

VERASONICS RECEIVES NEW PATENTS - CONTINUES FOCUS ON INNOVATION IN RESEARCH ULTRASOUND ON A GLOBAL BASIS

Since February 2021, Six New Patent Issuances Extend the Company's Intellectual Property Coverage

Kirkland, WA, March 22, 2022 – [Verasonics, Inc.](https://www.verasonics.com), the leader in research ultrasound, today announced that since February 2021, Verasonics has received six new patents supporting the Company's vision to advance research and development in biomedical ultrasound, materials science, earth sciences, and the physics of acoustics and ultrasonics.

This marks an important milestone as the Company continues to focus on developing innovative research ultrasound technologies. Verasonics' patent portfolio is now comprised of 74 issued patents worldwide, covering nine unique technologies. Verasonics has targeted patent coverage across important geographies including Canada, China, Denmark, France, Germany, Italy, Japan, Korea, Macau, the Netherlands, Poland, the United Kingdom, and the United States. The last valid claim expires in 2036.

Jon K. Daigle, President and Chief Executive Officer at Verasonics said, "Our first patent was granted a decade ago. We are pleased that our patent portfolio has expanded so extensively over the past 10 years. This achievement marks an important milestone for our team and its dedication to designing and providing customers, researchers, and product developers with the most innovative and flexible research ultrasound technology available on the market today."

Newly issued patents include:

- People's Republic of China Patent No. ZL201811519036.5: "Method and System for Arbitrary Waveform Generation Using a Tri-State Transmit Pulser." The Vantage™ systems use a tri-state pulser to supply a wide range of power to support both normal imaging and high intensity ultrasound applications. This patent covers the Verasonics' design for arbitrary waveform generation using programmable duty cycle control.
- Canadian Patent No. 2728998 and United States Patent No. 10914826: "High Frame Rate Quantitative Doppler Flow Imaging Using Unfocused Transmit Beams." This patent covers Vantage high-frame-rate Doppler sensing with long ensembles and unfocused beams. This feature is used for micro-vascular and functional imaging, spectral Doppler over the full imaging field of view, and derived blood velocity parameter imaging.
- Japanese patent No. 6952023: "Method and System for Coded Excitation Imaging by Impulse Response Estimation and Retrospective Acquisition." This patent covers the design for generating arbitrary transmit waveforms using knowledge of the transducer impulse response. This functionality allows high-frame-rate synthetic aperture imaging with coded transmit waveforms from each element.
- Canadian Patent No. 2728998 and United States Patent No. 10914826: "Estimation and Display for Vector Doppler Imaging Using Plane Wave Transmissions." This patent covers vector Doppler imaging (imaging of magnitude and direction of flow) that allows high frame rates and robust blood velocity estimation. Additionally, the patent covers a new method of display using particle flows that allow visualization of flow direction.



Verasonics' research ultrasound system has been cited in over 2800 publications via its customers' research in numerous scientific journals over the past twelve years. Visit the Verasonics Scientific Reference Database to learn more: <https://verasonics.com/scientific-references-database/>.

About Verasonics, Inc.

Verasonics is a privately held company founded in 2001, with headquarters in Kirkland, Washington, USA. Verasonics is the leader in research ultrasound and is focused on providing researchers and developers with the most advanced and flexible tools enabling them to develop new algorithms and products used in biomedical ultrasound, materials science, earth sciences, and the physics of acoustics and ultrasonics. Verasonics also licenses its technology to companies for use in their commercial products. Researchers in 36 countries across North and South America, Europe, Asia and Oceania routinely use Verasonics product solutions to advance the art and science of ultrasound through their own research efforts.

Learn more by visiting the Verasonics [website](#) or following us on [LinkedIn](#) and [Twitter](#).

Media Contact:

Verasonics, Inc.

Toni Baumann

T: 425-998-9836

E: tonibaumann@verasonics.com