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Discovery™ XR656 HD is GE's all new digital radiographic system powered by Helix™ advanced image processing and featuring an expanded suite of workflow automation & analytics tools.

Helix™ Advanced Image Processing

Helix™ advanced image processing algorithms harness the full high-resolution power of FlashPad HD detectors to deliver exceptional image quality despite challenging exams conditions.

Helix algorithms are designed to deliver outstanding resolution, excellent edge presentation, consistency, and noise handling

With Discovery XR656 HD, no more unnecessary X-ray image adjustments and repeated exams. Just sharp detail and the balanced contrast and brightness you need at low dose, right from that very first image

The Discovery XR656 HD base system includes:

The Acquisition Workstation is the primary interface to the network and provides image post-processing capabilities. The System Controller Module provides single point control, directing and coordinating overall system operation, while monitoring all system modules automatically through software.

The Acquisition Workstation includes:

24" Acquisition Workstation

Keyboard and Mouse

CPU Tower with 16GB RAM, 1 TB of hard drive storage and capacity for over 17,000 images.

Easy Image Manipulation and

Image Display Tools which include:

Window width and level

Gray scale/contrast invert

Interpolated zoom and roam

Image flips (horizontal, vertical) with automatic indicator

Image Rotate - 90 degree increments

Free rotation - 360 degrees

Image orientation management

Electronic Left/Right Markers

Free text annotation

Manual shuttering

Image Annotations and Measurement Tools

Multi-Resolution Post Processing

Customizable Image Processing to Match

User Preferences

CD-RW and DVD Drive for Image Archive

Image Viewer on Archive CD's and DVD's

""Patient Directory"" provides fast access to the image and exam database for case reviews and file management.

Detector Exposure Indicator: tool for detector dose feedback to ensure exposure was within normal limits.

Emergency Patient Exam Capability Emergency patient feature - allows user to open exam and acquire images without a worklist entry.

The Copy Patient function allows merging of the patient information with the exam images.

Fast Image Display - Average time for a partially processed image is approximately three seconds and less than eight seconds for a fully processed image. Times may vary based on how the detector is connected to the system (i.e. docked, tethered or wireless)

Set of default adult and pediatric protocols allows quick selection of the appropriate techniques for common procedures/exams with the ability to define unlimited number of custom protocols.

Set of 4 Factory (GE pre-set) image processing selections (looks) optimized for each anatomical view with the ability to define multiple Custom look for each anatomical view/ patient size combination.

Automatic image storage and print with DICOM 3.0 and IHE Compliant networking, further increasing exam throughput and decreasing examination time for patients.

Image Quality and Dose

Multi-resolution image processing capability.

Tissue Equalization used to correct over-penetrated and under-penetrated areas within the image.

Auto and manual image shuttering cropping tool.

Automated brightness/contrast setting (Smart Windowing)

Orthopedic Magnification/Print.

Detector Exposure Index (DEI) dose tracking and QC metric.

Dose Area Product (DAP) entrance dose metric.

Grid Line Reduction (selectable)

Intelligent Collimator Edge Detection automated, image based cropping/shuttering tool that relies solely on image information to locate the collimator **edges** present in the image.

Orthopedic Magnification/Print.

Networking

IHE Compliance for Scheduled Workflow Integration Profile. Images may be transmitted manually or automatically through the DICOM interface to printers, archival devices, servers, or review workstations. System Access and Authorization Control to support HIPAA Compliance.

DICOM 3.0 and Standard Networking Capabilities include:

Systems Cabinet

Built-in System Distribution Power Module and Circuit Breaker for Single Point Power Feed to Room Subsystems.

Modular Designed X-ray Systems Based on a Digital Communications Network for Improved Reliability and Image Quality.

Z	1.00	XR656 HD Overhead Tube Suspension
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The Overhead Tube Suspension (OTS) system with motorized movement achieves excellent levels of operational support for efficient operation and precise positioning.

The Overhead Ceiling Tube Suspension Package Includes:

Automation collimator Includes:

LED light collimator

inherent filtration 2.0 mm Al @ 70kV

Rotation +/- 90 degrees

Copper filter can be added manually or automatically via protocol set up at none, 0.1mm, 0.2mm, 0.3mm

Auto-Positioning Package :

Auto-Positioning enables the users to select a predefined system position from the system console and automatically move the equipment by simply holding the "Auto Positioning" buttons. This feature reduces user fatigue and increases the productivity of the operator.

Auto-Positioning is controlled at the acquisition workstation or with the IR remote control, allowing the user to remain in the room while moving the system.

Pre-set positions at the table, wallstand and park position at various SIDs and vertical and horizontal orientations.

Auto-Positioning will incorporate angulation of the tube, longitudinal, lateral, rotational and vertical positioning of OTS, table detector longitudinal positioning, wallstand detector vertical positioning.

Tube and Detector Tracking Synchronized tube and detector tracking enables convenient workflow by keeping the tube correctly aligned with the wall-stand or table detector.

Motorized 5-axis movements Supported Positions: park, table 100 cm SID (head, center, foot), wallstand 100 cm and 180 cm SID, and horizontal wallstand 100 cm SID.

Optional IR Remote -The infrared remote is an in-room control allowing the technologist greater flexibility & ability to pre-position the system automatically in preparation for the next clinical exam/view.

Auto or manual positioning with single lock release and auto detents for assisted manual positioning.

Touch-screen user interface with LCD screen display helps confirm patient data, review techniques, receptor selection and modify/confirm wireless detector association. The easy to Read, Auto Rotating user screen also includes a message readout line and easy to see light indicators.

Patient Side Touch Screen User provides the the following functions to the user:

Lock, Detent Control

Field of View Image Size Selection

Collimator Field Light Selection

Technique Adjust (kVp, mAs)

Receptor Selection (table, wallstand, wireless or cassette)

Exam Inhibit Display

Collimator Manual Override

Position Display (Source-to-Image Distance, X-ray Tube Angle, Column Rotation Angle)

Display of Patient Name for In-Room Verification (this feature

Line	Qty	Category	Description
3	1.00		2, 3, or 4 Meter Bridge Select

2, 3 or 4 Meter Bridge Select (Dependent on Room Size)

Line	Qty	Category	Description
4	1.00		2, 3, or 4 Meter Bridge Cable Drape Select

2, 3 or 4 Meter Bridge Cable Drape Select

Line	Qty	Category	Description
5	1.00		Inboard Rail Select

2, 3 or 4 Meter Longitudinal Rail Select (Dependent on Room Size)

Line	Qty	Category	Description
6	1.00		2, 3, or 4 Meter Longitudinal Drive Belt Kit

2, 3 or 4 Meter Longitudinal Drive Belt Kit

Line	Qty	Category	Description
7	1.00		80kW High Frequency Generator

80kW High Frequency Generator, 50 or 60Hz The high frequency 80kW power unit is designed for radiographic applications and utilizes microprocessor controlled power and parameter adjustment

Specifications:

- 1000mA at 80kVp
- 800mA at 100kVp

Input Power: 360-480VAC, 3 Phase, 60Hz

kVp Range: 40-150kVp, 1kVp increments

kVp Accuracy: 3% +/-2kVp mA Range:

- Small Focal Spot: 10-320mA
- Large Focal Spot: 160-1000mA

Line	Qty	Catalog	Description
8	1.00		System Wireless Access Point G3 AP- US

System Wireless AP(Access Point) for internal WIFI communication with wireless detectors, with USA Labeling and Certification.

Line	Qty	Catalog	Description
9	1.00	S1201LX	Operation Console RCIM2

Operation Console RCIM2

Line	Qty	Catalog	Description
10	1.00	S3100SWS	Standard Arm Tilting Wallstand

Tilting Wallstand with Standard Length Arm is designed for radiography applications with the patient standing, sitting or lying on a gurney.

Designed for use with GE's exclusive FlashPad HD wireless digital detector, overhead tube suspension and ion chamber. The FlashPad HD wireless digital detector can be operated docked, tethered or in a wireless digital cassette mode.

The wallstand is motorized. Electromagnetic braking secures vertical motion.

Motorized receptor tilting controlled with either IR remote control or hand switches located on the arm.

Vertical motorization of the wallstand with foot switch or IR remote control.

Auto-tracking from the overhead tube suspension.

Graphic outlines of image sizes and ion chamber scan areas on the front panel enhance accuracy and safety. Preparation is fast and simple for better patient throughput.

The wallstand tilts from -20 degrees to 90 degrees.

The wallstand grids are removable from the side.

It is configurable for either left or right side insertion.

Automatic Exposure Control (AEC) utilize three ion chamber sensors, which are mounted between the patient and digital detector.

Line	Qty	Catalog	Description
11	1.00		Wallstand Cable Selection

Wallstand Cable Selection

Line	Qty	Catalog	Description
12	1.00		72" Wallstand Grid

72" Wallstand Grid
70 lines/cm, 13:1 ratio, focus 180 cm (72 in) SID range 145 cm - 245 cm

Line	Qty	Catalog	Description
13	1.00		40" Wallstand Grid

40" Wallstand Grid
70 lines/cm, 13:1 ratio, focus 100 cm (40 in) SID range 90 cm-118 cm

Line	Qty	Catalog	Description
14	1.00		51" Wallstand Grid

Universal Wallstand Grid
70 lines/cm, 10:1 ratio, focus 130 cm (universal) SID range 90 cm-190 cm

Line	Qty	Catalog	Description
15	1.00		Premium Bariatric Table

Premium Elevating Table
A bariatric X-ray table enables you to serve the X-ray imaging needs of patients of all sizes and mobility levels. The elevating table P has a high precision bearing system that guarantees a smooth and parallel movement on the eight (8) ways of the table top. The ergonomic design makes it friendly-use for both the patient and operator

- 8 way float carbon fiber composite table top
- Table surface area 37" x 94"
- Variable height from 19.7" to 33.5"
- Max table weight 400kg (882lbs)
- Max bucky travel 31.5"
- Motion safety features like double tap foot pedals, dual emergency stop buttons, anti-collision and anti-pinch sensors.

Line	Qty	Catalog	Description
16	1.00		Table Cable Select

Table Cable Select

Line	Qty	Catalog	Description
17	1.00		Hand Grips XR656 Plus

Hand Grips

Line	Qty	Catalog	Description
18	1.00		Table Rear Foot Pedal

Table Rear:Foot Pedal

Line	Qty	Catalog	Description
37	1.00		40" Table Grid

40" Table Grid

70 lines/cm,12:1 ratio, focus 100 cm (40 in), SID range 90 cm-120 cm

Line	Qty	Catalog	Description
20	1.00		QTY 2 FlashPad HD3543 (14" x 17" Wireless integrated digital detectors)

QTY 2 FlashPad HD3543 (14inch; x 17inch; Wireless integrated digital detectors)- Detector battery can take up to 60 exposures per hour and provide enough power for 5 hours of use on a single charge- Single panel (non-tiled) amorphous silicon detector with a directly deposited cesium iodide scintillator- Pixel pitch 100 microns- Pixel matrix: 3524 x 4288 pixels- Typical DQE @ Olp/mm: 75%- Include QAP (Quality Assurance Procedure)- Available with 6:1 or 8:1 removable grids- Image area: (13.8 in x 16.6 in) - Weight: 3.2kb (7.1 lbs)- 802.11n 5GHz link between system and detector- Supports automatic channel switching to improve image transfer and avoid wireless interference with hospital network

Line	Qty	Catalog	Description
43	1.00		FlashPad HD2530 (10inch x 12inch Wireless integrated digital detector)

Flash Pad HD2530 (10 inch x 12 inch Wireless integrated digital detector)- Detector battery can take up to 60 exposure per hour and provide enough power for 2 hours of use on a single charge- Single panel (non-tiled) amorphous silicon detector with a directly deposited cesium iodide scintillator- Pixel pitch 100 microns- Pixel matrix: 2508x3004 pixels- Image area: (11.7 in x 9.8 in)-Typical DQE@ Olp/mm: 75%- Include QAP (Quality Assurance Procedure)- Available with 6:1 or 8:1 removable grids- Weight: 1.9kg (4 lbs)- 802.11n 5GHz link between system and detector- Supports automatic channel switching to improve Image transfer FlashPad HD2530 (10inch; x 12 inch; Wireless digital detector) and avoid wireless interference with hospital

Line	Qty	Catalog	Description
44	1.00		GRID 6:114X171N

6:1 Grid for FlashPad HD3543

23	1.00		GE Grip Flashpad HD 10x12
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GE Grip Flashpad HD 10x12

24	1.00	M	GE Grip Flashpad HD 14x17
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GE Grip Flashpad HD 14x17

25	1.00		HD Optional Detector Bin
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Charging bin for Flashpad HD detectors independent slots for 10x12 and 14x17 or 17x17 detectors for simultaneous charging.

26	1.00		Weight Bearing Cover for FlashPad HD 3543 Detector
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The Weight Bearing Cover protects the FlashPad HD 3543 detector during weight-bearing exams. The cover allows a 590 kg (1300 lb) load applied over a 25 cm (9.75 in)

27	1.00		Auto Image Paste for the Discovery XR656 Wallstand
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Wallstand Auto Image Paste for Spine and Long Bone Imaging

- Fully automated acquisition and processing of a series of images with user defined start and stop locations on the anatomical region of interest.
- Average acquisition time for a 3-image exam (90 cm coverage) is less than 10 seconds. Image pasting and processing time for a 3 image exam is less than 15 seconds from last exposure.
- Allows 2 to 5 images to be pasted together with a maximum range of 150 cm
- Includes imaging of the spine for scoliosis evaluation and imaging of the legs for orthopedic evaluations.
- Supports anatomies/view combinations of Spine Antero-posterior, Spine Postero anterior, Spine Lateral, Leg Antero-posterior, Leg Postero-anterior.
- Includes a patient stand with screen to keep the patient comfortable during acquisition.

28	1.00		Auto Image Paste for the Discovery XR656 Table
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Table Auto Image Paste for Spine and Long Bone Imaging

- Fully automated acquisition and processing of a series of images with user defined start and stop locations on the anatomical regions of interest.
- Average acquisition time for a 3-image exam (90 cm coverage) is less than 10 seconds. Image pasting and processing time for a 3 image exam is less than 15 seconds from last exposure.
- Allows 2 to 3 images to be pasted together with a maximum range of 100 cm.
- Includes imaging of the spine for scoliosis evaluation and imaging of the legs for orthopedic evaluations.
- Supports anatomies/view combinations of Spine Antero-posterior, Spine Postero anterior, Spine Lateral, Leg Antero-posterior.

Line	Qty	Catalog
29	1.00	Patient Orientation Tag

Patient Orientation Tag

Line	Qty	Catalog
30	1.00	Autorad Package

AutoRAD Suite offers an extensive set of automation and workflow enhancing features, to make exam set up fast, intuitive and easy for X-ray technologists and comfortable for patients.

Auto Protocol Assist - Allow automation by matching procedure codes from Modality Work List to selected anatomy technique
Auto Field of View - Optimize time spent on final collimation adjustments with Auto Field-of-View with easily pre-defined collimation size on an individual view basis

Repeat Reject Analysis - The Repeat and Reject Analysis (RRA) software package is a quality control (QC) application available that allows for repeat or reject images to be captured and categorized by technologist. It is designed to help track and analyze the X-ray repeat rate.

Line	Qty	Catalog
31	1.00	Infrared Remote

Infrared Remote Control

The infrared remote optionally allows remote control of several system features (e.g., collimator light, FOV selection, wallstand and OTS motorization).

Line	Qty	Catalog
32	1.00	UPS

Uninterrupted Power Supply

Line	Qty	Catalog
33	1.00	25 KAIC X-Ray Main Disconnect Panel 80 Amp, 480 V / 208 V

FEATURES/BENEFITS

- Serves as the main power disconnect between the X-Ray system and the facility 480V or 208V power source
- Provides emergency shut down, undervoltage protection and overcurrent protection for the X-Ray power distribution cabinet
- Standardized design provides a platform for future upgrades of the system
- Offers a number of advantages by combining a variety of individual components into a single pre-engineered and factory tested panel
- UL and cUL listed for compliance with NEC Article 100 and Article 110-3
- Remote emergency off pushbutton located by X-Ray control provides immediate shut down of the entire system to comply with NEC required disconnecting means
- Surface or semi-flush mounting

SPECIFICATIONS

- Dimensions (H x W x D): 48" x 20" x 6.68"
- Weight: 80 lbs.
- Mounting: via keyhole slots; Width is 16" on centers, Height is 45.5" on centers

COMPATIBILITY

- GE Three Phase X-Ray generators

This training program is designed for customers purchasing a GEHC fixed radiography system such as Discovery 656, Optima 646, Proteus XRF. GEHC will work with the designated Customer contact to agree upon a reasonable training schedule for a pre-defined group of core technologists (generally up to 5 technologists) that will leverage blended content delivery and may include a combination of onsite days and virtual offerings, to include the GEHC Answerline, and available on-demand courses ("Virtual Inclusions"). This blended curriculum with multiple delivery platforms promotes learner retention and allows for an efficient and effective skill development.

This program may contain:

- Onsite training (generally 4 days)

- Virtual Inclusions may include:

- o Remote instructor-led training: Instructor leads a remote training session one-on-one or in a group, typically for 1 hour
- o Answerline Support-Access to GEHC experts for clinical, non-emergency applications assistance via phone or by using the ilinq button on the imaging console if available
- o On Demand courses-On healthcare learning system. Self-paced courses and webinars (CE and non-CE).

Onsite training days will be mutually agreed upon, but generally will not exceed 8 days. Onsite training will be provided from 8am-5pm local time Monday-Friday. Virtual Offerings are unlimited. This training program has a term of six (6) months commencing on Acceptance, where all onsite training must be scheduled and completed within six (6) months of Acceptance, and all Virtual Inclusions also expire at the end of such six (6) month period. Additional onsite days may be available for purchase separately. All GEHC "Training" terms and conditions apply. Given the unique nature of this program, if this program is purchased as part of a purchase under a Governing Agreement, including any Master Purchase Agreement, Group Purchasing Organization Agreement, or Strategic Alliance Agreement, this program shall take precedence over any conflicting training deliverables set forth therein.