# Definium™ 656 HD

Gen 1 to Gen 5.1 Upgrade

# Elevate your existing X-ray system with new capabilities

## Technology updates and workflow enhancements can help you drive excellence in your X-ray department

Give your Definium™ 656 HD digital X-ray system the latest advancements in X-ray with an upgrade to Gen. 5.1. With an update, you can benefit from AI enhancements and new workflow and technology capabilities designed to help you improve image quality, drive efficiency and optimize the patient experience.

# Upgrade overview

When upgrading to Gen 5.1, customers with Gen 1 systems will get:

- A choice of one or more new FlashPad™ HD detectors
- New advanced Helix™ image processing software
- A new wall stand
- A new premium elevating table
- A new acquisition workstation
- New covers for the existing overhead tube suspension (OTS) carriage and tube head
- A live streaming camera on the tube head

- New acquisition software with workflow enhancements
- New fleet management features, including the cybersecurity package
- Upgrades to previously purchased advanced applications and the option to add advanced applications
- Option to purchase new out-of-room workflow enhancements with the Intelligent Workflow Suite†
- Option to purchase new quality applications

Note: The upgrade cost includes removal of all older fixtures

# High-quality images. Clinical excellence.

Your Definium 656 HD upgrade uses high-quality detectors, and AI-driven image processing to reduce variability and provide optimal image quality.
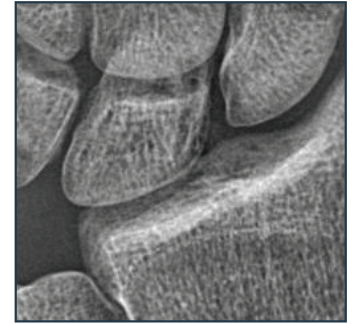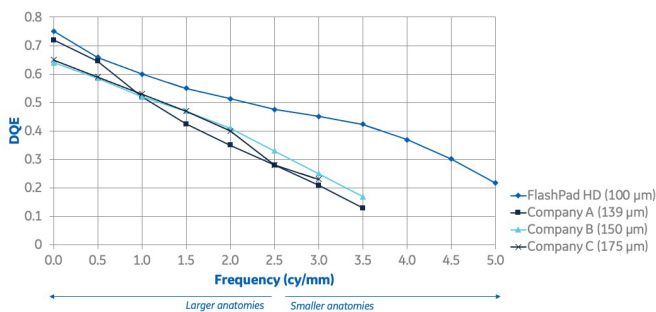


## Create great images with FlashPad™ HD detectors

These dose-efficient, high DQE detectors, available in three sizes, enable visualization of extraordinary anatomical detail.

- Thin and lightweight, packing **four times more pixels** per area than the original FlashPad™ detector.

- **Industry recognized high DQE** at all frequencies.

- **Ready when you need them** with QuickCharge, QuickConnect and QuickShare capabilities.

- **Enhanced with AutoGrid**[†], where software replaces a physical grid during out-of-bin usage. This feature assists you by reducing set-up time by up to 24%.[1]



FlashPad™ HD – DQE Performance
DQE goes down as smaller anatomy is acquired



## Enhance great images with AI-driven software

As part of the upgrade, customers will move to Helix™ 2.2 Advanced Image Processing. Coupled with FlashPad™ HD, it improves small detail detectability by up to 40%[2] and delivers improved image consistency despite variations in exposure technique and challenging exam conditions. Features include:

- **AI Brightness and Contrast** to deliver improved image consistency with 59 anatomy/view combinations.

- **Local Contrast Enhancement** to improve spine visualization and lung detail.

- **Detail Preserving Noise Filter** to help reduce noise levels.

- **Preview Image**, which allows you to preview images that look similar to full size images.

- **QuickEnhance** for reprocessing images with a custom look with just one touch.

- **Real-time IP Looks** for faster and easier fine-tuned image look customizations.

- **IQ Compare** for simultaneous viewing of standard and customized looks to simplify comparisons.



With Helix™ 2.2              Without Helix™ 2.2

# Enhanced workflows

Your upgrade to Gen 5.1 helps ensure your system meets your department's needs. A common user interface and intelligent applications converge to assist technologists, facilitate efficient workflows, and expand patient coverage.

## Heighten workflow efficiency

Upgrade customers will get a new acquisition workstation that's designed for workflow efficiency. The workstation features:

- A **24-inch user interface** with an optional touch screen.[†] This reduces desktop space (compared to having two 19-inch monitors) and improves workflow.

- **Faster access** to images and **faster image processing** due to increased power.

- **Common layout and workflow** with the latest GE mobile radiography systems.

- Customizable menu with **quick access tools**.

- Ability to purchase **a second workstation**[†] for image processing so as to not disrupt operation of the X-ray room.

## Out-of-room precision

When taking exposures outside the room, you'll now have live streaming video. This helps technologists stay connected to their patients, monitor patient safety, and helps reduce rejects resulting from patient motion or incorrect orientation.

# Create advanced images with updated applications

If your current system has advanced applications, your upgrade will include available updates. Advanced applications are also available for purchase.

**VolumeRAD™ Digital Tomosynthesis**[†] — Takes multiple images in a single sweep to create a set of tomographic images. The latest version includes a big reduction in workflow speed

**VolumeRAD™ Metal Artifact Reduction (MAR)**[†] — A new application that provides quality multi-level image slices even with metal implants

**Angulated Auto Image Paste**[†] — Creates images that extend beyond the size of the detector with a highly automated and efficient procedure

**Auto Spine** — A new application that works with Auto Image Paste to follow the spine for vertical equalization, enabling a natural balance of brightness and contrast

**Dual Energy Subtraction** — Separates soft tissue and bone structures to allow detection of abnormalities possibly obscured in a conventional radiograph

# New hardware

**Premium elevating table**

Designed for easy operation and patient safety, the premium elevating table has the highest weight capacity, fastest movement, and largest travel range of any GE X-ray table to easily accommodate large and small patients alike.
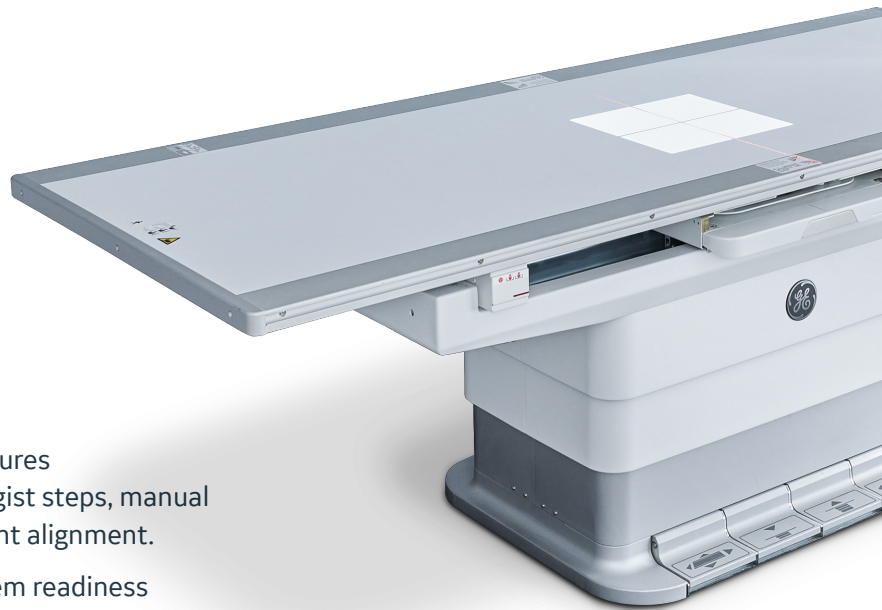
- Static weight capacity improved 82%[3] (from 220 kg to 400 kg)
- Dynamic weight capacity improved 45%[3] (from 220 kg to 320 kg)
- Detector Auto Travel Range increased 14%[3] (70 cm to 80 cm)
- Patient coverage increased 15%[3]
- Lowers to just 50 cm (19.7 in) off the floor, allowing easy patient loading from stretchers or wheelchairs
- In-table charging capability for detectors
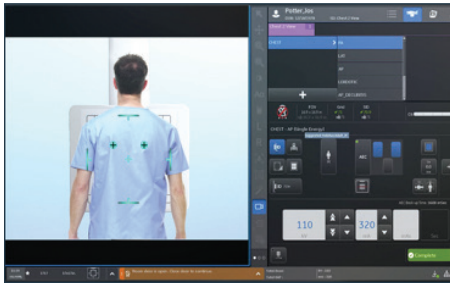
**Ergonomic wall stand**

The new wall stand has features that can minimize technologist steps, manual exertion and facilitate patient alignment.

- **Ring light** indicates system readiness
- **Auto-tracking** in which OTS automatically moves vertically to follow the wall stand movement
- **Reverse tracking** so wall stand automatically moves vertically to follow both vertical movement and changes in angulation of the OTS
- **In-bin charging** capability for detectors
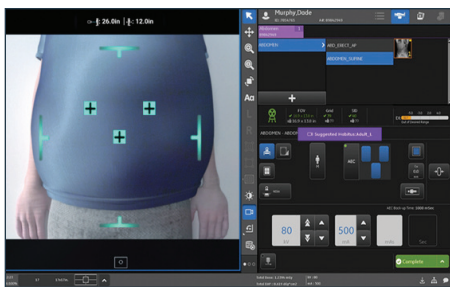- **Tilting** to a complete horizontal position for simplified extremity imaging

# Intelligent Workflow Suite

With your upgrade, you can also purchase the Intelligent Workflow Suite†. Enabled by the live streaming camera, this solution combines computer vision, video analytics and precision engineering to deliver a solution for common errors. The Intelligent Workflow Suite includes:
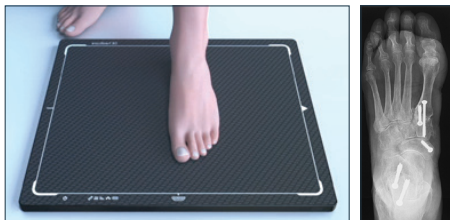


### Position Assist

Shows the detector boundaries, ion chamber locations and the active ion chambers so you can avoid position-related retakes.



### Technique Assist

Measures the thickness of the patient and, using a database of programmable sizes, suggests a size optimized to the specific patient. This helps create more consistent images for your patient population.



### Patient Snapshot

Takes an optical picture at the same time as the X-ray exposure. The system then optionally attaches the picture as a secondary DICOM capture when sent to the PACS, providing context to the radiologist.

# Decision support with on-device software add-on packages

The upgrade also includes the option to add on AI-enabled software packages for decision support. These include:

**Quality Care Suite†** — Provides real-time, on-device, automatic quality checks for frontal chest X-rays with Intelligent Auto Rotate, Intelligent Protocol Check and Intelligent Field of View

**Critical Care Suite 1.0†** — The world's first collection of on-device AI algorithms for automated measurements, case prioritization and quality control

**Thoracis Care Suite with LUNIT Insight CXR*** — Automatically analyzes images for the presence of eight abnormal radiologic findings

**Repeat-Reject Analysis†and iCenter† asset management** — Optimize X-ray equipment utilization and capture repeated or rejected images through remote connectivity

# All about easy

Many aspects of the upgrade are designed to help simplify tasks and help your team work smarter. Plus, getting your system back up and running after the upgrade is easier than you think.

## Built-in security

Due to increased risk of cyber attacks, malware and security vulnerabilities, your upgrade package includes our latest security software, offering multiple levels of protection. Features include:

- Anti-virus protection for malicious software
- Host-based intrusion detection
- Data encryption and storage
- Secure interconnection to external storage
- Network firewall
- DHCP and static IP allocations supported along with iPv6
- Secured detector network

## Updates on your schedule

Securely download from the cloud the latest quality updates and cybersecurity patches. It's fast and reliable, and it doesn't require a field service engineer.

## Ready, set, go!

We've taken steps to ensure your upgraded system will be up and running quickly.

- Existing protocols and Image Processing (IP) looks are compatible with Gen 5.1 of the system and can be easily imported once the upgrade is complete.
- Intelligent calibration reduces calibration time from 70 minutes to 18 minutes.
- Quality assurance procedures reduced from every 7 days to every 30 day.
- UI and protocols can now be displayed in Chinese, Japanese, or Korean languages.

## Upgrade today.

There are so many reasons to update an older Definium™ 656 HD system. Whether you're looking to ease your team's physical workload, reduce acquisition errors with AI-enabled solutions, or increase patient accessibility, an upgrade provides new workflow and technology capabilities designed to help you do it all. Talk to your GE Healthcare representative about what an upgrade would entail for you.

## About GE Healthcare

GE Healthcare is a leading global medical technology and digital solutions innovator. GE Healthcare enables clinicians to make faster, more informed decisions through intelligent devices, data analytics, applications, and services, supported by its Edison intelligence platform. With over 100 years of healthcare industry experience and around 50,000 employees globally, the company operates at the center of an ecosystem working toward precision health, digitizing healthcare, helping drive productivity and improve outcomes for patients, providers, health systems and researchers around the world.

Follow us on **Facebook**, **LinkedIn**, **Twitter**, and **Insights** for the latest news, or visit our website **www.gehealthcare.com** for more information.

### References

1. Source: GE bench testing, White Paper, GE Healthcare's AutoGrid Software (JB77154XX)

2. Source: GE whitepaper: High resolution for improved visualization (DOC2045904)

3. Refers to percent improvement from Gen 1 table to Gen 5.1.

†Denotes optional features.

*Not for sale in the U.S. Not approved or cleared by the U.S. FDA. Device is CE marked. May not be available in all markets.  Consult with your sales representative.