GE Healthcare

LOGIQ 7

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.

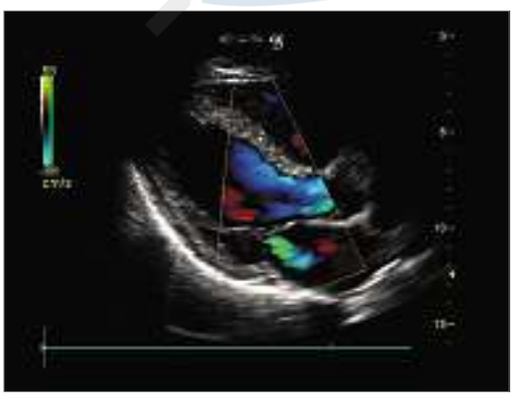
Ultrasound will be at the heart of this transformation. And so will you.

The system of choice for every application

The LOGIQ 7 system provides a full range of clinical applications – including abdominal, small parts, surgery, vascular and cardiac imaging – and the power of GE's patented TruScan architecture. Just imagine an ultrasound system so versatile and reliable that it can meet the demands of virtually any clinical setting. And an ergonomic design that improves scanning comfort and clinical workflow.

Cardiovascular imaging is a key component of the LOGIQ 7. In addition to transesophogeal scanning and stress echo, the system includes Tissue Velocity Imaging (TVI), Tissue Velocity Doppler (TVD) and Q-Analysis. These quantitative tools provide more precise methods for analyzing data, which can increase diagnostic confidence.

LOGIQ 7 is built on the industry's most advanced and proven system architecture, TruScan. A software-driven platform, TruScan provides unprecedented image quality and functionality, while offering a clear upgrade path for breakthroughs to come.



Parasternal long axis view-showing mitral regurgitant jet

A history of innovation in ultrasound

2001

Coded Harmonics

Automatic Optimization

B-Flow

2002

TruScan Architecture

Raw Data Imaging

Lightweight Matrix Array Transducers

Shared Service

Continuous innovation in ultrasound

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. Then, we apply these breakthroughs to our entire portfolio of systems. The LOGIQ 7 system exemplifies this strategy by delivering:

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

With a LOGIQ 7, you can add the latest, most advanced features available to ensure that you're always at the forefront in patient care. And that makes LOGIQ 7 a reliable technology investment for today – and for the future.

2003

LOGIQworks Workstation

Coded Contrast Imaging

2004

CrossXBeam Spatial Compounding

Stress Echo

Transesphogeal Transducer

2005

Speckle Reduction Imaging

Tissue Velocity Imaging

VoiceScan

The platform only GE can deliver

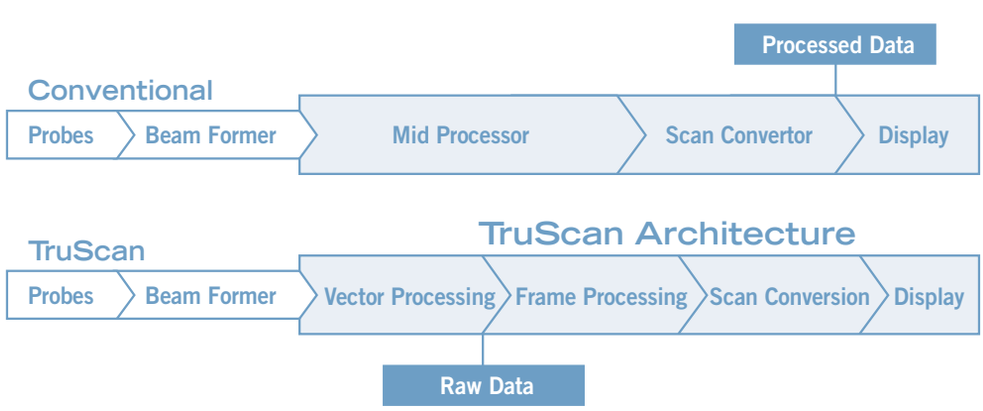
Raw Data

Image quality and the TruScan architecture are the cornerstones of the LOGIQ 7.

The TruScan architecture allows LOGIQ 7 to store 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 or improve images using a variety of techniques including:

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



Turning images into answers

Image Quality

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 seven 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

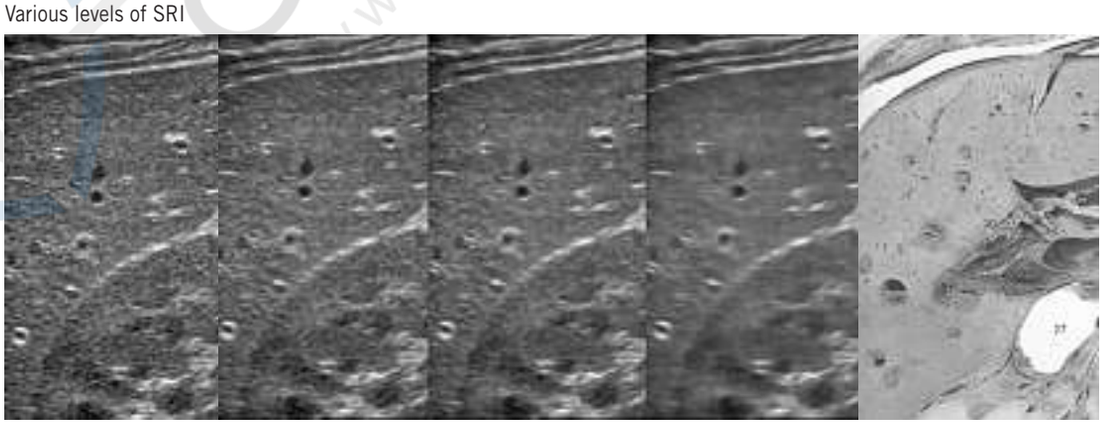
GE's exclusive coded ultrasound technology uses advanced encoding and decoding algorithms and techniques to improve image quality and new applications.

- Coded Harmonics
- B-Flow Color
- Coded Excitation
- Coded Contrast[1], Coded Phase Inversion, Coded Harmonic Angio

Matrix Array Transducers

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.

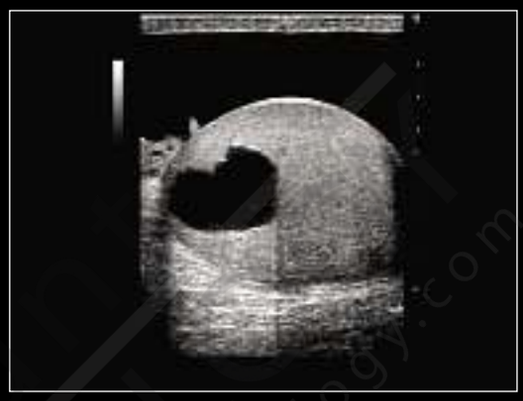
Various levels of SRI



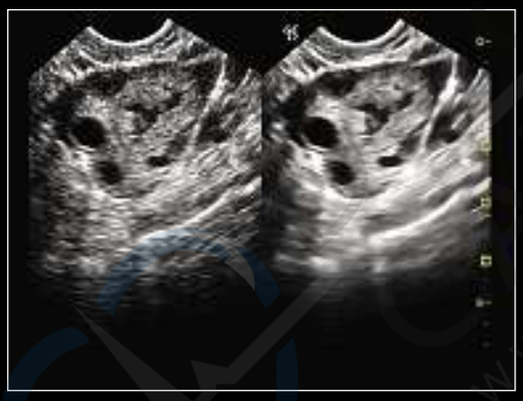
Original Low Medium High Optical

The picture of diagnostic confidence

High frequency imaging of complex breast mass



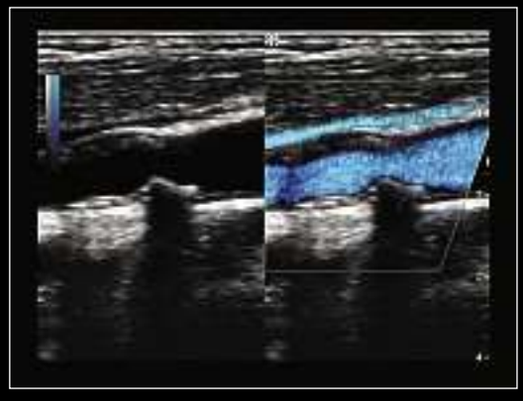
High frequency imaging of a testicular cyst using SRI



Resolving corpus luteum without SRI (left) and with SRI (right)

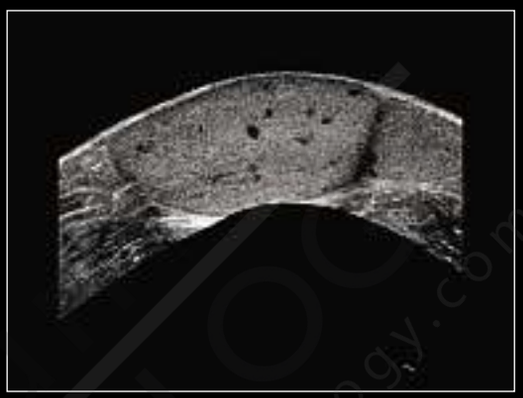
Hydronephrotic fetal kidney without SRI (left) and with SRI (right)

SFA using SRI and CrossXBeam



Simultaneous mode using SRI and B-Flow Color

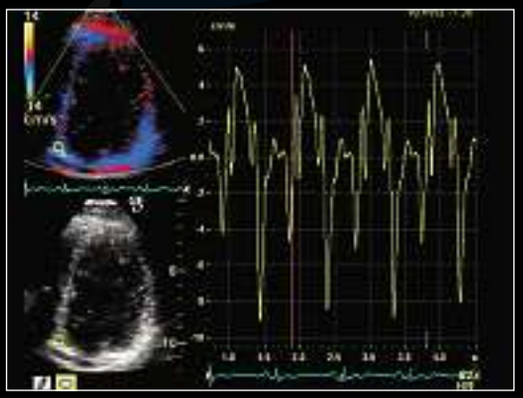
3D presentation of vessel tortousity



Demonstration of upper extremity mass using LOGIQView

Upper pole renal mass using SRI

B-Flow Color showing normal turbulent flow in the IVC



Adult echo shown with TVI and Q-Analysis

Parasternal long axis view (PLAX) of mitral regurgitant jet

Exceptional ergonomics

Ergonomics

In ultrasound, the clinician and system function as one during an exam. That's why we designed LOGIQ 7 to optimize comfort, convenience and productivity. The system is focused on providing an exceptional scanning experience.

- Elevating keyboard and adjustable monitor
- 17-inch, progressive scan, high-resolution color display
- Color touch LCD screen with programmable keys
- Four swivel wheels

VoiceScan

Applying the latest in wireless and speech recognition technologies, VoiceScan allows hands-free voice command and track ball control of the LOGIQ 7 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 7 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 automated features, our complete system and workstation solutions will help you work more efficiently and improve patient throughput.

Workstation solutions designed for you

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 7 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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