

GE Healthcare

LOGIQ 9



GE imagination at work



At the leading edge of healthcare



Image Quality



Raw Data



Ergonomics



Productivity

For more than a century, GE Healthcare has been inventing medical technologies. In ultrasound, our continuous stream of breakthroughs have redefined the standards for image quality, accelerated the development of new applications and increased clinical efficiency for users worldwide.

As we see it, the future of ultrasound looks even more exciting.

GE Healthcare is evolving. A pioneer in diagnostic imaging and information technologies, we are now at the forefront of molecular and genetic medicine as well. These capabilities will help shape a new age of healthcare in which disease is detected earlier, diagnosed more precisely and treated less invasively.

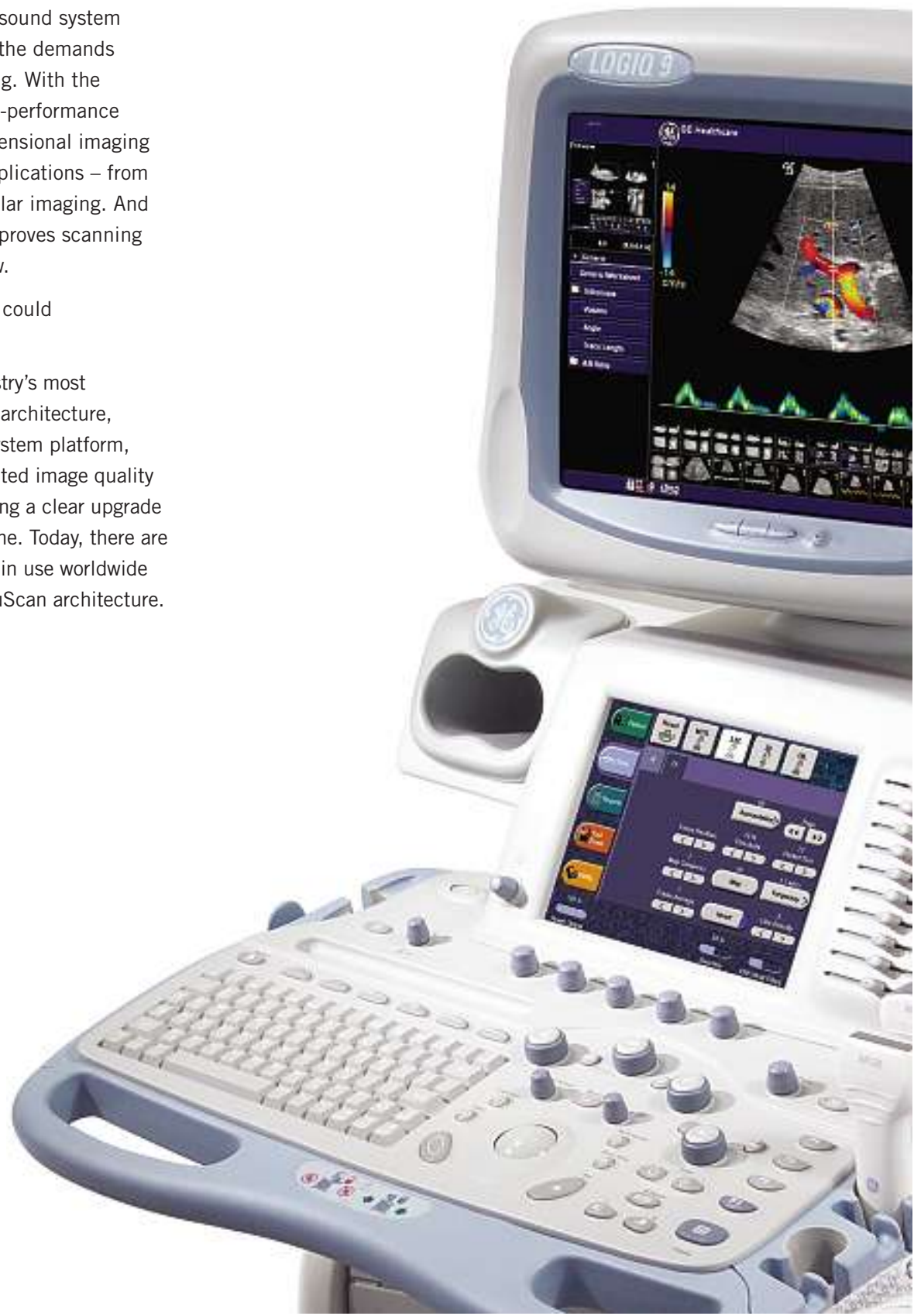
Ultrasound will be at the heart of this transformation. And so will you.

The system of choice for general imaging

Imagine a leading-edge ultrasound system so versatile that it can meet the demands of virtually any clinical setting. With the LOGIQ® 9, you'll have a high-performance system capable of multi-dimensional imaging for a full range of clinical applications – from abdominal to breast to vascular imaging. And an ergonomic design that improves scanning comfort and clinical workflow.

Now, imagine what LOGIQ 9 could do for you and your patients.

LOGIQ 9 is built on the industry's most advanced and proven system architecture, TruScan. A software-driven system platform, TruScan provides unprecedented image quality and functionality, while offering a clear upgrade path for breakthroughs to come. Today, there are thousands of LOGIQ systems in use worldwide powered by GE's patented TruScan architecture.





A history of innovation in ultrasound

2001

Coded Harmonics

Automatic Optimization

B-Flow

2002

TruScan Architecture

Raw Data Imaging

Lightweight Matrix

Array Transducers

Leadership in ultrasound technology

Breakthrough after breakthrough

At GE Healthcare, we are committed to innovation that optimizes every step of the diagnostic process. We focus our research and development efforts on technologies that offer the greatest clinical value across a broad range of applications. The LOGIQ 9 system exemplifies this strategy by delivering:

- Industry-leading image quality for clarity
- Analytical tools to increase diagnostic confidence
- Outstanding design for ergonomic scanning
- Automatic applications to streamline clinical workflow

With a LOGIQ 9, you can add the latest, most advanced features available to ensure that you're always at the forefront in patient care. And that makes the LOGIQ 9 a reliable technology investment for today – and for the future.

2003

Coded Contrast Imaging
Multi-level Coded Harmonics
LOGIQworks Workstation

2004

Speckle Reduction Imaging
CrossXBeam Spatial Compounding
VoiceScan

2005

Volume Ultrasound
Next Generation of Automatic
Optimization



Turning up the volume in ultrasound

Today, GE is defining a new age of ultrasound. We call it Volume Ultrasound. The LOGIQ 9 system and new 4D transducers enable real-time techniques for acquiring, optimizing and navigating volumetric images so that you can make clinical decisions with unprecedented confidence. By adding 4D imaging capabilities to the LOGIQ 9's outstanding 2D image quality, the system allows you to make multi-planar imaging part of your clinical routine.

With the LOGIQ 9, you can now acquire and construct volumetric images instantaneously – up to 30 volumes per second. With Volume Ultrasound, you'll experience clinical and productivity benefits including:

- More comprehensive and reliable exam data
- Greater diagnostic confidence
- Faster patient exams
- Improved patient comfort



A virtual cystoscopic view of ureterocele



Nodularity and small size of cirrhotic liver

Turning images into answers



Image Quality

Image quality is the cornerstone of the LOGIQ 9. The system combines all of GE's advancements in spatial compounding, speckle reduction, coded acquisition techniques and world-class transducers that allow clinicians to turn images into answers for their patients.

CrossXBeam Spatial Compounding

CrossXBeam is a real-time method that results in enhanced border definition, reduced acoustic artifact and improved contrast resolution. CrossXBeam provides:

- Live, side-by-side displays
- Coded Harmonics including high frequencies
- Visualization of up to nine angles

Speckle Reduction Imaging (SRI)

SRI is an adaptive, real-time software algorithm that reduces the speckle artifact inherent to ultrasound imaging by:

- Suppressing speckle artifact where no borders or edges are present
- Preserving borders where echogenicity differences occur
- Avoiding structure creation

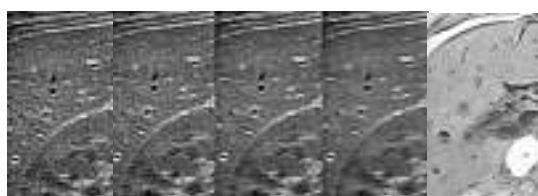
Coded Ultrasound Technology

GE's exclusive coded ultrasound technology uses advanced encoding and decoding algorithms and techniques to improve image quality and new applications.

- UltraCoded Harmonics
- B-Flow
- Coded Excitation
- Coded Contrast¹, Coded Phase Inversion, Coded Harmonic Angio

Higher performance is right in your hands

Transducers are a critical element in image quality and productivity. GE offers Matrix Array transducers with multiple rows of elements to achieve uniform resolution throughout the field of view, which reduces volume averaging and improves overall image consistency.



Original Low Medium High Optical

Turning images into answers



High-resolution image of thyroid lesions utilizing Coded Harmonics, SRI and CrossXBeam



4D image of gallbladder and calculi



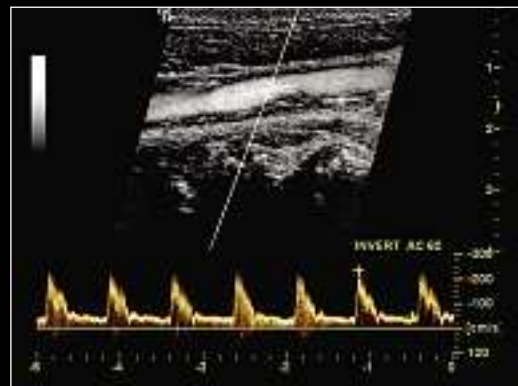
LEV varices utilizing LOGIQView with Coded Harmonics



Spectral and color Doppler image showing tortuous arterial flow



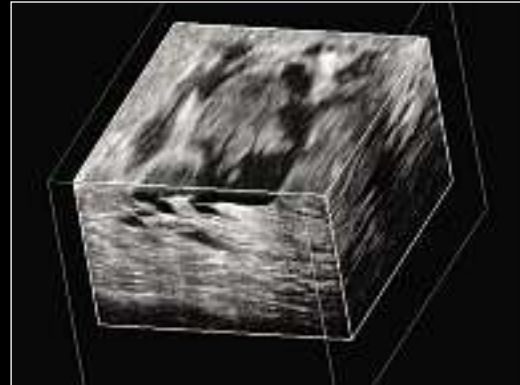
Demonstration of pulsatile portal vein flow



B-Flow with B-steer accurately depicting CCA stenosis



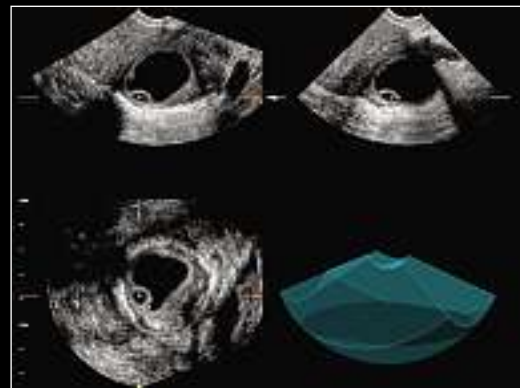
Superficial breast lesion utilizing SRI, CrossXBeam and Coded Harmonics



Easy3D Coronal view of breast showing ductal mass and dilatation



Fetal thymus gland without SRI (left) and with SRI (right)



Multi-planar view of an ovarian cyst depicting excellent resolution in all planes



Simultaneous mode without SRI (left) and with SRI (right)



Early fetal image featuring Coded Harmonics with CrossXBeam utilizing an endovaginal transducer



The platform that only GE can deliver

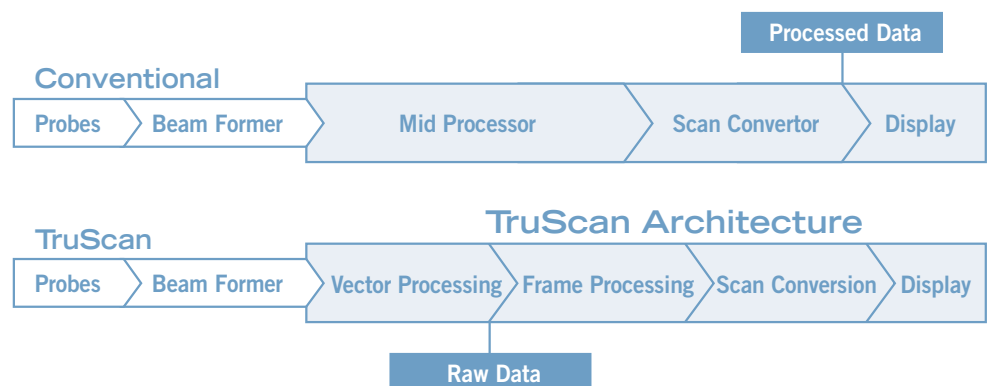


Raw Data

Enabled by GE's TruScan architecture, the LOGIQ 9 stores raw image data early in the imaging chain for optimum flexibility during post processing and analysis. With access to raw image data, clinicians are able to compensate for variations in image acquisition to increase their diagnostic confidence, while reducing the number of patient rescans.

GE's unique raw data and applications toolset allows clinicians to reconstruct images using a variety of techniques including:

- Adjusting time gain controls
- Modifying B-Mode gain, color gain, and dynamic range
- Analyzing and manipulating volume data
- Constructing 3D volume images from a cine loop
- Changing baseline shift, sweep speed and Doppler gain
- Applying SRI



Exceptional ergonomics. Maximum comfort.



Ergonomics

In ultrasound, the clinician and system function as one during an exam. That's why we designed the LOGIQ 9 to optimize comfort, convenience and productivity. The system's ergonomic design is focused on providing an exceptional scanning experience.

- Floating console that elevates, rotates and extends
- 17-inch, progressive scan, high-resolution color display
- Color touch LCD screen with programmable keys
- Full-size, back-lit keyboard
- Gel warmers
- Four swivel wheels with automatic two locking wheels

VoiceScan

The latest in wireless and speech recognition technologies, VoiceScan allows hands-free voice command and track ball control of the LOGIQ 9 system. VoiceScan enables clinicians to use intuitive words and phrases to activate more than 150 functions with exceptional accuracy – providing the freedom to perform multiple tasks simultaneously and improve scanning technique and body mechanics.





Built for speed



Productivity

The LOGIQ 9 is designed with your productivity in mind, offering a unique set of features to streamline clinical workflow from start to finish. From the speed and performance of the TruScan platform to very specific automated features, our complete system and workstation solutions will help you work more efficiently and improve patient throughput.

Automatic Optimization

With a set of new algorithms, Automatic Optimization harnesses the extensive processing power of the LOGIQ 9 to automatically apply time gain compensation, B-Mode, color gain and spectral Doppler optimization – including baseline and pulse repetition frequency.

Workstation solutions designed for you

By combining the expertise of the world's leading provider of healthcare IT and ultrasound systems, GE is uniquely suited to provide you with comprehensive ultrasound IT solutions that can:

- Enable Volume Ultrasound techniques
- Streamline clinical workflow
- Improve diagnostic confidence
- Connect with multi-vendor ultrasound systems, PACS, RIS, and HIS

LOGIQworks is a powerful workstation that integrates GE's exclusive raw data processing and proven Centricity multi-modality workstation to provide high-performance processing and image review. A scaleable solution based on DICOM standards, LOGIQworks is versatile enough to support any type of clinical setting – from an imaging department to a fully networked healthcare enterprise. Using advanced clinical applications such as quick organ review, multi-planar measurement tools and volume analysis, you'll have the power to diagnose faster and more precisely.

¹ The LOGIQ 9 is designed for compatibility with commercially available ultrasound 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 cleared for use. Contrast related product features are enabled only on systems for delivery to an authorized country or region of use. Available outside the United States.

LOGIQ is a registered trademark of GE

For more than 100 years, scientists and industry leaders have relied on General Electric for technology services and productivity solutions.

So no matter what challenges your healthcare system faces – you can always count on GE to help you deliver the highest quality healthcare.

For details, please contact your GE representative today.

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