ACUSON Origin

The genius is in the details

siemens-healthineers.com/acuson-origin

The clinical overlay is not that of the individual pictured. It was modified for better visualization.

ACUSON Origin

Redefining cardiac imaging with unmatched artificial intelligence, usability and image quality.

As cardiovascular cases grow in both volume and complexity, healthcare professionals face daunting challenges. The new ACUSON Origin™ ultrasound system was designed to address these head-on with best-in-class AI technology that enhances workflow efficiency with walk-up usability and enhanced ergonomics. Welcome to the revolution in cardiac care, where the genius is in the details.

System intelligence

SMART.

With just a touch of a button, launch AI Assist, 2D Heart^{AI} or any of the other 5600+ AI-powered measurements — fueled by nearly 2 billion* cardiac images across multiple modalities.

Image quality innovation

CLEAR.

Continuing decades of leadership in image innovation, superb image quality delivers superior clinical data acquisition in every scan.

Usability and efficiency

EASY.

Featuring walk-up usability, the system is intuitive and quick to learn. Its ergonomic console reduces repetitive motion and risk of strain by the operator.

* Data on file

ACUSON Origin is an all-in-one workhorse that can be used for diagnostics, structural heart, EP and pediatrics — to address the entire patient care continuum.

Smarter, truly integrated AI.
accuracy, the system's view classification and quantification capabilities are informed by nearly 2 Billion* cardiac images across multiple modalities — one of the largest medical imaging databases in the world.

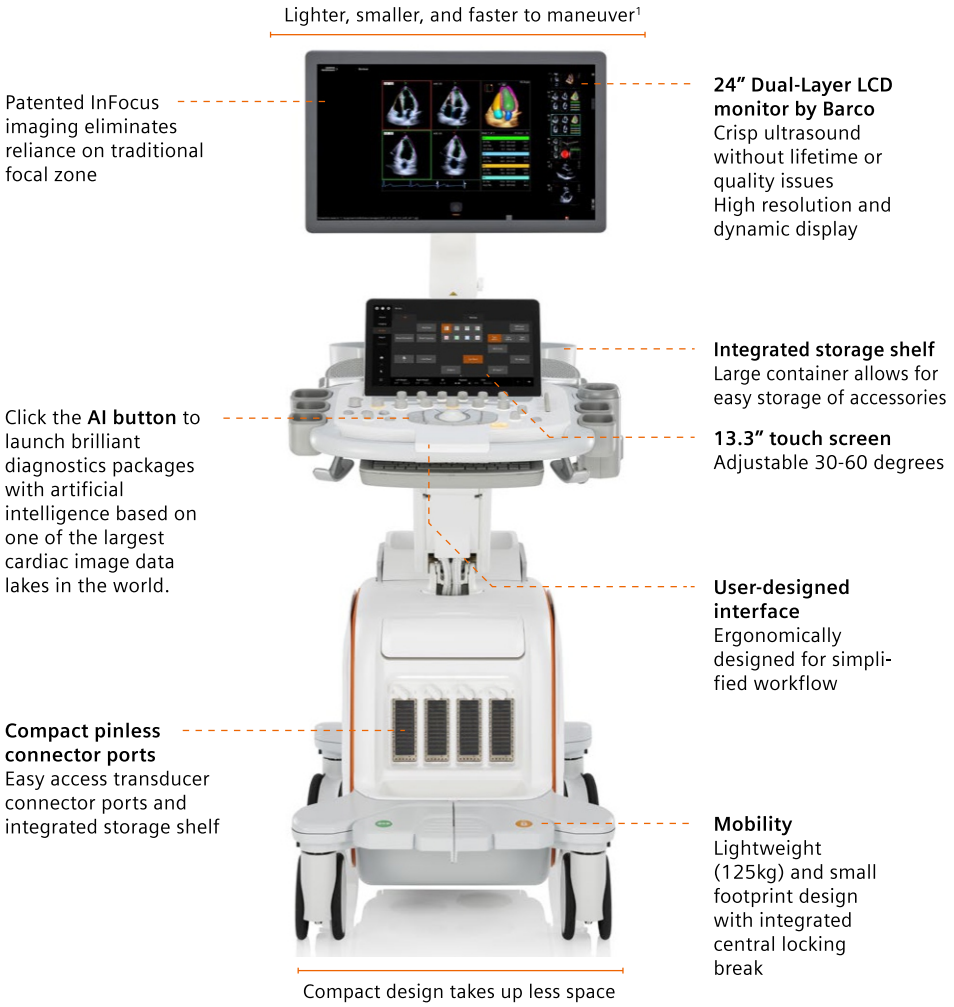
Supports custom workflows
doctors, sonographers and patients. In fact, the diagnostic volume rates of ACUSON Origin are among the highest in the industry.

Versatile for a range of imaging,
through structural heart screening procedure to follow-up.

* Data on file

The genius is in the details.

ACUSON Origin may look similar to other ultrasound machines, but it's a leap forward in some seemingly simple yet very important ways.



Delivering a brilliant new world of clarity for you.

Increasing case volume and complexity requires clarity.

- **Diagnostic accuracy**
- **Repeatable results, regardless of operator**
- **Intuitive system**

The genius is in the details.

Many unique enhancements support you in new ways:

SMART

- ACUSON Origin leverages AI to provide more than 5600+ automated measurements.
- 2D Heart^{AI} automatically produces estimates of left ventricular volumes and GLS, both for contrast enhanced and non contrast enhanced acquisitions, achieving 98% correlation coefficient* with GLS estimates.
- 4D Heart^{AI} on both 3D TTE and TEE acquisitions achieves 96% accuracy when compared with estimates provided by three experienced readers.

EASY

- Workflow enhancements such as instant view classification that automatically recognizes your view and places color, pulsed and continuous Doppler over the appropriate anatomy.
- AI Assist demonstrates a 99% accuracy rate for proper view classification and placement of the Doppler color box or PW/CW spectral Doppler gate, across 12 echocardiographic views which encompass 23 anatomic features of interest as assessed by multiple expert users.
- Quick to learn and highly intuitive to reduce learning curve, plus important ergonomic updates reduce strain and repetitive motion.

**average for all views*

Its patented and proven use of AI sets ACUSON Origin apart

AI Assist

Smart

- One of the only systems on the market with real-time AI view recognition for the standard echo workflow. Instant structural identification streamlines imaging.
- Automatically places color Doppler ROI and spectral Doppler sample.
- AI button cycles through target anatomy.
- System offers you both the control and the flexibility to override auto placement and easily switch between auto and manual.
- Available on cardiac TTE transducers for complete routine echocardiogram (5Z1, 5V1, and 8V3).

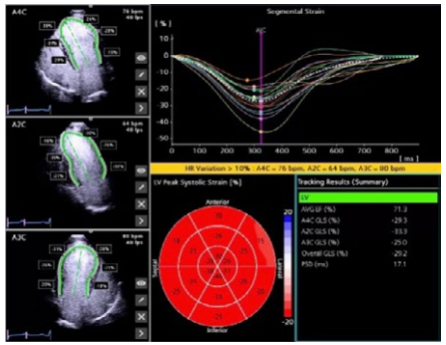
AI Assist recognizes 12 standard TTE cardiac views with 99% accuracy. In real-time, as the sonographer scans, a single button press places the color Doppler box and/or the spectral Doppler cursor on a selected anatomy region within the cardiac view. Placement is supported for a total of 12 views and 23 anatomy locations.

Color box placement is 98% accurate and PW/CW cursor placement is 95% accurate*, meaning little to no adjustments are needed.*

**average accuracy for all views*

2D Heart[AI]

Using cutting-edge AI, provides fast and precise automatic view recognition and contour placement for chamber volumes, function, and GLS while giving you the flexibility to edit as needed.



Comprehensive insights:

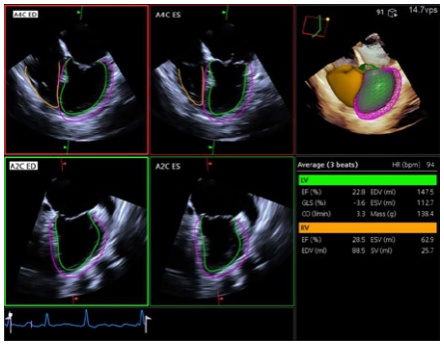
- Strain analysis for contrast imaging.
- Analysis for irregular heartbeats.
- Ability to change ED/ES and AVC timings.
- Average up to 5 beats.
- Includes auto view detection and auto contour placement.
- Can be done with or without ECG.

98% accuracy for detecting LVEVD and LVESV (across different users).

100% accuracy on view classification for A4C, A3C, A2C (with and without contrast, across multiple sonographers).

4D Heart[AI]

Instant insights and real-time results. 4D Heart[AI] utilizes AI to process complex cardiac data instantaneously, for real-time quantification of key parameters across all four heart chambers.



Complete cardiac profiling:

- From strain to EF, covers the entire spectrum of cardiac measurements.
- 4D Heart[AI] adaptability ensures accurate quantification regardless of the imaging method (4D auto-contouring of all four chambers in TTE and both ventricles in TEE).
- Easy to edit ED/ES frames, AVC and Pre-A.
- Can be done with or without an ECG.

96% accuracy for detecting LV ED and ES volumes using both TTE and TEE.

98% accuracy in MBR identification and alignment.

**average*

"This is truly revolutionary. Most of the time with a technology advancement, you can't say that because it is just a new feature on an old system, but this is a completely new creature. For the first time, the machine knows what it is looking at, so it knows what the next three steps are to help you do them"

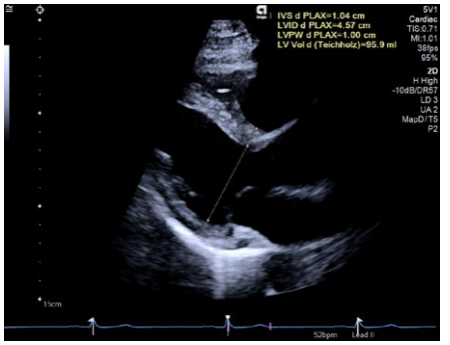
Robert Burke, MD
Director of noninvasive cardiovascular diagnostic imaging
HonorHealthPhoenix, AZ

AI Measure

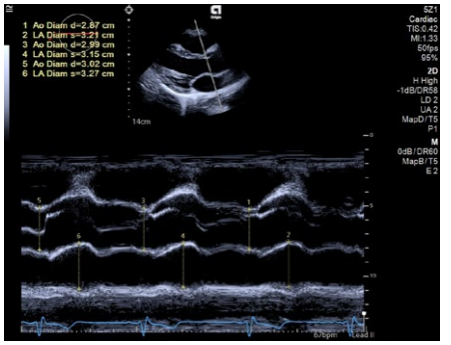
The AI Measure feature in the new ACUSON Origin ultrasound system combines one-click cardiac measurement tools with advanced AI technologies, focused on improving efficiency, consistency, and reliability in routine cardiac measurements. It is also designed to reduce examination durations and optimize workflow processes.

89%* AI Measure (B-mode, Doppler and M-mode) was judged accurate by the user

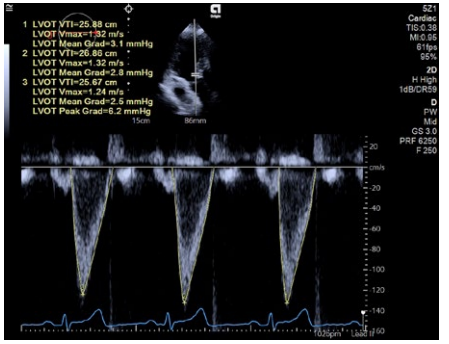
**average*



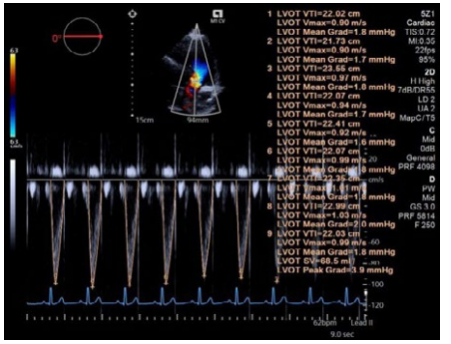
AI 2D measurements
System seamlessly computes B-mode measurements adhering to American Society of Echocardiography guidelines. Leveraging learned models, it autonomously locates landmark points using left ventricle and heart structures, such as the mitral and aortic valves to determine chamber measurement location.



AI M-mode measurements
Algorithm harnesses knowledge-based imaging technologies and expert annotations to detect landmark points for left ventricle and aortic root measurements. Employing a probabilistic, hierarchical, and discriminant framework, the system swiftly and accurately identifies deformable anatomical structures from M-mode images.



The AI Doppler measurement algorithm uses a Doppler knowledge-based framework to detect various parameters across different structures. It utilizes shapes like a triangle (for mitral inflow), a quadrilateral (for aortic regurgitation), and a curve (for tricuspid regurgitation) for precise detection.



Experience seamless precision with AI Measure's automatic tracing of unlimited on-screen Doppler tracings, revolutionizing accuracy in every detail.

Why choose ACUSON Origin over other systems?

Product details

AI database	Data lake of nearly 2B cardiac images across multiple modalities
Image quality	Excellent clarity and color on system as well as PACS, both 2D and Doppler
Number of AI-powered measurements	5,600+

AI Assist accuracy rate for:

View classification	99% (with minor or no adjustment)
Color Doppler box placement	98%* (with minor or no adjustment)
PW gate placement	95%* (with minor or no adjustment)

Patient continuum coverage

Diagnostics	Yes
Structural Heart	Yes
EP	Yes
Pediatrics	Yes

Smart features

Single crystal technology	Yes
4D ICE capability	Yes
Expert CV case support	Yes
Automatic view classification	Yes
Segmented strain	Yes
Customizable workflow protocols	Yes

**average accuracy for all views*

Why Siemens Healthineers?

We pioneer breakthroughs in healthcare.
For everyone. Everywhere. Sustainably.

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

Our portfolio, spanning from in-vitro 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 79 countries passionately pushing the boundaries of what's possible in healthcare to help improve people's lives around the world.

Solutions designed for maximum performance

When lives depend on the right diagnosis, you need the confidence that you can deliver. That calls for a trusted partner to help ensure systems are performing properly, staff are trained and processes optimized.

Kinectus, powered by Amazon Web Services, is a rapid and secure connection to technical and clinical support.

Kinectus™ is a secure, easy-to-use, cloud-based connect platform for Ultrasound that keeps you connected and supplied with software updates, all while enabling you adhere to current security and compliance guidelines. Powered by AWS (Amazon Web Services), Kinectus enables quicker resolution of your system questions via remote technical support and remote application support. It also provides faster updates through on-demand and automatic remote software updates all with a secure connection.

teamplay Fleet

teamplay Fleet is a cloud-based health platform solution that enables customers to streamline the management of their fleet from Siemens Healthineers and to optimize their asset performance holistically, 24/7, and from any browser capable device.

Digital education with PEPconnect

Included with every purchase, PEPConnect is a smarter connection to knowledge — designed to increase staff competency, efficiency, and productivity.

TechUp 18

TechUp 18 protects your investment with a service contract including a software upgrade program. This program enables eligible customers with feature enhancements to existing software licenses, new features from software base configuration, and new licensed features if available.

TechUp 18 is an add-on option for qualifying service contracts to help enhance the investment in your Siemens Healthineers ultrasound system.

[1] *Compared to ACUSON SC2000*

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.

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At Siemens Healthineers, we pioneer breakthroughs in healthcare. For everyone. Everywhere. Sustainably. As a leader in medical technology, we want to advance a world in which breakthroughs in healthcare create new possibilities with a minimal impact on our planet. By consistently bringing innovations to the market, we enable healthcare professionals to innovate personalized care, achieve operational excellence, and transform the system of care.

Our portfolio, spanning in vitro and in vivo diagnostics to image-guided therapy and cancer care, is crucial for clinical decision-making and treatment pathways. With the unique combination of our strengths in patient twinning1, precision therapy, as well as digital, data, and artificial intelligence (AI), we are well positioned to take on the greatest challenges in healthcare. We will continue to build on these strengths to help overcome the world's most threatening diseases, enable efficient operations, and expand access to care.

We are a team of more than 71,000 Healthineers in over 70 countries passionately pushing the boundaries of what is possible in healthcare to help improve the lives of people around the world.

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