



Sustainable general imaging ultrasound solutions for a resilient tomorrow

Invenia™ ABUS 2.0
Automated Breast Ultrasound





Creating a more sustainable future requires us to care for the planet and its inhabitants.

It is essential that we continue to drive progress toward early, precise, and accessible diagnosis and treatment of more patients. For the planet, it is critical that we do so with a reduced impact on precious and rare resources that are imperative to life. We believe that the advancement of precision health, greater digitization of healthcare, and increased access to quality care are fundamental to accomplishing this goal.

We support carbon policies that reduce greenhouse gas emissions and promote sustainable development. We are committed to achieving net zero by 2050 and are part of the UN-backed “Race to Zero,” with a goal of reducing emissions based on the Paris Agreement. We’ve also set a public goal to achieve a 50% reduction in our own operational emissions by 2030. As a result of these efforts, we want to enable a more sustainable health system by addressing not only the environmental impacts of our products but also the challenges healthcare professionals and their patients face with resilient, digital options.



We are committed to achieving **net zero** emissions by 2050.

We’ve set a public goal of a **50% reduction** in our own operational emissions by 2030.

**We deliver sustainable,
intelligently efficient
solutions for a resilient
tomorrow.**

Building a healthier world to
help improve access to care and
enable better patient outcomes.



Green

Using fewer resources for a healthier planet.

Digital

Transforming healthcare through innovation.

Resilience

Building flexibility and dependability across healthcare systems.



Invenia ABUS helps create a resilient tomorrow.

Invenia ABUS ultrasound and its services help ensure that clinical professionals and the patients they serve have the technology necessary to create a sustainable and resilient tomorrow.

Reducing environmental impact

- The Invenia ABUS system is designed to be refurbished, reused, or recycled at the end of its product life to minimize unnecessary waste.

Improving outcomes

- This system is the first FDA approved ultrasound technology for cancer screening in women with dense breasts.
- System is clinically proven to increase invasive cancer detection by 55%¹ over mammography alone when used as an adjunct to mammography.
- AI tools powered by Koios DS™+ Breast can improve clinical outcomes by decreasing benign biopsies by up to 31%.²



¹ Brem RF, Tabár L, et.al Radiology. 2015 Mar; 274(3): 663-73.

² Mango et al. Should We Ignore, Follow, or Biopsy? Impact of Artificial Intelligence Decision Support on Breast Ultrasound Lesion Assessment. AJR, June 2020: 214: 1145-1452



Contributing to a healthier planet

More than half of the healthcare sector’s climate footprint, approximately 53%, is attributable to energy use.³ As a result, we have strengthened our commitment to environmentally conscious design and sustainable practices across our product manufacturing, sourcing, distribution, installation, and service operations. This includes improving energy efficiency, optimizing the use of limited or rare materials, providing digitally enabled and remote predictive and maintenance service throughout the product lifespan, and offering refurbishment and recycling options at the end of product life.

GE Healthcare environmental management system is ISO 14001 certified.

Our production and service operations align to ISO 14001 standards.

We’re committed to environmental product design.

This product conforms with IEC60601-1-9.

Materials

GE Healthcare reviews the environmental aspects of the material supply used within our products to increase recyclability and decrease the use of hazardous substances, when possible.

Recyclable

We’re committed to high recyclability of our products and reuse when possible.

The Invenia ABUS contains more than 53% recyclable aluminum and steel.
Steel: 16%
Aluminum: 37%

Reduce the use of hazardous substances

Compliant to EU RoHS directive 2011/65/EU

Compliant to EU RoHS directive 2015-863/EU

REACH (EC) 1907–2006

Manufacturing

Through our environmental reviews, we also focus on implementing renewable energy and reducing waste.

Renewable energy

The Invenia ABUS is manufactured in our Wuxi, China, site, which has recently installed a rooftop solar system designed to generate 100M kW·h per year.

The Wuxi site features energy-efficient air conditioning and a smart energy management system, which is designed to continuously reduce energy consumption by 90%.

Reduced electricity

Prior to the addition of the rooftop solar system, ultrasound manufacturing at the Wuxi manufacturing facility required 876,376 kW·h. The solar-generated energy should reduce that by about 18%, or 100M kW·h per year.

³ Health care climate footprint report | Health Care Without Harm (noharm-uscanada.org)



Packaging

GE Healthcare imaging equipment has a robust and multi-sourced supply chain for systems and spare parts across all product portfolios.

Improved packaging

Packaging material is recyclable.

Product transportation

Truck transport: 32%
Air transport: 68%



32% product transportation utilizes low environmental impact modes

Product utilization

Our imaging products are designed to help enable energy efficiency through dedicated features and advanced applications to reduce the environmental impact.

Ergonomically designed to reduce staff burden

Invenia ABUS is ergonomically designed to support repetitive use.

Display Arm Motion:

- Extension arm horizontal range: 340°
- Elbow joint horizontal range: 276° +/- 10°
- Display joint vertical range (tilt range): 75° (5° forward, 70° back)

Scan Head Motion:

- The easy-to-handle scan head dimension is 30x30x8 cm.
- The easy-to-adjust scan head can be positioned between 27 inches to 46 inches in height.
- The scan arm can move freely with less than 6 pounds of force required to move up and down and less than 1 pound for rotation.
- An automatic control mechanism is in place to help the user maintain the position of scan head.
- An automatic probe movement mechanism helps to avoid user moving the probe manually in diagnosis.

Reduce energy consumption

Instructions are provided for use of the equipment to minimize the environmental impact during installation, use, and operation.

If Screen Saver is checked, a screen saver appears after a definable time of inactivity, and the system will go to standby mode.



End of product life

We are increasingly putting our retired products' materials back into the supply chain to maximize efficient use and minimize unnecessary waste. This circularity model enables our imaging products to extend their clinical impact through longer lifespans while reducing the environmental footprint. Additionally, we offer our customers partnered support for upgrades and services throughout a product's lifespan to maintain optimal performance and help drive better patient outcomes.

Our refurbishment programs involve an extensive inspection and testing process, designed to bring equipment back to its original certified manufacturing specifications. If the system is not suitable for refurbishment, eligible parts are harvested for reuse after quality and performance testing, while the rest are returned to dedicated recycling facilities.

Power consumption

Off mode: 0 W
Standby mode: 360 W
Scan mode: 430 W

Carbon emissions

There are zero direct carbon emissions at place of use.

Guidance for end of lifecycle

Equipment instructions are provided to minimize the environmental impact for disposal or recycling.

Upgradeable hardware and software options are provided as a solution to extend the product lifespan.

Upgrades are available for Invenia ABUS.

Parts harvesting and refurbishment options are provided to reduce waste and environmental impacts while extending imaging access to less advantaged regions.

General imaging ultrasound system parts are eligible for assessment through the refurbishment program, in which they are assessed for refurbishment, harvesting, or recycling at the appropriate time in the lifespan.⁴

94–96% of most systems are reused, refurbished, or recycled, extending the lifetime of each product.⁴

100% of Invenia ABUS consoles are eligible for refurbishment.

100% of parts are harvestable for spare parts.

Waste reduction

This system is in accordance with Waste Electrical and Electronic Equipment (WEEE) regulations.

⁴ Products within ultrasound are eligible for refurbishment, although whether a system is actually refurbished versus harvested for parts or otherwise recycled or reused is dependent on the state of the system when GE Healthcare takes possession of it. Data on file.



Digitizing healthcare through transformative innovations for a resilient tomorrow

We are committed to investing in digital capabilities that help accelerate clinical decision making, optimize imaging operations, and drive efficiencies in exam workflows, all of which can improve patient outcomes. Enabling digital transformation will further enhance our predictive and maintenance service operations for the life of your products.

We are also dedicated to driving a more resilient and sustainable future in healthcare. Many factors, including the pandemic, climate-related weather disasters, and supply-chain issues amplified this need. Managing operations through these challenges requires resilience and perseverance.

Advancing clinical outcomes

Advanced applications and cutting-edge AI tools provide personalized data to drive actionable insights, helping healthcare professionals make fast, accurate clinical decisions for care pathways.

Gain actionable clinical insights

3D breast volume data allows for multilayer analysis using coronal plane and AI technology. Archived 3D volumes allow for easy year-over-year image comparison.

Koios DS⁺ Breast automatically provides an AI-based quantitative risk assessment that aligns to a BI-RADS[®] category. It enhances clinical confidence, streamlines reading, and offers significant improvement in physician accuracy.

See a potential reduction in benign biopsies of up to 31%.

Detect up to an additional 6 cancers per 100 presented.



Advancing clinical outcomes (Cont.)

Keep your imaging equipment up to date with advanced clinical applications

Invenia ABUS updates are offered via eDelivery or disk on key.

Our cSound™ Imageformer platform uses advanced software image reconstruction and state-of-the-art graphics technology to deliver exceptional image quality on the Invenia ABUS. The powerful C15-6XW Reverse Curve™ broad bandwidth transducer produces a high-resolution image with every pixel in focus throughout the entire field of view.

Help improve patient outcomes with improved image quality

Next generation AI-powered tools drive results and efficiency.

Koios DS⁺ Breast improves physician confidence and streamlines reading.



Optimizing imaging operations

Our AI-based and advanced digital solutions are designed to increase efficiencies across the radiology spectrum without increasing the administrative and training burden on radiologists and technologists.

Increase productivity and consistency

The system provides the ability to perform remote viewing of images via DICOM® 3.0 compatible output.

The remote service platform InSite™ connects you with a GE Online Service Engineer or Applications Support Engineer. It has remote diagnostics capability as well as the ability to request service.

Reduce downtime

InSite allows GE to deliver remote diagnostics capability and is your direct link with a GE Online Service Engineer or Applications Support Engineer. Request for Service via the InSite link. Available in some markets.

Cybersecurity

GE Healthcare's Design Engineering Privacy and Security (DEPS) process follows GDPR, HIPAA, NIST 800-53, NIST 800-30, ISO 27001, and NIST CSF requirements.



Enabling intelligent exam workflows

Intelligent automation features help drive consistency, enable fast, easy exams, and improve workflow with fewer resources, all while achieving similar or improved outcomes.

Reduce setup time

Users can easily access patient information from an external Worklist Server.

Customizable scanning protocols allow the user to organize their workflow in the most efficient way for them.

Reduce exam time

Breast Assist CADe offers automatic lesion detection to improve the physician's diagnostic speed.

Ease of use

Icon-driven scanning protocols and single-button volume acquisition make the system easy to use.

Cleanability

Our equipment is designed to be cleaned and disinfected easily. We continue to test and approve new cleaning and disinfecting agents. Visit [Cleaning.GEHealthcare.com](https://www.gehealthcare.com/cleaning) for updates. This includes validated cleaning and disinfection instructions for probes.



Building a healthy world to help enable better patient outcomes.

GE Healthcare is a member of COCIR, the European Trade Association representing the medical imaging, radiotherapy, health ICT, and electromedical industries.⁵

⁵<https://www.cocir.org/about-cocir/members.html>

Not all products or features are available in all geographies. Check with your local GE Healthcare representative for availability in your country. Not all features are included in the standard system configuration. Check with your local GE Healthcare representative.

[†]*Koios DS is not available in all markets.*

© 2022 General Electric Company. GE, the GE Monogram, Invenia, cSound, C15-6XW Reverse Curve, and InSite are trademarks of General Electric Company. Koios DS is a trademark of Koios Medical, Inc. BI-RADS is a registered trademark of the American College of Radiology. DICOM is a registered trademark of the National Electrical Manufacturers Association.

JB21130XX