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.

1. Forecasting the Future of Cardiovascular Disease in the United States, AHA Policy Statement, 2011, source: CIR.0b013e31820a55f5
5. The Role of AI in Streamlining Echocardiography Quantification White Paper, Kristin McLeod - JB80498XX
6. 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 echo technician.
8. 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 (Lange, 2002)
9. Centricity Cardio Workflow of Intelligent Reporting out-of-the-box configuration compared to 2017 IAC guidelines excluding Doppler CIA Intelligent Reporting Outcome – JB74831
10. EchoPAC Suite is a marketing name for EchoPAC Plug in
11. With the EPACGE supports Phenomix Analysis (PAF) for an exam can be sent at the end of the exam or when exported from local archive. The destination can be a server or network (EchoPAC) or a removable media (DICOM Media) depending on the EPAC and/or exported selected Custom measurements supported only for Adult Ech (TRICUSPID) and Pediatrics (TRICUSPID)
14. 5 Tips for Controlling Costs in Hospitals and Biomed Shops, source: t.ly/I9n7
18. GE internal data
19. Digital Expert is only offered in the USA

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

Ultra Edition is not a product name, it refers to the 2020 release of the Vivid portfolio

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

\(\sim 108\) m annual echo exams performed globally\(^2\)

10-15% of echo exams result in sub-optimal images\(^3\)

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

$120+ billion yearly direct and indirect costs for employers\(^4\)

**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.
Vivid S60N Ultra Edition

Designed to provide you with uncompromised image quality, advanced visualization capabilities and easy measurements – while helping reduce tedious tasks and inter-observer variability. 5

Leverage the cSound imaging platform
We are committed to support the vital work you do with patients every day. Leveraging artificial intelligence powered by GE Healthcare’s Edison™ platform, we’ve taken the extraordinary processing capacity of our breakthrough software beamformer, cSound™, to a whole new level. Empower your care team with the expanded advantages of artificial intelligence of the Vivid™ S60N Ultra Edition system.

Achieve clinical excellence
Advanced quantification tools provide you with the ability to evaluate problems and pursue the path forward. Count on a full suite of intuitive tools to make your work easy and efficient. Accomplish reproducible results with advanced capabilities for quantifying heart function and valve anatomy.

Master complex exams
Due to a growing population of difficult to scan patients, XDclear™ probes combined with cSound beamformer technology make a difference in many of your exams, helping you quickly and easily acquire diagnostic images with confidence and without contrast.

Optimize your practice
Standardized and simplified procedures help increase patient throughput and optimize productivity. Help maximize efficiency with Automated Functional Imaging (AFI), assessment of the LV strain on all datasets, regardless of the system it was acquired on (i.e. vendor independent). Vivid S60N Ultra Edition also offers vast flexibility enabling superb performance in a range of exams including: stress-echo, vascular, abdominal, OB/GYN and small parts.
22” adjustable monitor
12” LCD touch screen
Adjustable keyboard
Convenient alphanumeric keyboard storage
Convenient cable management
Low power consumption
Battery powered “standby” function, up and running within few seconds
Easy mobility

MODERN ERGONOMICS
A familiar, yet modern and efficient design.
POWERED BY AI

Improve diagnostic speed and accuracy

Vivid S60N Ultra Edition introduces the latest AI-based technology to help reduce tedious tasks 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 is reduced, and operator fatigue minimized with up to 80% less clicks to get 2D measurements, and inter-observer variability diminished.¹

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.

AFI LV with AI View Recognition

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

Cardiac Auto Doppler with AI

- Reduced time per measurement: up to 93%³
- Lower inter-operator variability: ~3x
- Accelerated workflow

Vivid S60N Ultra Edition provides a comprehensive solution for improving diagnostic speed and accuracy, streamlining workflow, and elevating clinical practice.
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.

**POWERED BY AI**

**ELEVATED BY YOU**

**CLINICAL EXCELLENCE for the Echo Lab**

**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.

**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.

That’s why GE Healthcare designed the high-end Vivid S60N Ultra Edition with the extraordinary processing power of cSound to help you evaluate and navigate the complexities of pediatric hearts with speed, clarity and confidence.

Pediatric imaging

Visualize small anatomies with speed, clarity and confidence thanks to Vivid S60N Ultra Edition’s superb high-resolution imaging and dedicated pediatric probes.
While Vivid S60N Ultra Edition has been designed to address your needs for cardiac imaging, it proves very versatile as well, capable of providing you with superb images thanks to cSound technology, and diagnostic capabilities for a wide range of applications beyond the heart.

Vivid S60N Ultra Edition’s efficient workflow, wide probe range and quantification tools ensure the confidence you need for speedy and accurate diagnosis also under challenging conditions.

Lightweight and slim, the Vivid S60N Ultra Edition is easy to maneuver. This facilitates your movements as you walk in the corridors from one department to another, and if need be, gives access to scanning at patient bedside.

Accurate diagnostics and precise measurements are achievable with premium image quality, dedicated presets and tools on your Vivid system.

Vascular quantification
Develop fast and complete quantitative assessment of vascular anatomies, such as the Intima Media Thickness, with dedicated vascular measurement tools.

Abdomen diagnosis
Visualize tissues and flow patterns with greater details thanks to Vivid S60N Ultra Edition’s high-resolution imaging.
Vivid S60N Ultra Edition

VIVID HEART APPLICATIONS

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

FLOW QUANTIFICATION

- Cardiac Auto Doppler
- AI Auto Measure Spectrum Recognition

ULTRA EDITION

VALVES AND CHAMBERS QUANTIFICATION

- AI Auto Measure 2D
- AI Auto Measure Spectrum Recognition
- Auto EF

AFI FUNCTIONAL IMAGING

- AFI LV with AI View Recognition
- AFI RV
- AFI LA

APPLICATIONS POWERED BY AI
FLOW QUANTIFICATION
Your time is precious. Save it.

New in Ultra Edition

Cardiac Auto Doppler
Semi-automatic Cardiac Doppler measurements.

Benefits:
- Enhances reproducibility of follow-up studies when used in automated mode
- Offers Doppler measurement in multiple cardiac cycles as recommended by guidelines for irregular heart rhythms
- Supports less experienced users with advanced automation

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 tool
- Works seamlessly with Cardiac Auto Doppler
- Enhances reproducibility of follow-up studies when used in automated mode
- Supports less experienced users with advanced automation
VALVES AND CHAMBERS QUANTIFICATION

New in Ultra Edition

Precision at the heart of quantification.

**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 clicks
  - 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

**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
AFI FUNCTIONAL IMAGING

From diagnosis to prognosis.

AFI RV

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

Benefits:
- Offers advanced 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

AFI LV

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

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

New in Ultra Edition

Ultra Edition

AFI LV with AI View Recognition*

Ultra Edition

AFI RV

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.

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- 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

APPLICATIONS POWERED BY AI
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 EMRs.

EchoPAC Plug-in is available for:

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

With Centricity Cardio Enterprise IR, routine adult echo reports are complete before the physician opens the exam to review. 83%
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.

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.

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

Ultrasound is especially vulnerable to operator-dependence leading to variability between exams.\textsuperscript{15}

Healthcare is a soft-target for hacking and ransomware.\textsuperscript{12} $4B cost added in 2019.\textsuperscript{13}

Constrained budgets increase pressure to DO MORE with less\textsuperscript{14} and to optimize assets.

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. 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.

REMOTE FIX
Real-time and interactive applications support

Digital Expert™ 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

COST SAVINGS
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.

UP TO 40%
issues fixed remotely with InSite™

UP TO 90%
cost reduction, based on OnWatch alerts™

AI ~3x

AI ~3x

UP TO 40%

UP TO 90%