



An imaging revelation

Philips iE33 xMATRIX echocardiography system overview

Philips iE33 xMATRIX Edition is ultrasound like you've never seen it before. The system is designed for outstanding clinical utility, delivering high quality 2D imaging, while also making it easy for you to take full advantage of 3D imaging and the information it provides. Packed with features that optimize image quality and enhance workflow, every button, every transducer, and every algorithm bears the mark of our commitment to meaningful innovation.

The iE33 xMATRIX Edition reveals more information, expanding the value of ultrasound. Now you can see more clearly, explore more fully, and resolve more thoroughly.

Key advantages

- X5-1 transthoracic adult transducer for seamless transition between 2D and 3D imaging without compromise
- 2D and 3D assessment of left ventricle global function and regional wall motion, deformation and timing
- Live 3D TEE solution for accurate and fast assessment of valve anatomy and the inter-atrial septum

PHILIPS
sense and simplicity

iE33 highlights

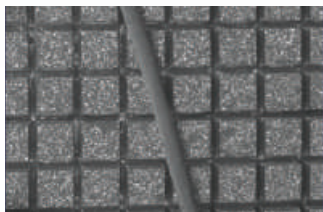
Versatile X5-1 transducer

A remarkable amount of meaningful technology is packed within the ergonomic, easy-to-handle X5-1 transducer. With 3,000 elements and breakthrough PureWave xMATRIX technology, the X5-1 supports virtually any cardiac ultrasound exam, including 3D, 2D, color flow, M-mode, PW/CW Doppler, Tissue Doppler imaging, and contrast-enhanced exams. It delivers outstanding image quality while making imaging easier and faster.

- Acquire crisp, high-resolution 2D images, even on your most difficult patients.
- Use iRotate electronic rotation to more easily obtain challenging views, such as apical 2 chamber, and to reduce foreshortening.
- Switch from 2D to 3D imaging at the touch of a button to quickly integrate volume imaging into routine exams.
- Image the entire heart in 3D, in real time with Live Volume, and zoom and rotate volumes with iCrop.
- Add Live 3D Stress to your protocols with the touch of a button and use iSlice to obtain show MRI-like short axis views from the apex to the base.



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xMATRIX

Using breakthrough array technology with elements smaller than a human hair, xMATRIX transducer technology provides volume acquisitions of the beating heart with truly remarkable image quality. Philips xMATRIX transducers are ergonomically designed and harness the power of 150 computer boards.

Accurate 2D and 3D LV function and regional wall motion

Cardiac Motion Quantification (CMQ) increases the accuracy of LV function and wall motion measurement. It includes a suite of quantification methods based on speckle tracking or border detection technologies. The new CMQ speckle tracking algorithm makes strain analysis a useful tool in assessing presence and extent of LV disease. It includes multiple strain and strain rate parameters, including longitudinal strain. Results are displayed in easy-to-read 17 LV segment bull's-eye format for communicating comprehensive regional and regional strain.

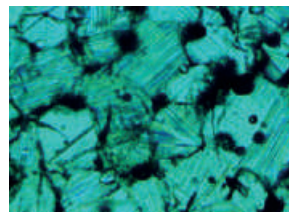
Cardiac 3D Quantification Advanced (3DQ Advanced) is the first semi-automated, on-cart and off-cart analysis of true LV volumes.

- 3DQ Advanced uses all the voxels available to generate a full 3D endocardial border with greater accuracy.
- Waveform display provides accurate data for assessing global function based on LV volume, ejection fraction and stroke volume.
- Simultaneous display of 17 regional waveforms enables temporal comparisons between segments.

Easier 3D transesophageal imaging

Live 3D TEE brings simplicity to 3D transesophageal imaging, making it practical to use 3D echo to plan, guide and assess interventional procedures.

- Obtain multiple perspectives of the complete valve and perform quantification that aids decisions about valve repair or replacement.
- During surgery, anesthesiologists can use Live 3D TEE to perform analysis and assess procedure outcomes.
- Surgeons can evaluate function with Live 3D Color before closing and make any repairs necessary.
- In the cath lab, increased visualization of structures and accurate, fast quantification enhances patient care.



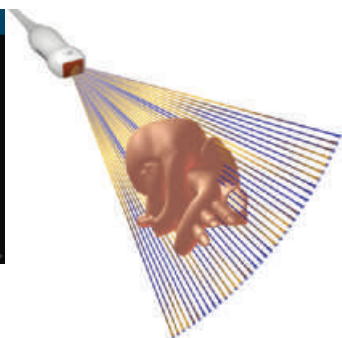
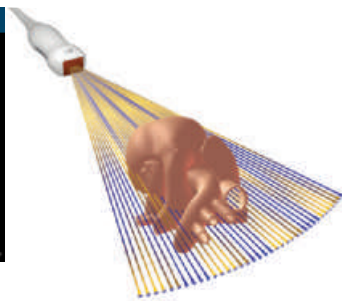
Conventional (x800)



PureWave (x800)

With uniform crystal alignment, PureWave technology is the innovation enabling crystal miniaturization that requires less stimulation and helps provide consistently excellent image quality. When PureWave technology is incorporated with xMATRIX technology the result is fully functional 2D and 3D imaging in a single transducer.

System specifications



iRotate electronic rotation

Rather than manually rotating the transducer to search for a non-obscured window, iRotate can electronically achieve the view within the acoustical window between ribs.

1.1 Applications

- Adult echocardiography
- Pediatric echocardiography
- Fetal echocardiography
- Stress echocardiography
- Vascular (peripheral, cerebrovascular, temporal and orbital TCD, and abdominal vascular)
- Transesophageal echocardiography (adult and pediatric)
- Contrast echocardiography (LVO, low MI and high MI detection)
- Perioperative
- Epicardial echocardiography

1.2 Imaging modes

- 2D grayscale imaging with advanced pulse coding, pulse shaping, and frequency compounding technologies
- xMATRIX-based 2D elevation compounding
- X5-1 2D imaging with 90 x 90 sector 18 cm 90 Hz imaging mode
- M-mode
- M-mode color Doppler
- M-mode tissue Doppler
- Live 3D Echo (instantaneous volume rendering of cardiac anatomy)
- Live xPlane imaging (simultaneous display of two live imaging planes)
- Tissue Harmonic Imaging (THI) with pulse inversion technology
- Left ventricular opacification (LVO) with pulse inversion and power modulation technologies
- Low MI and high MI contrast detection technology using power modulation
- SonoCT beam-steered real-time compound imaging
- Harmonic SonoCT imaging
- XRES adaptive image processing technology
- iSCAN intelligent scanning for one-button TGC, gain and compression map optimization
- iSCAN with adaptive gain compensation (AGC) for real-time line-by-line TGC optimization
- Simultaneous 2D M-mode
- Color Doppler

- Color Power Angio imaging (CPA)
- High-PRF pulsed wave (PW) Doppler
- Duplex and simultaneous 2D/PW Doppler
- Duplex continuous wave (CW) Doppler
- Duplex color flow and CW Doppler
- Duplex 2D, color flow, PW Doppler
- Duplex 2D, CPA, PW Doppler
- Tissue Doppler Imaging (TDI)
- Adaptive Doppler
- Adaptive Broadband Color Flow
- Color Compare mode
- Independent triplex mode for simultaneous 2D, color flow, PW Doppler
- Independent triplex mode for simultaneous 2D, CPA, PW Doppler
- Dual imaging with:
 - Choice of independent cineloop buffers or split screen imaging
 - Mixed mode display with one image live while other is frozen, for example, 2D/2D, 2D/color, color/color, color/CPA
- High definition zoom (write zoom)
- Reconstructed zoom with pan (read zoom)
- Panoramic imaging
- SonoCT panoramic imaging with XRES and harmonic modes
- Chroma imaging in 2D, 3D, QLAB MPR and iSlice
- Panoramic M-mode and Doppler modes

1.3 Physical dimensions

Width	55.9 cm (22.0 in.)
Height	139.7–162.6 cm (55–64 in.)
Depth	109.2 cm (43 in.)
Weight	150 kg (331 lb.) without peripheral devices

1.4 Power requirements

Power	950VA
Frequency	50 to 60 Hz
Voltage	90V to 240V AC
Power cords	Available for electrical standards worldwide

Keeping your system up and running

Philips support services are designed to maximize uptime. Our Remote Services connectivity allows for many advanced service features, including virtual on-site visits for both clinical and technical support. It provides faster resolution to issues and questions, remote clinical education, and remote log file transfer to minimize downtime. We offer Remote Desktop, “over the shoulder” system monitoring for faster technical and clinical troubleshooting and training options. And to help you manage your practice, we provide utilization reports with system and exam data analysis.



Please visit www.philips.com/iE33 for more information



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