ACUSON Sequoia Ultrasound System

Addressing the challenges of vascular ultrasound

Crown Edition

siemens-healthineers.com/ultrasound/new-era-ultrasound/acuson-sequoia
Clinical trends

Global obesity incidence is on the rise. Linked to more than 60 chronic diseases¹ including several that directly affect cardiovascular health, vascular ultrasound is at the forefront in diagnosing and treating vascular disease.

- **60–70%**
  - Hypertension in adults is attributable to adiposity⁴

- **1.5x**
  - Peripheral Artery Disease (PAD)

- **2.5x**
  - Deep Vein Thrombosis (DVT)

- **Stroke**
  - Primary risk factor is obesity and overweight²

¹ Link: [siemens-healthineers.com/ultrasound](siemens-healthineers.com/ultrasound)
Clarify with confidence

A new standard in vascular ultrasound

The ACUSON Sequoia ultrasound system was designed with the power to scan faster and deliver better image clarity and penetration than conventional ultrasound systems⁶. Leverage the latest innovations in ultrasound to address user-variability and personalize when it matters with an ultrasound system that is designed by the user, for the user.

Intelligent Imaging

Expanded Insights

User-Driven Design
Intelligent Imaging

Powerful automation and advanced transducers for easier imaging

ACUSON Sequoia’s imaging architecture enables powerful automation in each major mode to reduce ultrasound variability while improving diagnostic confidence.

Breakthrough automated image optimization in B-mode, advanced color flow Doppler, and spectral Doppler reduce operator dependence and consistently provide high exam quality. Powered by BioAcoustic imaging technology, the ACUSON Sequoia system is equipped with built-in design elements that overcome limitations that compromised previous ultrasound systems’ technologies.

Ultrasound’s potential has been limited by unwarranted variability

--siemens-healthineers.com/ultrasound
Expanded Insights

Advanced tools and applications to improve diagnostic accuracy

Boost your clinical confidence with a system designed to enhance your expertise. The ACUSON Sequoia gives you the power to expand your assessment to support the diagnosis and treatment of vascular disease.

From Auto Intimal Media Thickness measurements to Advanced modes such as Slow Flow, Directional Power and Clarify Vascular Enhancement, ACUSON Sequoia delivers vascular innovations to take clinical excellence to a new level.

Clarify technology
Remove artifacts and improve boundary detection in vessels.

Slow Flow technology
Image smaller, low flow vessels further into tissue.

Clarity Vascular Enhancement White Paper
Slow Flow White Paper
Conventional ultrasound was limited and suggests an occlusive thrombus in the main portal vein.

ACUSON Sequoia with DAX clearly demonstrates a patent portal vein in color and PW Doppler eliminating the need for unnecessary follow-up exams.

Deep Vascular Transducer (7L2)

A single crystal transducer that delivers 58% deeper color mode penetration than the conventional vascular transducer to improve diagnostic accuracy in technically difficult vascular exams.⁷

Deep Abdominal Transducer (DAX)

Is a unique transducer and employs an advanced form of Multi-D beam formation that controls the thickness and beam formation to enable high-quality imaging up to 55 cm for diagnosis confidence in technically difficult patients.

Learn how the DAX can help prevent sonographer injury

DAX Case Study

Conventional ultrasound was limited and suggests an occlusive thrombus in the main portal vein.

Color sensitivity in the most challenging views with the Deep Vascular Transducer (7L2) as seen in this example of color Doppler flow in the calf veins.

Improve color penetration when needed most as seen in this example of the color and spectral Doppler in a vertebral artery.
InFocus Imaging delivers image uniformity throughout the field of view with no user interaction as seen in this transverse view of the calf veins.

Auto Doppler will automatically steer and position the color box and PW gate to help reduce carotid exam time and over 25% of keystrokes.\(^8\)

Auto Spectral will automatically optimize relevant Doppler parameters immediately upon freeze for improved spectral analysis and workflow.

Color Flash Suppression Technology uses smart algorithms to automatically reduce flash artifact experienced from motion for improved color sensitivity and performance.

Directional Power not only improves sensitivity, but also provides flow direction which is important when evaluating flow. Directional Power can be an excellent tool when evaluating very small vessels or stenotic changes in flow.

Slow Flow uses smart filters and adaptive signal enhancement for imaging smaller, slow-flow vessels deeper into tissue like this kidney with reduced flash artifact.
User-Driven Design

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

ACUSON Sequoia’s user interface was designed to reduce complexity and enable users at all levels of experience and proficiency to easily operate.

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

3rd party validation of best in class usability
The ACUSON Sequoia earned a system usability score (SUS) of 86% and a preference score of 82% in a usability study conducted by Macadamian Technologies.

Average system usability score

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACUSON Sequoia</td>
<td>86%</td>
</tr>
<tr>
<td>Vendor 1</td>
<td>73%</td>
</tr>
<tr>
<td>Vendor 2</td>
<td>47%</td>
</tr>
</tbody>
</table>

User preference

- No preference: 7%
- Prefer vendor 1: 11%
- Prefer ACUSON Sequoia: 82%

See how the ACUSON Sequoia stacked up against similar systems
Custom-built workflow scanning protocols with flexible measurements and reporting

Achieve up to 40% reduced scan times with flexible workflow protocols

Workflow protocols allow the operator to focus on patient care, rather than the system. ACUSON Sequoia Workflow Protocols allow additional flexibility with dedicated controls and advanced skip when encountering pathology or circumstances outside of the normal exam.

Comprehensive vascular measurements and reporting

Flexible measurement and reporting packages are critical to the vascular lab. ACUSON Sequoia offers custom measurement packages and vascular subgroups. In addition, both labelled measurements and custom measurements support DICOM Structured Reporting for improved reporting accuracy on the front end and back end.
User-Driven Design

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 PEPconnections³. 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.
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.

On account of certain regional limitations of sales rights and service availability, we cannot guarantee that all products included in this brochure are available through the Siemens Healthineers sales organization worldwide. Availability and packaging may vary by country and is subject to change without prior notice. Some/All of the features and products described herein may not be available in the United States.

The information in this document contains general technical descriptions of specifications and options as well as standard and optional features, which do not always have to be present in individual cases.

Siemens Healthineers reserves the right to modify the design, packaging, specifications, and options described herein without prior notice. For the most current information, please contact your local sales representative from Siemens Healthineers. Note: Any technical data contained in this document may vary within defined tolerances. Original images always lose a certain amount of detail when reproduced.

The products/features mentioned in this document may not be commercially available in all countries. Due to regulatory reasons their future availability cannot be guaranteed. Please contact your local Siemens Healthineers organization for further details. Standalone clinical images may have been cropped to better visualize pathology.

ACUSON Sequoia, BioAcoustic imaging technology, and InTune are trademarks of Siemens Medical Solutions, USA, Inc.

---

Siemens Healthineers Headquarters
Siemens Healthcare GmbH
Henkestr. 127
91052 Erlangen, Germany
Phone: +49 9131 84-0
siemens-healthineers.com

Manufacturer
Siemens Medical Solutions USA, Inc.
Ultrasound
22010 S.E. 51st Street
Issaquah, WA 98029, USA
Phone: 1-888-826-9702
siemens-healthineers.com/ultrasound

---

1 www.who.int/news-room/fact-sheets/detail/obesity-and-overweight
2 www.who.int/news-room/fact-sheets/detail/the-top-10-causes-of-death
3 The study, "Obesity as a risk factor in venous thromboembolism" by Paul D. Stein, MD, Afzal Beemath, MD, and Ronald E. Olson, PhD, appears in The American Journal of Medicine, Volume 118, Number 9 (September 2005), published by Elsevier.
5 https://doi.org/10.1161/JAHA.118.008644Journal of the American Heart Association. 2018; 7:e008644
6 Compared to ACUSON S3000 ultrasound system
7 Compared to ACUSON S3000 9L4 transducers
8 Interactions 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
9 Ultrasound Machine Comparative Study by Macadamian Technologies
10 The Impact of Improved Ultrasound Performance [White paper]. Circulated May 2018 from Siemens Medical Solutions USA, Inc.