



Select either 22" OLED monitor
or 24" LCD monitor

Intuitive 12" LCD touch screen

Adjustable floating keyboard

Convenient keyboard storage

Convenient cable management

Low power consumption with efficient
and low-noise cooling

Easy mobility

MODERN ERGONOMICS

A familiar, yet modern
and efficient design.

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

DETECTABILITY⁵
98%

AI AFI LV with AI-based View Recognition

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



AI Cardiac Auto Doppler with AI

**REDUCED TIME
PER MEASUREMENT**

**UP TO
93%**

Fewer Keystrokes⁶

**LOWER INTER
OPERATOR VARIABILITY**

**REDUCE
VARIABILITY**

~3x

*Standardized exams with
greater reproducibility⁶*

**ACCELERATED
WORKFLOW**



Productivity improvement

POWERED BY AI

Improve diagnostic speed and accuracy

Vivid E90 Ultra Edition introduces the latest AI-based technology to help reduce tedious tasks and improve workflow efficiency. You can diagnose more confidently and accelerate exams via automated (AI-driven) Cardiac Doppler and 2D LV measurements.

The results are impressive. Exam time is reduced, and operator fatigue minimized with up to 80% less clicks to get 2D measurements, and inter-observer variability diminished.⁵

Discover the many innovations brought by the Vivid Ultra Edition, and more importantly, how these can contribute to make clinical practice - Elevated by You.

- Ultra Fast.
- Ultra Precise.
- Ultra Efficient.

CLINICAL EXCELLENCE for the Echo Lab

POWERED BY AI ELEVATED BY YOU

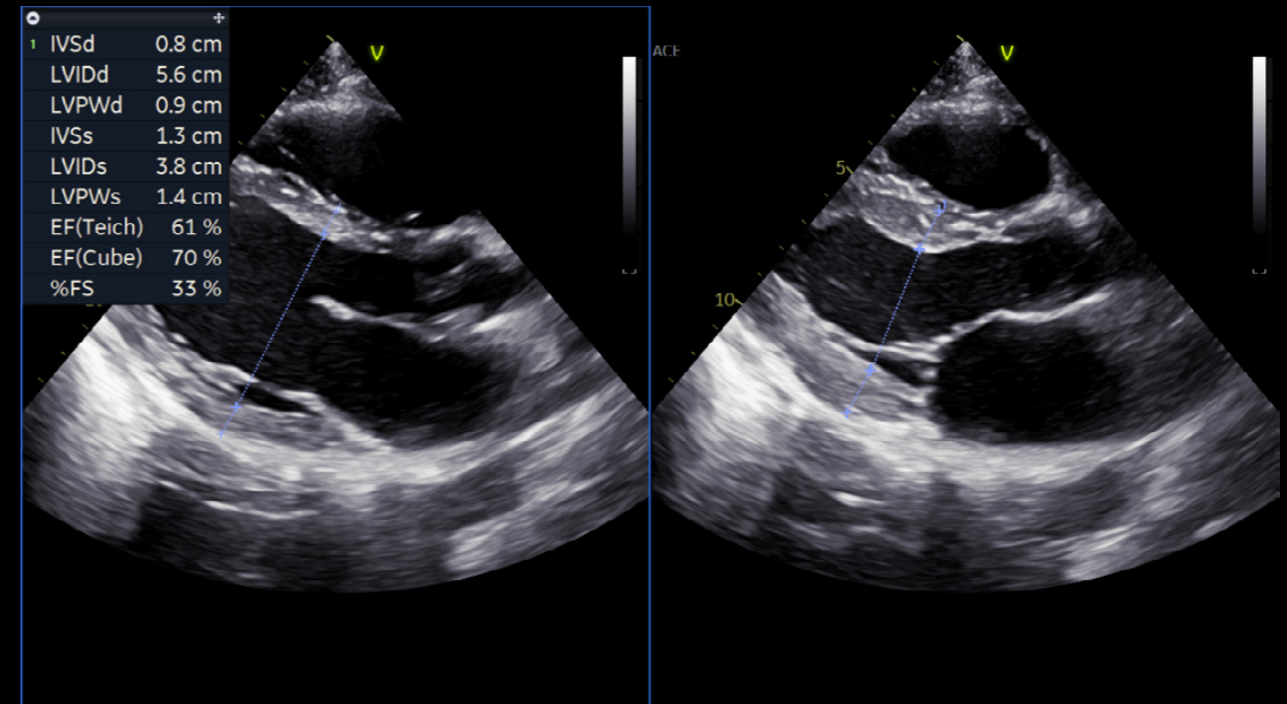
At GE Healthcare we strive to empower you by reducing wasted time and effort. We aim to remove tedious tasks and help make every moment count for your patients – seeing problems clearly and quickly, performing procedures with great precision... and providing quality of care for all.



LESS CLICKS, UP TO⁵
-80%

AI AI Auto Measure 2D

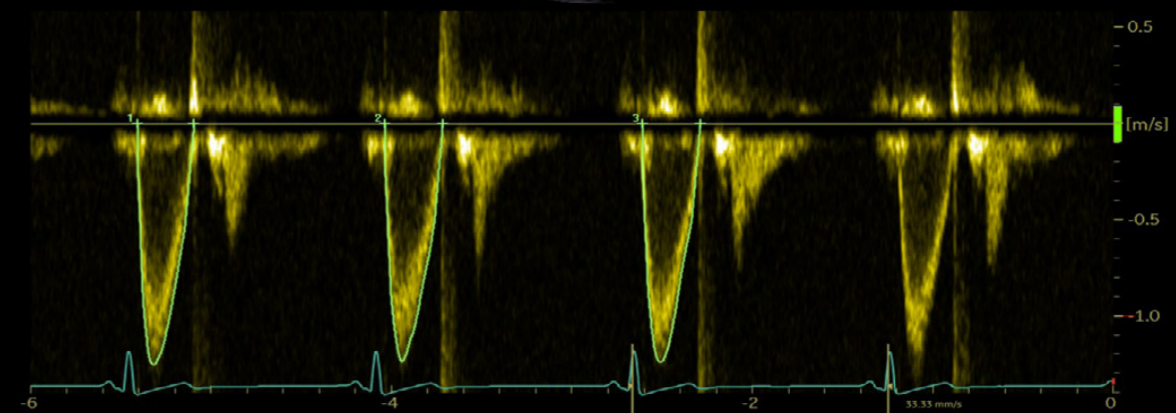
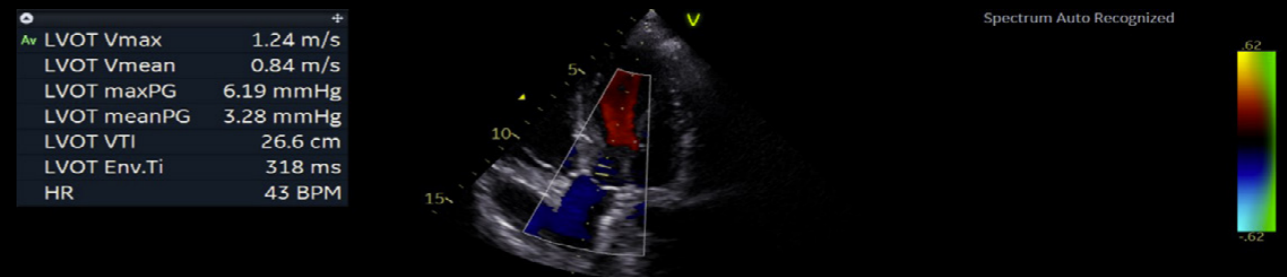
With the power of AI, the manual caliper measurements can be completed with 3 clicks: **Freeze - Measure - Auto**. A full set of reproducible measurements will instantly appear on the screen.



ACCURACY⁵
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.



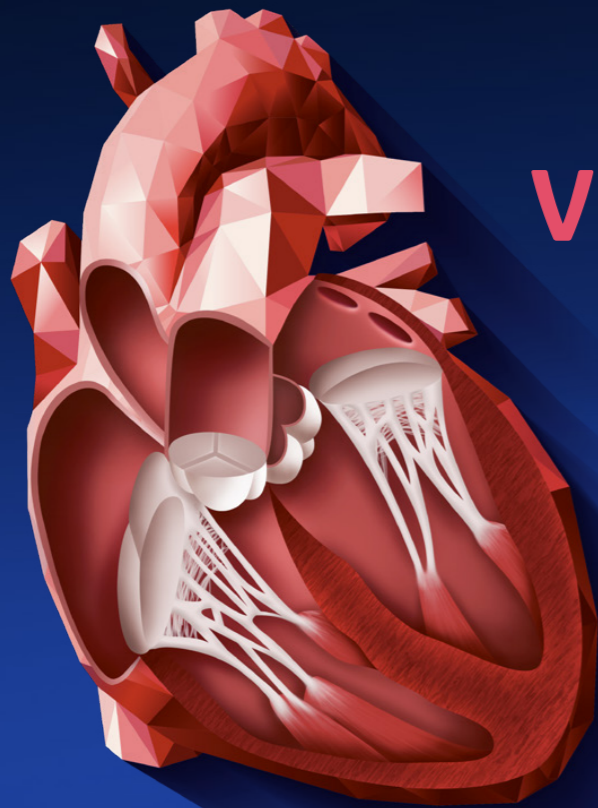


CLINICAL EXCELLENCE

for Pediatric Imaging

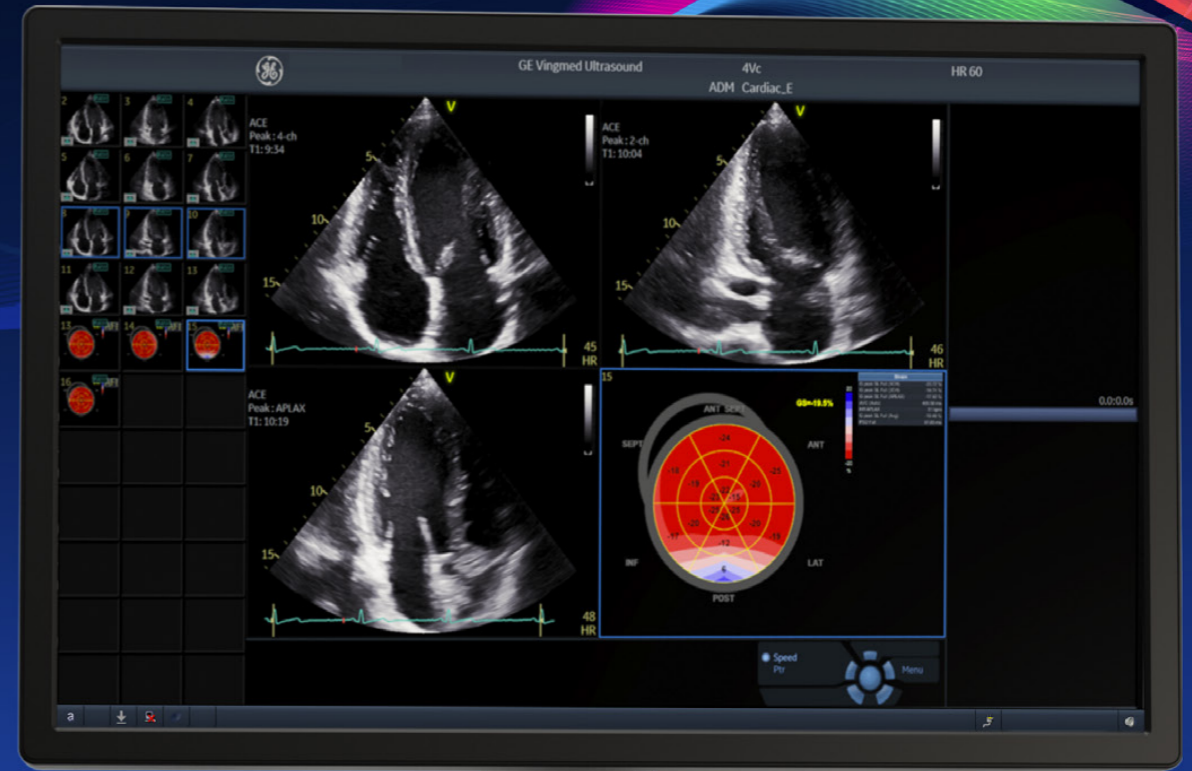
The smallest cardiac patients can pose the biggest care challenges with difficult to diagnose, severe conditions.

The Vivid E90 Ultra Edition helps you acquire images on a wide range of pediatric and neonatal patients, quickly and with few system adjustments enabled by Dynamic Auto Optimization. Two dedicated pediatrics probes, 6S-D and 12S-D, and two curved array probes, C1-6-D and C2-9-D, help you examine deep anatomy or shallow structures without sacrificing spatial or dynamic resolution.



VIVID HEART APPLICATIONS

A wide range of clinical applications for use in Core Echo Lab, Interventional and Pediatrics.



FLOW QUANTIFICATION

Cardiac Auto Doppler

AI

Ultra Edition

AI Auto Measure Spectrum Recognition

AI

BSI

CHAMBER QUANTIFICATION

Ultra Edition

AI Auto Measure 2D

AI

Auto EF on DICOM

AFI FUNCTIONAL IMAGING

AFI Stress

AI

MyoCardial Work

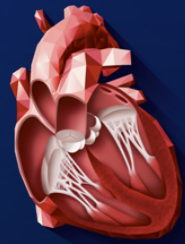
Ultra Edition

AFI LV with AI-based View Recognition

AI

AFI RV

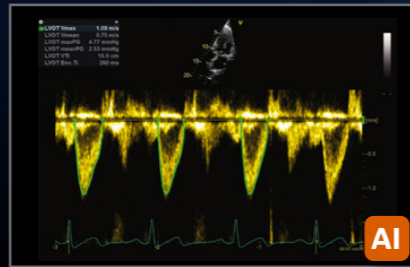
AFI LA



VIVID HEART APPLICATIONS

FLOW QUANTIFICATION

Your time is precious. Save it.

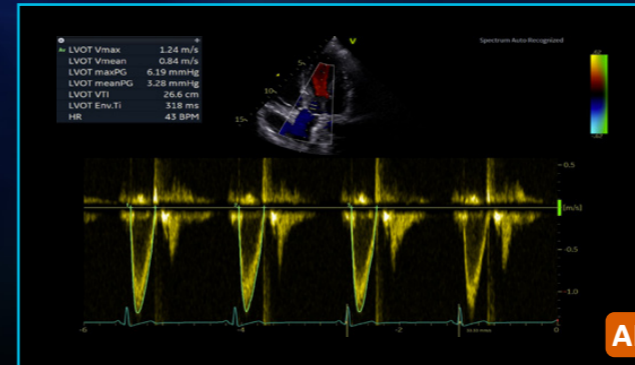


Cardiac Auto Doppler

Semi-automatic Cardiac Doppler measurements.

Benefits:

- Enhances reproducibility of follow-up studies when used in automated mode⁶
- Offers Doppler measurement in multiple cardiac cycles as recommended by guidelines for irregular heart rhythms^{7,8}
- Supports less experienced users with advanced automation



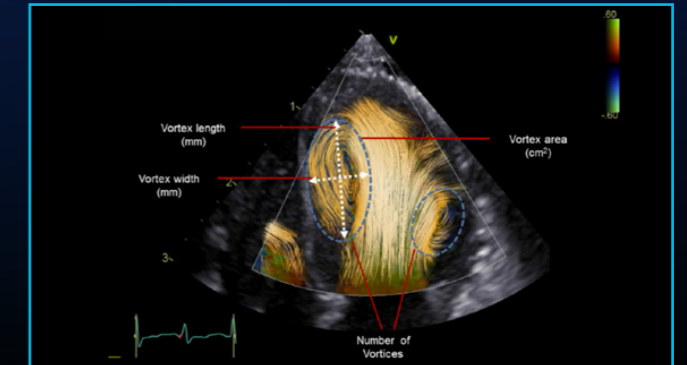
Ultra Edition

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 tool⁵
- Works seamlessly with Cardiac Auto Doppler
- Enhances reproducibility of follow-up studies when used in automated mode⁵
- Supports less experienced users with advanced automation



Ultra Edition

BSI 2.0

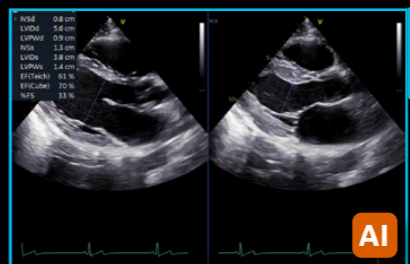
Insights into complex blood flow patterns such as vortex formation and duration.

Benefits:

- Provides multiple modes for visualizing blood flows, such as display of velocity vectors and pathway comets
- Provides complementary information for diagnosis of dilated cardiomyopathy and heart failure
- Opens new clinical research possibilities by providing measurements for studying vortex properties, such as vortex location, size and duration (time between 2 events)

CHAMBER QUANTIFICATION

Precision at the heart of quantification.



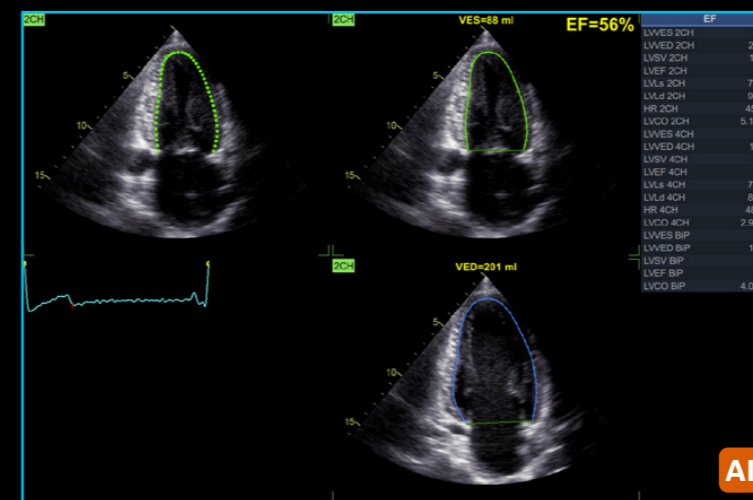
Ultra Edition

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 clicks⁵
 - 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



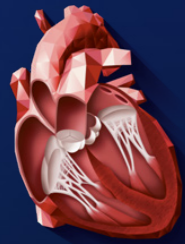
Ultra Edition

Auto EF

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

Benefits:

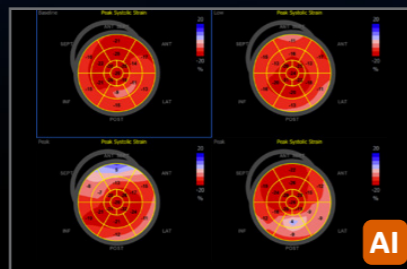
- Achieves fast measurements of ejection fraction
- DICOM[®] support. Assessment of the left ventricle ejection fraction also on data sets acquired on other vendors' systems for follow-up studies



AFI FUNCTIONAL IMAGING

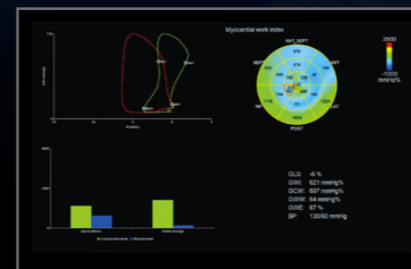
From diagnosis to prognosis.

New in Ultra Edition



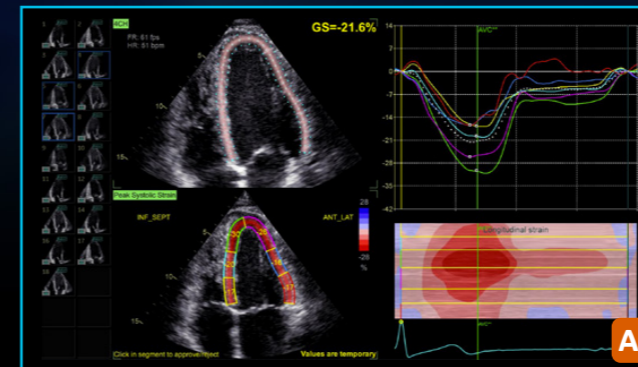
AFI Stress

This artificial intelligence-based tool provides Doppler measurements over all heart cycles for the most common parameters, supporting consistent results and potentially saving time in both adult and pediatric TTE studies.



MyoCardial Work

Using new and reduced load dependent parameters, Myocardial Work may provide more accurate and reproducible results, important especially for follow-up of patients over time. The new parameters are based upon the results obtained with AFI (longitudinal strain) by accounting for the systolic blood pressure measured at rest immediately prior to the echo exam, as well as the MV and AV opening and closure times.



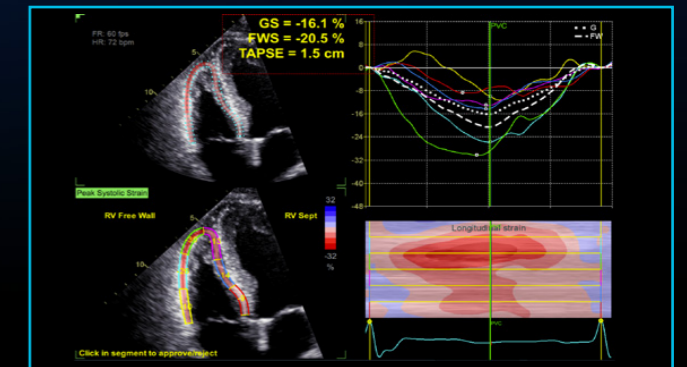
Ultra Edition

AFI LV with 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



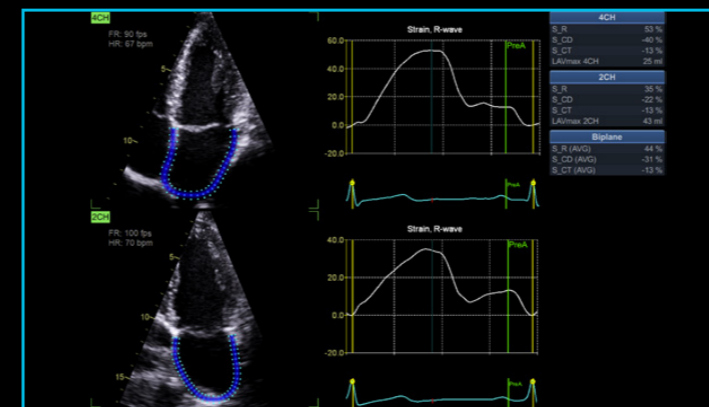
Ultra Edition

AFI RV

AFI RV is a novel tool to assess the right ventricular function by advanced speckle tracking echocardiography.

Benefits:

- Offers renown Vivid AFI user interface and workflow to allow current and new users easy adoption
- Supports right ventricle free wall strain, global strain and Tricuspid Annular Plane Systolic Excursion (TAPSE)
- Follows the 2018 EACVI-ASE Strain Standardized Task Force guidelines
- Supports right ventricle images also from previous releases



Ultra Edition

AFI LA

AFI LA Strain is a novel method to assess the left atrial function allowing global strain to be measured using speckle tracking echocardiography.

Benefits:

- Offers Vivid renown AFI user interface and workflow allowing users to easily adopt
- Supports left atrium strain, volumes and emptying fraction measurements
- Follows the 2018 EACVI-ASE Strain Standardized Task Force guidelines
- Supports left atrium images also from previous releases

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

SEAMLESS WORKFLOW INTEGRATION

POST PROCESSING & REVIEW

OPEN STANDARDS

INTEGRATION WITH YOUR WORKFLOW

EchoPAC Software Only and EchoPAC Plug-in:

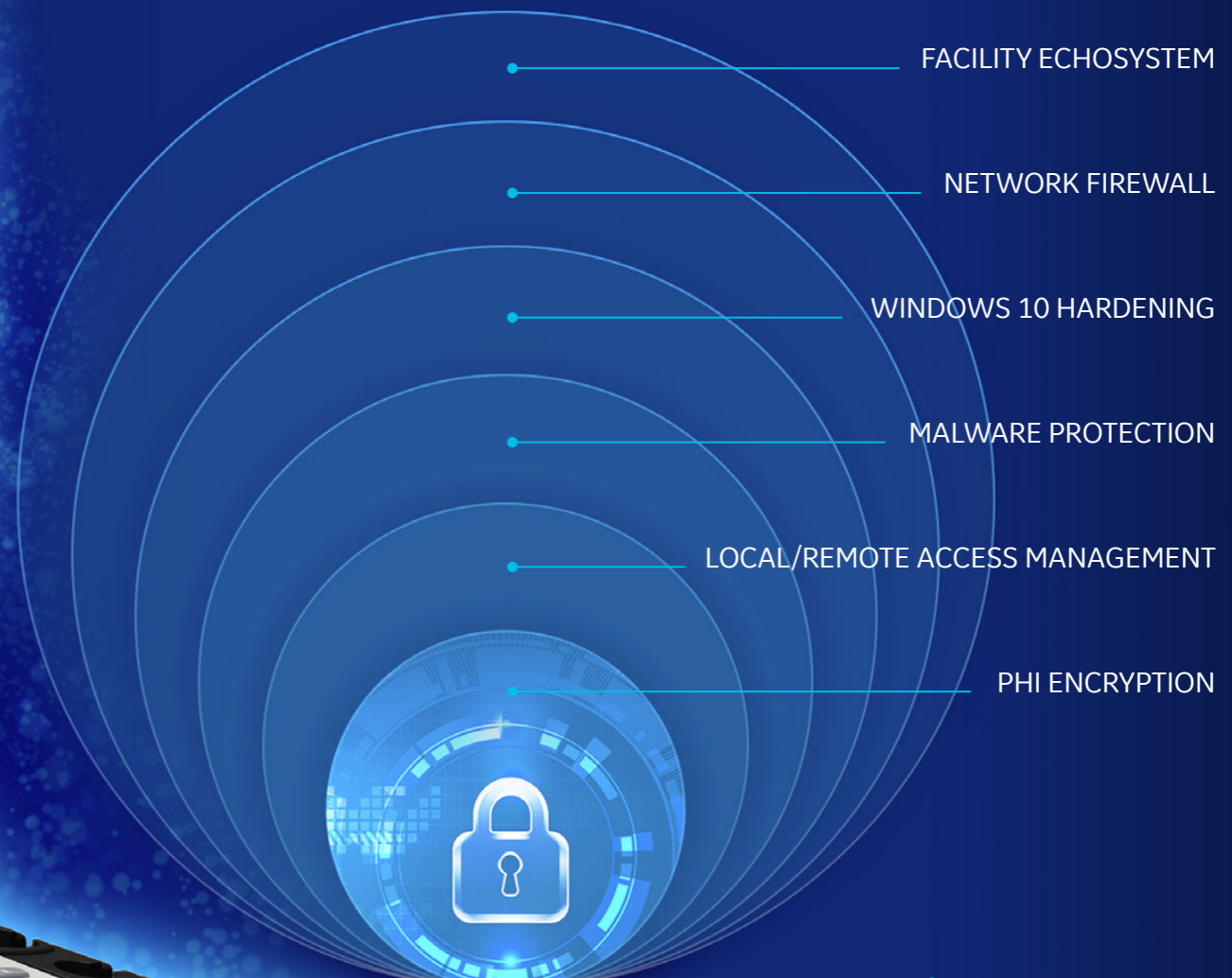
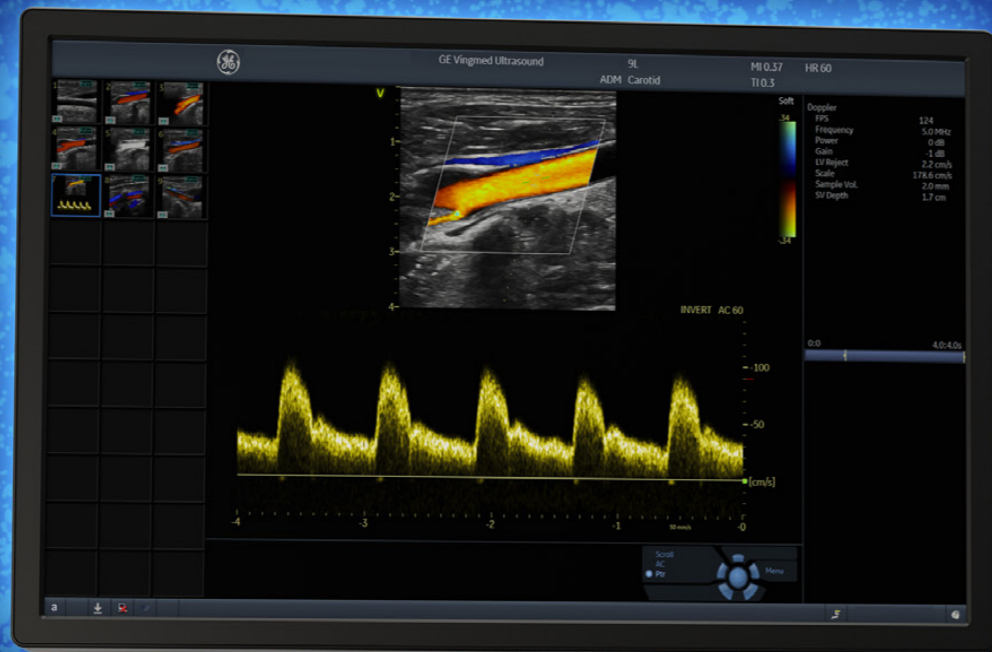
- Analyze and review data from GE Healthcare Vivid family of scanners, as well as DICOM images from other ultrasound systems.
- Access all Vivid measurement and review tools utilizing GE Healthcare Raw Data or industry standard DICOM data
- DICOM Image transfer with optional GE Healthcare Raw Data transfers 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 EMRs¹¹

EchoPAC Plug-in is available for:

- GE Healthcare Centricity™ Cardio Enterprise with Intelligent Reporting (IR).
- GE Healthcare ViewPoint™ 6 with EchoPAC Suite¹⁰
- 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.⁹



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.

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.¹²

\$4B cost added in 2019¹³



Ultrasound is especially vulnerable to operator-dependence leading to

VARIABILITY between exams¹⁵



Constrained budgets increase pressure to

DO MORE with less¹⁴ and to optimize assets



Probe mishandling can lead to damage which can cause faulty data and may lead to incorrect medical decisions^{16, 17}



[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.

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.

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.

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.

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.

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.

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

*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.

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.

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.

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.

MyGEHealthcare App 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.

REMOTE FIX

UP TO **40%**

issues fixed remotely with InSite¹⁸

COST SAVINGS

UP TO **90%**

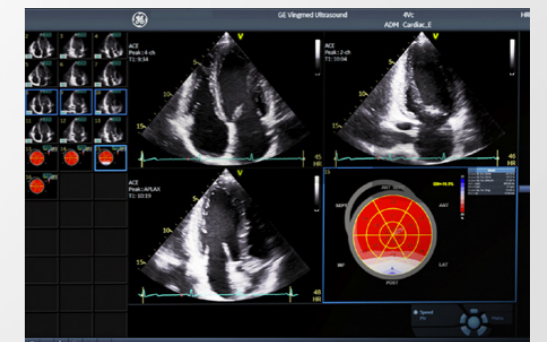
cost reduction, based on OnWatch alerts¹⁸

NEW REMOTE SUPPORT

Real-time and interactive applications support

Digital Expert¹⁹ 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.

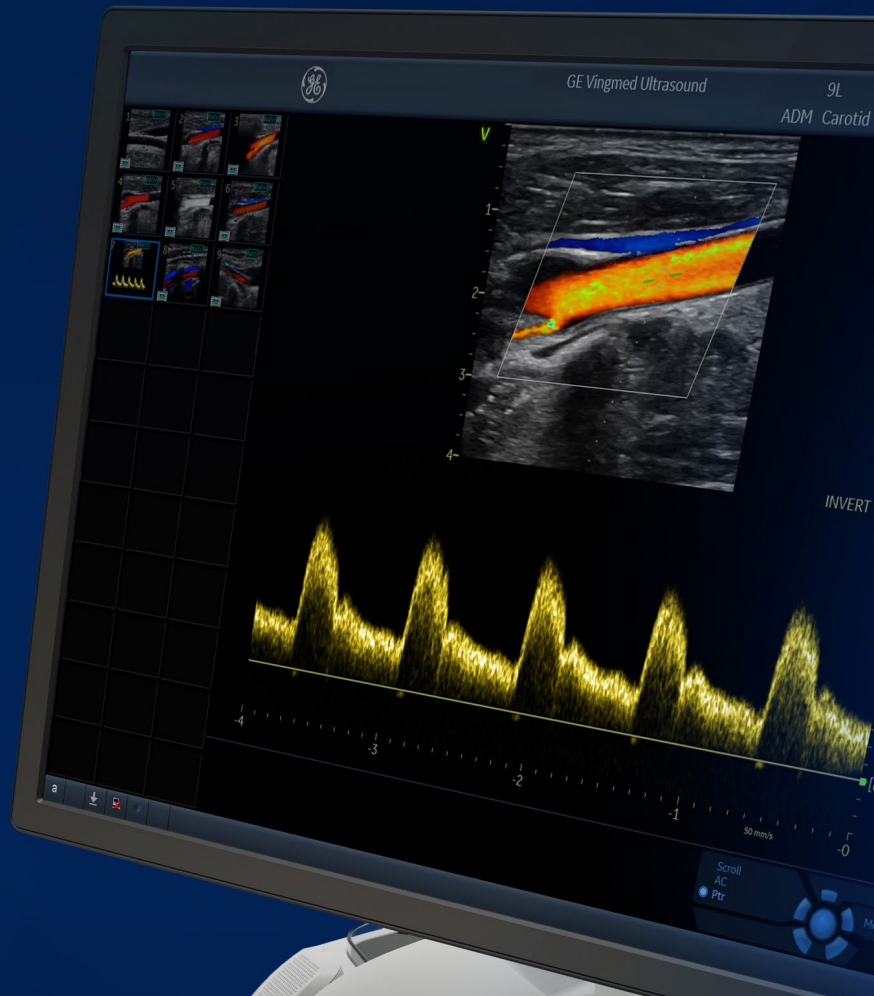




Vivid™ E90 Ultra Edition

Cardiovascular Ultrasound Probe guide

Vivid E90 Ultra Edition offers a broad range of probes to help achieve extraordinary images for cardiac, vascular, abdominal, pediatric, neonatal, fetal heart, obstetric, gynecologic, urological, transcranial and small parts applications.



vivid







gehealthcare.com/vivid



	Applications	Description	Footprint	Biopsy Guide	Bandwidth	Field of View	Depth of Field
Sector							
 M5Sc-D	Cardiac, Pediatric Abdomen, Fetal Heart, Transcranial, Coronary, Stress, Contrast Low MI [†] (optional), LVO Stress, LVO Contrast [†]	XDclear™ Active Matrix Single Crystal Phased Array Transducer	18 x 27 mm	Multi-angle disposable with a reusable bracket	1.4 - 4.6 MHz	120°	30 cm
 6S-D	Pediatric, Cardiac, Coronary, Neonatal Head, Abdominal, Fetal Heart, Neonatal	Phased Array Transducer	17 x 24 mm		2.4 - 8.0 MHz	115°	16 cm
 12S-D	Pediatric, Cardiac, Coronary, Neonatal Head, Neonatal, Abdominal	Phased Array Transducer	13 x 18 mm		4.0 - 12.0 MHz	105°	12 cm
Linear							
 9L-D	Vascular, Musculoskeletal, Thyroid, Contrast [†] (optional), Abdominal	Linear Array Transducer	14 x 53 mm	Multi-angle disposable with a reusable bracket	2.4 - 10.0 MHz	45 mm	16 cm
 11L-D	Vascular, Breast, Small Parts, Musculoskeletal, Thyroid, Scrotal	Linear Array Transducer	13 x 47 mm	Multi-angle disposable with a reusable bracket	4.0 - 12.0 MHz	39 mm	8 cm
 L8-18i-D	Vascular, Small Parts, Musculoskeletal	Linear Array Transducer	11 x 35 mm		5.0 - 18.0 MHz	25 mm	10 cm
 ML6-15-D	Vascular, Small Parts, Breast, Thyroid, Musculoskeletal, Scrotal	Matrix Linear Array Transducer	16 x 61 mm	Multi-angle disposable with a reusable bracket	4.5 - 15.0 MHz	50 mm	8 cm

[†] GE Healthcare's Vivid Ultra Edition E-series is designed for compatibility with commercially available contrast agents. Because the availability of these agents is subject to government regulation and approval, product features intended for use with these agents may not be commercially marketed nor made available before the contrast agent is approved for use. Advanced contrast features are only enabled on systems for delivery in countries or regions where the agents are approved for use or for investigational or research use.







	Applications	Description	Footprint	Biopsy Guide	Bandwidth	Field of View	Depth of Field
Convex							
 C1-6-D	Abdomen, OB/GYN, Urology, Vascular, Fetal Heart, Contrast* (optional)	XDclear Curved Array Transducer	16 x 70 mm	Multi-angle disposable with a reusable bracket	1.4 - 6.0 MHz	70°	50 cm
 C2-9-D	Abdomen, OB/GYN, Urology, Fetal Heart	XDclear Curved Array Transducer	14 x 51 mm	Multi-angle disposable with a reusable bracket	2.3 - 8.4 MHz	65°	30 cm
 8C*	Abdomen, Vascular, Musculoskeletal	Tightly Curved Array Transducer	12 x 22 mm	N/A	4.0 - 8.0 MHz	128°	30 cm
 iC5-9-D	OB/GYN, Urology, Fetal Heart	Tightly Curved Array Transducer	17 x 21 mm	Single-angle disposable bracket	3.3 - 8.6 MHz	128°	30 cm
 C3-10-D	Neonatal Head, Musculoskeletal, Vascular, Abdomen	XDclear Tightly Curved Array Transducer	12 x 22 mm	N/A	3.0 - 10.0 MHz	95°	14 cm
Doppler							
 P2D	Cardiac	Pencil Transducer			2.0 MHz		
 P6D	Vascular	Pencil Transducer			6.3 MHz		

*Supported, not for sale.

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	Applications	Description	Footprint	Biopsy Guide	Bandwidth	Field of View	Depth of Field
Volume							
	Cardiac, LVO Contrast*, Stress, Fetal Heart, Coronary, LVO Stress, Pediatrics	Active Matrix 4D Volume Phased Array Transducer	24 x 21 mm		1.5 - 4.0 MHz	90°	30 cm
	Cardiac, LVO Contrast*, Stress, Fetal Heart, Coronary, LVO Stress, Pediatric, Abdominal, Transcranial, Contrast Low MI† (optional)	XDclear Active Matrix 4D Volume Phased Array Transducer	29 x 18 mm	Multi-angle disposable with a reusable bracket	1.4 - 5.2 MHz	90°	30 cm
	Cardiac, Pediatric, Infant, Neonatal, Fetal Heart, Abdominal, Coronary, Neonatal Head, Preterm	Active Matrix 4D Volume Phased Array Transducer	16 x 20 mm		2.4 - 8.0 MHz	115°	20 cm
Transesophageal†							
	Cardiac, LVO Contrast*, Coronary	Active Matrix 4D Volume TEE Transducer	Tip 14 x 13 mm Length 45 mm		3.0 - 8.0 MHz	90°	20 cm
	Cardiac, Coronary	TEE Transducer	Tip 12 x 14 mm Length 45 mm		3.0 - 8.0 MHz	90°	20 cm
	Cardiac (Adult and Pediatric)	TEE Transducer	Tip 11 x 8 mm Length 35 mm		3.0 - 10.0 MHz	90°	14 cm
	Cardiac (Adult and Pediatric/ Neonatal)	TEE Transducer	Tip 8 x 6 mm Length 16 mm		3.3 - 10.0 MHz	90°	18 cm

*Supported, not for sale

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‡ 6Tc-RS, 9T-RS are supported via RS transducer adapter.

§The option "Biplane/Triplane Enable" is required to run these probes in Multiplane mode. 4D is not supported unless the 4D option is enabled.