enhances system portability by reducing startup and shutdown times to approximately 30 seconds and 10 seconds respectively.</p>
1	<p>S2000 ABVS Solution</p> <p>Siemens innovative ACUSON S2000(tm) Automated Breast Volume Scanner (ABVS) is the first multi-use ultrasound system that automatically, quickly and comfortably surveys and acquires full-field volumes of the breast, provides efficient and comprehensive analysis of the 3D data, and facilitates easy, semi-automated reporting. The ACUSON S2000 ABVS automatically acquires a complete volume data set of the breast in less than 10 minutes. Additionally, the coronal view allows slice-by-slice evaluation of the dense breast tissue, from the skin line to the chest wall, a perspective unavailable with conventional 2D-ultrasound. The ABVS Workplace completes the ABVS workflow solution by allowing manipulation of acquired 2D and 3D data and providing comprehensive BI-RADS(r) US reporting capability. All volume data sets can be viewed in five standard orientations: transverse, sagittal, radial, anti-radial, and coronal. In addition to automated breast ultrasound, the system provides conventional, hand held ultrasound capabilities for biopsy guidance and color Doppler as well as Advanced Breast Applications such as eSie Touch(tm) elasticity imaging and Custom Tissue imaging. Scanner with mechanically-driven 14L5BV transducer Observation and Touch Screen LCD Monitor Electrical junction box for easy connection of the ABVS module with the ACUSON S2000 system Starter Kit (includes 50 disposable membranes, 1 Gal ABVS contact lotion, 3 packages disinfectant wipes) The ABVS option requires SW1.6X or 2.0E; it is not supported with 2.0A.</p>
1	<p>S2000 ABVS SW bundle</p> <p>The SW bundle contains all Advanced Imaging Technologies, required to run the ABVS solution - S2000 Advanced Breast Imaging (eSie Touch elasticity imaging & Custom Tissue Imaging) - S2000 TEQ technology - S2000 Advanced SieClear compounding - 3-Scape real-time 3D imaging - S2000 Advanced fourSight technology</p>

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S2000 3.1 SW

Release 3.1 for the ACUSON S2000(tm) ultrasound system continues to advance the performance and capabilities of the system

1

S2000 Operating Sys, English, 3.1

1

S2000 English Keyboard 3.1

2

S2000 ABVS Op Instruction Engl.

The Instructions for Use include both a general overview and a technical description of the ACUSON S2000 ABVS. NOTE: This is an addendum to the ACUSON S2000 User and Reference Manual

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115V Power Supply

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S2000 NTSC Video Interface

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ABVS Cordset North America

1

Sony UPD23/25MD Printer, S2000

Small size color printer with excellent print quality and fast printing times - Dye Sublimation Printing technology with 403dpi resolution - A6 color prints (5" x 3-5/8") delivered in ~ 20 seconds - To be used on-board the ultrasound system

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S2000 OEM HW 3

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sUSBA 1st floating License

First floating license for the syngo(r).Ultrasound Breast Analysis standalone, off-system software, providing 2D review and 3D ABVS manipulation allowing for complete full field Breast imaging analysis. •Display of 2D and 3D ultrasound data in different hangings •Software licensing •Comprehensive tools for reviewing the data •Compatible with a wide variety of hardware •syngo.via look & feel •Patient-centered workflow •Support of DICOM communication for data transfer •Report supports the ACR BI-RADS(r) US Lexicon Classification Form* The license is not bound to a specific computer and can be accessed by one user at a time from multiple locations. Compatible with 2D images and ABVS data acquired from the ACUSON S2000(tm) ultrasound system. NOTE: To run syngo.Ultrasound Breast Application, the Workstation must meet the minimum system requirements. * BI-RADS (Breast Imaging-Reporting and Data System), a quality assurance tool, is published and trademarked by the American College of Radiology (ACR).

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Software Update Fee

This fee assures annual software updates for up to 5 years post installation of the syngo.Ultrasound Breast Analysis application to protect the software investment for the long term.

2

sUSBA Instruct for Use, ENG

1

S2000 B&W SieScape Panoramic Img

SieScape(tm) panoramic imaging option allows real-time acquisition and display of B-mode panoramic images up to 240 cm in length or in angular measurements up to 180 degrees. Large organs and long vessels can be displayed in their full dimension for increased on-screen anatomical information. User interface features include start, stop and pause controls and an "optimal scanning speed" indicator. Individual images, which have been used to compose the SieScape image, can be viewed with their original contents via Cine function. SieScape images can be rotated to adapt to the correct anatomical orientation using the trackball.

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S2000 Color SieScape Panoramic Img

The Color SieScape(tm) panoramic imaging option on the ACUSON S2000(tm) ultrasound system allows the user to create an ultrasound image with an extended field of view during real-time imaging in 2D and Power modes. The combination of Power and 2D modes provides exceptional views of the anatomy and its flow characteristics demonstrating anatomical relationships over a larger area than provided by standard 2D imaging. Color SieScape imaging can demonstrate anatomical relationships of tissue/organ and vasculature. Color SieScape imaging is compatible with all S2000 transducers and requires the B & W SieScape imaging option.

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S2000 Clarify VE

Clarify(tm) Vascular Enhancement technology uniquely utilizes power Doppler flow information to enhance B-mode imaging. The Clarify(tm) vascular enhancement technology option reduces slice thickness artifact in 2D throughout the field of view and reduces noise within macro and micro-vascular structures. The reduction in artifact further enhances tissue characterization and contrast resolution and improves boundary detection between tissues and clearly delineates vessel walls. Clarify VE technology is a post-scan conversion process that applies a mixing and processing algorithm to received data pixel-by-pixel. The advantages of Clarify VE are: - Refines vascularity by reducing slice thickness and reverberation artifacts - Provides pixel-by-pixel, real-time, adaptive enhancement - Selectively enhances macro and micro-vascularity

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ABVS Installation Set

Complete assembly set for mounting the ACUSON S2000(tm) ABVS column to the floor. Includes: - Expansion bolts and epoxy - Leveling shims - Installation instructions

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4C1 Transducer (MP), S2000

The 4C1 transducer utilizes ACUSON(tm) patented micro-pinless (MP) connector and is based on Hanafy lens transducer technology in an ergonomically optimized microCase(tm) transducer miniaturization technology design. Hanafy lens technology for uniformly narrow image slice thickness, dual frequency NTHI capability, excellent penetration, detail and contrast resolution, high signal to noise ratio, high sensitivity in color and spectral Doppler modes, independent frequency selection across modes, superior ergonomic design for comfort and access. Wideband MultiHertz(tm) multiple frequency imaging provides multiple transmit frequencies ranging for optimal resolution and penetration. Excellent detail resolution is apparent in primary applications including general abdominal, renal, and OB/Gyn imaging. The 4C1 transducer is also optimized for those exams that require additional imaging penetration such as technically difficult patients.

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7CF2 Transducer (MP), S2000

The 7CF2 utilizes an ACUSON(tm) patented micro-pinless transducer connector with 192 elements and a center frequency of 4.2MHz. The primary clinical application for the new 7CF2 4D transducer is for obstetric/gynecology applications with superior image quality, contrast and detail resolution in 2D, 3D, and real-time 3D imaging modes. The 7CF2 may be used for adult abdominal applications that can be addressed with high frequency imaging. The 7CF2 was ergonomically designed for extraordinary smaller size and lighter weight than current 4D transducers on the market today.

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9EVF4 Transducer (MP), S2000

The 9EVF4 utilizes an ACUSON(tm) patented micro-pinless transducer connector with 192 elements and a center frequency of 6.2 MHz. Wideband MultiHertz(tm) multiple frequency imaging provides multiple transmit frequencies. Integrated microelectronics combined with a revolutionary SuppleFlex(tm) transducer cable provides a lightweight design to reduce operator fatigue. The 9EVF4 is ergonomically designed for patient comfort and ease of use. The 9EVF4 supports a unique offering by electronically steering the Beta angle of the array for alleviation of user wrist fatigue.

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4V1 Transducer (MP), S2000

The 4V1 is a small footprint transducer featuring microCase(tm) miniaturization technology and can be used for a broad range of adult abdominal, OB/Gyn, and fetal heart imaging applications. This transducer utilizes ACUSON(tm) patented micro-pinless connector technology and Hanafy lens transducer technology to provide improved resolution and image uniformity. The 4V1 delivers excellent detail and contrast resolution, high sensitivity in color and spectral Doppler modes, independent frequency selection across modes, superior ergonomic design for comfort and access.

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9L4 Transducer (MP), S2000

The 9L4 transducer utilizes ACUSON(tm) patented micro-pinless (MP) connector and is based on Multi-D(tm) matrix array transducer technology and exceptional spatial resolution throughout the field of view. This multi-row array transducer is contained in an ergonomically designed microCase(tm). This transducer technology with its improved beam profile creates unsurpassed image detail, clarity and uniformity. Wideband MultiHertz(tm) multiple frequency imaging provides multiple transmit frequencies. Integrated microelectronics contained in an ergonomically designed microCase(tm) and combined with a revolutionary SuppleFlex(tm) transducer cable provide a lightweight design to reduce operator fatigue.

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14L5 SP Transducer (MP),S2000

The 14L5 SP transducer utilizes ACUSON(tm) patented micro-pinless (MP) connector technology and is specially designed for intra-operative applications. Its small, lightweight, offset "L" ergonomically designed form factor allows for easy access in tight imaging conditions. With superior contrast and detail resolution and improved accessibility due to the design, the 14L5 SP may also be used for breast, small parts and musculoskeletal applications where improved access and a small footprint are required. The 14L5 SP has 128 elements with a center frequency of 9 MHz. Sterilizable* High Resolution Linear Array for Special Applications.

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18L6 HD Transducer (MP), S2000

The 18L6 HD (High Density) is a large format, 50mm, linear transducer with a 6 to 18 MHz bandwidth. The 18L6 HD utilizes Hanafy lens transducer technology providing an industry leading high density (HD) 100 micron pitch for unrivaled contrast and spatial resolution. Additionally, ACUSON(tm) patented micro-pinless (MP) connector technology and Wideband MultiHertz(tm) multiple frequency imaging capabilities set the standard for high frequency imaging. It is built with patented Elastogrip(tm) ergonomic grip coating for unrivaled grip comfort and repetitive stress reduction. A specially designed SuppleFlex(tm) transducer cable provides a lightweight design to reduce operator fatigue. eSieTouch(tm) elasticity imaging is supported on the 18L6 HD.

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Ultrasound Apps Training 2 days included

Two (2) Days System Installation Applications Training Two days on-site general system installation applications training to include basic or advanced training on systems and options. Extent and objective of training will be determined with the site prior to the training event. Specific options may require one additional no charge applications day. Additional training may be purchased.

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Additional Manual for Govt-S2000

One complimentary biomedical tuition is included with the purchase of this system. This training must be completed before the end of the warranty period.

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Offset sUSBA Instruct for Use, Eng

1

Offset S2000 ABVS Op Instruction Engl.

Detailed Technical Specifications

ACUSON S2000 Automated Breast Volume Scanner

. / Product	Description
<p>ACUSON S2000 Mainframe</p>	<p>ACUSON patented micro-pinless connectors along with sophisticated high-density signal processing create image quality unsurpassed in the high end market. The flat panel monitor with ISP (in-plane switching) technology and transducer technology contributes to the image quality surpassing that of the competition</p> <p>The ACUSON S2000 core system DICOM functionality includes: Modality Worklist, Query/Retrieve (Q/R), “in-progress” or “batch” print to DICOM print devices, “in-progress” or “batch” storage of exam images, clips and patient information, Storage Commitment, transfer of performed procedure information from the ACUSON S2000 system to a HIS/RIS system, and Structured Reporting functionality.</p> <p>DICOM Structured Reporting allows organized transfer of calculation data to PACs systems in either supported public elements, or in private elements for measurements not supported by DICOM S/R and is available for OB/GYN, Cardiac and Vascular calculation data. Structured reporting data may be transferred to DICOM Storage Devices or Network File Share</p> <p><i>The DICOM conformance statement for the ACUSON S2000 ultrasound system is available on the Siemens Healthcare website at:</i></p>
<p>S2000 ABVS Solution</p>	<p>Siemens innovative ACUSON S2000™ Automated Breast Volume Scanner (ABVS) is the first multi-use ultrasound system that automatically, quickly and comfortably surveys and acquires full-field volumes of the breast, provides efficient and comprehensive analysis of the 3D data, and facilitates easy, semi-automated reporting.</p> <p>The ABVS Workplace completes the ABVS workflow solution by allowing manipulation of acquired 2D and 3D data and providing comprehensive BI-RADS® US reporting capability. All volume data sets can be viewed in five standard orientations: transverse, sagittal, radial, anti-radial, and coronal. The ABVS Workplace runs on the <i>syngo</i>® MammoReport “lite” hardware (<i>syngo</i> MammoReport without the 5 MP monitors). An integrated version of the ABVS Workplace on <i>syngo</i> MammoReport VB4X, part #14418385 is available through the XP W7-250-1 price pages.</p> <p>In addition to automated breast ultrasound, the system provides conventional, hand held ultrasound capabilities for biopsy guidance and color Doppler as well as Advanced Breast Applications such as eSie Touch elasticity imaging and custom tissue imaging. The ACUSON S2000 ABVS is the ideal complete solution for dedicated breast centers as well as radiology departments focused on breast imaging.</p> <p>The ACUSON S2000 ABVS features adaptive ergonomics to ensure accurate and consistent results. The adjustable scanner arm allows easy manipulation of the transducer pod with minimal compression so patients can relax and breathe comfortably during the exam. It encompasses an integrated room suite design with a semi-transportable column accommodating a wide variety of room settings. The ABVS column and arm assembly hold the scanner and an observation and touch screen LCD. The scanner arm provides a wide range of movement and flexibility for positioning. During acquisition, the transducer pod and arm are held in place with the unique one-button locking mechanism which simplifies and expedites volume acquisition and addresses the common problem of repetitive stress injuries. The core component of the scanner is the mechanically-driven high resolution 14L5BV transducer. Each acquisition acquires a 15.4 x 16.8 x 6 cm volume data set with exquisite resolution of intricate breast anatomy and pathology. Patented micro-pinless connectors along with sophisticated high-density signal processing create image quality unsurpassed on the high end market. The Advanced Imaging capabilities and the transducer technology contributes to the outstanding image quality. The ACUSON S2000 system's 3D/4D visualization tools enable the 3D processing with Thick Slice imaging and allow for online display of the ACUSON S2000 ABVS volume data.</p> <p>It is required that the ABVS Workplace be purchased along with the ACUSON S2000 ABVS for fully-featured breast imaging. The ABVS option requires SW1.6X or 2.0E; it is not supported with 2.0A.</p>

/ Product	Description
Sony UPD23/25MD Printer, S2000	<p>The Sony UP23/25MD A6 color printer can be purchased for on-board (PN 10041492) or off-board (PN 10041495) system configurations. Mounting brackets combinations for on-board configurations are required to support this printer. Please use the price book to determine which on-board/off-board configuration is required. The appropriate mounting hardware will be auto-selected at the factory. The printer requires Sony UP C 21-L 50 print media.</p>
sUSBA 1st floating License	<p>First floating license for the syngo®Ultrasound Breast Analysis standalone, off-system software, providing 2D review and 3D ABVS manipulation allowing for complete full field Breast imaging analysis.</p> <ul style="list-style-type: none"> - Display of 2D and 3D ultrasound data in different hangings - Software licensing - Comprehensive tools for reviewing the data - Compatible with a wide variety of hardware - syngo.via look & feel - Patient-centered workflow - Support of DICOM communication for data transfer - Report supports the ACR BI-RADS® US Lexicon Classification Form* <p>The license is not bound to a specific computer and can be accessed by one user at a time from multiple locations.</p> <p>Compatible with 2D images and ABVS data acquired from the ACUSON S2000™ ultrasound system.</p> <p>Minimum System Requirements:</p> <ul style="list-style-type: none"> - Compatible with 32-bit and 64-bit versions of Windows XP and 64-bit versions of Windows 7. - CPU: dual core processor with a speed of 2.2 GHz or more - RAM size: <ul style="list-style-type: none"> - 4 GB or more for 64-Bit OS - 2 GB or more for 32-Bit OS - Monitors with display ratio 5:4 and resolution up to 1280 x 1024 pixels - minimum resolution - Monitors with display ratio 16:10 and resolution up to 1920 x 1200 pixels - Monitors with display ratio 4:3 and resolution up to 1600 x 1200 pixels - Monitors with contrast resolution according to industry guidelines set by professional societies such as ACR (American College of Radiology) - Graphic board: <ul style="list-style-type: none"> - Memory bandwidth: 32 GB/sec or more - Texture memory: 512 MB or more - OpenGL 2.0 support - NVIDIA Quadro or GeForce, ATI Radeon - NOTE: Intel on-board graphics are not supported! - Hard drive size: 200 GB or more - Standard keyboard - Three button wheel mouse <p>* BI-RADS (Breast Imaging-Reporting and Data System), a quality assurance tool, is published and trademarked by the American College of Radiology (ACR).</p>
S2000 B&W SieScape Panoramic Img	<p>B/W SieScape™ panoramic imaging extends the field of view to provide a seamless ultrasound image covering an area much larger than a normal transducer aperture. B/W SieScape imaging can be performed regardless of whether the surface is flat or curved, whether the transducer movement is fast or slow.</p>
S2000 Color SieScape Panoramic Img	<p>The Color SieScape™ panoramic imaging option provides:</p> <ul style="list-style-type: none"> - Imaging of any structure where a field of view larger than standard real-time imaging is required. For example, large organs, masses, and long lengths of a vessel - Demonstration of anatomical relationships of tissue/organ and vasculature

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<p><i>(Continued)</i></p> <p>S2000 Color SieScape Panoramic Img</p>	<ul style="list-style-type: none"> - Measurements and zoom of any structure in the extended field of view display - Acquisition, back-up, pause and rotate features
<p>S2000 Clarify VE</p>	<p>Clarify™ Vascular Enhancement (VE) technology is an innovative 2D imaging mode that is compatible with THI, B/W SieScape™ panoramic imaging, TEQ™ ultrasound technology, Cadence™ contrast agent imaging* and 3-Scape™ real-time 3D imaging options. Multiple Clarify VE technology levels are available to optimize contrast resolution and definition of both tissue and vessel walls. The Clarify VE technology imaging parameters can be saved within user-defined customized presets.</p> <p>*At the time of publication, the United States FDA has cleared ultrasound contrast agents only for use in LVO. Check the current regulations for the country in which you are using this system for contrast agent clearance.</p>
<p>4C1 Transducer (MP), S2000</p>	<p>The 4C1 supports a wide range of applications and imaging features in order to provide a fully functional curved array transducer.</p> <p>Please see the Transducer flyer for specifications.</p>
<p>7CF2 Transducer (MP), S2000</p>	<p>The 7CF2 provides a broad coverage of applications in order to cover the majority of transabdominal radiology and Ob/Gyn needs.</p> <ul style="list-style-type: none"> - Applications: OB/GYN, Abdominal, Fetal Echo, Pelvis, Renal <p>Please see the Transducer flyer for specifications.</p>
<p>9EVF4 Transducer (MP), S2000</p>	<p>The 9EVF4 extends over multiple applications including imaging providing a single-solution transducer for both 2D, 3D and 4D imaging.</p> <ul style="list-style-type: none"> - Applications: Abdominal, Renal, OB/Gyn, fetal heart, Neonatal Head and interventional procedures such as endometrial biopsy. <p>Please see the Transducer flyer for specifications.</p>
<p>4V1 Transducer (MP), S2000</p>	<p>The 4V1 extends over multiple applications including imaging providing a single-solution transducer.</p> <p>Please see the Transducer flyer for specifications.</p>
<p>9L4 Transducer (MP), S2000</p>	<p>The 9L4 extends over multiple applications including imaging providing a single-solution transducer.</p> <p>Please see the Transducer flyer for specifications.</p>
<p>14L5 SP Transducer (MP), S2000</p>	<p>The 14L5 SP intra-operative and small parts imaging provides a multi-functional, high frequency, linear array transducer.</p> <p>* The 14L5 SP transducer is compatible with the STERRAD Sterilization System</p> <ul style="list-style-type: none"> - Array footprint: 26 mm - Maximum field of view: 61mm; 40 degrees in Virtual Format. - Virtual Format imaging mode extends the lateral field of view - Maximum Depth of display: 6cm <p>Multiple frequencies for all modes 2D, M-mode, Harmonics, Color Doppler (CDV and CDE), and PW Doppler.</p>
<p>18L6 HD Transducer (MP), S2000</p>	<p>The 18L6 HD extends over multiple superficial applications.</p>

. / Product	Description
<p><i>(Continued)</i></p> <p>18L6 HD Transducer (MP), S2000</p>	<ul style="list-style-type: none"> - Expanded MultiHertz™ multiple frequency imaging for 2D, Harmonics, M-mode, Color Doppler (CDE and CDV), and PW Doppler - Virtual Format imaging mode extends the lateral field of view - Array footprint: 58 mm - Maximum display depth of 80 mm - Maximum field of view is 40 degrees in sector format.