

High throughput ultrasound for cardiac care

Philips Affiniti CVx cardiovascular ultrasound system

innovation  you



We strive to make the world
healthier and more sustainable
through innovation

We're aiming to **improve the lives** of

3 billion
people a year **by 2030**





Intelligent. Definitive. Everywhere.

We are transforming ultrasound into an objective, intelligent, diagnostic solution.

We aim to improve 700 million lives a year by 2025, helping to support care providers make definitive diagnostic decisions and precision guided procedures at more touchpoints than ever before.

**Because every patient matters,
Every image counts.**

You face challenges every day

You always go above and beyond to provide the best care to your patients. But you are expected to do so with less time, fewer resources and higher patient volumes. The care you want to provide deserves tools that can set you ahead and stay ahead.



Designed for cardiology. **Built for your everyday.**



Our mission

A dedicated cardiovascular system that meets your everyday demands of echocardiography – helping you deliver greater diagnostic confidence to more patients with increased efficiency and throughput.



Affiniti CVx

Designed for
everyday echo



Philips CVx cardiovascular ultrasound systems

Meaningful advances in cardiovascular ultrasound

From the leaders in cardiovascular ultrasound, Philips Affiniti CVx is the latest addition to the CVx family.

Shared advances with Philips EPIQ CVx, our leading premium cardiology ultrasound system, help you overcome your everyday challenges in echo.

CVx systems share common cardiac workflow and transducers so that you can enhance your user experience and standardize workflow across your facility.

The CVx family – EPIQ CVx and Affiniti CVx share so much.

- Shared TTE and TEE transducers
- CV-focused workflow for TEE and TTE exams
- Same user interface
- Advanced automation



Why Affiniti CVx?



Elevate
diagnostic confidence



Improve
exam throughput



Lower
cost of ownership

A powerful combination of performance and versatility to help you make a confident diagnosis each time



A complete solution from the global leaders in cardiovascular ultrasound.



Exceptional imaging

Leading-edge transducer technology backed by precision beamforming provides **remarkable image quality across a wide range of patients** and applications, including for technically difficult patients.



Next-generation TEE

Innovative transesophageal echo solution that brings **new levels of confidence to TEE imaging** for both adult and pediatric patients.



Advanced quantification

Fast, robust and reproducible cardiac quantification in both 2D- and 3D-LV ejection fraction, LV strain, mitral valve and left atrial appendage.



Bridge the gap between 2D and 3D imaging

The **Philips xMATRIX X5-1** transducer is designed to simplify your transthoracic imaging workflow while offering outstanding 2D image quality for even difficult-to-image patients.

Drive throughput and exam efficiency without comprising IQ

iRotate
Easily access optimal views

Live xPlane
Acquire two planes simultaneously from the same heartbeat



XMATRIX
X5-1



The answer to imaging technically difficult patients

The **Philips PureWave S5-1** transducer is designed to increase penetration so that one transducer can provide diagnostic confidence on easy as well as difficult patients.

PureWave crystals have virtually perfect uniformity for greater bandwidth, resulting in excellent detail resolution and improved Doppler sensitivity.

Superb penetration and image quality

One of the biggest breakthroughs in transducer technology in over 40 years

85% more efficient than conventional PZT material¹



PureWave S5-1



Next-generation TEE solution

The Philips xMATRIX X8-2t transducer brings exceptional image quality and confidence to TEE imaging.

Live 3D and Live 3D color flow, together with our latest innovations such as xPlane Doppler, MultiVue and automated 3D quantification tools help you drive increased confidence in diagnosis and procedure guidance.

New levels of confidence in TEE imaging even in complex cases

New acoustic design and customizable workflow

xPlane Doppler enhances confidence in assessment of flow



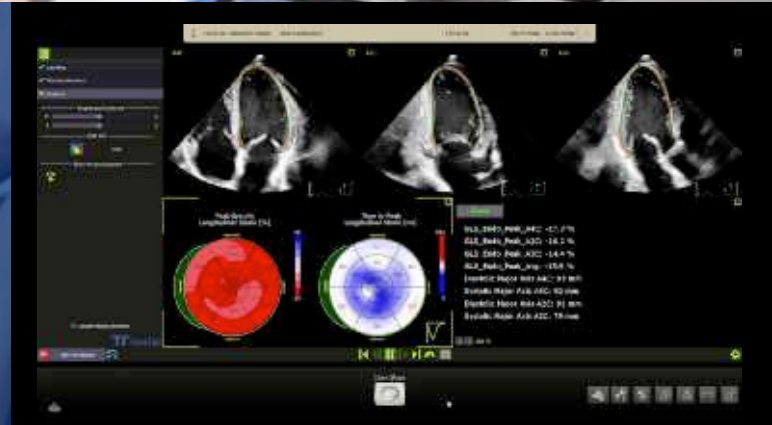
XMATRIX
X8-2t

Robust and reproducible 2D quantification

Automation that leads to everyday efficiency.

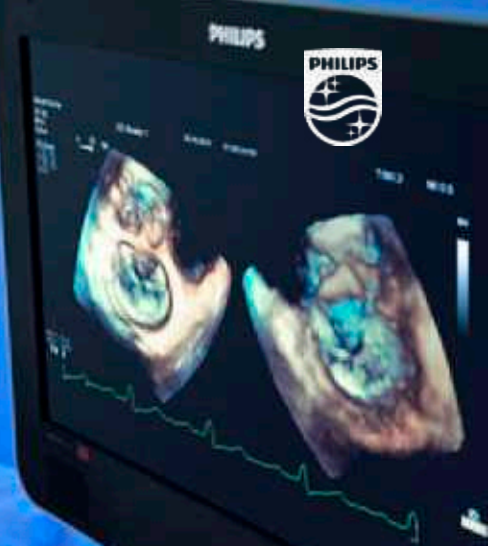


- AutoStrain LV uses advanced automation technology to deliver fast and reproducible LV (left ventricle) global longitudinal strain (GLS) measurements with just a single button push
- Automated 2D Cardiac Quantification (a2DQ) offers fast access to 2D LV and left atrium (LA) EF in seconds.

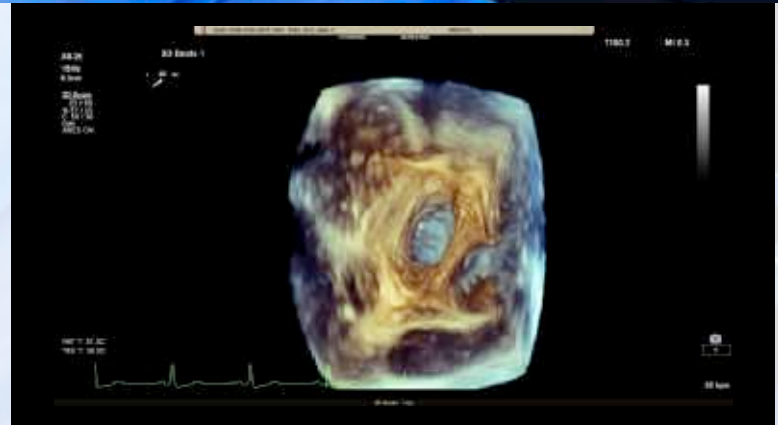


Robust and reproducible 3D quantification

Automation that leads to everyday efficiency.



- 3D Auto MV delivers semi-automated quantitative analysis of mitral valve with a comprehensive set of measurements
- 3D Auto LAA lets you quantify critical measurements for LAA closure procedure in less time compared to standard solutions



Comprehensive solution for pediatric cardiology

From fetal echo to pediatrics to adult congenital patients, Affiniti CVx offers a depth of imaging capability combined with streamlined cardiac workflow to reduce the steps and time needed for challenging exams.

Outstanding image quality for pediatric transthoracic echo –
S8-3, S12-4, X5-1, S5-1 transducers

Broadest range of TEE transducers – S8-3t, S7-3t, X8-2t with Live 3D

Advanced fetal echo functionality for early diagnosis –
C9-2, eL18-4 transducers

More consistent imaging of coronary flow – Coronary sub-mode for easier imaging of small vessels in both color Doppler and PW

Fast and reproducible quantification –

- Fast speckle tracking with AutoStrain LV
- a2DQ^{A.I.} for auto EF and volumes

MicroTEE
for imaging
tiny patients
(>2.5Kg)





Excellence in vascular performance

Affiniti CVx provides excellence in the full range of vascular imaging across patient types, including the technically difficult patient.

- eL18-4 high-frequency linear transducer provides amazing image detail and penetration
- L12-3 Ergo transducer brings exceptional clinical performance for carotid and peripheral vascular exams
- MicroFlow Imaging detects small vessel flow with high resolution and minimal artifacts



PureWave eL18-4

Ultra-broadband for ultra performance in carotid imaging

Why Affiniti CVx?



Elevate
diagnostic confidence



Improve
exam throughput



Lower
cost of ownership

Designed for walk-up usability, ergonomics and mobility



Walk-up usability

Users with ultrasound experience require minimal training on system use to be able to complete an exam. Intuitive tablet-like interface reduces reach and button pushes.



Ergonomics

180 degrees of articulation for the control panel and the large monitor allow for scanning comfort. Library quiet. Easy-clip keeps cables tangle- and damage-free, while decreasing cable strain for improved comfort while scanning.



Mobility

One of the lightest in its class, at just 184 pounds (83.5 kg), Affiniti CVx can be easily transported. Wake the system from sleep mode and start scanning in just seconds.

Controls designed for ease

A customizable cardiology-focused user interface

- Focus on the patient and images and not the touchscreen layout
- Designed to optimize cardiac workflow
- Provide a consistent way of working whether it's a TTE or TEE exam, an adult or a pediatric patient

85% of clinicians who saw the new CVx thought that the customization of the user interface would **improve** their on-cart scanning workflow. * 1

86% of clinicians who saw the new CVx thought the new cardiac user interface would help make ultrasound guided procedures more streamlined. * 1



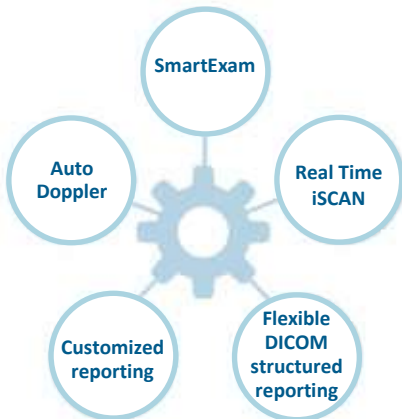
Streamlined workflow

Philips has completely reinvented the ultrasound user experience. Ease of use, workflow, ergonomics, portability – we've revolutionized how you interact with an ultrasound system from every standpoint.

The tablet-like interface results in **40% to 80%** less reach and **15%** fewer steps*

SmartExam decreases exam time by **30-50%**, keystrokes by as many as **300** per exam**

Auto Doppler takes **10** steps to **3** steps and reduces the number of button pushes by an average of **68%*****



* 2013 engineering study comparing Philips iU22 ultrasound system with EPIQ.

** University of Colorado, Protocols Study, Apr. 2007.

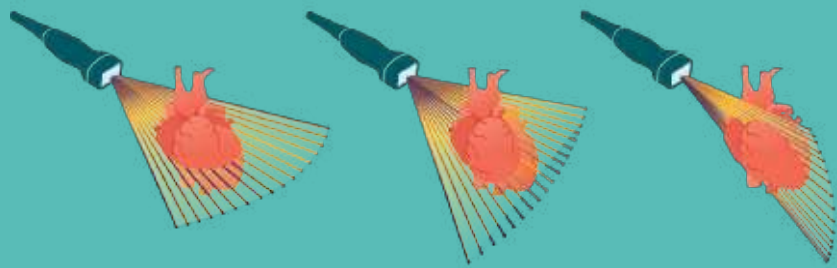
*** Auto Doppler Clinical Study, Dec. 2011.

Reinvent your cardiac workflow for speed

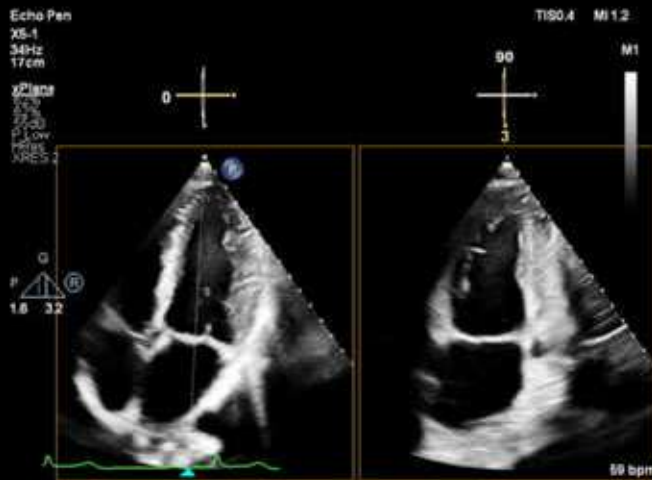
Increase accuracy in measuring LV volumes with iRotate because the image is less likely to be foreshortened.

Complete a 2D stress echo protocol (including acquisition of four-chamber, two-chamber and three-chamber images) from the standard apical window following peak exertion without rotating the transducer using iRotate.

Acquire two simultaneous orthogonal views without manually rotating the transducer using Live xPlane. Because the views are from the same heartbeat, this allows more accurate calculation of ejection fraction using the Simpson's biplane method of discs.



iRotate allows you to obtain the correct views of the heart within the acoustic window without needing to manually rotate the transducer.





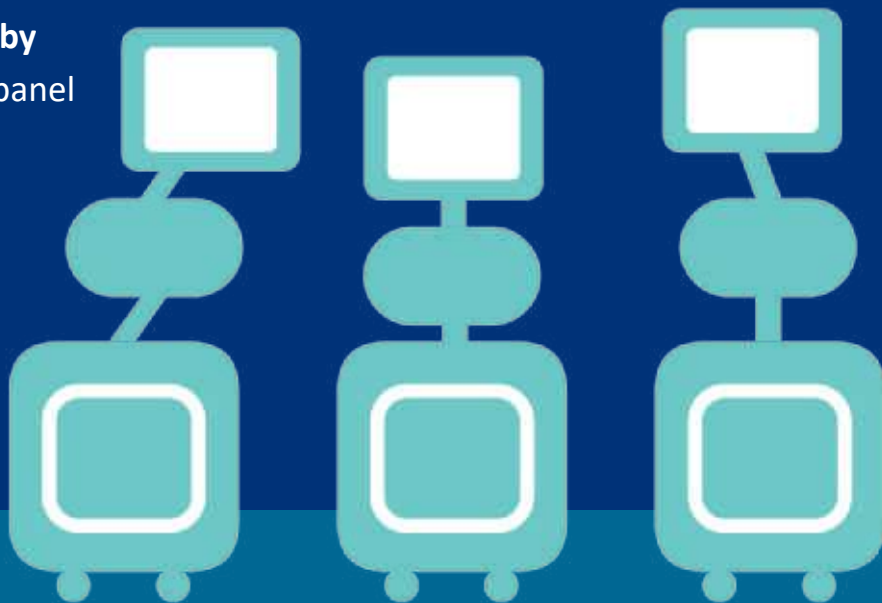
Advanced cardiac automation that leads to everyday efficiency

Philips Anatomical Intelligence Ultrasound (AIUS) features automatic anatomy recognition and proven quantification to make it easy to perform high-quality adult and pediatric exams, delivering critical clinical information quickly and easily.



Designed for your everyday echo needs

- **Improved ergonomics and user comfort enabled by**
 - Multiple degrees of articulation for the control panel
 - Large 21" monitor
 - Almost silent when running
- **Easy to transport on carpet and tile**
 - Philips lightest in class
 - Weighs 83.5 kg (184 lbs)
- **Boots up in seconds**



- **Easy clip cable management**
 - Keeps cables tangle-free and reduces damage
 - Decreases cable strain to enhance scanning comfort

Why Affiniti CVx?



Elevate
diagnostic confidence



Improve
exam throughput



Lower
cost of ownership

Reliability, sustainability, and support services to enhance your ownership experience



Designed for reliability and durability

Affiniti CVx features a modular design for enhanced reliability, rapid repair and enhanced system uptime. The system is built to last for the daily rigors of high patient volume, with 4,500 hours of rigorous system testing.



Backed by our service and support team

With every Affiniti CVx system, you get access to our award-winning service organization*, competitive financing and educational programs that help you get the most out of your system.**



Enhanced ultrasound cybersecurity

Protecting sensitive patient data – Affiniti CVx implements a suite of security features designed provide additional patient data privacy and virus protection, as well as protection from unauthorized access via the ultrasound systems on hospital networks.

* Philips is rated number one in overall service performance for ultrasound for more than 25 consecutive years in the annual IMV ServiceTrak survey in the USA.

** Optional. Not all services available in all geographies; contact your Philips representative for more information. May require service contract.

It's never been more essential to improve communication and collaboration



Consult on complex exams



Enable standardized care across locations



Maintain proficiency on your ultrasound system



Access real-time applications and technical expertise

Remote collaboration for real-time confidence

Philips Collaboration Live provides Affiniti ultrasound system users with the non-diagnostic capabilities to communicate and collaborate with their colleagues, or Philips technical and clinical support personnel, directly from the ultrasound system.*



Please contact your local Philips representative for availability.

*Contract required. For Affiniti releases 7.0 or higher.

Designed to aid in clinical collaboration and support



Enable standardized care across locations*



Reduce travel costs and increase schedule flexibility through remote training



Maximize uptime with remote service resolution

*Collaboration Live is designed to enable clinical collaboration and consultation. The tool is not intended to be used for remote diagnostic purposes.



Expand access to your team beyond the exam room

Enhance speed of care, which can increase patient satisfaction, while minimizing operational costs*

- The consulting peer can remotely view a real-time stream of the ultrasound system monitor
- Both parties can communicate live via text, voice and video for proper guidance during the exam, while being sensitive to the patient



* Collaboration Live is designed to enable clinical collaboration and consultation. The tool is not intended to be used for remote diagnostic purposes.

Training, right where you need it

Accessing remotely delivered clinical education through your ultrasound system provides sessions focused on your specific needs

- Helps ensure that your staff maintains a consistent level of knowledge and expertise while maximizing schedule flexibility and decreasing travel costs
- With tools such as asset sharing, pointers and two-way live video feed, it's easy to improve access to interactive education and training*

* All services may not be available in all geographies. Please check with your local representative.



Access real-time application and technical expertise



Communicate with Philips applications specialists and remote service engineers via your ultrasound system.

- Enable support from Philips applications specialists when and where it's needed, offering your staff schedule flexibility
- Assist on-site biomedical engineers in keeping equipment maintained quickly and easily to maximize uptime



Move call box anywhere on screen



Display sharing options



Show available and off-line users



Count on us as your patients count on you

- Award-winning service organization
- Competitive financing
- Educational tools

Cybersecurity critical for care providers



Cybercrime can impact reputation and result in astounding cost



Healthcare is a primary target

A healthcare record lost or stolen could cost as much as **\$408 per record** to remediate¹

Over 75%

of all legitimate websites contain **unpatched vulnerabilities**²



Two billion

personal records were stolen in the US in 2016, **100 million** of which were medical records³



There was an **80% increase** in the number of people affected by health data breaches from 2017 to 2019⁴



The value at risk from direct and indirect cyberattacks from 2019-2023 runs in **trillions of dollars**⁵



>8,500,000,000 records were compromised in 2019⁶



Source

1. IBM X-Force Threat Intelligence Index 2019
2. <https://www.symantec.com/security-center/threat-report>
3. NBC, Accenture, IBM X-Force Threat Intelligence Report 2016

4. <https://www.varonis.com/blog/data-breach-statistics>
5. The cost of cybercrime 2019 – Accenture Security
6. IBM X-Force Threat Intelligence Index 2020

Ultrasound Security

Overview of services and solutions

Security solutions for ultrasound systems

On-system solutions

- Firewall
- Operating system hardening
- Malware protection
- Access controls
- Patient data encryption

Software Upgrades

Single Commercial Purchase

Technology Maximizer

- Subscription based software upgrades
- Substantial savings



System Software upgrades*

- Single Purchase
- For applicable IB

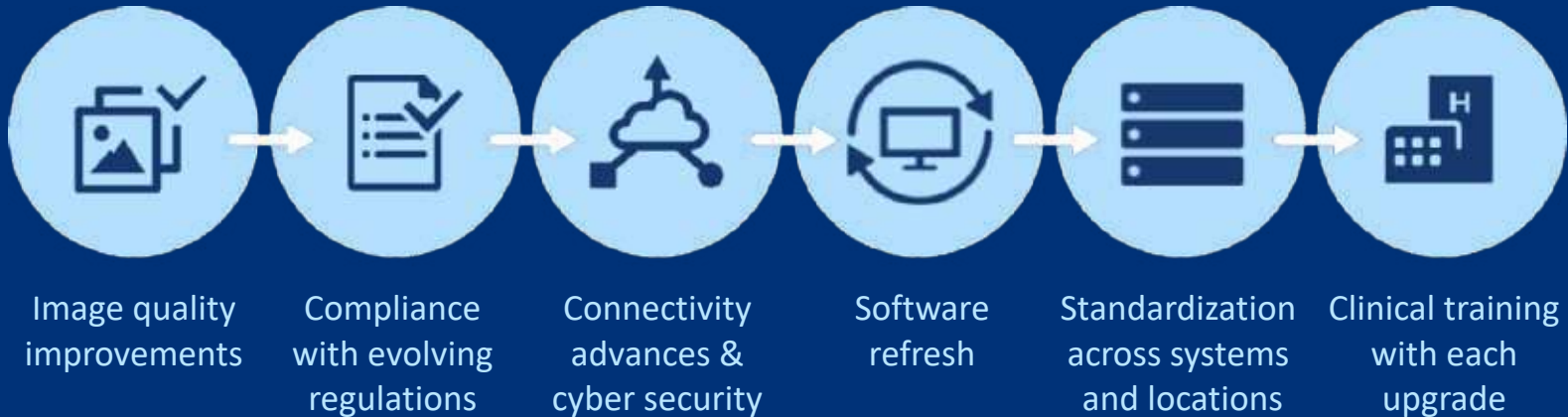


Technology Maximizer*

- Discounted software upgrades with a subscription
- For applicable new systems and IB

Philips Technology Maximizer

Philips Technology Maximizer is a service offering that helps you maximize your clinical capabilities and equipment performance with a software program that helps keep the system technology state of the art for years after installation.



Maximizer

Benefits of the program



Lifetime value

Maximizer is a pillar in the total value of ownership proposition. With Maximizer the lifetime value of the system is increased.

Regular and reliable software upgrades

Philips is committed to providing their customers value in the Maximizer program. Historically we have seen 3 upgrades in 4 years. Today we are delivering annual ultrasound software upgrades.

Standardization

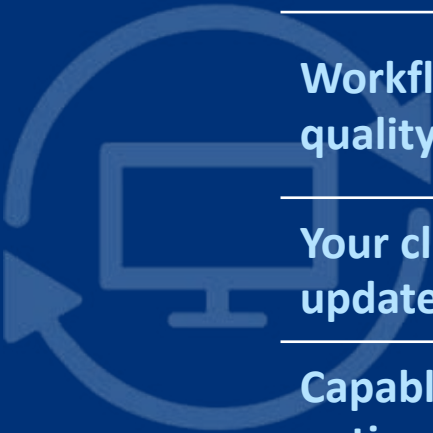
Sonographers can be more efficient when their workflow is the same across different systems, different rooms, different locations. Ensures the ability to share probes across departments or sites. Training time is reduced when all the systems have a consistent level of software.

Non-obsolescence

Stay protected from obsolescence, instead of buying each new system or software, access innovation on release and be first to market with innovations

Maximizer

What to expect from an upgrade



Core software upgrades

Upgraded to the latest core operating software and the license to any new core enhancements.

Workflow and image quality improvements

New systems are loaded with advancements from day 1 but Philips never stops innovating. As workflow, image quality and security improvements are made, Maximizer customers will get them with their upgrades.

Your clinical options updated

If a customer has purchased a clinical option and Philips has an improved version, Maximizer will ensure the customer has the latest version.

Capable of new clinical options & probes

When Philips comes out with new clinical options available for purchase, Maximizer means the customer's system will always be capable of running the latest options.

Understanding your needs, **designed for you**

- Flexible RightFit service agreements
- Technology Maximizer Program keeps your system performing at its peak
- Xtend Service Coverage to more easily calculate your total cost of ownership





Philips Affiniti CVx

Designed for cardiology,
Built for your everyday

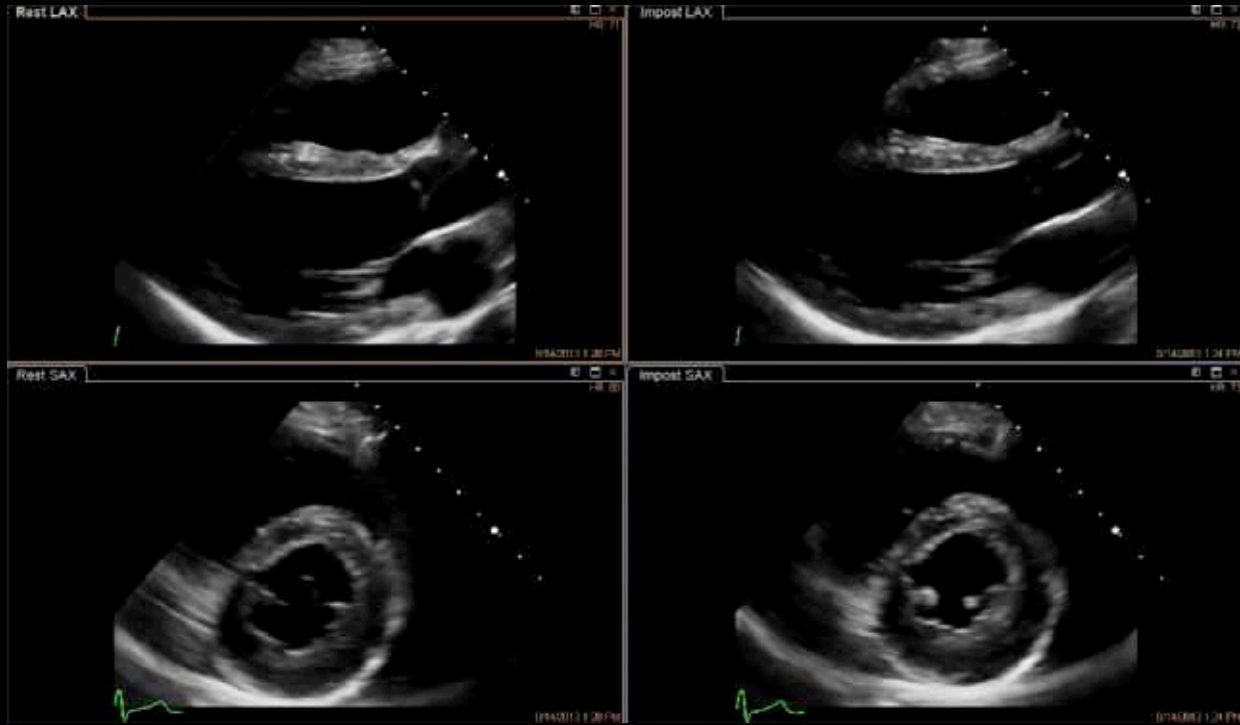
Superb clinical versatility

- Adult echocardiography
- Pediatric echocardiography
- Stress echocardiography
- Adult transesophageal
- Pediatric transesophageal
- Fetal echo
- Peripheral vascular
- Abdominal vascular
- Temporal TCD
- Surgical imaging
- Interventional imaging
- Cerebrovascular

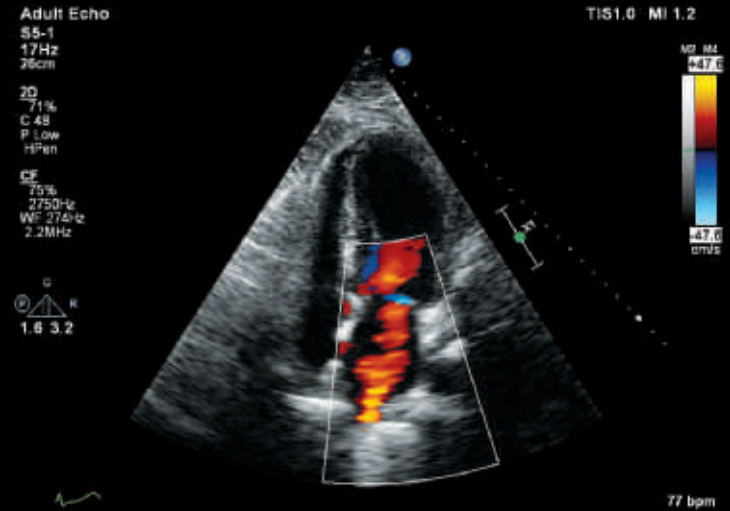
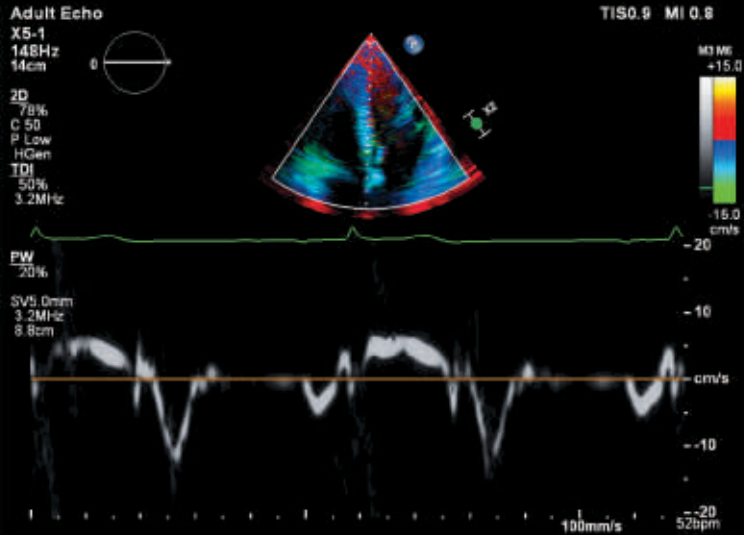


Philips Affiniti CVx supports a wide range of small, lightweight transducers that can be shared across our premium EPIQ CVx and CX50 compact systems. Shown above is an example of transducers for cardiology.

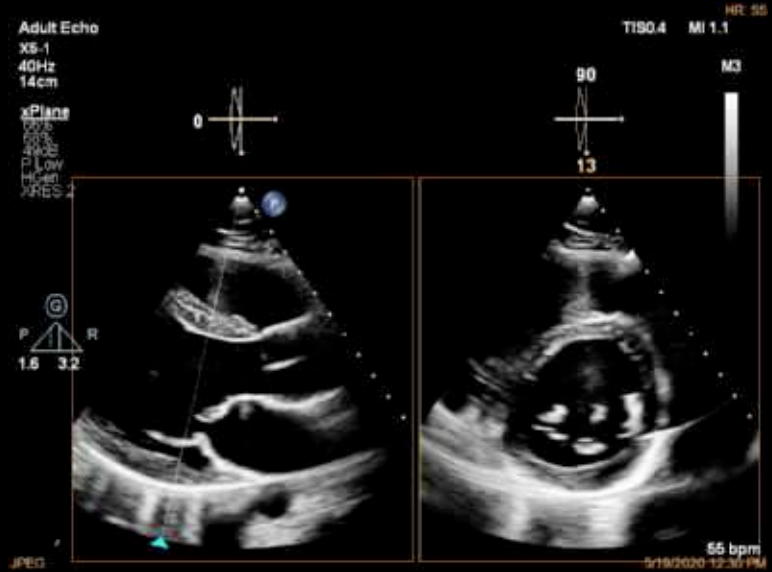
Stress echo



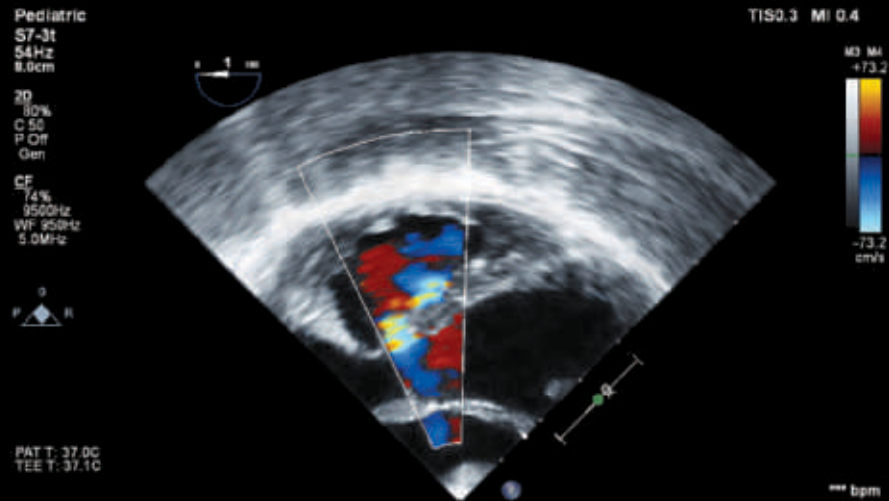
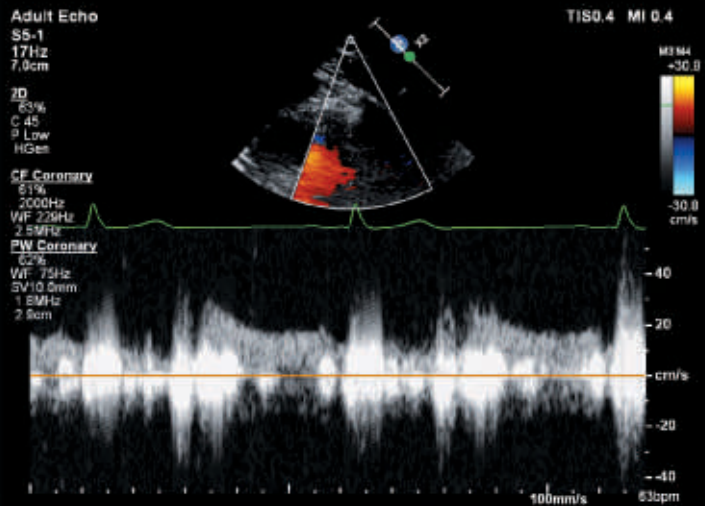
Adult echo



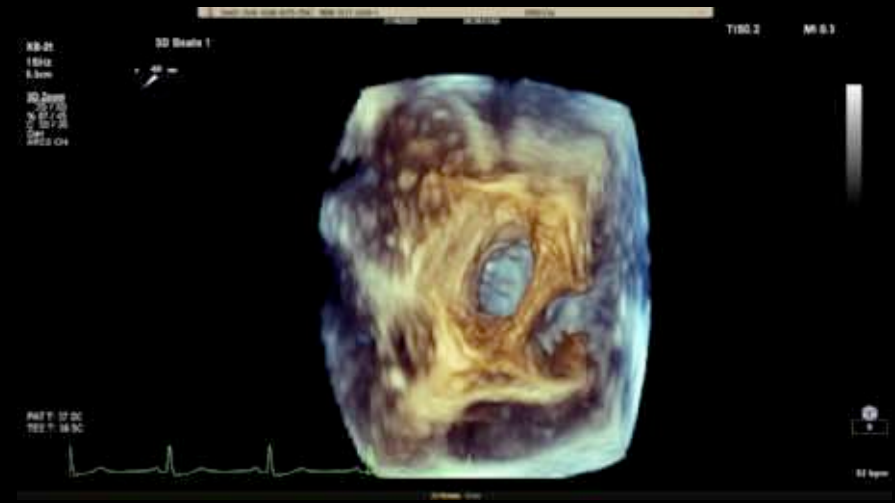
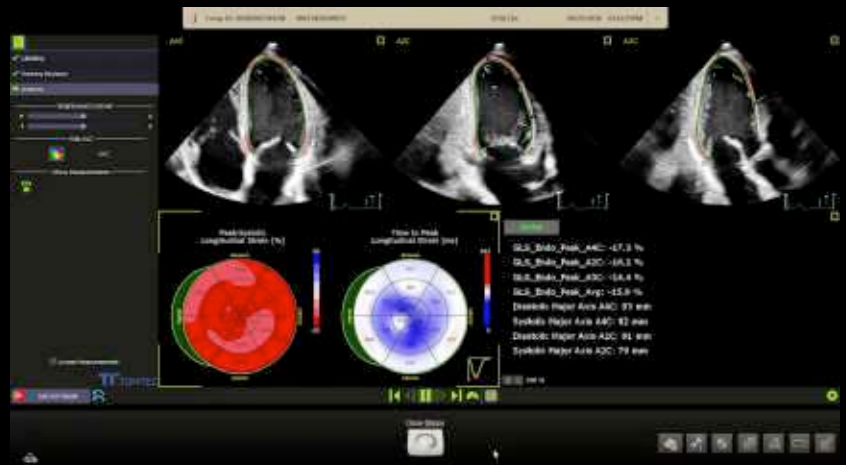
Adult echo



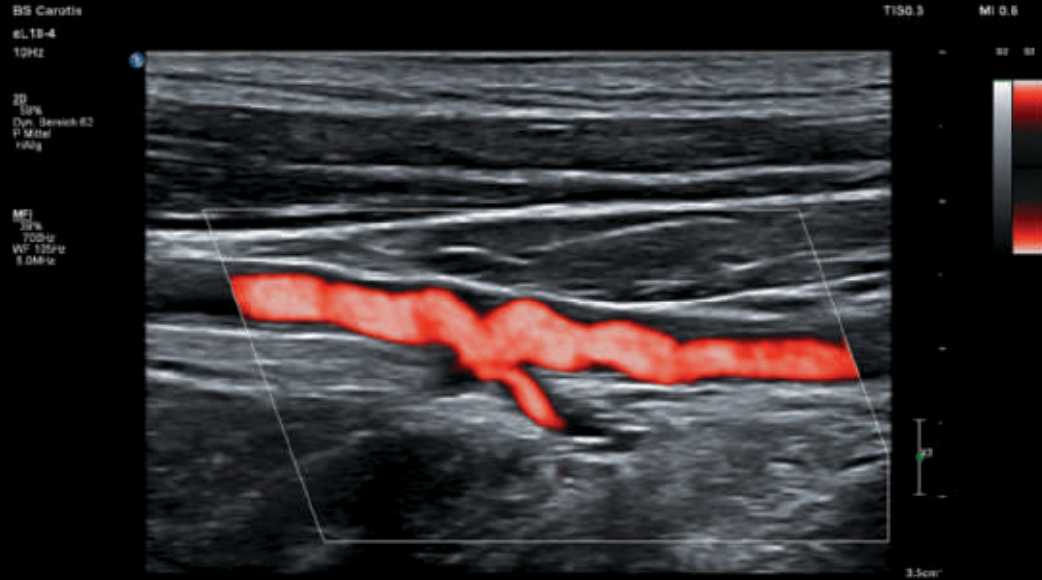
Pediatric echo



Advanced features – quantification



Vascular





Reference

1 Chen J, Panda R, Savord B. Realizing dramatic improvements in the efficiency, sensitivity and bandwidth of ultrasound transducers: Philips PureWave crystal technology. Koninklijke Philips N.V. . Aug 2006.

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