ACUSON Sequoia Ultrasound System Clarify with Confidence

SIEMENS

Healthineers

Crown Edition

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ACUSON Sequoia Crown Edition

Delivering clinical excellence across ultrasound specialties

The new ACUSON Sequoia Crown Edition represents continuing to reach for the highest clinical excellence across ultrasound specialties for users and their patients.

Like the crown of a tree, the ACUSON Sequoia Crown Edition branches and expands to encompass a fully featured Ultra-Premium ultrasound system, including innovative imaging, exclusive technologies, and specialty transducers designed to improve diagnostic accuracy in nearly every clinical use case.

ACUSON Sequoia Crown Edition provides healthcare providers with advanced technologies and applications that intelligently respond to patient- and user-specific needs. Tailoring diagnosis and therapies to each patient's profile helps to improve clinical, operational and financial outcomes. The Crown of the Sequoia tree is the area above the main trunk where the primary branches form and grow.

Crown is also defined as the top or highest part of something.



Ultrasound's potential has been limited by unwarranted variability









Ultrasound users are faced with a patient population that is increasingly harder to scan. Ultrasound devices are complex products. Differences in technology can inhibit the user's ability to generate accurate and reproducible measurements during an exam. Studies have demonstrated that significant intra- and inter-observer variability can pose a challenge to the standardization of care delivery.

Intelligent Imaging. Expanded Insights. User-Driven Design.

Powered by BioAcoustic imaging technology

Boost your clinical confidence with a system designed to enhance your expertise. The ACUSON Sequoia gives you the power to know more by maximizing the sensitivity and depth of your scans, while reducing variability across patients, systems and users.

An unmatched list of advanced application offerings allows clinicians to personalize ultrasound to a patient's specific needs.

Powerful AI-enabled tools and user-centric interfaces improve workflow efficiency allowing clinicians to focus more on their patients.







Diagnostic confidence is improved with deeper and clearer images using BioAcoustic imaging.



Personalized advanced applications expand your clinical information with advanced imaging technologies that improve patient outcomes.



User designed experiences that improve workflow usability.

O Intelligent Imaging

Powerful automation and advanced transducers for easier imaging

Fully focused images in record time

The ACUSON Sequoia ultrasound system's powerful architecture eliminates the need for conventional focal zones to create a fully focused image with faster frame rates than conventional systems.

InFocus uses synthesized, retrospectively focused transmit beams throughout the field of view that focuses at all depths. More information is harvested from the usual transmit sequence, using massive overlapping multibeam groups rather than individual or close parallel beam lines as in conventional systems. Secondary beamforming is enabled with InFocus and physics-based delay technologies. Amplitude corrections can be made across transmit events to significantly sharpen the image and improve spatial resolution beyond what is typical for a given transducer frequency.



InFocus utilizes multiple simultaneous receive beams covering a region with a single transmit.

Many receive beams per transmit event leads to many interrogations per image point.

Get clearer deeper perspective

Next generation transducers specifically designed to produce optimal acoustics for each clinical use case. The acoustic matching between transducer and patient was optimized using advanced materials science and optimized test protocols, together with the electrical signal path between the transducer and system, resulting in superior signal fidelity.

Compact-pinless connectors further improve signalto-noise ratio and feature one-handed plug and play connection.

Boost your clinical confidence

Scanning technically difficult patients can be a daily challenge for many ultrasound users. Innovative Ultra-Derived Fat Fraction technology on three abdominal transducers, the 5C1, 9C2 and DAX, aids clinicians in the early detection of NAFLD for nearly any patient body habitus, providing diagnostic confidence when you need it most.



DAX – Deep Abdominal Transducer with up to 73% color Doppler improvement.²



9C2 – Improve intercostal scanning in kids with 15% smaller lens equipped with CEUS, Auto pSWE and UDFF.³



15L4 – Exceptional near field resolution with 25% deeper penetration.⁴





InFocus Imaging

Fully-focused imaging of the liver and IVC utilizing InFocus Technology that delivers image uniformity throughout the field of view.



AutoCalcs

Delivers comprehensive measurements of complex lesions. Uses machine learning algorithm that instantly calculates length, AP and circumference improving measurement efficiency and variability.



High Frequency Linear Transducer

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Utilizing the high frequency 15L4 transducer, structures can be visualized in greater detail resolution as shown in this image of the supraspinatus tendon.

1808 Ceneral 118.1.09 110:0.65 115:0.45 115:0.45 24tps 95% 20 H Mid v D1580 c= 1150 LD 1 UA 3



AutoFlash Color Suppression Technology Reduce color flash artifacts without user interaction for

improved color sensitivity and performance, even when a patient is actively breathing.





Slow Flow Color Doppler

kidney with reduced flash artifact.

Auto Doppler and Spectral

Using smart filters and adaptive signal enhancement, slow flow Auto Doppler can reduce the number of exam keystrokes can image smaller, low-flow vessels further into tissue like this >25%.⁵ Auto Spectral optimizes Doppler automatically optimizes for gain, baseline, scale, and wall filter keeping operator adjustments to a minimum.



Speed of Sound Adjustment

Adjusting the speed of sound improves contrast and detail resolution, which allows for the most accurate representation of different types of tissues, as shown in this image of a breast.



High Frequency Curved Transducer

The new 9C2 high frequency curved single crystal transducer provides superior contrast resolution in obstetric imaging.



Volume Imaging

3D/4D imaging allows you to visualize anatomy in new dimensions for improved confidence as demonstrated in this coronal view of an IUD.







Single Crystal Technology

See highly detailed resolution like never before with the 11M3 micro-convex transducer as shown in this midline image of a neonatal head.

Modality Compare

Easily pinpoint regions of interest and improve procedural efficiency by importing and viewing previous patient studies alongside real-time ultrasound images.

Cardiac Imaging

An apical four chamber view with the 8V3 pediatric cardiac transducer offers exceptional tissue definition, valvular detail and blood flow visualization.



Advanced tools and applications to improve diagnostic accuracy

Improve diagnostic accuracy and confidence

The ACUSON Sequoia ultrasound system was built from the ground up with dedicated hardware for exceptional performance in applications such as contrast enhanced ultrasound (CEUS) and elastography, and is setting a new benchmark in the quantification of liver fat with Ultrasound Derived Fat Fraction (UDFF). With its industry leading performance, the ACUSON Sequoia ultrasound system enables healthcare professionals to access the clinical information needed for personalized precision medicine.

The ACUSON Sequoia is addressing clinical use cases leveraging the comprehensive advanced applications toolbox offered by the ACUSON Sequoia ultrasound system – from quantification and characterization of tissue to interventional procedures.



Next gen breast 2D-SWE to characterize breast lesions as benign or malignant.



Ultrasound Derived Fat Fraction (UDFF) for the noninvasive assessment of hepatic steatosis.



Next Generation 2D-SWE

Experience greater sensitivity in the detection and visualization of malignant breast lesions with Next-Gen Breast Elastography.



Auto pSWE

Rapidly reduce liver elastography acquisition time up to 75%⁶ by acquiring up to 15 valid pSWE measurements in less than 5 seconds.



UDFF

Classify hepatic steatosis with a simple and clear cutoff value of >5% using Ultrasound Derived Fat Fraction (UDFF).







CEUS Imaging

In contrast imaging, the ACUSON Sequoia ultrasound system has twice the sensitivity than previous systems for improved diagnostic confidence⁷.

Velocity Vector Imaging

Assess myocardial motion and mechanics with global longitudinal strain (GLS), global circumferential strain (GCS), and global radial strain (GRS) using semi-automated *syngo* VVI.

Fusion Imaging

Combine imaging modalities as demonstrated in this example of CT and ultrasound fusion for improved diagnostic confidence.



Designed by users for a best-in-class operator experience

The variability inherent in the ultrasound scanning process can pose a challenge for users. In an effort to eliminate variability, Siemens Healthineers hosted 170 workshops with 365 ultrasound users worldwide to create an ultrasound system designed by users, for users.

Leveraging automation, machine learning and listening to ultrasound users, every detail was re-imagined to reduce complexity and improve the user experience.

Preferred by users

Overall usability of an ultrasound system determines how well advanced technologies and diagnostic tools are able to expand healthcare professional's clinical capabilities. The ACUSON Sequoia ultrasound system was evaluated by an independent user experience design and development company in terms of user performance and user satisfaction.

The ACUSON Sequoia ultrasound system earned a system usability score (SUS) of 86% and user preference score of 82%, scoring higher than the conventional ultrasound systems participating in the study.⁸

See how the ACUSON Sequoia stacked up against similar systems:

Comparative usability study





macadamian

Average system usability score



User preference



More information: **7** macadamian usability study



Increase productivity with built in automation and AI



1-touch registration

Machine learning technology automatically selects the correct transducer and exam type for a patient scan supporting a seamless workflow.



Gesture detecting transducers

Tap anywhere on the transducer to quickly activate and start scanning with the ACUSON Sequoia ultrasound system's unique sensor technology.





UltraArt real-time quad-display

Exclusive UltraArt universal image technology allows users to select their image preference from a real-time touch screen display.

Virtual Workstation

Establish a connection to a remote computer or server to access remote applications directly from the ultrasound system.



24" Barco monitor

Dual-layer LCD technology with wide viewing angle.

Smaller intuitive touch display

A 13.3" touch access quick keys selected by user – enhanced user interface that improves ergonomics and workflow.

Integrated gel warmer

An integrated gel warmer which can be placed on either side of the system.

Larger storage areas

1 integrated storage bin and storage shelf option.

Central locking and steer pedals

A central locking mechanism eliminates the need to lock each wheel individually, enhancing maneuverability.

Floating control panel

Designed to fit every room and workflow, the control panel can swivel 180 degrees for a seamless workflow.



Solutions designed for maximum performance

Remote connectivity solution for Ultrasound

The Siemens Healthineers new remote connectivity solution for Ultrasound is a secure, easy-to-use, cloud-based remote service solution that keeps you connected and your software up to date, all while minimizing service costs and adhering to current security and compliance guidelines.

Powered by AWS (Amazon Web Services), the new remote connectivity solution enables quicker resolution via remote technical support and remote application support, faster updates through on-demand and automatic updates; all with a secure connection.



teamplay Fleet

teamplay Fleet is a digital health platform solution that enables you to streamline the management of your fleet and optimize asset performance holistically–24/7.

Digital education with PEPconnect

Engage in learning activities and earn credits at any time and on any device for a personalized learning experience with PEPconnect and PEPconnections⁹. Access a workforce education management plan as well as analytics and progress report tracking.

Designed for Growth

Built for the future, the ACUSON Sequoia Ultrasound System offers Evolve – a technology anti-obsolescence program that keeps your ultrasound systems updated with the latest software upgrades and feature enhancements. Evolve is an add-on option to qualified Service contracts.

With this program, Siemens Healthineers helps you to improve patient outcomes and productivity, protect your investment, optimize operating costs, increase system security, and simplify technology management.



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Why Siemens Healthineers?

We pioneer breakthroughs in healthcare. For everyone. Everywhere.

At Siemens Healthineers, we pioneer breakthroughs in healthcare. For everyone. Everywhere. By constantly bringing breakthrough innovations to market, we enable healthcare professionals to deliver high-quality care, leading to the best possible outcome for patients.

Our portfolio, spanning from in-vitro and in-vivo diagnostics to image-guided therapy and innovative cancer care, is crucial for clinical decision-making and treatment pathways. With our strengths in patient twinning, precision therapy, as well as digital, data, and artificial intelligence (AI), we are well positioned to take on the biggest challenges in healthcare. We will continue to build on these strengths to help fight the world's most threatening diseases, improving the quality of outcomes, and enabling access to care.

We are a team of 66,000 highly dedicated employees across more than 70 countries passionately pushing the boundaries of what's possible in healthcare to help improve people's lives around the world.



Keeping you protected from Cyber Threat

The Windows 10 operating system and state-of-the-art cybersecurity program protects the privacy of your data and strengthens your systems' resiliency from external cyberattacks. The scientific overlay is not that of the individual pictured and is not from a device of Siemens Healthineers.

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syngo VVI is a trademark of Siemens Healthcare GmbH.

¹ Data on file.

- ² Link to publication: <u>https://www.clinicalimaging.</u> org/article/S0899-7071(22)00242-X/fulltext
- ³ Compared to 9C3 transducer
- ⁴ Compared to 18L6 transducer
- ⁵ Data on file. Keystroke is defined as any interaction with the ultrasound machine including touchscreen taps and swipes, mouse movement, flat key presses, soft key twists, and soft key presses.
- ⁶ Data on file. Many variables exist in the customer environment including sonographer techniques, which may affect individual customer experience.
- ⁷ Compared to ACUSON Sequoia 512 ultrasound system
- ⁸ Macadamian Usability Test Study using the ACUSON Sequoia. Study result data on file. More information also available at <u>www.macadamian.com</u>.
- ⁹ Subscription required. Availability of subscription depends on country.

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