ULTIMUS 9E

Taking Ultrasound Imaging to New Heights



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ULTIMUS

The Ultimus 9E is equipped with VINNO's revolutionary MUSE platform, with the unique Tri-modal Imaging Acquisition (TIA). Its flexibility and powerful processing allow the system intelligently apply the most appropriate imaging acquisition mode from 3 modalities: Line acquisition, Zone acquisition and Multi-plane acquisition, to reconstruct the best imaging presentation.



Line acquisition

Zone acquisition

Multi-plane acquisition





Fast

Performed by multiple titled plane waves at imaging frame rates up to 20,000 per second, is averagely 300 times faster than conventional. This speed allows for a full new range of applications and innovations in ultrasound imaging.

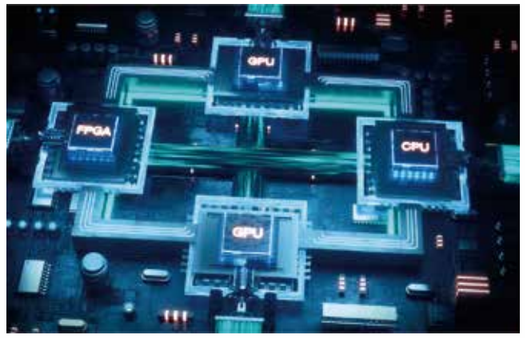




Forefront

enhanced Parallel Processing Chain (ePPC)

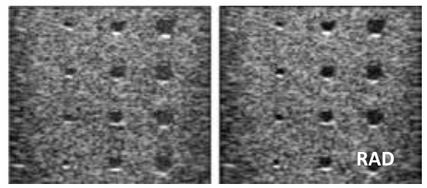
Built upon the ePPC, MUSE technology leverages the processing power of 2 GPUs combining with FPGA & CPU as a software-based beamforming Heterogeneous System Architecture (HSA), to enable full parallelization of image formation. Each insonification can therefore lead to a full image.



Ultimate Image Processing

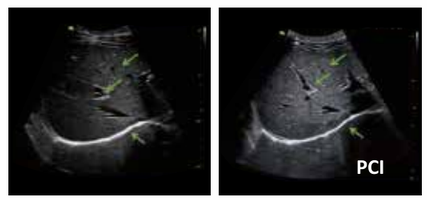
Real-time Adaptive De-noising (RAD)

The innovative acquisition technique combines multiple plane wave transmit signals to excel the conventional transmit performance. This improves the signal-to-noise ratio by about 8 decibels and results in a significant noise reduced data without compromising the frame rate.



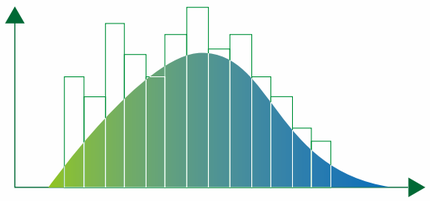
Planar Compound Imaging (PCI)

The received signals from the scan fields are time-shifted and compounded to pixel level of the entire field of view. This retrospective transmit field focus localization technique results in 20% more acoustic data acquired to form images with superior lateral border definition and contrast resolution than conventional compound imaging.



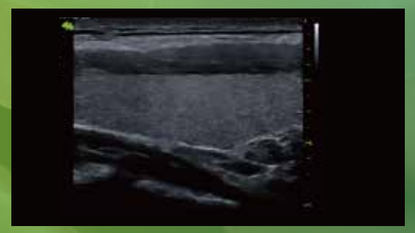
Dynamic Signal Enhancement (DSE)

The weak signals from the far field are enhanced multiple times when the signals are combined, providing increased lateral resolution and contrast at the greater depths of field.



Fluent

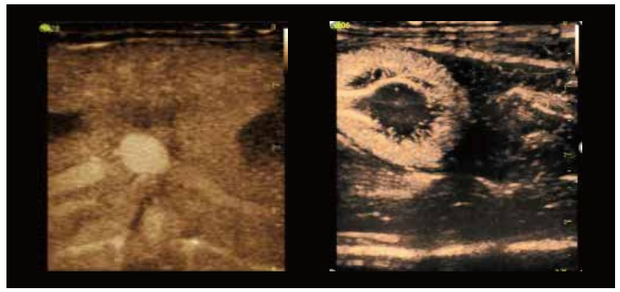
More speed, more clarity



Tissue motion: Ultrafast tissue imaging relies on powerful computing power and system processing capability. VINNO's original composite logic algorithm eliminates coherent motion artifacts to bring a more streamlined scanning experience.

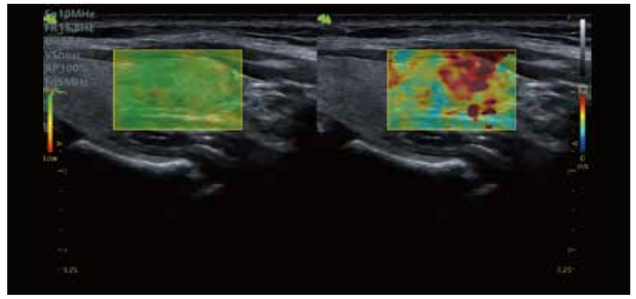


Blood motion: Ultrafast blood flow imaging, driven by plane wave technology and vector enhancement technology to improve the frame rate and sensitivity, detect slow blood flow signals more accurately.

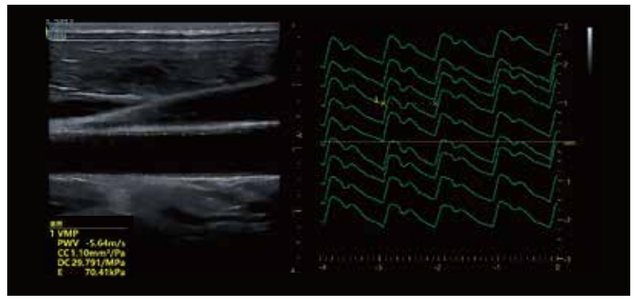


CBI⁺: An advanced, highly sensitive contrast bubble imaging which enhances real time vessels visualization significantly based on ultra-fast frame rate and outstanding 2D performance/penetration.

MCP (Micro Contrast Perfusion): By dynamically accumulating blood flow perfusion, MCP has greater sensitivity of minor signals, providing exceptional details throughout arterial, portal and late phase scanning.



VShear⁺: Powered by Muse Platform, VShear⁺ allows more sensitive tissue detection by capturing every shear wave motion details at ultrafast frame rates, which delivers great stability and accuracy during live scanning.



PWV⁺: A real-time pulse wave calculation method, which can identify very tiny vessel wall movements with up to 20000 frame rate, thus helping evaluate the elastic state of the blood vessels with high accuracy and repeatability.

Faith

Advanced performance for diagnostic confidence

Light Lab

A new 3D rendering technology that allows user to customise the position and direction of the virtual light sources,which displays the internal structure details more clearly and enhances the three-dimensional perception.

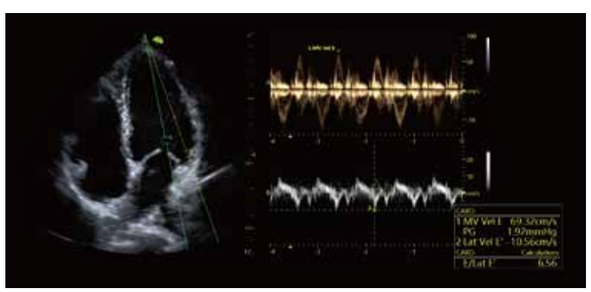






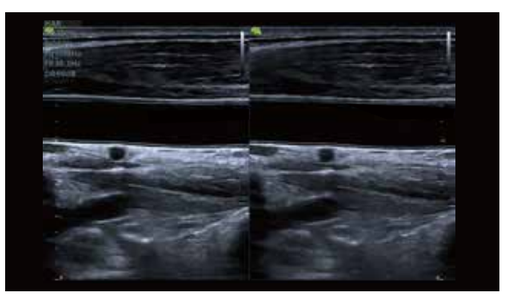
Multi Doppler

A technology that displays two Doppler waveforms from separate sample gates during the same cardiac cycle, the combination of TDI and PW allows simultaneous evaluation of wall motion and hemodynamics, which enables faster and more accurate measurement of LV diastolic dysfunction and carotid stenosis etc.The optional modes include PW/PW,PW/TDI, TDI/TDI.



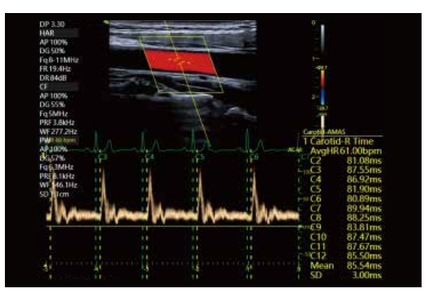
Tissue Boost

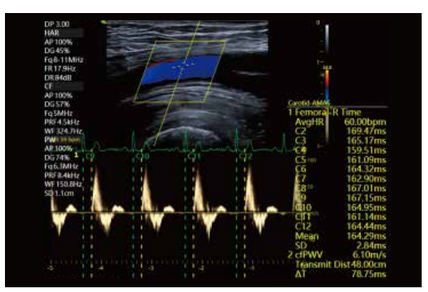
The unique adaptive signal processing technique, Tissue Boost automatically analyzes the echo signal in specific region of interest, to enhance the weak echo signals while suppressing the surrounding clutter noise, providing more imaging uniformity and improved visualization of tissues.



AMAS (Automatic Measurement of Arterial Stiffness)

Utilizing the Doppler spectrum of blood flow, automatically calculate and evaluate the degree of arterial stiffness, provide a screening and monitoring solution for the growing population of carotid atherosclerosis, effectively monitor early atherosclerosis, prevent sudden diseases such as stroke.





Future

Ultimate Intelligent Solutions

VAid Breast

VAid Breast increases the accuracy and productivity of breast diagnosis in real-time or on stored images and cineloops. It enables fully automatic lesion detection, measurement and BI-RADS categorization, which significantly improves the efficiency.



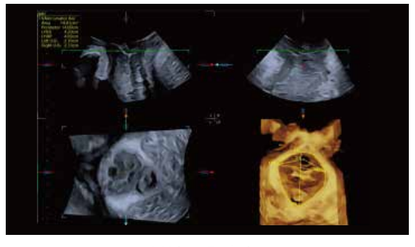
Ultimate Intelligent Solutions for Women, Children's Healthcare and Radiology



VAim Follicle



VAim OB



VAim Pelvic



VAim Hip

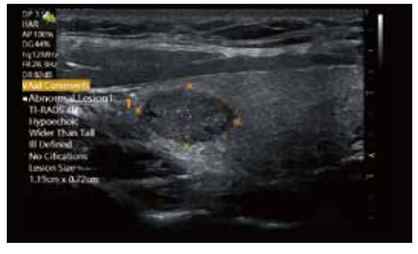
VAid Liver

With just one-button-click, VAid Liver can automatically detect common focal and diffuse diseases of the liver in real-time or on stored images and displays quantitative analysis of the lesion. VAid Liver significantly improves the efficiency and diagnostic accuracy in early screening and detection of liver diseases.



VAid Thyroid

VAid Thyroid provides a non-invasive approach for detection and assessment of thyroid nodules to avoid unnecessary interventions. It automatically detects and recognizes single or multiple lesions in real-time scanning and displays the size, border characteristics and TI-RADS classification of the lesion, which greatly improves the diagnostic accuracy and efficiency.



Future

Ultimate Intelligent Solutions

VMind OB

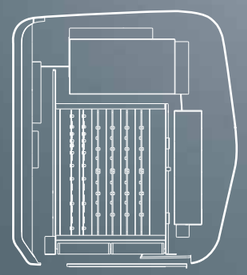
VMind OB offers an absolute extensive obstetric screening approach, by harnessing the power of deep learning techniques. VMind OB automatically captures and stores the standard planes with fetal biometric measurement in real-time, based on ISUOG practice guideline. VMind OB is so far the only intelligent obstetric screening tool offers up to 28 standard planes.

With only one-click simple touch, real-time dynamic acquisition of standard planes and automatic measurement of fetal biometry and growth index will be shown, which will free you from repetitive operation, high level of medical expertise as well as time and labor.



Ergonomic Design for Ultimate Convenience

The Ultimus 9E ultrasound system was developed with a keen focus on ergonomics, imaging performance and streamlined workflow to ensure clinicians have better diagnostic efficiency and focus on the patients.



Space Capsule

The excellent heating dissipation ability, anti-electromagnetic interference and noise isolation ensure the system deliver its best performance.



Large-viewing Monitor

With 24” high-resolution LED monitor provides about 25% more lateral viewing information for a larger image display.



Highly-sensitive Touch screen

A high-sensitivity full-HD touch screen with 60 degree tiltable angle, customizable interface, to make viewing and workflow significantly easy.



Extensive Probe Port

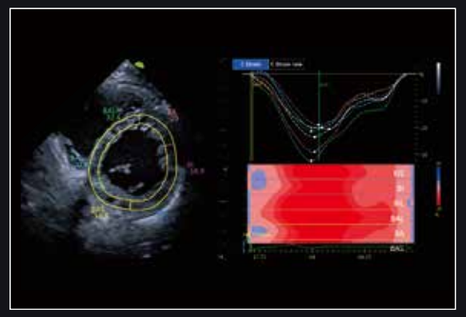
Five active ports plus 1 parking port for your extensive application needs. The water and dust prevention cover along with pinless probe connector, to the greatest extent for transducer protection from the possible damage during the daily use.



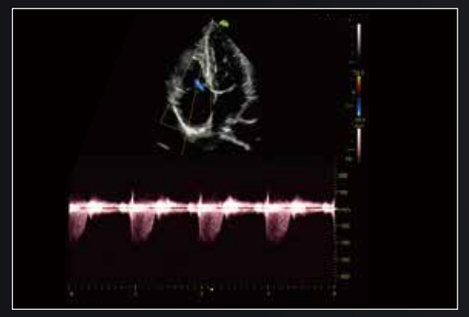
Ergonomic Console

One button access on the console panel for easy adjustment from left to the right, up and down, providing scanning comfort in any position.

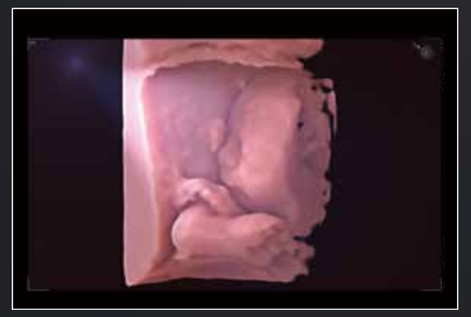




Cardiac Strain Imaging



Tricuspid regurgitation CWD



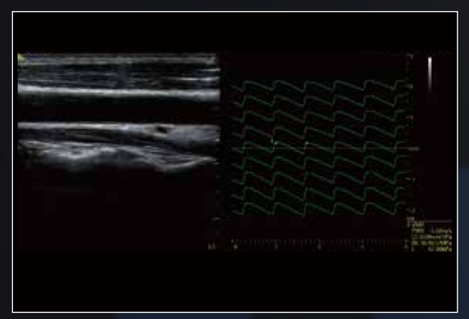
Baby face Light Lab



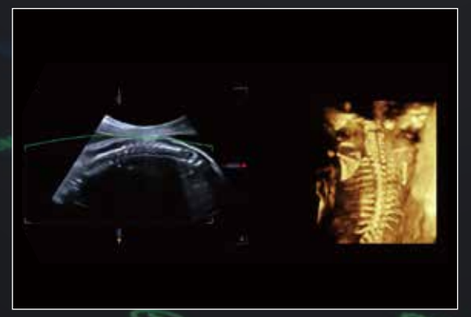
Baby hand HQ redering



Left ventricle long axis view 2D



Carotid PWV



Baby spine 3D



Fetal heart CF



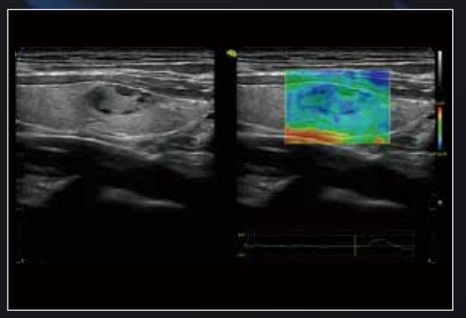
Kidney PDI



Uterus effusion 2D



Mammary duct dilation 2D



Thyroid EI