



About GE Healthcare

GE Healthcare is a leading global medical technology and digital solutions innovator. GE Healthcare enables clinicians to make faster, more informed decisions through intelligent devices, data analytics, applications and services, supported by its Edison intelligence platform. With over 100 years of healthcare industry experience and around 50,000 employees globally, the company operates at the center of an ecosystem working toward precision health, digitizing healthcare, helping drive productivity and improve outcomes for patients, providers, health systems and researchers around the world.

Follow us on [Facebook](#), [LinkedIn](#), [Twitter](#) and [Insights](#) , or visit our website www.gehealthcare.com for more information.

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2. Source: Healthcare Infrastructure and Procedural Volume for Ultrasound Imaging, Frost & Sullivan, 2018. Approx. 108.12 million echo exams are performed annually; Calculation based on 26% total global prevalence of CVD cases (422 million) undergoing echo exam; extrapolated from US study indicating roughly 26% of total prevalent CVD cases underwent echo exams percentage value validated from reports. https://www.prb.org/wp-content/uploads/2015/12/2015-world-population-data-sheet_eng.pdf
3. Kurt M, Shaikh K, Peterson L, et al. Impact on contrast echocardiography on evaluation of ventricular function & clinical management in a large prospective cohort. J Am Coll Cardiol. 2009; 53(9):802-810
4. Work Related Musculoskeletal Disorders In Sonography, Society Of Diagnostic Medical Sonography, 2018, Susan Murphey, BS, RDMS, RDCS, CECD <https://www.sdms.org/docs/default-source/Resources/work-related-musculoskeletal-disorders-in-sonography-white-paper.pdf?sfvrsn=8>
5. <https://doi.org/10.1016/j.amjcard.2011.01.006>
6. Average system noise level is 31 dB (min 28 dB, max 38 dB), depending on ambient temperature
7. The Role of AI in Streamlining Echocardiography Quantification White Paper, Kristin McLeod - JB80498XX
8. Based on results of time and motion study conducted by GE "JB49055XX - Cardiac Auto Doppler"; study results indicated time savings related productivity increase up to ~8 on an annual basis for a facility per sonographer
9. European Association of Echocardiography recommendations for standardization of performance, digital storage and reporting of echocardiographic studies (Eur Journal of Echo 2008 – Evangelista, Badano, Monaghan, Zamorano, Lancellotti).
10. Recommendations for Quantification of Doppler Echocardiography: A Report From the Doppler Quantification Task Force of the Nomenclature and Standards Committee of the American Society of Echocardiography (JASE 2002)
11. Centricity Cardio Workflow v7 Intelligent Reporting out-of-the-box configuration compared to 2017 IAC guidelines excluding doppler. CCW Intelligent Reporting Outcome - JB74831XX
12. EchoPAC Suite is a marketing name for EchoPAC Plug-in
13. With the DICOM SR support, Measures & Analysis (M&A) for an exam can be sent at the end of the exam or when exported from local archive. The destination can be either a server on the network (Storage SCP) or a removable media (DICOM Media) depending on the DICOM dataflow selected. Custom measurements supported only for Adult Echo (TID5200) and Pediatric Heart (TID5220).
14. <https://www.ncbi.nlm.nih.gov/pubmed/27689562>
15. Data Breaches Will Cost Healthcare \$48 in 2019, Threats Outpace Tech, healthitsecurity, source: t.ly/xrAA
16. 5 Tips for Controlling Costs in Hospitals and Biomed Shops, source: t.ly/l9n7
17. Errors in Sonography, DOI: 10.1007/978-88-470-2339-0_8.
18. e. a. M. Mårtensson, «High incidence of defective ultrasound transducers in use in routine clinical practice», European Journal of Echocardiography, vol. 10, no. 3, pp. 389-394, 2009. <https://academic.oup.com/ehjcardimaging/article/10/3/389/2396618> <https://probehunter.com/wp-content/uploads/FULLTEXT01.pdf>
19. A multicentre survey of the condition of ultrasound probes, Ultrasound. 2016 Nov, Published online 2016 Aug 1. doi: 10.1177/1742271X16662301. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5098704/>
20. GE internal data
21. View Recognition is only applicable to images acquired with TTE probe on GE systems
22. Digital Expert is only offered in the USA

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EchoPAC Suite is a marketing name for EchoPAC. Plug-in. Vivid, cSound, XDclear, HDlive, EchoPAC, ViewPoint, Centricity, Edison and InSite are trademarks of General Electric Company. GE Healthcare, a division of General Electric Company.

DICOM is the registered trademark of the National Electrical Manufacturers Association for its standards publications relating to digital communications of medical information.

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JB72914XX



POWERED BY AI ELEVATED BY YOU

Vivid™ T8 Ultra Edition



vivid

gehealthcare.com/vivid

By 2030,
▲ 40.5%
of the US population is
projected to have some
form of Cardiovascular
Disease (CVD)¹

▲ ~108m
annual echo exams
performed globally²

WORKLOAD IS HIGH.

WHILE ENERGY AND DETERMINATION PERSIST.

Demand for cardiovascular ultrasound exams is high and will continue to increase, with a mix of routine, follow-up and complex cases.

Using advanced clinical capabilities traditionally required extra effort and expertise - often resulting in delays and increased workload.

We strive to maximize efficiency with a system that helps you see more, easily achieve accurate measurements and minimize errors.

10-15%
of echo exams result in
sub-optimal images³

▲ 90%
of sonographers experience
symptoms of Work Related
Musculoskeletal Disorders
(WRMSD)⁴

\$120+
billion yearly
direct and indirect costs
for employers⁴

Vivid T8 Ultra Edition



Designed for your busy practice, Vivid T8 Ultra Edition provides reliable and solid design, powered with AI applications for extreme productivity without compromising quality of care. Enjoy long-term peace of mind with modern and secure software design, remote updates, and warranty coverage.

Extreme Productivity

With the power of AI, a new level of speed and efficiency is now possible with up to 80% less clicks⁷ to get 2D measurements. Productivity combined with diminished inter-observer variability⁷ provides you with high diagnostic confidence when taking critical decisions.

Advanced Functional Imaging (AFI) with AI-based View Recognition allows you to complete the guideline⁵ recommended follow up on oncology patients with just a few clicks.



Great Return on Investment

We understand the need to balance investment in new technology with financial resources. Vivid T8 Ultra Edition is a robust and reliable system perfectly designed to meet your everyday clinical needs. The T8 Ultra Edition modern and future-ready software addresses your practice privacy and security risks and protects you from external threats. 3 years of standard warranty and remote updates provide you with peace of mind of always being ready and up-to-date.

Cardiovascular Excellence, and much more

Designed primarily for cardiovascular specialists, it is a true shared-services system, offering versatile workflows and quantification tools.

Vivid T8 Ultra Edition provides exceptional cardiac and vascular 2D image quality and color sensitivity with a suit of advanced quantification tools. T8 Ultra Edition also provides a broad range of pediatric, abdominal, fetal/obstetrics, among many more applications.

A Delightful User Experience

Vivid T8 Ultra Edition is an exceptionally silent system⁶, designed for optimal patient experience. The comfort and health of your clinical staff is prioritized with a convenient operating panel, integrated alphanumeric keyboard, and a 10" modern touch panel. The full color, high-resolution 21" LCD monitor is mounted on an articulating arm.

21" ultra-high-resolution,
wide format, color screen

10.1" high-resolution
touch panel

Ergonomic transport
push handle

Cable management hooks

B&W and video printer
and printer shelf (optional)

Removeable and cleanable
storage bin

Large wheels
for easy system transport

Compact and maneuverable design

A lightweight (60 kg / 132 lbs) system
with compact footprint

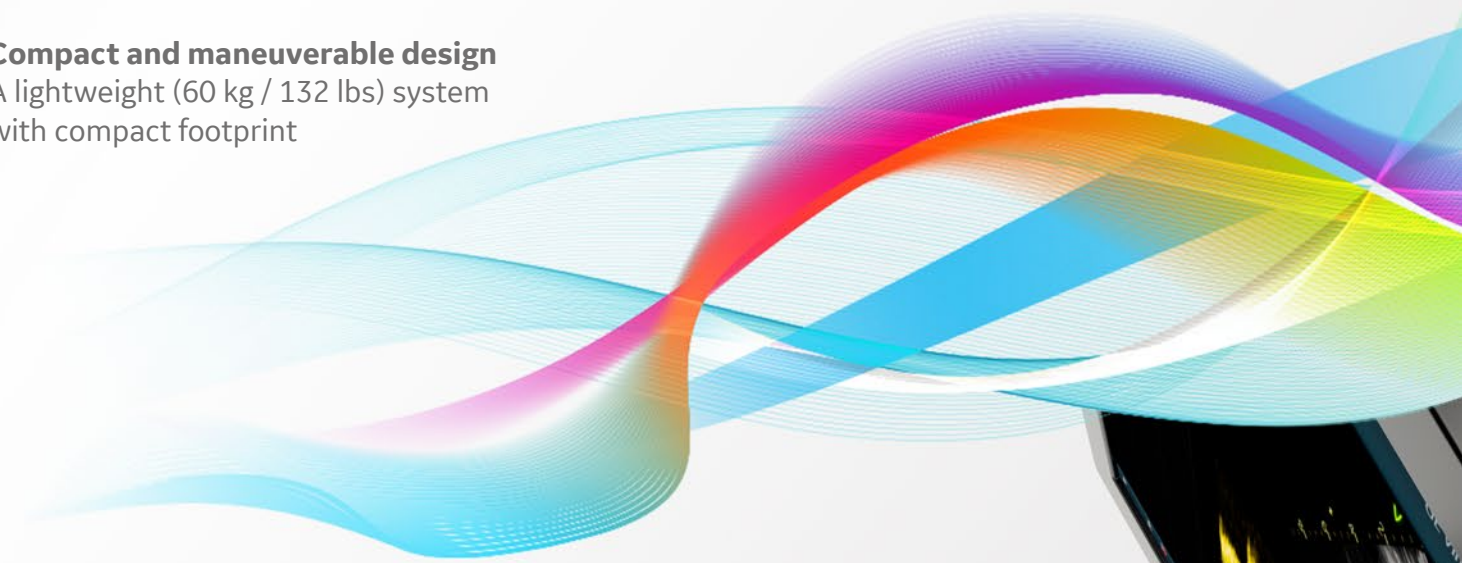
Convenient operating panel
with integrated alphanumeric
keyboard

Eco-friendly design

Extremely silent system with average
noise level of 31 dB
Black & white inverted printing,
preventing waste of ink and paper

MODERN ERGONOMICS

Sleek and maneuverable design
with ergonomic user interface



***Your time is precious.
Save it.***

DETECTABILITY⁷
 **98%**

AI AFI LV with AI View Recognition

Fully automatic recognition of the apical imaging views.
Measurements of GLS and segmental longitudinal Strain for LV.



POWERED BY AI

AI helps reduce tedious tasks and inter-observer variability.

Improve diagnostic speed and accuracy

Vivid T8 Ultra Edition introduces the latest AI-based technology to help reduce user fatigue and improve workflow efficiency. Diagnose more confidently and accelerate exams via automated (AI-driven) Cardiac Doppler and 2D LV measurements.

The results are impressive. Exam time was reduced, operator fatigue minimized with more than 80% less clicks⁷ to get 2D measurements, and inter-observer variability diminished.

Discover the many innovations brought by the Vivid T8 Ultra Edition, and more importantly, their contribution to your clinical practice.

Ultra Fast.

Ultra Precise.

Ultra Efficient.

AI Cardiac Auto Doppler with AI

**REDUCED TIME
PER MEASUREMENT**

 **UP TO
93%**

Fewer Keystrokes⁸

**LOWER INTER
OPERATOR VARIABILITY**

**REDUCE
VARIABILITY**


Standardized exams with
greater reproducibility⁸

**ACCELERATED
WORKFLOW**



Productivity improvement

POWERED BY AI ELEVATED BY YOU

At GE Healthcare we strive to empower you by reducing wasted time and effort. We aim to remove tedious tasks and help make every moment count for your patients – seeing problems clearly and quickly, performing procedures with great precision... and providing quality of care for all.



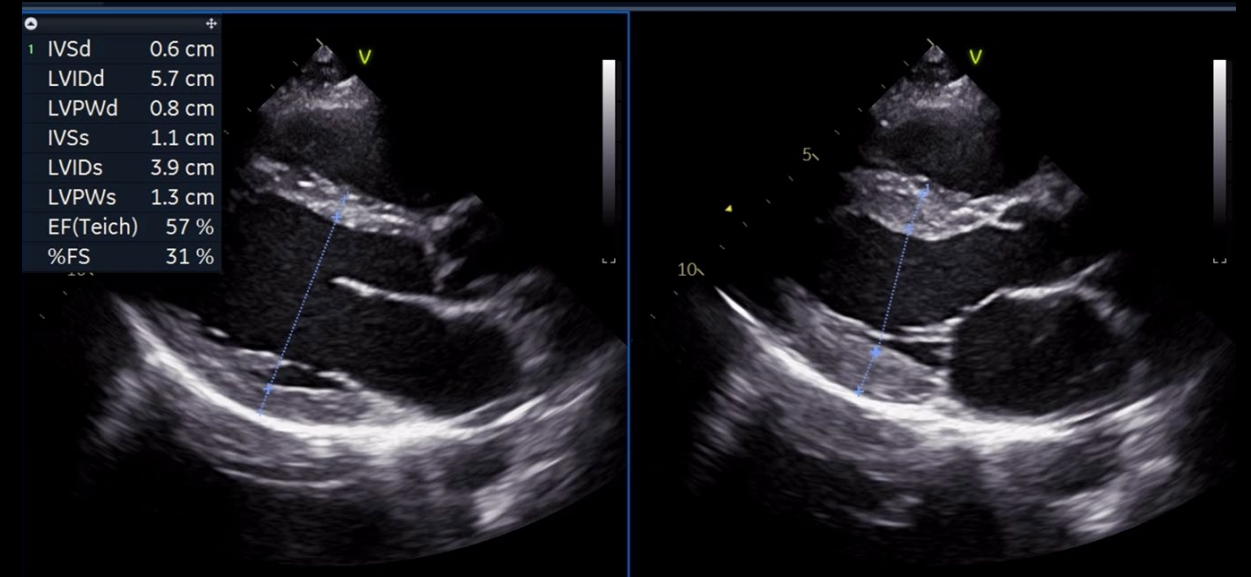
CLINICAL EXCELLENCE for cardiovascular practices

LESS CLICKS, UP TO⁷

 -80%

AI AI Auto Measure 2D

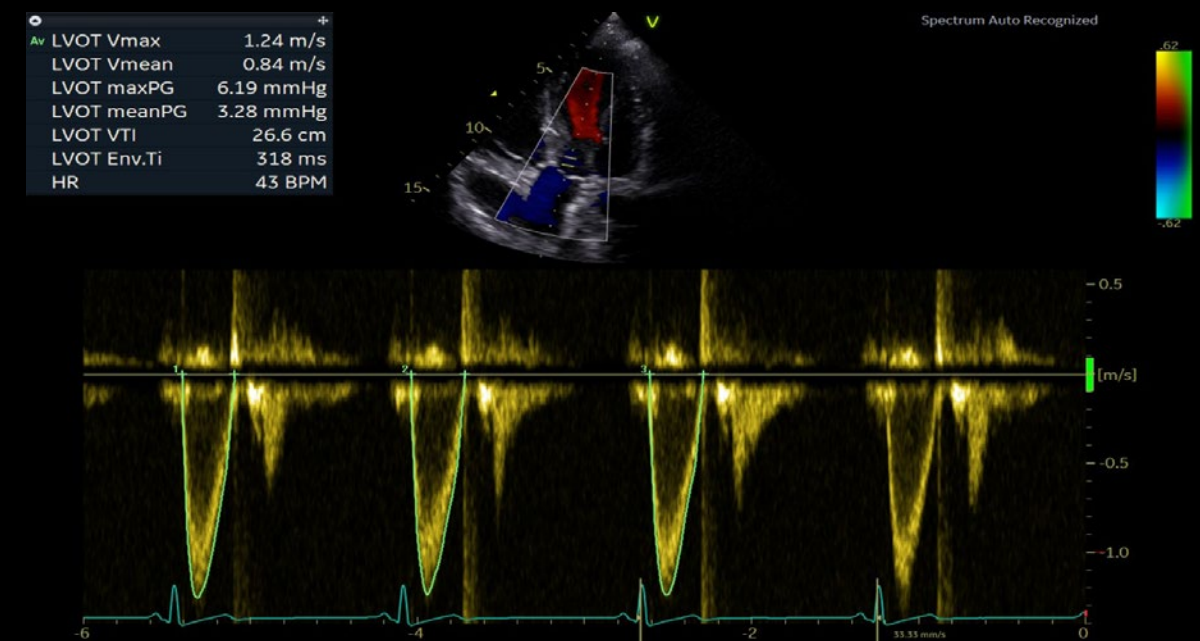
With the power of AI, the manual caliper measurements can be completed with 3 clicks: **Freeze** – **Measure** – **Auto**. A full set of reproducible measurements will instantly appear on the screen.



ACCURACY⁷
 98%

AI AI Auto Measure Spectrum Recognition

With the power of AI, a wide range of Doppler measurements can be completed with 2 clicks: **Freeze** – **Measure**. A Doppler trace and full set of associated measurements will instantly appear on the screen.





CLINICAL EXCELLENCE

for Pediatrics

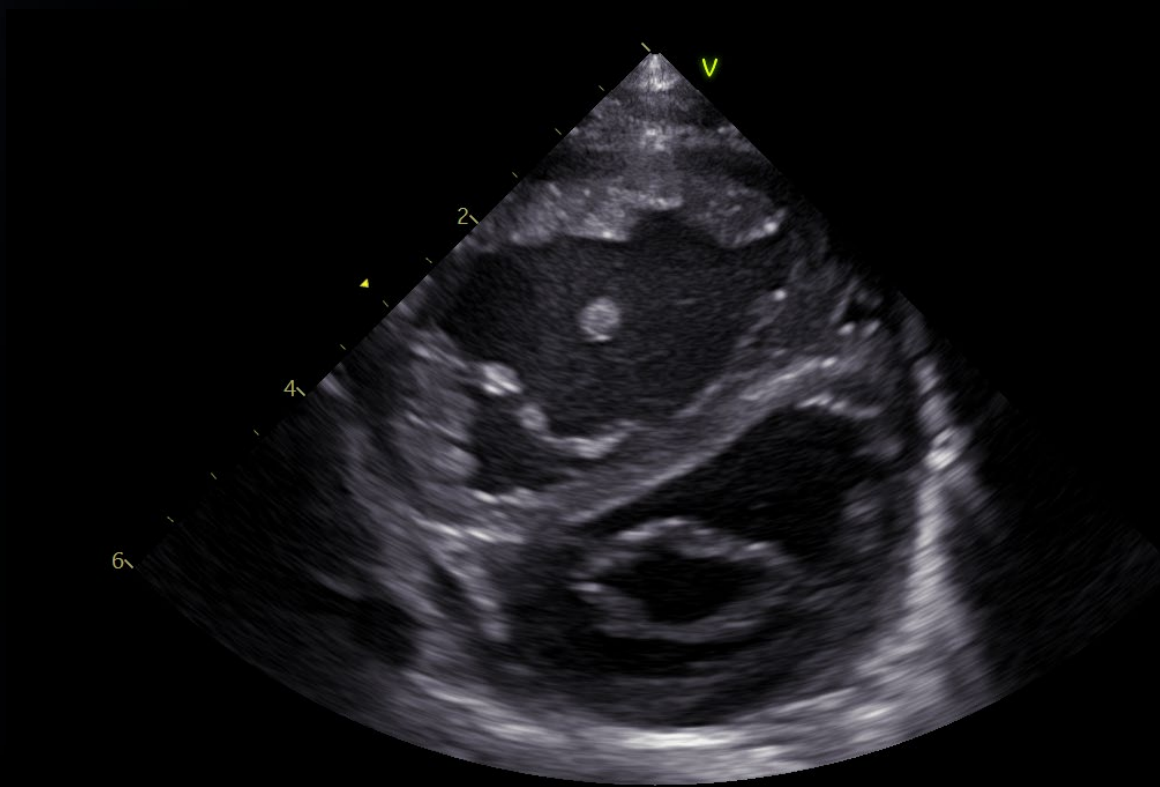
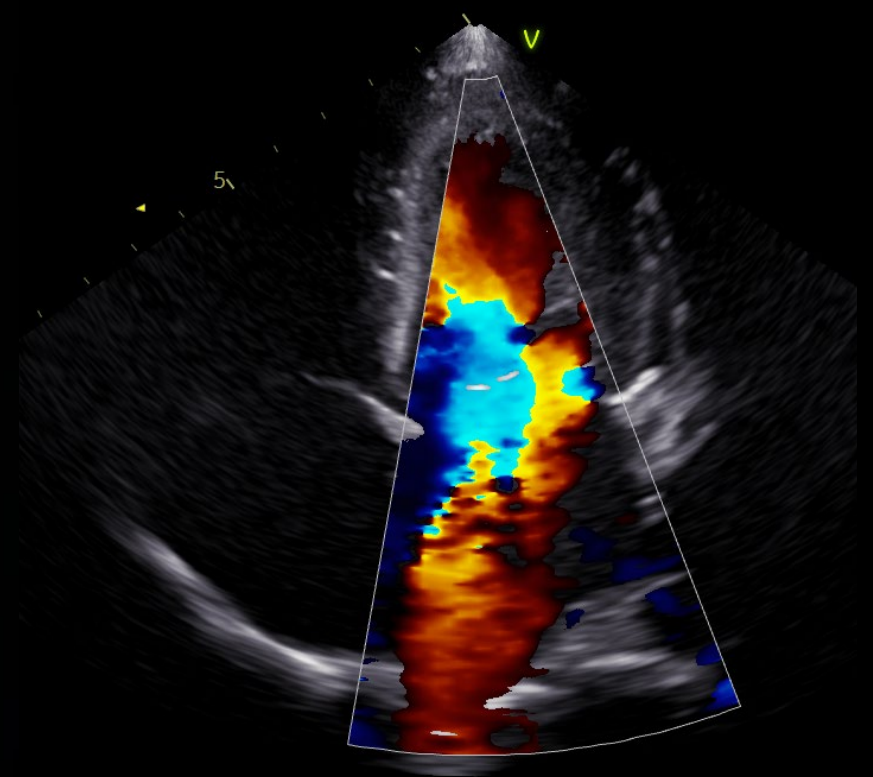
The smallest cardiac patients can pose the biggest care challenges with difficult to diagnose, severe conditions.

Pediatric echoes require speed and versatility. Accurate diagnostics and precise measurements are achievable with great image quality, dedicated presets and tools on your Vivid system.

Visualize small anatomies with speed, clarity and confidence thanks to Vivid T8's great image quality, range of affordable probes, and dedicated pediatric and neonatal presets.

Pediatric cardiology

Visualize small anatomies with speed, clarity and confidence thanks to Vivid T8 Ultra Edition's high-resolution imaging and dedicated pediatric probes.





CLINICAL EXCELLENCE

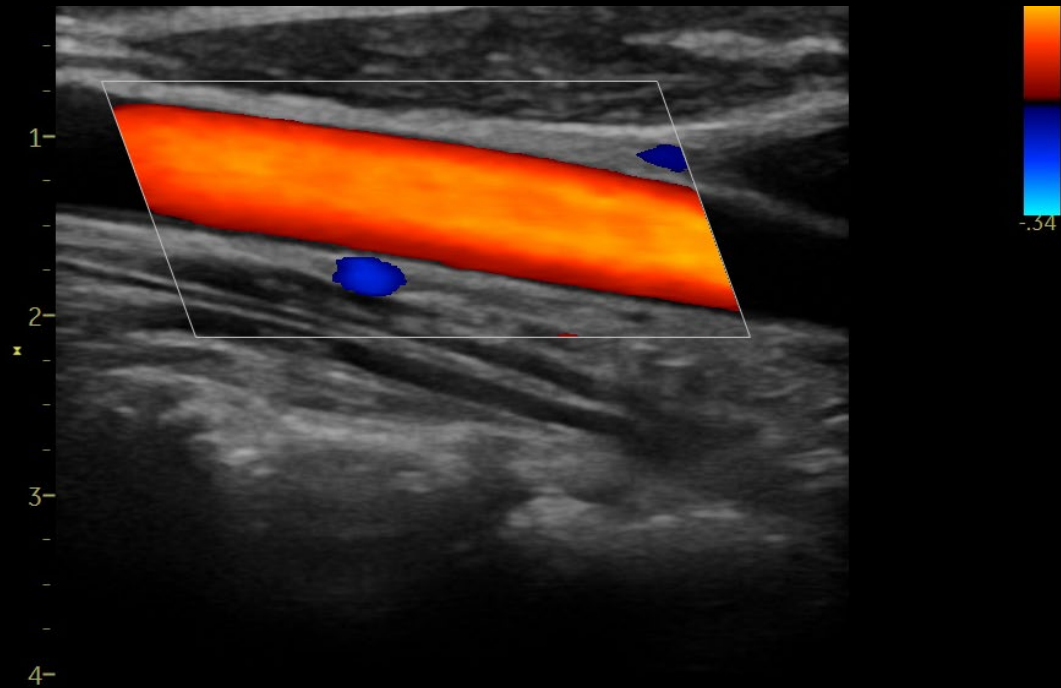
beyond Cardiology

The demand for multi-purpose, cost efficient ultrasound systems with uncompromised image quality is growing. With the aging population, vascular and abdominal exams are increasingly challenging.

Vivid T8 Ultra Edition provides you great 2D and color flow imaging across applications. Efficient workflow, a wide range of linear and curved probes and dedicated quantification tools ensure the confidence you need for speedy and accurate diagnosis also under challenging conditions.

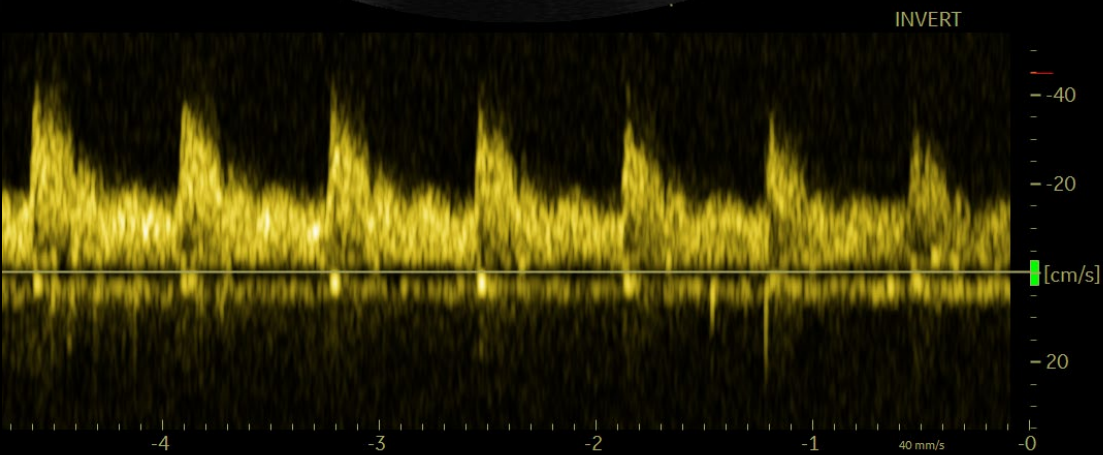
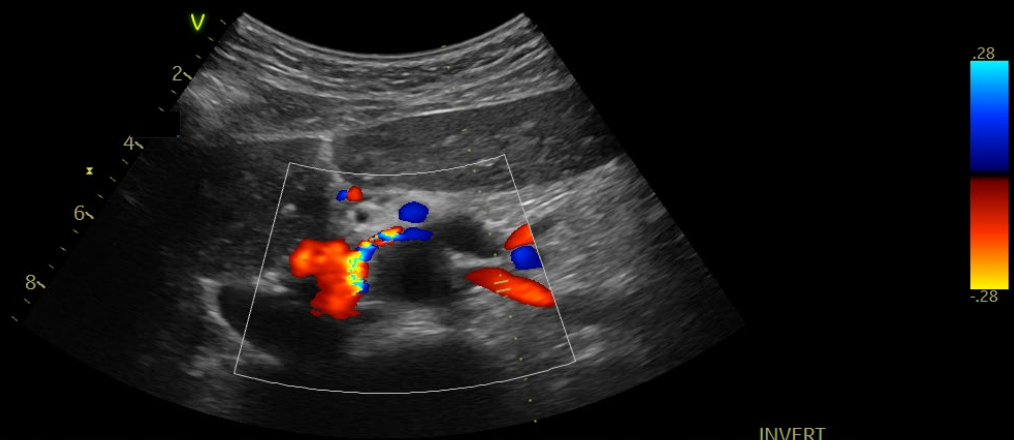
Vascular

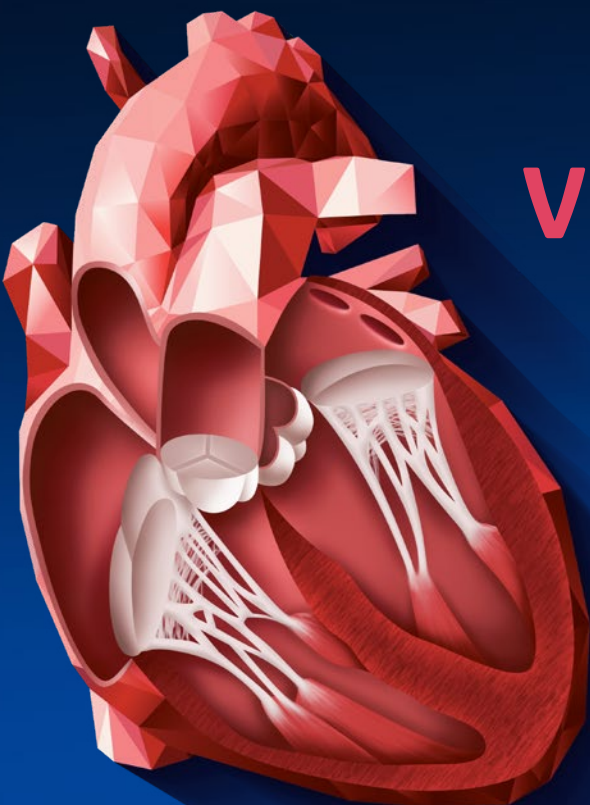
Develop fast and complete quantitative assessment of vascular anatomies with dedicated probes and presets.



Abdominal

Visualize abdominal tissue with clarity thanks to Vivid T8 Ultra Edition's high-resolution imaging and dedicated imaging presets.





VIVID HEART APPLICATIONS

A wide range of clinical applications for use in Core Echo and your cardiovascular practice.

VISUALIZATION AND NAVIGATION

Ultra Edition

Curved Anatomical M-Mode

LVO Contrast

Scan Coach

Smart Stress

Blood Flow Imaging

FLOW QUANTIFICATION

Ultra Edition

Cardiac Auto Doppler **AI**

AI Auto Measure Spectrum Recognition **AI**

CHAMBER QUANTIFICATION

Ultra Edition

Z-Scores

AI Auto Measure 2D **AI**

Auto EF **AI**

AFI FUNCTIONAL IMAGING

Ultra Edition

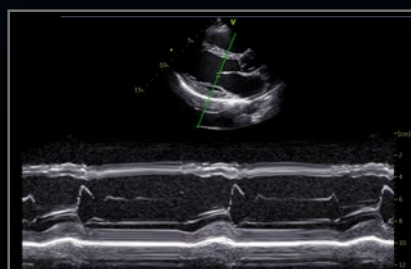
AFI LV with AI View Recognition **AI**



VISUALIZATION AND NAVIGATION

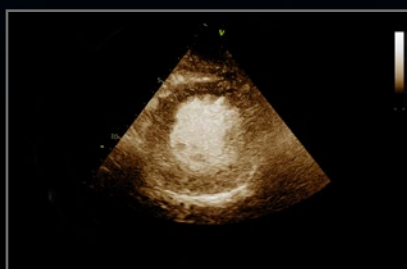
New in Ultra Edition

Why guess? When you can see.



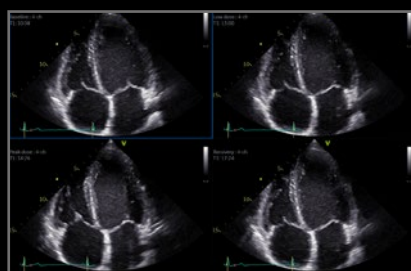
Curved Anatomical M-Mode

View Anatomical color and tissue velocity in M-mode. Adjust the cursor at any plane, in live imaging or with recalled images.



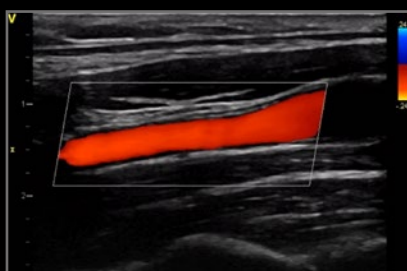
LVO Contrast

Benefit from high-resolution detection of contrast in the LV cavity with LVO Contrast and excellent suppression of myocardial tissue signals on the Vivid T8 Ultra Edition new Coded Phase Inversion (CPI).



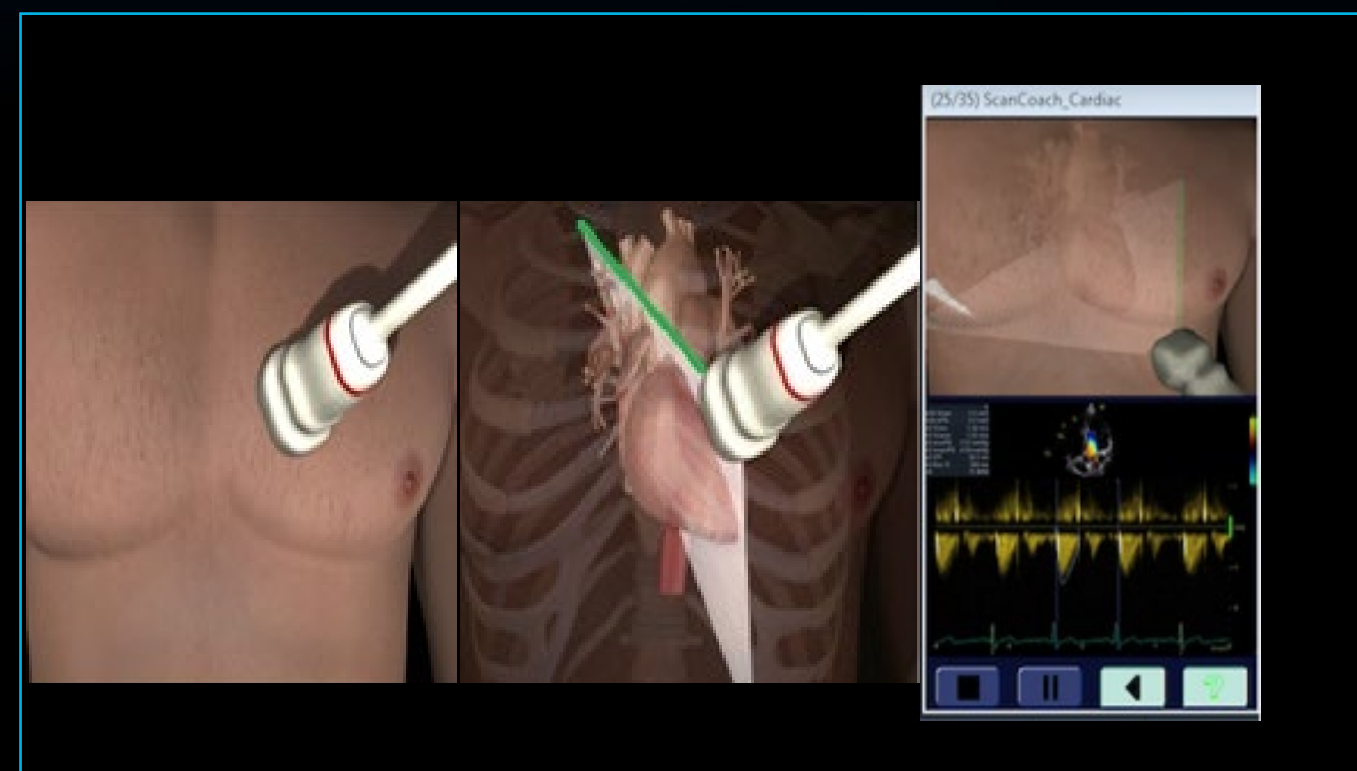
Smart Stress

Over 17 imaging parameters from each plane can be saved and recalled at each stress level, reducing system adjustments during acquisition.



Blood Flow Imaging

Enhance blood flow dynamics visualization using a signal-processing algorithm for visualizing blood flow data.



Ultra Edition

Scan Coach

A reference and education tool that provides modules depicting basic scanning techniques with animated graphics of probe position, schematic of anatomy and reference clinical image.

Benefits:

Guided scanning:

- Conveniently located onboard the console within the Scan Assist Pro feature
- Provides guidance to obtain different views and measurements
- Helps inexperienced users performing echo scans

Education and reference tool:

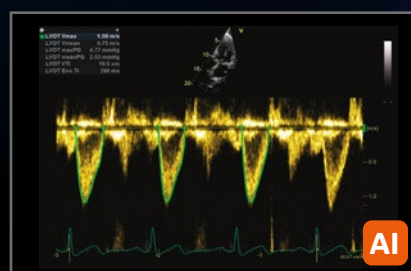
- Assists in positioning the probe and probe orientation
- Anatomical reference helps visualize where the scan plane is located inside the heart
- Scan Assist Pro exam protocols can be customized per local guidelines and help ensure exam completeness



VIVID HEART APPLICATIONS

FLOW QUANTIFICATION

Your time is precious. Save it.



Cardiac Auto Doppler

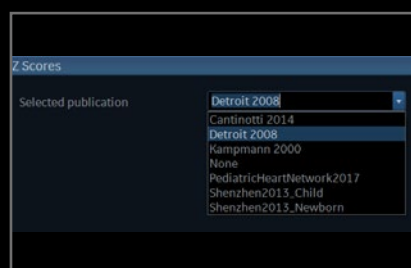
Semi-automatic Cardiac Doppler measurements.

Benefits:

- Enhances reproducibility of follow-up studies when used in automated mode⁸
- Offers Doppler measurement in multiple cardiac cycles as recommended by guidelines for irregular heart rhythms^{9,10}
- Supports less experienced users with advanced automation

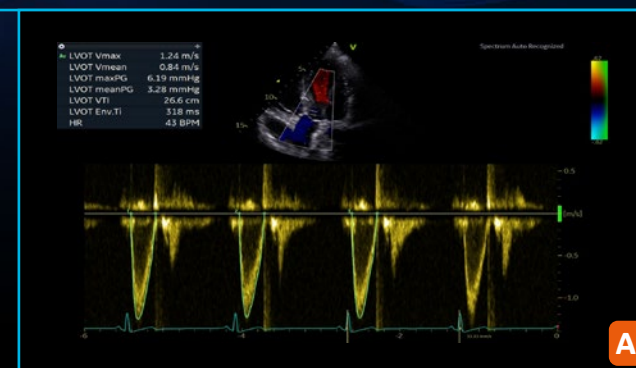
CHAMBER QUANTIFICATION

Precision at the heart of quantification.



Z-Scores

Vivid T8 Ultra Edition Support for six sets of user selectable Z score publications covering the most common pediatric dimension measurements.



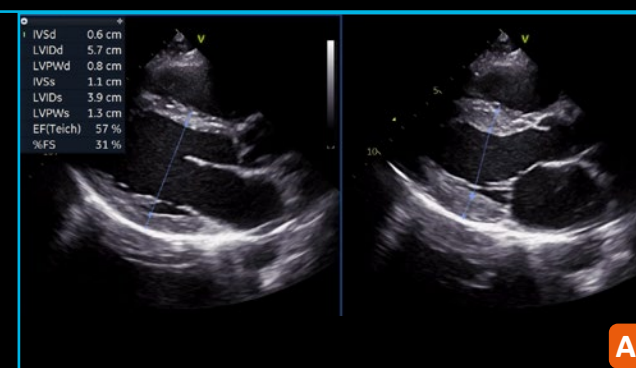
Ultra Edition

AI Auto Measure Spectrum Recognition

Semi-automatic selection of appropriate spectral Doppler measurement tool.

Benefits:

- Enables fewer manual interactions by automatically opening the appropriate measurement tool⁷
- Works seamlessly with Cardiac Auto Doppler
- Enhances reproducibility of follow-up studies when used in fully automated mode⁷
- Supports less experienced users with advanced automation



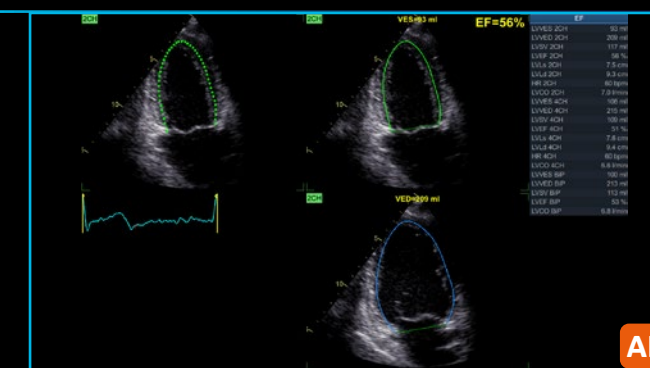
Ultra Edition

AI Auto Measure 2D

Semi-automated LV dimension measurements (2D calipers) in the parasternal long axis view, reducing manual interactions.

Benefits:

- Achieves fast measurements of left ventricle dimensions:
 - Up to 80% less clicks⁷
 - No need to scroll to look for ED and ES frames
 - Reduce manual workflow during analysis of cardiac images
- Improves reliability and repeatability of measurements – potentially increasing reproducibility for follow-up studies



Ultra Edition

Auto EF

Powered by AI-based View Recognition,²¹ Auto EF provides semi-automated quantification of left ventricular volumes and ejection fraction.

Benefits:

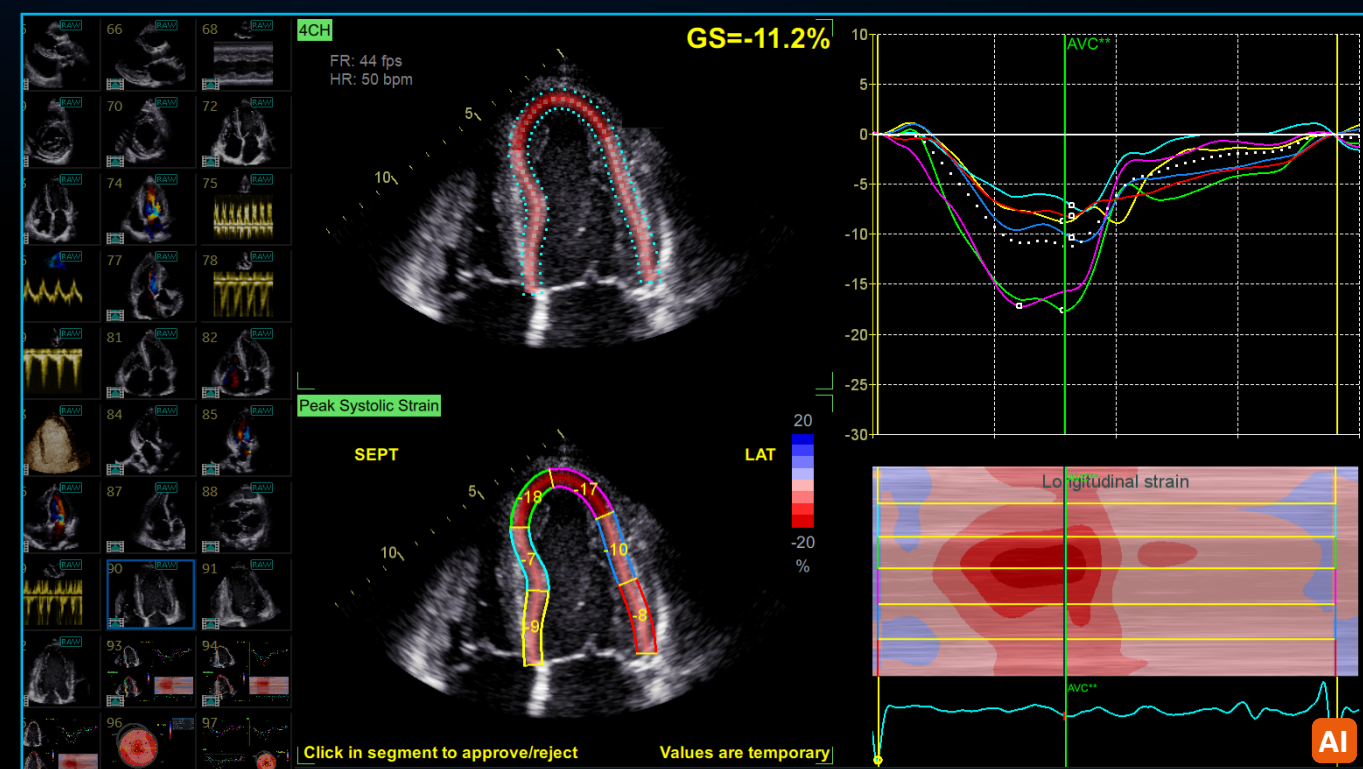
- Achieves fast measurements of ejection fraction
- DICOM[®] support. Assessment of the left ventricle ejection fraction also on data sets acquired on other vendors' systems



AFI FUNCTIONAL IMAGING

From diagnosis to prognosis.

New in Ultra Edition



Ultra Edition

AFI LV with AI View Recognition*

Powered by AI-based View Recognition, AFI LV provides semi-automated quantification of left ventricular global and segmental strain.

Benefits:

- Offers advanced industry pioneered speckle tracking algorithm for quantifying myocardial deformation
- Works seamlessly - integrated ejection fraction calculation
- Supports Adult and Pediatric TTE and Adult TEE images
- Provides time savings via automatic selection of the appropriate 4-chamber, 2-chamber and APLAX images for analysis
- DICOM support. Assessment of the left ventricle ejection fraction also on data sets acquired on other vendors' systems

*View Recognition is only applicable to images acquired with TTE probe on GE systems

APPLICATIONS POWERED BY **AI**

SEAMLESS WORKFLOW INTEGRATION

POST PROCESSING & REVIEW

OPEN STANDARDS

INTEGRATION WITH YOUR WORKFLOW

EchoPAC Software Only and EchoPAC Plug-in:

- Analyze and review data from GE Healthcare Vivid family of scanners, as well as DICOM images from other ultrasound systems.
- Access all Vivid measurement and review tools utilizing GE Healthcare Raw Data or industry standard DICOM data
- DICOM Image transfer with optional GE Healthcare Raw Data transfers images easily in your existing workflow
- DICOM SR Measurement Transfer including standard and custom measurement allows seamless integration with GE Healthcare and other industry reporting systems and EMRs¹³

EchoPAC Plug-in is available for:

- GE Healthcare Centricity™ Cardio Enterprise with Intelligent Reporting (IR).
- GE Healthcare ViewPoint™ 6 with EchoPAC Suite¹²
- As a plug-in to third party PACS

With Centricity Cardio Enterprise IR, routine adult echo reports are

83% **complete before the physician opens the exam to review.**¹¹

SonoDefense

ADVANCED CYBERSECURITY AND DATA PRIVACY PROTECTION

Healthcare institutions are under growing threats of cyberattacks – and the implications for data security, patient privacy, and the quality and cost of care are staggering.



FACILITY ECHOSYSTEM

NETWORK FIREWALL

WINDOWS 10 HARDENING

MALWARE PROTECTION

LOCAL/REMOTE ACCESS MANAGEMENT

PHI ENCRYPTION

The SonoDefense strategy consists of **SIX LAYERS**, with each layer enhancing the overall security of the system and help protect patient data.

Protecting against these threats and safeguarding your patients and your institution requires more than anti-virus protection. SonoDefense is GE Healthcare's multi-layer strategic approach to cybersecurity and patient data privacy for ultrasound..

SonoDefense is designed to:

- Keep the ultrasound machine safe and functional in the face of cyberthreats
- Protect patient data on the machine from unauthorized access
- Enable you to successfully implement patient data and security policies, while still managing product daily workflows

SonoDefense strategy applies to Vivid portfolio:

- Windows® 10 IoT Secure Operating System provides multi-layered security
- Application whitelisting prevents malware execution
- Configurable user security provides user authentication and access control
- Data encryption protects stored data and during transmission
- Network firewall disables unneeded operating system services
- Integrates with existing facility security infrastructure



Healthcare is a soft-target for hacking and ransomware.¹⁴

\$4B cost added in 2019¹⁵



Constrained budgets increase pressure to

DO MORE with less¹⁶
and to optimize assets



Probe mishandling can lead to damage which can cause faulty data and may lead to incorrect medical decisions^{18, 19}



Ultrasound is especially vulnerable to operator-dependence leading to

VARIABILITY
between exams¹⁷



[POP]

PERFORMANCE OPTIMIZATION PARTNERSHIPS

Purchasing a GE Healthcare ultrasound is not only getting access to a high-technology or remarkable clinical applications. It's about enjoying a new user experience, at every step of ownership. We help you to outperform today, while preparing your department for tomorrow's challenges.

STAFF EXCELLENCE

A comprehensive portfolio of training for clinical and technical users.

Helping you and your team build customized development plans to foster excellence and increased confidence.

PROACTIVE MANAGEMENT

Use digital technology and tools to minimize expensive and disruptive unplanned downtime.

Proactive monitoring to help reduce cost and revenue loss from unplanned failures and automated updates for peace of mind.

DEVICE PROTECTION

Keep your device state-of-the-art with software upgrades, new applications and security patches.

Optimizing your device to drive clinical and operational benefits and help you stay ahead of the game, without changing your equipment.

ASSET OPTIMIZATION

Customizable dashboards for asset utilization and consulting services to provide actionable insights.

Achieving more with your assets to improve patient care and realize department strategic plans.

IMPROVED UPTIME

Best-in-class repair services to drive uptime. Fully scalable from full coverage to shared maintenance.

Thoroughly aligned with your own in-house capabilities, providing the right balance between staff autonomy and our expertise.

PROBE PERFORMANCE

Customizable portfolio of solutions for probe lifecycle needs to improve availability and performance.

Proactive probe care that may help you increase diagnostic quality, decrease cross-contamination risk and expand the life span of the transducers.

Ready to make your Vivid **POP?**

Complete lifecycle solution for clinical, operational & financial outcomes.

You take care of your patients, we'll take care of you.

PARTNERSHIPS DRIVE RESULTS

GE Healthcare is by your side to overcome these risks, helping you to:

- ✓ Keep your systems up and running, safe from breaches and cyberattacks
- ✓ Achieve more with your existing systems, without changing your investment plan
- ✓ Improve your activity, exam flow and staff planning, based on comprehensive data and reports
- ✓ Create comfort zone for your teams, reaching operational efficiency and clinical excellence
- ✓ Achieve high standard in probe-related cross-contamination and diagnostic errors

UNLEASH THE POWER OF CONNECTED DEVICES

Your Vivid system has been designed to provide you with an optimal user experience. Connectivity is the key element to enjoy it fully, whenever and wherever you need it, regardless of site access restriction and planning constraints. Discover a new world of services, included in every package:

REMOTE TECHNICAL SUPPORT

Access to experts anytime, anywhere

InSite™ connectivity enables OnDemand and real-time access to remote GE Healthcare experts

- Reduce disruptions
- Decrease system downtime
- Improve asset usage and staff productivity

It provides secure remote connectivity without requiring any open inbound ports or VPN connection.

REMOTE FIX

UP TO **40%**

issues fixed remotely with InSite²⁰

PREDICTIVE MAINTENANCE

Know the failure before it occurs

Transform unplanned downtime into planned service events with **OnWatch** technology. It provides automated, 24/7 system monitoring, capable of detecting a system failure before it occurs. Any deviation alerts our GE Healthcare engineers, who proactively work to keep your operations running smoothly.

COST SAVINGS

UP TO **90%**

cost reduction, based on OnWatch alerts²⁰

DATA DRIVEN INSIGHTS

All the insights you need to decide, at your fingertips

Better decisions start with better data **iCenter™** is a secure, cloud-based asset management tool that offers comprehensive data analytics for your systems. It provides insights to make informed decisions and helps improve operational performance, optimize patient flow and maintain compliance standards.

UpdateMe is a complementary app that gives you access to the data 24/7 directly on your smartphone. You can receive notifications and create a service request anytime, anywhere.

NEW REMOTE SUPPORT

Real-time and interactive applications support

Digital Expert²² and **STAR** provide an interactive, real-time, flexible & convenient way to get education and support.

- May help improve training outcomes
- Increase capacity and efficiency
- Train staff on a short timeline



NEW AUTOMATED UPDATES

No need to worry about your system safety

Get automated software updates with **eDelivery** along with safety patches enabled by remote software download.

SonoDefense provides the highest level of cybersecurity to keep your systems up-to-date, with no impact on your operations. No on-site intervention needed.

